



LICENCING OFFSHORE ELECTRICITY
TRANSMISSION – A JOINT DTI/OFGEM
CONSULTATION

Updated Regulatory Impact
Assessment (RIA)

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LICENSING OFFSHORE ELECTRICITY TRANSMISSION : UPDATED REGULATORY IMPACT ASSESSMENT (RIA)

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1. PURPOSE AND INTENDED EFFECT OF MEASURE

Objective

- 1.1 The measure consulted upon was the specific licensing model for offshore electricity transmission, following the Government's decision in March 2006 to introduce a licensed price control approach offshore. This consultation was a further stage in the process to establish a regulatory framework for offshore electricity transmission which is required to connect emerging marine renewable energy developments to the onshore grid. This will be achieved by bringing into force a number of sections of the Energy Act 2004 (the "2004 Energy Act"), specifically sections 89, 90, 91, 92 (if required) and 180.
- 1.2 This RIA updates the partial RIA¹ developed for the 'Licensing Offshore Electricity – A Joint DTI / Ofgem Consultation Transmission'² in November 2006 in the light of the responses to the consultation.
- 1.3 In designing this regime, the Government's intention is to ensure the cost effective transmission of electricity within Great Britain, whilst stimulating the development of offshore renewable electricity and thereby contributing to the reduction of the UK's carbon dioxide emissions up to 2010 and beyond and to the diversity of its energy mix.

Background

- 1.4 The Government reiterated in the 2006 Energy Review³ its long-term goal of cutting carbon emissions in the UK by 60% by 2050. The development of renewable sources of electricity generation is an integral part of this objective, as it produces less carbon dioxide and other greenhouse gases than electricity generated by fossil fuels. By increasing the amount of energy we get from renewable sources – like offshore wind, wave and tidal energy – we can also reduce our reliance on those fossil fuels. The extra diversity that renewables bring to the UK's energy mix can make a contribution to the Government's goal of ensuring reliable and secure energy supplies.
- 1.5 Recognizing the important contribution that renewables can make to achieving our energy policy goals, in the 2003 Energy White Paper the Government set a target of 10% of UK electricity supply from renewable energy by 2010, with a further aspiration to derive 20% by 2020.
- 1.6 For the immediate future it is likely that both onshore and offshore wind generation will need to make a significant contribution to the UK's renewable energy targets and aspirations given the significant wind resource in the UK and the relatively advanced nature of wind generation technology.
- 1.7 We will also need to maximize the potential contribution from other emerging technologies, such as wave and tidal generation. The Government has already set out and consulted on its strategy for the development of offshore wind in the document 'Future Offshore – A Strategic Framework for the Offshore Wind Industry' published in 2002⁴. A key factor behind this policy is that the UK has some of the best offshore wind resources in Europe, if not the world. Currently, there are plans for up to 8GW of electricity generation projects (which represents just under 10% of current generating capacity) to be developed in the sea around Great Britain, harnessing those resources.

¹ Licensing Offshore Electricity Transmission – A Joint DTI / Ofgem Consultation. Partial Regulatory Impact Assessment (RIA) <http://www.dti.gov.uk/files/file35531.pdf>

² Licensing Offshore Electricity Transmission – A Joint Ofgem / DTI Consultation <http://www.dti.gov.uk/files/file35530.pdf>

³ The Energy Challenge: Energy Review; A Report, July 2006 <http://www.dti.gov.uk/energy/review/page31995.html>

⁴ <http://www.dti.gov.uk/files/file22791.pdf>

- 1.8 But exploitation of this potential offshore energy source requires connection to the onshore GB transmission and distribution networks. A broad framework for the regulation of offshore transmission and distribution of electricity was set out in the Energy Act 2004. It includes amendment of the Electricity Act 1989 so that the prohibitions (and licencing and exemptions regime) also apply in the Renewable Energy Zone and confirms that the regime applies in the territorial sea adjacent to Great Britain and gives broad powers to introduce a new regulatory regime for offshore electricity transmission and distribution.
- 1.9 Following a preliminary consultation, the Government announced on 30 March 2006 that it has decided the form of regulation to be applied to offshore transmission would be a price control regime, implemented through a system of licences, industry codes and industry standards. A programme of technical work is being undertaken to begin to establish the detailed modifications required to implement the price control regime.
- 1.10 As part of establishing that new regime, on 20 November 2006, the DTI and Ofgem jointly published a consultation document on the licensing of offshore electricity transmission.⁵ The document invited views on two possible models for licensing transmission owner (TO)⁶ activities offshore under a price control regime and set out a timetable for responses. The two options were:
- A non-exclusive approach whereby an offshore TO licence is granted to any party that can satisfy relevant application criteria. This system would allow those licensed parties to compete with each other through a common tender process for the right to build, own and maintain offshore electricity transmission connections.
 - An exclusive approach based on onshore electricity transmission network arrangements, whereby a single TO would be exclusively responsible for responding to all future connection requests from generators in a defined geographical area offshore. These area-based licences would be awarded by competitive tender.
- 1.11 The consultation was published on the DTI web site and interested parties were invited to comment on the options over a period of 6 weeks. A consultation workshop was also held on 29 November 2006 at the DTI offices in London.
- 1.12 The consultation closed on 8 January 2007. 26 responses were received, including from holders of licences for electricity generation offshore, licence-exempt offshore electricity generators, holders of distribution and transmission licences in GB, potential offshore transmission licensees, the GB System Operator (GBSO), suppliers and manufacturers of materials and equipment, and energywatch.
- 1.13 In light of all the information available to it, the Government has concluded that the non-exclusive approach of a common tender is the most appropriate model for licensing offshore electricity transmission. It has therefore concluded not to pursue the exclusive approach. The detailed rationale behind the Government's decision is set out in the Government Response to the Consultation.

Rationale for Government Intervention

- 1.14 When commenced, the relevant sections of the Energy Act 2004 (EA 2004) will prohibit electricity transmission in the Renewable Energy Zone without a licence. An appropriate regulatory framework is therefore essential for the high voltage or transmission systems needed to connect offshore renewable generation to the onshore grid to operate legally.

⁵ The consultation document is available on the DTI website at: <http://www.dti.gov.uk/files/file35530.pdf>

⁶ TOs build, own and maintain transmission systems and are regulated under sections A, B and D of transmission licences granted under section 6 of the Electricity Act 1989.

- 1.15 At an operational level there is a requirement for regulation to ensure that the offshore transmission system can safely and effectively interface with the onshore grid; failure to achieve this could lead to faults and interruptions in existing supply. Regulation will help to ensure appropriate codes and standards are applied to the interface.
- 1.16 Without a comprehensive regulatory regime for offshore transmission which gives developers certainty of outcome, there is a real risk that offshore renewable energy projects will not come forward. If this were to happen, there would then be a significant risk to the Government's target of 10% of electricity supplied by renewable sources by 2010 and its aspiration for 2020 with all the resulting benefits in terms of carbon dioxide abatement.
- 1.17 The joint DTI and Ofgem consultation exercise of July 2005 consulted on the high level regulatory options for licensing offshore transmission. The options set out in that document were either a licensed price control approach or a licensed merchant approach. The consultation document also set out that a licence exempt merchant approach had been explored to see if it was feasible. That approach was rejected.
- 1.18 The Government concluded in March 2006 that a licensed price control approach to the regulation of offshore transmission provides a number of clear benefits to offshore wind farm developers and the efficient operation of the transmission system as a whole, by:
- a. Ensuring consistency with the regulatory arrangements onshore;
 - b. Providing a financial benefit to offshore developers by spreading the costs they face to connect to the onshore electricity system through annual transmission charges recovered over a number of years. Responsibility for developing the offshore transmission network will be shared with the GBSO and the TOs;
 - c. Helping to deliver the Government's renewable energy targets thus displacing future electricity generation based on fossil fuels which produces carbon dioxide emissions;
 - d. Providing additional environmental benefits, as it will help to ensure a co-ordinated approach to the development of the offshore network, which will reduce unnecessary duplication of transmission assets.
- 1.19 Expectations are that the establishment of this regime will lead to increased investment in offshore renewables over the medium to long term compared to alternative approaches.

2. CONSULTATION

Internal Consultation

- 2.1 The decision to implement a price-control regime was agreed by interested Government departments in March 2006.⁷
- 2.2 This consultation, which is part of the ongoing process to introduce a regulatory framework for offshore electricity transmission, was issued on 20 November 2006 and the period for comment closed on 8 January 2007.
- 2.3 Agreement will be sought from other Government Departments prior to the consultation on the full regime which we intend to publish in June 2008.

Public Consultation

- 2.4 Views on the contents of the November 2006 consultation,⁸ which was published on the DTI website, were sought in particular from a range of stakeholders, including offshore wind developers, transmission owners, trade associations, consumer bodies and other users of the electricity grid during a 6-week period of consultation. A Partial RIA accompanied this consultation.⁹
- 2.5 The consultation asked a number of specific questions relating to the detail of the two proposed models for offshore transmission owner (TO) licences and these are dealt with in the Government Response to the Consultation. This document updates the possible regulatory impacts of the two suggested options in the light of the responses received during the consultation process.
- 2.6 It is intended that the offshore electricity transmission regime will go active in October 2008, subject to the commencement of the necessary Energy Act 2004 provisions.
- 2.7 In deciding on the scope of TO licences and the method for their allocation, the Government sought to balance the costs and benefits of each option, assessing them against the following objectives (in no particular order of priority):
- contributing to 2010 target (speed of implementation and ability to provide certainty to industry);
 - delivery of significant amounts of offshore wind (overall attractiveness of the regime to offshore developers and TOs);
 - creation of an enduring regime that will enable connection of marine renewables beyond Round 1 and Round 2 offshore wind;
 - ensuring reliability and security of supply;
 - consistency with the onshore regime;
 - minimising environmental impact through ability to co-ordinate construction of assets;
 - keeping costs to consumers and other system users to a minimum;
 - promoting competition where appropriate, which should lead to greater innovation and efficiency;
 - better regulation best practice (i.e. keeping burdens of regulation on industry to a minimum); and
 - complying with domestic and EU legislation.

⁷ <http://www.dti.gov.uk/files/file27137.pdf>

⁸ <http://www.dti.gov.uk/files/file35530.pdf>

⁹ <http://www.dti.gov.uk/files/file35531.pdf>

- 2.8 The Government's policy on marine renewable energy generation has already been consulted on independently and this RIA only relates to the regulation of the electricity transmission system offshore.
- 2.9 Copies of the consultation and associated documents are available on the DTI website.¹⁰

Post-consultation update

In total 26 written responses were received to the consultation and all but two respondents agreed their responses could be made public and these can be viewed on the DTI website¹¹. A full list of respondents is at Annex A. The written responses were supplemented by discussions with individual parties. A consultation workshop was held on 29 November 2006 and a list of attendees and a note of the workshop is at Annex C. All responses received, views expressed and questions raised during this process were carefully analysed and considered against the Government's policy aims during the preparation of this RIA and during the decision making process. A summary of these responses is available in the Government Response to the Consultation.

In light of all the information available to it, including contributions from respondents to the consultation exercise, the Government has concluded that the non-exclusive approach of a common tender is the most appropriate model for licensing offshore electricity transmission.

The Government and Ofgem will now proceed with developing the detailed legal and policy framework required to implement the offshore electricity transmission regime, having taken on board comments received.

The Government Decision sets the broad framework for the non-exclusive regime, but there are a number of questions that still need to be answered on detailed issues associated with the implementation of the non-exclusive approach. Ofgem has published a Scoping Document at the same time as the Government's Decision which sets out the framework for taking forward work on the key issues, which include:

- The connection application process;
- Design of the tender process;
- Design of price controls;
- Arrangements for adoption;
- Access, charging and compensation;
- Development of embedded transmission arrangements;
- Technical rules;
- Industry codes;
- Prequalification for licences;
- Form of transmission licences;
- Review of transmission licence conditions;
- Consultation and go-live; as well as
- A clear definition of the GBSO role offshore.

DTI and Ofgem will also hold an industry workshop on 24 April 2007 to explain this decision further and set out the forward programme of work.

A Policy Statement and first consultation on tender design, draft licence, code and agreement modifications will be issued in July 2007. In January 2008 there will be a second consultation on draft licence, code and agreement modifications.

¹⁰ <http://www.dti.gov.uk/energy/sources/renewables/policy/offshore-transmission/Licencing%20Offshore%20Electricity%20Consultation%20-%20Nov%202006/page35525.html>

¹¹ <http://www.dti.gov.uk/energy/sources/renewables/policy/offshore-transmission/Licencing%20Offshore%20Electricity%20Consultation%20-%20Nov%202006/page36969.html>

The new regime will 'Go-Active' i.e.: commencement of ss. 90 & 91 of the Energy Act 2004, in October 2008; modifications will subsequently be made to licences and associated codes and agreements. 'Go-Live' i.e.: commencement of ss. 89 & 180 of the Energy Act 2004 will be at a date to be determined by the Secretary of State following further discussions with developers.

Previous Public Consultation

- 2.10 To assist DTI and Ofgem in considering the issues identified and help manage these work streams, an industry working group OTEG (Offshore Transmission Experts Group) was established. Wider industry open OTEG meetings were also held in July and September 2006.¹² That input enabled the DTI and Ofgem to focus down the options for licensing offshore transmission from the range set out in the April 2006 Scoping Document to the two possible models identified in the November 2006 consultation paper.
- 2.11 Further details of previous related consultations are available in the partial RIA¹³ that accompanied the consultation 'Licensing Offshore Electricity Transmission'.

¹² Appendix 3 of the consultation document summarises the function and terms of reference of OTEG.

¹³ <http://www.dti.gov.uk/files/file35531.pdf>

3. REGULATORY BURDENS AND COMPENSATORY SIMPLIFICATION

- 3.1 There is a need to create regulation of electricity transmission in the marine environment; this will give the structure, standards and certainty required by an emerging area of energy resource development and for its connection to meet the requirements of the onshore grid.
- 3.2 The Government consulted in July 2005 on a range of options, including a light-touch licensed merchant approach to regulation, which would minimise the new regulatory burdens on business. However, the majority of responses to the consultation document did not support this option. Importantly, the businesses that will be most affected by the new regulatory regime – the offshore wind developers – favoured a regulated approach on the grounds that it would best facilitate achievement of the Government's energy policy goals.
- 3.3 DTI is committed to minimising the regulatory burden on business. In this case, it is difficult to provide a direct compensatory simplification measure, as offshore transmission is currently not regulated in any way. However, as a result of the 2006 Energy Review, DTI is engaged in a parallel process of wider simplification measures on a range of issues which will reduce the overall regulatory burden.
- 3.4 The updated RIA,¹⁴ developed following the original preliminary consultation, made reference to a number of changes made during a review of the Renewables Obligation (RO)¹⁵ planned to take effect from April 2006. The Renewables Obligation Order was amended from 1 April 2006 to bring into force some simplifications which reduced the administrative burden on the renewables sector. These include:
- Allowing generators to submit an annual rather than monthly declaration to Ofgem confirming various details relating to electricity in respect of which ROCs have been claimed. This brings a saving of £300 per site and as there are currently 1010 generating stations in Great Britain operating under the RO, the potential saving is £303,000.
 - Reducing the sampling requirement for established fuels could save between £5-10k per site per year for some biomass generators. There are currently 14 biomass generators in Great Britain operating under the RO and therefore a potential saving of up to £140,000 per year.

Post-consultation update

In developing an appropriate regulatory framework for the grid connections from offshore wind farms the Government's intention is to introduce as light regulation as possible whilst ensuring the economic and efficient operation of the system as a whole.

