



ENVIRONMENTAL BALANCE IN DESIGN AND CONSTRUCTION

ELEMENT POWER IRELAND LTD.

**ENVIRONMENTAL IMPACT STATEMENT FOR THE
PROPOSED MAIGHNE WIND FARM IN NORTH COUNTY
KILDARE AND SOUTH COUNTY MEATH**

VOLUME 2 – MAIN EIS

CHAPTER 3 – POLICY

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3. POLICY

3.1 Introduction

European Union (EU) and Irish Government policies identify the development of renewable energy, including wind energy, as a primary strategy in implementing national energy policy. Presented below is a review of the policies and legislation, at International, European, national and local levels, which relate to the proposed Maighne Wind Farm.

3.2 International Global Policies

3.2.1 [United Nations Framework Convention on Climate Change](#)

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty negotiated at the United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro in 1992. Its ultimate objective was to achieve "... *stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system*."¹ There are 195 parties ratified to the Convention and these are subdivided into Annex I, Annex II, Annex B, Non-Annex I and Least Developed Countries.

The Framework Convention specifies the aim of developed (Annex I) parties stabilising their greenhouse gas emissions (carbon dioxide and other anthropogenic greenhouse gases not regulated under the Montreal Protocol) at 1990 levels, by the year 2000. The treaty did not set any limits or binding targets, instead, it provided a framework for negotiating specific international treaties ("protocols") that set binding limits on greenhouse gases. It does however, require all parties in Annex 1¹ (of which the European Union 15 (EU-15) forms part of) are required to prepare and publish National Inventory Report (NIRs) on emissions. The Environmental Protection Agency (EPA) is responsible for the preparation of Ireland's NIR.

The 20th session of the Conference of the Parties (COP) and the 10th session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol was held from 1 to 12 December. COP 20/CMP 10 was hosted by the Government of Peru, in Lima, Peru. A summary of the main points is as follows:

- pledges were made by both developed and developing countries prior to and during the COP that took the capitalisation of the new Green Climate Fund (GCF) past an initial \$10 billion target
- levels of transparency and confidence-building reached new heights as several industrialised countries submitted themselves to questioning about their emissions targets under a new process called a Multilateral Assessment
- the Lima Ministerial Declaration on Education and Awareness-raising calls on governments to put climate change into school curricula and climate awareness into national development plans.

3.2.2 [Kyoto Protocol](#)

In 1997, at one of COPs, the Kyoto Protocol which set legally binding obligations for developed countries to reduce their greenhouse gas (GHG) emissions in two commitment periods was established.

The first commitment period (2008 - 2012) applied to emissions of six main greenhouse gases (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆)), and set targets for:

- A 5% overall reduction in the emission of greenhouse gases in developed countries
- An average 8% reduction below 1990 levels within the EU.

The EU-15 and other European countries (some of which subsequently acceded to the EU) have individual GHG reduction and limitation targets under the Kyoto Protocol. Together, these European countries committed to achieve an annual emission reduction of 456 Mt CO₂-equivalent (CO₂eq) below 1990 levels over the period 2008 to 2012ⁱⁱ.

¹ Decision 3/CP.5

Ireland's contribution is a limit of 13% above 1990 greenhouse gas emission levels which corresponds to an average limit of 62.8 million tonnes (Mt) of carbon dioxide equivalent (CO₂eq) per annum during the period 2008 – 2012. Countries not fulfilling their obligations will be forced to purchase carbon credits on an open market from compliant countries.

The second commitment period applies to emissions from 2013 - 2020. All members of the European Union have binding targets in the second commitment period.

The EU-27 countries have committed to reduce their GHG emissions by at least 20% by 2020 compared to 1990 levels and to increase this commitment to a 30% reduction if other major emitting countries agree to similar targets under a global climate agreement.

Developing countries do not have binding targets under the Kyoto Protocol, but are still committed under the treaty to reduce their emissions. Actions taken by developed and developing countries to reduce emissions include support for renewable energy, improving energy efficiency, and reducing deforestation.

One of the key mechanisms introduced under the Kyoto Protocol is the international emissions trading scheme which allows developed countries to trade their commitments. They can trade emissions quotas among themselves, and can also receive credit for financing emissions reductions in developing countries.

The EU Emission Trading Scheme (ETS) came into operation on 1 January 2005 and was introduced to facilitate Member States achieve their commitments to limit or reduce greenhouse gas emissions in a cost-effective way. It is the largest such scheme in the world and allows participants to buy or sell emission allowances which means that emission cuts can be achieved at least at cost. The EU ETS is a 'cap and trade' scheme, in that it caps the overall level of emissions allowed but, within that limit, allows participants in the scheme to buy and sell allowances as they require.

These allowances are the common trading 'currency' at the heart of the scheme. One allowance gives the holder the right to emit one tonne of CO₂ or the equivalent amount of another greenhouse gas (CO₂eq).

The categories of activity covered by the EU ETS are set out in Annex 1 of the principal Directive (2003/87/ECⁱⁱⁱ) and the greenhouse gases to which the EU ETS applies to are set out in Annex II of the same Directive. While all six gases listed in Annex A of the Kyoto Protocol are included in Annex II, not all are in practical terms actually covered by the ETS and the listing of all in Annex II is perhaps a signal of the intention to extend the scheme in the future.

The ETS operates in periodic cycles that have come to be known as 'phases' as the EU ETS scheme is open ended with no termination date specified. Phase 1 ran from 2005 - 2007 and was known as the commitment period, Phase 2 covered 2008 -2012 (the Kyoto Phase) and Phase 3 extends from 2013 – 2020 and this phase ties in with the EU Commissions end date of 31 December 2020 for its own reduction in greenhouse gases.

Further changes proposed for the ETS commenced in 2013 through Directive 2009/29/EC. In summary Member states will no longer draw up National Allocation Plans (NAPs) – instead there will be a single EU-wide cap and allowances will be allocated on the basis of harmonised rules amongst other changes to the trading period etc.

