



General Information



**Concerted Action for Offshore
Wind Energy Deployment (COD)**

**WORK PACKAGE 3: LEGAL AND
ADMINISTRATIVE ISSUES**



ENERGIE





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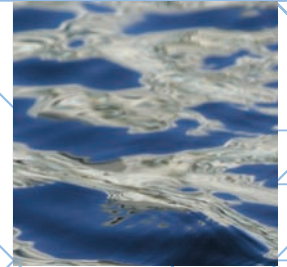
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Concerted Action for Offshore Wind Energy Deployment (COD)

WORK PACKAGE 3: LEGAL AND ADMINISTRATIVE ISSUES

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The Concerted Action Offshore wind energy Deployment (COD) aims to progress offshore wind energy in the European Community by sharing and incorporating good practice in legislation and consents procedures; environmental impact assessment and mitigation, and grid integration. COD exchanges information between the national energy agencies or delegated third parties from Belgium, Denmark, Germany, Ireland, the Netherlands, Poland, Sweden and the United Kingdom; representing more than 90% of the offshore wind energy potential in the EU.

COD interacts with key actors through an Advisory Board. The COD activities are steered by a Ministerial Working group with representatives of the energy departments of the related countries.



Summary

The Concerted Action Offshore wind energy Deployment (COD) aims to progress offshore wind energy in the EU. COD exchanges information between the national energy agencies or delegated third parties from the participating countries, representing more than 90% of the offshore wind energy potential in the EU. COD provides an overview of the legislation and consents procedures in the related countries. The presentation includes an analysis of current practices.

Observations

Requirements for acquiring concessions and licenses are basically the same in all countries involved.

Information applicants have to deliver can create a threshold for intending developers. Investments for gathering of information are weighed against the benefits of receiving exclusive rights. Granting of exclusive rights at an early stage reduces risks to investments at the development stage.

Conclusions

Each consent regime leads to activity, from receipt of concession or planning applications to deployment. There is too little experience to draw any conclusions if one consent regime performs better than another. Indeed, diversity could be viewed by some as spreading the risk of imperfections in each approach.

For the authorities, any tendency to harmonise consent regimes or legal frameworks between nations cannot be recognised. Harmonisations itself is not necessary to trigger the development of offshore wind energy activities.

The United Kingdom, the Netherlands, Denmark and Ireland apply a one stop - shop - system.

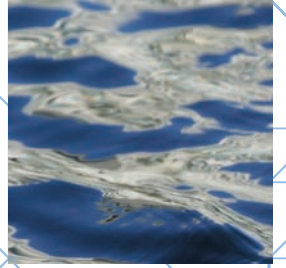
Some of the countries have pre-selected areas of preference, and some even on an SEA-like basis.

Recommendations

The competent authorities should clearly specify all information to meet the necessary requirements.

In order not to delay the implementation of cross-border projects, anticipate the need for a transnational development strategy, which aims at fine tuning and co-ordinating procedures across adjacent jurisdictions. The intention is not necessarily to form one strategy, but to ensure that national differences are not obstructive.

The exchange of knowledge of regulatory frameworks, consent regimes and procedures based on evaluation and experiences with applying these should continue in the future.



The definition of streamlining and expediting of procedures should be made more precise, for example via determination of specific, measurable, acceptable, realistic and time related goals at which authorities can aim for, evaluate and improve.

Perform an SEA in order to identify and assess (cumulative) environmental conflicts and their solutions, and to give better insight in the topics that need detailed consideration in project related EIA's. Authorities could consider doing this on a transnational or international level.

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Introduction

An obvious barrier to the realisation of offshore wind is the absence of a legal route by which a facility is granted permission for construction. Where legislation is in place, it may not be ideally suited to a new technology such as offshore wind energy.

Part of the project Concerted Action for Offshore Wind Energy Deployment (COD) consists of collecting information on the legal, administrative and policy issues of offshore wind energy.

Objects of this work package are:

- collecting information on activities (projects) of participating countries,
- collecting information on legal, policy and administrative issues in participating countries,
- composing a coherent overview, pointing out any information gaps,
- and regular updating.

Driven by an immediate need, procedures in a number of countries have progressed over the last few years, such that the situation now is rather more developed than at the inception of the COD project.

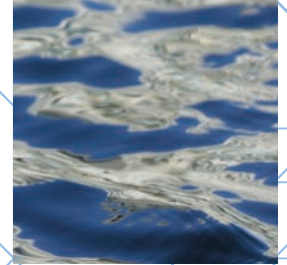
A number of projects have reviewed the status and development of legal procedures [i]. For the European Commission, the 2002 SEALEGAL report details international, European and national legislation relevant to planning and constructing offshore wind plants. This was intended in part as a guide for developers in navigating the sometimes complex procedures involved. To illustrate the pace of development, just three years later some of the national material has already been superseded by new legislation.

The COD project has reviewed current legal and administrative procedures in the countries represented, and commented on the rationale for any recent changes. This can be viewed as an update to the SEALEGAL commentary. In order to be of ongoing relevance, it is essential to keep this information up-to-date. COD provides an overview of the legislation and consents procedures in the related countries. The members have gathered all available information on legal and administrative procedures for the deployment of offshore wind energy in the participating countries. These and the status of consenting wind farms in those countries have been analysed.

Having reviewed the status of legislative procedures, COD has gone on to consider what might be learnt from experience to-date. Most procedures are at the formative stages, while it is still uncertain what the results will be in the long run. Moreover, different administrations will vary in their objectives and the way in which “success” is judged. Thus, without pre-judging the outcomes, COD is seeking to gather together the various observations with a view to gaining some insight into the future development of new procedures and the refinement of existing legislation.

Four main themes emerged from a summary and comparison of legal and administrative practices in the eight COD countries:

- The regulatory framework: managing and processing wind farm applications
- Harmonisation of regulatory frameworks
- Streamlining of procedures;
- Pre-selection of areas suitable for offshore wind energy deployment.



Regulatory Frameworks and Application Processes

2.1 Government Policies

In order to reduce greenhouse gas emissions all the governments of COD countries have set themselves one or more concrete national policy targets with regard to renewable energy production. In an attempt to achieve these goals offshore wind energy plays a considerable part in many of those countries (though not all countries have specifically quantified the planned contribution of offshore wind energy). The contribution of wind energy to the whole renewable energy production shows considerable variation.

	National target electricity production from RES 2010	Aimed contribution of offshore wind energy to meet this target
The Netherlands	9 %	6000 MW in 2020
Belgium	6 %	No specific policy objective
Germany	12,5 %	500 MW in 2006, 3000 MW in 2010 and 20.000 – 25.000 MW in 2030
Denmark	29 %	No specific policy objective- but 29 % was already met in 2004
United Kingdom	10 %	The bulk of renewable energy generation is expected to be supplied by wind energy (in 2016), 40% of which will come from offshore wind
Sweden	Yearly increase of 10 TWh to 2010 from 2002 level	No special aims for wind energy. Wind will have to compete with other RES electricity. It is estimated that around 4 TWh/year of the 2010 quota will be wind energy (of which 60% in EEZ)
Poland	Unknown	Unknown
Ireland	13,2 %	No specific policy objective

As shown in the diagram above, all COD countries have, to some extent, defined and qualified their ambitions (and targets) for the reduction of greenhouse gas emissions. Though not always qualified in MWs, all countries are aiming at a significant contribution of offshore wind energy to attain these ambitions or objectives. "The EWEA have estimated that 5 GW of the 60 GW predicted for 2010 will come from the offshore sector" (www.bwea.com).

"A total of 10 offshore projects are currently operational worldwide: the early projects were relatively small scale and in shallow or sheltered waters. Not until Blyth Offshore came online, exposed as it is to the full force of the North Sea, could any be described as truly offshore. The newly-completed Horns Rev is the largest offshore project in the world." (www.bwea.com).

In some of the COD countries offshore wind farms have already been built, while in others offshore wind energy policy is taking shape. The diagram below provides information on the current state of development of offshore wind energy in the eight countries.



	Leading principle: tender or first come first served (FCFS)?	Pre-selection of areas	Is SEA performed?	Assessment financial standing applicants	Does applicant get exclusive rights to area prior to permits? And when?	Number of new applications	Issued permits, but not yet built or under construction:	Offshore wind farms built or under construction (MW)
United Kingdom	Tender	Yes	No, but pre-selection based on SEA-like principles	Yes	Yes	Round 2: 11 applications	12 (Round 1) and 12 licences to investigate for	Blyth (3,8 MW) North Hoyle (60 MW) Scroby Sands (60 MW)
Denmark	Tender	Yes	No	Yes	Yes as soon as the winner of the tender is found, exclusive rights to preliminary surveys and depending on the outcome of the EIA-procedure and public hearing - also exclusive rights to the area are granted.	2 new tenders (Horns Rev 200 MW + Rødsand 200MW)		Vindeby (5MW) Tuno Knobs (5MW) Mittelgrund (40 MW) Horns Rev (160 MW) Frederikshaven (10,6 MW) Samso (23 MW) Nysted (158 MW)
The Netherlands	FCFS	No	No	No	Yes, as soon as complete application and approved EIA-report is delivered	57	2 (NSW and Q7)	Construction of NSW (108 MW) started, to be completed in 2006.
Ireland	FCFS	No	No	Yes	No	Cooling Bank, Bray and Kish Banks (to be expected)	1 (Sure Partners, 520 MW)	Arklow Banks (25 MW)
Belgium	Tender (application for competition)	Yes	No	Yes	Yes	9 (according to MUMW)	Seamergy: Vrakte van de Raan (has all permits, but will not be built). C-Power II: Thornton Bank	
Sweden	FCFS	Yes	No	Yes	No	2: Karskronavind (Värtental in Kalmar) and Kriegers flak	3 (Ulgrund and Utgrunden and Klasarden)	Bockstigen (2,5 MW) Utgrunden (10 MW) Yttre Stergrund (10 MW)
Germany	FCFS	Not yet, but formal procedure still in progress (finished approx. in 2005)	Yes (due to changes in legislation in June 2005)	No	No	33 (27 North Sea, 6 Baltic Sea)	10 in (EEZ)	Construction of Borkum West project starts in 2007/2008
Poland	Consent regime under construction	No	No	No	No	0	0	0



The differences in the stages of development of offshore wind energy in the eight countries are significant. Some of the countries have a longer history in offshore wind energy development and have altered their regulatory framework or consent regime to streamline and establish permit procedures. Whilst other countries have only recently given shape to their regulatory framework and are dealing with the first applications. One may observe that each consent regime leads to activity, from receipt of concession or planning applications to deployment.

The question arises whether a country's regulatory framework or consent regime constitutes an obstacle for the successful development of offshore wind energy. This report will not provide a direct answer to this question. However, it describes the different approaches of each of the countries concerned and leads to some conclusions and recommendations.

From the observations below, the conclusion may be drawn that the different regulatory frameworks of countries do pose challenges to offshore wind energy development, though they need not always be considered insurmountable obstacles.

