

**EXPLANATORY MEMORANDUM TO**  
**THE ELECTRICITY (OFFSHORE GENERATING STATIONS) (SAFETY**  
**ZONES) (APPLICATION PROCEDURES AND CONTROL OF ACCESS)**  
**REGULATIONS 2007**

**2007 No. 1948**

1. This explanatory memorandum has been prepared by the Department for Business, Enterprise and Regulatory Reform and is laid before Parliament by Command of her Majesty.

2. **Description**

2.1 These regulations assist in implementing the provisions of the Energy Act 2004 relating to the establishment of safety zones around offshore renewable energy installations. The regulations are necessary to enhance the workings of the safety zone provisions set out on the face of the 2004 Act, for the benefit of potential applicants, mariners and other interested parties.

3. **Matters of special interest to the Joint Committee on Statutory Instruments**

3.1 None.

4. **Legislative Background**

4.1 Sections 95 – 98 and Schedule 16 of the Energy Act 2004 make provision for a safety zone scheme applying to offshore renewable energy installations, i.e. wind farms and wave and tidal devices. The scheme applies in waters around Great Britain between the mean low water mark and the seaward limits of the Territorial Sea and in the UK Renewable Energy Zone. The essence of the scheme is that it is a criminal offence for vessels to enter or remain within a safety zone unless permitted to do so by means of a safety zone notice issued by the Secretary of State. Where vessels are permitted to enter a safety zone, the safety zone notice can prohibit certain activities from taking place within the area designated as a safety zone. These regulations are intended to:

(i) clarify the requirements for applying to the Secretary of State for the establishment of a safety zone around an offshore renewable energy installation; and

(ii) give standard permissions for vessels engaged in certain types of activity to enter and remain within safety zones, which will take effect in addition to any individual permissions that may be issued by the Secretary of State.

## **5. Territorial Extent and Application**

5.1 These regulations apply to the setting up of safety zones in GB internal and territorial waters, and in the UK Renewable Energy Zone (as established by the Renewable Energy Zone (Designation of Area) Order 2004).

5.2 These regulations will have legal extent to the UK as a whole.

## **6. European Convention on Human Rights**

6.1 As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

## **7. Policy Background**

7.1 A safety zone is an area of water around or adjacent to an offshore renewable energy installation from which certain or all classes of vessels are excluded and within which activities can be regulated. The introduction of a power for the Secretary of State to declare such a zone represents a domestic implementation of rights the UK has as a Coastal State under the United Nations Convention on the Law of the Sea (UNCLOS) (of which it is a signatory) to declare such zones to protect installations and mariners.

7.2 The purpose of a safety zone is to protect public and navigation safety by preventing collisions between vessels navigating in the vicinity of offshore renewable energy installations and the installations themselves. Under UNCLOS a maximum radius of 500 metres from the installation will normally apply, and this approach is to be adopted in the declaration of safety zones by the Secretary of State.

7.2 The normal expectation in relation to wind farms, based upon advice from experts such as the Maritime and Coastguard Agency, is that construction, major maintenance and decommissioning works, which will require the attendance of large maintenance vessels, should be subject to a full 500 metre zone to ensure the safety of vessels and those working on such sites. The normal operational phase of a wind farm is expected to use a standard 50 metre safety zone, allowing freer access between installations to mariners at that stage. The Secretary of State will work from the starting presumption that such dimensions will be suitable for wind farm safety zones but will carefully consider each case on its own merits, consider any alternative dimensions proposed and thereafter decide what requirements to attach to the safety zone declaration when made. In the case of wave and tidal powered devices, the Secretary of State will not work from such starting presumptions because of the widely differing nature and size of such devices and the fact that, for example, in contrast to wind turbines, wave and tidal devices are considerably less visible. The safety zone dimensions in such cases will be carefully fixed on a case by case basis.

7.3 Safety zones are one of a range of measures to minimise the risk of collision, which include marking such installations on charts, and lighting and marking their presence in accordance with the requirements of the Maritime and Coastguard Agency and Trinity House Lighthouse Services. They also complement the International Maritime Organisation's (IMO) International Regulations for Preventing Collisions at Sea.

### **Consultation**

7.4 The DBERR (then the DTI) carried out consultation from 3 November 2006 to 2 February 2007 on a draft of the regulations. The consultation document was sent to key stakeholders, such as the Devolved Administrations, offshore renewable energy developers, statutory advisors, bodies representing the interests of the shipping and fishing communities and environmentalist groups, and placed on the Department's website.

7.5 There were 39 responses to the consultation and the draft regulations stood up reasonably well to this scrutiny, with only a small number of changes required to reflect the views of a number of consultees that wave and tidal devices are sufficiently different from wind farms, in terms of both their design and the technology deployed, to warrant the case by case treatment outlined in Section 7.2 above. However, concerns were expressed by some fishermen and their representative organisations and also by some navigational stakeholders that safety zones might restrict their activities. It should be noted, however, that the consultation process to be followed for each individual application for a safety zone will enable these concerns to be taken into account by the Secretary of State in deciding whether to approve the application.

7.6 A more detailed analysis of the responses to the consultation is contained in the Government response which was sent to consultees and placed on the Department's website on 27 April 2007.

### **Guidance**

7.7 The Department is preparing a guidance note for applicants and other stakeholders to explain the processes for applying for a safety zone and for publicising applications so that interested parties have an opportunity to comment. It is expected that this guidance will be made available and placed on the DTI website to coincide with the commencement date of the regulations.

## **8. Impact**

8.1 A Regulatory Impact Assessment is attached to this memorandum.

8.2 The regulations will be impact neutral for the public sector.

## **9. Contact**

9.1 Tony Keegan at the Department for Business, Enterprise and Regulatory Reform, Tel: 020 7215 0479 or e-mail: [tony.keegan@dti.gsi.gov.uk](mailto:tony.keegan@dti.gsi.gov.uk), can answer any queries regarding the content of the instrument.

**Implementation of the provisions of the Energy Act 2004 relating to the establishment of safety zones around offshore renewable energy installations.**

**Final Regulatory Impact Assessment**

**1. Title of proposal**

1.1 Implementation of the provisions of the Energy Act 2004 covering safety zones around or adjacent to offshore renewable energy installations (OREI).

**2. Purpose and Intended Effect**

2.1 The objective of the regulations is to implement the Safety Zone scheme outlined in the Energy Act 2004 by clearly setting out:

- the process for applying to the Secretary of State for a safety zone around or adjacent to an OREI;
- indicative dimensions for safety zones during the construction, operation, possible extension and decommissioning phases of an OREI's life;
- a list of standard exemptions to the prohibition on vessels entering or remaining within safety zones; and
- a list of standard permissions for certain activities to take place within such zones.

2.2 The intention is to avoid imposing an unnecessarily onerous regulatory burden on the applicant. However, it is equally important that the process is as transparent as possible, thus encouraging full participation by ensuring that the application is brought to the attention of all parties who might have an interest in it and wish to register comments with the Secretary of State. It is also important, from the perspective of government and stakeholders alike, to remove any ambiguity with regard to exemptions from the prohibition on vessels entering or remaining within safety zones and the types of activities that may take place within such designated waters.

2.3 The regulations will cover all OREI, i.e. wind farms and wave/tidal devices, and will apply to territorial waters in or adjacent to

Great Britain (between the mean low water mark and the seaward limits of the territorial sea) and to waters in the UK Renewable Energy Zone, which was designated in December 2004.

