

Consultation

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Overview:

This document sets out our policy proposals for updating the offshore transmission licence for future tenders. We are building on the current regime and taking into account experience gained from the initial tender rounds. This document focuses on the OFTO licence for Generator build projects qualifying from 2013 onwards. We are seeking to deliver value for money for consumers whilst maintaining an attractive environment for investment.

Future windfarm projects are likely to be larger, and further from the shore than existing projects, so we are seeking to ensure the regime addresses the challenges that brings. This workstream sits alongside ongoing work on OFTO build as well as coordination and integration of transmission assets.

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Context

Electricity generated from offshore wind represents a key pillar of the government's target to provide 15% of the United Kingdom's (UK's) energy needs from renewable sources by 2020. As part of the strategy to deliver this target, Ofgem¹ and the Department of Energy and Climate Change (DECC) have developed a regulatory regime for the construction and operation of offshore transmission assets.

Tenders under the regime are being delivered in two parts: transitional and enduring². Under the transitional regime Offshore Transmission Owners (OFTOs) will operate, maintain and decommission the transmission assets. This is known as Generator build. Under the enduring regime, developers may choose either the Generator build option or the OFTO build option. Under the OFTO build option the OFTO will undertake the detailed design work and procurement and deliver the build programme, as well as being responsible for the operation, maintenance and decommissioning of the assets.

The core premise of the regime is that OFTOs are selected and licensed through a competitive tender process run by Ofgem. Over £450m has already been invested, with up to £2bn expected to follow through the transitional tender exercises alone. Going forward, the investment opportunity is expected to be significantly larger, with future offshore transmission tender exercises expected to deliver billions of pounds of investment over the next decade.

Associated documents

- <u>Licence modifications through the RIIO-T1 price control Potential impacts</u> on Offshore Transmission Owners (OFTOs) (Reference number 147/12)
- Offshore Electricity Transmission: Updated proposals under the enduring regime, May 2012 (Reference number 72/12)
- Offshore Electricity Transmission: Consultation on tender exercises under the enduring regime, December 2011 (Reference number 178/11)
- Open Letter: Draft Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2012 for consultation, September 2012, (Reference number 120/12)

¹ For ease of reference, Ofgem is used to refer to Ofgem, Ofgem E-Serve and the Gas and Electricity Markets Authority (The Authority) in this document.

² Transitional projects were required to meet the qualifying project requirements set out in the Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2010 by 31 March 2012. Projects that did not meet these requirements by the relevant date are subject to the enduring regime.

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Executive summary

Through the transitional regime we have already seen over £450m invested in offshore transmission with up to £2bn expected through the remaining transitional tender exercises. It is expected that future projects will involve billions of pounds of additional investment over the next decade. Given the size of this investment potential and the additional complexity expected in relation to these future projects, we are keen to ensure that the regulatory regime remains efficient and effective; supporting the interests of generators, OFTOs, investors and, most importantly, consumers.

The offshore regime is made up of various components, including the tender process, tender regulations, offshore transmission licence ('the OFTO licence'), coordination and the relevant industry codes and standards. We are currently reviewing each of these to reflect the evolution of the offshore regime and expect revised tender regulations to come into force early next year. As we expect the first tenders under the enduring regime to be Generator build projects, this document focuses on the OFTO licence for Generator build projects. It forms part of a suite of documents³, which build on the knowledge gained through the transitional regime to deliver a regulatory regime best aligned to the likely characteristics of future projects. In developing the options outlined in this document we have reviewed stakeholder feedback received from earlier consultations and carried out further detailed policy work, including seeking input from both technical and financial advisers.

In this document we focus on the following key aspects of the Generator build OFTO licence:

• Revenue Incentives:

- We propose enhancements to the availability incentive to help drive additional benefits through further incentivisation of desired OFTO behaviour. We propose that a capacity weighting mechanism would be most beneficial, and invite views on this, as well as whether differentiating between planned and unplanned outages could further enhance the availability incentive in future.
- We invite views on whether Transmission Entry Capacity (TEC) will remain the most appropriate measure of maximum availability in the future, and ask what further issues we should consider related to the availability incentive.
- We outline our updated proposals for remunerating OFTOs under the incremental capacity mechanism, including the mechanisms for

 $^{^3}$ Offshore Electricity Transmission: Updated proposals under the enduring regime, May 2012, (Ref 72/12):

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=45&refer=Networks/offtrans/pdc/cdr/2012

Offshore Electricity Transmission: Consultation on tender exercises under the enduring regime, December 2011, (Ref 178/11):

 $[\]frac{\text{http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=42\&refer=Networks/offtransp/pdc/cdr/Cons2011}{\text{s/pdc/cdr/Cons2011}}$

remuneration and the cap on remuneration. We invite views on these proposals.

We also outline our approach to transmission losses.

· Revenue framework:

- We consult on our proposal to keep the revenue term default length at 20 years.
- Refinancing At present there is no gain share mechanism applied to refinancing during the revenue term, so bidders are under competitive pressure to price any refinancing assumptions into their bid. We discuss the option of introducing a refinancing gain share mechanism. We invite views on the pros and cons of both options.
- o Indexation The current approach is 100% indexation of the Tender Revenue Stream (TRS) based on the Retail Prices Index (RPI) on an annual basis. We consider other potential options for indexation: partial and biddable indexation. We invite views on the pros and cons of all the outlined options for treating indexation.

We have previously set out the model for delivery of OFTO build tender processes, and are reflecting this in the tender regulations that we expect to come into force in early 2013. We are keen to engage with developers and other interested parties on how this model can be best introduced into upcoming projects. We would welcome further views on how OFTO build can best function to meet the needs of developers and potential OFTOs while protecting consumers.

Another key aspect of the enduring regime will be facilitating a more complex and integrated network to enable the benefits of coordination to be realised. We will shortly be publishing a consultation on coordination which provides details on specific measures to facilitate efficient offshore network coordination and sets out areas for the next phase of detailed analysis.

Following these consultations, we intend to publish a position paper in spring 2013 setting out our policy proposals in preparation for tender exercises commencing from 2013 as well as providing further detail on other key aspects of the offshore regime and coordination. We expect to publish detailed licence drafting for the 'generic' Generator build OFTO licence in mid to late 2013 ahead of commencing the Invitation To Tender (ITT) stage for the first future offshore tenders.

1. Introduction

Chapter summary

This chapter outlines the purpose of this document. It sets out the scope of policy proposals within the rest of this document and provides an overview of key interdependencies.

Purpose of this document

- 1.1. Since establishing the legal framework for the transitional regime in June 2009, we have licensed six OFTOs and qualified a further seven projects. The OFTO licences granted under the transitional regime are based on the regulatory framework that we consulted on primarily throughout 2008 and 2009.
- 1.2. The purpose of this document is to outline our proposals for updating the licence for future OFTO tenders under the Generator build model ('the OFTO licence'). We expect that this document will provide additional clarity and confidence to stakeholders on how the future offshore regime will work. It describes how different aspects of policy will be implemented through the OFTO licence.
- 1.3. The focus in this document is on tenders which will commence from 2013 and therefore includes the first projects in the enduring regime. However, as we recognised in our September open letter⁴, the offshore transmission regime will continue to evolve to reflect wider ongoing developments and project designs. We will continue to monitor where further policy refinements would be beneficial in future and we will consult with stakeholders as appropriate.

Overview

1.4. As discussed previously, this document focuses on those licences to be granted following a Generator build tender. During a Generator build tender exercise, Ofgem determines the transfer value of the transmission assets through the cost assessment process and grants a licence to an OFTO to own and operate the transmission assets. OFTOs bid for a revenue stream which commences on transfer of the assets. The revenue stream is fixed for 20 years although there are pass-through conditions in the licence that allow for costs to be added to the revenue stream under certain circumstances. The revenue does however vary for indexation as the revenue stream is fully indexed to RPI. The revenue stream also includes adjustments for a number of incentives included in the licence. These incentive adjustments include the availability incentive penalties and credits incurred by the OFTO, as well as revenue adjustments made in the event that the OFTO is required to provide additional capacity.

⁴ Open Letter: Draft Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2012 for consultation, September 2012, (Ref 120/12): http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=73&refer=Networks/offtrans/pdc/cdr/2012

- 1.5. To ensure that the regime continues to deliver for consumers and developers, we have revisited a number of these policy areas. This is to reflect experience gained and feedback received from transitional tenders. It also reflects the evolution of the regime to date, taking into consideration factors such as the development of the OFTO market, the increased experience of investors, and the probability of larger, more integrated and phased projects in the future.
- 1.6. This document considers policy areas affected by the factors outlined above, including those areas which we do not currently propose to amend. The policy areas considered in this document fall into two broad categories; revenue framework and revenue incentives. The revenue framework chapters include considerations such as whether the 100% level of indexation is appropriate going forward, as well as whether a refinancing gain share mechanism should be included in the OFTO licence. We have also looked at whether the 20 year revenue term continues to be an appropriate default term for future tenders. The revenue incentives chapter includes our proposals regarding updates to the availability incentive and incremental capacity incentive.
- 1.7. The National Audit Office (NAO) stated in their review of the offshore transmission regime that the regime has already delivered benefits and has the potential to deliver more. The policy options and proposals covered in this document look to build on the already successful transitional regime and the areas considered align with, but are not limited to, those raised by the NAO in their report.
- 1.8. Note that the objectives of competitive tenders for offshore transmission licences remain unchanged and are as set out in our May 2012 consultation⁵.

OFTO build licence

1.9. Currently we expect the first projects qualifying from 2013 onwards to be tendered under the Generator build model and so in this document we have focused on the OFTO licence to be granted following a Generator build tender. While the regulatory framework to support OFTO build tenders is currently in place, further work is ongoing to develop the licence conditions which will apply to OFTOs appointed following an OFTO build tender (the 'OFTO build licence').

1.10. As discussed in our May 2012 consultation, we expect the OFTO build option to deliver consumer benefits into the long term, through enabling greater competition and attracting new entrants across the supply chain and the bidding community. However, we recognise that there may currently be outstanding aspects of the OFTO build model that would need tailoring to the specific needs of upcoming projects in order to facilitate the efficient delivery of the OFTO build model. We welcome specific feedback on those aspects. Please see Chapter 6 for more detail.

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=45&refer=Networks/offtrans/pdc/cdr/2012

⁵ Offshore Electricity Transmission: Updated proposals under the enduring regime, May 2012, (Ref 72/12):

1.11. In developing the OFTO build licence conditions, we will use the licence conditions that would apply to Generator build tenders as a starting point but will need to consider whether these remain appropriate. We will also need to develop conditions that relate to the construction period. We recognise that OFTO build tenders will have a different risk profile to Generator build tenders and the OFTO build licence will need to reflect this, potentially throughout the full lifetime of the project.

Related workstreams

- 1.12. Various related workstreams, some of which are nearing completion, have been, and continue to be, taken forward as part of further development of the offshore transmission regime. These include the offshore tender regulations⁶ and tender process, the cost assessment processes and options to support the development of a coordinated network.
- 1.13. In developing the policy proposals for the OFTO licence, the linkages between these workstreams have been carefully considered to ensure that the issues are not tackled in isolation. Further detail on these related workstreams, as well as other key interdependencies such as RIIO (Revenue = Incentives + Innovation + Outputs), Integrated Transmission Planning and Regulation Project (ITPR), coordination and Third Package considerations are outlined in Chapter 6. All the Ofgem publications discussed in this section are available on our website. Key documents are also signposted within the Associated Documents section at the start of this document.

Responding to this document

- 1.14. We would welcome comments from respondents on all issues in this document, although particular issues on which we are seeking feedback are highlighted in the relevant chapters. We also welcome confidential responses, which should be clearly marked as confidential when they are submitted. We would also be happy to discuss the questions raised in the document with stakeholders and interested parties.
- 1.15. We welcome responses by **22 February 2013**. All responses should be sent to: offshore.enduring@ofgem.gov.uk.

⁶ The draft tender regulations for the future offshore regime were consulted upon recently, with the consultation closing on 5 November 2012. We anticipate that the 2013 Tender Regulations will come into force early next year.

2. Revenue framework

Chapter summary

This chapter sets out the framework for the revenue for an OFTO under the future offshore regime, in particular looking at revenue term and arrangements for the end of the revenue period. We recognise that refinancing and indexation also fall within the revenue framework, and these are discussed in greater detail in Chapters 3 and 4 respectively.

Question box

Q2.1 Do you agree that the 20 year revenue term is still appropriate for point to point systems?

Introduction

- 2.1. OFTO revenues are primarily made up of base revenue and incentive driven adjustments. This chapter outlines the framework upon which base revenue is bid, specifically the length of the revenue term and what happens at the end of the revenue term. Refinancing and indexation are also part of this framework but are outlined in further depth in Chapters 3 and 4.
- 2.2. We consulted on a number of revenue framework policy areas for transitional tenders during 2008 and 2009. The revenue framework for the transitional regime consists of a fixed revenue stream for 20 years which is fully indexed to RPI.
- 2.3. In addition to the revenue framework, a number of incentives apply that also affect the OFTO's revenue. These incentives include the availability incentive and incremental capacity incentive, which are discussed in Chapter 5.

Revenue term

2.4. Under the transitional regime, the default revenue term is 20 years. The 20 year term was set to align with the forecast life of the windfarm, to minimise the risk of stranding of the OFTO assets.

2.5. For the future offshore regime, we recognise that there are some key differences, such as more advanced generation technology, which raise questions as to whether the default 20 year revenue term remains appropriate. Supported by our financial advisers Ernst & Young (EY) ⁷, and technical advisers, Arup, we have undertaken analysis investigating whether the 20 year term is still

⁷ Ernst & Young – Analysis of Policy Options for the Enduring Regime, November 2012: http://www.ofgem.gov.uk/Networks/offtrans/et/Documents1/Ernst%20and%20Young%20-%20Analysis%20of%20Policy%20Options%20for%20the%20Enduring%20Regime.pdf

appropriate and provides best value for consumers⁸. As we expect that the assets will be in use for at least 20 years, we have only considered whether it is necessary to extend the term beyond 20 years and not whether it is necessary to reduce it. Our analysis and discussion here focuses only on the point to point systems that we expect to tender in the near future.

- 2.6. From a financing perspective, we believe that, supported by EY's analysis, it would be possible to fund a revenue term in excess of 20 years. However, as there is no significant evidence that extending the revenue term would increase the funding options available to bidders, an extended revenue term may not provide best value for money for consumers.
- 2.7. The OFTO's assets would only be useful if they are needed for the transmission of power. It would not provide value for money for the OFTO to be operating the asset significantly beyond its useful life. From a technical perspective, we believe that while the transmission assets are likely to last well in excess of 20 years, there is sufficient uncertainty as to whether the generation assets would still be operational past 20 years, which may therefore create significant risk of stranding.
- 2.8. Combining these findings with our own internal analysis we feel that the 20 year term is still appropriate and provides the best value for consumers at this point in time. We therefore do not propose to change the default revenue term from 20 years.
- 2.9. We also recognise however that a 20 year term, or perhaps any default length term, may not be appropriate for integrated networks where there may be lower risk of stranding due to multiple sources of generation. Our analysis of the appropriate revenue term for more integrated networks is ongoing and we expect to consider this further before tenders commence for such projects.