3.3 EU Directives and Policies

3.3.1 Directive on the Promotion of the Use of Energy from Renewable Resources

The EU Directive on the Promotion of the Use of Energy from Renewable Sources (2009/28/EC)^{iv} sets a target of 20% of EU energy consumption from renewable sources by 2020 and a 20% cut in greenhouse gas emissions by 2020, the so-called 20:20:20 plan. The Directive recognises the need to promote renewable energy sources and technologies which will have a positive impact on:

- security of energy supply
- regional and local development opportunities
- rural development
- export prospects
- social cohesion
- employment opportunities.

As part of this Directive, Ireland’s overall national target for the share of energy from renewable sources in gross final consumption of energy in 2020 is 16% (increased from 3.1% in 2005)^v. The sectoral components of the overall 16% target are detailed in Table 3.1, which outlines each form of renewable energy supply (RES). The current share of renewable energy in these components is also presented.

Table 3.1: Target and Current Share of Renewable Energy in Energy Sectors

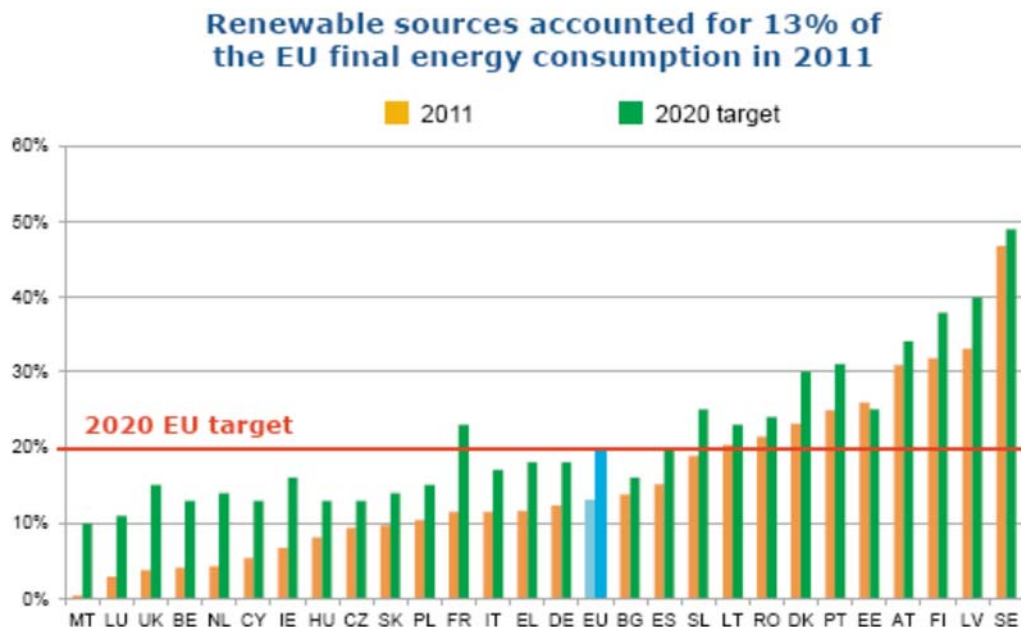
Form of Renewable Energy Supply	Target Share (2020)	2012 Position ^{vi}
Electricity (RES-E)	40%	19.6%
Heat (RES-H)	12%	5.2%
Transport (RES-T)	10%	2.4%

3.3.2 European 2020 Strategy for Growth

Europe 2020 is the EU’s ten-year growth strategy which identifies five headline targets:

1. **employment** - 75% of the population aged 20 - 64 to be employed
2. **research and development** - 3% of the EU’s GDP to be invested in research and development
3. **climate change and energy sustainability**
 - o a reduction in greenhouse gas emissions of 20% (or even 30%, if conditions are right)
 - o 20% of energy from renewables
 - o 20% increase in energy efficiency
4. **education** - reducing the rate of early school leavers to below 10% and at least 40% of 30 -34 year olds completing third level educations
5. **fighting poverty and social exclusion** - at least 20 million fewer people in or at risk of poverty and social exclusion.

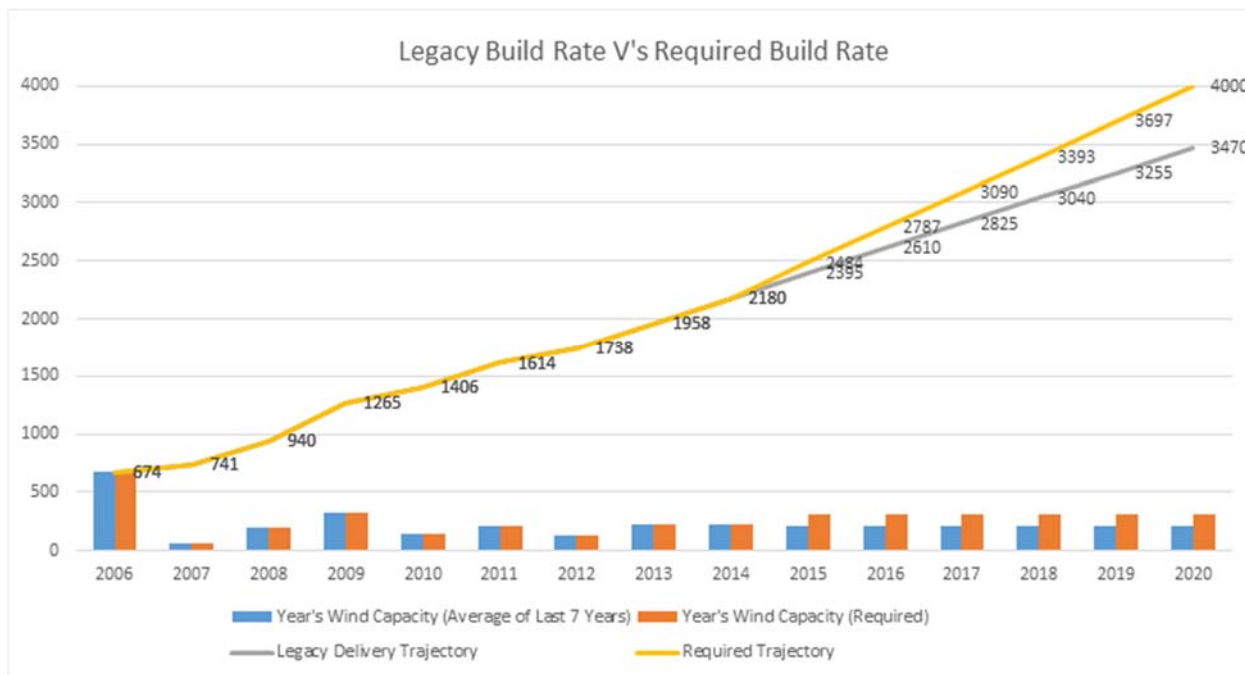
In 2011, the renewable energy share (RES) in the final energy consumption of the EU was 13% compared to 8.5% in 2005. With binding national targets, growth in renewable energy has increased but significant improvements are still required (to average 6.3% per year) to meet the overall 2020 target.



