



# THE PRINCIPLES OF PLANNING SEQUENCING IN RELATION TO WIND ENERGY

The purpose of this paper is to give an overview of the planning procedures in the UK, Republic of Ireland (ROI) and EU countries such as Germany and Denmark. It also gives detail on incentives used to increase wind energy generation in each of the countries already mentioned.

## **SUMMARY OF KEY POINTS**

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## **THE UK PLANNING SYSTEM**

Each country of the UK has its own distinct planning system where the issue of town and country planning is devolved to the Northern Ireland Assembly, the Scottish Parliament and the Welsh Assembly. While legislation may vary throughout the UK, authorities must take account of European and International legislation. Each country has its own set of planning policies, and the relevant Local Planning Authority in conjunction with its community, is responsible for the preparation of local planning policies which adhere to legislation at local, regional and national level.

### **The planning process in England**

Policy on planning in England is set by the Department for Communities and Local Government. The planning system in the UK (England and Wales) fell under review by the introduction of The Planning Act in December 2008. The recent Act introduces a new system for national planning, alongside developments to reform the Town and Country Planning System.

Local Planning Authorities in England are responsible for determining all wind turbine proposals under 50MW in capacity. Currently projects greater than 50MW in capacity are determined by The Department of Business, Enterprise and Regulatory Reform (BERR), in consultation with Local Planning Authorities, under section 36 of the Electricity Act 1989<sup>1</sup>. Under the provisions of the 2008 Planning Act<sup>2</sup>, it is expected by 2010, that all projects over 50 MW (both onshore and offshore) will be determined by The Infrastructure Planning Commission (IPC).

According to the Department of Energy and Climate Change; in consultation until 22<sup>nd</sup> February 2010 is the Draft National Policy Statements which apply to nuclear, renewables, fossil fuels, transmission networks and oil and gas pipelines. These statements will be used by the IPC when making decisions on applications for development consent.

#### **Preparation**

It is advisable for developers to contact their LPA and statutory bodies at an early stage in the selection and design of potential sites. In the case of wind energy, proposals can take the form of a planning application. Consultations at this stage can usefully inform initial stages of the EIA screening and scoping process (see below). They can also help LPAs assess the potential acceptability of specific proposals, particularly their compatibility with the relevant development plan<sup>3</sup>.

#### **Public consultation**

Where a proposal is likely to be potentially contentious, early consultation with the general public can be a useful way of spreading information about particular projects. It can also help to counter both uncertainty and misconceptions regarding the nature and impacts of particular proposals.

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<sup>1</sup> [Electricity Act 1989](#)

<sup>2</sup> [Planning Act 2008](#)

<sup>3</sup> [Department of Energy and Climate Change: Planning Process in England](#)

A public consultation is also a useful means of identifying legitimate public concerns about particular proposals, so that these can be addressed both in the detailed design of submitted proposals and in associated, supporting information.

#### Environmental Impact Assessment (EIA) screening<sup>4</sup>

A screening opinion from the LPA before submitting a planning application may be requested by the Developers. Its purpose is to inform the developer whether or not their proposed development, constitutes an EIA development. Once a decision is reached, the LPA takes account of the 'selection criteria' prescribed in Schedule 3 of the EIA Regulations<sup>5</sup>. The LPA can issue a request for a screening opinion, even if the developer has not. Should the developer disagree with an LPA's screening opinion that an EIA is required, then a screening direction can be requested from the Secretary of State.

#### EIA scoping<sup>6</sup>

Before making a planning application, a developer can request a 'scoping opinion' from the LPA. The LPA's indicates the information to be supplied within the proposed Environmental Statement (a scoping opinion).

The request for a screening or a scoping opinion should include:

- a plan sufficient to identify the land in question
- a brief description of the nature and purpose of the development and of its possible effects on the environment
- other information or representations the person making the request may wish to provide or make.

LPAs should adopt a scoping opinion within five weeks of receiving such a request, unless a longer period has been agreed in writing with the person making the request.

#### Production of Environmental Statements<sup>7</sup>

Schedule 4 of the EIA Regulations<sup>8</sup> sets out the information required for inclusion within Environmental Statements. This should include:

- a description of the proposal,
- assessment of its likely significant effects,
- a description of any proposed mitigation measures, and
- a non-technical summary.