Following the March 2006 decision, the DTI has also considered the regulatory position of grid connections from offshore wind farms at low voltage (which will be less than 132kV when s.180 of the Energy Act 2004 is commenced). In November 2006, DTI also published a consultation document¹⁶ which gave notice of and invited views on a proposal for the exemption by class of offshore electricity distributors from the requirement to hold a distribution licence. On 1 March 2007, the Government announced its decision¹⁷ to grant a class exemption for offshore electricity

¹⁴ <http://www.dti.gov.uk/files/file27138.pdf> pp6-8

¹⁵ <http://www.dti.gov.uk/energy/sources/renewables/policy/renewables-obligation/2005-6-obligation/page22311.html>

¹⁶ The consultation document is available on the DTI web site at: <http://www.dti.gov.uk/files/file35593.pdf>

¹⁷ The Government Decision is available on the DTI web site at: <http://www.dti.gov.uk/files/file38027.pdf>

distributors, given the limited number of offshore electricity distribution systems and the low volume of electricity conveyed through them.

This approach should minimise the regulatory burden on these persons whilst ensuring the safety and quality of supply to consumers. The Electricity (Class Exemptions from the Requirement for a Licence) (Amendment) Order 2007 (SI 2007/629)¹⁸, which adds the new class exemption to the existing class exemptions, will come into force on 6 April 2007. The Government concluded that the costs likely to be imposed by licensing offshore distribution at this stage appeared to be disproportionate to the risks that offshore low voltage connections pose to overall system security and the quality of supply provided to domestic consumers. For example, onshore costs may be summarised as:

- Licence fees (£1250 on application and a minimum £500 annual fee reflecting Ofgem's costs, based on share of total customer numbers);
- Developing and maintaining charging methodologies;
- Establishing a range of administrative services that are appropriate to the national network (such as meter point administration);
- Adhering to a range of accounting requirements from the regulatory regime.

A key concern of respondents to the November 2006 consultation on licensing offshore transmission was the possible costs and complexity of the two proposals contained in that document.

The Government believes that on an enduring basis the non-exclusive approach will create a lighter touch regulatory regime. Once the tender process is complete, non-exclusive offshore TOs could potentially have a fixed revenue stream for the life of assets, subject to strict pre-defined change mechanisms. It is the Government's view that the monitoring and review of individual price controls under the non-exclusive approach should be less burdensome than under the exclusive approach.

On the other hand, under the exclusive approach once the tender was complete, administration of the exclusive licensing regime would be similar to the system onshore, with TOs subject to periodic (5-yearly onshore) price control reviews, entailing considerable burden on all parties involved. For example, onshore transmission price controls presently cost Ofgem between £2m and £4m and last five years, with probably a similar cost for licensees. While costs are unlikely to be identical offshore, this indicates the possible scale of administrative costs for three offshore TOs under the exclusive approach.

During the further development of the offshore transmission regime, there will be significant efforts made to reduce the regulatory burdens it will place on those involved.

In particular, it is the intention of the DTI that the tender process will be streamlined to reduce its administrative burdens and potential costs. Respondents to the consultation suggested a number of ways in which the costs of the bidding process could be reduced. Further discussion of how costs and regulatory burdens may be reduced during the development of the regime can be found in the Government Response to the Consultation¹⁹ and Ofgem's Scoping Document.²⁰

¹⁸ The SI is available online at: http://www.opsi.gov.uk/si/si2007/uksi_20070629_en.pdf

¹⁹ <http://www.dti.gov.uk/energy/sources/renewables/policy/offshore-transmission/Licensing%20Offshore%20Electricity%20Consultation%20-%20Nov%202006/page35525.html>

²⁰ www.ofgem.gov.uk

4. OPTIONS

Description of options concerning the detailed model for the scope and allocation of offshore transmission licences

- 4.1 The DTI and Ofgem consulted on two options for the offshore transmission licensing model and continued to discount the 'do nothing' option:
- (i) A 'do nothing' option was already rejected prior to consultation for the reasons outlined in paragraph 4.3
 - (ii) A non-exclusive approach whereby an offshore TO licence is granted to any party that can satisfy relevant application criteria. This system would allow those licensed parties to compete with each other through a common tender process for the right to build, own and maintain offshore electricity transmission connections.
 - (iii) An exclusive approach based on onshore electricity transmission network arrangements, whereby a single TO would be exclusively responsible for responding to all future connection requests from generators in a defined geographical area offshore. These area-based licences would be awarded by competitive tender.
- 4.2 Within the non-exclusive and exclusive approaches there were several possible variations on the scope and method of allocation of transmission owner (TO) licences, for example the size and number of licensed areas under the exclusive approach. It was accepted under all options that the transmission and distribution of electricity will remain for the foreseeable future a "natural monopoly", i.e., it is more cost-effective to have a single provider responsible for transporting electricity rather than multiple providers building separate transport links that would directly compete with each other to carry the same electricity. Within the natural monopoly approach, however, there was still a debate as to exactly how to proceed.

Post-consultation update

The majority of respondents agreed that the DTI and Ofgem had focussed on the two best options available and that the other options had been appropriately discounted. However, in broad terms, respondents were evenly split in their support for each of the two proposed options and there were significant issues raised about both options in terms of the benefits they would bring and how they would work in practice.

The Government has given careful consideration to all the responses received. In making his decision, the Secretary of State has considered:

- The two models against the Government's stated policy aims.²¹
- Whether sufficiently robust answers are available to the questions raised by respondents. These concerns can be summarised as six key areas, relevant to both options, namely:
 - a. Complexity of the process;
 - b. Timely connections;
 - c. The role of the GBSO in the assessment of bids;
 - d. Quantification of the costs and benefits of competition;
 - e. Co-ordination of network connections in the short and long term;
 - f. Adoption issues.

²¹ These are set out in paragraph 2.7.

- The pre-stated preference of the Gas and Electricity Markets Authority ('the Authority') for the non-exclusive approach. It believed that this option would deliver offshore transmission connections in the most cost-efficient, timely and certain manner to consumers and generators. That preference remains the position of the Authority following the responses to the consultation exercise.
- The overall timetable for the development of the new regime and the need for a decision on the licensing model to be made to enable the next phases of the project timetable to proceed.

In light of all the information available to it, the Government has concluded that the non-exclusive approach of a common tender is the most appropriate model for licensing offshore electricity transmission. It has therefore concluded not to pursue the exclusive approach. The detailed rationale behind the Government's decision is set out in the Government Response to the Consultation.

The DTI and Ofgem have considered how the proven PFI approach could be adapted to the non-exclusive model and have identified a number of high level steps which are likely to be involved in the process of running the offshore tender process under this option. However, further detailed consideration will be required of the extent to which a PFI approach could be adapted to meet the needs of the new regime offshore. Ofgem's Scoping Document, published alongside the Government Response to the Consultation, sets out further thoughts on proposals for the tender and connection offer process which will be further refined in detail over the coming months.

Option (i) - Do nothing option

- 4.3 The Government had previously concluded that the option not to regulate was neither a practical nor a legal possibility.

Post-consultation update

There was no significant evidence in the responses received to the consultation document that the 'do nothing' option should be seriously re-considered. The Government therefore continues to discount this option.

Option (ii) - Non-Exclusive licences

- 4.4 This approach would see the Authority issue non-exclusive transmission licences to TOs who would then compete against each other for the right to provide transmission services (building, owning and maintaining the transmission assets) to specific offshore projects or 'bundles' of projects anywhere in Britain's territorial waters and Renewable Energy Zone (REZ), without an automatic obligation to be a TO for future developments offshore. In licensing terms this is broadly similar to the way in which Ofgem licences new networks such as the arrangements for Independent Distribution Network Owners (IDNOs) and Independent Gas Transporters (IGTs).
- 4.5 Under this asset-based approach, any organisation could apply to become a TO as long as they met certain application criteria as laid down by Ofgem under the existing (or amended) application regulations e.g. credit rating, technical ability, personnel etc. Generators would apply to the GBSO for a Terms of Connection Offer (TOCO). The GBSO or a third party would then put these connection requests out to competitive tender through an auction to all those holding a TO licence with the GBSO or a third party making a decision on the successful bidder.
- 4.6 Licences would be issued in perpetuity, although revocation would still remain a possibility in particular circumstances. Once licensed, TOs would be subject to a similar price control regime and monitoring as used onshore. Future developments could be tendered in a similar manner. A TO in proximity would be able to bid for it to be added to their licence or a new entrant able to bid for it as a stand-alone connection.

- 4.7 An update of the costs and benefits of a non-exclusive licence approach, in light of the consultation responses, can be found at Annex B.

Post-consultation update

The Government has concluded the benefits of the non-exclusive licencing approach make it preferable to the exclusive approach. In summary the Government believes that the non-exclusive approach will:

- Deliver cheaper and more timely offshore grid connections;
- Encourage innovation through competition and enable new entrants to compete in the market;
- Be more focussed on generators' requirements than the onshore system or the exclusive approach; and
- Enable generators to establish an affiliate to be a TO if they wish²² making the adoption issue easier to solve and creating more certainty for generators.

The DTI and Ofgem have considered how the proven PFI approach could be adapted to the non-exclusive model and have identified a number of high level steps which are likely to be involved in the process of running the offshore tender process under this option. However, further detailed consideration will be required of the extent to which a PFI approach could be adapted to meet the needs of the new regime offshore. Ofgem's Scoping Document, published at the same time as the Government Response to the Consultation, sets out further thoughts on proposals for the tender and connection offer process which will be further refined in detail over the coming months.

The Government has concluded that the additional concerns raised about the non-exclusive approach to licensing offshore transmission by respondents can be answered and that this approach will enable the delivery of offshore generation in the most economic and efficient manner. The detailed reasons behind this decision are set out in the Government Response to the Consultation.

Option (iii) - Exclusive Licences

- 4.8 This option would grant licences by competitive tender to existing or new TOs for the exclusive provision of transmission services to all developments within a specified geographic area offshore. These licences could be for defined periods, for the life of the assets or in perpetuity. An appropriate body e.g. Ofgem or DTI would establish more than one offshore area, for example, 3 zones covering the strategic areas and all Round 2 (R2) projects, and would hold a competitive tender for the TO licence for each area.
- 4.9 From a generator's point of view the system would be identical to that onshore: it would apply to the GBSO or a third party for an offer to connect to the GB transmission system, the GBSO or a third party would invite the relevant monopoly TO in that region and any other affected TOs to provide TOCOs, and the GBSO or a third party would then relay a combined offer back to the generator. Further details on this option can be found in the consultation document.
- 4.10 An updated view of the costs and benefits of an exclusive licence approach, in light of the consultation responses, can be found at Annex B.

Post-consultation update

The Government believes that under the exclusive area based approach:

²² This is subject (as onshore) to appropriate ring-fencing and business separation arrangements compliant with EU and domestic legislation

- The requirement to connect an unquantifiable number of projects could limit the number of potential new entrants and therefore the scope for innovation;
- The unquantifiable number and size of projects covered by exclusive licences creates a risk that no party bids to be the TO for an area or may lead to higher costs as the potential TOs seek to offset the risk;
- There is less focus on the needs of the generator, which could result in later delivery dates for connections; and
- An affiliate of a generator would have to bid to be the TO for the whole licensed area where the generator would be located. As a result, a generator's affiliate would be unable to be the TO for just that generator's connection, making the adoption issue more difficult to solve.

The Government has concluded that, while it is a workable option, the concerns raised about the exclusive approach make it less likely to enable the Government's policy aims for renewable generation to be achieved, particularly in delivering their timely connection in the short term and a similar level of cost reductions as under the non-exclusive approach in the long term. The detailed reasons behind this decision are set out in the Government Response to the Consultation.

- 4.11 There were a number of other options, which had been discounted by the Government, including the extension offshore of the existing onshore TO licences, the generator tender approach and a competitive tender for a single offshore zone. The Government does not believe that these are viable options and has decided that these should be discounted. The reasons for this decision are contained in the consultation document, 'Licensing Offshore Electricity Transmission'.

Post-consultation update

The majority of respondents agreed that the other possible approaches had been correctly ruled out. The Government does not consider that there was sufficient evidence in the responses received to the consultation document to merit these options being seriously re-considered. Further detail on the reasons for ruling out these options can be found in the Government Response to the Consultation.

Costs and Benefits

Sectors and groups affected

- 4.12 In its broadest context, the new regulatory regime will affect all electricity suppliers and generators in Great Britain, particularly the renewable energy industry, offshore and onshore transmission and distribution companies and ultimately, all consumers of electricity in Great Britain. However, consumers are only likely to be affected by this measure to the extent that it leads to changes in the prices they pay for electricity.
- 4.13 The table below shows the sums the existing three onshore GB TOs are allowed to recover between 2007 and 2012 at today's prices from their customers for providing electricity transmission services.²³ Moreover, "revenue drivers" will be established from April 2007 that will automatically adjust the allowed cost recovery to take account of additional capital expenditure beyond the baseline assumed by Ofgem. Assuming that transmission currently represents about 3% of the typical residential consumer's electricity bill, the total allowed revenue would have to increase by around 33% or £425 million on the 2006/07 total of £1,272 million at today's prices to

²³ Tables 3.1, 4.1 and 5.1 of "Transmission Price Control Review: Final Proposals" http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/17916_20061201_TPCR_Final_Proposals_in_v71_6_Final.pdf?wtfrom=/ofgem/work/index.jsp§ion=/areasofwork/transpcr, Ofgem, 3 December 2006. Figures in the tables are in 2004/05 prices and so have been adjusted by the estimated GDP deflator for 2006/07.

raise domestic bills by 1% on average.²⁴ Other things being equal, it has been estimated that a 1% rise in residential electricity prices increases the total number of British households in fuel poverty by some 20,000, although this rise can in principle be mitigated by an improvement in the dwelling's quality of insulation.

2006/07 £million	2007/08	2008/09	2009/10	2010/11	2011/12	Average
National Grid (NGET)	1097	1122	1152	1178	1200	1150
Scottish Power (SPTL)	156	160	165	168	173	164
Scottish Hydro (SHETL)	51	52	53	54	55	53
Total	1304	1334	1398	1400	1428	1367

Source: Ofgem (totals may not sum exactly due to rounding)

- 4.14 However, the main business sectors directly affected by the regime are generators of offshore renewable electricity, those who may be interested in owning, constructing and maintaining the infrastructure connecting generation to the onshore grid, and those operating the transmission system.
- 4.15 The turnover of the UK wind energy sector in 2005 was estimated at £345 million (€500 million) based on the price of installed capacity.²⁵ By 2020, assuming realisation of the Government's aspirations, the market will grow to a value of between £15 billion and £19 billion, supporting between 17,000 and 35,000 jobs. On average, 10 full-time jobs are sustained per megawatt installed.²⁶
- 4.16 The UK wind energy supply chain encompasses a diverse range of goods and services to meet the needs of the wind energy sector, and sustains close to 4000 jobs in the UK, with around 1500 jobs located in Scotland and the balance in the rest of the UK. The DTI estimate that Round 2 offshore wind developments alone could bring a further 20,000 jobs for the UK.
- 4.17 The Renewables Obligation (RO), the Government's main mechanism for encouraging new renewable generating capacity will be worth £1 billion per annum by 2010.
- 4.18 Under any of the options, developers with pre-existing connections could be affected by the new regime. Ofgem have considered these issues and initially addressed these points in an Open Letter dated 25 July 2006²⁷ and in the last consultation document, asked whether any further comfort could be provided. Further detail on the approach that will be taken to adoption can be found in the Government Response to the Consultation and Ofgem's Scoping Document. DTI and Ofgem will continue to work with developers to ensure that the development of the regime takes into account existing as well as future wind farms.
- 4.19 Manufacturers and materials and equipment suppliers required in the construction of transmission assets may also be affected through increased competition for these materials, as well as by the industry standards established in relation to the regime.

Post-consultation update

²⁴ A 1% increase is equivalent to a rise of some £4.70 per household per year given that annual domestic electricity consumption is currently around 4,600kWh in Britain (page 31, "Quarterly Energy Trends", <http://www.dti.gov.uk/files/file36183.pdf>) and the average residential price is 10.25p/kWh including VAT (table 2.2.3, "Quarterly Energy Prices", <http://www.dti.gov.uk/files/file36184.pdf>).