Q2.1 Do you agree that the 20 year revenue term is still appropriate for point to point systems?

End of revenue stream

- 2.10. In our May 2012 consultation we outlined the three approaches which could be taken when the revenue period for an incumbent OFTO had come to an end. These were:
 - In the event that the offshore transmission assets were no longer required, the OFTO's licence would be revoked once decommissioning of the assets had been completed.
 - In the event that the offshore transmission assets were still required, the OFTO's licence could be either:

⁸ Arup – Technical support for the enduring regime, November 2012: http://www.ofgem.gov.uk/Networks/offtrans/et/Documents1/Arup%20-%20Technical%20support%20for%20the%20Enduring%20Regime.pdf

- extended, with the revenue term also extended for a limited period of time to cover appropriate costs that will be determined at the time
- \circ $\,$ revoked and then a tender exercise undertaken to appoint a new OFTO.
- 2.11. We believe that these three approaches are still appropriate. We understand that some respondents would like further clarity around the end of revenue stream process. However, we feel that decisions on the approach chosen would depend on the individual project circumstances and the ongoing demand for transmission services. This requirement could only be robustly assessed closer to the end of the initial revenue period. Therefore we do not believe it is prudent to make any changes to the OFTO licence or issue further guidance at this time.

3. Refinancing

Chapter summary

This chapter introduces refinancing and potential policy measures for dealing with refinancing gains. The approach for the transitional regime is that there is no gain sharing. Consequently bidders are implicitly incentivised to price any refinancing gain assumptions into revenue bids and we believe this has worked well. An alternative approach to refinancing might involve some element of refinancing gain share. We are consulting on both options: retaining the transitional regime policy or introducing a gain sharing mechanism. We believe the issues are finely balanced. We will be mindful of the success of the transitional regime policy when considering which option provides best value for consumers. In this chapter we set out the pros and cons of each of the options that we are exploring.

Question box

- Q3.1 What do you think are the advantages and disadvantages of each refinancing policy option? Please explain why.
- Q3.2 Are there other refinancing policy options that you think we should also consider?
- Q3.3 What are the benefits of OFTOs coming under common ownership and what are the associated issues that Ofgem should consider? To what extent should we capture any gains from OFTOs coming under common ownership?

Introduction

Background to refinancing policy

- 3.1. Refinancing is the term used to describe a company changing its sources of funding. When there are only minor changes to the sources of funding, such as taking out a small additional overdraft, this would not typically be referred to as refinancing.
- 3.2. When there is a significant change, such as taking out much more debt or significantly altering the terms of existing debt, then the company's annual costs are likely to change significantly. In particular the refinancing may have been designed specifically to reduce costs. If the company's income does not also reduce then the company's shareholders will effectively make a gain out of the refinancing. This is referred to as a refinancing gain.
- 3.3. There is the potential for an OFTO to make a refinancing gain if it renegotiates its debt terms, particularly if the financing market improves and debt is more cheaply available. EY undertook analysis for us to quantify the potential benefits and identify the associated risks of each policy option. Whilst the size of a refinancing gain is subject to much uncertainty there is the possibility of a gain

of a material size⁹. We are now consulting on how we deal with potential gains from a regulatory point of view.

- 3.4. In this document we are considering the high level options for refinancing policy. We are not consulting on detailed parameters for any specific option. We also acknowledge that refinancing as contemplated here applies to project financed OFTOs but probably not to other funding structures. Throughout this section references to specific percentages are purely illustrative. Whilst we are not consulting on the specifics of how to implement any option it is worth noting that we believe all the options are capable of being implemented. Specific parameters will be consulted on as necessary once we have decided on the high level policy option.
- 3.5. In future there is the possibility that OFTO networks may also avail of capital markets funding through the issue of a bond. Whereas the terms of bank debt often make refinancing a practical option the terms of bonds typically include termination clauses which require significant compensation. Hence if an OFTO were bond financed it would probably make refinancing less likely to happen. We do not believe that this would impact the policy considerations for refinancing policy and mention it here only for completeness.
- 3.6. This chapter focuses on Generator build, in line with the rest of this document. We plan to separately consider refinancing policy for OFTOs appointed via an OFTO build tender when we refine the other aspects of our policy for the OFTO build licence. The change in risk profile with OFTO build means that there is potentially more likelihood of a refinancing taking place and that the gains may be larger.

Facilitating the full range of potential financing options

3.7. Whilst this analysis focuses on project finance senior debt, we remain keen to ensure that the regulatory regime is compatible with the widest range of financing solutions and to ensure that there is a level playing field for each. To date commercial debt has been widely used to fund OFTOs but we are also keen to ensure that bidders can explore other sources of finance such as direct institutional and corporate investment and capital markets financing. We are mindful of the need for a robust and comprehensive evaluation approach in order to fairly compare differing sources of finance and have developed our evaluation framework accordingly. We continue to keep this under review and will make necessary changes through tender documentation.

⁹ Ernst & Young – Analysis of Policy Options for the Enduring Regime, November 2012: http://www.ofgem.gov.uk/Networks/offtrans/et/Documents1/Ernst%20and%20Young%20-%20Analysis%20of%20Policy%20Options%20for%20the%20Enduring%20Regime.pdf

¹⁰ Initially OFTO build has construction risk as the transmission assets are built but this is replaced by operating risk once the assets are operational.

Refinancing policy for the transitional regime

- 3.8. The approach for the transitional regime has been to have no gain sharing. This implicitly incentivises bidders to price any refinancing gain assumptions into their revenue bid in order to make their bid as competitive as possible.
- 3.9. We aim to maximise value for consumers from future tenders so when making our ultimate decision on this policy we will consider the balance of risks and benefits of each policy option. The transitional regime policy is well understood, robust and has been successful in facilitating over £450m of OFTO investment to date at competitive rates. We will be mindful of this when making our decision since the track record of the transitional regime policy does in itself provide value for consumers.

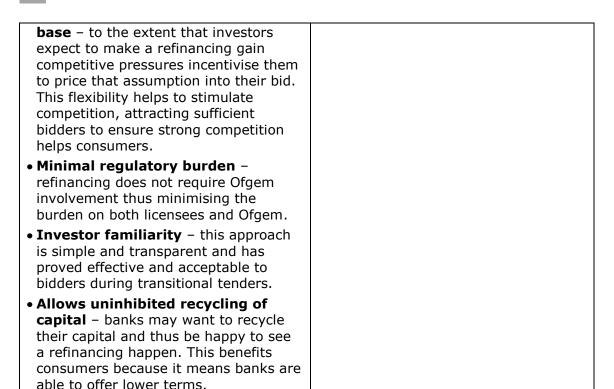
Identification of refinancing policy options

- 3.10. We have identified the following options for refinancing policy for the future offshore regime:
 - 1. **Retain the transitional regime policy** namely that there is no gain sharing. Bidders are at liberty to price into their bid any refinancing assumptions.
 - 2. **Implement a gain share mechanism** this would by its nature be asymmetric because we are of the view that refinancing losses (should they be incurred) would not be shared¹¹.
- 3.11. For both options we list below our assessment of the pros and cons. EY's assessment of the pros and cons is contained within their analysis which is published alongside this consultation. In some instances we identify some of the same pros and cons as EY note in their analysis but we believe that there are also other pros and cons, which go beyond the scope of their work, and we have included these in our summary below. Key quantitative findings from EY's analysis are included in the impact assessment in Appendix 2.

Option 1: Retaining the transitional regime policy

Pros	Cons
 Potential future refinancing gains may be priced into bids – information obtained through tenders to date suggests bidders may be incorporating gain assumptions into their bids though this is hard to verify. Helps to broaden potential investor 	Consumers do not benefit from gains in excess of a bidder's original assumptions, instead licensees potentially could enjoy windfall gains.

¹¹ The scope of the refinancing policy we are consulting on here is only refinancing which is driven by OFTO choice. Hence, we do not believe it is appropriate to explore policy options that include sharing refinancing losses.



Option 2: Implementing a gain share mechanism

How would a gain share work?

3.12. A gain share would mean that if an OFTO makes a refinancing gain then some of that gain could be used to reduce their revenue allowance in future 12 . For example, if an OFTO typically charges £20m per year for use of its network and achieves a £5m refinancing gain with 10 years left until the end of the revenue period then a 50% gain share would lead to £2.5m of the gain being used to reduce the cost of offshore transmission in years 11 to 20 by £0.25m per year. Please note these figures are purely to illustrate how such a mechanism could work and are not derived from any analysis of potential gains. EY's assessment of potential gains based on their modelling is contained within the impact assessment in Appendix 2.

Pros and cons of implementing a gain share mechanism

Pros	Cons
Consumers could benefit from	• Bid prices may increase – if bidders
refinancing – windfall gains from movements in financing costs would	have been pricing in expected refinancing benefits in bids to date.
lead to reduced revenue allowances.	Potentially reduced investor
• Investor familiarity – a standard	appetite - investors would no longer

 $^{^{12}}$ There are many ways a gain share could be implemented. Using the gain to reduce revenue is just used here as an example.

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gain share model is used in the Private Finance Initiative (PFI) ¹³ and is understood by many investors.	be able to benefit so much from refinancing gains. This could lead to fewer bidders and weaker competition. It could also make banks more hesitant to lend if they were otherwise anticipating that their long term debt would be taken out by refinancing.
	• Increased regulatory monitoring – Application of the gain share would require Ofgem resources at times dictated by external events.

Implementation timing

- 3.13. Whatever the outcome of this consultation any decision would apply purely prospectively. This would mean that existing licensees and preferred bidders would continue to be subject to the policy that was built into their licence.
- 3.14. As noted in the summary of pros and cons, implementing a gain share of some sort potentially has two opposite impacts on the cost of offshore transmission:
 - 1. Reducing the cost of offshore transmission by allowing consumers to share in gains.
 - 2. Increasing the cost of offshore transmission by making investors more reluctant to invest in OFTOs and thus reducing the benefits of competition.
- 3.15. If we were to implement a gain share we would need to consider where the tipping point is with these two effects. One way to manage this would be to defer implementation of a gain share until the financial markets were sufficiently robust so a gain share would not lead to a significant increase in the cost of offshore transmission. This could mean that the transitional regime policy is retained for the time being and that gain sharing would only be introduced once we judged the OFTO market to be able to sustain such a policy.
- 3.16. If we were to defer implementation then we would need to assess when an appropriate time to implement a gain share would be. Such an assessment would likely need to be informed by objective analysis of the current state of the OFTO and financial markets. It is not appropriate at this stage to consider the details of implementation. However, in order for stakeholders to understand this proposal we can say that, for example, we might look at recent instances of PFI refinancing and the number of banks lending long term debt as indicators of how the market would react to a refinancing gain share. We would welcome views on the kind of indicators that might support such an analysis.

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¹³ See Standardisation of PFI Contracts Version 4 (SoPC4): http://www.hm-treasury.gov.uk/d/pfi sopc4pu101 210307.pdf

Related policy considerations

- 3.17. Whilst the focus of this consultation is refinancing of external debt we also note that it is possible that equity investments in OFTOs could change. Such changes could lead to a change of ownership and potentially see OFTOs coming under common ownership. The policy issues involved in such a transaction are likely to be different to those of a debt refinancing.
- 3.18. The onshore network merger policy is set out in an open letter¹⁴ which states that Ofgem will "advise the merger authorities and government on any relevant mergers based on the relevant factors surrounding the merger in question". That letter also states that "any benefits from the merger should be automatically shared with consumers in the same way that efficiencies from other initiatives are shared as part of the price control framework". The letter also notes that this sharing would happen naturally as a result of price control sharing mechanisms and hence merger savings are not treated any differently to other efficiency savings. We invite views on the degree to which differences between onshore and offshore networks lead to a need for a different merger policy.

Way forward

- 3.19. We are consulting on all options on an equal basis. We believe that the arguments for and against these options are finely balanced. The transitional regime policy has proved effective in facilitating investment and is well understood and we will be mindful of the value this provides consumers when making our ultimate decision. We invite views from all stakeholders on the relative merits of the options outlined above.
- 3.20. Specific questions which we invite views on are:
- Q3.1 What do you think are the advantages and disadvantages of each refinancing policy option? Please explain why.
- Q3.2 Are there other refinancing policy options that you think we should also consider?
- Q3.3 What are the benefits of OFTOs coming under common ownership and what are the associated issues that Ofgem should consider? To what extent should we capture any gains from OFTOs coming under common ownership?
- 3.21. Respondents are particularly invited to draw on any relevant experience when answering these questions and to provide evidence where possible.

¹⁴ Public statement on Ofgem's network company merger policy, May 2010: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=284&refer=Networks/Policy

4. Indexation

Chapter summary

This chapter introduces the issue of indexation and potential policy measures for dealing with inflation. The transitional regime policy is that 100% of an OFTO's revenue increases in line with RPI and we believe this has worked well. We have looked at alternative structural approaches to indexation. We are consulting on all options and believe the issues are finely balanced. We will be mindful of the success of the transitional regime policy when considering which option provides best value for consumers. In this chapter we set out the pros and cons of each of the options that we are exploring.

Question box

- Q4.1 What do you think are the advantages and disadvantages of each indexation policy option? Please explain why.
- Q4.2 Are there other indexation policy options that you think we should also consider?

Introduction

Background

- 4.1. Inflation is the term used to describe the fact that the cost of goods and services changes over time. Generally the cost of goods and services goes up and, if an OFTO's allowed revenue did not increase also, this could lead to financial distress of the OFTO. Since OFTOs have no control over inflation it is appropriate for us to consider policy measures which deal with inflation risk.
- 4.2. The transitional regime approach has been to have 100% of the allowed revenue increase in line with the RPI measure of inflation. We said in our May 2012 consultation that we would undertake further analysis on indexation policy. We commissioned EY to analyse several policy options for indexation and are now consulting on those options.
- 4.3. There are a number of factors which we need to consider when assessing indexation policy:
 - 1. **Cost profile for consumers** our choice of indexation policy will impact on the timing of transmission costs for consumers and potentially also the total present value of those costs¹⁵.
 - 2. **Intergenerational issues** The demographic and membership of consumers changes over the revenue term of an OFTO. Our choice of indexation policy will alter the relative proportions of offshore

 $^{^{15}}$ Consumers value a £10 cost in 10 years time differently to a £10 cost today. The difference in value can be worked out using a social time preference rate.

transmission costs that are borne by current and future consumers.

- 3. **Investor appetite** some investors like to have returns that are linked to inflation whilst others prefer non-inflation linked returns. Our choice of indexation policy will therefore have a bearing on which investors might want to invest in offshore transmission and also impact on how keen they are to invest. Moreover for a policy that leads to extensive use of RPI swaps we may need to bear in mind the potential impact of each financial close, particularly for larger projects, as these may impact on the market price of the swaps.
- 4. **Impact on financial stability** if an OFTO's costs and revenues move independently of each other then there is a risk that the costs will increase without an equivalent increase in revenues that could lead to financial distress. Indexation policy allows us to influence how revenue changes in response to cost changes.
- 4.4. There are two separate elements of indexation policy:
 - 1. **Structural approach to indexation** this concerns the mechanics of how revenues move in response to changes in a particular index.
 - 2. **Choice of index** there are many different indices each measuring different aspects of inflation. One element of indexation policy is choosing an appropriate index to which revenue is to be linked.
- 4.5. In this consultation we are only examining options for structural approaches to indexation.
- 4.6. We note the recent Office for National Statistics (ONS) consultation on options for improving the ${\sf RPI}^{16}$. The ONS plans to implement any changes to RPI in March 2013. We therefore expect the conclusion of their RPI review to be announced prior to our making a decision on indexation policy.