Environmental Statements must be circulated to statutory consultation bodies for comment. These include the Environment Agency, the Countryside Agency and English Nature.

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<sup>4</sup> [Surrey County Council: Environmental Impact Assessment \(EIA\) Guidance note 1](#)

<sup>5</sup> [EIA Regulations 2009](#)

<sup>6</sup> [Communities and Local Government: Evidence Review of Scoping in EIA](#)

<sup>7</sup> [Department for Communities and Local Government: EIA: Guide to procedures](#)

<sup>8</sup> [EIA Regulation 2009](#)

## Environmental Impact Assessment (EIA) process<sup>9</sup>

### **ONSHORE**

The majority of onshore renewable energy proposals represent development and require planning consent, unless they constitute permitted development (which cannot apply to Schedule 1 development or to Schedule 2 development unless the local planning authority (LPA) has screened to the effect that an EIA is not required). Offshore renewable energy developments are subject to a different consenting process.

Onshore renewable energy proposals, fall within Schedule 2 of the Town and Country Planning (EIA) (England and Wales) Regulations 1999<sup>10</sup> (the EIA Regulations) and are therefore subject to an (EIA) if they are considered likely to have significant effects on the environment.

For new, electricity-generating stations over 50 megawatts, development consent under Section 36 of the Electricity Act 1989<sup>11</sup> is required from the Secretary of State for the Department of Business, Energy and Regulatory Reform (BERR). In such cases it is also usual for developers to ask the Secretary of State for deemed planning permission under Section 90 of the Town and Country Planning Act 1990<sup>12</sup> at the same time.

### **OFFSHORE**

The Secretary of State is responsible for all development consents for offshore renewable energy proposals of above 1 megawatt capacity in waters around England and Wales. Consents can be requested under two separate pieces of legislation: Section 36 of the Electricity Act 1989 or an order under the Transport and Works Act 1992<sup>13</sup>. In either case, associated licences will be required under the Food and Environmental Protection Act 1985<sup>14</sup> and an additional consent may be required under the Coast Protection Act 1949<sup>15</sup>.

## Dealing with planning applications for renewable energy

The majority of planning applications for renewable energy developments are dealt with by the relevant LPA. As well as publicising the application in order to invite comments from third parties, the authority may consult various other parties with relevant interests or expertise, depending on the location, size and likely impacts of the development.

Appeals against refusal of planning permission, or against a grant of permission with imposed conditions that the applicant finds unacceptable, are heard by the Planning Inspectorate on behalf of the Secretary of State.

## Submission

When submitting an application and the necessary plans and drawings, applicants should provide the appropriate fee and the number of copies needed for circulation to the statutory consultees. It is important to show the full extent of the development as

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<sup>9</sup> [Department for Communities and Local Government: EIA: Guide to procedures](#)

<sup>10</sup> [Town and Country Planning \(EIA\) \(England and Wales\) Regulations 1999](#)

<sup>11</sup> [Electricity Act 1989](#)

<sup>12</sup> [Town and Country Planning Act 1990](#)

<sup>13</sup> [Transport and Works Act 1992](#)

<sup>14</sup> [Food and Environmental Protection Act 1985](#)

<sup>15</sup> [Coast Protection Act 1949](#)

some renewable energy schemes can include work outside the main site, for example highway improvements to allow delivery of large turbine components.

A checklist of issues that should be covered in an application can be found on the [TNEI Services: Securing Planning Consent](#) webpage.

### Approval Time and Determination<sup>16</sup>

Unless a longer period of time has been agreed by the applicant and the LPA, if no decision has been made after eight weeks, the applicant can appeal on the grounds of non-determination.

In the case of applications accompanied by an EIA, the period of time available for determination is four months.

In the case of development consent applications submitted to BERR there is no specified time period for determination, but the Secretary of State will have a duty to reach a decision as expeditiously as they can. An LPA has 4 months in which to advise the Secretary of State of its views on an onshore development. If the LPA objects then a public inquiry is mandatory. The views of the LPA are therefore a crucial ingredient. In the case of offshore wind farm applications, the LPA has 6 weeks to provide its comments.