A recent update on progress to meeting the 2020 targets has been published by SEAI (Renewable Energy in Ireland 2013 - SEAI March 2015). This shows that Ireland is currently about 50% of the way to meeting its overall 16% target^{vii}. The European Environment Agency (EEA) also recently published a report 'Tracking progress towards Europe's climate and energy targets for 2020'^{viii} stated that Ireland was one of three EU countries that is at risk of not meeting its targets.

As of 2014, the installed electricity generating capacity of the Republic of Ireland's 221 wind farms was 2,647 Megawatts (MW)^{ix} none of which are located in Counties Kildare or Meath.

Recent analysis by the Irish Wind Energy Association of Ireland's wind energy development shows that at the current build rate Ireland is going to have 3,470MW of wind energy installed by 2020. This is likely to be short of the estimated 40% demand², IWEA have shown it as 4,000MW in the IWEA graph shown below).



Moreover the likely shortfall in installed generation capacity does not take into account the shortages that Ireland is going to experience in Heat and Transport. SEAI estimate* that Ireland "will not deliver 12% renewable energy in the heat sector by 2020. The estimated shortfall will be in the region of 2 to 4 percentage points of the 12%. This represents about 1 to 2 percentage points in terms of the overall national target of 16% mandated to Ireland under the 2009 Renewable Energy Directive". In addition there is likely to be an even more significant gap for the Transport target.

So, in order to meet Ireland's overall 2020 target, there is likely to be a requirement to add up to an additional 1,500MW of renewable energy from electricity generation to offset this shortfall or Ireland will incur significant fines.

SEAI suggests the cost to Ireland of missing the 2020 target may be in the range of €70 million to €140 million per percentage point shortfall (equivalent to €50 to €100 per MWh)^{xi}.

Maighne wind farm can contribute approximately 3% of the 2020 Electricity target is necessary and significantly more wind may be required in order to assure that Ireland meets its overall 2020 renewable target as well as being sustainable by making Ireland less dependent on importing fossil fuels for power generation.

If Ireland was penalised for not meeting targets, the Maighne Wind Farm would reduce those fines by around €40m per annum (based on the annual production of Maighne wind farm multiplied by €100 per MWh).

² the target is determined by the demand load in 2020 which is not exactly known until 2020 but last year the target was approx. 3,600MW based on forecast by Eirgrid

3.4 National Policies

3.4.1 National Spatial Strategy

This National Spatial Strategy (NSS) for Ireland 2002-2020 is a twenty year planning framework designed to achieve a better balance of social, economic, physical development and population growth between regions. Its focus is on people, on places and on building communities. Through closer matching of where people live with where they work, different parts of Ireland will for the future be able to sustain:

- a better quality of life for people
- a strong, competitive economic position and
- an environment of the highest quality.

The NSS states on page 36 that (emphasis added):

*“National and international evidence also demonstrates that rural areas have a vital contribution to make to the achievement of balanced regional development. This involves utilising and developing the economic resources of rural areas, particularly in agriculture and food, marine, tourism, forestry, **renewable energy**, enterprise and local services, while at the same time capitalising on and drawing strength from vibrant neighbouring urban areas. In this way rural and urban areas are seen as working in partnership, rather than competing with each other. This urban — rural partnership model is in line with the approach taken in the European Spatial Development Perspective (ESDP).”*

3.4.2 Green Paper – Towards a Sustainable Energy Future for Ireland

The Green Paper *Towards a Sustainable Energy Future for Ireland*^{xii} sets out the Irish Governments proposals on delivering an energy policy for Ireland around the three pillars of ensuring the security of Irelands energy supply, promoting the sustainability of Irelands energy supply and enhancing the competitiveness of energy supply in Ireland. The green paper puts forward policy targets and policy actions in order to achieve these aims and invites comments from interested parties in order to shape energy policy in Ireland into the future. Following on from the consultation process on this Green Paper, the White Paper *Delivering a Sustainable Energy Future for Ireland* was published.

3.4.3 White Paper – Delivering a Sustainable Energy Future for Ireland (2007)

Delivering a Sustainable Energy Future for Ireland^{xiii} sets out the Government’s Energy Policy Framework for the period 2007 - 2020 to deliver a sustainable energy future for Ireland. It is set firmly in the global and European context which puts energy security and climate change among the most urgent international challenges. A number of key issues relating to renewable energy include the government’s commitment to delivering a significant growth in this sector.

The renewable target was increased to 40% of the electricity consumed in 2020 by the Minister for the Environment, Heritage and Local Government in his Second Carbon Budget in October 2008. It is estimated that wind energy will provide up to 90% of the energy required to meet this target.

The “All Island Grid Study” (2008), undertaken by the Department of Communications, Energy and Natural Resources (DCENR), and the Northern Ireland Department of Enterprise, Trade and Investment, concluded that it was feasible to increase the share of electricity generated from renewable sources to 42% of total demand without incurring excess societal costs. The study concluded that the capacity of renewable plant required to deliver this contribution could include up to 6,000MW of wind, 360MW of base renewables such as biomass or biogas, and 285MW of other variable renewables such as wave or tidal energy. Irish government targets are based on the results of this study.