²⁵ IEA Wind Energy Annual Report, 2005, http://www.ieawind.org/annual_reports.html

²⁶ DTI, Renewable Energy: You want the Confidence to Invest in Renewable Energy <http://www.dti.gov.uk/files/file21289.pdf>

²⁷ http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/15881_126_06.pdf

The responses to the consultation suggested that the sectors and groups identified as being affected were correctly identified. Responses also suggested that suppliers of materials and equipment required in the construction of transmission assets (sub-sea cables, transformers, substations etc.) may be subject to increased costs under the non-exclusive approach as a result of being asked to price the same offshore connection by a number of different competing TOs. This would be less likely to happen under the exclusive approach where there would be a single TO.

In choosing a non-exclusive approach the Government is mindful of this and the development of an appropriate tender process will seek ways to minimise the costs of any process from both the TO and supplier side and ensure that the process is fair, efficient and transparent. Further detail on the proposed tender process is available in the Government Response to the Consultation and Ofgem's Scoping Document.

The Government further considers that a non-exclusive approach will promote competition in the sector which will encourage innovative technical, commercial and financial solutions. Under an exclusive approach, there will be a limited likelihood that such innovation will occur as a result of competition, as the incentives on licensees to make use of the most effective solutions available do not exist or are at least diluted.

Costs and benefits of each option

- 4.20 A post-consultation update of the possible economic, environmental and social costs and benefits of each option is at Annex B.

Updated summary of the economic, environmental and social costs and benefits of each option

- 4.21 DTI and Ofgem considered that both the non-exclusive and exclusive options are workable solutions and that both have a range of costs and benefits.

Economic costs and benefits

- 4.22 In terms of economic benefits, the non-exclusive approach is likely to lead to greater competition for the provision of offshore transmission in the long-term rather than just at the procurement stage or in the tender for the initial allocation of areas as would be the case under the exclusive approach, which may reduce costs. However, the exclusive approach, with fewer TOs, may reduce costs as there is less scope for the replication of services such as operation, repair and maintenance functions. The non-exclusive approach is more likely to lead to new entrants coming into the TO market which is more likely to lead to innovative methods of providing transmission connections which will reduce costs and lead to an increase in the volume of offshore wind generation. However, the multiplicity of TOs and new entrants may not be able to bring about the cost savings that a single TO with a more strategic approach to offshore transmission in a particular area may be able to bring. The exclusive approach, once the areas had been assigned, would not be consistent with Government's policy goal of increasing competition where possible in energy markets, however, competition may exist through the ongoing competition for the procurement of materials and letting of construction and maintenance contracts for network construction.

Post-consultation update of economic costs and benefits

Respondents generally agreed that the non-exclusive approach would lead to increased competition but there was a concern about whether or not the costs savings made through competition would be sufficient to justify the possible extra costs that would fall on those involved in the tender process. It was suggested that a single round of tenders under the exclusive approach would lead to lower administrative costs. However, others argued that the reduced opportunity for competition under the exclusive approach would remove the incentives on TOs to reduce costs and innovation, as there would be less opportunity for new entrants to the market. This would impact on the ability to reduce costs and may lead to higher transmission charges.

The Government has considered the experience of the PFI approach and believes that the benefits of a competitive tender process which will lead to an increase in the number of participants in the market and the potential cost savings possible under a non-exclusive approach outweigh the potential costs and will enable offshore transmission connections to be delivered in the most cost-efficient and timely manner. The Government has also considered the reduced likelihood of competition under the exclusive approach.

An NAO analysis in 2001 and 2002 studies²⁸ concluded that the average efficiency gain in projects tendered under the PFI was between 10% and 20%. If a similar range of efficiency gains is applied to the lower end of the estimated costs of offshore transmission assets (ca. £2.5 billion²⁹) then the savings would be in the region of £250m to £500m. Taking into account that the tender process may not be directly comparable to PFI, even a much lower achievement than this illustrative 10% – 20% saving compares very favourably with the possible additional bidding costs of around 0.5%.

It was suggested that co-ordination would be more difficult under the non-exclusive approach as there could be a number of TOs as opposed to a single TO per licensed area under the exclusive approach. The impact of this could lead to more radial connections being built and increased costs as a result. However, the Government believes that the tender process under a non-exclusive approach can be designed to address the concerns about coordination. These issues are discussed further in Chapter 10 and in the Government Response to the Consultation.

There were concerns that under an exclusive approach, while experience of constructing offshore transmission assets was being gained the real costs of this work would not be available for the purposes of determining a price control. As a result, it was felt that they risked facing higher transmission charges than under the non-exclusive approach where a competitive tender should mean the real costs of construction will be determined from the outset, amongst other benefits. In contrast, under the exclusive approach the lack of historical data and experience offshore would make the determination of costs for use in a price control mechanism more difficult.

Environmental costs and benefits

- 4.23 In environmental terms, the exclusive approach may have the advantage of a single TO being able to provide a strategic view of the connection requirements of a single area and therefore plan and implement the transmission assets required with the least amount of negative environmental impact. However, the lack of competition to provide these assets may lead to a reduction in innovation and consequently attempts to reduce environmental impact may be less effective.

Under the non-exclusive approach, the use of a 'bidding window' may enable the issuing of tenders for bundles of lines rather than individual connections which will also enable a strategic view of connection requirements to be taken with the associated benefits of economies of scale and reduced environmental impact. Both options have the risk that they may cause delay to the implementation of the regime with the loss of carbon savings as a result of slower development of offshore renewable generation.

Post-consultation update of environmental costs and benefits

It was suggested that a lack of co-ordination under the non-exclusive approach would lead to greater negative environmental impacts and an increased likelihood of failure to obtain consents. However, some respondents suggested that there were measures that could be taken to lessen the likelihood of this. It was suggested that under the exclusive approach the 'best price option' would not be identified and would result in higher connection costs and more failed projects which

²⁸ The two National Auditing Office papers are available on its web site, PFI Construction Performance (2002) at: http://www.nao.org.uk/publications/nao_reports/02-03/0203371.pdf and Modernising Construction (2001) at: http://www.nao.org.uk/publications/nao_reports/00-01/000187.pdf

²⁹ The report Grid Integration Options for Offshore Wind Farms is available on the DTI web site at: <http://www.dti.gov.uk/files/file36129.pdf>

would have a negative overall environmental impact in terms of lower overall reductions in CO₂ emissions.

Some respondents suggested that a 'bidding window' could introduce unnecessary delays, as large numbers of applications at once would be likely to lead to a queue. This may lead to negative environmental impacts as there could be a loss of carbon savings through slower development of renewable generation.

However, the Government believes that on an enduring basis a bidding window will become a focus for generation projects to plan towards and can be factored into their overall project timings and that it will encourage greater co-ordination and procurement efficiencies which may reduce negative environmental impacts. The proposals for bidding windows are discussed further in Ofgem's Scoping Document.

The Government considers that the non-exclusive approach offers significant environmental benefits over the exclusive approach. In the long-term it will enable more timely connections for renewable generation projects and in the short-term it will better enable adoption of early Round 2 offshore wind projects. These will both have positive impacts on the timelines of renewable generation projects and will lead to an earlier reduction in CO₂ emissions.

Based on a social cost of carbon of £70 per tonne in 2000 which increases by £1/tC in real terms every year thereafter³⁰ and assuming a social discount rate of 3.5%, one can demonstrate that each year's delay in 1GW of offshore wind generating capacity (which is assumed to displace CCGT generation producing 0.1tC/MWh) would result in lost carbon savings of around 350kt per year if the annual load factor is 40%. This equates to a monetary loss of roughly £30 million per year at 2006 prices in present value terms.³¹

Furthermore, the Government considers that under a non-exclusive approach there is a reduced likelihood of stranded assets as only transmission assets that are required will be built which will reduce negative environmental impacts.

Social costs and benefits

- 4.24 In terms of social impacts, under the exclusive approach in which opportunities for competition and innovation are reduced may lead to higher costs of providing transmission assets which may lead to higher electricity prices for consumers and increase the numbers living in fuel poverty. The higher costs of providing transmission assets may have a negative impact on the offshore wind industry which may mean that less offshore wind generation would occur. Consequently, the benefits for the energy supply which may be derived from further increased diversity of the energy mix both in terms of fuel type and geographic source if greater volumes of offshore electricity generation connect would not be realised. This may have long-term costs in terms of the security of the UK energy supply. However, the non-exclusive approach, in which opportunities for economies of scale by having a more strategic and co-ordinated approach to offshore transmission are reduced, may also have similar negative social impacts.

Post-consultation update of social costs and benefits.

The Government considers that the benefits of a competitive tender process under a non-exclusive approach will enable offshore transmission connections to be delivered in a more cost-efficient and timely manner than under an exclusive approach. This will have significant benefits for the delivery of renewable generation and may reduce the costs of providing transmission assets which may lead to lower electricity prices for consumers and decrease the numbers living in fuel poverty. Furthermore, the Government believes that there will be less risk of stranded assets under

³⁰ <http://www.hm-treasury.gov.uk/media/209/60/SCC.pdf>

³¹ Strictly, the present value loss declines every year, although it remains close to £30 million up to 2013 if the "year zero" for the PV calculation is 2007.

a non-exclusive approach which is likely to lead to lower costs for transmission assets and therefore lower costs to consumers.

GB Security and Quality of Supply Standards (GB SQSS)

- 4.25 A GB SQSS sub-group was established by OTEG to review the existing technical rules governing onshore networks to see how they could be made to work offshore.
- 4.26 The sub-group was asked to complete a review of the current GB SQSS and consequently consider:
- whether it is appropriate to apply to the present onshore standard to offshore transmission networks;
 - if amendments are needed to extend the GB SQSS offshore; and
 - the range of options that exist for alternative security standards for offshore transmission networks.
- 4.27 In particular, the sub-group was tasked with the following specific objectives:
- to develop a framework of security rules that can be applied to offshore transmission networks that is compatible and consistent with the current onshore transmission network and market structure;
 - to assess the relevance of the existing GB SQSS for offshore transmission networks in the first instance and, if required, to outline any amendments that are needed to extend the GB SQSS offshore; and
 - to identify and develop a range of feasible alternative options for security standards relating to offshore transmission networks.
- 4.28 A full Terms of Reference for the subgroup is available on the Ofgem and DTI websites.³²
- 4.29 The sub-group produced a recommendation to Ofgem and DTI, following which 'A security standard for offshore transmission networks: an initial joint DTI/Ofgem consultation'³³ was published on 13 December 2006, inviting views on the recommendations.
- 4.30 If DTI and Ofgem decide to develop a different security standard for offshore electricity transmission networks, any changes to the GB SQSS are expected to be made by the Secretary of State under powers provided to him by the Energy Act 2004.
- 4.31 A Government Response to the offshore security standard consultation will be published shortly and will be available on the DTI website.³⁴

³² <http://www.dti.gov.uk/energy/sources/renewables/policy/offshore-transmission/offshore-transmission-experts-group/page31187.html>

³³ <http://www.dti.gov.uk/files/file36032.pdf>

³⁴ <http://www.dti.gov.uk/energy/sources/renewables/policy/offshore-transmission/Offshore%20GB%20SQSS%20Consultation/page35786.html>

5. CONSULTATION WITH BUSINESS: THE SMALL FIRMS' IMPACT TEST

- 5.1 The sectors directly affected are made up almost entirely of large businesses. The vast majority of small and medium sized enterprises (SMEs) are only likely to be affected by this measure to the extent that it leads to changes in the prices they pay for electricity. There is the potential for a small increase in electricity prices due to higher cost recovery of transmission revenues, although this is expected to be less than 1% and should have no significant impact on SMEs as a group or between each other. The Preliminary Consultation 'Regulation of Offshore Electricity Transmission' was used to test this assumption and no responses were received to suggest that there is likely to be any impact on small and medium size enterprises.
- 5.2 Prior to and following the publication of the preliminary consultation in 2005 the DTI and Ofgem have held a wide range of meetings with relevant stakeholders, companies and trade associations. These included organisations that represent small firms active in these sectors. The DTI also received more than 30 responses to the preliminary consultation.
- 5.3 A much smaller subset of small businesses active in the generation of renewable energy and/or the manufacture of materials required for offshore generation or transmission might be more affected by the regime.
- 5.4 There are around fifty firms in the UK involved in the development of wave/tidal devices. This industry comprises both small and large companies. However, wave and tidal devices are in the demonstration phase and commercial deployment is unlikely to take place on a scale requiring a high-voltage transmission connection for some time. Views from firms in the wave/tidal development sector were sought during this consultation
- 5.5 We have consulted the Small Business Service and they have agreed that the proposed regulatory measures are unlikely to have a disproportionate effect on small firms. However, this assertion will be further tested by the consultation process.

Post-consultation update

No responses were received to suggest that there is likely to be any significant impact on small or medium size enterprises.

6. COMPETITION ASSESSMENT

- 6.1 The Government's intention is to establish a new regulatory framework for offshore electricity transmission. There currently exist a number of offshore grid connections from offshore wind farms to the shore at low voltage, but until s.180 of the Energy Act 2004 is commenced³⁵ none are likely to be operating at high voltage or transmission level. A competition assessment is therefore difficult to undertake at this stage in the development of the market.
- 6.2 However, the Government's energy policy regulates where necessary and encourages competition where possible. The introduction of an element of competition in this new market for offshore transmission has been the Government's intention throughout the regime's development. The November Consultation document reaffirmed this by setting out two approaches that both contained varying degrees of competition for the award of the right to build, own and maintain offshore transmission assets. By deciding to implement the non-exclusive approach, the Government has selected the most competitive option.

Market definition

- 6.2 The product/service in question is the provision of transmission connections between offshore generating stations and the onshore grid. The market associated with this service comprises:
- The firms responsible for constructing, owning and maintaining the transmission infrastructure, which are the 'transmission owners' (TOs). TOs would not necessarily undertake the construction themselves, they might sub-contract the work, but they are ultimately responsible for the completion of the connections.
 - The firm responsible for operating the system and balancing and settling the electricity transmitted, the GB System Operator (GBSO).
 - The firms responsible for installing offshore generating stations, the developers (both wave/tidal and offshore wind).
 - The firms that manufacture and supply the equipment and materials necessary to construct transmission connections.

Market structure

- 6.3 The offshore wind energy industry is characterised by several large vertically integrated utility companies, a number of oil and gas companies seeking to diversify and several niche market players who specialise in renewable energy. It is a multi-national industry with participation by a number of European-based energy companies. The sector is a dynamic one and has seen a number of recent acquisitions and mergers.
- 6.4 In the wave and tidal industry, there are around 50 companies actively developing the technology, which is not yet commercial. The wave and tidal sector is less developed than the offshore wind industry.
- 6.5 In the offshore wind industry, developers tend to form consortia when the size of the project is several hundreds of MW or more. Thus, for Round 1, (where the average size of projects is relatively small at below 100MW) the development of projects has tended to be undertaken by a single company. In contrast, for Round 2, the size of projects averages several hundreds of MW and, possibly to minimise risks and costs, many projects are being developed by a consortium of developers.

³⁵ Cables of 132kV or more will be high voltage lines (transmission systems) once s.180 of the 2004 Act is commenced. Until then, cables of 132kV are low voltage lines.

- 6.6 The market structure for the TO activities onshore is split into 3 natural monopoly areas inherited from previous public sector ownership. These are England and Wales (National Grid Electricity Transmission 'NGET'), Northern Scotland (SHETL) and Southern Scotland (Scottish Power). Ofgem's Transmission Price Control: Updated Proposals³⁶ gives the regulatory asset values (RAVs) of each of the GB Transmission owners for 2006/07. These RAVs give NGET an 84.1% share (by value) of the GB TO market, Scottish Power, 11.5% and SHETL 4.1%. These companies are licenced in perpetuity and a proxy for competition is provided by a price control process. Competition exists in the procurement process through the sub-contracting for the supply of materials, construction and operation and maintenance contracts.
- 6.7 The proposed offshore transmission regulatory regime would create a new market structure similar to that onshore by introducing a regulated market for transmission connections - under the non-exclusive option offshore TO licensees compete for the right to build, own and maintain assets whilst under the exclusive approach organisations (not licensees) compete for licences. In the absence of transmission licences offshore, there is currently no market for TOs offshore. Project developers finance and construct their own connections individually as required, and at 132kV or less, these are regulated by a class exemption from the requirement for a distribution licence. The new regime will apply only to offshore projects that require a connection of 132kV or more, post commencement of s180 of the Energy Act 2004.
- 6.8 The extension offshore of a price control approach to regulation similar to onshore arrangements should ensure a single integrated set of arrangements for the trading and transmission of electricity, including:
- A single system operator which is independent of generation and supply interests;
 - Common rules and charging arrangements for connecting to and using the transmission system;
 - A common set of balancing and settlement arrangements; and
 - Consistent technical rules governing the planning and operation of transmission circuits.
- 6.9 The Government's view is that introducing offshore regulation in the form of price control arrangements will ensure a level playing field for both offshore and onshore generators, creating competition between electricity generated from different sources of energy.