## **The planning process in Scotland**

According to the National Planning Policy Guideline 6 (NPPG 6) 2000<sup>17</sup>, the UK Government has overall responsibility for energy policy throughout the UK. However, certain responsibilities rest with the Scottish Ministers, such as electricity generation proposals over 50 MW (1 MW for offshore) which are authorised under section 36 of the Electricity Act 1989<sup>18</sup>, The Electricity (Applications for Consent) Regulations 1990 (No. 455)<sup>19</sup> and the associated Electricity Works (Environmental Assessment) (Scotland) Regulations 2000 (No 320)<sup>20</sup>. Electricity generation plants under these levels are dealt with by the planning system.

For all applications 50 MW and under, local authorities are able to charge a range of fees under the Town and Country Planning (Fees for Applications and Deemed Applications) (Scotland) Regulations 2004<sup>21</sup>. Applications that require the approval of Scottish Ministers incur a fee under The Electricity (Applications for Consent) Amendment (Scotland) Regulations 2006<sup>22</sup>.

Consent for overhead lines must be applied for and obtained separately from planning permission where there are separate procedures to deal with this under Section 37 of the Electricity Act 1989. Section 37 consent should be sought

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<sup>16</sup> [Department of Energy and Climate Change: Planning Process in England](#)

<sup>17</sup> [National Planning Policy Guideline 6](#)

<sup>18</sup> [Electricity Act 1989](#)

<sup>19</sup> [The Electricity \(Applications for Consent\) Regulations 1990 \(No. 455\)](#)

<sup>20</sup> [Electricity Works \(Environmental Assessment\) \(Scotland\) Regulations 2000 \(No 320\)](#)

<sup>21</sup> [Town and Country Planning \(Fees for Applications and Deemed Applications\) \(Scotland\) Regulations 2004](#)

<sup>22</sup> [The Electricity \(Applications for Consent\) Amendment \(Scotland\) Regulations 2006](#)

simultaneously with the planning or Section 36 consent for the development itself, in order that both can be considered together<sup>23</sup>.

### Environmental Impact Assessment

Renewable energy proposals, depending on their size and nature, fall to be determined under both the Town and Country Planning (Scotland) Act 1997 or under Section 36 of the Electricity Act 1989. Different EIA regulations apply, where under the Electricity Act 1989, the relevant EIA Regulations are The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000; see also "Guidance on the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000"<sup>24</sup>.

Wind farms fall under Schedule 2 of the Planning EIA Regulations (the Environmental Impact Assessment (Scotland) Regulations 1999)<sup>25</sup>, for example:

### **Schedule 2 projects**

EIA is only required if the following are likely to generate significant environmental effects:

- **Schedule 2 paragraph 3(a)** - industrial installations for the production of electricity, steam and hot water (unless in Schedule 1);
- **Schedule 2, paragraph 3(b)** - industrial installations for carrying gas, steam and hot water;
- **Schedule 2, paragraph 3(c)** - surface storage of natural gas;
- **Schedule 2, paragraph 3(d)** - underground storage of combustible gases;
- **Schedule 2, paragraph 3(h)** - installations for hydroelectric energy production;
- **Schedule 2, paragraph 3(i)** - installations for harnessing of wind power for energy production (wind turbines);
- **Schedule 2, paragraph 10(i)** - dams and other installations designed to hold water or store it on a long-term basis (unless in Schedule 1);
- **Schedule 2, paragraph 11(b)** - installations for the disposal of waste (unless in Schedule 1)

### Screening

Projects falling under the category Schedule 2 must be screened to establish if it is likely to have significant environmental effects. If this proves to be the case then EIA is required. To aid the screening procedure, guidance is given in SEDD Circular 15/1999<sup>26</sup>, paragraphs 36-40 where general guidance is provided, and at Annex A which gives indicative criteria where EIA is more likely to be required.

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<sup>23</sup> [PAN 45 \(revised 2002\): Renewable Energy Technologies](#)

<sup>24</sup> [Guidance on the Electricity Works \(Environmental Impact Assessment\) \(Scotland\) Regulations](#)

<sup>25</sup> [Planning EIA Regulations \(the Environmental Impact Assessment \(Scotland\) Regulations 1999\)](#)

<sup>26</sup> [SEDD Circular 15/1999](#)



With wind farms falling within Schedule 2, the need for EIA must be considered if the proposed development:

- is located within a 'sensitive area';
- involves the installation of more than 2 turbines;
- where the hub height of any turbine, or the height of any other structure exceeds 15 metres.

The likelihood of significant effects will generally depend upon the scale of the development, and its visual impact and other potential impacts. EIA is more likely to be required for commercial developments of 5 or more turbines, or more than 5 MW of new generating capacity.