Ireland has doubled the connected renewable generating capacity over the past three years. According to the Irish Wind Energy Association *the Republic of Ireland’s total installed wind energy capacity is 2,263 MW generated from 188 wind energy developments in 23 counties*^{xiv}.

3.4.4 [National Renewable Energy Action Plan](#)

The National Renewable Energy Action Plan (NREAP)^{xv} sets out the Government’s strategic approach to deliver on Ireland’s 16% target under Directive 2009/28/EC. It acknowledges that Ireland has immense potential for the development of renewable energy particularly wind energy, both on and offshore, as well as wave energy.

The plan sets out Ireland’s national targets to achieve the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020, taking into account the effects of other policy measures relating to energy efficiency on final consumption of energy. The plan shows that the majority of the renewable electricity target will be delivered by onshore wind.

3.4.5 [Strategy for Renewable Energy 2012 -2020](#)

The Strategy for Renewable Energy was published by the DCENR in May 2012 and sets five strategic goals for renewable energy:

Strategic Goal 1 - Progressively more renewable electricity from onshore and offshore wind power for the domestic and export markets

Strategic Goal 2 - A sustainable bioenergy sector supporting renewable heat, transport and power generation

Strategic Goal 3 - Green growth through research and development of renewable technologies including the preparation for market of ocean technologies

Strategic Goal 4- Increase sustainable energy use in the Transport sector through biofuels and electrification

Strategic Goal 5 - An intelligent, robust and cost efficient energy networks system.

The Strategy acknowledges that the Government is confident that Ireland has the capability to achieve its 2020 target for renewable electricity, primarily through onshore wind power.

With relevance to Maighne Wind Farm, the Strategy highlights the economic benefits the development of projects of this nature may have for the Irish economy:

“Further strategic deployment of onshore wind projects will develop a base of indigenous and foreign companies and create employment in the short-term in wind farm construction, possible turbine component manufacturing and servicing, the opportunity to capture international supply chain opportunities and the manufacture of niche onshore renewable energy generating equipment.”

A key action of the Strategy is to:

“Support delivery of the 40% target for renewable electricity through the existing GATE processes.”

3.4.6 [REFIT](#)

Since 1994, the government has sponsored various schemes whereby wind energy developments could acquire a contract to sell their electricity to the national grid. The Renewable Energy Feed in Tariff scheme, or REFIT, was set up in 2006 to support the construction of an initial target of at least 400MW of renewable energy-powered electricity. This scheme promotes new renewable generation to meet 2010 and subsequent climate change and electricity targets by providing financial support in the form of a minimum price per unit of energy for long-term power purchase agreements.

The initial aim of the scheme (REFIT 1) was to more than double the contribution of renewable sources in electricity production from 5.2% in 2004 to 13.2% by 2010, by increasing the total capacity of renewable energy technologies to 1,450MW. Additional renewable categories have been added to the scheme to ensure the national 40% target for 2020 can be achieved^{xvi}.

The REFIT 2 scheme was opened in March 2012 for onshore wind, small hydro and landfill gas. The REFIT 3 scheme was opened in February 2012 for biomass technologies.

3.4.7 Green Paper on Energy Policy in Ireland (2014)

The Green Paper on Energy Policy in Ireland was published by the DCENR in May 2014 with the purpose of this energy policy:

“To provide the regulatory and financial framework to deliver a national energy system that enables a sustainable quality of life.”^{xvii}

The six policy priority areas in the Green Paper are:

- empowering energy citizens

In this priority the emphasis is on informing and raising awareness of energy production and consumption to citizens. It aims to reduce energy costs and carbon emissions from homes. Suggesting ways to adapt and change relationships between energy suppliers and citizens.

The report goes on to say:

“The relationship between energy suppliers and their customers will change to one of energy providers covering services such as home retrofits, advisors on energy efficiency and renewable energy options. Smart meters will give unprecedented access to data on how we use energy and how much of it we use.”

This priority's aim is to start conservation on how energy is used and supplied in Ireland.

- **Markets And Regulation**

In this priority the questions are:

- I. what long-term approach we should take to electricity and gas market integration after 2016
- II. whether any additional regulatory measures need to be taken with regard to increasing competition between energy providers, and their impact on energy prices for consumers
- III. the role of the regulator (the commission for energy regulation (CER)) in ensuring a stable and predictable regulatory framework.

- **planning and implementing essential energy infrastructure**

This priority discusses the need for improved energy infrastructure. It discusses the topics of:

- I. how increasing shares of renewable electricity can be integrated to the Irish electricity grid while at the same time meet increasing electricity demand
- II. what steps are necessary to improve electricity and gas systems integration
- III. how oil storage and refining in Ireland can be secured
- IV. what needs to be done to improve the planning process of energy infrastructure in terms of empowering stakeholders and increasing efficiency for project developers.

- **ensuring a balanced and secure energy mix**

Driven by the pillars of competitive, secure and clean energy, Ireland needs to work towards achieving the right energy mix. The main areas discussed in this theme are:

- I. how to optimise the use of our indigenous natural resources
- II. our dependence on fossil fuels in transport and heating
- III. new approaches to energy storage and emergency planning that might be needed.

- **putting the energy system on a sustainable pathway**

This priority drives home that there is a real need to shift from Ireland's dependence on imported fossil fuels to a more indigenous, low-carbon economy based on renewable energy, energy efficiency and smart networks. The main areas covered in this theme are:

- I. how to enable a radical improvement in energy efficiency
- II. what measures are needed to upscale the use of renewable energy across the sectors where it is most beneficial
- III. sustainable development of the grid
- IV. how to maximise job creation during the energy transformation
- V. the role of SEAI in facilitating our shift to a sustainable energy pathway
- VI. how climate change and our international mitigation commitments will affect our energy system.

- **Driving Economic Opportunity**

This priority discusses how the energy sector needs to create jobs and protect existing ones. The main areas covered in the economic opportunity theme include:

- I. the measures needed to ensure a well-equipped energy workforce
- II. how to encourage strong investment in research and development
- III. fostering strategic partnership between industry and academia
- IV. how to improve the gathering of relevant energy data and develop modelling hubs to process it
- V. developing a collaborative governmental approach to energy policy.