Impact of options on competition

Option (ii) - Non-exclusive licences

- 6.11 The provision of offshore transmission assets is a natural monopoly in so far as that only one transmission connection is required for each offshore generating station. Therefore, a generator will be restricted in their choice of TO in that the winner of the competitive tender will be providing their transmission connection. However, under this approach the affiliate of a generator can apply for a licence to become an offshore TO and bid to run that generator's connection through the competitive tender process (subject to unbundling requirements). The purpose of the competitive tender is to provide the best solution at the best price.
- 6.12 The introduction of a competitive tender process is likely to increase the number of firms involved in the market as the provision of each line (or bundle of lines) will be open to competition. The companies likely to be involved in bidding to build, own, and maintain those assets are likely to include existing domestic and international TOs, DNOs, offshore wind developers and cable suppliers/installers and others who may see a market opportunity.
- 6.13 The greater the number of firms involved in providing offshore transmission connections the more likely it is to reduce an individual organisations overall share of the offshore transmission market.

³⁶ Tables 3.4, 4.4 & 5.4, "Transmission Price Control Review: Updated Proposals" (http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/16855_170_06.pdf), Ofgem, 25 September 2006

- 6.14 The costs involved for new entrants and existing market players under this option are likely to be the same, as all will be involved in the same competitive tender process and the relatively small scope of tender should not disadvantage smaller entities in the same way that the relatively large scope of the tender may under an exclusive licence approach.
- 6.15 The regulatory regime is likely to change the structure of the market (in that a market does not exist at present). However, this change is likely to mean an increase in the number of TOs operating in the market with the benefits that this extra competition will bring.
- 6.16 The offshore transmission market is characterised by rapid innovation and the Government believes that by introducing competition when regulating this new market, this should lead to further innovation as those involved in a competitive tendering environment will seek to reduce costs which will have associated benefits for customers.

Post-consultation update

The Government's energy policy includes the promotion of competition where appropriate and regulation where necessary. The Government's decision to regulate offshore electricity transmission through a licensed price control approach is compatible with this policy. The Government considers that it is right to introduce new competition for the provision of offshore TO services. Significant benefits can be captured by introducing through the non-exclusive approach a new element of competition between licensed offshore TOs for the right to build, own and maintain the transmission assets to be covered by their licences.

Both of the options set out in the consultation document introduce new elements of competition to offshore electricity transmission licensing and the clear majority of responses to the consultation exercise agreed that these were the right two options to consider. The debate amongst respondents was whether the potential benefits of the more competitive approach – the non-exclusive option – would be realised in practice and whether these benefits outweigh the greater complexity compared to a conceptually simpler exclusive approach.

The partial RIA accompanying the November 2006 consultation document³⁷ noted that the non-exclusive approach could have potentially higher total administrative costs than the exclusive approach as there are likely to be a greater number of competitions for the right to build, own and maintain transmission assets. At the highest end of the cost estimates, the total costs of bidding under the non-exclusive approach for the planned 21 individual connections in the three strategic areas were estimated to be as high as £105m. This estimate was based on the assumption that there would be five bidders for each project with a cost of £1m per bid.³⁸

However, the Government believes that in practice the actual costs of bidding could be much closer to the lower end estimate, under a non-exclusive scenario involving three bidders with a cost of £0.25 million per bid. It is clearly important to try to ensure that the costs of bidding under the non-exclusive approach are substantially reduced through the design of the tender process. A range of possible measures for further consideration are set out below:

- An iterative process to reduce individual and total costs of bidding.
- Provision of shared information to initial bidders.
- Recovery of development costs required to complete the transaction.
- Bidding windows

If, for example, the benefits of a number of offshore wind farms sharing connections to shore are also captured then the total costs of bidding for all those planned 21 projects could be in the

³⁷ The RIA is available on the DTI web site at: <http://www.dti.gov.uk/files/file35531.pdf>

³⁸ There is a lack of direct comparators on which to base the potential costs of bidding under the proposed regime although these will become clearer as the tender process is designed in more detail. However, respondents generally agreed with the costs cited in the RIA.

region of £13 million.³⁹ A study carried out for the DTI by the Centre for Embedded Distributed Generation and Sustainable Electrical Energy (CDGSEE)⁴⁰ estimated the connection costs of the planned offshore wind farms ranged between £2,421 million to £2,617 million on a shared line basis. The cost of bidding at the low-end estimate of £0.25m per bid would therefore be around 0.5% of the total cost of the projects planned, a fairly low proportion of the total costs of the assets.

National Audit Office analysis in 2001 and 2002 studies⁴¹ concluded that the average efficiency gain in projects tendered under the PFI was between 10% and 20%. If a similar range of efficiency gains is applied to the lower end of the estimated costs of offshore transmission assets (ca. £2.5 billion) cited above, then the savings would be in the region of £250m to £500m. Taking into account that the tender process may not be directly comparable to PFI, even a much lower achievement than this illustrative 10% – 20% saving compares very favourably with the possible additional 0.5% bidding costs. An HM Treasury report and a further 2001 report by the House of Commons⁴² concluded that bidding costs also ensured appropriate upfront diligence and good budgeting. While these samples may not be representative of all PFI projects, they illustrate the scale of benefits which may be achieved through an approach like the non-exclusive common tender approach.

Respondents did raise a number of concerns with this approach. For example, it was questioned whether the costs of a competitive system would be justified by the benefits it brings. This would be dependent on the effectiveness of competition and the associated incentives. This is discussed further in Chapter 10 and in the Government Response to the Consultation.

Option (iii) - Exclusive Licences

- 6.17 Under this option there will be a fixed number of TOs dependent upon the number of exclusive areas that are licensed. The competitive element for the provision of transmission assets will be restricted to an initial competition for the exclusive licensed areas. An individual organisation's share of the offshore transmission market will be based on the number and value of areas and how these are awarded. However, this is likely to lead to the market being dominated by a small number of large players with no scope for new entrants to the market once the licences have been granted.
- 6.18 The cost of regulation is likely to be similar for all players. The market structure will be affected as the number of TOs in the market will be restricted by the number of areas for which there are licences. A small number of exclusive areas is likely to favour the existing TOs who have the experience and significant resources that they can call on to plan, develop and implement a potentially large number of transmission connections over a relatively short period of time. An exclusive licence area may mean that, although set up costs will be the same for any size of organisation, smaller organisations may not have sufficient resources to be able to take on the future ongoing obligations and liabilities that being a TO for a whole area may bring. This resource obligation entails a significant and unquantifiable risk, due to the largely unknown nature (size, timing or location) of future offshore connection requirements. This may reduce the attractiveness of the offshore TO market for new entrants.
- 6.19 The offshore transmission market is characterised by rapid innovation and by providing an exclusive area it may mean that it is less likely that an incumbent TO will be willing to develop innovative techniques aimed at reducing costs as there is no competitive pressure upon them to do so.

³⁹ This is based on the low end estimate in the RIA of £0.25m / bid and 3 bidders.

⁴⁰ The report Grid Integration Options for Offshore Wind Farms is available on the DTI web site at: <http://www.dti.gov.uk/files/file36129.pdf>

⁴¹ The two National Auditing Office papers are available on its web site, PFI Construction Performance (2002) at: http://www.nao.org.uk/publications/nao_reports/02-03/0203371.pdf and Modernising Construction (2001) at: http://www.nao.org.uk/publications/nao_reports/00-01/000187.pdf

⁴² The House of Commons report The Private Finance Initiative (PFI) (2001) is available on its web site at: <http://www.parliament.uk/commons/lib/research/rp2001/rp01-117.pdf>

- 6.20 The provision of offshore transmission assets is a natural monopoly in so far as only one transmission connection is required for each offshore generating station. However, this option would restrict the number of possible providers to one following the initial allocation of the licences and competition would therefore be minimised. It is also possible that new entrants to the market for future licensed areas may be restricted as the initially successful TOs will have gained significant experience and learning which may enable them to offer a submit a lower cost bid thereby making it more difficult for new entrants to compete for a licence on the basis of cost, should that be relevant.

Post-consultation update

The non-exclusive approach can be compared against the exclusive approach, where one service provider (the TO licensed for a particular area) would be solely responsible for building, owning and maintaining transmission assets in a specified geographic area.

The development of offshore transmission assets is a relatively new area of technology and development, with only limited national and international benchmarks available, as many respondents noted. Therefore the ability to determine through competition the best bid for an exclusive TO licence would be more difficult. The bid criteria would be for an area and a theoretical number of projects rather than actual proposed project assets being assessed under the non-exclusive approach. Competitive benefits would be realised through procurement procedures of the new exclusive licensee, rather than through the identification of the lowest cost of specific assets through the non-exclusive tender process.

Based on its expenditure of over £55 billion through PFI projects, the Government believes that a tender process under the non-exclusive approach should provide more timely delivery and better budgeting when compared to the exclusive approach. A 2003 HM Treasury study⁴³ has assessed the track record of PFI.

HM Treasury data shows that before 2002, of a sample of 32 large PFI projects, 88% were delivered on time or early. This compares to a sample of 66 comparable non-PFI Government-run projects where 70% were delayed. Looking at whether the projects were delivered on budget results in a similarly favourable conclusion for PFI projects. Whereas 73% of the non-PFI public sector projects that were examined had to revise their spending plans upwards, this was only the case for 21% of PFI projects.

Under the exclusive approach there was a concern that any competition was likely to be restricted to the incumbent TO and it would act as a barrier to new entrants. These incumbents would be more likely to stick with their existing suppliers which would further restrict competition in the supply chain. There were also questions around the capability of a single TO being able to sustain the investment and resources required to deliver new connections and maintain existing connections in a timely manner. A concern was raised that the exclusive approach would remove the competitive element altogether and, whilst embedding onshore monopoly practices offshore would be easier to regulate, it would simply extend existing inefficiencies to a wider area.

Whilst it was suggested that there would be reduced opportunity for competition under this approach once the licences for exclusive areas had been allocated, some respondents suggested that this approach would benefit from economies of scale and enable cost and design efficiencies to be captured which would lead to lower costs. It was also suggested that tender costs would be reduced, as there would only be a single round of tenders and that this approach would lead to innovation as technologies could be developed, given the costs involved, at a global level.

The Government has concluded that effective competition was much less likely to occur under the exclusive approach. Furthermore, there will be a limited likelihood that innovative technical,

⁴³ The 2003 HM Treasury paper PFI: meeting the investment challenge, is available on its web site at: http://www.hm-treasury.gov.uk/media/648B2/PFI_604.pdf

commercial and financial solutions would occur as a result of competition, as the incentives on licensees to make use of the most effective solutions available do not exist or are at least diluted when implemented through licence conditions.

7. ENFORCEMENT AND SANCTIONS, COMPLIANCE AND MONITORING

- 7.1 The regime will be implemented through modifications to licences, codes and agreements. Licences are administered and enforced by Ofgem, and licence breaches can be subject to financial penalties and ultimately revocation. Licensed parties will be obliged to sign and comply with core industry documents. In addition, signatories to these documents will be bound by the contractual terms therein.
- 7.2 Licences can be subject to modification proposals by Ofgem, and disputes in respect of proposed modifications can be referred to the Competition Commission. Participants of the regime will also continue to be subject to the normal operation of competition law.

Post-consultation update

No responses were received to suggest that the proposals were likely to have any impact on these issues.

8. OTHER REGULATORY IMPACT ISSUES

- 8.1 We do not consider that any of the proposals give rise to any negative impacts in relation to health, the environment or race equality issues, or are likely to have a material impact on the rural economy.

Post-consultation update

No responses were received to suggest that the proposals were likely to have any significant negative impacts in relation to health, the environment or race equality issues, or are likely to have a material impact on the rural economy.

9. POST-IMPLEMENTATION REVIEW

- 9.1 The Government will undertake a review 3 years after the implementation of the regulatory regime. This review will consider the impact of the regime on the offshore wind industry and will specifically address:
- The costs and benefits experienced by offshore developers and TOs in relation to overall costs of the offshore transmission regime.
 - The environmental impacts of the regime
 - The effect on electricity prices to consumers
 - The effect on the Government's renewable energy targets
 - The continuing effectiveness and suitability of the security standards, licence conditions and adoption criteria implemented will be reviewed
- 9.2 Offshore developers, transmission owners and system operators, other Grid users, wider energy industry stakeholders, environmental groups and members of the public will be consulted during the review of the regulatory regime.

Post-consultation update

One respondent suggested that if the non-exclusive were chosen it should be reviewed after 5 years and if the resulting competition was limited, the exclusive approach should be re-considered.

10. SUMMARY OF COSTS AND BENEFITS OF PROPOSALS

- 10.1 As with any new regulatory regime there are costs associated with the development, implementation and monitoring of the offshore transmission regime. Whilst it is not possible to give a definitive breakdown of the exact costs for all the likely expenditure, there are areas where the costs (or a range of possible costs) can be forecast based on the experience obtained in the onshore environment. Additionally, as part of the consultation process, DTI / Ofgem sought views on the costs associated with each particular option to further inform the decision on the licensing option.
- 10.2 These costs fall under a number of broad categories:
- Monitoring and Reporting / Licences
 - Interfaces between GBSO and TOs
 - Setting up systems
 - Costs for Market Participants
 - DTI / Ofgem costs

Monitoring and reporting / Licence costs

- 10.3 There are a number of costs associated with the licence obligations surrounding monitoring and reporting in relation to Ofgem, other TOs and the GBSO. However, whilst these costs will be higher with an increased number of TOs involved, the Government does not consider this to be significant.
- 10.4 Ofgem operates a fee-based system for those who wish to be licensed to undertake electricity transmission activities. The current application fee for an onshore transmission licence is £450. Whilst there may be different criteria applied to those wishing to obtain an offshore licence as opposed to an onshore licence, it is not anticipated that the costs will increase significantly under the non-exclusive approach. Under the exclusive approach, the cost of obtaining an offshore TO licence will be dependent on the eventual total costs of bidding for a licensed area.
- 10.5 Ofgem recover the costs of administering the gas and electricity licensing regimes and funding of Energywatch from certain licensees (gas transportation, electricity transmission (GBSO only) and electricity distribution licensees), although these companies are able to pass through the costs to demand or supply customers. A licensee's share of these costs is calculated on the basis of their share of total customers on the system – subject to a minimum charge of £500. Offshore TOs, like onshore TOs, would not be subject to these costs although the GBSO could pass them through.

Post-consultation update

The Government anticipates that the monitoring and reporting costs associated with having an offshore TO licence should be lower under the non-exclusive approach, as this will primarily be due to any revenue changes, which will be determined through strict, pre-defined revenue change mechanisms. In contrast, under the exclusive approach, a similar periodic transmission price control review mechanism is likely to take place. This costs Ofgem on average £2m - £4m every five years. It is likely that licensees experience a similar cost.

Interfaces between GB system operator and transmission asset owners

- 10.6 The TOs will mainly be responsible for these costs which will include, for example, the creation and maintenance of interfaces between the GBSO and the [offshore] TOs. Onshore, there are three separate TOs, each of which has had to develop and maintain commercial and contractual

links with the GBSO and similar costs are anticipated offshore. Whilst a large number of TOs will increase the costs, it is not anticipated that these numbers will be sufficiently large as to be a significant driver for any particular regulatory option.