### Scoping and Environmental Statement

Developers may undertake studies to fulfil both the objectives of the environmental impact assessment and licence or authorisation applications. To speed up the process, and where appropriate, developers should be encouraged to use the environmental statement to provide all the technical information required for all the various permissions and licences (see above Environmental Statements under England). A developer can request a scoping opinion from the LPA which seeks the LPA's opinion as to the information to be supplied within the proposed Environmental Statement.

When a planning authority decides that statutory EIA is not required, it is still open to them to use their powers under Article 13 of the General Development Procedure Order<sup>27</sup> to request additional environmental information.

### Approval time and Determination

Once a valid planning application has been received, the LPA must determine the proposal within 8 weeks, unless an extension in time is agreed with the applicant. The applicant can appeal against non-determination if after this period, no decision has been made or there is no agreement to an extension in the determination period. Applications accompanied by an EIA must be determined within 4 months<sup>28</sup>.

## **THE EU**

For the purpose of this paper, the EU countries that will be discussed are the Republic of Ireland, Germany and Denmark, as they are good examples and world class leaders in wind energy generation.

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<sup>27</sup> [General Development Procedure Order 1992](#)

<sup>28</sup> [Department for Business Innovation and Skills - Planning Process in Scotland](#)

*Providing research and information services to the Northern Ireland Assembly*

## The planning process in the Republic of Ireland

All large scale wind farms require planning permission for their development. Planning exemptions which have been published by the Department of the Environment have recently come into effect. These exemptions cover micro generation units with a maximum height of 13 metres for domestic turbines and units with a maximum height of 20 metres for businesses.

### Applications<sup>29</sup>

In the first instance, the grant of planning permission is a matter for local authorities. The Department of the Environment, Heritage and Local Government (DEHLG) is responsible for the planning regulations on wind farms in Ireland. They set out the general rules and regulations required to govern the planning process while individual county councils develop the mechanisms through which they implement those rules.

The Planning Department within local county councils is the authority through which planning proposals are granted permission. Applications must include:

- A site layout map
- A site location map
- Drawings of the planned turbines including their height and rotor diameter
- a site notice and notification in the appropriate national and/or local papers.

It is necessary for developers wishing to produce electricity, to be granted with a generator license from the Commission for Energy Regulation (CER). A developer requires a generator license for each separate development. Once this has been obtained, authorisation to construct is required from the CER also. To be allowed connection to the grid, it is essential to acquire a connection agreement from the grid operators: Electricity Supply Board Network or Eirgrid. Should this prove to be difficult, a developer has the option of building their own connection, for which planning permission is required.

An Bord Pleanála is responsible for the consideration of appeals against Local Authority decisions under the planning and Development Acts, 2000,<sup>30</sup> and with appeals under the Building Control Act 1990,<sup>31</sup> the Local Government (Water Pollution) Acts 1977<sup>32</sup> and 1990,<sup>33</sup> and the Air Pollution Act 1987.<sup>34</sup>

### Environmental Impact Assessment<sup>35</sup>

An Environmental Impact Assessment is necessary for wind energy developments that: 1) have over 5 turbines or 2) will have a total output greater than 5 MW. An EIA must be submitted along with the planning application (Section 176 of the Planning and Development Act 2000, and Article 93 and Schedule 5 of the Planning and Development Regulations 2001<sup>36</sup>)

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<sup>29</sup> [Irish Wind Energy Association \(IWEA\): Planning Regulations and Administration](#)

<sup>30</sup> [Planning and Development Act 2000](#)

<sup>31</sup> [Building Control Act 1990](#)

<sup>32</sup> [Local Government \(Water Pollution \) Act 1977](#)

<sup>33</sup> [Local Government \(Water Pollution\) Act 1990](#)

<sup>34</sup> [Air Pollution Act 1987](#)

<sup>35</sup> [DEHLG Planning Guidelines for Wind Farms](#)

<sup>36</sup> [Planning and Development Regulations 2001](#)

### Times Scales

Generally, the local planning authority must make a decision on a planning application within 8 weeks of receiving an application, but if the local authority needs more information, or the decision is appealed, it may take between 4 and 8 months. Worst cases can take 1 to 2 years<sup>37</sup>.

