

The background of the entire page is a photograph of an offshore wind farm. The wind turbines are silhouetted against a bright, cloudy sky. The water in the foreground is a deep blue. The overall image has a blue color overlay.

dti

**REGULATION OF OFFSHORE
ELECTRICITY TRANSMISSION**

Partial Regulatory Impact
Assessment



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DTI Partial Regulatory Impact Assessment



1. Title of proposal

- 1.1 Partial Regulatory Impact Assessment for the Preliminary Public Consultation on the Development of a Regulatory Regime for Offshore Electricity Transmission.

2. Purpose and intended effect

- 2.1 This RIA covers a preliminary consultation on the regulatory regime that should be put in place for the offshore electricity transmission system. Such a regime is necessary due to the emergence of marine renewable energy developments which need to be connected to the onshore grid and in particular 'Round 2' offshore wind farms. The policy on marine renewable energy has already been consulted on and Round 2 is expected to deliver up to 7.2 gigawatts of electricity (enough electricity for more than one in six UK households). Establishing a regulatory regime for offshore transmission provides the opportunity to get that renewable energy connected.
- 2.2 The options considered in the consultation range from an unlicensed or licence exempt approach (effectively the 'do nothing' option), to a light touch regulatory regime, to a regime broadly similar to the one which exists onshore and finally to a regime which would

provide additional support to renewable energy generators. Given this range of options (which all have sub-options around implementation) the analysis in this preliminary consultation is necessarily high level. More detailed analysis will be prepared, in the light of responses, for the second stage of the consultation. A key point, however, is that a regulatory regime is likely to be welcome to the industry sector it is primarily aimed at – the renewables industry – as regulation brings with it certain advantages in terms of funding the costs of connecting renewable energy. The main issue for consultation is the extent to which a regulatory regime should support the renewables industry in managing what are relatively high costs of its connections to the grid as opposed to leaving it to bear the actual costs of those connections.

Objective

- 2.3 The Government stated in the 2003 Energy White Paper, its long-term goals to cut current carbon dioxide emissions in the UK by some 60% by 2050. The White Paper set a target of 10% of electricity from renewable energy sources by 2010.
- 2.4 Wind energy is expected to contribute the largest proportion of the 10% target. While increasing generation from renewable energy sources is important to the Government's targets to reduce

carbon emissions, it is also likely to be important in terms of security of energy supplies. Onshore and offshore wind are expected to make roughly equal contributions to the 10% target.

- 2.5 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 2002. A key factor behind this policy is that the UK has some of the best offshore wind resources in Europe, if not the world¹.
- 2.6 The purpose of this consultation exercise is to seek views on an essential piece of the regulatory framework necessary to exploit this potential energy source. That is an electrical connection connecting offshore wind farms to the onshore transmission network.
- 2.7 The Energy Act 2004 includes provisions enabling the introduction of a new regulatory regime for offshore electricity transmission. It does so by providing that the prohibition on persons participating in transmission activities without a licence applies in Great Britain, the territorial sea adjacent to Great Britain and any designated Renewable Energy Zone (REZ).
- 2.8 This Preliminary Consultation seeks views on the high-level options for an effective regime to regulate the transmission of electricity produced offshore. In making his decision on the appropriate form of regulation the

Secretary of State will be guided by the principle objective and general duties set out in section 3A of the Electricity Act which seeks to balance costs to consumers with social and environmental goals. The views of all stakeholders including offshore developers, other users of the electricity grid including other generators and consumers are therefore sought.

- 2.9 The responses to the present consultation will inform the decision on the appropriate form of offshore regulation. A further Full Consultation will be carried out in which views on the detailed regulatory regime will be requested.