Some observations

In the Netherlands the new consent regime, together with the restrictions on the possibilities to 'claim' sea areas (not within the territorial 12 nautical miles zone and not in restricted areas), has led to approximately 80 claims for about 20,000 MW of mostly overlapping sea areas within the first four months after release of this consent regime. If there is an obstacle, it can certainly not be found in the lack of willingness on the part of industrial parties to develop offshore wind farms. Neither does the subsidy regime for offshore wind energy production constitute an impediment, although it must be remarked that recently this subsidy regime has been put on hold for the coming 1.5 years. The Dutch challenge now lies in choosing among the vast amount of overlapping claims for sea areas.

Belgium has designated a specific zone for wind energy development. After much delay this zone was selected, because it was far enough from the coast and not used for other activities. The main reason for planning a wind farm offshore were the legal problems connected with the visual impact a wind farm would have onshore. After all the necessary licences had been issued, the development of the Seanergy project was cancelled because of the visual impact of the offshore project. A fight in court ensued between the Belgian State and the Seanergy Consortium about the liability for the costs of an equipment order that had already been placed after the issuing of the permits. The decision on this case may provide a precedent for similar cases and pose a legal challenge for future development of offshore wind farms near the Belgian shore.

In Germany, the licensing procedure for offshore wind is related to the legal situation in the EEZ. The 'Seeanlagenverordnung' was amended in 2002. Competences and procedures for the EEZ were then laid down on the federal level for the first time. This concentration of competences on the federal level (within the BSH) was a major precondition to enable offshore wind development in the EEZ. Germany



applies the First Come First Served principle. The number of applicants is comparably high. Before the licensing process can start, the applicant will have to spend at least two years on baseline studies and one year on EIA procedures. These requirements diminish the number of applicants, so that there are fewer developers in the licensing process than there are applicants. The period in which high feed in taxes are guaranteed to offshore developers has been prolonged by the EEG in 2004.

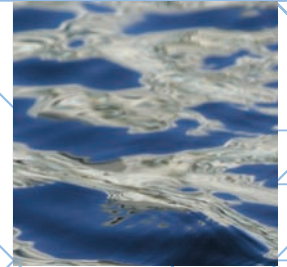
A major constraint on the realisation of offshore wind parks is the fact that the majority of sites are located in the EEZ. Technical issues (water depths and maintenance), therefore, present serious problems to developers. They will have to take greater risks than if they were building on near shore sites. There are also technical obstacles with regard to the access to the grid. The installation of grid infrastructures both offshore and onshore (necessary grid extensions and reinforcements) might slow down development of offshore wind energy. From the viewpoint of investors and developers, the German regulatory framework is considered complicated, but not a real impediment.

Recently, a new foundation (Offshore-Stiftung) was initialized that will realise the first German offshore wind farm at 'Borkum West'. It is planned to start the construction in 2007 or 2008. The German government financially supports this pilot project.

The United Kingdom applies a tender system to concede sea areas for offshore wind energy development. A first round of concession tenders has already taken place. As a result of experiences in this round, the United Kingdom has altered some elements of their consent regime. The main reasons for changes in the application procedure for a Crown Estate Concession to investigate if a specific site or location is suitable for development of wind energy (technically and environmentally), were a desire to increase the allowable size of wind farms (hence to encourage larger projects) and to introduce contracts with more onerous financial stipulations, thus ensuring the applicants' seriousness in their intentions to develop. The main reason for changes in applying for a planning permission, however, was the need for procedures to be put in place outside the EEZ. At the same time, the opportunity was taken to rationalise procedures in the EEZ to ease the administrative effort.

The result of these changes was that, for the Crown Estate Lease, applications have been submitted for larger wind farms by larger consortiums. As to the planning permission, no clear effect has so far been observed, probably because little experience has yet been gained in this field.

Some of the obstacles are related to the grid extensions (the terms for reinforcing the grid currently require credit covers for works, before a project is granted planning permission). Others can be found in the financial sphere (are projects financially attractive enough to be taken through to construction by relatively conservative utilities/banks?). And some obstacles, but less important at the moment, can also be found, in planning (quite a few projects in the first round have been granted planning permission, but have not yet been completed).



2.2 Regulatory Framework

The amount of permits required for offshore wind energy development, as well as the number of competent authorities directly involved in the permitting process, differ considerably in the COD countries. In all the countries more than at least one authority is directly or indirectly involved.

Offshore wind energy development projects are complicated. They touch on a great many disciplines such as navigation, fishing, military defence, etc. In them many issues and parties are directly or indirectly involved. It stands to reason that applicants for such projects will often have to apply for more than one permit to more than one authority.

Appendix 1 gives more detailed information on the required permits for offshore wind energy development for each country, as well as the legislative basis. It also lists the competent authorities involved. In the table below, the information on permits found in Appendix 1 is summarized.

Required permits* and for what purpose:

Netherlands	<p>1 permit required: Wbr permit: planning permission for building, exploiting, maintaining and removing the wind farm, including platforms and cables (at sea)</p>
Belgium	<p>3 permits required: 1) a concession: the right to solely occupy a parcel of the Belgian maritime area 2) a licence, needed for the operation of a wind farm 3) an authorisation, needed for the building of the construction.</p>
Germany	<p>Within EEZ, 3 permits required: 1) a licence to establish and exploit the wind turbine 2) a licence for the establishment and exploitation of the electricity cables 3) a licence for the construction of cables in territorial waters on the basis of the Federal Mining Act.</p> <p>Within 12 nm zone, approvals and 2 permits are required**: 1) an approval in a regional planning procedure for the wind farm site and the sea cable. 2) a licence on the basis of the Federal Emission Control Act (Bundes-immissionsschutzgesetz) 3) a licence for the construction of cables in territorial waters on the basis of the Federal Mining Act.</p>
Denmark	<p>5 permits required: 1) a permit for preliminary survey with the obligation to carry out an EIA (the EIA is subject to public hearing) 2) a permit to establish the installation: a building permit including cables (subject to public hearing) 3) a permit to exploit wind energy 4) an additional permit to produce electricity at installations with a capacity of more than 25 MW (not particularly wind energy; all existing electricity producing companies with power production larger than 25 MW must be awarded such a licence. Each enterprise will only need one permit – independent on the amount of power production installations.) 5) a permit for the construction of cables for a new electricity transmission grid in territorial waters and the EEZ (until now, the transmission companies have been responsible for, and have covered the costs of the installation of the grid connection of the Danish large scale offshore wind power plants).</p>



United Kingdom	<p>Via Route 1, 3 permits required:</p> <ol style="list-style-type: none"> 1) Electricity Act 1989 consent (permitting construction and operation of a generating station) 2) Coast Protection Act 1949 consent (permitting coastal works that may affect navigation) 3) Food and Environmental Protection Act (FEPA) licence (permitting deposition in the sea) 4) other consents if required*** <p>Via Route 2, 2 permits required:</p> <ol style="list-style-type: none"> 1) Transport and Works Act 1992 (TWA) Order (permitting electricity generation and coastal works) 2) FEPA licence (permitting deposition in the sea) 3) other consents if required*** <p>For establishment in REZ, 2 permits required</p> <ol style="list-style-type: none"> 1) consent under section 36 of Electricity Act 1989 2) licence under FEPA section 5
Sweden	<p>Within 12 nm Zone, 6 permits required:</p> <ol style="list-style-type: none"> 1) permit to use public waters 2) government permit for exploration (also for cabling) 3) building licence 4) concession for electrical cables 5) licence for laying, building and maintaining cables within privately owned waters 6) government environmental permit <p>Within EEZ, 2 permits required:</p> <ol style="list-style-type: none"> 1) government permit for exploration (also for cabling) 2) permit according to Swedish Exclusive Economic Zone Act
Poland	<p>5 permits required:</p> <ol style="list-style-type: none"> 1) preliminary building condition 2) licence to exploit the area 3) licence to construct the wind farm 4) licence to connect the wind farm to the grid 5) concession for renewable energy production
Ireland	<p>5 permits required:</p> <ol style="list-style-type: none"> 1) Foreshore Licence to allow for the investigation of the suitability of a site is normally required 2) Foreshore Lease for the construction and operation of offshore electricity generating stations 3) An authorisation to construct a generating station 4) A licence to generate electricity 5) A licence to supply electricity

* permit, concession, licence, authorisation etc.

** presumably from 1 July 2005

*** Additional consents: (a) consent from the Environment Agency under Water Resources Act 1991, (b) planning permission under the Town and Country Planning Act 1990 and (c) consent granted by the Secretary of State for Trade and Industry under the Electricity Act 1989 for cabling

The permits required in each of the countries mentioned in the table above, only concern the construction and exploitation of the installation at sea and the cables for connection to the onshore electricity grid. Not included are, for instance, the permits required to cross the coastal zone (such as dunes) and installing cables onshore to the nearest grid connection point. Generally, this will involve



the competent authorities of municipalities as well. The (number of) permits required for ‘coastal crossing’ and installing cables in municipal grounds will vary for each situation (e.g. ‘obstacles’ on the onshore route to the nearest grid connection point) and for each country. It should be taken into consideration that acquiring these various permits may take some time and should preferably be streamlined or co-ordinated by a competent body.

Large amounts of offshore wind energy development not only pose a challenge for grid connection, but also for the necessary reinforcement of the existing electricity grid. In some countries a distinction in permits and the responsible authority is made between the route through the EEZ and the territorial 12 nautical miles zone. In almost all COD countries (the existing and planned large scaled wind farms in Denmark are an exception) the wind farm developer or operator is responsible for and covers the cost of the installation of the cables and the grid connection. For the reinforcement of the onshore grid, however, the TSO is being held responsible, as also for the costs.

The number of permits required to develop an offshore wind farm should not constitute any obstacle for intending developers, as long as it is clear to applicants what permits are required, in what order and what information must be supplied at what time.

In some consent regimes it is not so much the amount, but rather the type of information to be supplied that creates a threshold for potential applicants. Detailed information on, for instance, the turbines to be installed relies on investment decisions that are usually made later on in a project. Applying for permits may sometimes mean making these investment decisions earlier than they are generally planned. In some cases applicants may not even have any guarantees of obtaining exclusive rights for an area.

Consent procedures in place tend to reflect existing MS legal frameworks, and for the most part remain subject to ongoing refinement. Changes are driven by a “learning by doing” approach, an urge to improve or streamline existing procedures, or a need to develop a proprietary regime specifically for offshore wind.

2.3 General Outlines of the Application Process

The development path of offshore wind can be thought of as a filtering process of initial interests in offshore wind. This spans a wide spectrum of both potential sites and developers, to a smaller core of projects which will eventually be granted consent. All regimes share this general characteristic, but within this there are a number of differences. Differences between MSs – maritime heritage, regulatory practices and other factors – all contribute to differences in consent regimes. Nonetheless it may be observed that development activity is stimulated where a framework is implemented.