The local authority gives permission for planning by issuing a 'notice of intention'. Should no one appeal the decision to An Bord Pleanála within 4 weeks of the decision being made, the local authority then issues a 'grant of permission'.<sup>38</sup>

It is necessary to place a notice in local newspapers and to put up a site notice. An application must be received by the local authority within 2 weeks of giving public notice. From the date of receipt of the planning application, the site notice must remain in place for 5 weeks.

Planning permission granted to a wind farm development normally expires after 5 years, and it can take up to 6 years to process a grid connection application. This in turn can result in the expiration of many project's planning approval as projects can not commence building work until they receive a connection offer and authorisation to construct from CER<sup>39</sup>.

## **The planning process in Germany**

One of the guiding principles of the planning system in Germany is that all projects are to prevent or minimise the impacts on nature and the environment. Therefore the type and nature of a project determines the environmental regulations that are to be considered for project planning and permission.

Special environmental risk assessments are legally demanded for projects with expected substantial effects on nature and the environment.

Impacts which are non preventable are to be compensated by adequate measures, which are to be provided along with an application.

### Relevant legal issues

The main legislation which underpins the planning process for Wind Energy Generation is<sup>40</sup>:

- Federal Building Act<sup>41</sup>, → Regulations for the planning permission of wind turbines under "privileged" building projects.  
→ Projects with turbines as high as 50m total height

<sup>37</sup> [GSM Association, Base Station Planning in Europe \(2004\)](#)

<sup>38</sup> [Citizens Information Board: Public Service Information on Planning Permission](#)

<sup>39</sup> <http://www.iwea.com/index.cfm/page/currentissues>

<sup>40</sup> [Germany: National Status of Wind Energy](#)

<sup>41</sup> [The Federal Building Act 1997](#)

- Federal Spatial Planning Act → National Objectives, principles and basic conditions of “Spatial Planning” in compliance with the global principle of “Sustainable Development”  
→ Defining the spatial category of “Suitable Areas”
- Federal Immission Planning Act<sup>42</sup>. → Regulations for the planning permission of wind turbines under “immission relevant” projects  
→ Projects with turbines over 50m total height
- Federal Nature Conservation Act<sup>43</sup> → Regulations for the planning permission of wind turbines under “nature relevant” projects.  
→ Definition of protected/restricted areas and compensatory measures.
- Federal Environmental Risk Assessment Act → Regulations for the planning permission of wind turbine projects with expected substantial impacts on nature and the environment.

### The Approval process

Planning approval of a project is dealt with by the local authority of the territory or region the project is located in. The authority has “planning discretion” meaning that it has to assess the project in relation to its advantages and disadvantages. If the authority comes to the decision that the project will not fulfill the objectives of regional planning, it may not grant approval<sup>44</sup>.

Diagram 1 overleaf gives a step by step account of the planning application process in Germany.

### Planning Approval Time

The diagram above gives an account of the timescale for each of the stages of planning approval. It was with the introduction of the Infrastructure Acceleration Act in December 2006, that planning approval time was shortened<sup>45</sup>. This included:

- the speeding up of the EIA process and the issuing of environmental licenses
- new plans and approval system for connection between wind farms and the grid.

The Bill was introduced as an incentive to speed up and encourage the development of infrastructure at a national level i.e. renewable energy projects, transport networks

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<sup>42</sup> [Federal Immission Control Act](#)

<sup>43</sup> [Federal Nature Conservation Act](#)