3.4.8 National Climate Change Strategy 2007-2012

The second National Climate Change Strategy, published in 2007, provides a framework for action to reduce Ireland's greenhouse gas emissions to comply with the target, set by the EU, to reduce greenhouse gas emissions by 20% on 1990 levels by 2020. The strategy states that:

"Electricity generation from renewable sources provides the most effective way of reducing the contribution of power generation to Ireland's greenhouse gas emissions. The Government has therefore established ambitious national targets for the contribution of renewables to power generation: 15% of electricity consumed will be from renewable sources by 2010 and 33% by 2020. These are above and beyond existing EU targets."

3.4.9 Ireland's Greenhouse Gas Emission Projections 2013-2030

The National Climate Change Strategy designated the Environmental Protection Agency (EPA) with responsibility for developing annual national emission projections for greenhouse gases for all key sectors of the economy, including transport.

The International Panel on Climate Change has put forward its clear assessment that the window for action on climate change is rapidly closing and that renewable energy sources such as wind energy will have to grow from 30% of globally electricity at present to 80% by 2050 if we are to limit global warming to below 2 degrees^{xviii}. Earlier this year Minister Kelly stated that *"As a nation we must do everything in our power to curb our emissions"*

The EPA's most recent publication (May 2014), stated that current projections indicate that Ireland is not on a pathway to a low-carbon economy. Total national greenhouse gas emissions are projected to, at best, decrease by an average of 0.4% per annum up to 2020 if all national policies are implemented and delivered. Furthermore, emissions are projected to increase between 2020 and 2030 (12% in total), with transport a key contributor to this trend, in the absence of additional policies and measures. However, it should be noted that ^{xix}renewable electricity generation in the Republic of Ireland is estimated to have saved 778 ktoe of fossil fuel, with an associated CO₂ emissions reduction of 1.94 million tonnes. Wind generation is the largest contributor, with savings estimated at 586 ktoe of fossil-fuel and a CO₂ emissions reduction of 1.51 million tonnes.

3.5 Regional and Local Policies

3.5.1 Regional Planning Guidelines (RPG's)

The RPG's aim to give regional effect to national planning policy under the National Spatial Strategy and to guide the development plans for each county. The RPG's inform the Development Plans in each Council area and cover the 12 year period from 2010 to 2022. The Planning Act requires that the Regional Planning Guidelines be reviewed before 2016^{xx}.

On 1 June 2014, the eight Regional Authorities in Ireland, set up in 1994 under the Local Government Act 1991 (Regional Authorities) Establishment Order 1993, dissolved and the functions, staff, assets and liabilities of the Mid-East Regional Authority and the Midland Regional Authority were transferred on a transitional basis to the two regional assemblies, the Southern & Eastern Regional Assembly (S&ERA) and the Border Midland and Western (BMW) Regional Assembly respectively. From 1 January 2015, the two regional assemblies will be replaced by three regional assemblies, with the former Mid-East and Midlands Regions included under a new Midlands and Eastern Regional Assembly, based in Dublin^{xxi}.

The current Regional Planning Guidelines (RPG's) will remain in place. It is proposed that they will be replaced in time by new Regional Spatial & Economic Strategies^{xxii}.

3.5.1.1 *Regional Planning Guidelines for the Greater Dublin Area 2010 - 2022*

The current Regional Planning Guidelines for the Greater Dublin Area (GDA), which came into effect on 15 June 2010, caters for the two Regional Authority areas formerly known as the Dublin Regional Authority and the Mid-East Regional Authority^{xxiii}. These guidelines cover the Councils of Dun Laoghaire-Rathdown, Dublin City, Fingal and South Dublin in the Dublin Region and Kildare, Meath and Wicklow County Council areas in the Mid-East Region.

The Regional Planning Guidelines cover the 12 year period from 2010 to 2022 and sets out the planned direction for sustainable and balanced growth within the Greater Dublin Area and by giving regional effect to national planning policy under the NSS.

The guidelines discuss supporting the development of economic clusters in strategic areas and supporting policies which promote clustering activities outside of the core economic areas including those related to green economy projects such as renewable energies. Also discussed is the need for a study on the wind energy potential of different areas and producing regionally consistent new land use policies and objectives and associated development management guidance to potential projects.

The policies and recommendations of the Guidelines on renewable energy development are contained in Chapter 3 Economic Development and in Section 6.6 Energy and Communications. Those policies which are considered the most relevant are summarised in Table 3.2 over.

Table 3.2: Extracts from the Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022

Strategic Recommendations	Description
ER6 (Economic Development)	Support the development of economic clusters and sectoral opportunities around the RPG strategic growth towns and core economic areas and support policies which facilitate opportunities for clustering activities which have a tangible locational requirement outside these centres including those relating to green economy projects such as renewable energies – e.g. wind energy and bio fuel crop production; innovation and eco parks; food production and agri-business; horticulture and rural based tourism.
PIR28 (Energy & Communications)	To ensure that planning policy at Local Authority Level reflects and adheres to the principles and planning guidance set out within Department of the Environment Heritage and Local Government publications relating to 'Telecommunications Antennae and Support Structures', 'Wind Energy Development' and any other

Strategic Recommendations	Description
	relevant guidance which may be issued in relation to communications and sustainable energy provisions.
PIR34 (Energy & Communications)	That a study is undertaken on wind energy potential by local authorities jointly in the GDA focusing on suitable areas for larger wind energy projects, role of micro wind energy in urban and rural settings and the potential for wind energy within industrial areas with the outcome presenting regionally consistent new land-use policies and objectives and associated development management guidance to potential projects.

As outlined in Chapter 3 of the Regional Planning Guidelines for The Greater Dublin Area:

“The Wind Energy Development Guidelines for planning authorities 2006 are designed to ensure consistency of approach to wind energy developments and provide clarity to developers and local communities. The RPGs support these developments in statutory and policy planning processes.”