Indexation policy in the transitional regime

- 4.7. Indexation policy for the transitional regime has been that 100% of OFTO revenues increase in line with RPI.
- 4.8. We aim to maximise value for consumers from future tenders, so when making our ultimate decision on this policy we will consider the balance of risks and benefits of each policy option. As detailed in Chapter 3, the transitional regime policy is well understood, robust and has been successful in facilitating over £450m of OFTO investment to date at competitive rates. We will be mindful of this when making our decision since the track record of the transitional regime policy, and the familiarity and comfort it provides to investors, does in itself provide value for consumers.

¹⁶ Further details are available on the ONS website: http://www.ons.gov.uk/ons/about-ons/user-engagement/consultations-and-surveys/national-statistician-s-consultation-on-options-for-improving-the-retail-prices-index/index.html

Previous consultations

4.9. In our December 2011¹⁷ consultation we sought views on indexation policy. Responses to that consultation were summarised in our May 2012 consultation. Responses broadly fell into one of two categories – either stating the benefits of the transitional regime approach or indicating the potential to save the costs of inflation hedging by indexing only some of the revenue stream. We are now exploring these issues in more detail.

Onshore transmission

- 4.10. The onshore transmission networks are subject to price control regulation under the RIIO framework. These settlements include full indexation of revenues to RPI. Whilst there are inherent similarities between onshore and offshore transmission there are also significant differences. Key differences include the following:
 - 1. **Capex programme** onshore networks have large ongoing capital expenditure (capex) programmes whereas offshore transmission has limited if any ongoing capex. Since capex costs often relate largely to materials and labour they may be expected to rise in line with inflation.
 - 2. **Length of the regulatory settlement** onshore price controls under the RIIO framework are set for a period of eight years. Offshore, the revenue restrictions are determined by competitive tender and then fixed for 20 years.
 - 3. **Index linked nature of finance costs** onshore transmission networks have issued a significant amount of index linked debt. To date nominal debt has been prevalent in OFTO bids.

Identification of options

- 4.11. We have identified three options for the structure of indexation in OFTO licences:
 - 1. Retain the transitional regime policy of 100% indexation under this option 100% of allowed revenues increase with RPI.
 - 2. **Allow biddable indexation** under this option bidders would be allowed to decide what proportion of their revenue they would like to increase with RPI.
 - 3. Have a fixed proportion of revenue being indexed under this

¹⁷ Offshore Electricity Transmission: Consultation on tender exercises under the enduring regime, December 2011, (Ref 178/11): http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=42&refer=Networks/offtrans/pdc/cdr/Cons2011

option Ofgem would determine what proportion of allowed revenue increases with RPI.

- 4.12. As with refinancing we have assessed the pros and cons of each option ourselves. For each option we list below our assessment of the pros and cons. EY's assessment of the pros and cons is contained within their analysis which is published alongside this consultation. In some instances we identify some of the same pros and cons as EY note in their analysis but we believe that there are also other pros and cons, which go beyond the scope of their work, and we have included these in our summary below. Key quantitative findings from EY's analysis are included in the impact assessment in Appendix 2.
- 4.13. Implementing biddable indexation would require changes to the tender process (eg the basis of evaluation). We believe that it is possible to successfully implement any of the options outlined above though at this stage we are consulting only on high level options and not on specific issues of implementation. There will be an OFTO licence drafting consultation in 2013 in which we will consult on how we implement whichever option is chosen following this consultation.

Option 1: 100% indexation

What 100% indexation means in terms of revenues

- 4.14. 100% indexation is the indexation policy that was applied for the transitional regime. With this policy all of an OFTO's revenue allowance increases in line with the index in question (for the transitional regime that index was RPI). For example, if an OFTO's revenue for year one was £1m and inflation (according to the index in question) was 3% then revenue for year two would be £1m \times 1.03 = £1.03m.
- 4.15. Where a bidder has some costs that are not expected to increase with RPI, for example non index-linked debt costs, then they find themselves exposed to a mismatch in how their revenues and costs will change over time. For example, if inflation was very low then their revenues may not increase much at all in nominal terms. To overcome this mismatch a bidder could take out an RPI swap. This would mean that they enter into a contract under which they would pay an RPI-linked amount each year but receive a non-RPI-linked amount each year.

Pros and cons of 100% indexation

Pros	Cons
 Potentially matches consumers' income which means that offshore transmission costs are spread evenly over the asset life in real terms which 	 Encourages bidders to take out RPI swaps and the associated credit spread is a material cost ultimately borne by the consumer.
provides intergenerational fairness .	• RPI swaps create a contingent liability
 Encourages bidders to take out an RPI swap which, at current rates, reduces the allowed revenue that 	which means that even if Ofgem, the licensee and the generator were all willing to terminate the revenue

bidders require compared to if there were no RPI swap.

- Easy to evaluate since bids can be evaluated in real terms and compared directly.
- RPI linked investments are in short supply relative to the demand for them which means investors seeking RPI linked returns will accept lower real returns leading to lower transmission costs.
- Because inflation is generally positive bidders build this in to their bid and so initial revenue requirements are lower.

period early, there would still be a significant swap breakage cost.

The existence of the swap could also reduce the value from refinancing or prevent it happening at all, regardless of how gains are treated.

• There is more **variability in costs for consumers** with future payments potentially increasing significantly in nominal terms. We note consumers with an RPI linked income would not see real term price increases, ie prices would remain at a constant proportion of their income.

Option 2: Biddable indexation

Introduction to biddable indexation

- 4.16. We use the term biddable indexation to describe an arrangement in which bidders decide what proportion of their revenue they would like to index. Bidders would specify this proportion in their bid and would be unable to change this at a later date. It is likely that different bidders would choose to have different proportions of their revenue linked to an index. Thus we would need to evaluate bids in terms of the net present cost of offshore transmission over the duration of the revenue term. Hence bids would effectively be submitted on a net present cost basis.
- 4.17. Importantly biddable indexation does not amount to simply bidding on what they think inflation is likely to be over the duration of the revenue term. However, they may well want to make such an assessment in deciding what proportion of revenues should be indexed.

Pros and cons of biddable indexation

Pros	Cons
• Revenues are less variable in nominal terms than under full indexation if the bidder chooses to have less than 100% of revenue indexed.	Could be more costly than 100% indexation for consumers as the real cost of offshore transmission will depend on outturn inflation where the bidder chooses other than 100%
• Bidders can create a natural hedge to RPI linked costs by choosing to have revenues indexed in line with costs ¹⁸ . This approach therefore allows us to	 indexation. Evaluation procedures would need to develop. If bidders had a wide range of indexation proportions it

 $^{^{18}}$ This assumes that costs increase in line with RPI. It is possible that there may be costs that are actually increasing in line with another measure of inflation.

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use the market to determine an appropriate level of indexation.

- Costly RPI swaps can be avoided which saves consumers paying the costs of hedging unnecessarily. It also makes it easier to terminate the project early if necessary.
- Not needing to have an RPI swap provides greater flexibility and makes refinancing more viable¹⁹.

would make the evaluation result sensitive to outturn RPI. The risk is that if outturn RPI were very different to what we assume when evaluating bids then the bidder who was appointed may turn out not to have offered the lowest net present cost bid.

• Intergenerational fairness issues, particularly if a bidder chooses a very low proportion to index, as the initial revenue would be high in real terms whilst in 20 years it would be low in real terms.

Option 3: Fixed proportion of revenue gets indexed

How this option would work

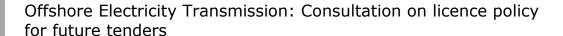
4.18. This policy option would mean that Ofgem would set the proportion of revenue to be subject to inflation prior to inviting bids. The transitional regime policy is effectively a special case of this policy where Ofgem has set the proportion to be indexed at 100%. Under this policy the proportion could potentially be different for each tender but would always be the same for all bidders.

4.19. As an example, we could set the indexation proportion at 20%. This would mean that 20% of the revenue stream would increase with RPI. Taking the example from paragraph 4.14, a year one revenue of £1m with inflation at 3% would increase to $(£1m \times 1.03 \times 20\%) + (£1m \times 80\%) = £1.006m$ for year two. Note this example is only to illustrate the calculation methodology and should not be taken to indicate expected inflation or to indicate the relative value of one policy option over any other.

Pros and cons of having a fixed proportion of revenue to be indexed

Pros	Cons
 Bids are directly comparable without having to make an inflation assumption. 	The natural hedge is unlikely to be 100% effective for any given bidder so bidders still have to manage their
• Revenues are less variable in nominal terms than 100% indexation.	residual RPI exposure which could involve a costly RPI swap.
 Provides a partial natural hedge to OFTO cost inflation. 	Could be more costly for consumers as the real cost of offshore transmission will depend on outturn inflation.
	• RPI swap credit spreads would be less

 $^{^{19}}$ How consumers access the value of a refinancing is considered in Chapter 3 of this consultation.



costly than in the 100% indexation scenario but may still exist and be high relative to the amount being swapped as some of the transaction costs do not scale with the amount being swapped.
Limits scope for index linked financing in future which could make OFTOs less attractive to investors such as pension funds.
OFTO return requirements may increase as investors seeking an RPI linked return would not have so much RPI linked income.

Way forward

- 4.20. Each of these options is currently under review. We believe that the arguments for and against these options are finely balanced. The transitional regime policy has proved effective in facilitating investment and we will be mindful of the value this provides consumers when making our ultimate decision. We invite views from all stakeholders on the relative merits of the options outlined above.
- 4.21. Specific questions which we invite views on are:
- Q4.1 What do you think are the advantages and disadvantages of each indexation policy option? Please explain why.
- Q4.2 Are there other indexation policy options that you think we should also consider?
- 4.22. Respondents are particularly invited to draw on any relevant experience when answering these questions and to provide evidence where possible.

5. Revenue incentives

Chapter summary

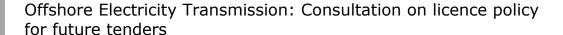
This chapter considers the revenue incentives in the OFTO licence, in particular the availability incentive and the incremental capacity incentive. This chapter sets out potential alternative options that are being considered in light of the types of project that are likely to come forward under the future offshore regime. It outlines our proposal to introduce a capacity weighting mechanism to the availability incentive mechanism. The chapter also outlines our updated proposals for remunerating OFTOs under the incremental capacity mechanism, including the mechanisms for remuneration and the cap on remuneration. It also discusses Transmission Entry Capacity (TEC), transmission losses, and asks what further issues we should consider related to the availability incentive.

Question box

- Q5.1 Do you agree with our proposal to introduce the capacity weighting mechanism to the availability incentive mechanism?
- Q5.2 Do you agree with our proposal not to introduce a penalty differential between planned and unplanned outages to the availability incentive mechanism at this time?
- Q5.3 Are there any further issues that you feel we should consider as part of our enhancements to the availability incentive? If so, why?
- Q5.4 Going forward do you think that the use of TEC for the maximum availability will remain appropriate? If not, what project designs might TEC not be appropriate for and what alternative would there be?
- Q5.5 Do you agree with our intention to remove the ICUA term and only use the ACA cost assessment term to calculate the remuneration required for providing additional capacity?
- Q5.6 Do you agree with our intention to not introduce greater flexibility in relation to remuneration for incremental capacity at this time?
- Q5.7 Do you believe that adding an absolute threshold for incremental capacity would be beneficial? If so, what should the value of the threshold be?
- Q5.8 What are the benefits, drawbacks, risks and considerations in adapting the incremental capacity mechanism to allow Generator build of subsequent phases?

High level overview

5.1. This chapter focuses on the revenue incentives in the OFTO licence, which includes the availability incentive and the incremental capacity incentive. In our previous consultations in December 2011 and May 2012 we considered possible amendments to these incentives.



- 5.2. After analysing responses from the previous consultations as well as input from stakeholder workshops, we have assessed the current incentive mechanisms and considered the relative merits of amending these in light of the types of project which we would expect to come forward under the future offshore regime. In this chapter we provide minded-to positions along with a limited number of options for further consultation.
- 5.3. Since our original proposals on the revenue incentives for the offshore regime in 2009, we have been able to observe the operation of six OFTOs, with the first OFTO being in operation for over 18 months. We therefore are now able to build on this experience to develop new proposals for future tenders. There may be more enhancements relevant for future tenders that could be identified and implemented in the future once further experience has been gained by all parties involved in the tenders.

Availability incentive

5.4. This section outlines the purpose of the availability incentive, and the range of enhancement options we have considered for the future offshore regime. It outlines our proposed enhancement option, the capacity weighting mechanism, and discusses the reasons behind choosing this option.

Background

- 5.5. The availability incentive is designed to incentivise OFTOs to maximise system availability and repair faults promptly in the case of an outage. In our May 2012 consultation, we stated that we were reviewing the availability incentive mechanism because we expect the future offshore regime to evolve in a number of areas going forward, including a more mature OFTO market and larger, more integrated network designs. While the current availability incentive mechanism is fit for purpose, additional benefits for consumers may be found by acknowledging these differences and adapting the availability incentive mechanism to better suit future offshore projects.
- 5.6. Although we believe that our proposals would work for more integrated networks, we are likely to revisit it in the future with regard to coordinated networks and integrated systems in order to fully assess the implications once there is more certainty on integrated project designs.
- 5.7. In the May 2012 consultation we outlined three options for the availability incentive; the current mechanism, as implemented under transitional tender round 2; the capacity weighting mechanism, which penalises the OFTO proportionately more for higher capacity outages²⁰; and the bonus mechanism, which reduces or negates the effect of penalties incurred for outages in times of low or no generation that do not affect the generator's ability to export power.

 $^{^{20}}$ For example, for a transmission system with 2 x 100MW capacity cables, a 1 hour outage of both cables concurrently would be penalised more severely than two separate 1 hour outages where only one cable is unable to export.

- 5.8. We outlined that the capacity weighting mechanism was our preferred option as it was likely to have a positive impact on OFTO behaviour while retaining a largely similar availability based regime.
- 5.9. The majority of respondents supported the capacity weighting mechanism, either implemented on its own or in conjunction with the bonus mechanism, whereas some supported staying with the current mechanism. Concerns raised around moving away from the current mechanism included adding complexity to the availability incentive mechanism and not sufficiently incentivising OFTOs to drive a change in behaviour.

Availability incentive enhancement analysis

- 5.10. Building on the proposals outlined in our May 2012 consultation, we have undertaken further analysis. This analysis has been supported by our technical advisers Arup²¹, and has also taken into account industry views. Through this analysis a number of options for enhancing the availability incentive mechanism were considered.
- 5.11. The current availability incentive mechanism includes a seasonal weighting term which penalises OFTOs more heavily for outages occurring during the winter months when generation is likely to be at its highest. As this term is simple to implement and has proved effective to date, we propose to retain this term, so that it would apply for all the proposals discussed. We recognise, however, that the seasonal weighting term is less dynamic than the proposals outlined below, as the weighting term is set at licence grant, based on forecasts made by the generator at that time.