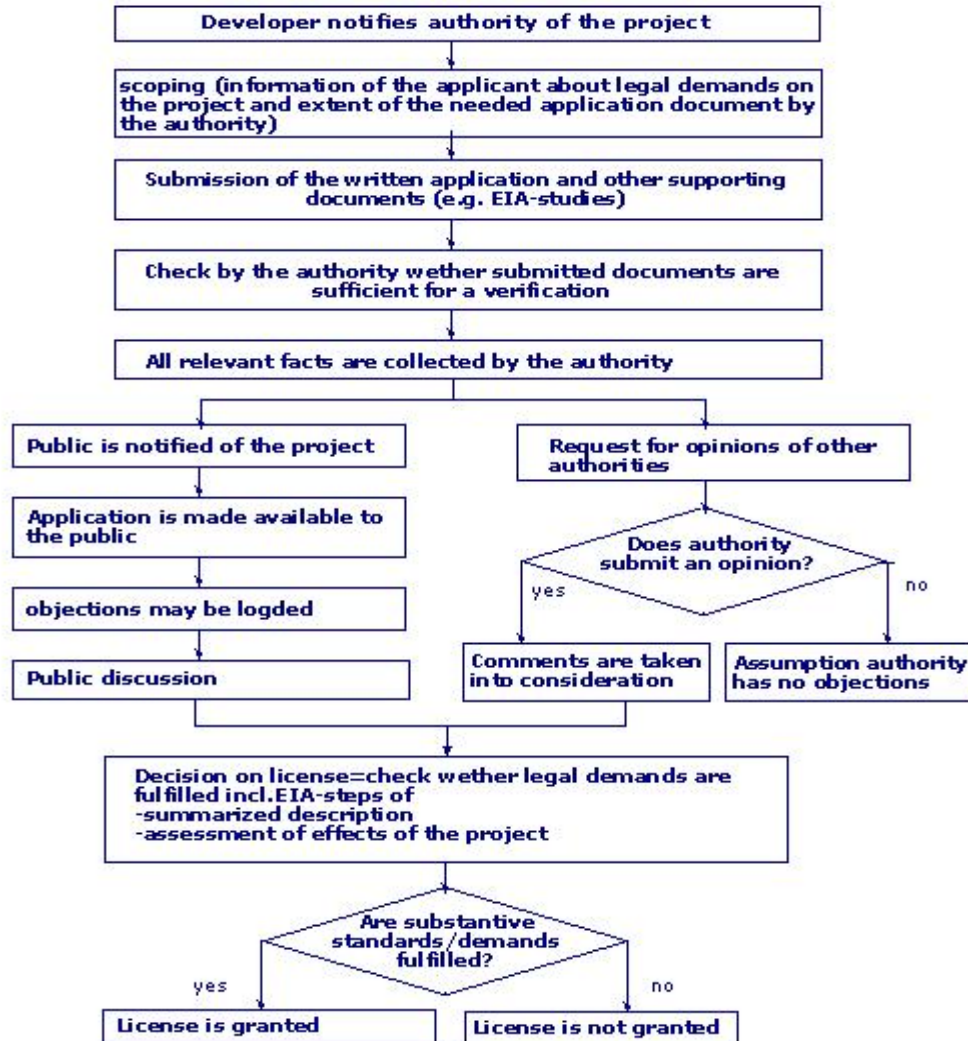
<sup>44</sup> [Penelope Project \( a resource tool for Environmental Law\): EIA Procedure in Germany](#)

<sup>45</sup> [Christain Haman and Michael Obst \( International law Office\): Renewable Energy Sources Act Changes Proposed to Benefit Offshore Wind Farms](#)

etc. It was suggested in a press release by the Federal Ministry of Transport, Building and Urban Affairs (26/10/06), that with the introduction of the new Bill<sup>46</sup>:

*“ the planning periods for large-scale infrastructure projects will on average be two and a half years shorter than today”*

**Diagram 1: Planning Application Process**



(Source: The Penelope Project for Environmental Law <http://www-penelope.drec.unilim.fr/penelope/library.htm>)

<sup>46</sup> [Federal Ministry of Transport, Building and Urban Affairs Press Release](#)  
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## The planning process in Denmark

In Denmark the public planning procedures were left to local trial and error. In 1992 more systematic planning procedures were developed at the national level, with directives for local planners. An executive order from the Minister of the Environment and Energy ordered municipalities (local authorities) to find suitable sites for wind turbines throughout the country. This "prior planning" which held public hearings in advance of any actual applications for turbine sites, helped the public acceptance of wind turbines.<sup>47</sup>

### The Danish Wind Turbine Certification Scheme

This technical certification scheme applies to both onshore and offshore projects. The scheme is managed by the Energy Agency under the Ministry of Climate and Energy and ensures that turbines are designed, manufactured and erected in accordance with stipulated safety, energy and quality related requirements.

#### **ONSHORE**<sup>48</sup>

The regulation for onshore wind energy sites, grid connection and subsidies are managed by the Danish Energy Agency under the Ministry of Climate and Energy.

The municipalities (local authorities) handle planning for onshore wind turbines, while the Agency for Spatial and Environmental Planning which is part of the Ministry of the Environment, manages legislation for planning activities in connection with onshore turbines.