Background

The Government's Renewables Policy

- 2.10 In 2001, the UK Government signed the Kyoto Protocol and has a legally binding target to reduce greenhouse gas emissions to 12.5% below 1990 levels during the period 2008 to 2012. The Government's Climate Change Programme of 2000 seeks to go further by reducing emissions to 20% below 1990 levels by 2010.
- 2.11 These targets are supplemented by those on reduction of carbon dioxide emissions and increasing renewable energy mentioned at paragraph 2.3. The Energy White Paper also set out the Government's policy of maintaining energy reliability through energy

¹ DTI (2002). Future Offshore: A Strategic Framework for the Offshore Wind Industry
Sustainable Development Commission (2005). Wind Power in the UK; <http://www.sd-commission.org.uk>
DTI (2000). The UK Wind Resource. <http://www.dti.gov.uk/renewables/publications/pdfs/windfs8.pdf>

diversity. The Government believes that competitive wholesale markets complemented by appropriate levels of efficient investment are the best way of providing diverse and viable long-term energy supplies. Increasing generation from renewable energy sources is likely to be important in terms of security of energy supplies as it will help to increase the diversity of the energy supply mix both in terms of fuel type and of geographical source.

Offshore Electricity Generation

- 2.12 The UK has some of the best wind resources in Europe, if not the world, in both onshore and offshore locations. The high average wind speeds and good reliability should result in more power output and lower costs. These benefits will be further augmented by the higher wind speeds encountered offshore.
- 2.13 In addition the lower visual impact of offshore development will mean that it will be possible to build much larger turbines offshore. The Government is therefore committed to ensuring a framework for offshore development that will enable its energy policy objectives to be met – including a regulatory system for the offshore grid.
- 2.14 The Government has taken a strategic approach to offshore wind development to ensure that the new industry is developed in a way that meets Government energy commitments as well as promoting sensible marine resource management. Two competitive rounds have been held for offshore wind farm site leases, with the

competitions organised by Crown Estate with DTI. (The Crown Estate is the landowner of the seabed out to 12 nautical miles and leases areas of both this and the Renewable Energy Zones beyond territorial waters for the placing of turbines.)

- 2.15 The first round was relatively small scale with projects limited to a maximum of 30 turbines connected directly to the electricity distribution network. The Round 2 projects – that will be subject to the new transmission system regime – are much larger in scale and the Government has designated three offshore strategic areas where the licensing rounds have been held in the Greater Wash, the North West of England and the Thames Estuary.

The Regulatory Environment

- 2.16 The Government's aim is that the offshore transmission regulatory regime facilitates the connection of a proportion of Round 2 projects in time to contribute to the 2010 target. The objectives are to ensure efficiency of connections and allow fair and open access for offshore generators. The regulatory framework should also be robust enough to control the connection of future offshore renewable development.
- 2.17 As set out in the White Paper, the Government believes that the achievement of its objectives may be dependent on a radical transformation of the energy system to one that is more diverse with a greater mix of energy, especially in electricity sources

and technologies and the control and management of demand.

- 2.18 This is likely to require new electricity generation in widely dispersed parts of the country including offshore. The Government does not seek to be prescriptive in the way these changes are achieved, believing that within the broad context of policy set by the White Paper the market is best placed to deliver cost effectively the outcomes that are sought. However, the Government intends that the regulatory system should facilitate the Government's wider social and environmental goals. That framework seeks to strike the right balance between the interests of consumers and investors; combating fuel poverty; and balancing short-term consumption and long-term conservation of resources.
- 2.19 It is recognised that this is a complex area and that different stakeholders have different requirements from the proposed regulatory regimes. There are alternative regimes that could be employed to address the issue and the consultation document seeks the views of all relevant stakeholders.
- 2.20 DTI is mindful of the Government's commitments to reducing the regulatory burden on business. In this case it is difficult to provide direct compensatory deregulation. The simple reason for this is that the need is to create regulation in an area of the marine environment where none currently exists. One of the options being considered here, however, is a very light touch regulatory regime which would not impose any

significant new regulatory burdens. Furthermore, as part of a review of the Renewables Obligation, consideration is being given to ways in which the regulatory position for renewables generators could be improved. Options being considered include: introduction of a pre-accreditation system in order to provide developers with greater certainty that their projects will be eligible for Renewables Obligation Certificates (ROCs); a complaints procedure which would allow companies to seek an independent review of decisions on eligibility; and, simplification of the rules on eligibility for ROCs of off-site blending of biomass for the purposes of co-firing. In the slightly longer term, and in the context of the Government's plans to introduce a Marine Bill, it will be possible to look at the options for streamlining the consenting arrangements applied to offshore renewable energy generation.