3.5.2 Kildare County Development Plan 2011 - 2017

The planning policies and objectives for County Kildare are set out in the Kildare County Development Plan (KCDP) 2011-2017. The policies and objectives of the Authority on renewable energy development are contained in Chapter 8 Energy and Communications. As outlined in Section 8.1 Energy Background, in order to meet national targets as set out in EU Directive 2009/28/EC *“Kildare County Council is committed to developing a more diverse range and combination of energy sources”*.

Section 8.5.1 Wind Energy states that:

“In general, areas in close proximity to grid connections and outside designated heritage sites may be suitable locations for the provision of wind energy. It is recognised however that certain areas, which are suitable for the exploitation of large-scale renewable energy, may also coincide with the county’s designated sensitive and scenic areas.”

Section 8.11 Energy Policies and Section 8.13 Energy Objectives continues on to identify the County’s Policies and Objectives in relation to Energy and Wind, with the most pertinent transposed in Table 3.3 over.

Table 3.3: Extracts from the Kildare County Development Plan 2011 - 2017

Policy/ Objective	Description
Policy ER 2	To support regional, national and international initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which make use of the natural resources in an environmentally acceptable manner.
Policy ER 7	To provide energy conservation and efficiency measures and facilitate innovative building techniques that promote energy efficiency and use of renewable energy sources in accordance with national policy and guidelines.
Policy WE 1	To have regard to the Department of the Environment, Heritage and Local Government Guidelines for Planning Authorities on Wind Energy Development (2006) in assessing all planning applications for wind farms.
Policy WE 2	To encourage the development of wind energy in suitable locations in an environmentally sustainable manner and in accordance with Government policy.
Policy WE 3	To ensure that the assessment of wind energy development proposals will have regard to: <ul style="list-style-type: none"> • the sensitivity of the landscape • the visual impact on protected views, prospects, scenic routes, as well as local visual impacts • the impacts on nature conservation designations, archaeological areas and historic structures, public rights of way and walking routes • local environmental impacts, including noise and shadow flicker • the visual and environmental impacts of associated development such as access roads, plant and grid connections • the scale, size and layout of the project, any cumulative effects due to other projects • the impact of the proposed development on protected bird and mammal species.
Objective ENO 1	To examine the possibility of designating appropriate areas of the county as being suitable for the production of wind energy.
Objective ENO 2	To prepare and implement an Energy Strategy, as a support to a structured response to energy cost changes and to work with central government to reduce market volatility. This could then assist community stakeholders and the renewable energy sector to cooperate in developing appropriate projects of sufficient scale with a stable demand and thereby attract employment investment.

Kildare Landscape Character Assessment

A Landscape Character Assessment was prepared for County Kildare in 2004 and is incorporated into the Development Plan as Appendix 3. Landscape policy is dealt with in Chapter 14 of the main document entitled Landscape, Recreation and Amenities. There are four major landscape character types; Uplands; Lowland Plains and Boglands; Transitional Lands; and, River Valleys and Water Corridors. Nearly all of the proposed turbines are contained within the Lowland Plains and Boglands landscape type but with some skirting the edges of water corridors associated with the Grand Canal and Royal Canal. There are also proposed turbine clusters in close proximity to the 'upland' areas known as the Northern Hills (Newtown Hills) and the 'Chair of Kildare' Hills (Red Hill, Dunmurry Hill, Allen Hill). These are the Drehid-Hortland and Cloncumber clusters respectively.

Fifteen geographically distinct landscape character areas are derived from the main landscape character types. All of the proposed turbines (except the two in Meath) are spread between two of these, which include the 'North-western lowlands' and the 'Western Boglands'. The 'Grand Canal', 'Northern Hills' and 'Chair of Kildare' hills are each considered to be a distinct landscape character areas in their own right and, as described above, there are proposed turbines in relatively close proximity to each of these LCA's.

The landscape sensitivity for the North-Western Lowlands is low, therefore it is 'tolerant to change' and has the 'ability to accommodate development pressure'. The Western Boglands has a medium sensitivity landscape rating which 'can accommodate development pressure but with limitations in the scale and magnitude'. Section 14.4.2 outlines that 'all developments are unique and at micro / local level landscapes vary in terms of their ability to absorb development and each site should be assessed on its individual merits.'



Figure 3.1: Excerpt from Map 14.1 of the Kildare CDP showing the Maighne Wind Farm sites in the context of Landscape Character Areas

The Landscape Character Areas are assigned to 3 classes of landscape sensitivity in map 14.2 (Landscape Sensitivity Areas). This indicates that the Western Boglands LCA is considered to be of medium sensitivity and the North-western Lowlands are of low sensitivity. Both of the surrounding LCAs 'Northern Hills' and the 'Chair of Kildare Hills' are deemed to be of high sensitivity. It should be noted that County Kildare does not yet have an adopted Wind Energy strategy. The Wind Energy strategy would usually be driven by the Landscape Character Assessment and in particular the landscape sensitivity ratings assigned to each of the LCAs. Relevant landscape policies in relation to the 'Lowland plains and Boglands' areas are found at 14.8.2 of the County Development Plan and include;

LL 1: To recognise that the lowlands are made up of a variety of working landscapes, which are critical resources for sustaining the economic and social well-being of the county.

LL 2: *To continue to permit development that can utilise existing structures, settlement areas and infrastructure, whilst taking account of the visual absorption opportunities provided by existing topography and vegetation.*

LL 3: *To recognise that this lowland landscape character area includes areas of significant landscape and ecological value, which are worthy of protection.*

LL 4: *To recognise that intact boglands are critical natural resources for ecological and environmental reasons.*

LL 5: *To recognise that cutaway and cut-over boglands represent degraded landscapes and/or brownfield sites and thus are potentially robust to absorb a variety of appropriate developments.*

These lowland landscape policies clearly indicate a pragmatic approach to development within these robust landscape areas, but with a measured degree of caution with respect to habitat value. This is discussed further in Chapter 15 – Landscape and Visual Assessment.