Options considered - bonus mechanism

- 5.12. The bonus mechanism works by applying an additional bonus incentive mechanism based on lost transmission on top of the current incentive mechanism. This bonus would be positive only and would act to reduce any deduction under the availability incentive when an outage occurred in times of low or no generation. It would negate (where the outage had no impact on generation) or reduce (where the outage had very little impact on generation) the impact of any unavailability deductions that occurred during times of low or no generation.
- 5.13. As discussed in our May 2012 consultation, while this mechanism could incentivise OFTOs to be flexible and plan outages to minimise the impact on the export of power, it could also add complexity. The key factor in this complexity is the added requirement to measure the level of lost transmission. Supported by our subsequent analysis, we do not feel that there is a sufficiently robust method of calculating the level of lost transmission. As such, there is a risk that the bonus calculations could be inaccurate.

²¹ Arup – OFTO Availability Incentive, November 2012: http://www.ofgem.gov.uk/Networks/offtrans/et/Documents1/Arup%20-%200FTO%20Availability%20Incentive.pdf

- 5.14. Furthermore, our analysis has shown that it is likely that the OFTO would have very limited, if any, opportunity to be flexible with outages, or to forecast export power, and so adopting the bonus mechanism would be unlikely to impact the OFTO's behaviour. We also believe that there is already sufficient incentive in the seasonal weighting mechanism to minimise outages during the winter months when generation is likely to be at its highest.
- 5.15. Therefore, as the bonus mechanism is unlikely to have a notable positive impact on the OFTO's behaviour but would add significant risk and complexity, we have decided that this option is not appropriate for the future offshore regime. As a result, we will not be pursuing this option further.

Options considered - differentiation of planned and unplanned outages

- 5.16. A further option considered as part of our analysis was to introduce differentiation between penalties for planned and unplanned outages. This would penalise unplanned outages more heavily, with a view to incentivising the OFTO to prioritise undertaking appropriate planned maintenance to reduce the risk of unplanned outages. This would reflect the fact that unplanned outages often have a larger adverse impact on the generator than planned outages.
- 5.17. This concept could be implemented on its own, or applied in conjunction with the capacity weighting mechanism. This would work by having a capacity weighting for planned outages, and an unweighted but stronger penalty for unplanned outages. See Appendix 4 for further detail.
- 5.18. However, this option may have a limited effect on the OFTO's behaviour over and above what is already incentivised through the current mechanism. The OFTO is already incentivised to minimise unplanned outages through the availability incentive penalties. Increasing this by some percentage is unlikely to affect behaviour due to the high cost of maintenance. Furthermore, as the OFTO will still be penalised for planned maintenance, albeit to a lesser extent, they will not be incentivised to take equipment out of service for planned maintenance over and above the levels required by good industry practice.
- 5.19. This mechanism could also be complex to implement. This is primarily due to the additional reporting requirements on OFTOs to declare whether the outage was planned or unplanned. Although these provisions currently exist, it is likely that they would need revisiting and clarifying before this mechanism could be implemented. This could cause uncertainty on the reporting requirements, adding to the risk profile of the OFTO. There could also be an additional regulatory burden on Ofgem to ensure that the differentiation between planned and unplanned outages are clear, and to resolve any disputes in this area.
- 5.20. Due to this mechanism's complexity, as well as the potentially limited effect on the OFTO's behaviour, we therefore are not minded to differentiate between planned and unplanned outages when calculating penalties at the current time, but we welcome views on whether this enhancement may be beneficial in the future.

Availability incentive enhancement proposal - capacity weighting mechanism

- 5.21. The capacity weighting mechanism option looks not only at the Megawatt hour (MWh) availability (as is the case under the current mechanism) but at the duration of the outage and capacity availability during the outage. The OFTO would be proportionally increasingly penalised, the lower the capacity availability of the export system, to reflect that the average loading of a windfarm is well below the maximum capacity. Therefore fewer penalties would be incurred for an outage that was a result of a small drop in capacity availability over a longer period of time than it would for the same MWh outage that was a result of a large drop in capacity for a short amount of time. See Appendix 4 for further detail.
- 5.22. This mechanism would incentivise the OFTO to maximise capacity availability, thereby minimising impact on the generator's ability to export power.
- 5.23. Some respondents to the May 2012 consultation expressed concern with the complexity of this mechanism; however the majority of respondents were supportive of the proposal. We feel that the detail of this proposal would not add significant complexity to the mechanism or reporting requirements. OFTOs are already required to state the capacity and duration of outages, and we anticipate that the change in the algebra required is minimal. However we would welcome further views on this.
- 5.24. We also feel that any additional minor complexity would be outweighed by the benefits to consumers from having a more targeted incentive, which penalises the outages that most affect export through the capacity weighting.
- 5.25. Based on our analysis, with input from Arup, we believe that, while the current mechanism could continue to work for the offshore regime, introducing the capacity weighting mechanism would improve the performance of the availability incentive. This option further incentivises OFTOs to plan outages to minimise the impact on the generator's ability to export. **We therefore propose to adopt the capacity weighting mechanism for future tenders** and will work up the detail of this proposal in 2013.
- Q5.1 Do you agree with our proposal to introduce the capacity weighting mechanism to the availability incentive mechanism?
- Q5.2 Do you agree with our proposal not to introduce a penalty differential between planned and unplanned outages to the availability incentive mechanism at this time?

Penalty and bonus caps

5.26. Whilst it is important that the availability incentive mechanism keeps the OFTO incentivised in all outage scenarios, it is also important to limit the OFTO's exposure to the incentive to ensure its financial stability. By exposing the OFTO to an appropriate level of risk, this will ensure that the bids received show value for money for consumers. This is because including unnecessarily high levels of risk is likely to increase the revenue stream without a commensurate benefit in performance.

- 5.27. Under the transitional regime, the availability incentive penalty for outages occurring in a given year is capped at 50% of one year's base revenue, spread over up to five years. Therefore, the maximum penalty that the OFTO can suffer in any year is 10% of base revenue. The 10% level was set to provide a significant performance incentive on the OFTO while not being so substantial that it undermines the financial viability of the OFTO. However, to ensure that OFTOs are incentivised in all outage scenarios including longer outages, the maximum penalty for one outage is capped at 50% of base revenue.
- 5.28. There is also up to 5% revenue uplift for availability performance above the performance target level. This was included to provide an incentive on the OFTO to always maximise availability where possible, even above the availability target.
- 5.29. We have considered whether the existing parameters outlined above remain appropriate for the offshore regime going forward. The penalty cap levels have been shown to be effective for the transitional regime in incentivising OFTOs to minimise outages while providing a risk reward profile that offers an efficient cost of capital. This has been demonstrated by the high level of OFTO availability performance to date. We therefore do not feel that it would be appropriate to amend the penalty cap levels at this point. However, we will continue to keep this under review as the market evolves.

Q5.3 Are there any further issues that you feel we should consider as part of our enhancements to the availability incentive? If so, why?

Target availability measurements

- 5.30. For the proposed enhancement to the current availability incentive mechanism described above, we have assumed that the availability target and measurement remains the same as it is for the transitional regime. The current mechanism in place for the transitional regime is that the target availability is 98% and the maximum availability against which the actual availability is measured against is defined as the lower of TEC which is set by the generator, and the Normal Capability Limits of the system. When considering the types of projects and asset configurations for future projects we may need to revisit these assumptions to ensure that the availability incentive appropriately incentivises behaviour.
- 5.31. Larger, more complex projects located further offshore are likely to make use of High Voltage Direct Current (HVDC) technology. The reliability of this type of equipment may vary from the High Voltage Alternating Current (HVAC) technology that we have seen in relation to the transitional projects. We may therefore wish to reconsider whether the 98% target remains appropriate and continues to incentivise the right behaviour.
- 5.32. Not only will projects in the future be larger and more complex, there is also likely to be greater integration between projects. The current mechanism measures availability against a maximum availability which may be given by the TEC. This is the transmission capacity that the generator has agreed with National Electricity Transmission System Operator (NETSO) in relation to the generating

capacity of the windfarm. Additional redundancy over and above the TEC is therefore not included in the maximum availability.

- 5.33. Whilst for the transitional projects TEC was very often similar or indeed the same as the maximum rated capacity of the export cable, we have started to see projects with cross links and cable redundancy where TEC may no longer be an appropriate measure of availability.
- 5.34. We are not minded to change the definition of maximum availability at the moment. This is because it has proved effective for the transitional regime and is the most appropriate metric for a number of project designs. However, we may revisit the use of TEC in the definition of the maximum possible availability in the future and consider the potential use of the rated capacity of the cable instead.
- Q5.4 Going forward do you think that the use of TEC for the maximum availability will remain appropriate? If not, what project designs might TEC not be appropriate for and what alternative would there be?

Incremental capacity incentive

- 5.35. Under the standard licence conditions and the System Operator-Transmission Owner Code (STC), the System Operator may request that an OFTO make additional capacity available to new or existing generators. The Incremental Capacity Incentive Adjustment (ICA) licence term remunerates OFTOs for providing increased capacity.
- 5.36. The ICA term currently includes two separate remuneration mechanisms: the Additional Capacity Incentive Adjustment (ACA) and the Incremental Capacity Utilisation Adjustment (ICUA). ACA is meant for cases where the OFTO undertakes major capital expenditure in order to provide the increased capacity. The OFTO submits a notice to The Authority that sets out its costs for providing the additional capacity, and The Authority determines the revenue adjustment required to cover the efficient costs reasonably incurred.
- 5.37. ICUA is meant for circumstances where the OFTO is largely using its existing assets (headroom) to provide the new capacity and requires no or minor capital expenditures in order to do so. The formula for ICUA derives a £/kW value for providing the extra capacity.
- 5.38. We have found that the ICUA term has a high potential to provide too much or too little compensation to the OFTO, depending on the relevant year that the incremental capacity begins. For example, an OFTO that adds incremental capacity in an early year receives the same \pounds/kW revenue driver for each remaining year as an OFTO that adds the capacity in a later year. As a result, the OFTO that adds the capacity in a later year may not receive enough revenue to cover its costs of even minor capital expenditures, while the OFTO that adds the capacity early in its revenue stream could accrue significant levels of additional revenue, even if costs of providing the new capacity are low.

- 5.39. We examined changing the ICUA formula to mitigate these risks, either by reducing the \pounds/kW value that licensees receive, or by varying the \pounds/kW value upwards or downwards depending on the number of years remaining on the revenue stream. Both partially mitigated the risk of overcompensation, but neither addressed the risk that OFTOs might be undercompensated in later years.
- 5.40. For future offshore projects we believe that it will be in the best interests of consumers to remunerate all incremental capacity through the ACA term whether using existing headroom or not. This would allow The Authority to examine what costs an OFTO faces when using its existing headroom, to determine whether these costs are economic and efficient investments, and to compensate appropriately. We expect these to vary on a case-by-case basis and in a way that is difficult for a \pounds/kW revenue driver to address. We therefore seek views on removing the ICUA term from OFTO licences and modifying the wording of the ACA term such that OFTOs can submit their costs for using existing headroom for incremental capacity to The Authority in order to determine the efficient costs reasonably incurred in doing so. ²²

Q5.5 Do you agree with our intention to remove the ICUA term and only use the ACA cost assessment term to calculate the remuneration required for providing additional capacity?

Incremental capacity threshold for phased projects

- 5.41. In our May 2012 consultation we asked stakeholders for their views on introducing greater flexibility to the OFTO licence's incremental capacity provisions for certain phased projects. Currently OFTOs can be reimbursed for additional costs associated with providing incremental capacity to a generator, provided those costs are no more than 20% of the OFTO's original investment cost.
- 5.42. We noted that there may be benefits to, on a case-by-case basis, adding additional flexibility to the incremental capacity threshold so as to enable incumbent OFTOs to take forward an additional project phase. This could apply to cases where the value of a subsequent integrated phase is significantly smaller than that of the original phase but is still greater than the 20% threshold.
- 5.43. While respondents to the May 2012 consultation were generally supportive of allowing additional flexibility in this area, there was a general view that further detail was needed on any alternative arrangements before determining the appropriateness of the approach. We have undertaken some preliminary analysis on the financial benefits and practicalities of any revised approach.
- 5.44. Under the incremental capacity provisions, when OFTOs provide additional capacity, their major capital costs for doing so are reimbursed following a determination by Ofgem on the associated economic and efficient costs. For very

 $^{^{22}}$ Note that we do not intend to change the ICA provisions for any existing or future Transitional Round 1 or 2 licensees. This is because bids and commercial decisions for these projects were made on the basis of the existing arrangements.

small, low asset value phases or increments – where the savings that result from competitive tenders may be outweighed by the cost of tendering – the incremental capacity process has the potential to result in savings by avoiding the fixed costs of running a tender and developing new contractual and operational interfaces. However, for larger phases, where asset values are higher, the savings from competitive tenders are likely to outweigh the costs of running a tender.

- 5.45. Currently planned project phases for future projects are mostly large in size (circa 500MW) relative to transitional projects and we expect them to have relatively high transmission asset values. Therefore, there are likely to be strong financial benefits to competitive tenders in most cases.
- 5.46. From a practical perspective, there are likely to be timing challenges associated with an incumbent OFTO taking forward an additional project phase through expanded incremental capacity provisions. Under the incremental capacity processes, several steps need to occur before the additional capacity is added. These include agreement between the OFTO, NETSO and generator on the connection for the additional capacity, and work between the OFTO and Ofgem on the economic and efficient costs associated with the additional assets. Once these steps have concluded, the licensed OFTO would construct the necessary additional assets to deliver the agreed additional capacity.
- 5.47. Completing the above contracting and construction steps may not meet the compressed timescales that future phased projects are planning. For example, many future projects plan to construct and commission phases at yearly intervals. It would be challenging for an incumbent OFTO to take forward the contracting and constructing aspects of incremental capacity within these short timescales.
- 5.48. Based on the above initial findings, we are minded to maintain the current incremental capacity provisions. However, we recognise that planned project timelines and designs continue to evolve so we will keep this area under review as further detail emerges on the size, timing and location of transmission links within project phases. In line with our work on coordinated asset development, we will also be examining how the incremental capacity provisions interact with anticipatory investment²³.

Q5.6 Do you agree with our intention to not introduce greater flexibility in relation to remuneration for incremental capacity at the moment?

Introducing an absolute cap on the incremental capacity threshold

5.49. Given the financial considerations outlined above (the cost of running a tender versus the savings from competition), and as asset values grow in line with the development of larger projects, the current 20% threshold could represent significant incremental capacity. We are seeking views on whether it is

²³ We define anticipatory investment as ' capital expenditure that supports anticipated future network requirements, rather than the immediate needs of a single offshore generation phase'.

worth adding an absolute threshold to the current proportional one. For example, the incremental threshold could become: 20% of initial investment or £x million, whichever is lower. An absolute threshold could ensure that high value assets retain the benefits of competition, while also ensuring incumbent OFTOs are only obliged to offer terms for and undertake a reasonable level of incremental investment. It may equally be appropriate that the threshold is set on a project specific basis.

Q5.7 Do you believe that adding an absolute threshold for incremental capacity would be beneficial? If so, what should the value of the threshold be?