One option in the filtering process for the right sites is to pre-select suitable areas. Some countries have pre-selected preferred areas for offshore wind energy development, for instance by carrying out a



strategic environment assessment (SEA). The EC Directive obliges applicants to carry out an SEA for the approval of plans or programmes such as offshore wind energy development. An SEA enables both authorities and applicants to assess the cumulative environmental consequences of the development of their projects. Furthermore, carrying out an SEA gives a better indication of what topics need detailed addressing in the ‘in depth’ project-related Environmental Impact Assessments (EIAs) that are to be carried out by the applicants.

An option in the filtering process for the suitable developers is to set a minimum criteria for participation. Some countries assess the applicants on, for example, their financial qualities, expertise and experience with (offshore) sustainable energy production and development.

In the process of matching the proper developer with the most suitable site, two broad types of mechanism can be defined: a tender system and an open ‘first come first served’ system. As stated above, new or purposely modified consent regimes for offshore wind lead to development activity. There are, however, some important differences in the stage at which development interest is narrowed down to a manageable, realistic level.

A tender process, whereby developers compete for something which is in limited supply – a suitable site or a power purchase contract – seeks to select suitable development parties at a relatively early stage in the process. A “first come first served” approach allows a large number of developers the opportunity to move further into the process before projects are selected through the planning system.

The former approach means that the consenting authorities see potentially fewer applications from developers who have been pre-filtered variously on criteria including financial standing, technical expertise and experience in offshore development. The latter approach means that developers compete at the speed with which they can deliver an acceptable planning application – developers need to commit much more before being awarded any rights, and potentially this is a strong incentive to separate out serious players. But if accompanied by an attractive market, authorities can be overwhelmed by applications (concerning lots of overlapping sea areas), and the focus tends to be on achieving consent, rather than project building.

The UK has operated a tender-type system for rights to develop projects. Generally speaking, without any prejudice in favour of any of the systems, it may be observed that a tendering system has some advantages for the consenting authority. The most important being that the system provides the authorities with prior knowledge and thus allows planning for the number of applications that is likely to be received. The main advantage for the government is that it can prescribe specific criteria which allow it to rank applications or developers on the basis of criteria it considers to be important. Thus improving the chances of achieving its objectives. These advantageous elements of a tendering procedure lead to a fair allocation of best quality business opportunities and have in the past proven to generate high rates of project realisation.

In the table below, some characteristics of the tender and the first come first served systems are presented.



Characteristics	Tender	First Come First Served
Number of applicants or intending developers	Relatively small	Relatively large
Number of applicants or intending developers that move further through the consenting process	Relatively small	Relatively large
Selection of applicants, based on financial and technical standing	Early in consenting process	Late in consenting process
Most important ranking criteria	1. Quality of applicant 2. Quality of application	1. Speed of delivery of application 2. Quality of application 3. Quality of applicant
Delivery of detailed project information	Early in consenting process	Late in consenting process

The above commentary is only relevant to regimes which have a market-based mechanism for implementing offshore wind. A number of early projects in Denmark and Sweden were implemented as demonstration projects, and not under open-market conditions. Only a few projects developed as commercial concerns in an open market have been realised so far. In fact this only applies to projects in the UK, which has pioneered commercial developments, learning a great deal from earlier demonstration projects in other countries.

As described above, for the development of a wind farm one or more permits are required. On some occasions multiple required permits can be applied for simultaneously and/or via the same authorities, who can streamline procedures and shorten the time needed to obtain all the required permits. Basically, a developer can apply for permits by means of an application. The information upon which the competent authorities base the assessments of the quality of the applications varies from country to country.

The performance of an Environmental Impact Assessment (EIA) is obligatory for offshore wind energy projects in all countries concerned. It is important to note the difference between the SEA and the EIA. Carrying out an SEA prior to application and the more detailed, project-related EIA, gives applicants a better indication of which environmental topics need further detailed investigation. More importantly, the SEA allows a better insight into the possible cumulative environmental effects of multiple offshore wind farms. The EIA is a project-related assessment in which all possible environmental effects are determined and documented in detail. The quality and contents of the EIA report is assessed by the competent authorities prior to the issuing of permits and - of course - project construction. Therefore, the EIA report is an official document in the application process, upon which the assessment and licensing is based.

The EIA method is standardised. An EIA report will describe and analyse the impact of the project on:

- people, flora and fauna
- sea bottom, water, air, climate and landscape
- material objects and cultural heritage



It will also describe and analyse:

- the interaction between these elements
- mitigation measures and alternatives considered.

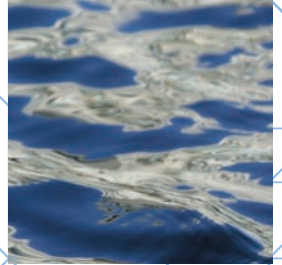
In more concrete detail, the EIA contains at least: a description of the project, the effects on other users of the particular sea area, the effects on (shipping) safety, the effects on radar (shipping, air traffic, military) and the overall expected environmental impact .¹

Some countries use a so-called pre-phase in their application process. Such a pre-phase can be directed at encouraging competition in the quality of the applications in the event of overlapping applications and at giving the applicants certainty (within a comparatively short period and at acceptable costs) in the form of an exclusive right to develop a wind farm within a specific territory at sea. With the exclusive rights the applicant holds the sole title to develop the project plans further. From that moment on, other applicants cannot apply for the same sea area.

Requirements for acquiring concessions or licenses to deploy offshore wind energy are basically the same in all countries involved – determined in large part by European law on environmental assessment. In some consent regimes it is not so much the amount, but rather the type of information to be supplied that creates a threshold for potential applicants. Detailed information on, for instance, the turbines to be installed relies on investment decisions that are usually made later on in a project. To apply for permits may sometimes mean taking these investment decisions earlier than they are generally planned. In some cases applicants may not even have any guarantees of obtaining exclusive rights for an area.

Needless to say, regardless of what procedure principle they apply, the authorities should clearly define the criteria all applicants must satisfy in order to be awarded licences or concessions. These criteria can cover a wide range of topics, such as: proof of financial and technical abilities of intending developers, project plans (more or less detailed) and the required contents of the EIA (what environmental issues need detailed investigation and on what aspects will its quality be assessed?) The concession procedures should be transparent and require good communications.

¹ The topics to be assessed cover a wide range of environmental matters: sea bed conditions, raw materials, hydrography, water quality and fauna and vegetation, fish, birds, marine mammals, landscape and visual impact, marine archaeology, emissions, noise, matters of recreation and planning, the impact on sailing and fishing in the area and suggestions for limiting or neutralising the potential negative effects on the environment



Harmonisation and Streamlining

3.1 Harmonisation of Regulatory Frameworks

On legislation and consent regimes, the Background Document of the Policy Workshop in Egmond aan Zee (2004)² observes that existing procedures are based on national legal frameworks. It goes on to say that harmonisation may not be necessary for EU-wide deployment.

There was a perception that harmonised procedures or frameworks might be desirable, but it has become clear that the benefits or otherwise of harmonisation are outweighed by an imperative to have useable, streamlined and transparent consent procedures. COD notes that there have been no prominent calls for harmonisation on a European or bilateral basis. On the other hand, harmonisation in itself is not necessary to trigger the development of offshore wind energy activities.

These consent regimes are in some countries still in development, based on experiences and the urge to improve or streamline them. It may also be that a new basis has to be laid to issue a country's first offshore wind energy licences. Nations and their energy agencies do exchange information on their consent regimes and their experiences, and find this to be to their advantage.

As projects move further offshore and increasingly begin to occupy EEZ areas, projects will increasingly come to the attention of more than one member state and its jurisdiction. This could lead to a desire for some harmonisation or, at least, co-ordination between respective authorities. There are already procedures in place to cover environmental impacts in more than one country, but projects physically located in a number of jurisdictions need to secure separate planning permissions. The extent to which this is a barrier is not yet apparent. In order not to delay the implementation of cross-border projects, MSs could anticipate the need for a transnational development strategy, aiming to tune and co-ordinate procedures across adjacent jurisdictions.

It seems desirable to exchange information and knowledge about applying the different procedures and the experiences gained with it. For example: since its first round concession tender the United Kingdom has altered its procedures in order to improve or streamline them. These altered procedures were applied in the second round concession tender, with which both the authorities and intending developers gained new experiences. Meanwhile, the Netherlands have launched their first application procedures and are now dealing with a vast amount of applications mostly concerning overlapping sea areas.

3.2 Streamlining of Procedures

As noted earlier and also in the Background Document for the Egmond aan Zee policy workshop, EU MSs are obliged under the Renewables Directive 2001/77 [ii] to "evaluate the existing legislative and regulatory framework....with a view to reducing the regulatory and non-regulatory barriers to the increase in electricity production from renewable energy sources, streamlining and expediting procedures....and ensuring that rules are objective, transparent and non-discriminatory...."

²This policy workshop was organised by the Netherlands Ministry of Economic Affairs in co-operation with Concerted Action for Offshore Wind Energy Deployment in Egmond aan Zee (the Netherlands) on 30 September and 1 October 2004. The Background Document is part of the basis for the policy's Declaration.



As concluded earlier, existing procedures are based on national legal frameworks, and to-date any tendency to harmonise procedure cannot be recognised. It goes beyond the scope of the COD project to judge whether member states ensure that the rules within their consent regime are objective, transparent and non-discriminatory.

Intending developers of offshore wind farms generally require multiple permits. A so-called “one - stop - shop” offers one main point of contact, the main competent authority involved, which has efficient and effective communications lines with other relevant authorities. The one-stop-shop is mandated to make decisions, informed by opinions from experts on the subjects of, for instance, legal issues, or environmental impacts. This is regarded as “streamlining” procedures and to some extent as a way to expedite these procedures.

The number of permits required to develop an offshore wind farm should not constitute an obstacle to intending developers, as long as it is clear to applicants what permits are required, in what order these must be applied for and what information must be supplied and at what time. The streamlining of procedures for permits, close co-ordination and the possibility to apply for different permits simultaneously will help to make the application process run smoothly.

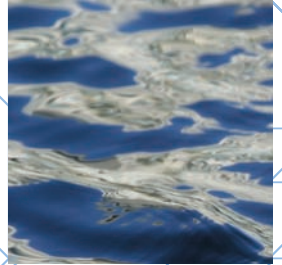
Evaluation and comparison of consent regimes and experiences, will lead to valuable know-how that should be shared among the COD members. And what we have seen in this study is that some of the COD countries have had experiences with the concession of sea areas for wind energy development, and that some of them have already altered their authorisation procedures based on these experiences. It is premature to evaluate the outcome of these and future actions, and specifically to decide whether there is a reduction of regulatory and non-regulatory barriers to increases in renewable electricity production. However, the idea to streamline procedures originated from the perception that these procedures pose a bottleneck. Many countries have taken early action in this respect, and the question arises whether, in these cases, consent regimes remain a bottleneck for the (fast) development of offshore wind energy.