## **Background**

2.4 A Safety Zone scheme is set out in outline in sections 95-98 and Schedule 16 of the Energy Act 2004. The purpose of a safety zone is to manage the interaction between vessels and OREI in order to protect life, property and the environment. The fundamental principle is that vessels should be kept at a safe distance from OREI in order to avoid collisions. A safety zone may be established at various stages in the life of an installation, from construction and any possible extension through to operation and eventual decommissioning.

2.5 A safety zone works by designating an area of water around or adjacent to an OREI. It is a criminal offence for a vessel to enter or remain in such designated waters without permission. However, under the provisions of the safety zone scheme set out in the Energy Act the Secretary of State can give permission, by way of a safety notice or under regulations, for certain vessels to enter or remain within a safety zone. The safety zone notice may also set out prohibited activities that may not take place within such designated waters.

## **Experience of safety zones around OREI**

2.6 Advisory safety notices were issued during the construction of the four currently operational Round 1 wind farms to warn mariners and fishermen of the potential danger and advise them to avoid the specified areas. There have been no reports of any serious incidents arising out of this work, but it should be noted that the Round 1 wind farms are very much smaller (around 30 turbines) than those under application for Round 2 (up to 300 turbines).

## **Safety Zones around Offshore Oil and Gas Installations**

2.7 Safety zones of 500 metres are created automatically by law around all offshore oil and gas installations that project above the sea surface. This is because such installations may have relatively large crews and the presence of oil and gas presents a much higher risk to the safety of personnel on both the installation and any vessel in collision with it than would be the case in a collision between a vessel

and an OREI. Sub-sea oil and gas installations do not have automatic safety zones, but such zones can be created by Order on application to the Health and Safety Executive (HSE). Such zones are frequently created during the installation or removal of sub-sea installations to protect the crews carrying out these activities.

## **Rationale for Government Intervention**

2.8 It is Government policy to enable vessels to navigate within offshore renewable energy sites where it would be safe to do so. However, there are circumstances in which safety zones may be required around an OREI to protect maritime and public safety. An obvious example would be during the construction and decommissioning phases, but they may also be required during the operational period, and particularly during major repair or refurbishment work.

2.9 Clarification of the application process will ensure that applicants and other interested parties have a complete understanding of the process and the information they are required to provide when applying for a safety zone or commenting on an application.

2.10 The lists of standard exemptions and permissions will remove any ambiguity over vessels that may enter a safety zone and activities that may take place within such designated waters. As indicated in paragraph 2.5 above, under the safety zone provisions of the Energy Act 2004 such exemptions and permissions could be written into individual safety notices. However, this case-by-case approach seems inefficient and could potentially result in inconsistency between individual notices, resulting in confusion for OREI developers, mariners and other users of the sea. We therefore believe that it is in the best interests of all parties to set out lists of standard exemptions and permissions in the proposed regulations.

2.11 As a general principle, safety zones will only be established on the basis of sound risk assessment and evidence of need. However, there may be instances where the Secretary of State decides that in order to protect maritime and public safety, a safety zone should be imposed even if the developer has not applied for one. In such circumstances, the Secretary of State will exercise his powers under the safety zone scheme provisions of the Energy Act 2004 to impose the establishment of such a zone. Such an approach is consistent

with the Government's overall approach to regulatory burden and managing risks to the public.

### **3. Consultation**

#### **Within Government**

3.1 The proposals have been developed in conjunction with other Government Departments with an interest, primarily Defra and the Department of Transport, and also the Maritime & Coastguard Agency – an agency of the DfT with statutory responsibility for maritime safety. The Devolved Administrations, the Health and Safety Executive and The Crown Estate were also consulted during the pre-consultation phase.

#### **Public Consultation**

3.2 A formal public consultation was carried out on the proposed regulations between 3 November 2006 and 2 February 2007. Copies of the document were circulated to developers likely to be making applications for safety zones around offshore renewable energy installations, and also to a wide range of stakeholders who might potentially be affected by the creation of safety zones and would therefore have an interest in the application process. These included the navigation community, the fishing industry and a number of environmental organisations. The consultation document was also published on the Department's external website, and a half-day workshop was held on 30 November 2006 to give stakeholders an early opportunity to discuss and comment on the proposals. In addition, the Department expressed willingness to hold meetings on request with particular stakeholder groups who offered detailed comments. The Government's response to the consultation was published on Friday 27 April 2007.

### **4. Options**

4.1 In deciding on the policy to be presented in the consultation document, the Government considered three options, which were:

- (i) Do nothing.

- (ii) Introduce compulsory 500 metre exclusion zones around all OREI at all stages of their lives, i.e. construction, operation, possible extension and decommissioning.
- (iii) Introduce a safety zone scheme requiring applications from OREI developers based on site-specific circumstances, or, where no application is made, upon the Secretary of State's own initiative in appropriate cases. The proposed starting presumptions for the dimensions of safety zones, based on prior consultation with the Maritime and Coastguard Agency (MCA) the statutory advisor for navigation safety, would be 500 metres during construction, possible extension and decommissioning of an OREI and 50 metres during the much longer operational phase of an OREI's life.

### **Description of options**

- (i) Doing nothing would mean continuing to rely on legislation which lacks clarity in that there is no detailed explanation of the application process. This is potentially confusing for OREI developers and does not allow sufficient opportunity for other interested parties to make their views known. Given that a significant number of new offshore wind farms and demonstrator wave and tidal energy devices are due to be constructed in the next 3-5 years, this option could potentially have serious safety implications for developers, mariners, the fishing industry and members of the public.
- (ii) The prescriptive approach of establishing 500 metre compulsory exclusion zones around all OREI at all stages in their construction, operation, possible extension and decommissioning would result in the sterilisation for other uses of large areas of sea. This could cause additional disruption to navigation and increased costs/potential economic losses to the shipping and fishing industries than would be the case if some access in, or closer to, wind farm sites were safely possible.
- (iii) A safety zone scheme with starting presumptions of standard safety zone dimensions of 500 metres during the navigational safety-critical construction, possible extension and decommissioning phases of an OREI's life, and 50 metres during the much longer operational phase, would in our view and that of the MCA cause far less disruption to navigation and minimise any potential losses to the shipping and fishing industries.

4.2 On balance and after very careful consideration, we decided that option (iii) offered the best balance between an appropriate and proportionate level of regulation and the need to protect the safety of mariners and other users of the sea. We therefore adopted this option in the consultation document.

4.3 As a matter of good practice, the scheme will encourage applications for development of an OREI under section 36 of the Electricity Act 1989 to include basic information on the need, or otherwise, for a safety zone as part of the assessment which needs to be made of the impact of the proposed installation on safety of navigation. This will need to be sufficient to enable the Secretary of State to consider whether a safety zone would be required at the same time as consideration is given to the consent for the OREI. This information would also inform a possible safety notice on the initiative of the Secretary of State where no application is made by the developer. In normal circumstances, and subject to confirmation that a safety zone would be required, we would anticipate that a formal application for such a zone would then be made by developers after the consent for development of the OREI had been granted and once the developer had taken firm decisions on key issues such as the foundation type to be used and the location of the installations making up the array. This is to ensure that decisions about a safety zone, and particularly how the safety zone notice should be drawn up, can be taken on the basis of firm and up to date information. However, sufficient flexibility is required as to both the timing of any application and the amount of data provided.

4.4 Under the terms of the scheme, a safety zone of appropriate size will be clearly marked on Admiralty charts and advertised through the publication of a notice in the specialist maritime press, Lloyds List and appropriate fishing industry and marine leisure journals. The notice, which will also be displayed in Harbour Masters' offices, Marine Fisheries Agency offices and HM Coastguard sector managers' offices, will clearly identify the location of the zone, where possible by both place name and co-ordinates. Since it is a criminal offence under the Energy Act 2004 for unauthorised vessels and individuals to enter or remain within a safety zone without permission, the notice will carry a warning that transgressors could face the risk of criminal prosecution.