The Ministry of the Environment is also responsible for dealing with the EIA of onshore projects and planning proposals at the general strategic level.

#### **OFFSHORE**<sup>49</sup>

Around 1997 another set of planning regulations were developed for offshore wind farms, with the national authority, the Danish Energy Agency being responsible for hearing all interested public and private parties. This "one stop shopping" method has facilitated the planning process considerably.

Conditions for offshore farms are stated under the Danish Electricity Supply Act, adopted by Parliament in November 2008. 3 licenses are required to establish an offshore wind project, which are issued by the Danish Energy Agency, these include:

1. A license to conduct preliminary studies for a future offshore wind project under specified conditions (section 13)
2. A license to establish the offshore wind farm under specified conditions
3. A license to produce electricity under specified conditions

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<sup>47</sup> Soren Khron, Danish Wind Energy Association (1992) *Wind Energy Policy in Denmark: 25 years of success- What Now?*

<sup>48</sup> [Danish Energy Agency, Onshore Wind Power](#)

<sup>49</sup> [Danish Energy Agency: Procedures and Permits for offshore Wind Parks](#)

**Environmental Impact Assessment**

If a project is speculated to have environmental impacts, has turbine heights over 80metres, or has more than 3 turbines, then an EIA must be carried out (the specific procedure for an EIA is described in Executive Order no.815, 28<sup>th</sup> August 2000)

**The Application Process**<sup>50</sup>

1. The developer submits the project to the municipality
2. The municipality issues a discussion paper for at least 2 weeks of public consultation regarding content in the EIA report.
3. The developer and the municipality prepare an EIA
4. A draft of municipal planning guidelines, along with the EIA report, is circulated for public consultation (at least 8 weeks).
5. Often the municipality will circulate the draft plans for public consultation, and along with the developer, will arrange a public meeting.
6. After the public phase is over, the municipality will make a decision about the project, and depending on the outcome, will issue an EIA permit and later a building permit.

**Timescale for permission**<sup>51</sup>

In theory there is no legal timescale for the decision to grant or refuse an application, however in practice, permission can take 3 to 6 months. It can take up to one or two years for exceptional cases.

In theory a decision to grant or refuse the application has no legal timescale. In practice however, permission takes 3 to 6 months. The worst cases are in the one-year range with exceptional cases taking up to two years.

**Incentives**

Please refer to the table provided overleaf, which demonstrates the various types of incentives offered throughout the UK, Republic of Ireland, Germany and Denmark.

For further Information, it may be useful to visit the following website of Global Renewable Energy, which is a database for searching polices/measures, offered to countries for Renewable Energy generation:

<http://www.iea.org/textbase/pm/?mode=re>

**INCENTIVES**

<b>Country</b>	<b>Renewables Obligation (RO)</b>	<b>Feed –In Tariffs (FITs)</b>	<b>Repowering/ Replacement</b>	<b>Subsidies</b>
<b>UK + Scotland</b>	Came into force in April 2002 as part of the Utilities Act (2000) RO Northern Ireland (NIRO) was	Comes into force in 2010 under The Energy Act 2008. For small-scale low-carbon electricity generation, up to a		

<sup>50</sup> [Denmark’s Wind Turbine Owner’s Association, Planning for wind turbines: Facts about wind](#)

<sup>51</sup> [GSM Association, Base Station Planning in Europe \(2004\)](#)



	<p>introduced April 2005<sup>52</sup>. Provides financial incentives for large scale renewable energy generation. It encourages electricity suppliers to source some of the electricity they sell to customers from renewable sources. Eligible renewable generators receive Renewables Obligation Certificates (ROCs) for each MWh of electricity generated. These certificates can then be sold to suppliers, in order to fulfil their obligation. Suppliers can either present enough certificates to cover the required percentage of their output, or they can pay a 'buyout' price for any shortfall. All proceeds from buyout payments are recycled to suppliers in proportion to the number of ROCs they present<sup>53</sup>.</p> <p>Renewables (Scotland) Obligation came into force in April 2002 as part of the Utilities Act (2000)<sup>54</sup></p>	<p>maximum limit of 5 megawatts (MW) capacity - 50 kilowatts (KW).</p> <p>FITs will guarantee a price for a fixed period for electricity generated using small-scale low carbon technologies. It is hoped this will provide and encourage individual households, communities, businesses etc to consider installing small-scale low carbon electricity generation technologies<sup>55</sup>.</p>		
<b>Country</b>	<b>Renewables Obligation (RO)</b>	<b>Feed –In Tariffs (FITs)</b>	<b>Repowering/ Replacement</b>	<b>Subsidies</b>