- 10.7 There could be additional costs arising from the need for Ofgem to oversee and regulate these new interfaces. However, these costs are considered to be small, not least because the activities concerned are already subject to regulatory oversight.

Post-consultation update

No new significant costs were identified as a result of the consultation.

Setting up Systems

- 10.8 In May 2006, interested parties were informed that the Secretary of State was minded to extend the role of the current onshore GBSO - undertaken by NGET - offshore. NGET's one-off costs to set up the regime may be the largest cost item in the development of the offshore regime. This will cover the development of upgrades to the system that the GBSO uses to receive, accept and settle bids and offers, and issue operational instructions. These costs relate mainly to the extension of the IT system already underpinning the operation onshore. It should be noted that these costs would likely to have been higher were NGET not the GBSO offshore as there may have been additional costs involved in integrating different systems. At the present time however it is not possible to accurately quantify these costs.

Post-consultation update

One respondent said that whilst there may be costs for National Grid to upgrade systems, these are more likely to be associated with detailed control systems and data exchange requirements. The system used to receive, accept and settle bids will be that which is used currently onshore. It is anticipated that National Grid's main costs will be manpower costs involved in supporting the development of the new regulatory regime.

If, as outlined in the Government Response to the Consultation, an independent tender process were set up to consider tender bids there would be both set-up and running costs associated with this. However, it must also be recognised that similar costs would also be incurred under the exclusive approach. There are a number of factors which would impact on these costs such as the number of times the process was invoked (although under a windowing process, it is envisaged that this would be reduced), the complexity of tenders and the associated governance structures. However, as stated previously, the Government is committed to ensuring that costs to enable the development of the regime are kept to a minimum.

Costs for Market Participants

- 10.9 Each of the options is likely to have cost implications for those companies who wish to become an offshore TO. These costs will be dependent on both the option that is chosen and the process within this for determining who will be awarded the TO licences for either areas or specific assets. Given the lack of data concerning the costs of bidding for an offshore transmission asset on either option, illustrative figures of £0.25m, £0.5m and £1m per bid have been used. Furthermore, there are a number of variables that are likely to influence such costs and at the present time it is only possible to suggest a broad range of possible costs based on anecdotal evidence.
- 10.10 The possible costs for bidding for either an exclusive area or a single transmission connection in Tables 1 and 2 below are given the same values. However, in reality there may be differences in costs between bidding for an exclusive area and an individual connection. There may also be differences in costs between areas and between individual connections as a result of local factors. It may be that the costs involved in submitting a bid for an exclusive area are higher than would be involved in bidding for a single line. However, these costs may be reduced as a result

of economies of scale. The impacts of each a number of variables within each option are discussed below. However, given the lack of data at the present time it is difficult to draw any firm conclusions. **Views on the potential costs to TOs of bidding to build, own and maintain offshore assets and how these costs might be reduced were sought in responses to the consultation document.**

Post-consultation update

Some respondents said that there was insufficient information on the actual costs involved in either approach and that the analysis was too simplistic for any proper assessment to be made. It was suggested that work to identify and quantify the costs and benefits of each option, including those options that have been ruled out, should have been undertaken. However, the Government noted that no new information pertaining to possible costs of bidding was received during the consultation. These illustrative costs will be refined as the tender process is designed.

Respondents had different views on the re-imbursement of the costs of the tender process irrespective of which option was chosen. These included; those who said that tender costs should be reimbursed to all those in the supply chain who incur significant costs; that the costs should only be absorbed into regime if they are strictly controlled and not if they were as high as the costs cited in the original RIA (Tables 1 & 2); that it was not appropriate for the winning TO to pay the costs of unsuccessful bidders, as it would result in commercial gaming; one respondent noted that if costs were recovered through Use of System charges, the consumer would ultimately pay for them. It was also stated that the fixed costs of setting up and running a TO business should not be repaid.

It was suggested that a way to reduce costs would be to have a pre-selection process to limit the number of bids prepared for each tender process. Another means of minimising tendering costs would be to identify asset clusters of projects in advance and tender these together. Further discussion of the possible costs under each option can be found at paragraphs 10.11 – 10.12 and in the Government Response to the Consultation.

Generators currently pay application fees and a range of financial commitments relating to the transmission connection and offer process. Similar cost-reflective costs may be incurred by generators offshore and this issue will be considered further during the development of the regime.

Option (ii) - Non-Exclusive licences

- 10.11 The non-exclusive option may have higher costs for potential TOs than the exclusive option as there are likely to be a greater number of competitions for the right to build transmission assets. The overall costs will be a function of the costs of developing a bid for a competitive tender, the number of assets available and the number of bidders. There may be significant variations in the costs of bidding for different transmission assets, as these will be influenced by the overall complexity of a particular project. Cable lengths and type, wind farm location and size, onshore and offshore infrastructure, design complexity etc will impact significantly on the cost of a bid. However, it is possible that costs may be reduced in a number of ways. For example, there may be economies of scale as companies may bid for a number of assets at the same time and there may be information which is common to a number of projects. There may be projects which can be based on a shared connection, thereby reducing the need for two separate bids. It may be less expensive for a new entrant to the market to bid for a single line than for an entire exclusive area. There is no obligation for each TO to submit a bid for each connection and it would be up to potential TOs to decide whether it was worthwhile bidding for the right to build these assets. It is therefore possible that overall costs will be less than outlined in Table 1.

Number of transmission lines (existing and future)	Cost of 3 bidders x £0.25m / bid	Cost of 5 bidders x £0.25m / bid	Cost of 3 bidders x £0.5m / bid	Cost of 5 bidders x £0.5m / bid	Cost of 3 bidders x £1m / bid	Cost of 5 bidders x £1m / bid
North West						
7 individual lines	£5.25m	£8.75m	£10.5m	£17.5m	£21m	£35m
Sharing options (1 group & 4 individual lines)	£3.75m	£6.25m	£7.5m	£12.5m	£15m	£25m
Greater Wash						
10 individual lines	£7.5m	£12.5m	£15m	£25m	£30m	£50m
Sharing options (2 groups & 6 individual lines)	£6m	£10m	£12m	£20m	£24m	£40m
Thames Estuary						
4 individual lines	£3m	£5m	£6m	£10m	£12m	£20m
No sharing options	N/A	N/A	N/A	N/A	N/A	N/A

Table 1 – Potential costs involved in bidding for different numbers of assets (single / shared lines) under a non-exclusive licence approach at a range of costs

Post-consultation update

Some respondents raised concerns that the potential costs of a tender process could be high for all those involved (developers, TOs, Ofgem and supply companies) and that these costs may cancel out any savings made as a result of greater competition. One respondent said that much of the cost of these projects is asset procurement, which is already fully competitive, regardless of the TO licensing arrangements.

It was suggested that the costs involved in a tender process could be reduced through having certain basic information on the nature of the connection, such as seabed surveys, available to all parties thus avoiding repetition of the same work. Similarly, closer TO/developer liaison would help to reduce costs. Respondents suggested that pre-selection of bidders and a streamlined tender process would reduce costs by limiting the number of bidders but it was recognised that this may restrict competition. The level of risk associated with fixed price contracts is significantly higher and a mixture of fixed and variable elements within contracts and the appropriate allocation of these risks may be key to reducing costs.

The Government considers significant benefits can be captured by introducing a new element of competition into the allocation of assets covered by offshore transmission licences, which should justify this scale of costs of tendering.

The RIA accompanying the November 2006 consultation document⁴⁴ noted that the non-exclusive approach could have potentially high total administrative costs as there are likely to be a greater number of competitions for the right to build transmission assets. At the highest end of the cost estimates contained in the RIA the costs of bidding under the non-exclusive approach for potentially 21 individual connections in the three strategic areas could be as high as £105m. This estimate was based on the assumption that there would be five bidders for each project with a cost of £1m per bid.⁴⁵

However, the Government believes that in practice the actual costs of bidding could be much closer to the lower end estimate of £13m contained in the same RIA, a non-exclusive scenario involving three bidders with a cost of £0.25 million per bid. It is clearly important to try to ensure that the costs of bidding under the non-exclusive approach are substantially reduced through the design of the tender process. A range of measures, set out in more detail in the Government Response to the Consultation and Ofgem's Scoping Document, include:

- An iterative process to reduce individual and total costs of bidding
- Provision of shared information to initial bidders
- Recovery of development costs required to complete the transaction
- Bidding windows

If, for example, the benefits of a number of offshore wind farms sharing connections to shore are also captured then as noted earlier the total costs of bidding for all those planned 21 projects could be around 0.5% of the total cost of the projects planned, a fairly low proportion of the total costs of the assets.

As set out previously, the tender process under the non-exclusive approach could be based on a PFI schemes. When considering the merits of the non-exclusive approach against those of the exclusive approach, the Government has considered the benefits that PFI has brought. Whilst not direct comparators, PFI schemes and the non-exclusive approach broadly fulfil similar conditions:

- There is a competitive process for each defined project, with an output-based specification;
- There is a specified service and the price is determined by a tender rather than cost pass through, with change mechanisms allowing for variations to reflect performance against specifications; and
- Commercial risks / opportunities that are best managed by the investor lie with the investor, not another party.

This can be compared against the exclusive approach, where one service provider (the TO licensed for a particular area) would be solely responsible for building, owning and maintaining transmission assets in that area. The development of offshore transmission assets is a relatively new area of technology with only limited national and international benchmarks available, as many respondents noted. Therefore the ability to determine through competition the best bid for an exclusive TO licence would be more difficult. The bid criteria would be for an area and a theoretical number of projects rather than actual proposed project assets being assessed under the non-exclusive approach. Competitive benefits would be realised through procurement procedures of the new licensee, rather than through the identification of the lowest cost of specific assets under the licence tender.

Based on its expenditure of over £55 billion through PFI projects, the Government believes that the tender process should provide more timely delivery and better budgeting when compared to

⁴⁴ The RIA is available on the DTI web site at: <http://www.dti.gov.uk/files/file35531.pdf>

⁴⁵ There is a lack of direct comparators on which to base the potential costs of bidding under the proposed regime although these will become clearer as the tender process is designed in more detail. However, respondents generally agreed with the costs cited in the RIA.

⁴⁶ The sharing options outlined in the table are based on the report 'Grid Integration Options for Offshore Wind farms', (CDGSEE), November 2006, whose analysis suggested that in some circumstances shared connections were the least cost options. <http://www.dti.gov.uk/files/file36129.pdf>

conventional Government spending. A 2003 HM Treasury study⁴⁷ has assessed the track record of PFI, with the following evidence supporting the conclusion that such improvements are delivered through the extra competitive pressure found under PFI.

HM Treasury data shows that before 2002, of a sample of 32 large PFI projects, 88% were delivered on time or early. This compares to a sample of 66 comparable non-PFI Government-run projects where 70% were delayed. Looking at whether the projects were delivered on budget results in a similarly favourable conclusion for PFI projects. Whereas 73% of the non-PFI public sector projects that were examined had to revise their spending plans upwards, this was only the case for 21% of PFI projects.

The HM Treasury study found that PFI projects were especially successful the larger the size of the project (£20m+), because in those cases the bidding costs are less significant in relation to the contract volume. The study also concludes that the participation of a minimum of four bidders is sufficient to bring about large benefits from competition. The Government considers that both these conditions on project size and number of bidders are likely to be present in the case of competitions for the provision of offshore transmission assets and services.

A review of tendering under PFI by the NAO in 2007⁴⁸ concluded that creating successful competitive tension under PFI was strongly linked to attracting sufficient bidder interest. The NAO commented that encouraging (and maintaining) bidder interest depended on minimising the bidding costs and the length of the tendering period, as well as by providing standardised terms and providing greater upfront warning to potential bidders on the timing of projects coming to the market.

The NAO's analysis in 2001 and 2002 studies⁴⁹ concluded that the average efficiency gain in projects tendered under the PFI was between 10% and 20%. If a similar range of efficiency gains is applied to the lower end of the estimated costs of offshore transmission assets (ca. £2.5 billion) cited earlier then the savings would be in the region of £250m to £500m. Taking into account that the tender process may not be directly comparable to PFI, even a much lower achievement than this illustrative 10% – 20% saving compares very favourably with the possible additional 0.5% bidding costs. The same Treasury report and a further 2001 report by the House of Commons⁵⁰ concluded that bidding costs also ensured appropriate upfront diligence and good budgeting. While these samples may not be representative of all PFI projects, they illustrate the scale of benefits which may be achieved through an approach like the non-exclusive common tender process.

However, once the tender process is complete, non-exclusive offshore TOs could potentially have a fixed revenue stream for the life of the assets, subject to strict pre-defined change mechanisms. It is the Government's view that the monitoring and review of individual price controls under the non-exclusive approach should be less burdensome than under the exclusive approach not only to offshore TOs and Ofgem, but also to the range of parties involved or interested in periodic price control reviews.

Whilst it would be possible to introduce incentives into licences for exclusive TOs to achieve economic and efficient solutions, similar to those in place in onshore TO licences, it is the Government's view that the real competitive pressures which would exist under the non-exclusive approach are more likely to deliver the most economic and efficient solutions in practice. The Government believes that there are therefore significant financial benefits to be gained by both

⁴⁷ The 2003 HM Treasury paper PFI: meeting the investment challenge, is available on its web site at: http://www.hm-treasury.gov.uk/media/648B2/PFI_604.pdf

⁴⁸ The NAO report Improving the PFI tendering process is available on its web site at: http://www.nao.org.uk/publications/nao_reports/06-07/0607149.pdf

⁴⁹ The two National Auditing Office papers are available on its web site, PFI Construction Performance (2002) at: http://www.nao.org.uk/publications/nao_reports/02-03/0203371.pdf and Modernising Construction (2001) at: http://www.nao.org.uk/publications/nao_reports/00-01/000187.pdf

⁵⁰ The House of Commons report The Private Finance Initiative (PFI) (2001) is available on its web site at: <http://www.parliament.uk/commons/lib/research/rp2001/rp01-117.pdf>

generators and consumers by pursuing the non-exclusive approach. Those benefits will be felt by generators through lower transmission charges and consumers through their electricity bills.

Option (iii) - Exclusive Licences

10.12 The costs will be based on the number of exclusive areas that are available for TOs and the number of TOs that are likely to bid under a competitive process for these areas. For example, the lowest number of potential exclusive areas will naturally lead to the lowest costs in terms of costs of bidding. If the TO role within more than one offshore area was put out to competitive tender it would be for individual organisations to weigh up whether the potential returns for winning such a role were worth the investment required to enter into a competitive process. Table 2 outlines what it may cost TOs to bid for the TO licences for 3, 4 or 5 exclusive areas at a range of different costs. The costs of the tender process increase as a result of any increase in the number of areas, number of TOs and the costs of bidding. However, it is hoped that costs would be reduced by economies of scale, for example, if a TO bid for more than one exclusive area. It may be that there will be differences in the costs of bidding between different areas as a result of there being a greater number of assets within a particular area. However, a lack of data on what assets will be in any particular area has meant that no such distinction is made here. It may be that the costs of a new market entrant would be higher if they were bidding for an exclusive area given the potential scope of the tender than if they were just bidding for a single connection.

Number of exclusive areas	Cost of 3 bidders x £0.25m / bid	Cost of 5 bidders x £0.25m / bid	Cost of 3 bidders x £0.5m / bid	Cost of 5 bidders x £0.5m / bid	Cost of 3 bidders x £1m / bid	Cost of 5 bidders x £1m / bid
3 areas	£2.25m	£3.75m	£4.5m	£7.5m	£9m	£15m
4 areas	£3m	£5m	£6m	£10m	£12m	£20m
5 areas	£3.75m	£6.25m	£7.5m	£12.5m	£15m	£25m

Table 2 – Potential costs of bidding for different numbers of areas under an exclusive licence approach at a range of costs⁵¹

Post-consultation update

It was suggested that an exclusive approach would lead to the lowest cost tender process as there would only be a single round of tenders for the licence for an exclusive area as opposed to multiple tender rounds under the non-exclusive approach. It was considered by respondents also important that any costs under the exclusive approach were minimised and approaches to reducing costs outlined under paragraph 10.11 were equally applicable to this option.