As a result of research, the exchange of information and experience, countries are now building up a body of knowledge, for instance, on the environmental effects of offshore wind energy. Based on this body of knowledge authorities could, in the future, consider reducing both the amount and the nature of the information to be supplied by applicants, and standardising research methods. This standardisation on an international level will, for instance, promote the insight into the accumulation of environmental effects and may lead to the pre-selection of suitable sea areas internationally.

However, the exact interpretation of “streamlining” in the EC Renewables Directive is not yet made, but, for example, a one-stop-shop would appear to qualify, and certainly seems desirable.³ When evaluating whether MSs have met this part of the Directive, evaluation criteria could include:

- A reduction in development lead times;
- Consent of high quality projects;
- Reducing the cost of gaining permits;
- Reducing the cost of issuing permits.

³ This was also one of the conclusions of the 2002 3E and EWEA report: S. Shaw, M.J. Cremers and G. Palmers (3E and EWEA) Enabling Offshore Wind Developments, Brussels, 2002.



The Pre-selection of Suitable Areas

4.1 EEZ and 12nm zones

According to international law, all countries bordering on a sea possess territorial rights to a part of this sea. For all countries territorial jurisdiction extends to a maximum of 12 nautical miles from the coastline. All countries have also established an Exclusive Economic Zone (EEZ) or another similar zone, in which they can exercise functional jurisdiction, pertaining, among other things, to wind farms.

The zoning of the marine area is, therefore, essentially the same in all countries. However, the size and nature of the area for offshore wind energy may vary greatly for each country. This area is always defined geographically by the size of the relevant EEZ or similar zone, which is different for each country. The United Kingdom's REZ (Renewable Energy Zone), for instance, by far exceeds the size of the Belgian EEZ. The extent to which the available area can be used for offshore wind energy development or is taken up by other activities in these zones (such as shipping and mining) may vary greatly as well. Around the main port of Rotterdam, for instance, shipping lanes will take up much more of the area than those in several of the other countries.

4.2 Preferred and Restricted Areas

While all COD countries have defined restricted sea areas for offshore wind energy development, only few have selected preferred areas. Criteria for the selection of preferred or pre-selected areas are, among other things, wind conditions, water depth, the availability of onshore electricity grid connections, shipping lanes and exclusion areas. A strategic environment assessment (SEA) can also be used (or provide criteria) for the selection of preferred areas.

The Netherlands, Belgium, Poland and Ireland have not selected any preferred areas for offshore wind energy development.

The Swedish National Board of Housing, Building and Planning and the Swedish Energy Agency both have designated some areas within the territorial waters which are of national interest for wind energy production. These have, however, not been designated as preferred or allocated areas. No areas in the EEZ have yet been designated. Wind projects in Sweden need not necessarily be built in the designated areas. The areas have merely been designated because they meet certain physical criteria, such as wind energy content, a certain maximum water depth, etc. The purpose of these allocations is to put wind power on the same level of importance as other activities of national interest in these areas before decisions on permits according to the environmental code are made.

The German Federal Maritime and Hydrographic Agency will designate particularly suitable areas for offshore wind farms in Germany's EEZ. Some areas have been proposed by the government as



potentially suitable areas, but the formal procedure is still in process. In the summer of 2004 the Federal Regional Planning Act (Raumordnungsgesetz) has been amended to implement a regional planning in the EEZ to enable a more comprehensive spatial coordination of marine uses for the future. Up to now, however, no spatial plan for the EEZ has been drawn up.

By 1995 Denmark had already mapped out designated areas for offshore wind power. These designated areas compete obviously with other area interest such as fishery (the entire Danish offshore area), areas designated as being of special scenic interest, areas with high concentration of bird life, areas with natural resources which are not yet being exploited, areas with remnants of the stone-age period etc., shipping and fishery harbours, areas for recreational sailing, military shooting range areas, telecommunication cable trajectories, areas in which the approach routes for planes are situated and areas with aviation facilities. In 2003 and 2004 a screening of a certain number of the previously mapped areas was undertaken to update the current area interest. The screening was undertaken as a preparation for the ongoing 2 * 200 MW tender. Preparatory work is planned to update the assessment for future offshore wind power in Denmark.

The United Kingdom has selected some preferred areas. In the second round of site identification, DTI identified three potential strategic regions in its proposal "Future Offshore". Those areas are the Thames Estuary, the Greater Wash and the North West (there are no Round 2 sites in Scottish territorial waters).

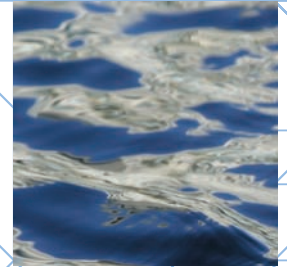
All countries have defined some areas that are restricted for the development of offshore wind energy. The restrictions for wind energy development that authorities impose on some sea areas are roughly the same in the countries concerned. Generally, these restrictions are based on safety and environmental parameters and other uses of and activities in certain sea areas, such as main ports, navigation, military and flight paths to and from airports.

Basically, the Dutch 12 nautical miles zone is a restricted area, except for the NSW demonstration project and areas near IJmond and the Maasvlakte. In the Netherlands navigation routes and motorways laid down in the Act on Mining, roadstead and anchor areas, military training areas and areas that are reserved for the dredging and exploitation of sand, are restricted. Furthermore, in the vicinity of five valuable ecological areas, exploitation of wind energy is restricted (unless there are no alternatives and exploitation in that particular area is of great public significance). This is also the case for areas which are or will be used for other purposes (unless negotiated with licensee).

In Belgium some areas are precluded from wind energy development, such as several areas of Conservation under the Habitats Directive and areas reserved for exploitation of mineral resources. Zones for the shipping industry, fishery, the environment etc. are precluded, as well as some zones reserved for the Belgian army.

In Germany, in general, wind farms are not allowed, if the safety and smooth flow of traffic is at stake or the marine environment is endangered.⁴ In the EEZ a legal base for spatial planning was introduced in the summer of 2004, but there is no spatial plan yet. The procedure for setting up a spatial plan was started in 2005 and is still going on. In general it will be possible to introduce priority areas,

⁴ Germany: to avoid wind farm applications within protected areas, it was laid down in the amendment of the Renewable Energy Sources Act that for approvals after the beginning of 2005 no guaranteed feed-in tariff will be paid if the wind farm is situated within a marine protected area.



reservation areas and suitable areas for different uses (including nature conservation) in the EEZ. At the moment there are no restricted areas for planned offshore wind farms. In every single case it has to be decided whether the safety and smooth flow of traffic will be disrupted or the marine environment will be endangered by the project. That means that the introduction of a planned wind farm in e.g. a Natura 2000 site is not excluded automatically and will have to be examined individually. Military training areas have no special legal standing in the relevant legal literature (Marine facilities regulations). In case an offshore wind farm would be planned at a site within or close to a sea traffic separation area (Verkehrstrennungsgebiet) as defined by IMO or any other area containing highly frequented shipping lanes, the application would be turned down immediately.

In Denmark areas designated under the EC Birds Directive and Ramsar Convention, areas in which natural resources are being exploited, areas with a concentration of derelict ships and objects of cultural and/or historical value, military practice areas, navigation routes and traffic separation schemes and areas with offshore petroleum pipelines and electricity transmission lines, are restricted for wind energy development as a point of departure. In the near future, the area closely around the Femeer Bridge across the Baltic Sea most likely will be restricted.

In the United Kingdom all areas where no Strategic Environmental Assessment has been carried out present more difficulties for offshore wind energy development, although they are not actually restricted.

Sweden has designated some restricted areas ('stop areas' and some 'less suitable areas'): national parks, unexploited archipelagos and coastal areas, areas of high cultural value (cultural heritage management), four large shallow water reefs/banks of the highest protection priority and areas for military activities.

In Ireland offshore wind farms will not be allowed in areas where there are military firing ranges or, normally, within five kilometres from the shore. Flight paths to and from airports are excluded, as well as some zones in areas of heavy shipping traffic. In principle, but subject to detailed analysis to ensure there is no unacceptable environmental impact, wind farms can be established anywhere other than in restricted or prohibited areas.

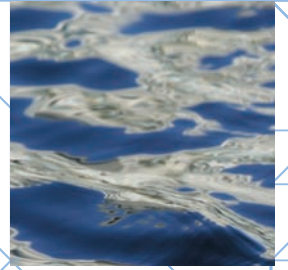
4.3 Pre-selection and SEA

Some of the countries examined here have made a pre-selection of preferred areas for offshore wind energy development. Earlier in this paper it has been explained that a Strategic Environment Assessment (SEA) can be considered a suitable instrument for this pre-selection. Although only named as such in the UK and newly in Germany, this can be considered an activity that would be akin to a Strategic Environment Assessment (SEA). An SEA gives both authorities and applicants the opportunity to assess cumulative environmental consequences and benefits of a programme for offshore wind, and



to identify at an early stage mitigatory action. Furthermore, performing an SEA gives a better indication of what topics need to be addressed in detail in the applicants' Environmental Impact Assessments (EIA).

The SEA EC-Directive [iii] obliges MSs to perform an SEA for the approval of plans or programmes such as offshore wind energy development. It would seem that SEA-type activities for offshore wind have already yielded advantages, and thus it should be in the MS's interests to comply with this Directive. Also, in line with the earlier recommendation on co-ordination between adjacent jurisdictions for cross-border projects, the same recommendation would apply to co-operation on SEA activities.



Observations, conclusions and recommendations

5.1 Introduction

The COD project has reviewed current legal and administrative procedures in the countries represented, and commented on the rationale for any recent changes. This can be viewed as an update to the SEALEGAL commentary. In order to be of ongoing relevance, it is essential to keep this information up-to-date.

Four main themes emerge from a summary and comparison of legal and administrative practices in the eight COD countries:

- The regulatory framework: managing and processing wind farm applications
- Harmonisation of regulatory frameworks
- Streamlining of procedures;
- Pre-selection of areas suitable for offshore wind energy deployment.

5.2 Regulatory Framework

Consent procedures in place tend to reflect existing MS legal frameworks, and for the most part remain subject to ongoing refinement. Changes are driven by a “learning by doing” approach, an urge to improve or streamline existing procedures, or a need to develop a proprietary regime specifically for offshore wind.

The differences between MSs – maritime heritage, regulatory practices and other factors – all contribute to differences in consent regimes. Nonetheless it may be observed that development activity is stimulated where a framework is implemented.

The development path of offshore wind can be thought of as a filtering process of initial interest in offshore wind which spans a wide spectrum of both potential sites and developers, to a smaller core of projects which will eventually be granted consent. All regimes share this general characteristic, but within this there are a number of differences:

- In filtering sites, an option is to pre-select suitable areas.
- In filtering developers, an option is to set minimum criteria for participation.
- In filtering developers with sites, two broad types of mechanism can be defined: a tender system and an open ‘first come first served’ system.

A tender process, whereby developers compete for something which is in limited supply – a suitable site or a power purchase contract – seeks to select suitable development parties at a relatively early stage in the process. A “first come first served” approach allows a large number of developers the opportunity to move further into the process before projects are selected through the planning system.