4.5 In terms of safety zone dimensions, our starting presumption for the consultation based on discussions with the HSE and the Maritime & Coastguard Agency, was that the standard dimensions for

safety zones should be 500 metres during the construction, possible extension and decommissioning of an OREI, and a minimum of 50 metres during the much longer operational phase of its life. Such dimensions are entirely consistent with international law (United Nations Law of the Sea (UNCLOS)), which stipulates that the breadth of a safety zone is a matter to be determined by the coastal state, but cannot exceed a distance of 500 metres.

4.6 It must be emphasised that whilst option (iii) was the preferred option, we made it clear in the consultation document and also in discussions with stakeholders that we were very much open to comments and considerations that might arise out of the consultation on all aspects of our proposals. A clear theme running through a number of the responses to the consultation was that whilst the starting presumptions set out in paragraph 4.5 above should be adequate for wind turbines, a different approach would need to be adopted for wave and tidal devices due to their larger footprints (when compared to a single wind turbine) and the differences in technologies adopted – some wave and tidal devices will have moving ‘arms’ or other structures designed to ‘catch’ waves and most will require some form of mooring to hold the device in place. This means that mooring cables and anchor points will need to be included in the appropriate dimensions for any safety zone around such a device. The regulations therefore provide for applications for safety zones around wave and tidal devices to be considered solely on the basis of site-specific factors, rather than on any presumption of standard dimensions.

4.7 In considering responses to the consultation and drawing up the regulations, our over-riding concern has been to ensure that the safety zone scheme provides sufficient safeguards to navigational safety.

## **5. Costs and benefits**

### **Sectors and groups affected**

5.1 The regulations will apply most directly to developers of offshore renewable energy installations applying for development consents under section 36 of the Electricity Act 1989. However, as indicated above, there is a wide range of stakeholder groups with an interest in offshore generating stations, including the navigation community (both commercial and recreational interests), the fishing

industry and organisations with an interest in the conservation of the marine environment.

### Summary of costs and benefits

The table below summarises the possible impacts of each option. For the reasons given in the following paragraphs, it has not been possible to quantify the costs involved other than those directly incurred by the applicant through the proposed standard fee to cover the costs to government of processing applications and compliance with the requirements for publishing and advertising applications.

|          | Option (i) – Do nothing  | Option (ii) – Compulsory 500 metre exclusion zones  | Option (iii) – Safety Zone Scheme  |
|----------|--|---|--|
| Economic | Avoids application costs but likely to give rise to uncertainty and confusion as more and bigger OREI are built. | Imposes additional application and advertising costs, albeit likely to be marginal when compared to the development costs of an OREI. The costs (as yet unquantifiable) of policing and enforcing a safety zone would also fall to the applicant. Might also have potentially significant economic impacts on other industry sectors and users of the | Imposes additional application and advertising costs, albeit likely to be marginal when compared with the development cost of an OREI. As with option (ii), the costs of policing and enforcing a safety zone would fall to the applicant. Potential economic impacts on other industry sectors likely to be less significant than for option (ii) |

|               |  |  |  |
|---------------|--|--|--|
|               |  | sea.   |  |
| Social        | Potential risks to public and maritime safety. Provides little or no opportunity for parties likely to be affected by the establishment of a safety zone to make their views known.                        | Provides clarity with regard to the application process, but little or no opportunity for parties likely to be affected by the establishment of an exclusion zone to air their views.                                    | Provides complete clarity and transparency in the application process, and excellent opportunities for parties likely to be affected by the establishment of safety zones to make their views known. |
| Environmental | Unquantifiable, though some potential benefit might accrue from exclusion of vessels, particularly commercial fishing vessels, in terms of creation of new marine habitats or protection of existing ones. | Unquantifiable, though it is possible that greater potential benefit might accrue from the exclusion of vessels, particularly commercial fishing vessels, due to the larger dimensions of the 500 metre exclusion zones. | As for option (i)  |

### **Option (i) - do nothing.**

#### **Economic, social and environmental**

5.2 There will be a cost to all parties involved in familiarising themselves with the application and advertising processes set out in the proposed regulations. However, the benefits of maintaining the status quo would be insignificant when compared with the potential

costs and risks to navigational and public safety of operating within the outline provisions in the Energy Act 2004, which lack clarity and are generally unsatisfactory.

## **Option (ii) - introduce compulsory 500 metre exclusion zones**

### **Economic, social and environmental**

5.3 The ongoing economic costs to the shipping and fishing industries of 500 metre exclusion zones for all stages in an OREI's construction, operation, possible extension and decommissioning, could be potentially significant. As indicated in paragraph 5.6 below, this option might potentially sterilise an area of sea estimated in total at around 1,660 square km to these industries and other users of the marine environment. Unfortunately, due to a lack of published data and site-specific information, it is not possible to quantify these costs at present.

5.4 A draft report by the Sea Fish Industry Authority (SEAFISH) commissioned by DTI on behalf of the Fishing Liaison with Wind and Wet Renewables (FLOWW) stakeholder group, recommends that commercial fishing of any kind should not be permitted anywhere within wind farms and that 500 metre safety zones, the largest permitted under international law – see paragraph 4.5 above, should be established around each turbine. However, this recommendation was based largely on desk studies of commercial fishing methods and a series of interviews with fishermen, who generally have limited experience of fishing in wind farms due to the small number currently constructed. Whilst the report is a valuable contribution to the debate on what types of fishing activity might safely be permitted within wind farms, and confirmed the DTI's view that trawling and certain long-line types should definitely not be permitted, alternative views have been put forward by others, including the MCA, and it has also been argued that the need for such a highly prescriptive approach could only be properly assessed on a case-by-case basis, as proposed under option (iii).

5.5 There is also a lack of detailed information as to how much fishing activity actually takes place within wind farms. The SEAFISH report suggests that with a few notable exceptions, including shellfish grounds east of the Humber and off the north coast of Norfolk and sole fishing grounds in the Thames Estuary, the strategic areas identified for wind farm development are not particularly good for fishing. We had hoped to gather further information on the extent of

fishing activities in wind farms from fishing industry representative organisations and others through the consultation process. Unfortunately, despite the inclusion of specific questions in the consultation document designed to draw out this information, we did not receive any quantifiable data.

5.6 We have also noted strong opposition to the introduction of compulsory life-long exclusion zones expressed by the Maritime and Coastguard Agency on the grounds that they would permanently sterilise large areas of sea for other uses. MCA estimate that under option (ii), a large wind farm of 300 plus turbines would sterilise well in excess of 200 square km of sea. On that basis, given that the total number of turbines presently planned for wind farms in UK waters is in the region of 2500, this would effectively sterilise a total area of sea in excess of 1,660 sq km. MCA believe that this would cause significant disruption to navigation, particularly in the Thames Estuary with its restricted navigation routes. It might also lead to increased costs to the shipping industry, together with increased carbon emissions, as vessels would need to burn additional fuel to sail around the wind farms using greater margins of avoidance. However, as indicated in paragraph 5.3 above, it is not possible at present to calculate the costs of option (ii) to the shipping and fishing industries. This would require detailed site-specific data on each of the existing and proposed UK wind farms sites, which is not presently available.

5.7 There may be potential benefits from a wider exclusion of vessels from wind farms, particularly fishing vessels. However the evidence as to the environmental benefits in terms of protecting areas of sea from on-going activities once the wind farm is constructed is as yet uncertain.