<sup>52</sup> <http://www.scotland.gov.uk/Publications/2008/10/29115428/8>

<sup>53</sup> The UK Low Carbon Transition Plan: National strategy for climate and energy (July 2009)

<sup>54</sup> <http://www.bwea.com/business/roc.html>

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[http://www.decc.gov.uk/en/content/cms/what\\_we\\_do/uk\\_supply/energy\\_mix/renewable/policy/feedin\\_tarriff/feedin\\_tarriff.aspx](http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/policy/feedin_tarriff/feedin_tarriff.aspx)



<b>ROI</b>		Administered by the Minister's Department. (REFIT) feed-in tariff offered to Developments banded by type of technology: Large-scale wind category – EUR 57 per MWh. Small-scale wind category – EUR 59 per MWh. Capacity limitation of 400 MW (later raised to 620 MW)15 years per contract. Support cannot continue beyond 2024 in any contract <sup>56</sup>		
<b>Germany</b>		FITs fixed by the German Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz - EEG) <sup>57</sup> Guaranteed priority grid access, transmission and distribution, and grid operators are obliged to purchase the electricity produced from these sources. <sup>58</sup>	Economic Incentives given by the EEG <sup>59</sup> by removing lower-capacity systems from the 1990's, their replacement both cleans up the landscape and at the same time achieves a significant growth in power generation capacity by erecting taller turbines <sup>60</sup>	
<b>Denmark</b>		Applied as a form of subsidy (see Subsidies section)	Owners of smaller/older turbines reluctant to replace/ upgrade their plant as they would lose their rights to above-market subsidies for that plant This incentive	Subsidies increased in summer 2008. Supported by the EUDP fund which distributes 750 mil DKK in 2009 and 1 bill DKK in 2010 <sup>62</sup> .  The type of subsidy received is

<sup>56</sup> [International Energy Agency \(IEA\), Energy Policies of IEA Countries: Ireland 2007 Review \(p.73\)](#)

<sup>57</sup> [Development of an Ecological Strategy for Onshore and Offshore Wind Power Use](#)

<sup>58</sup> [International Energy Agency, Energy Policies of IEA Countries: Germany 2007 Review \(p.69\)](#)

<sup>59</sup> [Development of an Ecological Strategy for Onshore and Offshore Wind Power Use](#)

<sup>60</sup> [Development of an Ecological Strategy for Onshore and Offshore Wind Power Use](#)

<sup>61</sup> [International Energy Agency, Energy Policies of IEA Countries: Denmark 2006 Review \(p.99\)](#)

<sup>62</sup> <http://www.ens.dk/en->

[US/supply/Electricity/Conditions\\_for\\_production\\_plants/Subsidies\\_for\\_generation\\_of\\_electricity/Sider/Forside.aspx](#)

			<p>system gives owners of new plants an additional subsidy for the production covered by a certificate from a decommissioned small turbine. E.g. onshore turbines connected to the grid from 1 January 2005 until 31 December 2009, receive an extra premium of up to 12 øre per kWh for 12 000 full load hours for production covered by a scrapping certificate from a 450 kW or less turbine decommissioned between 15 December 2004 and 15 December 2009<sup>61</sup></p>	<p>determined by the age of the plant and by when it was connected to the grid. Wind turbines (connected 2003) receive a price premium of 43 øre/kWh for 22 000 full load hours. Turbines (connected 2005) are eligible for a premium of 12.3 øre per kWh until the turbine is 20 years old.<sup>63</sup></p> <p>Household wind turbines below 25 kW receive a fixed feed in tariff of 60 øre/kWh<sup>64</sup>.</p>
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<sup>63</sup> [International Energy Agency, Energy Policies of IEA Countries: Denmark 2006 Review \(p.99\)](#)

<sup>64</sup> [http://www.ens.dk/en-US/supply/Electricity/Conditions\\_for\\_production\\_plants/Subsidies\\_for\\_generation\\_of\\_electricity/Sider/Forside.aspx](http://www.ens.dk/en-US/supply/Electricity/Conditions_for_production_plants/Subsidies_for_generation_of_electricity/Sider/Forside.aspx)