The former approach means that the consenting authorities see potentially fewer applications from developers who have been pre-filtered variously on criteria including financial standing, technical expertise and experience in offshore development. The latter approach means that developers compete on the speed with which they can deliver an acceptable planning application. But if accompanied by an attractive market, authorities can be overwhelmed by applications, and the focus tends to be on achieving consent, rather than project building. This commentary is only relevant to regimes which have a market-based mechanism for implementing offshore wind. A number of early projects in Denmark and Sweden were implemented as demonstration projects, and not under open-market conditions.

Observations

- Requirements for acquiring concessions or licenses to deploy offshore wind energy are basically the same in all countries involved – determined in large part by European law on environmental assessment. However, it is not the amount of information applicants have to deliver, but rather what, and when, which can create a threshold for intending developers. In particular, investigative work looks expensive prior to allocation of development rights.
- Gathering of information means making investments, which is weighed against the benefits of receiving some form of exclusive rights. Granting of exclusive rights at an early stage reduces risks to investments at the development stage.

Conclusion

- Each consent regime leads to some activity, whether in receipt of concession or planning applications, or even in actual deployment of offshore wind energy. There is too little experience in the COD-countries to draw any conclusions if one consent regime performs better than another. Indeed, diversity could be viewed by some as spreading the risk of imperfections in each approach.

Recommendation

- The competent authorities should clearly specify all information to meet the necessary requirements.

5.3 Harmonisation of Regulatory Frameworks

On legislation and consent regimes, the Background Document of the Policy Workshop in Egmond aan Zee (2004) observes that existing procedures are based on national legal frameworks. It goes on to



say that harmonisation may not be necessary for EU-wide deployment. COD also notes that there have been no prominent calls for harmonisation on a European or bilateral basis. However, nations and their energy agencies do exchange information on their consent regimes and their experiences, and find this to be to their advantage.

Looking to the future, offshore wind farms are likely to be larger and further offshore, increasing the prospect of projects spanning two or more jurisdictions. This could lead to a desire for some harmonisation or, at least, co-ordination between respective authorities.

Conclusion

- For the authorities, any tendency to harmonise consent regimes or legal frameworks between nations cannot be recognised. On the other hand, harmonisations in itself is not necessary to trigger the development of offshore wind energy activities.

Recommendations

- In order not to delay the implementation of cross-border projects, anticipate the need for a transnational development strategy, aiming to tune and co-ordinate procedures across adjacent jurisdictions. The intention is not necessarily to form one strategy, but to ensure that national differences are not obstructive.
- The exchange of knowledge of regulatory frameworks, consent regimes and procedures based on evaluation and experiences with applying these should continue in the future.

5.4 Streamlining of Procedures

As noted earlier and also in the Background Document for the Egmond aan Zee policy workshop, EU MSs are obliged under the Renewables Directive 2001/77 [ii] to “evaluate the existing legislative and regulatory framework....with a view to reducing the regulatory and non-regulatory barriers to the increase in electricity production from renewable energy sources, streamlining and expediting procedures....and ensuring that rules are objective, transparent and non-discriminatory...”. As concluded earlier, existing procedures are based on national legal frameworks, and to-date no tendency to harmonise procedure can be recognised.

The exact interpretation of “streamlining” in the EC Renewables Directive is not yet defined, but a one-stop-shop would appear to qualify, and certainly seems desirable. When evaluating whether MS’s have met this part of the Directive, evaluation criteria could include:



- Reduction in development lead times;
- Consent of high quality projects;
- Reducing the cost of gaining permits;
- Reducing the cost of issuing permits.

Some of the COD-countries have gained experience with permitting offshore wind, and even altered authorisation procedures based on these experiences. It is premature to evaluate the outcome of these and future actions, and specifically whether there is a reduction of regulatory and non-regulatory barriers to increases in renewable electricity production.

Observation:

- The idea to streamline procedures originated from the perception that these procedures pose a bottleneck. Many countries have taken early action in this respect, and the question arises whether, in these cases, consent regimes remain a bottleneck for the (fast) development of offshore wind energy.

Conclusion

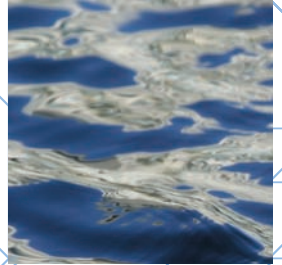
- The United Kingdom, the Netherlands, Denmark and Ireland all apply a one - stop - shop system.

Recommendation:

- The definition of streamlining and expediting of procedures should be made more precise, for example via determination of specific, measurable, acceptable, realistic and time related goals at which authorities can aim for, evaluate and improve.

5.5 Pre-selection of Suitable Areas

Some of the COD countries have made a pre-selection of preferred areas for offshore wind energy development. Although only named as such in the UK and newly in Germany, this can be considered an activity that would be akin to a Strategic Environment Assessment (SEA).



The SEA EC-Directive [] obliges MSs to perform an SEA for the approval of plans or programmes such as offshore wind energy development. It would seem that SEA-type activities for offshore wind have already yielded advantages, and thus it should be in MS interests to comply with this Directive. Also, in line with the earlier recommendation on co-ordination between adjacent jurisdictions for cross-border projects, the same recommendation would apply to co-operation on SEA activities.

Conclusion:

- Some of the countries have pre-selected areas of preference for offshore wind energy development, and some even on an SEA-like basis.

Recommendation:

- Perform an SEA in order to identify and assess (cumulative) environmental conflicts and their solutions, and to give better insight in the topics that need detailed consideration in project related EIA's. Authorities could consider doing this on a transnational or international level.

5.6 'Enabling Offshore Wind Developments'

In 2002 the results of a similar study have been published in the 3E and EWEA publication entitled 'Enabling Offshore Wind Developments' [i]. It was sponsored by the European Commission Directorate General for Energy and Transport via the ALTENER Programme, the Secretary of State for Energy and Sustainable Development of Belgium and Novem (the Netherlands). It would appear worthwhile to have a brief look at this publication.

The 2002 study gives some recommendations, which are formulated as primary 'best practice' policy initiatives:

- 'One - stop - shop' procedure,
- Transparency in financial burden for project developer,
- Anti-speculation clauses,
- Enhanced communication and public involvement,
- Burden sharing for grid connections,
- Allowances for innovation in technology,
- Securing pioneering risks,
- Risk hedging schemes (insurance coverage),
- Monitoring requirements,
- Decommissioning and rehabilitation guarantees.



The study also identifies new policy initiatives, which are urgently required if offshore wind is to make a significant and sustainable contribution in the short to medium term. These initiatives are mainly:

- the development of standards in environmental impact assessment,
- the realisation of an EU offshore electric grid infrastructure,
- the reinforcement of RD&D programmes for new generation offshore wind turbines and related equipment for installation, operation and maintenance,
- and finally, in the longer term, the development of harmonised procedures for areas beyond national jurisdiction of coastal states.

Some of the 'best practice' recommendations are dealt with in the report in hand and will be considered below. It should be noted that the topics 'enhanced communication and public involvement', 'securing pioneering risks' and 'risk hedging schemes' are not discussed here.

'One- stop- shop' procedure

In both reports, the one - stop - shop system is recommended. Since intending developers of offshore wind farms have to acquire multiple permits, licences, authorisations or concessions, a one - stop - shop systems would indeed seem advisable. To a certain extent, such a one – stop - shop should be mandated to make decisions and should rely on experts on the subjects of, for instance, legal and administrative procedures and offshore planning and development.

Transparency in financial burden for project developer

This topic is dealt with indirectly in the report in hand. For the issuing of permits, in some cases the authorities obtain revenues, for example via royalties, lease fees, administrative handling costs or costs charged for research required by the administrative services. In the report in hand, the financial burden is primarily considered in relation to the legal and administrative procedures. It has been mentioned that some developers tend to consider supplying this information a cost-increasing factor or even a liability.

Burden sharing for grid connection

As stated in the report in hand there generally is no burden sharing for grid connection in the countries concerned. For almost all COD countries, the wind farm developer or operator is responsible and bears the costs for the installation of the cables and the grid connection. For the reinforcement of the onshore grid, however, the TSO is being held responsible, as also for the costs involved.



Allowances for innovation in technology

The 2002 recommendation is to make some allowance to enable integration of the most recent technology in the construction plans other than during the application phase. This should be a consideration given the relatively long lead times between concession demand and actual building activities. Legislation should allow for technology innovation. This relates to the topic of the type of information to be supplied that creates a threshold for potential applicants. Detailed information on, for instance, the turbines to be installed relies on the investment decisions that are usually made later on in a project. To submit applications sometimes means taking these investment decisions earlier than they are generally planned, and in some cases without the applicants having any guarantees that they will obtain exclusive rights for an area.

Monitoring requirements

The 2002 report recommends extensive monitoring of all legal administrative and political aspects. To a certain extent the report in hand also deals with monitoring, as important aspects are picked up again and the actual state or execution is described.

Decommissioning and rehabilitation guarantees

The recommendation of the 2002 report on these subjects is that the financial guarantee should stand surety for the demolition as well as for the restoration of the site. This aspect is not dealt with in the report in hand. It must be remarked that in general, for a permit to be issued, applicants must supply information about their abandonment and decommissioning plans. As is the case with the monitoring requirements, conditions for decommissioning and rehabilitation could be incorporated in the permits.

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- [ii] Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market
- [iii] Directive on Strategic Environment Assessment: SEA Directive 2001/42/EC

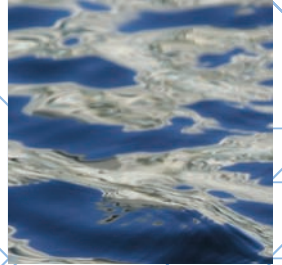


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Additional contributions are gratefully received from the COD advisory board and the ministerial committee.



Appendix

Details of the Application Process for Each Country

The Netherlands

The Netherlands have so far not carried out any SEA, nor have (preferred) areas been pre-selected. Basically, development of offshore wind energy would be possible only within the Dutch EEZ, except within the restricted areas.

The Dutch procedure is based on the “First Come First Served” principle. An applicant has to present a starting note for the EIA to the competent authority. The application is considered complete when the application form and EIA report have been presented. From that moment on, the licence procedure starts, during which the applicant holds an exclusive position for his location.

Multiple applicants can apply for the same sea area, so that an overlap is possible. As the First Come First Served principle is applied, the first applicant to deliver a complete application with EIA report will be granted exclusive rights. From that moment, new applications for the same location will not be dealt with.

This system has recently led to more than 80 starting notes from different applicants, concerning overlapping sea areas. The large amount of potential applications calls for well defined criteria to assess both the quality of the applications and the EIA report, in order to locate best business proposals in the best areas.

The Netherlands have recently combined the various permits required for offshore wind energy development into one permit. This permit contains a planning permission for building, exploiting, maintaining and removing the wind farm, including platforms and cables (at sea). In this permit also the environmental and safety aspects as well as the effects on other use are taken into account. In the permit a warranty for the availability of the necessary financial resources before the start of building is included as a condition. An applicant can apply for this permit to only one authority, which represents the other relevant authorities in the assessment process.