**Option (iii) – introduce a safety zone scheme based on applications from OREI developers, or at the Secretary of State’s own initiative in appropriate cases.**

## **Economic**

5.8 The main economic benefit of a safety zone scheme would be derived from the fact that applicants, regulators and other interested parties will be able to work from clear, transparent and open sets of regulations. An additional, although at present unquantifiable, long-term economic benefit would derive from the more flexible nature of the scheme. Under this option, 500m safety zones would apply only during the comparatively short construction and decommissioning

phases of an OREI's life. During the operational phase the zone would be much smaller, thus sterilising a correspondingly smaller area of sea and minimising the potential economic impact on the shipping and fishing industries.

## **Social**

5.9 It is important from a societal perspective that all persons and organisations who have an interest in offshore renewable energy developments are encouraged to participate in the process of providing views on applications which are taken into account in the decision making process. This participative approach is the foundation of good decision making which, in itself, has a social benefit. Having a transparent and open application process with clear sets of regulations is an important prerequisite for such a participative approach. This option might also have some social benefits in terms of allowing yachting and recreational fishing to occur within wind farms.

## **Environmental/Safety of Navigation**

5.10 The participation of parties with environmental and navigational safety expertise in the application process will be of particular value. As indicated in the Competition Assessment in section 7 below, the generation of electricity offshore is a relatively new activity. It is important therefore that the application process is designed to facilitate the participation of environmental organisations, navigational safety experts, bodies representing the shipping and fishing sectors and other parties who can provide the information and specialist expertise necessary to assist Government to make sound decisions on the establishment of safety zones.

## **Costs**

5.11 Apart from the proposed £2,000 standard fee to cover the costs to government of processing the application, the main costs of compliance would be those associated with the required publication of the notice of application for a safety zone in local, national and specialist press. The publication requirements are consistent with those established for applications for consent for the construction and operation of offshore renewable energy installations under section 36 of the Electricity Act 1989. They are also consistent with the requirements in related legislation, including the Electricity Works

(Environmental Impact Assessment) (England and Wales) Regulations 2000.

5.12 The costs of publication will vary depending on a number of factors, the most important of which are the size of the notice and number of local newspapers in which it is included. The new regulations will require the publication of a notice in Lloyds List and a fishing industry journal such as Fishing News, which will bring the proposed safety zone to the attention of the navigation community and the fishing industry. The costs associated with this requirement are justified by the need to bring the application to the attention of those who may be most directly affected by it.

5.13 As indicated in paragraph 5.7 above, the publication requirements for safety zones will be broadly similar to those for section 36 consent applications. On the basis of offshore renewable energy developers' experience in complying with the consents application publication requirements, we estimate that the costs of publication for a safety zone application will be in the range of £5,000 - £15,000. The costs of a notice for a small demonstration-scale wave or tidal device are likely to be towards the lower end of this range of costs.

5.14 The costs of complying with the requirement to serve notice of the application on certain organisations likely to have an interest in the establishment of safety zones would be minimal. All that would be required is a standard letter or e-mail to the organisations in question. Additionally, the draft regulations require the applicant to display a notice of the application in Harbour Masters' and Marine Fisheries Agency offices local to the installation and HM Coastguard Sector Managers' Offices as mariners often visit such locations. Again, the costs of this would be minimal.

5.15 The costs of policing and enforcing safety zones will largely fall to the applicant – in most cases this is expected to be OREI developer, although some costs are likely to be incurred by the Maritime and Coastguard Agency in bringing prosecutions against transgressors based on evidence provided by the applicant. At present it is not possible to quantify these costs because there are no safety zones presently in operation around OREI in UK waters and there have been no prosecutions to date. However, the British Wind Energy Association and the MCA have agreed to monitor costs incurred by OREI developers and the MCA respectively so that we

can take these into consideration when reviewing the operation of the scheme.

## **6. Small Firms Impact Test**

6.1 In our view it is unlikely that the cost of complying with the proposed regulations will have a significant impact on small firms in the offshore renewables industry. To the best of our knowledge, there are at present only a few small firms (i.e. enterprises employing fewer than 250 people full time) developing proposals in the wind farm sector, and even fewer, if any, who then go on to construct projects.

6.2 There are around fifty firms in the UK - ranging in size from small to large - involved in the development of wave and tidal devices. However, the costs incurred by a developer in applying for a safety zone and complying with the publication requirements outlined above are unlikely to be a significant element of the overall development costs of a project. The British Wind Energy Association as one of the representative bodies of the offshore renewable energy industry has confirmed that this would be the case.

6.3 The introduction of safety zones could potentially have an impact on the fishing industry, which is largely comprised of small, single-boat enterprises, through displacement of fishing activity. However, although data on the extent of fishing activity by vessels over 15 metres in length is available from their recorded electronic vessel monitoring systems (VMS), such data is not available for vessels under 15 metres, which is thought to be the sector of the fishing industry most likely to want to operate within OREI. For these vessels data on the weight and species of landings is available (from EU log sheets in the case of >10m vessels and from registration of first stage sales for <10m vessels), as is data on the value of landed catch. However, this data is not recorded at a sufficiently detailed spatial level to enable catches to be correlated precisely with the sites of existing or proposed wind farms. In view of this, and in order to try to clarify the position on levels and types of fishing likely to be affected, the views of the fishing industry were sought during the consultation on the potential commercial impacts of the creation of safety zones on fishermen. Unfortunately, as indicated in paragraph 5.5 above, we received no quantifiable data from fishermen's organisations or individual fishermen in response to the consultation.

## **7 Competition Assessment**

7.1 The market for the purposes of undertaking the competition assessment comprises energy-related companies who are looking to construct and operate offshore generating stations, including wind farms and wave and tidal devices. The offshore wind energy market is relatively newly established with the first experimental 2-turbine installation being commissioned in December 2000. The industry has developed rapidly since that first installation and four commercial-scale 30 turbine wind farms are now fully operational (North Hoyle, Scroby Sands, Kentish Flats and Barrow), with a fifth (Burbo Bank) under construction and 4 more currently out to tender. A second phase of development is now underway comprising much larger wind farms – the largest will deploy a projected 300 plus turbines with an installed generating capacity of 1000 Megawatts of electricity. Section 36 consent applications have already been received for seven of these second phase developments.

7.2 The offshore wind energy industry is characterised by several large vertically integrated utility companies, a number of oil and gas companies seeking to diversify into renewable energy and several niche market players who specialise in renewable energy. It is a multinational industry with participation by a number of European-based energy companies who are seeking business opportunities in the UK energy market. The sector is a dynamic one and has seen a number of recent acquisitions and mergers.

7.3 The wave and tidal sector is less well developed. However, a number of companies have been developing prototype devices of different kinds and the industry is now ready to move forward to demonstrating the capabilities of larger scale devices.

7.4 The costs of developing and installing any kind of electricity producing device in the marine environment are considerable. The costs of applying for a safety zone are insignificant by comparison and the risk that there will be any impact on competition is consequently very low. It can only be helpful to offshore renewable energy developers, whether established players or new entrants to the market, and other interested parties to have the applications procedure clearly set out in regulations.

7.5 The establishment of safety zones could potentially have an impact of the competitiveness of other marine industries, such as dredging and aggregates. Here again, we had hoped to obtain further information on the potential impacts on small firms in these and other industry sectors through the consultation process. Unfortunately, the

representative body for the marine aggregates sector did not respond to the consultation and it has not been possible within our limited resources to undertake any additional research in this area.