However, once this initial tender of licences was complete, administration of the exclusive licensing regime would be similar to the system onshore, with TOs subject to periodic (5-yearly onshore) price control reviews, entailing considerable administrative burden on all parties involved in contrast to the reduced monitoring burden of individual price controls under the non-exclusive approach.

There is presently no UK historical experience of operating completely new transmission networks in offshore waters. This lack of information, data, and experience makes the task of developing a price control and incentives for exclusive TO licensees potentially complex and burdensome. It would also be a less accurate method for determining the regulated revenue stream of the new TOs. The Government also considers that further tenders would still need to be undertaken for any additional exclusive licence areas needed to provide for future offshore generation projects.

While the initial set up of the exclusive approach may be less complex than the non-exclusive approach, at the same time it is less likely to deliver cost reductions in offshore electricity transmission connections in the long term. These cost reductions will be a key driver for further

⁵¹ <http://www.dti.gov.uk/files/file36129.pdf>

development of offshore renewables in the future, which underpins the Government's targets and aspirations for renewable electricity generation.

On balance, it is the Government's view that while concerns over the complexity of the non-exclusive approach are resolvable through the careful design of the tender process, the concerns about how to reduce the administrative burden and difficulties in the design of a price control under the exclusive approach present a greater risk in delivering a regime for offshore electricity transmission which provides cost-effective and timely connections for offshore electricity generation

Ofgem Costs

- 10.13 There will be costs to Ofgem involving the design and co-ordination of the new offshore arrangements. Ofgem costs for the implementation of the BETTA project in 2005/06 were approximately £3 million. However, it is anticipated that the implementation of the offshore transmission regime will not be as complex as BETTA and the initial costs are therefore likely to be lower. There will be ongoing costs associated with, for example, work on price control issues and any tendering process. The costs for these will differ depending on the amount of work involved. Multiple tender processes for individual connections may be more expensive than a single tender process for an exclusive area.

Post-consultation update

There may be additional costs to Ofgem as a result of their involvement in the setting up and running of any proposed independent tender process. As stated under paragraph 10.8, the level of these is subject to a number of factors yet to be determined but the intention would be to keep these costs to a minimum.

There will be differences between the two options in terms of the ongoing costs involved. It is likely that costs under the exclusive approach would be similar to the system onshore, where TOs are subject to 5-yearly price control reviews, entailing considerable administrative burden on all parties involved.⁵² However, under the non-exclusive approach offshore TOs will effectively have a fixed revenue stream for the life of the assets, subject to strict, pre-defined revenue change mechanisms which should mean lower ongoing administrative costs.

DTI Costs

- 10.14 The costs to the DTI of designing and co-ordinating the offshore regulatory regime are estimated to be in the order of £340,000. It is anticipated that these costs will be broadly similar whichever regulatory option is chosen.

Post-consultation update

There may be additional costs to DTI as a result of their involvement in the any proposed independent tender process although as stated previously, these are subject to a number of factors yet to be decided.

⁵² For example, onshore transmission price controls presently cost Ofgem between £2m and £4m and last five years, with probably a similar cost for licensees. While costs are unlikely to be identical offshore, **this indicates the possible scale of administrative costs for three offshore TOs under the exclusive approach.**

11. SUMMARY AND CONCLUSIONS

- 11.1 The Government has announced its decision that the non-exclusive approach to licensing offshore electricity transmission as outlined in Chapter 4 is the approach that will be taken.
- 11.2 The DTI has given careful consideration to all the responses received. In making his decision the Secretary of State has also considered:
- The two models against the Government's stated policy aims.⁵³
 - Whether sufficiently robust answers are available to the questions raised by respondents.
 - The pre-stated preference of the Gas and Electricity Markets Authority ('the Authority') for the non-exclusive approach. It believed that this option would deliver offshore transmission connections in the most cost-efficient, timely and certain manner to consumers and generators. That preference remains the position of the Authority following the responses to the consultation exercise.
 - The overall timetable for the development of the new regime and the need for a decision on the licensing model to be made to enable the next phases of this project timetable to proceed.
- 11.3 The Government believes that the benefits of a non-exclusive approach make it preferable to the exclusive approach and does not believe there is a case for adopting any alternative option from the two set out in the consultation paper. The detailed rationale behind the Government's decision is set out in the Government Response to the Consultation.
- 11.4 The Government Decision sets the broad framework for the non-exclusive regime, but there are a number of questions that still need to be answered on detailed issues associated with the implementation of the non-exclusive approach. The Government and Ofgem will now proceed with developing the detailed legal and policy framework required to implement the offshore electricity transmission regime, having taken on board comments received.
- 11.5 Ofgem has published a Scoping Document⁵⁴ at the same time as this Government Response, which sets out the framework for the work to be undertaken and the key policy questions to be answered on the detailed issues associated with the implementation of the non-exclusive approach.
- 11.6 DTI and Ofgem will also hold an industry workshop on 24 April 2007 to explain this decision further and set out the forward programme of work. However, DTI currently expects the high level milestones to be as follows:
- | | |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------|
| July 2007 | Policy Statement and first consultation on tender design, draft licence, code and agreement modifications |
| January 2008 | Second consultation on draft licence, code and agreement modifications |
| June 2008 | Consultation on full regime |
| October 2008 | 'Go-Active' : commencement of ss. 90 & 91 of the Energy Act 2004. Modifications made to licences and associated codes and agreements. |

⁵³ The Government's policy aims were noted in Appendix 2 of the November 2006 consultation paper.


⁵⁴ The Scoping Document is available on Ofgem's web site at: <http://www.ofgem.gov.uk/>

First tender process commences, including for those with connections to be adopted (see sections 2.86 –2.105 of the Government Response)⁵⁵

An appropriate 'Go-Live' : commencement of ss. 89 & 180 of the Energy Act 2004 date to be determined⁵⁶

I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.

Signed by the Parliamentary Under Secretary of State for Energy



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Date

29 March 2007
.....

Contact

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⁵⁵ The length of time it will take for the tender process to conclude is subject to the design of this process, but the Government currently expects this to be in the region of 6-8 months.

⁵⁶ As discussed in sections 2.86 – 2.105, this date will be determined by the Secretary of State following discussions with developers.

ANNEX A: LIST OF CONSULTATION RESPONDENTS

DTI / Ofgem would like to thank the following for their responses to the consultation document.

Airtricity
BEAMA Power Ltd
BWEA
Centrica
Charles Davies
Eclipse Energy
EDF Energy
Energywatch
Eon-UK
Highlands & Islands Enterprise
London Array
National Grid (as GBSO)
National Grid (as TO)
Natural England
RWEnpower
Scira Offshore
Scottish Power (Energy Management, Generation & Energy Retail)
Scottish Power (Energy Networks)
Siemens
SSE
United Utilities
Warwick Business School
Warwick Energy
Western Isles Council
Two further confidential responses were received.

ANNEX B: POST CONSULTATION UPDATE OF THE COSTS AND BENEFITS OF EACH OPTION

[Paragraph numbers are taken from the original RIA]

As stated in the partial RIA that accompanied the consultation document, the regulatory regime that we are seeking to put in place is new and it was therefore difficult to determine with certainty the magnitude of the likely costs and benefits associated with each option. This section of the RIA updates these original costs and benefits in the light of the responses received. These updates (in italics), where necessary, are dealt with on an issue-by-issue basis for ease of reading and understanding.

4.20 Option (ii) - Non-exclusive Licences

Benefits

Economic

- 4.21 This approach would offer offshore TO licensees a Regulated Asset Base (RAB) on a specific asset basis rather than on an area basis. Potentially, this could lead to greater certainty for new and existing TOs on the financial obligations and risks they would be taking on as they would be able to decide which transmission assets they were bidding to build. There would be no obligation upon them to bid for any particular connection.

Post-consultation update

A number of respondents suggested that a larger number of smaller TOs with better defined roles would encourage more participants.

- 4.22 This approach could provide greater quantification of what is being bid for (compared to the exclusive area approach where bids would be made on both defined and undefined assets) which may increase the likelihood of TOs bidding a more realistic price as there is less risk of inflated bids being made to cover potential future liabilities. This could also reduce the cost of Ofgem developing a price control as the cost of the winning bid will be nearer the true market value and may therefore make the price control assessment simpler.

Post-consultation update

Some respondents said that this approach should allow the discovery of the best price option and, by minimising the cost of offshore networks, provide best value to consumers.

- 4.23 This could give TOs greater confidence in their ability to finance their commitments and would provide developers with greater certainty. If no existing TO was interested in bidding to build the transmission assets, a developer could, in theory, apply for a TO licence and build and operate the transmission assets themselves (subject to unbundling requirements). This would give early R2 developers greater certainty.
- 4.24 This approach would provide competition between licensed TOs. Direct competition between TOs for the provision of assets would enable a more market based approach to the setting of a price control removing the need for benchmarking between TOs / bundles (assuming that more than one TO bids successfully).

- 4.25 It also allows for new entrants to the market who might not wish or be able to take on the obligations that the role of a TO for a whole area would bring. New entrants to the market may develop technical innovations which are likely to reduce costs.
- 4.26 This approach is similar to the way in which Ofgem licences new networks such as IDNOs and IGTs.
- 4.27 Subsequent rounds of offshore developments would require additional tenders. However, it is likely that there would be learning in the early tender rounds, which may lead to administrative cost-reductions in the longer-term.
- 4.28 This approach may make it simpler to deal with existing connections, as requests for connections that are put out to tender could be drawn up with or without them. This should not undermine the principle of the regime – if the connection is tendered and not bid for, then the developer could, in theory, be licensed to run it (subject to unbundling requirements). However, the developer would still be required to obtain a TO licence and successfully tender for the line. **The consultation document sought views on whether it is appropriate to allow generators to bid for their own transmission services, in particular in light of any potential moves towards unbundling at an EU level.**

Post consultation update 4.23 – 4.28

Some respondents agreed that this approach would be more flexible and allow new entrants into the market. It was suggested that this approach is fundamentally more competitive and allows for the formation of competing TO / contractor alliances, which could deliver the benefits of collaborative working whilst enabling competition.

A majority of respondents stated that it was appropriate to allow a generator to bid for the right to build own and maintain its own transmission connection. It allows the developer to apply for its own TO licence and assemble its own set of contractors, thus reducing the risk of no TO being appointed. It is important that there is adequate business separation alongside transparency and regulatory controls to minimise any anti-competitive behaviour, but these requirements could also be unduly onerous for some developers. One respondent suggested that this proposal would lead to cherry-picking and may lead to more difficult or less attractive projects getting no connection offer. The Government Response to the Consultation further addresses this issue.

- 4.29 This approach would allow developers to consider co-ordinating applications for transmission connections and sharing of connections. However, there is a risk that this will not happen. A study⁵⁷ by the Centre for Distributed Generation and Sustainable Electrical Energy (CDGSEE) on the optimum economic and technical solution for offshore transmission networks estimated that the costs for connecting existing and planned offshore wind farms ranged between £2,421 million to £2,617 million on a shared line basis and £2,583 million to £3,059 million on an individual line basis. This suggests that there may be significant potential for cost savings to be made if some Round 2 wind farms shared transmission connections rather than had individual connections. Ofgem and the GBSO could play a role in encouraging this.

Post-consultation update

There were conflicting responses regarding the risk to co-ordination under this approach. Some respondents suggested that the GBSO maintaining a strong co-ordination role would address any serious risk. It was suggested that licensed TOs should be required to consult each other. Respondents argued that natural economic pressures would make developers cooperate, as shown by East Irish Sea developers. The currently radial and incremental nature of development did not suggest the non-exclusive approach would result in inefficient or uneconomic investment. Achieving co-ordination and economic efficiency of networks under this approach would require more upfront work on equipment and technology standards.

⁵⁷ Grid Integration Options for Offshore Wind Farms, CDGSEE, November 2006. <http://www.dti.gov.uk/files/file36129.pdf>

However, other respondents argued that there was a major risk that a lack of coordination in the non-exclusive approach would deliver less economically sound assets, including duplication and unnecessary levels of redundancy. They believed it would ultimately jeopardise the viability of offshore renewables and result in a failure to meet the 2010 target.

- 4.30 It may be that greater benefit may be derived from co-ordinated timing of applications rather than physical sharing of connections. A 'bidding window'⁵⁸ in which developers were required to submit connection requests to the GBSO or a third party would enable Ofgem and the GBSO or a third party to consider individual connection requirements more strategically and offer prospective TOs the opportunity to bid for bundles of lines as well as single connections if appropriate. In such a case, three projects located in completely different areas could benefit from having a single TO successfully win a combined bid for them. This approach may be more likely to lead to an optimal level of build of transmission assets at an economic and efficient price as procurement efficiencies from economies of scale would lead to a lower overall cost.

Post-consultation update

Some respondents were concerned that the introduction of an application or bidding window could lead to unnecessary and artificial delays in project development timelines partly because it was unusual for a single connection application to be sufficient as usually multiple modifications to this would be required over a period of time. It was also suggested that application windows were likely to result in a large number of applications and a queue, as per the Scottish experience before BETTA and that synchronisation of all aspects of different projects to fit a time-window would be too difficult. However, it was suggested that co-ordination could be better achieved by identifying cluster of developments in advance which could be tendered as a group. The Government believes that greater co-ordination and procurement efficiencies can be encouraged through the windowing of tenders for projects. The issue of a bidding window is discussed further in the Government Response to the Consultation and Ofgem's Scoping Document.

- 4.31 Moreover, in view of the multiple options that might be available for sub sea routing, landing and grid connection, it is possible that the GBSO or a third party might be required to undertake preliminary works to identify a small number of feasible routing options and obtain seabed surveys that would be made available to all TOs interested in bidding. This would remove the possibility of each bidder undertaking their own seabed and other survey work which otherwise might increase costs and the likelihood of negative environmental impact.

Post-consultation update

There were conflicting views on the issue of the GBSO or another party undertaking preliminary works on behalf of developers and TOs. Some respondents felt that it would be useful if certain basic information on the nature of the connection could be provided to all parties and that closer TO / developer liaison would help to reduce costs. The issue of who would judge if these preliminary works were economic and efficient would have to be determined. There was concern that sea bed surveys, for example, should only be carried out by those with sufficient expertise given the level of risk associated with this.

Environmental

- 4.32 Greater competition would lead to an increase in innovation in the development of new techniques or implementation strategies, which may be more environmentally beneficial. As a result there may be a reduced risk of negative environmental impact. This may reduce the costs of transmission networks which would have a positive impact on the offshore wind sector, where costs are currently high, and lead to an increased amount of offshore wind development.

⁵⁸ An 'application or bidding window' is a defined period within which a generator must make a request for an offshore transmission connection to the GBSO or a third party. The GBSO or a third party will then issue tenders to all eligible TOs for all the connection requests received within that window at the same time.

Post-consultation update

No new environmental benefits were identified as a result of the consultation.

Social

- 4.33 A regime in which opportunity for competition is increased may lead to greater innovation in technology and implementation strategies which may lead to lower electricity prices for consumers and reduce the numbers living in fuel poverty. The possibility of a positive impact on the offshore wind industry as a result of lower costs to those developing offshore wind projects may mean that a greater volume of offshore wind generation would occur. Consequently, the benefits for energy supply which may be derived from further increased diversity of the energy mix both in terms of fuel type and geographic source if greater volumes of offshore electricity generation connect would be realised. This may have long-term benefits in terms of the security of the UK energy supply.

Post-consultation update

No new social benefits were identified as a result of the consultation.

Costs

Economic

- 4.34 Although there will be increased competition, there may be a risk to security of supply if a number of new inexperienced TOs enter the market. However, this risk can be managed through either the application criteria or through the competitive tender criteria at a later stage. Furthermore, the requirements of the GB SQSS should also ensure that all connections meet the minimum standards required.
- 4.35 There is no guarantee that a TO will get any return on the resources it puts into tendering for connections. This may discourage new entrants, but also existing onshore TOs from bidding. However, this is not as big an issue as faced under the exclusive license approach where there is no possibility of new entrants winning any bids once the decision on the exclusive areas has been made.