European Directives

- 2.21 The regulatory regime for offshore wind will need to be consistent with European law. Of particular relevance, will be the requirements of the EU Directive 2003/54/EC Concerning Common Rules for the Internal Market in Electricity (IMED), the EU Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market (Renewables Directive) and the regulation (1228/2003) on conditions for access to the network for cross-border exchanges in electricity.

3. Consultation

- 3.1 Public Bodies – This is a joint DTI/Ofgem consultation. The consultation document has been agreed by all interested Government Departments.
- 3.2 Public Consultation – Views on the contents of this preliminary consultation are being sought from offshore developers, transmission and system operators, other Grid users, wider energy industry stakeholders and members of the public. Their views will be considered when the detail of the full consultation later in the year is prepared (this will include a full RIA). This is in addition to on-going dialogue with industry and stakeholders.
- 3.3 The DTI and Ofgem will use existing stakeholder relationship structures such as the Renewables Advisory Board to facilitate further discussion. DTI and Ofgem will hold a workshop for all interested stakeholders during the consultation period.

4. Options

- 4.1 The DTI and Ofgem are considering three broad options - and are minded to reject a fourth for the regulatory regime offshore:

(i) Unlicensed or license exempt approach

- 4.2 This would effectively be the “do nothing” option. DTI and Ofgem do not, however, believe it is practical or even legally permissible. 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. At the very least regulation is needed to ensure appropriate codes and standards are applied to the interface. In legal terms, the Energy Act 2004 prohibits electricity transmission in the Renewable Energy Zones without a licence. In addition the requirements of the IMED for regulated third party access means that a license exempt approach is not possible. Some form of regulation is therefore essential if the infrastructure needed to connect offshore renewable energy is to be provided. The RIA done for the offshore renewable energy provisions of the Energy Act 2004, covering both generation and transmission, was clear on this point:

“Without a specific comprehensive regulatory regime which introduces an element of certainty of outcome, there is a real risk that renewable energy developers will not be encouraged to come forward with proposals for projects outside territorial waters. If this were to happen, there would then be considerable doubt as to whether the Government would be able to meet its target of achieving 10% of electricity being supplied by renewable sources by 2010 and its aspiration for 2020.”

(ii) Extension of the Current Onshore regime offshore

- 4.3 A price control regulated approach to offshore electricity transmission would resemble the onshore approach to the regulation of transmission activities.

Participation in offshore transmission would be a licensable activity, with offshore transmission licences having broadly similar standard licence conditions as onshore licences, with only such amendments as would be necessary to account for any relevant differences between onshore and offshore networks. Transmission Owners (TO) would be responsible for planning investment in networks, following consultation with the System Operator (SO).

- 4.4 The offshore TO licences would contain special licence conditions establishing price controls similar to those onshore. This would allow the TO licensee to recover its efficiently incurred costs from the SO. The SO would recover both SO and TO costs via its charging methods from generators and suppliers.

(iii) Extension of the Current Onshore regime offshore with a degree of cross-subsidisation with other onshore users

- 4.5 Because of the higher costs of offshore development relative to onshore, consideration is being given to a policy option under which both offshore generators and other transmission system users would meet a proportion of the extra cost of offshore transmission infrastructure. That is, rather than offshore generators being responsible for all the additional costs which they impose upon the transmission system, at least some of the cost of the offshore transmission infrastructure could be smeared across a wider class of transmission system users.

- 4.6 This would involve the existing onshore approach being extended offshore but with modifications either to the transmission charging methodology used by the SO to recover the costs; or perhaps through the Secretary of State making amendments to the licence conditions so that the SO was required to recover a proportion of the costs of offshore wind farm connections above an upper limit from other users of the system.

(iv) A Licensed Merchant approach

- 4.7 A licensed merchant approach to offshore electricity transmission would involve the minimum regulatory arrangements consistent with the IMED. This would be a relatively light touch regulatory regime. While offshore transmission would be a licensable activity the licence conditions would be limited to conditions such as requiring any surplus transmission capacity to be offered to third parties on non-discriminatory terms. The conditions would also need to deal with the interface between the offshore cable and the onshore transmission system.