## **8 Simplification Assessment**

8.1 In bringing forward its proposals the Department has sought to comply with better regulation practice.

8.2 It should be borne in mind that the proposed regulations represent a much-needed clarification of the safety zone scheme provisions of the Energy Act 2004. Their purpose is to help offshore renewable energy installation developers and other interested parties better understand the processes of applying for a safety zone and commenting on such applications. They will also remove any ambiguity over the types of vessels that may enter a safety zone and the kinds of activities that can take place in such designated waters. We believe that such clarification will be of considerable benefit to a wide range of stakeholders.

8.3 It is our intention to integrate the approval of safety zones as smoothly and seamlessly as possible into the existing regime for consenting offshore renewable energy installations. Once the safety zone regime is underway and underpinning regulations brought into force, all future applications for development of an OREI would be expected to cover the need, or otherwise, for a safety zone. Where it is considered, either by the developer or the Secretary of State, that a safety zone is required, the developer will subsequently be required to submit an application for one.

## **9. Enforcement, sanctions and monitoring**

9.1 The Department will not consider an application for a safety zone where the process set out in the draft regulations has not been followed. The Department will, however, issue guidelines to assist applicants to follow the process and be willing to provide advice to applicants who have particular queries.

9.2 Given the small numbers of wind farms currently operating and the low annual number of new development applications, it will be possible for the Department to monitor each application to ensure that the process has been followed correctly.

9.3 Once a safety zone is established it will be for the developer to decide how to police and enforce it. Since an OREI is a very considerable financial investment, it will be in the developer's best interest to ensure that suitable arrangements are put in place in a timely manner. Such arrangements would need to include a means of gathering evidence of infringements of the safety zone in order to support any legal action that might be taken against transgressors.

## **10. Summary and recommendation**

10.1 Our objective is to put in place regulations which establish a clear, open and transparent application process for safety zones that allows all interested parties to participate in the decision making process, whilst at the same time avoiding placing overly onerous administrative and cost burdens on the applicant. At the same time, the lists of standard exemptions and permissions will remove any ambiguity over categories of vessels that may enter or remain within safety zones and activities that may take place within such designated waters.

10.2 Option (i), the 'do nothing' option was unacceptable in our view, as the Department would be failing to address potentially serious navigational and public safety issues. Similarly, option (ii), compulsory 500 metre exclusion zones around all OREI at all stages of their lives, was not acceptable in our view due to its inflexibility and potential impact upon mariners and other users of the sea. We believe that the cost/benefit analysis above indicates that the option which best met our objectives was option (iii) – to introduce safety zones through a single set of regulations dealing with (a) the process of applying for a safety zone around or adjacent to an offshore renewable energy installation and the dimensions of such zones, and (b) standard exemptions to the prohibition on vessels entering safety zones and permissions for certain activities to take place within such designated waters. Our recommendation therefore, subject to the views of those taking part in the consultation, is to proceed to placing regulations before Parliament on the lines of option (iii). As indicated in Section 9 above, we strongly believe that clarity and transparency on these issues will greatly benefit a wide range of stakeholders, including OREI developers and the shipping and fishing industries.

# **Implementation of the provisions of the Energy Act 2004 relating to the establishment of safety zones around offshore renewable energy installations.**

## **Final Regulatory Impact Assessment**

### **1. Title of proposal**

1.1 Implementation of the provisions of the Energy Act 2004 covering safety zones around or adjacent to offshore renewable energy installations (OREI).

### **2. Purpose and Intended Effect**

2.1 The objective of the regulations is to implement the Safety Zone scheme outlined in the Energy Act 2004 by clearly setting out:

- the process for applying to the Secretary of State for a safety zone around or adjacent to an OREI;
- indicative dimensions for safety zones during the construction, operation, possible extension and decommissioning phases of an OREI's life;
- a list of standard exemptions to the prohibition on vessels entering or remaining within safety zones; and
- a list of standard permissions for certain activities to take place within such zones.

2.2 The intention is to avoid imposing an unnecessarily onerous regulatory burden on the applicant. However, it is equally important that the process is as transparent as possible, thus encouraging full participation by ensuring that the application is brought to the attention of all parties who might have an interest in it and wish to register comments with the Secretary of State. It is also important, from the perspective of government and stakeholders alike, to remove any ambiguity with regard to exemptions from the prohibition on vessels entering or remaining within safety zones and the types of activities that may take place within such designated waters.

2.3 The regulations will cover all OREI, i.e. wind farms and wave/tidal devices, and will apply to territorial waters in or adjacent to Great Britain (between the mean low water mark and the seaward

limits of the territorial sea) and to waters in the UK Renewable Energy Zone, which was designated in December 2004.

## **Background**

2.4 A Safety Zone scheme is set out in outline in sections 95-98 and Schedule 16 of the Energy Act 2004. The purpose of a safety zone is to manage the interaction between vessels and OREI in order to protect life, property and the environment. The fundamental principle is that vessels should be kept at a safe distance from OREI in order to avoid collisions. A safety zone may be established at various stages in the life of an installation, from construction and any possible extension through to operation and eventual decommissioning.

2.5 A safety zone works by designating an area of water around or adjacent to an OREI. It is a criminal offence for a vessel to enter or remain in such designated waters without permission. However, under the provisions of the safety zone scheme set out in the Energy Act the Secretary of State can give permission, by way of a safety notice or under regulations, for certain vessels to enter or remain within a safety zone. The safety zone notice may also set out prohibited activities that may not take place within such designated waters.

## **Experience of safety zones around OREI**

2.6 Advisory safety notices were issued during the construction of the four currently operational Round 1 wind farms to warn mariners and fishermen of the potential danger and advise them to avoid the specified areas. There have been no reports of any serious incidents arising out of this work, but it should be noted that the Round 1 wind farms are very much smaller (around 30 turbines) than those under application for Round 2 (up to 300 turbines).

## **Safety Zones around Offshore Oil and Gas Installations**

2.7 Safety zones of 500 metres are created automatically by law around all offshore oil and gas installations that project above the sea surface. This is because such installations may have relatively large crews and the presence of oil and gas presents a much higher risk to the safety of personnel on both the installation and any vessel in collision with it than would be the case in a collision between a vessel and an OREI. Sub-sea oil and gas installations do not have

automatic safety zones, but such zones can be created by Order on application to the Health and Safety Executive (HSE). Such zones are frequently created during the installation or removal of sub-sea installations to protect the crews carrying out these activities.

## **Rationale for Government Intervention**

2.8 It is Government policy to enable vessels to navigate within offshore renewable energy sites where it would be safe to do so. However, there are circumstances in which safety zones may be required around an OREI to protect maritime and public safety. An obvious example would be during the construction and decommissioning phases, but they may also be required during the operational period, and particularly during major repair or refurbishment work.

2.9 Clarification of the application process will ensure that applicants and other interested parties have a complete understanding of the process and the information they are required to provide when applying for a safety zone or commenting on an application.

2.10 The lists of standard exemptions and permissions will remove any ambiguity over vessels that may enter a safety zone and activities that may take place within such designated waters. As indicated in paragraph 2.5 above, under the safety zone provisions of the Energy Act 2004 such exemptions and permissions could be written into individual safety notices. However, this case-by-case approach seems inefficient and could potentially result in inconsistency between individual notices, resulting in confusion for OREI developers, mariners and other users of the sea. We therefore believe that it is in the best interests of all parties to set out lists of standard exemptions and permissions in the proposed regulations.

2.11 As a general principle, safety zones will only be established on the basis of sound risk assessment and evidence of need. However, there may be instances where the Secretary of State decides that in order to protect maritime and public safety, a safety zone should be imposed even if the developer has not applied for one. In such circumstances, the Secretary of State will exercise his powers under the safety zone scheme provisions of the Energy Act 2004 to impose the establishment of such a zone. Such an approach is consistent with the Government's overall approach to regulatory burden and managing risks to the public.