The data required for the application are the co-ordinates of the location, the (preliminary) design of the wind turbines, including monopile and foundation (certificate required), construction plans, maintenance plans, safety and security plans, lighting and calamity plans, data on the planned duration of exploitation and an abandonment plan. A crucial part of the application is the EIA report, which must contain a description of the project, mitigation measures, expected environmental impact, alternatives considered, the effects on other users of the particular sea area, the effects on (shipping) safety and the effects on radar (shipping, air traffic, military).



The Dutch competent authorities do not assess the applicants on their financial qualities, expertise or experience.

The period from publication of the starting note to a complete licence application and EIA is called the pre-phase. The competent authority will have one consultation with the applicant on the basis of the starting note. The Ministries of VROM (Department of Spatial Planning, Housing and the Environment) and LNV (Agriculture, Nature and Food Quality) are legal advisors in the EIA procedures. Other authorities are also involved, such as the Ministry of Economic Affairs, the Ministry of Defence and the National Coastguard.

The pre-phase may result in the granting of exclusive rights to an applicant. Within the location of the wind farm and a 500 meter zone surrounding the wind farm, shipping (and fishery activities) is not allowed.

Belgium

Belgium has not carried out an SEA. The maritime areas are characterized by intensive activity as a consequence of which a limited number of maritime areas remain available for offshore wind farms.

It appears that an agreement has been reached within the Belgian government about a zoning plan for the Belgian North Sea. According to this plan a zone around the Thornton Bank appears to have been selected for the establishment of offshore wind farms. It is submitted this was chosen on the basis of the fact that there is a fair distance between the Bank and the most important sea approaches.

The zone around the Thornton Bank is, however, not considered a preferential area. Belgium has not pre-selected or designated preferred areas for offshore wind energy development. Some areas in the Belgian North Sea are restricted from offshore wind energy.

A candidate developer requires three permits to develop an offshore wind farm: one concession (right to occupy a parcel), one licence (to operate a wind farm) and one authorisation (to build or construct). From a legal point of view the applications can be made simultaneously. However, it appears the normal procedure is to apply first for a concession and after obtaining that to apply for the licence and the authorisation. If the licence or authorisation is refused, the concession will be considered non-existent.

Concessions are subject to a selection procedure. The selection procedure is a tendering procedure of a specific kind. The tendering procedure is started by the submission of a so-called 'application for concession'. The application is submitted by a candidate holder of a concession. The application is registered by the supervising Ministry as a result of which it is published in the Belgian Official Journal and in at least three national newspapers. Within 30 days of this publication, a competitor can submit an 'application for competition'. The Minister will eventually decide which competitor meets the selection and award criteria best.



For the application for concession, an applicant is obliged to deliver the following data: general information of the applicant, a statement of the scope of the project, a statement with regard to the selection and award criteria, an in-depth map (demarcation of the area, delineation of other areas, planned locations of cables), a detailed plan on scale, description of building and operation activities, technical equipment and the planning of activities, specification of the installations (number, net power, operational safety, energy production, statement of the contribution of renewable energy development), documents for the assessment of the economical and financial standing of the applicant and an Environmental Impact Statement.

For the application for licence and authorisation, the applicant has to supply documents for the assessment of the economical and financial standing of the applicant.

The applicant has to formulate an Environmental Impact Statement. On the basis of this statement, the actual Environmental Impact Assessment is performed by the MUMM (Management Unit of the North Sea Mathematical Models), which makes recommendations to the Federal Minister of Environment for licence and authorisation.

The selection procedure containing an application for concession and applications for competition is considered a pre-phase. A concession for the establishment of a wind farm is qualified as a 'private occupation' of the public domain. The applicant, who meets the selection and award criteria best, is given the right for this private occupation. This does not exclude other activities, provided an agreement is reached with the concessionaire.

Germany

According to the strategy of the Federal Government the deployment of offshore wind energy must be implemented in four phases: (1) the preparation phase, (2) the starting phase (500 MW in 2006), (3) the first expansion phase (3.000 MW in 2010) and (4) further expansion (25.000 MW in 2030).

There is a clear distinction between the responsibility of the licensing procedures for application concerning areas in the EEZ or within the territorial waters of the 12 nautical miles zone. Licensing within the EEZ is the responsibility of the BSH (Federal Maritime and Hydrographic Agency). As applications are confined to the EEZ, the BSH occupies a central position.

The application scheme can be described as follows: the developer communicates his intention of constructing a wind farm to the Federal Maritime and Hydrographic Agency (BSH). The BSH communicates the requirements and preconditions that have to be fulfilled.

In general, the developer has to investigate the baseline status during a period of two years in the area of the planned wind farm and a reference area. In addition to this, he has to carry out an EIA and investigate the concrete impacts. As soon as these documents and records have been completed, they will be scrutinized by BSH, and - if they fulfil the requirements – the formal licensing process will begin.



During the process of licensing, the site will be assigned to the developer, until the licensing process (for the wind park as well as for the grid connection) has come to an end. Usually, the process results in one licence combining the right to deploy offshore wind energy in that area and the right to construct the wind farm.

At the earliest the licence can be granted after one year of investigation. The total application and licensing process may take up to three years.

If several applications have been submitted by developers for the same location or for any neighbouring locations in the EEZ, a decision shall first be taken on the application which first fulfils the requirements for the licensing (priority principle). According to the Marine Facilities Ordinance, a licence for a wind farm in the EEZ can only be refused, if the safety and smooth flow of traffic is disrupted or the marine environment is endangered and these negative effects cannot be prevented or compensated for by imposition of a time limit, condition or additional requirement. Particular grounds for a refusal shall be deemed to exist in cases where:

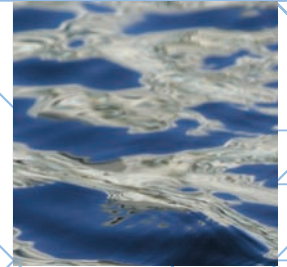
- 1) operation and effect of navigational installations and marks would be endangered,
- 2) the use of shipping lanes or airspace for navigation would be disrupted,
- 3) pollution of the marine environment is to be feared,
- 4) bird migration would be endangered.

The responsible Water and Shipping Directorate must approve of the situation with respect to safety and the smooth flow of traffic.

Responsible for the licensing of offshore wind farms in territorial waters (12 nm zone) are the competent authorities of the federal states (Länder). Before the licensing procedure starts, a comprehensive integrated evaluation and estimation of various interests of use takes place in the regional planning procedure according to the Federal Regional Planning Act (Raumordnungsgesetz) and the state planning act of the respective federal state (Landesplanungsgesetz). After the project has been found to be in accordance with the requirements and aims of regional planning for the development and construction of offshore wind farms within the 12 nautical miles zone, from July 1st 2005 (presumably), the following licences will be required:

- 1) A licence on the basis of the Federal Emission Control Act (Bundesimmissionsschutz-gesetz); this licence usually includes all licences which are necessary on the basis of other laws
- 2) Under certain circumstances: a supplementary licence on the basis of the Federal Mining Act.

The total application and award process may take up to three years. In theory, the licences to develop a wind farm and the submarine electricity cables may be dealt with simultaneously. In order to speed up the process and reduce costs the government has announced in its strategy plan that it aims at integrating all activities (from the turbines to the connection to the electricity grid) in one authorisation



process. In practice, however, the licences are awarded separately, as a result of which the entire process to develop a wind farm is time-consuming. For the licensing of wind energy development in the EEZ, the BSH is the sole licensing authority (one - stop - shop system). However, the BSH is subject to the powers of the Water and Shipping Directorates to veto the development of wind energy in a certain area, if this would endanger navigation.

In the application, the applicant must supply the following data: a description of the area and the project (turbines and operation), safety precaution measures, drawings, information about the environment and other uses of the area, and a proposal for a monitoring or research plan for the area. In the application conference phase, the applicant has to present his plans to multiple parties (e.g. governmental organisations, NGOs and civilians). The aim of the conference is to define in detail the issues that need further investigation before an assessment can be made of the application and the awarding of the licence.

This public participation procedure is based on the concepts of an EIA procedure. The requirements for the EIA depend on the type of project and vary according to the category of wind farm. The EIA must cover direct and indirect impacts on humans, flora and fauna, ground water, climate, landscape, cultural and other assets. In the case of offshore wind farms, the authorities investigate visual impact, bird life (counts of bird species), fishing (taking stock of fish and benthos), and the effects of dredging of the seabed. They also assess species and geological structure, and count sea mammals before, during, and after the installation. During the monitoring programme of the EIA, the licence can be issued.

The German competent authorities do not assess the applicants on their financial qualities, expertise or experience.

Germany does not apply a pre-phase in its selection of developers, but applies the priority principle (First Come First Served). Exclusive rights are granted with the licence to develop the wind farm. No other licence for a wind farm will be awarded, if such a licence has already been granted for the same area, although the licensee has no complete exclusive right to the area. For the exploitation of sand, gravel etc. and in case petroleum deposits are discovered in the area, the licensee and e.g. the petroleum company need to negotiate to find a solution.

Denmark

Denmark has conducted several investigations into its sea area to designate suitable areas for offshore wind energy development throughout the past 10 years. In 1995 a working group published a study in which the entire offshore area was assessed. It identified excluded and assessment areas. One of the objectives of the report was to identify those areas suitable for the construction of offshore wind turbines. For this identification it concentrated on technical and practical parameters.



In a subsequent 1997 action plan four main areas and a number of supplementary areas were selected for future offshore wind farms, based on the recommendations of the 1995 report. In 1998 the government and the electricity production companies entered into an agreement in which the companies were required to establish some large-scale demonstration projects. The objective was to investigate economical, technical and environmental matters and to speed up offshore development (and open up the selected areas for future wind farms. In 2003, and later in 2004 the Danish Energy Authority published a report in which it described a screening of the areas for the purpose of offering them in the tendering procedure. Such screenings were considered necessary as technical expertise had changed considerably since the 1997 action plan. The following areas were screened: the area near Horns Rev, south of Laesø (Kattegat), around Lysegrund, around Kriegers Flak (Baltic Sea), at Omo Staalgrunde, and around Roedsand (Baltic Sea),

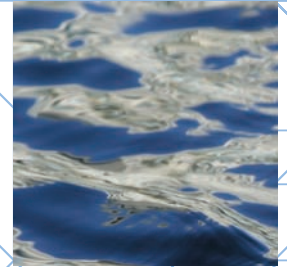
The aim of the screening procedure was to find out, which of the areas were best suited for wind energy production and thus could be included in the tendering procedure. It could also provide investors with some ideas about the research that is required for developing wind farms in the areas and the issues that might arise when carrying out an environmental impact assessment. The 2003 screening report is roughly drafted on the basis of the principles of the SEA.