Post-consultation update

The number of potential TOs could be limited by the moderate number of projects in the long term, different timescales of development, and the organizational and financial requirements involved in being a TO.

Respondents had different views on the reimbursement of some or all of the costs of the tender process. These included: tender costs should be reimbursed to all those in the supply chain who incur significant costs; that the costs should only be absorbed into regime if they are strictly controlled and not if they were as high as the costs cited in the original RIA; that it was not appropriate for the winning TO to pay the costs of unsuccessful bidders, as it would result in commercial gaming; one respondent noted that if costs were recovered through Use of System charges, the consumer would ultimately pay for them. It was also stated that the fixed costs of setting up and running a TO business should not be repaid. It was suggested that a way to reduce costs would be to have a pre-selection process to limit the number of bids prepared for each tender process. Another means of minimising tendering costs would be to identify clusters of projects in advance and tender these together.

One respondent was concerned that the desire to minimise tender costs should not remove the scope for design and delivery innovation on the part of tendering TOs.

- 4.36 The non-exclusive approach may mean a less straightforward regime, with a number of TOs which may result in a higher administrative burden (for developers, the GBSO, other TOs, DNOs and Ofgem). For example, there may be higher recurring costs as there would be multiple tender processes as and when new connections were required. The GBSO or third party's role would be greater and therefore recurring GBSO or third party costs passed through the price control could increase. A more complex system with multiple players may lead to a more costly system of monitoring.
- 4.37 This approach may cause delays as it could be a lengthy process from the developer submitting an application to the GBSO or third party, to receiving an offer, as bid evaluation could potentially be complex (addressing price, risk and timescale factors) and the criteria set in the GBSO licence might, for example, require the appointment of an independent and transparent tender panel. The issue of how to evaluate different bids, if a number of bids involving one or more different lines were submitted, would have to be resolved. If no TO is initially interested in tendering for the transmission connection, this will also lead to further delays. **The consultation sought views on how confidence could be built that the tender process can be run transparently and fairly.**
- 4.38 This approach would need to ensure that there was appropriate ring fencing of National Grid's TO and SO interests (as a result of their potential role as assessor of tenders) to ensure that other TOs who were tendering for contracts had sufficient confidence that the system was fair and that the processes for determining successful bidders were transparent.
- 4.39 The criteria to determine the GBSO or third party's choice of TO would have to be made publicly available and any decisions taken would have to be fully auditable. Alternatively, Ofgem could run the process, but this approach would be a departure from the onshore offers system and would require some further consideration of how it might work (e.g. Ofgem could contract out this function). It would also need consideration in light of Ofgem's statutory duties.

Post-consultation update of paragraphs 4.36 - 4.39

Respondents said that there was a need to address concerns over the potential costs, complexity and length of time a tender process would take to implement and to demonstrate to stakeholders how the proposed regime would operate in practice.

It was suggested that using a tender panel that was independent of the GBSO would ensure fairness and it was key that any process was transparent. Licence conditions, Ofgem's powers, EU competition law, careful consideration of the tender panel membership, provision of clear and timely information, clear tender assessment criteria, and the provision of auditable decisions were suggested as ways in which such transparency and impartiality could be delivered to give confidence in any tender process.

Respondents outlined a number of criteria against which bids could be assessed. These included price, credit ratings, relevant experience, ability to fulfil necessary duties, technical ability, ability to innovate, ability to deliver on time, willingness to be bound by a unit cost for set periods and environmental considerations.

The Government believes that, as a result of further clarification, the concerns raised by respondents about how complex the tender process might be under the non-exclusive approach can be addressed. Balanced against the potentially more complex nature of the non-exclusive approach is the greater ability of this approach to determine the real costs of constructing assets. These issues are addressed further in the Government Response to the Consultation and Ofgem's Scoping Document.

- 4.40 The non-exclusive approach would mean that developers are unlikely to have early certainty on their TO until mid-2008 at earliest. However, this could be lessened as any TO who would be asked to tender for a particular transmission connection would have to have passed certain

eligibility criteria and be licensed by Ofgem. It would also be lessened by the knowledge that a developer could potentially bid for his or her own connection if no TO came forward.

Post-consultation update

One respondent felt that increased certainty could be provided, in terms of adoption, if there were some mechanism that allowed Ofgem to make an economic and technical assessment of high level designs and forecast costs in advance of investment. It was suggested that Transmission Investment for Renewable Generation (TIRG) provides a precedent for this. Further detail on arrangements for adoption is available in Ofgem's Scoping Document.

- 4.41 This approach could lead to fewer economies of scale if TOs were to only bid to build single lines as there would be no requirement for TOs to bid to build lines together. This may lead to suboptimal investment decisions, as each TO would have no incentive to co-operate with other TOs in creating hubs and minimising cables, planning for future projects in close proximity, or avoiding using up capacity for connection points.

Post-consultation update

It was suggested that competition in the market could allow the discovery of the best price option and therefore minimise the cost of offshore networks. Some respondents were of the opinion that the GBSO maintaining a strong co-ordination role would address any serious risk. It was suggested that co-ordination could be better achieved by identifying groups of developments in advance which could be tendered as a group and requiring licensed TOs to consult each other.

Environmental

- 4.42 There may be a reduced possibility of strategic planning across a wider area (depending on the extent of bidding for bundles), as there is reduced incentive for TOs to take a wider or long-term perspective of developments not in their bundle e.g. capacity limits of a specific onshore connection point like Heysham. This may lead to duplication of assets by multiple TOs in a particular area and as a result there may be a risk of increased negative environmental impact as multiple cables and landfalls are necessary. However, Ofgem and GBSO provide a counter to this in their respective roles. TO licence conditions could also minimise the risk of this behaviour. **The consultation sought views on whether there was a risk of lack of co-ordination that was specific to this approach and if there were any measures that could mitigate such a risk.**

Post-consultation update

It was suggested that under the non-exclusive option a lack of co-ordination could impact on sea cable routes and may result in duplication, unnecessary crossings of cables, and limitations to the availability of routes. This would lead to greater negative environmental impact and may result in developers failing to get all necessary consents which could lead to increased connection costs as economies of scale may be reduced. It was also suggested that there would be serious problems if developments exploited the limited opportunities to make environmentally acceptable connections in a way that made future expansion at particular onshore connection points more difficult or impossible. Accordingly, co-ordination of connections near the beach and more widely, proposals to deal with a potential lack of coordination in operation of and access to the networks, was seen as particularly important.

- 4.43 Any delays caused by an overly complex procedure may also mean a loss of carbon savings, as outlined in paragraph 4.63, as wind farm development is delayed.

Social

- 4.44 This approach, in which the likelihood of economies of scale may be reduced, could lead to an increase in the cost of providing transmission assets. In the long-term these costs will be passed to the consumer who will pay more for their electricity. This may lead to an increase in the

numbers of those living in fuel poverty - other things being equal, a 1% rise in residential electricity prices increases the total number of British households in fuel poverty by some 20,000.

Post-consultation update

No new social costs were identified as a result of the consultation.

4.45 Option (iii) - Exclusive Licences

Benefits

Economic

- 4.46 Whilst this option may be more complex to set up initially it would lead to a relatively simple regime, with reduced ongoing administrative burdens once the TOs for each exclusive area had been decided. It would be consistent with the onshore regime's approach of monopoly areas and it would provide greater certainty for developers about their TO for existing and future developments, once an offshore TO is appointed for an area. The TO would be obliged to offer the generator a connection.

Post-consultation update

Some respondents suggested that conceptually the process under the exclusive approach was simpler to understand, as it mirrored more closely the system onshore.

However, other respondents were concerned that the complexity of establishing an effective price control mechanism under the exclusive approach until adequate historical data and information is available was a serious issue. This could result in greater administrative and construction costs subsequent to the tender process, particularly, for example, relating to the administrative burden of periodic price control reviews. Others also noted that it would be a complex and difficult task to determine effective criteria on which to base a tender for exclusive licences, without resorting to a beauty contest. Such a contest would be based on subjective and unquantified information, which could result in inaccurate judgements that could be subject to significant subsequent changes.

- 4.47 Competition would initially be provided through tenders for exclusive areas. There would also be ongoing competition through the procurement of materials and letting of construction and maintenance contracts for network construction. This option could be more likely to achieve optimal use of resources in the design of offshore connections by having a single strategic planner for a discrete area, reducing the risk of stranded and / or duplicated assets or inefficient investment to consumers.
- 4.48 This approach could encourage a more co-ordinated approach to the sharing of connections with the possibility of significant cost savings as outlined in paragraph 4.29.

Post-consultation update

It was suggested that tender costs would be reduced, as there would only be a single round of tenders. It was also suggested that this approach would lead to innovation as technologies could be developed, given the costs involved, at a global level.

One respondent said that this approach provided an opportunity for consistent engineering standards to be applied with others suggesting that it enabled economies of scale to be achieved as well as savings through design efficiencies as the approach would be better coordinated, more efficient and less complex.

- 4.49 A single or smaller number of exclusive areas with a corresponding number of TOs would mean that there would be less replication in terms of teams required for maintenance, operation and measurement for example which would further reduce costs.

- 4.50 A greater number of exclusive areas will increase competition during the tender process, which will also allow for greater benchmarking between areas. **The consultation document sought views on the value and feasibility of benchmarking exclusively licensed offshore TOs and, if desirable, how it could be facilitated.**

Post-consultation update

Some respondents considered benchmarking an essential component of the exclusive approach whilst one thought that the competitive tender reduced its importance. Some respondents considered it an essential part of maintaining a proxy for competition within the exclusive approach and although it might initially be an information gathering exercise, it would prove useful in modifying and developing incentives as the sector evolves. It was suggested that the offshore oil and gas sectors could provide comparative experience. However, it was suggested that international benchmarks were unlikely to be useful, because of different regulatory environments and the limited number of offshore transmission networks. The value of benchmarking will be limited by differences between the licensed areas.

Environmental

- 4.51 This approach would be more likely to achieve optimal use of resources in the design of offshore connections by having a single TO responsible for a discrete exclusive area, reducing the likelihood of duplicated assets and thereby minimising environmental impact. However, too few areas may result in less competitive pressure.

Post-consultation update

A respondent suggested that this approach would reduce the risk of negative environmental impacts, which may have led to consents not being obtained. However, it was recognised that this would be difficult to monitor and assess. It was suggested that this approach would better facilitate strategic consideration of environmental impacts and proposed mitigation measures.

Social

- 4.52 A regime that was likely to be the least expensive in the long-term and minimised the risk of duplicated assets would be least likely to lead to price increases with associated reduction of those living in fuel poverty.

Post-consultation update

No new social benefits were identified as a result of the consultation.

Costs

Economic

- 4.53 An element of competition for the licences for offshore exclusive areas could be introduced via a one-off competition / tender process. However, once the tender was complete and licences had been issued, there would be no opportunity for competing TOs to provide transmission assets within the exclusive area more cost-effectively.

Post-consultation update

It was suggested that as competition would be reduced and likely to be restricted to incumbent TOs, this approach would act as a barrier to new entrants.

- 4.54 As competition for the provision of assets within areas may be reduced, the economic and efficient development of the regime would rely on the setting of a price control by the regulator,

Ofgem, as a proxy for competition. In determining the price control Ofgem would be reliant on benchmarking between monopoly providers when setting price controls, as it does onshore. This approach may introduce less competition into the market for TO services which may reduce incentives for innovation which may lead to higher prices for consumers.

Post-consultation update

Some respondents agreed that under this approach there would be no natural incentive for TOs to reduce costs and innovate, as there would be a reliance on a price control. It was suggested that incumbent TOs would be more likely to stick with existing suppliers rather than try new innovative methods as there would be less competitive pressure to reduce transmission costs and it is likely therefore that transmission charges would be higher. One respondent suggested that there is potential for innovation beyond that which would take place during the initial tender for an exclusive area. One respondent cited Ofgem's Innovation Funding Incentive, which provides distribution companies with financial incentives to invest in R&D spending to improve the performance of networks, and suggested that it could be extended to cover offshore transmission networks.

- 4.55 This approach may initially prove longer to set-up as there are a number of issues that must be decided following the commencement of the Government's powers in 2008 prior to the regime going live.

Post-consultation update

It was suggested that the exclusive option, whilst simpler to run in the long term, would be complex to set up as it would be difficult to define effective criteria on which to base a tender for exclusive licences. There were a concern that the complexity of establishing an effective price control mechanism under the exclusive approach until adequate historical data and information was available was a serious issue, which could result in greater administrative and construction costs subsequent to the tender process. The exclusive approach would be similar to the system onshore, where TOs are likely to be subject to periodic (5-yearly onshore) price control reviews, entailing considerable administrative burden on all parties involved.

- 4.56 A decision on the precise size and scope of a licenced area would need to be made taking into account factors such as likely mega watts (MW) of power that needed to be connected, locations, timescales and the ability of a TO to provide the services required. **Views on how to define the monopoly areas were sought in the consultation document.**
- 4.57 A tender exercise to allow potential TOs to bid for the exclusive rights to provide transmission assets and services in a particular area would be required. This will involve a tender period to allow interested parties to submit bids followed by a period in which a decision on the successful bidder(s) must be made. Any possible extra delay may cause problems for offshore wind farm developers as it will lead to further uncertainty in the regulatory regime. **The consultation document sought views on what basis should the competition for offshore exclusive licences be run.**

Post-consultation update - paragraphs 4.56 – 4.57

Some respondents agreed that the three existing strategic areas should be the licensed areas but others felt that these should be broken down further, to make them more manageable, comparable and attractive to bidders. However, there was concern that if too many licensed areas were established it would in practice be very similar to the non-exclusive approach. One respondent thought areas should be focused around the onshore connection points, as this was the basis for prospective coordination between projects. Another thought it should be done on the basis of extension of onshore areas, to ensure interoperability of systems. Some respondents thought the areas in the first tender should be limited to cover just current developments.

One respondent suggested that rather than areas, clusters should be identified and tendered. Relevant considerations in identifying these clusters included similar cable routes, onshore landing points in close proximity to each other, requirements for cables to cross and use of the same offshore substation.

It was suggested that the licensed areas should at least encompass all currently known generators or would be generators who connect or propose to connect at any voltage. The three existing offshore zones omit large areas of the coast and the resulting uncertainty in these areas may inhibit developers from exploring their potential. It was also suggested that awarding licences only for the existing strategic areas would potentially discriminate against future wave and tidal projects outside these areas.

Respondents suggested that areas could be awarded on the basis of preference to ensure multiple TOs. However, others did not agree because this may not result in the best party providing the service which was not in the best interest of consumers.

Respondents suggested a number of issues which should be considered as the basis for the competition to award exclusive offshore TO licences. These included; ability to fulfil duties as a TO licensee; financial assets and capability of sustaining investment in a timely manner; record of project delivery; credit worthiness; relevant experience including offshore engineering; rates of return; and demonstration of innovative and economic engineering solutions.

- 4.58 There is a possibility that administrative burdens could be increased, as new areas have to be determined and tendered each time projects strayed out of the original exclusive areas. This may mean that periodic price control reviews would be required with significant costs for Ofgem. **The consultation document sought views on the arrangements that would be appropriate for dealing with future build outside of exclusively licensed areas.**

Post-consultation update

It was suggested that this was not a problem, as further licence areas could be decided later in tandem with DTI developing its policy on leasing further areas. Some respondents suggested that if the exclusive option were chosen, it would be appropriate to align future area licences with future SEA areas. One respondent thought that developers should be allowed to self-build and own new connections if licensed areas were not yet in place. One respondent suggested that it depends on how leasing proceeds in future, but that for one or two developments close to an existing area, it would make sense to give it to the local TO. It was also suggested that further generation leases should result in a new tender for the new areas, to allow new entrants to market. One respondent believed that in many cases the most efficient and effective means of connecting new developments will be to utilise or extend existing assets and that the offshore TO licence should contain an obligation to provide terms for connection of new developments when requested to do so by the SO.