### **3. Consultation**

#### **Within Government**

3.1 The proposals have been developed in conjunction with other Government Departments with an interest, primarily Defra and the Department of Transport, and also the Maritime & Coastguard Agency – an agency of the DfT with statutory responsibility for maritime safety. The Devolved Administrations, the Health and Safety Executive and The Crown Estate were also consulted during the pre-consultation phase.

#### **Public Consultation**

3.2 A formal public consultation was carried out on the proposed regulations between 3 November 2006 and 2 February 2007. Copies of the document were circulated to developers likely to be making applications for safety zones around offshore renewable energy installations, and also to a wide range of stakeholders who might potentially be affected by the creation of safety zones and would therefore have an interest in the application process. These included the navigation community, the fishing industry and a number of environmental organisations. The consultation document was also published on the Department's external website, and a half-day workshop was held on 30 November 2006 to give stakeholders an early opportunity to discuss and comment on the proposals. In addition, the Department expressed willingness to hold meetings on request with particular stakeholder groups who offered detailed comments. The Government's response to the consultation was published on Friday 27 April 2007.

### **4. Options**

4.1 In deciding on the policy to be presented in the consultation document, the Government considered three options, which were:

- (iv) Do nothing.
- (v) Introduce compulsory 500 metre exclusion zones around all OREI at all stages of their lives, i.e. construction, operation, possible extension and decommissioning.

- (vi) Introduce a safety zone scheme requiring applications from OREI developers based on site-specific circumstances, or, where no application is made, upon the Secretary of State's own initiative in appropriate cases. The proposed starting presumptions for the dimensions of safety zones, based on prior consultation with the Maritime and Coastguard Agency (MCA) the statutory advisor for navigation safety, would be 500 metres during construction, possible extension and decommissioning of an OREI and 50 metres during the much longer operational phase of an OREI's life.

### **Description of options**

(i) Doing nothing would mean continuing to rely on legislation which lacks clarity in that there is no detailed explanation of the application process. This is potentially confusing for OREI developers and does not allow sufficient opportunity for other interested parties to make their views known. Given that a significant number of new offshore wind farms and demonstrator wave and tidal energy devices are due to be constructed in the next 3-5 years, this option could potentially have serious safety implications for developers, mariners, the fishing industry and members of the public.

(ii) The prescriptive approach of establishing 500 metre compulsory exclusion zones around all OREI at all stages in their construction, operation, possible extension and decommissioning would result in the sterilisation for other uses of large areas of sea. This could cause additional disruption to navigation and increased costs/potential economic losses to the shipping and fishing industries than would be the case if some access in, or closer to, wind farm sites were safely possible.

(iii) A safety zone scheme with starting presumptions of standard safety zone dimensions of 500 metres during the navigational safety-critical construction, possible extension and decommissioning phases of an OREI's life, and 50 metres during the much longer operational phase, would in our view and that of the MCA cause far less disruption to navigation and minimise any potential losses to the shipping and fishing industries.

4.2 On balance and after very careful consideration, we decided that option (iii) offered the best balance between an appropriate and proportionate level of regulation and the need to protect the safety of

mariners and other users of the sea. We therefore adopted this option in the consultation document.

4.3 As a matter of good practice, the scheme will encourage applications for development of an OREI under section 36 of the Electricity Act 1989 to include basic information on the need, or otherwise, for a safety zone as part of the assessment which needs to be made of the impact of the proposed installation on safety of navigation. This will need to be sufficient to enable the Secretary of State to consider whether a safety zone would be required at the same time as consideration is given to the consent for the OREI. This information would also inform a possible safety notice on the initiative of the Secretary of State where no application is made by the developer. In normal circumstances, and subject to confirmation that a safety zone would be required, we would anticipate that a formal application for such a zone would then be made by developers after the consent for development of the OREI had been granted and once the developer had taken firm decisions on key issues such as the foundation type to be used and the location of the installations making up the array. This is to ensure that decisions about a safety zone, and particularly how the safety zone notice should be drawn up, can be taken on the basis of firm and up to date information. However, sufficient flexibility is required as to both the timing of any application and the amount of data provided.

4.4 Under the terms of the scheme, a safety zone of appropriate size will be clearly marked on Admiralty charts and advertised through the publication of a notice in the specialist maritime press, Lloyds List and appropriate fishing industry and marine leisure journals. The notice, which will also be displayed in Harbour Masters' offices, Marine Fisheries Agency offices and HM Coastguard sector managers' offices, will clearly identify the location of the zone, where possible by both place name and co-ordinates. Since it is a criminal offence under the Energy Act 2004 for unauthorised vessels and individuals to enter or remain within a safety zone without permission, the notice will carry a warning that transgressors could face the risk of criminal prosecution.

4.5 In terms of safety zone dimensions, our starting presumption for the consultation based on discussions with the HSE and the Maritime & Coastguard Agency, was that the standard dimensions for safety zones should be 500 metres during the construction, possible extension and decommissioning of an OREI, and a minimum of 50 metres during the much longer operational phase of its life. Such

dimensions are entirely consistent with international law (United Nations Law of the Sea (UNCLOS)), which stipulates that the breadth of a safety zone is a matter to be determined by the coastal state, but cannot exceed a distance of 500 metres.

4.6 It must be emphasised that whilst option (iii) was the preferred option, we made it clear in the consultation document and also in discussions with stakeholders that we were very much open to comments and considerations that might arise out of the consultation on all aspects of our proposals. A clear theme running through a number of the responses to the consultation was that whilst the starting presumptions set out in paragraph 4.5 above should be adequate for wind turbines, a different approach would need to be adopted for wave and tidal devices due to their larger footprints (when compared to a single wind turbine) and the differences in technologies adopted – some wave and tidal devices will have moving ‘arms’ or other structures designed to ‘catch’ waves and most will require some form of mooring to hold the device in place. This means that mooring cables and anchor points will need to be included in the appropriate dimensions for any safety zone around such a device. The regulations therefore provide for applications for safety zones around wave and tidal devices to be considered solely on the basis of site-specific factors, rather than on any presumption of standard dimensions.

4.7 In considering responses to the consultation and drawing up the regulations, our over-riding concern has been to ensure that the safety zone scheme provides sufficient safeguards to navigational safety.

## **5. Costs and benefits**

### **Sectors and groups affected**

5.1 The regulations will apply most directly to developers of offshore renewable energy installations applying for development consents under section 36 of the Electricity Act 1989. However, as indicated above, there is a wide range of stakeholder groups with an interest in offshore generating stations, including the navigation community (both commercial and recreational interests), the fishing industry and organisations with an interest in the conservation of the marine environment.