The screening document for suitable areas is public and provides interested parties with an indication of which investigations need to be made and the requirements for a subsequent EIA. Within the period of validity of the permit for preliminary survey an applicant will have to carry out an EIA. The EIA Regulation requires an EIA for the construction of wind turbines and the internal cables connected to them, if it appears that these facilities have a considerable impact on the environment. An EIA will describe and analyse the impact of the project on:

- people, flora and fauna
- sea bottom, water, air, climate and landscape
- material objects and cultural heritage
- the interaction among these elements.

The topics to be assessed cover a wide range of environmental matters: sea bed conditions, raw materials, hydrography, water quality and fauna and vegetation, fish, birds, marine mammals, landscape and visual impact, marine archaeology, emissions, noise, matters of recreation and planning, the impact on sailing and fishing in the area and suggestions to limit or neutralize the possible negative effects on the environment.

In Denmark a tender procedure has now been carried out for a windfarm, at Horns Rev, with a capacity of 200 MW. In the first round, the Danish Energy Authority assessed the applicants on their financial and technical capabilities, especially with regard to experiences in the offshore sector. In the next round, the negotiations took place. The bidders were judged on three different criteria: the



kWh price, the location and design of the project, and the timetable for implementation of the project.

The Danish Energy Authority is now in the process of preparing the pre-qualifications of applicants for the second tender for a windfarm at Roedsand. The negotiations for this tender are expected to be finalised at the beginning of 2006.

After the selection of the winner, the developer will enter into the "normal" scheme for licensing. As can be seen in the table on page 8, a developer will need four permits to develop an offshore wind energy farm. These permits have to be applied for in the following strict order:

(1) a permit for a preliminary survey with the obligation to carry out an EIA (the EIA is subject to public hearing), (2) a permit to establish the installation: a building permit including cables (is subject to public hearing), (3) a permit to exploit wind energy, 4) an additional permit to produce electricity at installations with a capacity of more than 25 MW (not particularly wind energy; all existing electricity companies have been awarded such a licence. Each enterprise will only need one permit – independent of the amount of power production installations. The Danish Energy Authority is the coordinating authority – with the authority to award permits and licences for the development of offshore wind farms. Before awarding one of the permits or licences, the Authority will consult all other departments involved or affected.

In general the Danish Energy Authority and all parties involved show a pragmatic attitude to the permitting process. Up to the present the documents required for assessing the application of a permit have not been considered a threshold for the applicants. The Danish Energy Authority requires quite detailed information on the project plans, the environmental impact and the legal and financial standing of the applicant.

Denmark's pre-phase comprises activities connected with the screening of suitable areas and the tendering rounds, which result in one developer for a location gaining all the necessary permits. The areas are awarded exclusively in the sense that other wind energy developers are excluded from carrying out the same activities. Fishery and sailing are not necessarily restricted in the area. A safety zone of 200 meters at each side of cables will be applied.

United Kingdom

Based on experiences gained in the first round of tendering of sea areas for offshore wind energy development, the United Kingdom has altered its application procedures. Before starting the second round tender procedure process, some preparations were made in the shape of:

- 1) the performance of an SEA, resulting in three preferential areas,
- 2) a call for expressions of interest and short Business Development Plans (BDP),



- 3) supply of complete BDPs,
- 4) an information seminar.

Furthermore, the United Kingdom has established a Renewable Energy Zone around the whole of the United Kingdom out from the edge of its 12 nautical miles territorial sea extending seawards by 200 nautical miles.

As described before, the United Kingdom has designated three preferential areas with their second round tender. During round 1, developers proposed their own sites. The sites had to be within the 12 nautical miles limit around the UK.

Areas restricted from offshore wind energy development are corridors around shipping lanes, oil and gas pipelines, electricity and telecommunications cables, ship wrecks, aggregate extraction areas and oil and gas production sites. Applications for development of wind energy outside the preferential areas for round 2 are likely to be rejected on the basis of the absence of an SEA.

The United Kingdom applies a tender principle, in which preferred areas are 'opened' for applications during a fixed time period. The Lease Tender starts with the registration of expressions of interest, in which applicants can register by submitting a concept Business Development Plan (BDP).

These applicants receive a checklist of information to be included in the detailed BDPs to be submitted with final tenders. These BDPs must contain: a plan to consent stage, a construction plan, an operational plan and a decommissioning plan.

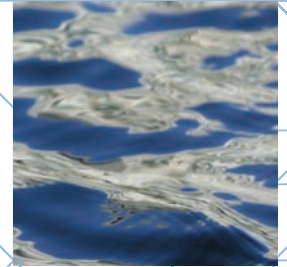
Next an information seminar for registered companies or consortia is organised to discuss the competition procedures and criteria.

The tender process is organised in two integral stages:

- 1) developers are required to submit project co-ordinates,
- 2) the full tenders are required to be submitted with a non-refundable fee. Only compliant tenders are accepted for assessment.

The UK consenting regime is co-ordinated by DTI's Offshore Renewables Consents Unit (ORCU). The ORCU is a 'one - stop - shop' for offshore wind farm developers. A developer can choose two routes to obtain consents or licences, via:

- A) The Electricity Act 1989 consent (permitting construction and operation of a generating station) + Coast Protection Act 1949 consent (permitting coastal works that may affect navigation) + Food and Environmental Protection Act (FEPA) licence (permitting deposition in the sea) + other consents if required;
- B) Transport and Works Act 1992 (TWA) Order (permitting electricity generation and coastal



works) + FEPA licence (permitting deposition in the sea) + other consents if required.

If a developer chooses to obtain regulatory consents of licences by Route A, he will submit a single application in respect of the Electricity Act 1989 consents, FEPA Licence and consent under the Coast Protection Act. If the developer chooses Route B, a TWA Order and FEPA Licence, the Order and Licence must be applied for separately. In either case applications may be made simultaneously and proceed in parallel.

The two routes for consents or licences require different data from the applicants.

For Route A:

- details of the applicant
- start date and expected completion date of the construction
- project description
- estimated gross cost of the project
- location of projects on charts
- construction plans and sections
- method of construction including measures to be taken to: minimise the risk to marine environment, prevent undue interference to others by supplying moor barges, pontoons, transhipment vessels and maintaining navigational safety (marking and lighting plans)
- description of any deposition to be made below mean high water springs
- statement whether there has been any consultation with the public on the proposal
- statement whether the proposed operations are located within or in close proximity to a Special Area of Conservation/Site of Special Scientific Interest/Special Protection Area and whether the developer has consulted the relevant nature conservation body on its proposals
- copy of the Environmental Statement prepared to support the application
- (pro forma letter with more detailed project information, the environmental statement and visual photomontage)

Required data for Route B:

- a draft order and an explanatory memorandum that explains the powers sought and the other matters for which provision is to be made by the order
- a declaration as to the status of the applicant



- evidence by affidavit that notices of the application have been sent to all the persons and bodies that must be notified under the Rules
- details of any other consents, permissions or licences required for the project
- plans and sections of a project
- an environmental statement
- a reference book containing information about the nature of the affected land and rights over it, if acquisition of land is necessary
- the costs of the proposed works
- the funding arrangements for the project
- a timetable for the proposed works
- details of any request for grant of deemed planning permission

The FEPA licence must be applied for separately.

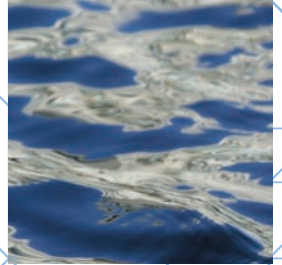
Round 2 applications are assessed according to how they meet four criteria:

- 1) the applicant's qualities and experience,
- 2) the development plans and site information,
- 3) the business plan,
- 4) the decommissioning plan.

During the application process an applicant has to carry out an EIA for each location or planned wind farm. The developer's role in the EIA is to carry out, or more usually for an environmental consultant on its behalf to carry out, an environmental assessment of both negative and positive impacts of the project during construction, its operational life and decommissioning. The findings of these assessments are presented in an environmental statement (ES). The consenting authorities are usually satisfied with one ES to support all the consent applications rather than requiring a separate ES to support each. The developer is also required to advertise its proposal. The general contents of the EIA: Description of the project, landscape, seascape and visual assessment, ornithological assessment, marine ecology, acoustics and vibration, cultural heritage, geology and hydrogeology, coastal and seabed processes and coastal defences, marine water quality, commercial fishing, commercial shipping, navigation and other maritime uses, electromagnetic interference and air traffic, safety, socio-economic assessment.

The preparations prior to the start of the tender procedure, viz.:

- 1) an SEA, resulting in three preferential areas,



- 2) call for expressions of interest and short Business Development Plans (BDP),
- 3) delivery of complete BDPs, and
- 4) an information seminar

can be considered a pre-phase.

Regulatory consents and licences are generally granted on an exclusive basis, though the Crown Estates considers earlier rights granted for extracting oil and gas within some of the same areas as the Round 2 locations.

Sweden

Sweden has not carried out an SEA for their territorial or EEZ sea areas or offshore wind energy development in those areas.

Basically, developers can apply for wind energy development anywhere in the Swedish sea, as no areas have been actually designated as preferential. Within the 12 nautical miles zone the planning is made by the municipalities in co-operation with the county administrations. The municipalities have a planning monopoly within their territory. In the EEZ, the government could in principle appoint areas other than by 'soft recommendations', although so far it has not done so. Quite recently 49 areas in 13 counties were designated as national areas of national interest for electricity production from wind energy by the Swedish Energy Agency. Of those areas, more than 1,400 km² are offshore. However, no areas in the EEZ have yet been appointed.

The Swedish restricted areas have already been described in the report. In some areas of conflicting interest, e.g. fishing, shipping etc. a weighing of merits will be carried out, in order not to exclude beforehand the abilities of multiple use of sea areas. If necessary, agreements with other users can be made for compensation. The Swedish Maritime Administration suggests that navigation lanes must be surrounded by a protection zone. The weighing of these protection zones and other conflicting interests will be a part of the decision process in the EIA.

The Swedish authorities do not pre-select developers. Several developers can in fact carry out an application procedure in the same area. There are no guidelines on how to act if several developers are applying for permits in the same area. In this sense, Sweden applies the First Come First Served principle.

The application process is planned around the applications for and issuing of required licences, and around the obliged actions based on the environmental code. Within the Swedish territorial waters:

- Initial contacts with concerned authorities and local interested parties for e.g. analysis of alternative locations are made.



- An application must be made for a permit for sea bottom explorations in accordance with the Act on the Continental Shelf.
- An early consultation round according to the environmental code is organized.
- The county administrations' decision concerning whether the activity shall be considered of significant environmental impact is adopted (for offshore wind project this is always the case, which means an EIA has to be carried out).
- An application is to be made for the right of disposition of public waters.
- If necessary: A notice is published in accordance with the ESBO Convention, if significant environmental impact in a neighbouring country is to be expected.
- An extended consultation round is held in accordance with the environmental code for projects with significant environmental impact (all offshore wind farms).
- An application is submitted for a permit according to the environmental code (permit issued by the county administration according to chapter 9 of the environmental code for projects below 10 MW and permit issued by the government according to chapter 17 for projects above 10 MW. In the latter case the permit is sent to an environmental court which prepares the case for the government in a first phase)
- An application is submitted for a building permit, for the concession for cabling and access to the grid and for a permit for water activities according to chapter 11 of the environmental code.