Adapting incremental capacity for Generator build

- 5.50. We continue to explore options where it may be beneficial to allow a generator to build highly integrated projects with smaller successive phases, which are then owned and operated by a single licensee. This might be of benefit where timescales for building out and operating phases are compressed (as set out in paragraph 5.47).
- 5.51. One such option would be where generators could build incremental asset phases, and then have them transferred to an existing licensee, if they fall under the incremental capacity threshold²⁴. There may be benefit to considering such an option for future projects as it could facilitate the integrated construction of the assets. However, changes to the legislative, licensing and tender evaluation framework would likely be required. We intend to undertake further work to assess such an option's benefits and risks, and to scope any enabling framework adaptations.
- Q5.8 What are the benefits, drawbacks, risks and considerations in adapting the incremental capacity mechanism to allow Generator build of subsequent phases?

Transmission losses

5.52. A key aspect of the offshore regime is to ensure that transmission assets are constructed, operated and maintained in the most economic and efficient manner. Transmission losses relate to the losses incurred as the electricity flows through the resistance of an offshore transmission system. We are keen to ensure that there is sufficient incentive to minimise these losses where it is economic and efficient to do so. Our technical advisers Arup have supported our work on what factors affect the levels of transmission losses on an OFTO system. This work suggests that for a 1000MW windfarm, located 100km offshore, the transmission loss levels would be around 3-5% of total windfarm output with the loss levels mainly dependent on the design of the system.

 $^{^{24}}$ Under the current incremental capacity mechanisms, licensees are responsible for ensuring that the assets are constructed.

5.53. Our analysis, supported by Arup's work, shows that the most effective way to control transmission losses is through the design of the transmission assets. Through the Generator build option, there is no way to incentivise this behaviour through the OFTO licence, as the assets will already be operable when the licence is granted.

Operational phase

- 5.54. Our analysis also shows that during the operational phase of the assets, the OFTO has very little opportunity to control loss levels. This is due to a number of reasons. The loss levels are determined by two factors; load losses and no load losses. The no load losses are dependent on the design of the system; therefore the OFTO has no control over these.
- 5.55. The load losses are dependent on the amount of electricity going though the OFTO system. The OFTO is not able to control the amount of electricity flowing through the system without declaring the assets unavailable, and availability is already incentivised through the availability incentive. Therefore the OFTO has very little opportunity to influence either the load losses or the no load losses.
- 5.56. We have therefore concluded that during the operational period the OFTO has limited ability to actually influence the transmission losses of the system once it has been installed and therefore no incentive should be added to the OFTO licence for the operational period.

Design phase

- 5.57. Reducing transmission losses overall is an important consideration in the delivery of efficient transmission systems and we are looking at ways to incentivise the minimisation of these losses through the design of the offshore transmission assets. Our analysis has suggested that although transmission losses are an important factor in determining the most economic and efficient design of the system, there are many other and sometimes more significant factors that will inform design and procurement options, such as planning constraints and reliability of the assets. Furthermore, this analysis shows that low loss designs can lead to low capex designs.
- 5.58. Our cost assessment process for Generator build considers the costs and spend associated with the design and construction of the transmission assets and considers whether these costs are economic and efficient. Part of this assessment could in future include specific analysis of the transmission losses associated with the assets. More detail of our plans for cost assessment review can be found in Chapter 6. For OFTO build projects we intend to further develop our policy to ensure that transmission losses are minimised where economic and possible, therefore work in this area is ongoing.

6. Next steps and interdependencies

Chapter summary

This chapter sets out the next steps we expect to undertake in developing the OFTO licence and the related documents we intend to publish in order to refine the offshore regime. It also provides an early indication of potential interdependencies between work on the RIIO licence, the tender process under the future offshore regime and coordinated network development for offshore transmission.

Question box

- Q6.1 What further areas relating to your planned or potential future projects do you think that Ofgem should consider in order to help facilitate the efficient delivery of the OFTO build model?
- Q6.2 Do you have any comments on the relevance of changes to the RIIO licence on the OFTO licence?

Next steps

- 6.1. Following the close of this consultation, responses will be analysed and further work will be carried out to assess how the policy proposals presented here will be taken forward and implemented through the OFTO licence.
- 6.2. We expect to publish a position paper in spring 2013 which will provide further details, including minded-to positions, on a range of policy areas including those in this consultation related to the OFTO licence, the offshore tender regulations and process.
- 6.3. We expect to publish detailed drafting for the 'generic' OFTO licence for Generator build tenders in mid to late 2013 to ensure that they are available ahead of commencing the ITT stage for the first future offshore tenders.

Interdependencies

OFTO build

6.4. We have consistently set out that we expect the OFTO build option to deliver consumer benefits into the long term, through enabling greater competition and attracting new entrants across the supply chain and the bidding community. Currently we expect the first future projects to be tendered under the Generator build option and so in this document we have focused on the Generator build licence. We have previously consulted on our approach to OFTO build, and will continue to develop our detailed proposals with respect to OFTO build in consultation with stakeholders. In our December 2011 and May 2012 consultations we set out further detail of the OFTO build model. We anticipate the

revised tender regulations will come into force in early 2013. They will enable the delivery of OFTO build tenders. At this stage, adoption of the OFTO build option by generators is a key challenge to the delivery of the OFTO build model. We recognise that there may currently be outstanding aspects of the OFTO build model that would need tailoring to the specific needs of upcoming projects in order to facilitate the efficient delivery of the OFTO build model.

Q6.1 What further areas relating to your planned or potential future projects do you think that Ofgem should consider in order to help facilitate the efficient delivery of the OFTO build model?

2013 Tender Regulations

- 6.5. Draft tender regulations for the future offshore regime were consulted upon recently, with the consultation closing on 5 November 2012²⁵. The regulations were developed following the previous consultations on enduring regime policy in December 2011 and May 2012, where we established our minded-to policy positions to ensure the regime meets the needs of future projects. We anticipate that the 2013 Tender Regulations will come into force early next year.
- 6.6. The tender regulations set the framework for the competitive process to grant a licence to an OFTO, rather than details of an OFTO's obligations and rights once appointed. Any changes to OFTO licence policy under consultation in this document will not impact upon the tender regulations.

RIIO licence

- 6.7. The second informal consultation on the first RIIO Transmission and Gas Distribution price controls (RIIO-T1 and GD1) has recently concluded ahead of a statutory consultation later in the year to implement changes to the existing licences²⁶.
- 6.8. We published an open letter on 7 November 2012 highlighting the RIIO licence conditions which stakeholders of the future offshore regime should review in light of potential read across to the OFTO licence. If you have any comments on the possible relevance of RIIO changes to the OFTO licence, please respond to our open letter by 5 December 2012²⁷ and include them in your response to this consultation. Should we wish to make any changes to the OFTO licence in light of the RIIO-T1 licence we will consult further prior to making any changes.

²⁵ Open Letter: Draft Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2012 for consultation, September 2012, (Ref 120/12).

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=307&refer=Networks/Trans/PriceControls/RIIO-T1/ConRes

²⁶ RIIO-T1 and GD1: Draft licence conditions – Second informal licence drafting consultation, October 2012, (Ref 138/12):

[/]PriceControls/RIIO-T1/ConRes

27 Licence modifications through the RIIO-T1 price control – Potential impacts on Offshore Transmission Owners (OFTOs), November 2012 (Ref 147/12): http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=89&refer=Networks/offtrans/pdc/cdr/2012

Q6.2 Do you have any comments on the relevance of changes to the RIIO licence on the OFTO licence?

Coordinated network development

- 6.9. In March 2012 we published the joint DECC/Ofgem Offshore Transmission Coordination Project (OTCP) conclusions report, which described six key potential barriers to coordination and set out high level proposals for how these may be dealt with.
- 6.10. We have since been working with DECC to help remove these barriers. As part of this, we published a consultation that invited views on potential improvements to offshore network planning documents along with potential measures to support investment in offshore transmission assets which go beyond the needs of a single developer²⁸. In July we published an open letter to give an update on our policy developments in these areas, and to consult further on specific areas²⁹.
- 6.11. We will shortly be publishing a consultation that sets out, and invites views on, our proposed framework to support the delivery of investment in offshore transmission which goes beyond the needs of a single developer. This includes measures to support investment in offshore transmission assets that support the later connection of specific phases of offshore generation and offshore assets that provide wider network benefits.
- 6.12. Over the coming months, we also intend to consider how relevant aspects of tender and OFTO licence policy would apply to coordinated assets. This will include looking at the tender regulations and processes, as well as OFTO licence areas such as the availability incentive or incremental capacity incentive with a view to how these support coordinated assets.

Integrated Transmission Planning and Regulation project

6.13. In March 2012 we launched the Integrated Transmission Planning and Regulation project (ITPR)³⁰. This is a proactive review of the network planning and delivery arrangements for electricity transmission. It is considering how our arrangements will facilitate a future integrated system for onshore and offshore transmission and interconnection. In November 2012 we published an open letter

²⁸ Offshore Transmission - Consultation on potential measures to support efficient network coordination, March 2012, (Ref 26/12):

 $[\]frac{\text{http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=12\&refer=Networks/offtranspt/cdr/2012}{\text{s/pdc/cdr/2012}}$

²⁹ Offshore Transmission: update on coordination policy developments, July 2012, (Ref

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=49&refer=Networks/offtrans/pdc/cdr/2012

³⁰ Open Letter: Planning for an integrated electricity transmission system, March 2012, (Ref 37/12):

 $[\]label{lem:mattor:mat$

seeking further views about some of the barriers to facilitating an integrated network³¹.

6.14. As part of our strategy for the RIIO model of price control, we stated that we would develop a framework to allow third parties to build, own and maintain parts of the onshore electricity transmission network³². We are now undertaking this work as part of ITPR. This will ensure that we take a coordinated approach to our examination of the costs and benefits of a potential extension to the use of competition.

Cost assessment

- 6.15. We are currently working towards publishing an offshore cost assessment guidance document, which will cover our current approach to determining economic and efficient costs of offshore transmission assets. Following this, we expect to consult on a methodology around the future development of the offshore cost assessment process. This will discuss options for how we can develop the current process, as well as outlining some alternatives as to how the cost assessment process could develop in the future.
- 6.16. Ongoing work on the future offshore regime has flagged potential opportunities to consider how the cost assessment process interacts with a number of areas where we believe consideration of asset life-cycle costs would be beneficial. One such example is transmission losses as discussed in Chapter 5.

Industry codes and standards

6.17. Our initial view is that the policy proposals contained herein will have minimal impact on the industry codes and frameworks. However, we will continue to review this as we develop the OFTO licence drafting in more detail.

Commissioning and full commencement

- 6.18. We are working with DECC on issues relating to full commencement to develop a solution which balances the preference for generators to be able to commission their transmission assets, under the Generator build option, with the need for ensuring that generators transfer the transmission assets to the OFTO in a timely manner.
- 6.19. We are continuing to consider how existing transitional projects should be treated with a view to recognising their transitional nature whilst also ensuring

³¹ Open Letter: Update on the Integrated Transmission Planning and Regulation Project – request for further views and evidence, November 2012, (Ref 147/12): http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=117&refer=Networks/Trans/ElecTransPolicy/itpr

^{/&}lt;u>ElecTransPolicy/itpr</u>

32 RIIO-T1: Implementing competition in onshore electricity transmission – update, April 2012:

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=192&refer=Networks/Trans/PriceControls/RIIO-T1/ConRes

they are transferred as soon as is reasonably practicable. It remains the basis of DECC and Ofgem policy, and the efficient running of the competitive tender process, that both transitional and Generator build transmission systems are transferred to an OFTO as soon as possible after the assets have been constructed and are available for use.

- 6.20. DECC proposes that one of the measures in the Energy Bill will address the concerns raised by developers regarding the commissioning of transmission assets.
- 6.21. The Energy Bill was published on 29 November 2012³³. The intent of the offshore transmission measure is to enable generators constructing offshore transmission assets under the Generator build option to convey electricity for a defined period in certain circumstances. It provides an exception to the prohibition on transmission without a licence during generator commissioning activities and during the period leading to OFTO licence grant, while still ensuring that generators transfer the transmission assets to the OFTO in a timely manner.

³³ The Energy Bill can be found at: http://www.decc.gov.uk/en/content/cms/legislation/energybill2012/energybill2012.aspx

Appendices

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Appendix 1 – Consultation response and questions

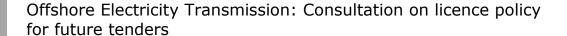
- A1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document.
- A1.2. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.
- A1.3. Responses should be received by 22 February 2013 and should be sent to:

Megan Smith
Offshore Enduring
9 Millbank, London, SW1P 3GE
020 7901 7091
offshore.enduring@ofgem.gov.uk

- A1.4. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.
- A1.5. Respondents who wish to have their responses remain confidential should clearly mark the document(s) to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.
- A1.6. Any questions on this document should, in the first instance, be directed to:

Megan Smith
Offshore Enduring
9 Millbank, London, SW1P 3GE
020 7901 7091
offshore.enduring@ofgem.gov.uk

A1.7. With the exception of the questions outlined below, there are no questions in relation to other chapters in this document.



Chapter 2: Revenue framework

Q2.1 Do you agree that the 20 year revenue term is still appropriate for point to point systems?

Chapter 3: Refinancing

- Q3.1 What do you think are the advantages and disadvantages of each refinancing policy option? Please explain why.
- Q3.2 Are there other refinancing policy options that you think we should also consider?
- Q3.3 What are the benefits of OFTOs coming under common ownership and what are the associated issues that Ofgem should consider? To what extent should we capture any gains from OFTOs coming under common ownership?

Chapter 4: Indexation

- Q4.1 What do you think are the advantages and disadvantages of each indexation policy option? Please explain why.
- Q4.2 Are there other indexation policy options that you think we should also consider?

Chapter 5: Revenue incentives

- Q5.1 Do you agree with our proposal to introduce the capacity weighting mechanism to the availability incentive mechanism?
- Q5.2 Do you agree with our proposal not to introduce a penalty differential between planned and unplanned outages to the availability incentive mechanism at this time?
- Q5.3 Are there any further issues that you feel we should consider as part of our enhancements to the availability incentive? If so, why?
- Q5.4 Going forward do you think that the use of TEC for the maximum availability will remain appropriate? If not, what project designs might TEC not be appropriate for and what alternative would there be?
- Q5.5 Do you agree with our intention to remove the ICUA term and only use the ACA cost assessment term to calculate the remuneration required for providing additional capacity?
- Q5.6 Do you agree with our intention to not introduce greater flexibility in relation to remuneration for incremental capacity at this time?
- Q5.7 Do you believe that adding an absolute threshold for incremental capacity would be beneficial? If so, what should the value of the threshold be?

Q5.8 What are the benefits, drawbacks, risks and considerations in adapting the incremental capacity mechanism to allow Generator build of subsequent phases?

Chapter 6: Next steps and interdependencies

- Q6.1 What further areas relating to your planned or potential future projects do you think that Ofgem should consider in order to help facilitate the efficient delivery of the OFTO build model?
- Q6.2 Do you have any comments on the relevance of changes to the RIIO licence on the OFTO licence?