## Summary of costs and benefits

The table below summarises the possible impacts of each option. For the reasons given in the following paragraphs, it has not been possible to quantify the costs involved other than those directly incurred by the applicant through the proposed standard fee to cover the costs to government of processing applications and compliance with the requirements for publishing and advertising applications.

|          | Option (i) – Do nothing  | Option (ii) – Compulsory 500 metre exclusion zones   | Option (iii) – Safety Zone Scheme  |
|----------|--|--|--|
| Economic | Avoids application costs but likely to give rise to uncertainty and confusion as more and bigger OREI are built. | Imposes additional application and advertising costs, albeit likely to be marginal when compared to the development costs of an OREI. The costs (as yet unquantifiable) of policing and enforcing a safety zone would also fall to the applicant. Might also have potentially significant economic impacts on other industry sectors and users of the sea. | Imposes additional application and advertising costs, albeit likely to be marginal when compared with the development cost of an OREI. As with option (ii), the costs of policing and enforcing a safety zone would fall to the applicant. Potential economic impacts on other industry sectors likely to be less significant than for option (ii) |

|               |  |  |  |
|---------------|--|--|--|
| Social        | Potential risks to public and maritime safety. Provides little or no opportunity for parties likely to be affected by the establishment of a safety zone to make their views known.                        | Provides clarity with regard to the application process, but little or no opportunity for parties likely to be affected by the establishment of an exclusion zone to air their views.                                    | Provides complete clarity and transparency in the application process, and excellent opportunities for parties likely to be affected by the establishment of safety zones to make their views known. |
| Environmental | Unquantifiable, though some potential benefit might accrue from exclusion of vessels, particularly commercial fishing vessels, in terms of creation of new marine habitats or protection of existing ones. | Unquantifiable, though it is possible that greater potential benefit might accrue from the exclusion of vessels, particularly commercial fishing vessels, due to the larger dimensions of the 500 metre exclusion zones. | As for option (i)  |

**Option (i) - do nothing.**

**Economic, social and environmental**

5.2 There will be a cost to all parties involved in familiarising themselves with the application and advertising processes set out in the proposed regulations. However, the benefits of maintaining the status quo would be insignificant when compared with the potential costs and risks to navigational and public safety of operating within

the outline provisions in the Energy Act 2004, which lack clarity and are generally unsatisfactory.

## **Option (ii) - introduce compulsory 500 metre exclusion zones**

### **Economic, social and environmental**

5.3 The ongoing economic costs to the shipping and fishing industries of 500 metre exclusion zones for all stages in an OREI's construction, operation, possible extension and decommissioning, could be potentially significant. As indicated in paragraph 5.6 below, this option might potentially sterilise an area of sea estimated in total at around 1,660 square km to these industries and other users of the marine environment. Unfortunately, due to a lack of published data and site-specific information, it is not possible to quantify these costs at present.

5.4 A draft report by the Sea Fish Industry Authority (SEAFISH) commissioned by DTI on behalf of the Fishing Liaison with Wind and Wet Renewables (FLOWW) stakeholder group, recommends that commercial fishing of any kind should not be permitted anywhere within wind farms and that 500 metre safety zones, the largest permitted under international law – see paragraph 4.5 above, should be established around each turbine. However, this recommendation was based largely on desk studies of commercial fishing methods and a series of interviews with fishermen, who generally have limited experience of fishing in wind farms due to the small number currently constructed. Whilst the report is a valuable contribution to the debate on what types of fishing activity might safely be permitted within wind farms, and confirmed the DTI's view that trawling and certain long-line types should definitely not be permitted, alternative views have been put forward by others, including the MCA, and it has also been argued that the need for such a highly prescriptive approach could only be properly assessed on a case-by-case basis, as proposed under option (iii).

5.5 There is also a lack of detailed information as to how much fishing activity actually takes place within wind farms. The SEAFISH report suggests that with a few notable exceptions, including shellfish grounds east of the Humber and off the north coast of Norfolk and sole fishing grounds in the Thames Estuary, the strategic areas identified for wind farm development are not particularly good for fishing. We had hoped to gather further information on the extent of fishing activities in wind farms from fishing industry representative

organisations and others through the consultation process. Unfortunately, despite the inclusion of specific questions in the consultation document designed to draw out this information, we did not receive any quantifiable data.

5.6 We have also noted strong opposition to the introduction of compulsory life-long exclusion zones expressed by the Maritime and Coastguard Agency on the grounds that they would permanently sterilise large areas of sea for other uses. MCA estimate that under option (ii), a large wind farm of 300 plus turbines would sterilise well in excess of 200 square km of sea. On that basis, given that the total number of turbines presently planned for wind farms in UK waters is in the region of 2500, this would effectively sterilise a total area of sea in excess of 1,660 sq km. MCA believe that this would cause significant disruption to navigation, particularly in the Thames Estuary with its restricted navigation routes. It might also lead to increased costs to the shipping industry, together with increased carbon emissions, as vessels would need to burn additional fuel to sail around the wind farms using greater margins of avoidance. However, as indicated in paragraph 5.3 above, it is not possible at present to calculate the costs of option (ii) to the shipping and fishing industries. This would require detailed site-specific data on each of the existing and proposed UK wind farms sites, which is not presently available.

5.7 There may be potential benefits from a wider exclusion of vessels from wind farms, particularly fishing vessels. However the evidence as to the environmental benefits in terms of protecting areas of sea from on-going activities once the wind farm is constructed is as yet uncertain.

**Option (iii) – introduce a safety zone scheme based on applications from OREI developers, or at the Secretary of State’s own initiative in appropriate cases.**

## **Economic**

5.8 The main economic benefit of a safety zone scheme would be derived from the fact that applicants, regulators and other interested parties will be able to work from clear, transparent and open sets of regulations. An additional, although at present unquantifiable, long-term economic benefit would derive from the more flexible nature of the scheme. Under this option, 500m safety zones would apply only during the comparatively short construction and decommissioning phases of an OREI’s life. During the operational phase the zone

would be much smaller, thus sterilising a correspondingly smaller area of sea and minimising the potential economic impact on the shipping and fishing industries.

## **Social**

5.9 It is important from a societal perspective that all persons and organisations who have an interest in offshore renewable energy developments are encouraged to participate in the process of providing views on applications which are taken into account in the decision making process. This participative approach is the foundation of good decision making which, in itself, has a social benefit. Having a transparent and open application process with clear sets of regulations is an important prerequisite for such a participative approach. This option might also have some social benefits in terms of allowing yachting and recreational fishing to occur within wind farms.

## **Environmental/Safety of Navigation**

5.10 The participation of parties with environmental and navigational safety expertise in the application process will be of particular value. As indicated in the Competition Assessment in section 7 below, the generation of electricity offshore is a relatively new activity. It is important therefore that the application process is designed to facilitate the participation of environmental organisations, navigational safety experts, bodies representing the shipping and fishing sectors and other parties who can provide the information and specialist expertise necessary to assist Government to make sound decisions on the establishment of safety zones.

## **Costs**

5.11 Apart from the proposed £2,000 standard fee to cover the costs to government of processing the application, the main costs of compliance would be those associated with the required publication of the notice of application for a safety zone in local, national and specialist press. The publication requirements are consistent with those established for applications for consent for the construction and operation of offshore renewable energy installations under section 36 of the Electricity Act 1989. They are also consistent with the requirements in related legislation, including the Electricity Works

(Environmental Impact Assessment) (England and Wales) Regulations 2000.

5.12 The costs of publication will vary depending on a number of factors, the most important of which are the size of the notice and number of local newspapers in which it is included. The new regulations will require the publication of a notice in Lloyds List and a fishing industry journal such as Fishing News, which will bring the proposed safety zone to the attention of the navigation community and the fishing industry. The costs associated with this requirement are justified by the need to bring the application to the attention of those who may be most directly affected by it.

5.13 As indicated in paragraph 5.7 above, the publication requirements for safety zones will be broadly similar to those for section 36 consent applications. On the basis of offshore renewable energy developers' experience in complying with the consents application publication requirements, we estimate that the costs of publication for a safety zone application will be in the range of £5,000 - £15,000. The costs of a notice for a small demonstration-scale wave or tidal device are likely to be towards the lower end of this range of costs.

5.14 The costs of complying with the requirement to serve notice of the application on certain organisations likely to have an interest in the establishment of safety zones would be minimal. All that would be required is a standard letter or e-mail to the organisations in question. Additionally, the draft regulations require the applicant to display a notice of the application in Harbour Masters' and Marine Fisheries Agency offices local to the installation and HM Coastguard Sector Managers' Offices as mariners often visit such locations. Again, the costs of this would be minimal.