- 4.8 A key aspect of the licensed merchant approach is that wind farm developers would have to meet all the costs of developing the connection themselves upfront and raise the necessary finance in the capital market at prevailing conditions. The transmission licence would therefore not contain conditions establishing a price control mechanism. The only interaction with transmission price controls would be through the onshore transmission charging arrangements from the point at which

connection was made to the onshore grid. This approach to regulating offshore would be different to the approach used to regulate onshore transmission in not providing a price-control. Nevertheless a licensed merchant approach would not appear to be inconsistent with the underlying economic characteristics of offshore electricity transmission assets and there are precedents for such treatment from other offshore assets such as electricity and gas interconnectors.

5. Costs and benefits

Sectors and Groups Affected

5.1 In its broadest context any new regulatory regime will affect electricity suppliers and generators in Great Britain, particularly the renewable energy industry and by implication, all consumers of electricity in Great Britain. Any new regulatory regime that leads to an increase in electricity prices may adversely affect the fuel-poor more than other electricity users. However, there are a range of stakeholders which may be affected differently by each of the regulatory options.

Under option (i) it would not be possible to build any new offshore transmission connections so it would not affect any new commercial or non-commercial groups in that this option represents the status quo. Consequently there are no new benefits. In terms of costs, the Government would be unlikely to meet its 2010 reduction targets for carbon dioxide and would lose the associated environmental benefits as offshore

electricity developers would be unlikely to build offshore wind farms.

Option (ii) will not have a disproportionate negative effect on any group as it will provide a level playing field for onshore and offshore generators. It should be beneficial to offshore developers, as it will allow them to recover the costs of building transmission assets under a price control regime similar to onshore. Under the current system Ofgem assesses the efficient levels of costs and determines levels of allowed revenue for each year of the price control period. In the final proposals for Transmission Investment in Renewable Generation in 2004 Ofgem allowed a real cost of capital of 8.8 per cent (equivalent to around 11.5 per cent in nominal terms). If this enables more renewable energy to be built it will have environmental benefits through reduced carbon dioxide emissions.

Option (iii) may have a disproportionate effect on other users of the system as it will lead to them incurring higher charges as a result of a proportion of the extra cost of offshore transmission being recovered from them. Ascertaining whether a form of extra subsidy is required is one of the purposes of this exercise. At this stage there is no specific proposal for the level of subsidy and it is therefore not possible to assess the level of any extra costs that might be associated with it. Should this approach be pursued, the costs would be looked at in more detail in the second consultation.

Option (iv) may have a disproportionate effect on offshore generators as they alone will have to fund upfront the costs of developing the transmission assets. That may mean some projects do not go ahead and so not all of the potential carbon savings will be realised. The paragraph and table below sets out an estimate of the potential carbon savings. Costs to other users of the system under this option will however be negligible.

5.2 Potentially up to 7.2 GW of renewable generating capacity could be installed offshore as a result of the Round 2 licenses awarded. Assuming the annual load factor of these developments averages 35% (i.e. taking account of wind intermittency), then up to 22 TWh of renewable electricity could be generated per year which is equivalent to almost 7% of final consumption in 2003. If the additional generation capacity displaced an equal amount of CCGT generation then up to 2.2 million tonnes of carbon (MtC) could be avoided each year. The latest guidance from Defra²³ recommends using a central estimate of the social cost of carbon of £70 per tonne in 2000 prices, increasing by £1/tC each year thereafter, although these figures are presently the subject of a review. At today's prices, therefore, the estimated social cost is around £85.5/tC in 2005 and rising by over £1.1/tC in each subsequent year. If all 2.2MtC were saved in the current year, for the sake of argument, then the total benefit to society would be worth £188 million/year. Table 1 illustrates the amount of carbon replaced and the

savings in terms of the social cost of carbon.

In seeking to encourage the generation of renewable energy, the Government provides support through the Renewables Obligation, LECs (Climate Change Levy Exemption for Renewables Certificate) and the Emissions Trading Scheme. Table 2 shows income that would be received by the renewables industry from a range of ROC prices, LECs and ETS, and for a range of renewable energy generation scenarios (using various proportions of the total generation expected from Round 2 wind farms as the range).