Appendix 2 – Impact assessment for refinancing and indexation options

Summary

- A2.1. In this document we have set out a number of policy options in respect of refinancing and indexation. In order to develop robust policy that meets its objectives in an efficient way we are conducting an impact assessment at this initial consultation stage. We expect that a further impact assessment will be required at the point The Authority announces its decision on each policy option.
- A2.2. We have undertaken a high level analysis of the impacts of each policy option. Because this is an initial consultation stage impact assessment we have been proportionate in the extent of the analysis that we undertake to assess impacts. We have been quantitative where it is possible to produce meaningful quantitative conclusions. In addition we have undertaken a qualitative assessment of the impacts to help us understand some of the impacts which cannot so easily be quantified.
- A2.3. In order to make the most informed and reliable decisions we need evidence of the likely impacts of each option. As this impact assessment is published as part of our initial consultation on these issues we seek evidence from respondents. Any respondent who wishes to submit evidence of the likely impacts of each policy option should send that evidence as part of their consultation response clearly marked as evidence for consideration in the decision stage impact assessment. Responses received will be published on the Ofgem website unless they are clearly marked as confidential.

Key issues and objectives

- A2.4. This impact assessment concerns two policy areas:
 - Treatment of refinancing of OFTO debt.
 - Indexation of allowed revenues.
- A2.5. There is an established policy for each of these areas under the transitional regime. We are now developing the future offshore regime, under which some transmission assets may be quite different potentially further from shore, more complicated in design and possibly built by an OFTO. These different circumstances mean there is a need to consider if the same policy is still appropriate.
- A2.6. Our objective in reviewing these policy areas is to perform our primary statutory duty of protecting consumers' interests. Specifically we aim to provide a

regulatory regime for offshore transmission that allows current and future consumers to benefit from the lowest possible cost of offshore transmission.

A2.7. In considering the policy options we have considered how each serves to reduce the cost of offshore transmission and also the impact it may have on competition for OFTO licences and the funding market.

Options

A2.8. We have considered several options for each policy area:

Refinancing	Indexation
 Status quo – there is no gain share and bidders are at liberty to price in, or not, their refinancing assumptions. Any refinancing gain is shared with consumers. Losses are not shared. 	 Status quo – 100% of the allowed revenue is indexed. Bidders are free to choose in their bid what <i>proportion</i> of allowed revenue they wish to be indexed (referred to as biddable indexation). The proportion of allowed revenue that is indexed is fixed by Ofgem before bidding.

A2.9. These options are described in more detail in Chapters 3 and 4 of this document. We are looking at how each of these policy options impacts on the cost of offshore transmission.

Impacts on consumers

A2.10. We have summarised the qualitative consumer impacts that we have identified in Chapters 3 and 4 of this document. We also appointed EY to analyse the costs and benefits of the policy options. Their analysis is published alongside this document. We summarise below key quantitative consumer impacts identified by EY.

A2.11. In line with Better Regulation guidance³⁴ we do not attempt to quantify costs and benefits which cannot be reliably estimated. There is real value in the qualitative assessments and it is not helpful in reaching a conclusion to have spurious figures for costs or benefits.

Quantitative impacts of refinancing options

A2.12. Costs and benefits have been assessed relative to the transitional regime policy in which bidders take the refinancing risks and rewards. EY estimate that for an OFTO project taken forward under the Generator build option with a capital value of £300m the potential refinancing gain could be £10-35m depending on

³⁴ Guidance on Impact Assessments, December 2009, (Ref 151/09): http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=12&refer=About us/BetterReg/IA

which terms were renegotiated in the refinancing. EY note in their report that these gains are based on "highly aggressive refinancing assumptions" which they "do not consider are deliverable in the current funding market". These figures should be taken to be indicative only since any gain figure is wholly dependent on the specific assumptions made in relation to the improvements in funding terms. Details of how each term impacts on refinancing gains are shown in the EY report³⁵. For ease of reference the four parameters that EY assumed in respect of changes in financing terms are shown below:

Parameter	Value
Reduction in margins	100 bps
Reduction in cover ratios	0.05
Release of debt service reserve account	Yes
Tenor extension	6 months

A2.13. At this stage we are consulting on the high level policy options and have not specified what percentage of a gain might be shared. However, for illustrative purposes we assume that gains might be shared 50:50.

A2.14. The potential costs of option 2 have not been fully quantified because reliably estimating the monetary value of the impact on investor appetite and competition for OFTO licences is very complex. We do not believe that such quantification is proportionate at this stage of consultation.

For a notional £300m OFTO appointed via Generator build tender	Option 1: Transitional round approach	Option 2: Gain share Sharing at 50% for illustrative purposes
Potential cost relative to transitional regime approach	£nil	Not quantified
Potential benefit relative to transitional regime approach	£nil	£5.0-17.5m

Source: Ernst & Young 2012 - Analysis of Policy Options for the Enduring Regime

A2.15. EY's approach and assumptions for producing this analysis are set out in their report. For ease of reference the key assumptions are restated below:

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³⁵ Ernst & Young – Analysis of Policy Options for the Enduring Regime, November 2012: http://www.ofgem.gov.uk/Networks/offtrans/et/Documents1/Ernst%20and%20Young%20-%20Analysis%20of%20Policy%20Options%20for%20the%20Enduring%20Regime.pdf

Parameter	Value
Capital cost	£200m
Assumed base case RPI rate	2.5%
Interest rate swap	2.070%
RPI swap rate	2.875%
RPI swap credit margin	0.30%
Proportion of TRS swapped out	84%

Quantitative impacts of indexation options

A2.16. Costs and benefits have again been assessed relative to the transitional regime approach. EY considered the costs and benefits of each indexation policy option over a range of inflation scenarios because there is uncertainty over what inflation will be for the next 20 years. The assumptions EY used to produce their estimates are detailed in their report. Based on the EY analysis we estimate potential costs and benefits in net present value terms as follows:

For a notional £200m OFTO appointed by Generator build tender	Outturn inflation	Option 1: Transitional round approach	Option 2: Biddable indexation ³⁶	Option 3: Fixed proportion indexed ³⁷
Potential cost relative to transitional	0.0%	£nil	£49m	£49m+
	2.5%	£nil	£1m	£1m+
regime approach	5.0%	£nil	£nil	£nil
Potential benefit relative to transitional regime approach	0.0%	£nil	£nil	£nil
	2.5%	£nil	£nil	£nil
	5.0%	£nil	£33m	£33m-

Source: Ernst & Young 2012 - Analysis of Policy Options for the Enduring Regime

 36 This assumes that 14% of costs are linked to RPI and hence that the bidder chooses to have 14% of their revenue increase in line with RPI.

³⁷ The figures shown assume that the proportion of revenue was fixed at 14% and uses the same assumption that 14% of costs are linked to RPI. If we were to adopt this option and fix a certain proportion of revenues to be indexed, then it is likely that this would not exactly match the proportion of index-linked costs for any bidder so they may still take out some RPI swaps. The associated hedging costs would increase the costs and reduce the benefits of this option.

- A2.17. When reading the table above please note that the range of outturn inflation values shown should not be taken to indicate the likelihood of any specific outturn inflation. The range of outturn inflation is merely taken to show how the cost or benefit for the consumer varies for a range of inflation values. In reality outturn inflation is likely to be none of the precise values shown above but somewhere between (or above or below) them. For comparison the RPI swap rate assumed for this analysis is 2.875%. Due to the non-linearity of the relationship between outturn inflation and consumer cost/benefit the above table cannot be used to predict the cost or benefit for other outturn inflation values. This table also doesn't indicate the potential variability in cash flows and how this differs for each policy option. That effect is described in the body of the consultation along with the impact of RPI swap credit spreads and swap breakage costs.
- A2.18. We also note that we do not expect that any of these options will have a significant impact on quality of service, innovation or network reliability since these policies relate to the financing of the transmission business only and do not have a direct impact on operational behaviour.
- A2.19. Any impact on consumers will have a particular impact on vulnerable consumers. These impacts are considered further under the heading of 'Impacts on sustainable development'.

Impacts on competition (including effects on small businesses)

- A2.20. These policy options, particularly the refinancing options, potentially have a significant impact on competition for OFTO licences. We do not believe it is possible to reliably quantify this impact but it is possible to value the qualitative assessment of impact on competition.
- A2.21. Implementing an asymmetric gain share would likely be seen by investors as making OFTO investment less attractive. We would therefore expect this to lessen investor appetite and potentially reduce the number of market participants. This could reduce the strength of competition and potentially result in higher operating costs.
- A2.22. The impact on OFTO investors of the indexation options will depend on their appetite for RPI linked income. We are seeking stakeholders' views on investors' appetite for RPI linked income through our consultation.

Impacts on sustainable development

Managing the transition to a low carbon economy

A2.23. Offshore transmission is a necessary part of the deployment of offshore wind which is a low carbon source of electricity generation. What we are seeking to do through this consultation is ensure the most cost effective way of connecting offshore generation. To that end, whichever policy option we ultimately decide upon is helping to facilitate the transition to a low carbon economy, though we acknowledge that this is an indirect impact.

Eradicating fuel poverty and protecting vulnerable consumers

A2.24. The options we are consulting on potentially reduce costs for consumers overall and may impact on the timing of costs for consumers. Thus they are working towards the aim of eradicating fuel poverty and protecting vulnerable consumers. However, these proposals do not have a targeted impact on the fuel poor or vulnerable consumers.

Promoting energy savings

A2.25. We do not believe that our proposals will have any direct impact in this area.

Ensuring a secure and reliable gas and electricity supply

A2.26. We do not believe that our proposals will have any direct impact in this area.

Supporting improved environmental performance

A2.27. We do not believe that our proposals will have any direct impact in this area.

Impacts on health and safety

A2.28. We do not believe that our proposals will have any direct impact in this area.

Risks and unintended consequences

A2.29. We have identified a number of key risks that could lead to unintended consequences, including:

- **Inappropriate assumptions** if the assumptions used in the quantitative analysis are not representative of actual OFTOs then costs and benefits may not be as we expect.
- Adverse impact of policy options several of the policy options have both potentially positive and negative impacts. Depending on which option is chosen and how it is implemented the overall impact could be negative and cause reduced competition and/or higher offshore transmission costs.

Other impacts

A2.30. There would be impacts on Ofgem's internal resources as a result of implementing any of these proposals. We will consider the details of

implementation once we have chosen a high level policy option. For the time being we have identified the key challenges for implementation and how they could be overcome.

- A2.31. Option 1 for each of indexation and refinancing policy has already been implemented for the transitional regime. Therefore we consider that implementation for the future offshore regime would be relatively simple.
- A2.32. Option 2 for refinancing involves implementing a sharing mechanism. We believe that such a mechanism could be implemented through changes to the amended OFTO standard licence conditions, potentially by making changes to the revenue allowance. The amended standard conditions allow us a reasonable amount of flexibility and therefore we do not believe there is a need to consider the details of implementation any further for the time being.
- A2.33. Option 2 for indexation would require us to make changes to the way we evaluate bids. We would have to evaluate bids in terms of net present cost and would have to make an assumption about inflation in order to do so. This is possible and whilst there are complexities of the approach which would need more consideration prior to implementation, we do not believe it is proportionate to address those issues before deciding on a high level policy option.
- A2.34. We do not believe that implementing option 3 for indexation would have a significant resource impact because it would not require significant changes to either the evaluation process or the ongoing regulation of OFTOs.

Post implementation review

A2.35. It is important to assess the ongoing impact of our policy and we plan to do that for refinancing and indexation through the ongoing regulatory reporting that OFTOs are already subject to.

Conclusion

A2.36. All options are open for consultation and we have no preferred option at this stage. We invite evidence from all stakeholders on the impacts of each option.

Appendix 3 – Summary of responses to 'Updated proposals for the enduring regime', May 2012

Introduction

- A3.1. The 'Offshore Electricity Transmission: Updated proposals for the enduring regime' document set out Ofgem's minded-to position on the tender arrangements for both Generator build and OFTO build options under the future regime for offshore transmission. The consultation also set out further policy proposals and sought stakeholder feedback on several aspects of the OFTO licence under the future offshore regime and on running tender exercises for phased and staged projects. Responses from stakeholders were sought by 17 July 2012.
- A3.2. The responses summarised within this appendix relate to all aspects of the May 2012 consultation, not just those that relate to the areas covered by this consultation. The responses specific to the 2013 Tender Regulations were included in the September 2012 consultation on the tender regulations. A summary of these is included again below for completeness.
- A3.3. This appendix provides an overview of the key themes from the responses. Copies of all non-confidential responses are available on the Ofgem website³⁸.

Generator build option

Q2.1 Are there any areas of the OFTO of Last Resort process on which you feel further clarity is needed?

- A3.4. Generators generally wanted reassurance that they would not be disadvantaged by the OFTO of Last Resort process, in terms of ability to export, Transmission Network Use of System (TNUoS) charges and reimbursement for ongoing maintenance.
- A3.5. Some bidders sought clarification about cost assessment, particularly how the assets would be valued and whether the OFTO licence would be changed to reflect any material issues with the assets. Another clarification sought was whether the reserve bidder would be considered for the OFTO of Last Resort.
- A3.6. A few respondents considered the criteria for starting an OFTO of Last Resort process to be subjective, and a couple of respondents were concerned that poor performance would be picked up too late as a lot of reporting is retrospective.

³⁸ Offshore Electricity Transmission: Updated proposals under the enduring regime, May 2012 (Ref 72/12) – Associated documents: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=45&refer=NETWORKS/OFFT RANS/PDC/CDR/2012

Q2.2 Do you agree that option 2 is the most appropriate enhancement for the availability incentive to incentivise OFTOs to plan outages with regard to maximising exported energy? If not, which option offers the optimal way forward for the enduring regime?

- A3.7. The majority of respondents were supportive of option 2 (a capacity weighted availability incentive mechanism), with some highlighting that it could be further improved by combining it with option 3 (a bonus mechanism). There were also a number of respondents who favoured option 3, although a few suggested there may be issues with implementing option 3 in practice. A number of respondents also requested further clarity on the proposals in order to be able to comment in more detail.
- A3.8. A few bidder respondents suggested that maintaining the current incentive (option 1) was the best option as it incentivises OFTOs sufficiently already. They noted that option 2 (a weighted availability incentive) could penalise them more as penalties could accrue faster than under the current mechanism. They also argued that an availability-based incentive with option 3 (a bonus mechanism) would expose OFTOs to downside risk, on the basis that competition would force them to drive down prices, having to assume that outages may be scheduled for times of low wind.
- A3.9. A number of respondents noted that coordinated assets should be further considered as none of the options fully accounted for these.

OFTO build option

Q3.1 What are your views on the anticipated costs an unsuccessful bidder may incur in developing an OFTO build bid at the ITT stage, and how Ofgem might approach calculating an allowance for costs?

- A3.10. In general, responding bidders were in favour of the proposal that Ofgem should reimburse a proportion of the fees incurred in developing ITT bids. They were in agreement that the bid costs incurred under OFTO build would be higher than under Generator build. Potential bidders offered different options as to how we might determine the amount reimbursed. These tended towards an approach in which Ofgem set a fixed allowance or amount for each unsuccessful bidder.
- A3.11. There was a more mixed response from generators. Half of respondents stated that reimbursement for unsuccessful bid costs was not standard practice and were opposed to the proposal. However, the other half recognised there may be benefits to such a mechanism in some circumstances. They recommended strict criteria to manage any reimbursement.
- Q3.2 Do you have any comments on our proposals for: i) qualifying project requirements, including the potential to require one or more additional qualifying project requirements in order to provide additional assurance that a project will be taken forward by a generator? ii) tender entry conditions?