3.5.3 Meath County Development Plan 2013 - 2019

The planning policies and objectives for County Meath are set out in the Meath County Development Plan (MCDP) 2013-2019. The policies and objectives of the Authority on renewable energy development are contained in Chapter 8 Energy and Communications. Section 8.1 - Energy continues on to state the County's Policies and Objectives in relation to Energy, with the most pertinent transposed in Table 3.5.

As outlined in Section 8.1.3 Renewable Energy:

"Meath is committed to developing a more diverse range and combination of energy sources including wind energy, micro hydro power, solar energy, biofuels, geothermal (deep and shallow), anaerobic digestion and combined heat and power in order to deliver on the targets set down in the National Renewable Energy Action Plan (NREAP) Ireland."

The potential feasible renewable energy options for the county include: Wind - onshore wind, offshore wind (single turbines and groups). 'It will be an objective of the current plan that Meath County Council will investigate the potential of renewable energy identified in the initial assessment areas with a view to developing a renewable energy strategy for the County.'

Table 3.4: Extracts from the Meath County Development Plan 2013 - 2019

Policy	Description
Policy EC POL 1	To facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations, so as to provide for the further physical and economic development of Meath.
Policy EC POL 2	To support international, national and county initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which makes use of the natural resources of the county in an environmentally acceptable manner, where it is consistent with proper planning and sustainable development of the area.
Policy EC POL 3	To encourage the production of energy from renewable sources, such as from biomass, waste material, solar, wave, hydro, geothermal and wind energy, subject to normal proper planning considerations, including in particular, the potential impact on areas of environmental or landscape sensitivity and Natura 2000 sites.
Policy EC POL 4	To support the National Climate Change Strategy and, in general, to facilitate measures which seek to reduce emissions of greenhouse gases.

Policy	Description
Policy EC POL 13	To ensure that energy transmission infrastructure follows best practice with regard to siting and design particularly to ensure the protection of all important recognised landscapes.
Policy EC POL 20	To encourage the development of wind energy, in accordance with Government policy and having regard to the Landscape Characterisation Assessment of the County and the Wind Energy Development Guidelines (2006).
Policy EC POL 21	To support the preparation of a study on wind energy potential by local authorities jointly in the GDA.
Objective EC OBJ 1	To ensure that all plans and projects associated with the generation or supply of energy or telecommunication networks will be subject to an Appropriate Assessment Screening and those plans or projects which could, either individually or in-combination with other plans and projects, have a significant effect on a Natura 2000 site (or sites) undergo a full Appropriate Assessment.

Meath Landscape Character Assessment

A Landscape Character Assessment was prepared for county Meath in 2007 and this is incorporated into the County Development Plan 2013–2019 as Appendix 7. The Landscape Character Assessment identifies four generic Landscape Character Types (LCT’s) for the county including; Hills and Upland Areas; Lowland Areas; River Corridors and Estuaries and; Coastal Areas. The two turbines straddling the Meath/Kildare border at Longwood are fully contained within the ‘Lowland Areas’ Landscape Type and LCA6 – Central Lowlands.

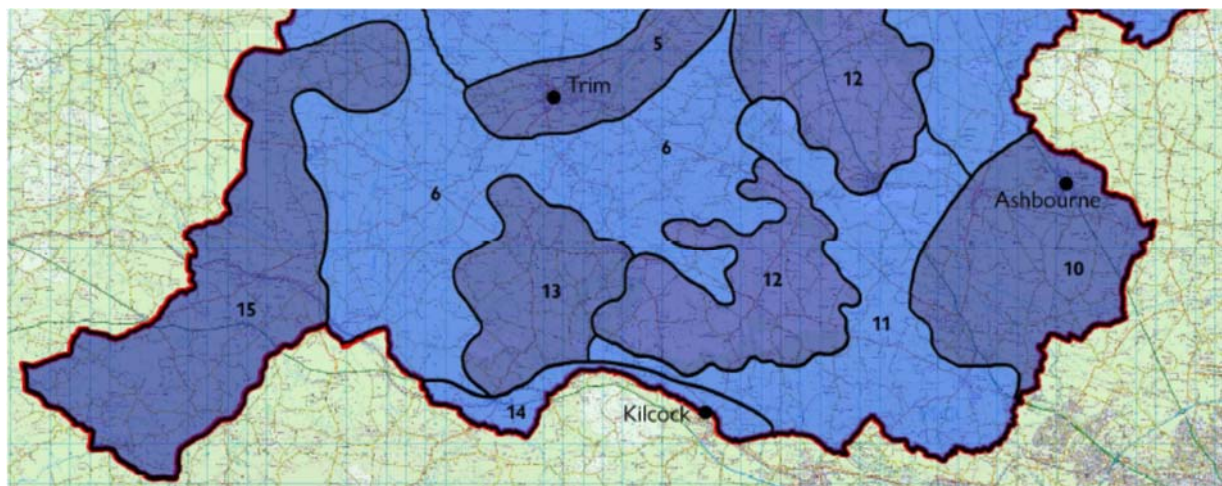


Figure 3.2: Excerpt from Meath Landscape Character Assessment indicating relevant LCA

LCA6 – Central Lowlands

Key Characteristics -

“Complex drumlin landform created by glacial movement.”
“The central lowlands have a diverse geological make up with the north east comprising of shaly limestone and sandstone and micaceous and pebbly sandstone. The rest of the lowlands formed from calp limestone.”
“In the south west of the central lowlands a mixture of well drained soils and peaty soil have created a more diverse landscape with areas of fertile agricultural land interspersed with conifer plantations and birch woodland.”
“Mix of small - medium rough pasture fields.”
“Longwood is the main settlement. Settlement type predominantly small villages with several medium to large villages.”
“Longwood: Large village with small-scale attractive centre, although through traffic is considerable. No new development in centre but large housing developments on the outskirts.”

Landscape Value -	High
Landscape Sensitivity -	Medium
Landscape Importance -	Regional
Capacity for Wind Energy -	Low - Potential to accommodate wind farms “due to the high number of receptors but medium potential capacity to accommodate single turbines because extensive views could be more easily limited by vegetation and through careful location.” Medium – Potential to accommodate “underground services as the small scale farmland and variety of land use is not as sensitive to change and is not as archaeologically rich as other areas although the loss of landscape features such as hedgerows would need to be avoided to minimise negative impacts.”