5.3 The costs of building the cable connection to Round 2 projects has been estimated as between 10-15% of the total capital costs of building Round 2 wind farms. The Econnect report³ for DTI suggested the costs of building the individual connections are between £117m – 254m per gigawatt of installed capacity. The main consideration with the options being consulted on is how these costs will be financed. Under option (ii) the costs will be recovered from developers through an annual transmission charge over a fixed period. Under option (iv) the cost of building the connection will be met by developers upfront. Only under option (iii) would there be an extra element of cross-subsidisation by other users of the system. Ascertaining whether an extra element of subsidy is appropriate is one of the purposes of this consultation.

²³ <http://www.defra.gov.uk/environment/climatechange/carbon-cost/index.htm>

Table 1

% of possible 7.2 GW renewable generation / yr	0	25	50	75	100
Renewable generation GW / yr	0	1.8	3.6	5.4	7.2
TWh generated / yr	0	5.5	11.0	16.6	22.1
MtC replaced / yr	0	0.55	1.1	1.66	2.2
Social costs of carbon saved (£m/yr)	0	47	94	141	188

Table 2

% of possible 7.2 GW renewable generation / yr	0	25	50	75	100
ROC income received (£m/yr) (£45/MWh)	0	248	497	745	993
ROC income received (£m/yr) (£37.5/MWh)	0	207	414	621	828
ROC income received (£m/yr) (£30/MWh)	0	166	331	497	662
LEC income received (£m/yr)	0	24	47	71	95
EU ETS income received (£m/yr)	0	16	32	49	65
Total benefits (high ROC) (£m/yr)	0	288	576	865	1153
Total benefits (mid ROC) (£m/yr)	0	247	493	741	988
Total benefits (low ROC) (£m/yr)	0	206	411	617	822

5.4 Option (i) Unlicensed or license exempt approach

Benefits

It is unlikely that development of offshore electricity generation would proceed on any significant scale and hence no significant new economic, environmental or social benefits.

Costs

Economic

Offshore developers would be highly unlikely to invest in projects without a regulated transmission regime. As up to 7.2 GW of offshore electricity generation would not proceed there would be a loss of up to £188m/yr in terms of the social cost of carbon savings. The emerging offshore wind energy industry would fail to develop and this could cause a loss of confidence in the wave and tidal energy industry, where the technology is behind wind.

Environmental

This option would have a significant negative effect on the likelihood of the Government meeting its 2010 target for electricity to be supplied from renewable energy sources. Up to 7.2GW of currently planned Round 2 offshore wind electricity generation would be unable to proceed. This would mean that a reduction in carbon dioxide emissions of up to 2.2mtc/yr would not be realised.

Social

In broad terms, society would fail to benefit from a reduction in the effects of climate change and the emergence of a new industry.

5.5 Option (ii) Extension of the Current Onshore regime offshore

Benefits

Economic

This approach would enable offshore connections to be constructed by a TO with Ofgem approving a level of efficiently incurred costs which could be recovered by a SO via charges. In terms of competition this approach would be consistent with onshore arrangements and provide a level playing field for offshore and onshore generators. A significant part of the cost of developing Round 2 offshore wind projects is the grid connection and the cost of building these assets will be recovered from developers over a fixed period and at a fixed rate of capital which is likely to be beneficial to developers.

Environmental

If more renewable generation connects because of this approach, there is an environmental benefit stemming from the substitution of generation plant with high levels of carbon emissions for renewable sources of generation. Offshore wind is expected to provide 3-4% of renewable energy by 2010. If 7.2gw of planned offshore wind generation were to connect, this is equivalent to a reduction of up to 2.2mtc/yr.

Social

Benefits for energy supply may be derived from increased diversity of the energy mix both in terms of fuel type and geographical source if greater volumes of offshore electricity generation connect. This would have long-term benefits to society in terms of security of a sustainable energy supply.

Costs

Economic

There is a risk that costs of stranded assets or other inefficient investment decisions will be borne by consumers rather than the generators. The imposition of prescriptive regulations and standards may blunt incentives for developers to investigate more efficient methods of design, construction and/or operation of transmission links.

Environmental

The complexity of a price control regime may delay offshore wind projects which may have a significant negative effect on the reduction of carbon dioxide emissions, although flexible approaches in the period during the establishment of the regime would be adopted to prevent delays occurring.