- A3.12. While the majority of respondents were not persuaded that additional qualifying project requirements were necessary, there were some who saw benefit in including evidence that the generator will fund preliminary works³⁹.
- A3.13. We also consulted on proposed tender entry conditions for OFTO build. Most respondents were of the view that the proposed list was reasonable; although a couple of respondents sought further clarification on the final condition to 'comply with any other conditions necessary for that particular tender exercise'.

Q3.3 Do you have any comments on whether our proposed approach to the tender specification⁴⁰ provides the necessary information for a bidder to develop a design proposal which meets the generator's requirements?

- A3.14. OFTO respondents were generally in agreement that the proposed approach provided the necessary information. Suggested amendments included that the specification should include any property issues such as land permissions; a high level annotated graphical representation of the constraints placed on the OFTO assets; requested life span as a range; cable separation/segregation requirements; separation distances between the OFTO's and the windfarm's activities and expected use of the OFTO assets by the generator.
- A3.15. Generator respondents were broadly in agreement with the proposed approach but they emphasised that the design process is iterative and that the specification should therefore retain some flexibility. Several referred to the Rochdale Envelope⁴¹ in this context. Two generators were of the view that if bidders' designs did not meet the requirements of the specification, they should be expected to explain why. Three respondents were of the view that if bidders are involved in the design process, extra time would be needed to build in any necessary changes arising from consents.
- A3.16. Other responses highlighted that the Offshore Connections and Infrastructure Options Note will be useful to bidders in detailing the preferred offshore design and should be available in the data room and that information relating to turbine specification should be included.

Q3.4 Do you have any comments on our proposals for seabed surveys, including the level of information generators will be expected to supply and the timing for providing that information?

³⁹ In the forthcoming Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations, 'pre-construction works' will be referred to as 'preliminary works'. See our Open Letter: Draft Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2012 for consultation, September 2012, (Ref 120/12): http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=73&refer=Networks/offtrans/pdc/cdr/2012

⁴⁰ In the forthcoming Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations, the 'tender specification' will be referred to as the 'system specification'. See link above for further detail.

⁴¹ The Rochdale Envelope is an approach to consent applications which allows a project description to be broadly defined, within agreed parameters. It recognises that it may not be possible for all aspects of a proposal to have been settled in precise detail at the time of application.

- A3.17. There continues to be recognition that this is a complex area. OFTOs were broadly in agreement with the proposal for industry led minimum standards. However, a couple of respondents noted this would require active DECC or Ofgem leadership, and others suggested funding might be required to develop the standards. A couple of respondents identified more specific areas of work which they would expect to be included in the minimum standards.
- A3.18. Generators were broadly in agreement with the minimum level of investigative data we set out. There remained, however, some scepticism as to whether a generic approach would introduce any benefits. Two generators said it would not introduce any benefits. Several of the generator respondents to this question argued that there needed to be flexibility in the process and that it should provide a baseline or be aspirational only. Two of the respondents argued that developers should be allowed to carry out the geotechnical investigations post the consent decision.
- A3.19. From a supplier perspective, a respondent agreed with the proposal of industry led standards. They suggested that the insurance industry should be consulted in respect of any work on specific standards. They also agreed with the level of information which we had proposed as a minimum but thought there might be advantages in considering allowing bidders to comment on a project-specific basis.

Q3.5 Do you have any thoughts on how to ensure the generator's supply chain activities on a given project do not result in the supply chain for that project being effectively closed off to any suppliers?

- A3.20. Bidder respondents were of the view that generators should not be allowed to engage with the supply chain at the concept design stage as this could lead to certain suppliers being favoured via the system specification. Those respondents suggested starting the ITT stage earlier in order to allow more bidder/supply chain engagement. One bidder and one supplier stated that the tender specification and Bilateral Connection Agreement (BCA) should avoid technically specifying any OFTO assets beyond the minimum functionally required, as any unnecessary specification of detailed design parameters risks ruling out particular manufacturers.
- A3.21. Generator respondents were generally of the view that the generator should be permitted to engage with the supply chain, and just over half of those respondents were of the view that the generator should be able to reserve production slots and/or sign and transfer core supply contracts, particularly for HVDC assets due to the proposed long lead times for these.

Q3.6 What are your views on how we ensure any process relating to delay to licence grant maintains transparency and parity across bidders?

A3.22. Respondents made a number of suggestions on how to calculate any change to the TRS caused by a delay to licence grant. These included varying bids in line with the price index of various commodities, limiting preferred bidder cost increases, aligning contract validity periods for all bidders and publishing guidelines on licence grant delay mechanisms. Respondents also commented that it would be difficult to apportion blame for a delay to licence grant and questioned who should bear the cost burden of this.

Q3.7 Do you have any examples of mechanisms to manage weather related delays which you think would be useful to inform our approach?

A3.23. Three generators thought that the vast majority of weather delays should be the OFTO's risk, with a pass through cost only used in extreme circumstances. However, all other respondents (both generators and bidders) proposed a range of mechanisms to manage the risk of weather related delays, including:

- bidders including 'statistical risk' in the price of their bids with a cost sharing mechanism for delays above this
- Ofgem publishing criteria to determine the 'effective price' of each bid
- a simple threshold (number of days) for weather delay above which there would be a cost sharing mechanism
- use of existing industry standards for managing weather delay.

Q3.8 Do you consider the proposed design and construction criteria to be appropriate and sufficient, and if not, what other criteria would you consider relevant?

- A3.24. There was a general view that the criteria set out were broadly appropriate. However, a number of suggestions were made for additional areas to be covered and/or set out in greater detail (although there was no consensus on these areas, other than in relation to Health and Safety), including:
 - Health and Safety should be taken into more explicit consideration, for example, ensuring the OFTO gives due consideration to the Construction (Design & Management) Regulations in relation to offshore construction
 - consideration should be given to the extent of future-proofing in the technical design, including scope for expansion of capacity in the future, flexibility to accommodate other forms of marine renewable power, scope for life extension and balance between design and construction and O&M or lifecycle requirements
 - criteria should also cover the anticipated programme of works. This
 would help Ofgem identify the overall approach that the bidder will
 have to the project, including time allotted for aspects such as design,
 manufacture, installation and commissioning.
- A3.25. Only one respondent disagreed with the proposal that National Grid Electricity Transmission (NGET) should not be involved in bid evaluation. They felt NGET's involvement would represent a more efficient approach.

Q3.9 Do you have any views on the key elements within the tender specification, as set out in the draft template within Appendix 4, on which there may be advantages in considering a variant bid?

- A3.26. There was a general view that variant bids should be allowed in any area in which they can be demonstrated to deliver a tangible benefit to consumers.
- A3.27. The most common response was that a bidder could suggest a slight upward or downward adjustment in its offered transmission capacity in order to minimise per-MW costs. A couple of respondents suggested that there may be advantages in considering variant bids on the number of cables and the amount of redundancy.

A3.28. There were suggestions from other respondents that there may be advantages in considering variant bids on:

- number of platforms
- reactive power design
- harmonic filtering design
- construction programme
- installation methodology
- lifespan of assets.

A3.29. The majority of generator respondents set out that generators should be involved in the evaluation of variant bids, and a small minority of those suggested that generators should hold power of veto over variant bids.

Phased or staged construction of transmission assets

Q4.1 What are your views on the findings relating to potential impact of the baseline approach on the technical aspects of projects?

- A3.30. All bidder respondents agreed with our finding that the baseline arrangements set out for running tender exercises for staged and phased projects, appeared on balance to be appropriate across all technical areas.
- A3.31. Generator respondents expressed general agreement that the baseline assumptions were valid. However, they set out a range of recommendations on areas where further clarity is needed, including:
 - consideration of additional more complex phased project scenarios
 - issues around partial decommissioning or licence extension/retendering at the end of a licence period for a multi-phase project
 - how the availability incentive mechanism will work
 - the technical capability a later OFTO should deliver to the first OFTO
 where there are common assets (eg substation)and how any technical
 interface requirements would be specified and governed (eg under the
 STC or Grid code)
 - consideration of asset transfer/OFTO to OFTO interfaces and agreements where there are common assets
 - issues relating to access to shared onshore cables and/or substation
 - anticipatory investment arrangements for earlier phases.
- A3.32. A significant minority of generator respondents set out that as a guiding principle, the generator should be able to propose the best grouping for tendering, and the baseline tendering approach should be applied on a case by case basis in light of this.

Q4.2 What are your views on the findings relating to potential impact of the baseline approach on commercial and tender process aspects of projects?

- A3.33. Responses to this question were similar to those for Q4.1, except one generator respondent argued that an HVDC system should be tendered via a single tender.
- A3.34. One generator respondent set out the view that, under both Generator build and OFTO build, greater economies of scale will be possible from a single

larger tender than for multiple smaller tenders. The respondent suggested a possible framework agreement approach whereby multiple phases are tendered together.

A3.35. A further generator respondent set out that where failure of shared assets results in constrained network capacity, then clarity is required on how the remaining offshore transmission capacity is allocated to different generation phases, noting that they may be in separate ownership.

Q4.3 What are your views on the proposed principles for treating staged projects under the enduring regime?

A3.36. In general, the responses were in agreement with the proposed approach of including all stages/assets within a single tender exercise. A minority of respondents suggested that the usual position may warrant variation in certain project specific circumstances, particularly where several years might pass between commissioning of the first stage and the transfer of assets to OFTOs. For example, one bidder respondent set out their concerns around transferring ownership of all stages only following completion of the final stage, as this would disadvantage the generator through delays to recovering the transfer value for earlier stages. Their view was that for enduring regime projects, projects could easily be designed and contractually structured to facilitate staged transfer to OFTOs.

A3.37. A couple of bidder respondents also set out their support of an incremental increase in the TRS with the completion of each stage (under OFTO build).

Q4.4 What are your views on the proposed approach for treating phased projects under the enduring regime?

A3.38. Those responding were predominantly of the view that Ofgem's proposed approach was sensible and pragmatic. Examples of occasions on which Ofgem might wish to consider amendments to this approach were identified by some respondents as where anticipatory investment may be required as a part of the development of a coordinated offshore network, or where there are inter-phase transmission linkages.

Q4.5 What are your views on the possible implications of phased projects for the OFTO licence, and in particular for the current incremental capacity incentive?

- A3.39. There was general agreement that additional flexibility under the incremental capacity incentive should be investigated.
- A3.40. One bidder respondent set out that there was a need to define what assets would fall within the scope of the ICA. The respondent set out that in a scenario where the HVDC connection to a far-offshore wind farm is built by a generator and then transferred to an OFTO, the OFTO might then take on the construction of the short AC connections to assets owned by other OFTOs within the zone as part of its incremental capacity incentive.
- A3.41. The respondent also set out that if the current 20% limit is to be raised then the additional amount should not be an obligation on the OFTO. Rather, it should be an option to invest an additional amount at a regulated return. They

propose that if the option is not taken up then Ofgem could run an additional tender and appoint an additional OFTO to provide the required investment (note that this aligns with Ofgem's early view of how this might work).

- A3.42. Another respondent set out that, for a multi-phased project, the tender process for the first phase should be structured to include the submission of a proposal for revenue adjustment for the next phase, and that this should be part of the tender evaluation.
- A3.43. Several respondents were of the view that more clarity will be required on the criteria Ofgem would use to make a decision around when the ICA would apply.
- A3.44. One generator respondent set out that Ofgem should allow generators to participate in evaluating any OFTO offers to increase incremental capacity.

Next steps and implementation

Q5.1 What are your views on changes that may need to be made to the industry codes and frameworks going forward in order to support the arrangements set out in this document?

A3.45. Three respondents suggested changes to the Grid Code to allow for DC systems, while a further three respondents thought changes may be required to the Grid Code and the Connection and Use of System Code (CUSC) in order to support implementation of the commissioning solution. Other responses included that CUSC modifications may be required for any new TNUoS charging arrangements that the STC and Grid Code need to mirror each other for Generator build, and that there may be compliance issues with shared assets.

Q5.2 What are your views on the possible interdependencies between the development of a coordinated offshore network and the offshore transmission tender process?

Q5.3 Are there any other possible interdependencies we should consider?

- A3.46. Respondents identified a number of independencies as well as changes that may need to be made to the industry codes and frameworks going forward in order to support the arrangements set out in the consultation.
- A3.47. One respondent raised concerns regarding the potential for the tender process to be fair in situations where a coordinated design is developed by an onshore Transmission Owner (TO). These concerns centred around the potential for design and timing of preliminary works to favour certain bidders/suppliers during an OFTO build tender. Other bidder respondents also raised the importance of a fair and transparent tender process in a scenario where a TO undertook preliminary works. Two respondents set out that the business separation conditions within National Grid's transmission licence must be strengthened to ensure that there cannot be any knowledge transfer between NGET and any bidding group that includes a subsidiary of National Grid.

A3.48. Another bidder respondent set out that if NETSO were the party undertaking preliminary works:

- remuneration for such works should be through the OFTO tender process rather than the RIIO arrangement
- the best incentive to ensure that NETSO transfers the preliminary works to the incoming OFTO in the most economic and efficient manner is to make the transfer of the works the only mechanism by which NETSO is remunerated for undertaking the works.

A3.49. A few respondents set out that additional clarity is also required on:

- the regulatory frameworks that will apply where network infrastructure spans different domestic or other member state regimes
- the charging and securitisation implications for coordinated assets
- the consentability of large connection infrastructure and how this is linked with the National Policy Statement EN-5⁴².

A3.50. One generator respondent set out that Ofgem should consider how the early OFTO build model could be adapted to deliver wider coordination benefit.

A3.51. Respondents identified a number of additional interdependencies, including: availability, operations, connection offer and BCA, transmission charging, the impact of OFTO performance on energy contract delivery and imbalance exposure, anticipatory investment and the OTCP, and the Renewables Obligation banding review.

A3.52. One respondent stated there was an interdependency between the cost assessment and the availability incentive mechanism. They also said that whole-life costs associated with loss of revenue through unavailability and the period of unavailability can often be mitigated by increasing capex or opex. The respondent considered increased spending on capex to be the most appropriate solution. They considered this would avoid increased risk to the OFTO of not meeting its availability target as well as reducing lost revenue for the generator. They also considered it could offset lifetime electrical losses.

documents.gov.uk/document/other/9780108510816/9780108510816.pdf

⁴² The National Policy Statement, taken together with the Overarching National Policy Statement for Energy, provides the primary basis for decisions taken by the Infrastructure Planning Commission on applications it receives for electricity networks infrastructure. Please see: http://www.official-

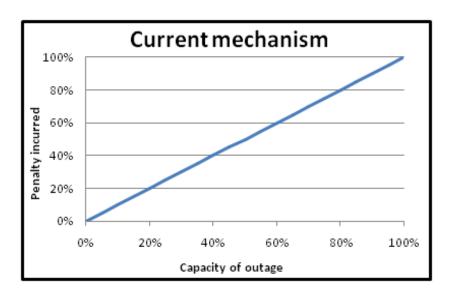
Appendix 4 – Outline of availability incentive options

Overview

A4.1. This section outlines in further detail the options discussed in Chapter 5 of this document. These are high level summaries only and we expect to undertake further analysis to determine the exact metrics of our proposed option in 2013.