Within the EEZ, the same rules apply as above, however with the following differences. The activity will always be considered to have significant environmental impact. Therefore, an EIA is always necessary. Permits according to both chapter 9 and 17 of the environmental code do not apply outside the territorial waters of the 12 nautical miles zone. A government permit must be granted in accordance with the Act on the Swedish Exclusive Economic Zone. Also, the Building permit according to the Planning and Building Act does not apply in the EEZ.

In summary: within the 12 nautical miles zone, six permits are required for the development of wind energy, whereas within the EEZ two permits are required. The time it takes to obtain these permits is so long that it would appear necessary to make it possible for them to be applied for simultaneously. For cabling within the territorial waters, another four permits are required.

The type of information needed is specified during the early and extended consultation rounds. The necessary content to be dealt with in the EIA is specified in chapter 6 of the environmental code. However, specific guidelines for wind energy are not given. The applicants themselves are assessed on their capabilities to build and operate the wind farm project (e.g. financial standing).

The Environmental Court scrutinizes the application and the documentation is sent to a wide range of authorities for consultation. The Court sends its recommendation to the Ministry of Sustainable



Development, which takes the final decision whether to approve or reject the project. If approved, the Environmental Court will set the conditions that will apply for the project. The environmental permit often contains conditions with respect to studies that the developer will have to carry out before, during and after the construction of the project. These are mostly related to marine life, birds, seals etc. but recently also noise and visual effect studies have been part of the conditions for the permit.

Sweden does not apply a pre-phase for the application process for offshore wind energy development. However, before applications are submitted, suitable areas have to be designated and some preparations for the EIA have to be made, which include the early consultation round according to the environmental code.

Exclusive rights are granted to wind farm operators, which excludes the possibility for others to develop a competing wind farm on the same location. The initial permit is turned into a water lease agreement with the government. During the permit process other interests such as fishery, shipping, navigation are weighed on their merits.

Poland

Poland has not carried out an SEA for its sea area, nor has it appointed preferred areas for offshore wind energy development.

In the Polish pre-phase the building conditions for the wind farm are determined.

The procedure of the pre-phase comprises a public hearing in the Marine Offices of the Ministry of Infrastructure for which all parties are invited (i.e. navigation authorities, fishery associations, nature protection authorities, renewable energy experts, municipal authorities, military authorities) and in which all parties can voice their opinion. Spatial planning procedures for marine areas have not yet been started. However, they will be required by new legislation.

Though it is not clear which data must be presented by the applicant for him to be issued with all the permits, at least the following data will be necessary: co-ordinates location, project drafts and the environmental consequences (dealt with in an EIA) and information for the assessment of the availability of the area, navigation issues, marine safety issues and the opinions of parties present at the public hearing.

Five licences are required:

- 1) preliminary building condition,
- 2) licence to exploit the area,
- 3) licence to construct the wind farm,



- 4) licence to connect the wind farm to the grid,
- 5) concession for renewable energy production.

The applicant has to supply a preliminary Environmental Impact Assessment. The general contents of the EIA report are standardized.

The applicant will not be granted any exclusive rights.

There are no formally defined criteria. Current limitations are a result of the protection zones as determined in the NATURE 2000 report and lack of specified procedures in those areas.

The Republic of Ireland

Ireland has not carried out an SEA, nor has it pre-selected or appointed preferential areas for offshore wind energy development. In principle and subject to detailed analysis to ensure there will be no unacceptable impacts, wind farms can be established anywhere, with the exception of the limited number of prohibited areas, subject to the developer having been issued with the necessary consents.

In Ireland, offshore wind farms will not be allowed in military firing ranges or, generally speaking, within 5 km from the shore. Flight paths to and from airports are also excluded, as are some prohibited zones in areas of heavy marine traffic.

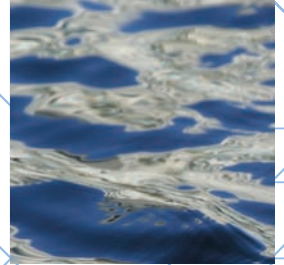
Ireland applies the First Come First Served principle. The intending developer to apply first for a licence to allow investigation of a site, will also be the first to claim on a Foreshore Lease with regard to that area to develop a wind farm.

In Ireland, a developer requires five permits for the development of an offshore wind farm.

Prior to issuing the Foreshore Lease (permit) to develop the farm, investigations have to be made according to the Foreshore Licence to investigate. Before construction work can commence under a Foreshore Lease the lessee must have an authorisation to construct, a licence to generate and a licence to supply. These consents are issued by the Commission for Energy Regulation. A binding contract with a licensed supplier will be acceptable, if the lessee is not a licensed supplier.

Applications for Foreshore Licences may lead to the issue of Foreshore Licences which will be valid for a period of four years. During the currency of the Foreshore Licence the authorities will expect the licensee to:

- carry out all necessary tests on wind, wave strength, tidal and sea bottom conditions;
- seek planning permission for the land-based aspects;
- obtain the necessary wayleaves on land;



- apply for an authorisation to construct the station on the site;
- apply for licences to generate and supply electricity;
- generally consult with interested parties (local port authority, Commissioners of Irish Lights, fishing and local interests etc.);
- prepare an application for a lease to allow the construction of the site;
- consult with the Heritage Service in relation to protection of habitats, bird life, archaeological artifacts and monuments etc.;
- carry out an Environmental Impact Assessment leading to an Environmental Impact Statement.

Assuming that a licence has been issued and held in good standing, the licensee who has first applied for a licence with regard to a specific area will have a legitimate expectation to a first claim on a Foreshore Lease with regard to the area. The term 'legitimate expectation' is used in this context to assure intending developers that 'gazumping' will not be allowed. It does not put a contractual obligation on the authorities to issue a Foreshore Lease for the development of an offshore electricity generating station to any applicant or in respect of any particular location. The licences, authorisations of permits can be applied for simultaneously.

For the application of a Foreshore Lease to construct, generate and supply, an applicant needs to supply the following data: co-ordinates of the location, project drafts, statement of consequences for third parties (dealt with in EIA), environmental consequences (dealt with in EIA), construction plan, safety and security plan (dealt with in EIA), calamity plan (dealt with in EIA), planned duration of exploitation (dealt with in EIA), abandonment plan (dealt with in EIA), demonstration of visual impact if within 5 km from the shore, business plans, photomontage and a Tax Clearance Certificate.

An applicant must show evidence of financial ability to construct and operate the generating station. For this purpose business plans covering the five year period commencing at the date of application for a Foreshore Lease through construction and the first five years of operation will be required.

During the currency of the Foreshore Licence to investigate a particular sea area, the intending developer must carry out an EIA leading to an Environmental Impact Statement. The general contents of the EIA:

- description of the project,
- description of the existing environment in the leased area,
- impacts of project during construction, operation and decommissioning,
- alternatives considered,
- mitigation measures,

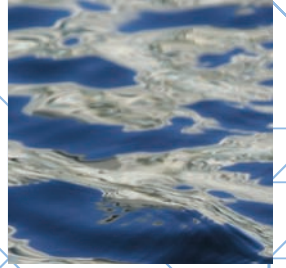


- monitoring programmes.

The application process for a foreshore licence to investigate the suitability of a site and the Environmental Impact Assessment can be considered a pre-phase. A foreshore lease will be issued subject to a condition that work cannot commence until necessary consents to construct and operate the wind farm have been issued by the Commission for Energy Regulation and a licence to supply electricity has been issued by the Commission for Energy Regulation or other appropriate authority. A deposit of 100,000 is required with respect to each licence area. The deposit will be refunded on completion of the work programme (including the furnishing of all required information) and the making of a valid application for a foreshore lease or, alternately, if the applicant proves to the satisfaction of the Minister that the site is unsuitable. The holding of a Foreshore Lease of Licence over a leased or licensed area does not preclude the authorities from issuing further Leases or Licences to other parties in the same area, provided that the activities under that Lease of Licence do not interfere with the operation of the first licensee. Therefore, neither the licence for exploratory work, nor the lease allows for exclusive use of the area. However, the lease provides that no activities which will have an adverse impact on the generation of electricity will be authorised while the lease is maintained in good standing.

An intending developer can apply for a Foreshore Licence or Lease on an area for which a licence of lease has already been issued or is in process. When an applicant is informed that there is a prior applicant for an area, the second or subsequent applicant will have the option of:

- allowing the application for a Foreshore Licence to proceed in respect of the entire area covered in the application;
- allowing the application to proceed with that area which is subject of prior application excised from the licence area sought;
- having an 'expression of interest' in the site noted (to be the next in line);
- withdrawing the application.



OPET NETWORK: ORGANISATIONS FOR THE PROMOTION OF ENERGY TECHNOLOGIES

The network of Organisations for the Promotion of Energy Technologies (OPET), supported by the European Commission, helps to disseminate new, clean and efficient energy technology solutions emerging from the research, development and demonstration activities of ENERGIE and its predecessor programmes. The activities of OPET Members across all member states, and of OPET Associates covering key world regions, include conferences, seminars, workshops, exhibitions, publications and other information and promotional actions aimed at stimulating the transfer and exploitation of improved energy technologies. Full details can be obtained through the OPET internet website address <http://www.cordis.lu/opet/home.html>

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NOTICE TO THE READER

Extensive information on the European Union is available through the EUROPA service at internet website address <http://europa.eu.int/>

The overall objective of the European Union's energy policy is to help ensure a sustainable energy system for Europe's citizens and businesses, by supporting and promoting secure energy supplies of high service quality at competitive prices and in an environmentally compatible way. European Commission DGXVII initiates, coordinates and manages energy policy actions at transnational level in the fields of solid fuels, oil & gas, electricity, nuclear energy, renewable energy sources and the efficient use of energy. The most important actions concern maintaining and enhancing security of energy supply and international cooperation, strengthening the integrity of energy markets and promoting sustainable development in the energy field.

A central policy instrument is its support and promotion of energy research, technological development and demonstration (RTD), principally through the ENERGIE sub-programme (jointly managed with DGXII) within the theme "Energy, Environment & Sustainable Development" under the European Union's Fifth Framework Programme for RTD. This contributes to sustainable development by focusing on key activities crucial for social well-being and economic competitiveness in Europe.

Other DGXVII managed programmes such as SAVE, ALTENER and SYNERGY focus on accelerating the market uptake of cleaner and more efficient energy systems through legal, administrative, promotional and structural change measures on a trans-regional basis. As part of the wider Energy Framework Programme, they logically complement and reinforce the impacts of ENERGIE.

The internet website address for the Fifth Framework Programme is
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Further information on DGXVII activities is available at the internet website address
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