- 4.59 A requirement for a prospective TO to connect all generation within a licensed area may create greater uncertainty for the TO regarding the level of financial commitment they are potentially taking on, from potential for significant future connection obligations beyond Rounds 1 and 2. Potentially, this may lead to a reduced number of TOs interested in providing a service and deter smaller new entrants to the market.
- 4.60 Having a larger number of smaller areas may reduce a TO's potential liabilities. However, the concern may remain that the exclusive licence approach creates a deterrent uncertainty for potential TOs regarding the level of financial commitment they are potentially taking on – future rounds beyond R1/R2 may simply extend the current sites by adding on further turbines, creating new obligations on the existing TO for that area. A fresh round of licensing may be used to provide transmission connections for future projects. **Views on the appropriate balance between obliging exclusive offshore TOs to take on unknown levels of risk and the need to ensure that a TO is available to connect generators were sought in the consultation document.**

Post-consultation update

It was suggested that the exclusive approach could result in regional TOs of different sizes with different capabilities and resources being unable to meet their obligations to connect new parties in an efficient and economic manner, resulting in offshore queues, higher connection costs more failed projects and less benefit to consumers.

- 4.61 There is also a risk that TOs may try to increase their margins to cover the uncertainty that potential future liabilities may hold for them. However, this risk may be mitigated via the price control and re-openers. There is a risk that speculative building of extra capacity by a single TO in anticipation of future wind farms connecting may lead to stranded assets and / or duplicated assets which would increase costs. **The consultation document sought views on how suitable incentives can be placed on TOs to ensure that assets are constructed and operated economically and efficiently.**

Post-consultation update

It was suggested that cost pass through would be acceptable initially, subject to sensible assessment and to establish baseline information but this should evolve incentives in light of experience akin to onshore. Others accepted that it was difficult to place suitable incentives on exclusive offshore TOs, but that a pass through could not be in the interests of consumers or generators. International benchmarks could be used until UK data is ready but another respondent said these would not be suitable benchmarks as areas of sea bed and landing sites could differ significantly. One respondent suggested an 'opt out' last resort for developers, as competition is the only robust incentive – this should come from the developer having the right to step in and operate the assets (on a periodic review basis). Another respondent suggested that an incentive based price control is most appropriate, applying the onshore principles in setting RAV and cost of capital, such as penalties for inefficiency and incentives for innovation, performance levels, and target beating. One respondent said that the regulatory contract must be established so that it follows best practice for contracts between contractors and clients on one-off developments. Incentives to deliver would be further strengthened if generators were involved in the network development consortium.

A number of respondents suggested it was appropriate, in certain circumstances, to have re-openers in a fixed price bidding system. For example, for new obligations or unexpected significant costs, as a substantial risk premium would otherwise be included in bids. However, it was suggested that the financial threshold for this should be set at a significant level, would require an economic case and should be on an exceptional rather than a periodic basis as otherwise it would undermine the bidding process. These criteria should be clearly defined at the start of the tender process. It was also suggested that despite there being a need for re-openers in certain circumstances, conditions for which tender prices are valid can be kept broad by having a range of parameters which address unseen eventualities i.e. costs for laying different cable types in different seabed conditions.

Environmental

- 4.62 The lack of ongoing competition may stifle innovation in the development of new techniques or implementation strategies, which may be more environmentally beneficial. As a result there may be a risk of increased negative environmental impact. The increase in potential liabilities that a TO may need to take on may reduce the number of TOs interested in obtaining a licence. This may increase the costs of transmission networks which may have a negative impact on the offshore wind sector where costs are already high. This may therefore reduce the amount of offshore wind generation and have negative environmental consequences. There may be a risk that a TO responsible for a single area may build speculative assets with the view that future wind farms may be likely to connect in that area. This may lead to unnecessary increased environmental impact as these assets would become surplus to requirement if they remained unused.

Post-consultation update

One respondent said that they suspected that the costs of cables will mean that there were few circumstances where speculative investment in cable capacity for future developments is likely.

- 4.63 Any delay in implementing the regime may also mean a loss of carbon savings as wind farm development is delayed. Based on a social cost of carbon of £70 per tonne in 2000 which increases by £1/tC in real terms every year thereafter⁵⁹ and assuming a social discount rate of 3.5%, one can demonstrate that each year's delay in 1GW of offshore wind generating capacity (which is assumed to displace CCGT generation producing 0.1tC/MWh) would result in lost carbon savings of around 350kt per year if the annual load factor is 40%. This equates to a monetary loss of roughly £30 million per year at 2006 prices in present value terms.⁶⁰
- 4.64 There may be an environmental risk in having fewer TOs in terms of their ability to provide connections in line with the offshore wind developer's timetables. The build up of a 'queue' of offshore developments requiring connections, as has been experienced onshore, may lead to costs as outlined in paragraph 4.63.

Social

- 4.65 A regime in which competition is minimal may lead to reduced innovation which may lead to higher prices for consumers and increase the numbers living in fuel poverty. The possibility of a negative impact on the offshore wind industry as a result of higher costs to those developing offshore wind projects may mean that less offshore wind generation would occur. Consequently, the benefits for energy supply which may be derived from further increased diversity of the energy mix both in terms of fuel type and geographic source if greater volumes of offshore electricity generation connect would not be realised. This may have long-term costs in terms of the security of the UK energy supply.

Post-consultation update

No new social costs were identified as a result of the consultation.

⁵⁹ <http://www.hm-treasury.gov.uk/media/209/60/SCC.pdf>

⁶⁰ Strictly, the present value loss declines every year, although it remains close to £30 million up to 2013 if the "year zero" for the PV calculation is 2007.

ANNEX C: NOTE OF 29 NOVEMBER 2006 CONSULTATION WORKSHOP

Licencing Offshore Transmission – Consultation Workshop 29th November 2006 10.30-14.00, DTI Conference Centre, London Note of Meeting

1. This note has been taken by DTI/Ofgem to capture some of the key points made and to inform further debate. This note will concentrate on the outcomes of the three discussion groups and the subsequent questions raised and discussion. It is not our intention to clear the note with participants but it will be made available for their use in future work. The views expressed in this note are not necessarily the views of DTI or Ofgem.

Welcome and introductions

2. The Chairs welcomed and thanked all for attending the workshop. The aims of the day were to:
 - To provide a brief update on the recently published DTI / Ofgem consultation document 'Licensing Offshore Electricity Transmission'
 - To give stakeholders an opportunity to discuss the two options for licensing offshore transmission set out in the consultation document and the issues they raise – as part of the overall consultation exercise.
3. Ofgem gave a brief presentation on the main options outlined in the consultation document.
4. During the discussion, the following general points were raised:
 - The powers given to the Secretary of State in the Energy Act with regard to the offshore transmission regime are time-limited. Accordingly, these powers will not be commenced until everything concerning the regime is in place. Under the published timetable this will be mid-2008.
 - DTI / Ofgem are aware that this will mean a period of uncertainty for some developers but are looking at ways that comfort can be given on a range of issues.
 - There was surprise that the generator tender approach has been ruled out at this stage. However, it was felt that under this approach it would be difficult to capture the advantages of co-ordination and that as generators only pay a proportion of network charges it would not be appropriate for them not to solely bear the risk of that decision.
 - It was not anticipated that there would be a restriction on affiliates of generators applying for TO licences if they met the application criteria / requirements and appropriate ring fencing was in place.
 - It was suggested that a non-exclusive approach would take longer, be more expensive and lead to fragmentation.
 - The cost of tendering under the non-exclusive approach needed to be better quantified and the benefits of a competitive tender process weighed up against the benefits of certainty and timing that an exclusive licence approach would offer. It was stated that competitive processes were already in place in the procurement process. However, the requirement for an enduring regime, questions as to whether an exclusive approach would be quicker and the benefits that competition in terms of financing would bring were raised.
 - There needs to be a long-term view of the risks and rewards involved.

Discussion Groups

5. The delegates were split into 3 groups and asked to consider questions from the consultation document and then feedback to the group on questions concerning a particular licencing option or other related issues.

Discussion Group 1 – Non-exclusive licence approach

6. During the discussion the following points were made:
- Developers were focused on the issue of timing whilst the TO / GBSO were more focused on the costs of this approach.
 - The criteria used to determine the awarding of licences were important.
 - Competition did not occur onshore so why was it being considered offshore. It was stated that the historical legacy ownership onshore prevented competition and this barrier did not exist offshore.
 - There was a need for a co-ordination role. The offshore gas grid was given as an example.
 - A regime with sufficient flexibility to take account of changing needs in the future was required. It was suggested that such flexibility was difficult to achieve under either option and that there was only scope for a marginal amount of spare capacity. A large amount of spare capacity would be at a company's own risk.
 - Would competitions be re-opened if there were need to increase capacity? It was suggested that it was a question of degrees and that a substantial increase would be more likely to lead to a re-opening / new competition rather than a marginal increase.
 - Is the PFI model where the winning bidder under a competitive tender process absorbs the costs of all the bidders appropriate? If so how far down the supply chain will this go?
 - The issue of the cost of bidding only becomes important if there are lots of bids or too much effort is put in. If costs are re-covered, then it is not an issue.
 - It was suggested that the licence merchant might be the most appropriate approach given the complexity of the two options.
 - There was a class exemption for distribution so a precedent exists for further exemptions.
 - It was questioned whether developers would ever 'gold plate' their transmission assets as it is in their interests to keep the costs down.

Discussion Group 2 – Exclusive licence approach

- The two options in the consultation document were the right options to be considered.
- If the exclusive licence approach is chosen, care must be given to determining the number of zones as a large number would mean that it would be similar to the non-exclusive approach.
- It is important that the pros and cons of each option are considered in detail to determine if they are workable.
- Neither option lends itself to a light regulatory approach.
- In general terms, the exclusive approach would lead to a more co-ordinated and robust regime whilst a non-exclusive approach would be quicker and allow a greater level of competition.
- Price / income stream is only one of the factors that need to be taken into consideration when taking the initial decision on how to award exclusive licences.
- Some of the group felt that assessment of bids would be more difficult under an exclusive licence approach.
- It would be useful to state that the assessment of bids both from the auctioneer's and the bidder's side is difficult as essentially it is bidding for something that is unknown.

Discussion Group 3 – Other issues

- There were concerns that the ‘generator tender’ approach had been ruled out as a possible option too early. The generator tender approach was workable and there was a danger that the two options being consulted on might not deliver real competition.
- Under the two options on the table, there was high upfront risk and considerable number of unknowables – a tender process could give a good view on costs, but like manufacturers, bidding TOs would not be able to give a fixed revenue stream.
- Others thought the key would be getting the level of information available during the tender process right, including high quality surveys.
- The opportunities for benchmarking under the exclusive approach may be reduced. However, operating expenses could be reduced through the use of standard designs which would lower overall costs.
- There is no incentive for developers to ‘gold plate’ transmission assets as there are no guarantees that any assets would be adopted by a TO under the new regime.
- It would be wrong to preclude generators from acting as their own TOs. There was concern that many generators would not qualify to be TOs under the current criteria or that they would not be able to do it in practice (e.g. a 100% equity stake in a TO company might not be possible).
- It was noted that a generator would not be able to be their own TO under the generator tender model (as they would be deciding and bidding).
- There was some concern that generators should not be disassociated from the bidding process and that a balance needed to be found between concerns about coordination and the generator’s concerns.
- Incentives needed to be considered to ensure the TO considered the generator’s interests after the tender concluded.
- It was discussed whether or not it was appropriate to apply Ofgem’s current approach on adoption offshore and it was argued that to deviate from Ofgem’s current approach on adoption offshore was possible as it was not unduly discriminatory.

Open discussion

7. During the open discussion, the following points were made.

- Either of the options could work or not work depending on the contractual boundaries and risks that applied. If these issues were clarified, then the logical option would fall out of this.
- If an offshore generator went out of business after the construction of the transmission assets had been completed, the TO could continue to recover its revenue. If this happened before the assets were completed, this would be covered by generator guarantees.
- It was likely that if a generator went out of business, another party would step in and pick the assets up.
- It was suggested that there was insufficient information in terms of the detail of how each option would work to enable a properly informed decision to be taken. It is necessary to work through, step by step, an example of how the process under each option would work. This would flush out the detail and enable a better understanding of the wider issues.
- There was uncertainty as to whether TOs would be under an obligation to provide a connection under the exclusive licence approach. If this were the case it would increase complexity.
- Under an exclusive licence approach, a greater number of areas rather than fewer would enable the benefits of increased competition to be realised.

Attendees

Kristian	Armstrong	DTI
John	Overton	DTI
Katherine	Watson	DTI

Suzanne	Coe	DTI
Phil	Baker	DTI
Richard	Daniels	DTI
Bob	Hull	Ofgem
Giles	Stevens	Ofgem
Graham	Knowles	Ofgem
Steve	Argent	Ofgem
Anthony	Mungall	Ofgem
Andrew	Mann	Ofgem
Konrad	Keyserlingk	Ofgem
Siobahn	Carty	Ofgem
Simon	Brooke	United Utilities
Paul E	Brown	KBR
Richard	Cooke	Areva
Graeme	Cooper	BWEA
Tony	Cotton	Energy Technical
Andrew	Croker	Scira Offshore
Lewis	Dale	National Grid
Charles	Davies	
John	Greasley	National Grid
Peter	Jones	ABB
Matthew	Knight	Siemens
Robert	Longden	Airtricity
John	Lucas	Elexon
Paul	Neilson	SSE
Mark	Petterson	Warwick Energy
Guy	Phillips	E.ON Renewables
Dragana	Popovic	Energy Networks Association
Svend	Richmann Jensen	Energi E2
Charles	Ruffell	rwenpower
Jeremy	Sainsbury	Natural Power
David	Scott	EDF Energy
Abid	Sheikh	Energywatch
Martin	Simpson	Shell
Malcolm	Taylor	AEP
Colin	Taylor	Scottish Power
Ian	Taylor	SLP Energy
Christopher	Towner	Bond Pearce LLP
Chris	Veal	Airtricity
Graeme	Vincent	CE Electric UK
Jenny	Woodruff	Central Networks

ANNEX D: OTEG TERMS OF REFERENCE

Offshore Transmission Experts Group (OTEG)

Summary of function and terms of reference

1. In developing the detail of this regulatory regime, DTI and Ofgem recognise the benefits of drawing upon the specialist expertise of the existing transmission licensees, offshore developers and other parties with experience relevant to offshore transmission activities.
2. Ofgem's Scoping Document announced the setting up of the Offshore Transmission Experts Group (OTEG). This is the forum in which Ofgem and DTI draw upon such specialist expertise and experience.
3. The purpose of OTEG is to provide advice to DTI and Ofgem on options and issues associated with the development of a regulatory regime for offshore electricity as outlined in the April 2006 Ofgem scoping document.
4. It is important to note that OTEG is a development group and not a decision making body. In particular, nothing presented or discussed at the group can have the effect of fettering the Authority's or Minister's discretion in relation to any decisions taken.
5. OTEG meets monthly (from May 2006). Every third meeting is open to other interested parties. Two sub-groups have been formed to look at the specific areas of the SQSS and price controls. These sub-groups report back to OTEG. A schedule of all meeting dates, agendas, and papers and the full terms of reference for OTEG are available on the DTI and Ofgem websites.

Membership

6. Membership of OTEG reflects the issues being addressed and therefore the expertise required. To this extent, new members, additional delegates from existing members or delegates from relevant sub-groups are invited to join the group to advise on specific areas as appropriate.
7. Whilst it is our view that for the group to be effective it needs a small representative membership, the other elements of the consultative process mean the chance to influence the shape of the new offshore regime is by no means restricted to the participants of the group.
8. Every third OTEG meeting is open to all interested parties, in order to increase transparency, to provide an opportunity for wider discussion, and to ensure maximum participation in the OTEG process.
9. Details of the members of OTEG, members of its subgroups and attendance at open meetings are available on the DTI and Ofgem websites:
 - www.ofgem.gov.uk
 - <http://www.dti.gov.uk/energy/sources/renewables/policy/offshore-transmission/offshore-transmission-experts-group/page28711.html>