Social

There is a possibility of higher costs being borne by consumers compared to option (iv) (see economic costs above). Higher prices tend to impact disproportionately on the fuel poor and the Government's targets for reducing the number of consumers living in fuel poverty could be affected.

5.6 **Option (iii) Extension of the Current Onshore regime offshore with a degree of cross subsidisation with other onshore users**

Benefits

Economic

Providing a cross-subsidy for offshore electricity transmission would tend to lead to a greater increase in the amount

of electricity generated from renewable energy sources than is likely under Option (ii) as it would directly reduce costs for renewable energy generators.

Environmental

This approach is likely to lead to more renewable generation. There would be an increased environmental benefit stemming from the substitution of generation plant with high levels of carbon emissions for renewable sources of generation. Offshore wind is expected to provide 3-4% of renewable energy by 2010. If 7.2GW of planned offshore wind generation were to connect, this is equivalent to a reduction of up to 2.2mtc/yr. This amounts to savings of up to £188m/yr in terms of social cost of carbon savings. This would make it more likely that the Government would meet its 2010 target of 10 per cent target for electricity to be supplied from renewable energy sources contributing to its long-term goals to reduce carbon dioxide emissions

Social

Benefits for energy supply may be derived from further increased diversity of the energy mix both in terms of fuel type and geographical source if greater volumes of offshore electricity generation connect. This would have long-term benefits in terms of security of a sustainable energy supply.

Costs

Economic

Other transmission users would be subsidising offshore connections and this may encourage energy generation

that is not as economically efficient. Increased charges to generators, suppliers and industrial sites onshore may deter renewable generation onshore, alter operating decisions of existing plant or harm competitiveness. Market distortions may increase regulatory uncertainty and hence market risk. Cross subsidy may simply cause existing generators to alter their location and deliver no additional capacity.

Environmental

The complexity of a price control regime may delay offshore wind projects which may have a significant negative effect on the reduction of carbon dioxide (up to 2.2mtc/yr if all 7.2GW of offshore wind were to connect by 2010), although flexible approaches in the period during the establishment of the regime would be adopted to prevent delays occurring.

Social

Under this approach a proportion of the costs are likely to be ultimately passed to consumers as users of the onshore transmission system seek to recover their higher costs. Any rise in electricity prices may adversely affect the fuel-poor more than other users – a 1% rise in retail gas and electricity prices would lead to 40,000 households falling into fuel poverty⁴.

5.7 Option (iv) A Licensed Merchant approach

Benefits

Economic

Transmission assets could be provided without any costs falling on other users of the transmission system or

consumers as wind generation developers would have to meet all the costs of transmission assets and raise the associated finance. There may be stronger incentives for efficiency if a developer is required to provide its own transmission assets. This light-touch approach to regulation could potentially allow transmission asset investment decisions to be made in a more timely fashion.

Environmental

This option could potentially allow transmission asset investment decisions to be made in a timely fashion and get renewable energy connected more quickly.

Social

There may be stronger incentives for efficiency if a developer is required to provide its own transmission assets. This may mean that the likelihood of stranded assets would be reduced and therefore lessen the risk of higher prices being borne by the consumer with a positive effect on Government targets for reducing fuel poverty.

Costs

Economic

A licensed merchant approach would differ from the arrangements onshore, because of the underlying cost characteristics, and this could be perceived as distorting competition between generators.

Environmental

If all the high investment costs to develop transmission connections had to be met by offshore renewable energy developers up front it may mean that projects would be less likely to proceed than in options (ii) and (iii). This

may mean that, conventional generation sources could not be substituted for by renewable sources. The offshore wind farm industry could fail to develop and this may adversely impact on the reduction of carbon dioxide emissions both by 2010 and beyond. This may mean that up to 7.2GW of offshore wind generation would not connect and reductions in carbon dioxide of up to 2.2mtc/yr and savings of up to £188m/yr in terms of the social costs of carbon would not be made.

Social

If renewable electricity generation failed to develop, the benefits for energy supply which may be derived from further increased diversity of the energy mix both in terms of fuel type and geographical 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 energy supply.