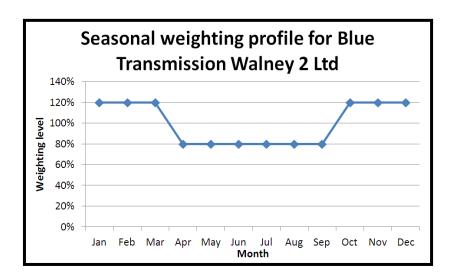
Current mechanism

A4.2. This option has been implemented for transitional tender round 2. Penalties would be the same regardless of whether the outage was planned or unplanned. This mechanism only takes into account availability in terms of MWh. It does not take account of the capacity of outages, so that one MWh of unavailability will be penalised the same whether it is caused by an outage on the whole transmission system or a partial outage (eg one cable out of a three cable system). This is shown in the graph below.



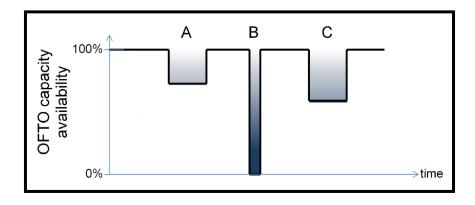
Seasonal weighting mechanism

A4.3. The seasonal weighting mechanism has applied to both the transitional tender round 1 and tender round 2 projects. It is designed to incentivise the OFTO to plan outages during the months of least predicted generation. The weighting levels are set at licence grant by the generator, but must average 100% over the year. An example profile, based on the Blue Transmission Walney 2 Ltd licence, is shown below.



Capacity weighting mechanism

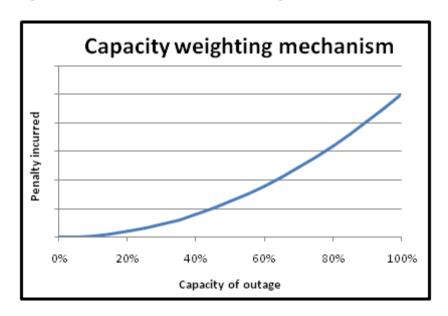
- A4.4. This option differs from the status quo in that it penalises larger capacity outages more heavily than small capacity outages of the same size in MWh. Under this mechanism both planned and unplanned outages are treated the same.
- A4.5. This mechanism is designed to incentivise the OFTO to plan outages to ensure minimum impact on the generator where possible, by minimising the capacity of outages (ie taking outages on individual circuits rather than the whole system). This is because the average load factor of the generator is likely to be around 35%, meaning that large capacity outages are much more likely to impact on the generator's ability to export electricity than small capacity outages.
- A4.6. The diagram below, taken from the May 2012 consultation, illustrates this point. Here, A B and C are outages of different capacities. The area of the shaded sections represent the size of the outage in MWh. A and C are relatively low capacity outages, and would not impact on the generator's ability to export electricity assuming their output is 35% of maximum capacity.



A4.7. In the diagram above, the size in MWh of outages A and B are the same, and would therefore result in the same size penalty under the current availability

incentive mechanism. However, under the capacity weighting mechanism, B would incur a higher penalty than A as it is a higher capacity outage.

A4.8. The weighting is calculated as a curve of the form ax^b where a determines the penalty incurred for 100% unavailability in one year, and b determines the shape of the curve. The intercept point is how much a 100% outage is penalised. Under the transitional regime mechanism, a 100% outage leads to a 100% penalty. However, by introducing a capacity weighting mechanism which reduces penalties for lower capacity outages this will reduce the overall penalties incurred by the OFTO. As we would not be seeking to change the risk profile of the OFTO, we may increase the intercept point to redress the balance and ensure that the overall penalties likely to be incurred are the same between the capacity weighting mechanism and the transitional regime mechanism.



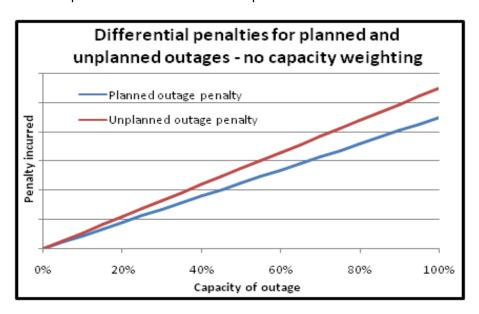
Differential penalties for planned and unplanned outages

A4.9. This option would strengthen the incentive to avoid unplanned outages. This would be done by increasing the penalty incurred for unplanned outages with respect to planned outages. This is to reflect that large unplanned outages are more likely to have a significant adverse effect on the generator. The differential between the penalties could be applied in one of two ways, which are described below.

Without capacity weighting

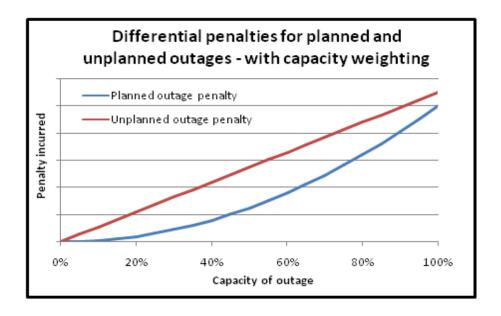
A4.10. The first way would look similar to the status quo, but would apply a scalar multiplier to the penalty depending on the type of outage, so that the penalty for an unplanned outage is some fixed percentage higher than for the equivalent planned outage. The penalty for an unplanned outage would be multiplied by some scalar >1 to increase the level of penalties incurred, and conversely the penalty for a planned outage would be multiplied by some scalar <1 to decrease

the penalties incurred. These may or may not be symmetric. The graph below shows an example of how this could be implemented.



With capacity weighting

A4.11. The second way would take into account the benefits from the capacity weighting mechanism. Since the capacity weighting mechanism is designed to ensure that OFTOs plan outages to minimise impact on the generator, it may not be appropriate to apply a capacity weighting to unplanned outages. Therefore, one option could be to adopt the capacity weighting for planned outages with an unweighted, but higher penalty for unplanned outages. This is shown in the graph below.



Appendix 5 - Glossary

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- 7	^

AC

Alternating Current

ACA

Additional Capacity Incentive Adjustment

Authority

The Gas and Electricity Markets Authority

В

BCA

Bilateral Connection Agreement

C

Capex

Capital expenditure

Connection and Use of System Code (CUSC)

The contractual framework for connection to, and use of, the National Electricity Transmission System.

Construction (Design & Management) Regulations

Regulations relating to occupational health, safety and welfare in construction. They place duties in relation to management arrangements and practical measures on a range of construction project participants, including clients, designers and contractors.

CPI

Consumer Prices Index

Crown Estate

A property portfolio owned by the Crown. The Crown owns the UK seabed out to the 12nm limit and the Crown Estates has the right to lease areas of the UK seabed for renewable energy projects.

Crown Estate Round

The Crown Estate has leased areas of the UK seabed to offshore renewable energy developers in 'leasing rounds'. Developers are asked to bid for exclusive rights to develop offshore renewable generation within identified zones.

D

DC

Direct Current

DECC

The Department of Energy and Climate Change

December 2011 consultation

Offshore Electricity Transmission: Consultation on tender exercises under the enduring regime, December 2011, Ref (178/11)

Ε

ΕU

European Union

EY

Ernst & Young

G

Generator build option

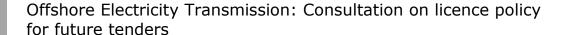
Under the Generator build option, the generator will take responsibility for all aspects of preliminary work, procurement and construction of the transmission assets. A prospective OFTO will bid their approach to the financing, operation, maintenance and decommissioning of the transmission assets, and a Tender Revenue Stream value that includes the costs associated with carrying out these activities.

Geotechnical investigation

An investigation to obtain information on the physical properties of soil and rock around a site.

Grid Code

The Grid Code covers technical aspects relating to connections to and the operation and use of the National Electricity Transmission System.



GW

Gigawatt

н

HVAC

High Voltage Alternating Current

HVDC

High Voltage Direct Current

Ι

ICA

Incremental Capacity Incentive Agreement

ICUA

Incremental Capacity Utilisation Agreement

Integrated Transmission Planning and Regulation Project (ITPR)

A project launched by Ofgem in March 2012, considering how Great Britain's network planning and delivery arrangements will facilitate a future integrated system for onshore and offshore transmission and interconnection.

Invitation to Tender (ITT) stage

The stage of a tender exercise during which bidders have the opportunity to put forward their detailed proposals for providing transmission services. Its purpose is to enable Ofgem to identify the preferred bidder.

М

March 2012 consultation

Offshore Transmission - Consultation on potential measures to support efficient network coordination, March 2012, Ref (26/12)

May 2012 consultation

Offshore Electricity Transmission: Updated proposals under the enduring regime, May 2012, Ref (72/12)

MW

Megawatt

MWh

Megawatt hour

Ν

National Audit Office (NAO)

The body responsible for scrutinising public spending on behalf of Parliament.

National Electricity Transmission System Operator (NETSO)

The entity responsible for operating the GB electricity transmission system and for entering into contracts with those who want to connect to and/or use the electricity transmission system.

National Grid Electricity Transmission (NGET)

NGET owns and maintains the onshore high-voltage electricity transmission system in England and Wales. It also acts as the National Electricity Transmission System Operator for GB.

Net present cost

Net present cost is the discounted sum of a sequence of cash flows, whether positive or negative, over a period of time where the total of those cash flows amounts to a cash out flow once the future cash flows have been discounted to present value.

Net present value

Net present value is the discounted sum of future cash flows, whether positive or negative, minus any initial investment.

0

Office for National Statistics (ONS)

The UK's largest independent producer of official statistics and the recognised national statistical institute of the UK.

Offshore Transmission Coordination Project (OTCP)

A project launched jointly by Ofgem and DECC to assess the potential costs, risks and benefits that may arise from the development of a more coordinated offshore and onshore electricity transmission network.

Ofgem

Office of Gas and Electricity Markets

OFTO

Offshore Transmission Owner

OFTO build option

Under the OFTO build option, the generator would obtain the connection offer and undertake high level design and preliminary works. A prospective OFTO would bid their approach to the procurement, financing, construction, operation, maintenance and decommissioning of transmission assets, and the costs associated with carrying out these activities.

OFTO build licence

The licence awarded following an OFTO build tender exercise.

OFTO of Last Resort mechanism

The mechanism used to appoint an OFTO outside of the competitive process in the unlikely event that a generator would otherwise be stranded. The aim of the OFTO of Last Resort mechanism is to minimise the risk of a generator becoming stranded or delayed in connecting to the onshore electricity network.

OFTO licence

The licence awarded following a tender exercise, allowing an OFTO to own and operate the offshore transmission assets. The licence sets out an OFTO's rights and obligations as the offshore transmission asset owner.

0&M

Operations and maintenance

Opex

Operational expenditure

Outturn inflation/Outturn RPI

The actual inflation rate covering a future period. This term is used to contrast with expected inflation over a future period since inflation may not turn out to be as high or low as expected.

Ρ

Phase

A grouping of transmission assets to be built out over a period of time, where the grouping is defined by certainty on build out (for example in relation to a Final Investment Decision and/or key contractual commitments). A phase may include stages.

Preferred bidder

The bidder chosen to own the transmission assets following the Invitation to Tender stage of the tender process.

Price control

The control developed by the regulator to set targets and allowed revenues for onshore network companies. The characteristics and mechanisms of this price control are developed by the regulator in the price control review period depending on network company performance over the last control period and predicted expenditure in the next.

Private Finance Initiative (PFI)

A long term contractual arrangement that makes the private sector responsible for, and bear the risks of, areas including designing, building, financing, maintaining and operating a public sector facility to output specifications set by the public sector.

R

Renewables Obligation

The Renewables Obligation places on obligation on licensed electricity suppliers in the United Kingdom to source an increasing proportion of electricity from renewable sources. Suppliers meet their obligations by presenting Renewables Obligation Certificates or payment into the buy-out fund.

Retail Prices Index (RPI)

RPI measures the aggregate change in consumer prices over time and is therefore a measure of inflation. It differs from the Consumer Prices Index (CPI) in that it measures changes in housing costs and mortgage interest repayments, whereas the CPI does not, they are calculated using different formulae and have a number of other more subtle differences.

RIIO (Revenue = Incentives + Innovation + Outputs)

The RIIO price control model builds on the success of the previous RPI-X price control regime, but better meets the investment and innovation challenge by placing much more emphasis on incentives to drive the innovation needed to deliver a sustainable onshore energy network at value for money to existing and future consumers.

RIIO-GD1

The first gas distribution price control under the RIIO framework, which will apply from 1 April 2013 to 31 March 2021.

RIIO-T1

The first onshore electricity transmission price control under the RIIO framework, which will apply from 1 April 2013 to 31 March 2021.

RPI swap

An RPI swap is a contract between two parties. One party agrees to pay a regular (typically every six months) amount that is linked to RPI whilst the other pays an

amount that is independent of RPI and is instead written into the contract when it is entered into. Swap payments are settled on a net basis so that there is only a payment from one party to the other. Which party is on balance receiving money for a period depends on the value of RPI in that period. Hence an RPI swap can be used to counteract RPI-linked movements in a sequence of regular cash flows.

S

Stage

Transmission assets built out incrementally in a discrete group within a phase.

System Operator - Transmission Owner Code (STC)

The STC defines the high-level relationship between the National Electricity Transmission System Operator and a Transmission Owner.

Т

Tender regulations

The Tender Regulations underpin the competitive tender process run by Ofgem to select and license OFTOs under the regulatory regime. The regulations currently in force are the Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2010.

Tender Revenue Stream (TRS)

The payment an OFTO receives over its revenue to term.

Third Package

The term 'Third Package' refers to a package of EU legislation on European electricity and gas markets that entered into force on the 3rd September 2009 (the 'Electricity and Gas (Internal Markets) Regulations').

Transmission Assets

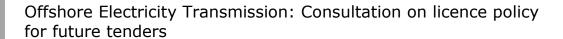
Transmission assets are defined in Paragraph 1 (3)(a) of Schedule 2A to the Electricity Act 1989 (the 'Electricity Act') as, 'the transmission system in respect of which the offshore transmission licence is (or is to be) granted or anything which forms part of that system'. The transmission system is expected to include subsea export cables, onshore export cables, onshore and offshore substation, and any other assets, consents, property arrangements or permits required by an incoming OFTO in order for it to fulfil its obligations as a transmission operator

Transmission Entry Capacity (TEC)

The contractually agreed maximum amount of electricity a generator can export onto the National Electricity Transmission System.

TNUoS charges

Transmission Network Use of System charges



Transmission Owner (TO)

An owner of a high-voltage transmission network or asset.

U

UK

United Kingdom

Z

Zone

The transmission assets within a zone licensed by the Crown Estate, in relation to Crown Estate Round 3.

Appendix 6 – Feedback questionnaire

A6.1. 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.

A6.2. Please send your comments to:

Andrew MacFaul

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