5.15 The costs of policing and enforcing safety zones will largely fall to the applicant – in most cases this is expected to be OREI developer, although some costs are likely to be incurred by the Maritime and Coastguard Agency in bringing prosecutions against transgressors based on evidence provided by the applicant. At present it is not possible to quantify these costs because there are no safety zones presently in operation around OREI in UK waters and there have been no prosecutions to date. However, the British Wind Energy Association and the MCA have agreed to monitor costs incurred by OREI developers and the MCA respectively so that we

can take these into consideration when reviewing the operation of the scheme.

## **6. Small Firms Impact Test**

6.1 In our view it is unlikely that the cost of complying with the proposed regulations will have a significant impact on small firms in the offshore renewables industry. To the best of our knowledge, there are at present only a few small firms (i.e. enterprises employing fewer than 250 people full time) developing proposals in the wind farm sector, and even fewer, if any, who then go on to construct projects.

6.2 There are around fifty firms in the UK - ranging in size from small to large - involved in the development of wave and tidal devices. However, the costs incurred by a developer in applying for a safety zone and complying with the publication requirements outlined above are unlikely to be a significant element of the overall development costs of a project. The British Wind Energy Association as one of the representative bodies of the offshore renewable energy industry has confirmed that this would be the case.

6.3 The introduction of safety zones could potentially have an impact on the fishing industry, which is largely comprised of small, single-boat enterprises, through displacement of fishing activity. However, although data on the extent of fishing activity by vessels over 15 metres in length is available from their recorded electronic vessel monitoring systems (VMS), such data is not available for vessels under 15 metres, which is thought to be the sector of the fishing industry most likely to want to operate within OREI. For these vessels data on the weight and species of landings is available (from EU log sheets in the case of >10m vessels and from registration of first stage sales for <10m vessels), as is data on the value of landed catch. However, this data is not recorded at a sufficiently detailed spatial level to enable catches to be correlated precisely with the sites of existing or proposed wind farms. In view of this, and in order to try to clarify the position on levels and types of fishing likely to be affected, the views of the fishing industry were sought during the consultation on the potential commercial impacts of the creation of safety zones on fishermen. Unfortunately, as indicated in paragraph 5.5 above, we received no quantifiable data from fishermen's organisations or individual fishermen in response to the consultation.

## **7 Competition Assessment**

7.1 The market for the purposes of undertaking the competition assessment comprises energy-related companies who are looking to construct and operate offshore generating stations, including wind farms and wave and tidal devices. The offshore wind energy market is relatively newly established with the first experimental 2-turbine installation being commissioned in December 2000. The industry has developed rapidly since that first installation and four commercial-scale 30 turbine wind farms are now fully operational (North Hoyle, Scroby Sands, Kentish Flats and Barrow), with a fifth (Burbo Bank) under construction and 4 more currently out to tender. A second phase of development is now underway comprising much larger wind farms – the largest will deploy a projected 300 plus turbines with an installed generating capacity of 1000 Megawatts of electricity. Section 36 consent applications have already been received for seven of these second phase developments.

7.2 The offshore wind energy industry is characterised by several large vertically integrated utility companies, a number of oil and gas companies seeking to diversify into renewable energy and several niche market players who specialise in renewable energy. It is a multinational industry with participation by a number of European-based energy companies who are seeking business opportunities in the UK energy market. The sector is a dynamic one and has seen a number of recent acquisitions and mergers.

7.3 The wave and tidal sector is less well developed. However, a number of companies have been developing prototype devices of different kinds and the industry is now ready to move forward to demonstrating the capabilities of larger scale devices.

7.4 The costs of developing and installing any kind of electricity producing device in the marine environment are considerable. The costs of applying for a safety zone are insignificant by comparison and the risk that there will be any impact on competition is consequently very low. It can only be helpful to offshore renewable energy developers, whether established players or new entrants to the market, and other interested parties to have the applications procedure clearly set out in regulations.

7.5 The establishment of safety zones could potentially have an impact on the competitiveness of other marine industries, such as dredging and aggregates. Here again, we had hoped to obtain further information on the potential impacts on small firms in these and other

industry sectors through the consultation process. Unfortunately, the representative body for the marine aggregates sector did not respond to the consultation and it has not been possible within our limited resources to undertake any additional research in this area.

## **8 Simplification Assessment**

8.1 In bringing forward its proposals the Department has sought to comply with better regulation practice.

8.2 It should be borne in mind that the proposed regulations represent a much-needed clarification of the safety zone scheme provisions of the Energy Act 2004. Their purpose is to help offshore renewable energy installation developers and other interested parties better understand the processes of applying for a safety zone and commenting on such applications. They will also remove any ambiguity over the types of vessels that may enter a safety zone and the kinds of activities that can take place in such designated waters. We believe that such clarification will be of considerable benefit to a wide range of stakeholders.

8.3 It is our intention to integrate the approval of safety zones as smoothly and seamlessly as possible into the existing regime for consenting offshore renewable energy installations. Once the safety zone regime is underway and underpinning regulations brought into force, all future applications for development of an OREI would be expected to cover the need, or otherwise, for a safety zone. Where it is considered, either by the developer or the Secretary of State, that a safety zone is required, the developer will subsequently be required to submit an application for one.

## **9. Enforcement, sanctions and monitoring**

9.1 The Department will not consider an application for a safety zone where the process set out in the draft regulations has not been followed. The Department will, however, issue guidelines to assist applicants to follow the process and be willing to provide advice to applicants who have particular queries.

9.2 Given the small numbers of wind farms currently operating and the low annual number of new development applications, it will be possible for the Department to monitor each application to ensure that the process has been followed correctly.

9.3 Once a safety zone is established it will be for the developer to decide how to police and enforce it. Since an OREI is a very considerable financial investment, it will be in the developer's best interest to ensure that suitable arrangements are put in place in a timely manner. Such arrangements would need to include a means of gathering evidence of infringements of the safety zone in order to support any legal action that might be taken against transgressors.

## **10. Summary and recommendation**

10.1 Our objective is to put in place regulations which establish a clear, open and transparent application process for safety zones that allows all interested parties to participate in the decision making process, whilst at the same time avoiding placing overly onerous administrative and cost burdens on the applicant. At the same time, the lists of standard exemptions and permissions will remove any ambiguity over categories of vessels that may enter or remain within safety zones and activities that may take place within such designated waters.

10.2 Option (i), the 'do nothing' option was unacceptable in our view, as the Department would be failing to address potentially serious navigational and public safety issues. Similarly, option (ii), compulsory 500 metre exclusion zones around all OREI at all stages of their lives, was not acceptable in our view due to its inflexibility and potential impact upon mariners and other users of the sea. We believe that the cost/benefit analysis above indicates that the option which best met our objectives was option (iii) – to introduce safety zones through a single set of regulations dealing with (a) the process of applying for a safety zone around or adjacent to an offshore renewable energy installation and the dimensions of such zones, and (b) standard exemptions to the prohibition on vessels entering safety zones and permissions for certain activities to take place within such designated waters. Our recommendation therefore, subject to the views of those taking part in the consultation, is to proceed to placing regulations before Parliament on the lines of option (iii). As indicated in Section 9 above, we strongly believe that clarity and transparency on these issues will greatly benefit a wide range of stakeholders, including OREI developers and the shipping and fishing industries.

## **11. Declaration and publication**

I have read the regulatory impact assessment and I am satisfied that the benefits justify the costs

Signed Malcolm Wicks

Date 9th July 2007

Malcolm Wicks  
Department for Business, Enterprise and Regulatory Reform