5.8 Summary of the environmental, economic and social benefits of each main option

In environmental terms, option (ii) has the advantage of being likely to encourage the development of more offshore wind farms and thereby contributing to the Government's target of 10% of electricity supply from renewable energy by 2010. This would in turn contribute to the Government's targets for reductions in carbon dioxide emissions under the Kyoto Protocol and beyond. The economic benefits of option (ii) would stem partly from the advantages to the energy market of having a level playing field between

onshore and offshore transmission arrangements. There could also be some wider benefits to the economy from increasing the diversity of energy supply and therefore improving the security of that supply. Social benefits would be primarily based on the potential for improving the sustainability of energy supply in the longer term.

The benefits of option (iii) would be similar to those of option (ii) but the encouragement of offshore wind farm developments could be further enhanced and therefore the renewable energy and carbon dioxide emission reductions similarly enhanced. (This would, of course, be at the price of the cross-subsidy that would be required).

While the main advantages of options (ii) and (iii) are environmental, the key benefits of option (iv) are economic. It would avoid any costs falling on other users of the transmission system and reduce the risk of costs to consumers from stranded assets. It could also provide greater incentives to the industry to introduce efficiencies into provision of the transmission assets and would minimise regulation and market intervention. There could also be a social benefit through the avoidance of any higher prices to consumers which might impact disproportionately on the fuel poor.

6. Small Firms Impact Test

- 6.1 We have consulted the Small Business Service and they have agreed that the proposed regulatory regimes are unlikely to have a significant impact on small and medium sized enterprises (SMEs) as the sectors directly affected are made up almost entirely of large businesses. There is the potential for an increase in electricity prices although this is expected to be less than 1% and should have no significant impact on SMEs. The Preliminary Consultation will be used to test the above.

7. Competition assessment

- 7.1 In terms of competition between providers of electricity from different sources of energy, option (ii) is likely to have the least affect on competition in the electricity generation market as it will provide a level-playing field for both offshore and onshore generators. Under option (iii) there may be a risk that increased charges to generators and suppliers onshore may deter other forms of generation, alter operating decisions of existing plant or harm competitiveness. These market distortions may increase regulatory uncertainty and hence market risk. Option (iv) would impact more on the competitiveness of offshore developers as the approach to regulating offshore would be different to that onshore in not providing a price control. However, in assessing any competition concerns the appropriate authorities would have to consider what the relevant market was.

Whichever option is pursued, it will need to be borne in mind the importance of opening up what is a significant new market in offshore renewable energy. The 15 successful bids for Round 2 offshore wind farms were selected from a total of 40 bids from a large number of companies and partnerships. Those 40 bids represented over 30GW of electricity in total. Many of the key players in the UK energy market are seeking to enter the offshore renewables sector. This includes wave and tidal which, while less advanced in technology terms, offers the UK the opportunity to be at the front of the world market in design, development and construction. This preliminary consultation therefore seeks the views of other generators and stakeholders on the competition implications of the proposed regimes for offshore generators.

8. Enforcement, sanctions and monitoring

- 8.1 The licenses for electricity transmission are administered and enforced by Ofgem. The detailed enforcement arrangements will be consulted upon in the full consultation document.

9. Conclusions

- 9.1 The Energy Act 2004 includes provisions enabling the introduction of a new regulatory regime for offshore electricity transmission. It does so by providing that the prohibition on

persons participating in transmission activities without a licence applies in Great Britain, the territorial sea adjacent to Great Britain and any designated Renewable Energy Zone (REZ). This consultation exercise seeks views on the broad options for licensing offshore transmission. DTI and Ofgem are consulting on a range of options – from a light touch approach with the minimum regulatory arrangements consistent with UK and European law – to a more regulated approach consistent with the current onshore arrangements. We are consulting all stakeholders to ensure that any regime is appropriate and effective. In making his decision on the appropriate form of regulation the Secretary of State will be guided by the principle objective and general duties set out in section 3A of the Electricity Act which seeks to balance costs to consumers with social and environmental goals. The key considerations will be the opportunities to encourage an increase in the proportion of electricity generated from renewable energy sources and the effects of the various ways in which the costs of connecting that electricity can be met. There will be a further consultation on the detailed proposals for the new regulatory regime once a decision has been taken on the broad approach to regulation.



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