Meath Strategic Environmental Assessment (SEA) Environmental Report

The Meath County Development Plan 2013 – 2019 includes a detailed Strategic Environmental Assessment (SEA) Environmental Report which refers to renewable energy and the potential for wind energy in the county. Section 4.9.6 of the SEA Environmental Report titled ‘Energy’ refers to an assessment carried out in 2002 of Meath’s energy provision which concluded that the county has the potential to increase its’ provision of renewable energy through the use of a number of options, including on and offshore wind farms. This section further states that

“Wind and hydro are likely to become two of the most viable forms of renewable energy in the County. Specifically in relation to wind energy and of significant relevance to all areas of the Country is the SEAI’s Wind Atlas. This is a digital map of Ireland’s wind energy resource and provides detailed information on wind speeds, electricity transmission and distribution networks for specific locations around Ireland at national and county levels. It can provide assistance to developers and policy makers alike. Presently it is used by some local authorities to help identify areas suitable for wind energy developments.”^{xxxiv}

Section 4.9.7.9 of the SEA states that:

“County Meath is overly reliant on external and non-renewable energy sources. While renewable energy is to be welcomed any new wind farm development within Meath must be carefully sited and designed so as to avoid negative impacts on the protected views and landscapes of the County.”

Table 4.15 of this SEA Environmental Report outlines the Landscape Character Areas as set out in the Meath Landscape Character Assessment and “the potential capacity of each LCA to accommodate various classes of development”. As indicated in Map 01, the proposed development site is contained within ‘LCA6 – Central Lowlands’. Table 4.15 of the SEA indicates that the ‘Central Lowlands’ has low-medium capacity to accommodate wind turbines, medium capacity to accommodate under-ground services and has medium capacity to accommodate overhead cables, masts, sub-stations.

3.6 Other Relevant Guidelines

3.6.1 Department of the Environment, Heritage and Local Government – Wind Energy Development - Planning Guidelines

The Wind Energy Development Planning Guidelines (2006) published by the Department of the Environment, Heritage and Local Government (DoEHLG)^{xxv} offer advice to planning authorities assessing planning applications for wind farm developments. The guidelines set out criteria which assist in the identification of suitable locations for wind energy development. They are also of assistance to developers and the wider public in considering wind energy development.

We are aware that the DoEHLG Wind Energy Development Planning Guidelines are currently being revised and should these guidelines be finalised in advance of a planning decision for this proposed development, with shadow flicker and noise requirements being amended, the proposed development can be modified to comply with the proposed planning requirements and guidelines.

3.6.2 Irish Wind Energy Association – Best Practice Guidelines for the Irish Wind Energy Industry

The 'Best Practice Guidelines for the Irish Wind Energy Industry' were published by the Irish Wind Energy Association in 2008^{xxvi} with Guideline aims updated in 2012^{xxvii}. These guidelines encourage responsible and sensitive wind farm development, and provide assistance and recommendations for those developing onshore wind projects in Ireland.

3.6.3 Commission for Energy Regulation (CER) – Gate System

The Gate 3 Offer Project refers to the third round of connection offers that were issued to generators under the Group Processing Approach (GPA) by the System Operators (EirGrid and ESB Networks). The GPA allows for strategic processing of generation applications for grid connection and was introduced by the Commission for Energy Regulation (CER) in 2004. It allows applications to be processed by the System Operators in groups or batches known as 'Gates'.

The scope is based on the CER's decision papers CER/08/260 CER Direction on Criteria for Gate 3 Renewable Generator Offers and CER/09/191 Direction on Conventional Offer Issuance Criteria and Matters Related to Gate 3. It involves offers for connection to circa 4,000MW of wind generation and 1,700MW of conventional generation. The 4,000MW of wind developments which received an offer as part of Gate 3 provides for the 40% renewable generation target.

It is envisaged that Maighne Wind Farm will use a Gate 3 connection Agreement.

3.6.4 RTÉ (2RN) Protocol

2RN were consulted during the pre-planning stage. A standard protocol agreement will be prepared and signed between the developer and RTÉ prior to the commencement of the development. The developer has given a commitment to correct any deterioration in television reception should they arise. This is discussed in further detail in Chapter 16 Telecommunications and Aviation.

3.6.5 Forestry Guidelines

There are a number of Forestry Guidelines which are the mechanisms by which the Forest Service will ensure that the environmental aspects are implemented. These are:

- Forestry and Water Quality Guidelines
- Forestry and The Landscape Guidelines
- Forestry and Archaeology Guidelines
- Forest Biodiversity Guidelines
- Forest Harvesting and Environmental Guidelines
- Forest Protection Guidelines.

3.7 Conclusions

The proposed Maighne Wind Farm development will comply with all the relevant legislation, directives and policy objectives as outlined in this Chapter. It will contribute significantly towards achieving the Government's commitment to meeting its Kyoto Protocol target, as well as, EU and National targets for renewable energy production as outlined in Sections 3.3 and 3.4 of this Chapter.

As referred to in Section 3.3, the EU has adopted a Directive (2009/28/EC)^{xxviii} on the Promotion of the Use of Energy from Renewable Sources in April 2009 which includes a common EU framework for the promotion of energy from renewable sources. The Directive sets a mandatory national target for the overall share of energy from renewable sources for each Member State. This package is designed to achieve the EU's overall 20:20:20 environmental target, which consists of a 20% reduction in greenhouse gases, a 20% share of renewable energy in the EU's total energy consumption and a 20% increase in energy efficiency by 2020. To ensure that the mandatory national targets are achieved, Member States must follow an indicative trajectory towards the achievement of their target.

Ireland's mandatory national target, as outlined in Ireland's National Renewable Energy Action Plan (NREAP)³, is to supply 16% of its overall energy needs from renewable sources by 2020. This target covers energy in the form of electricity, heat and transport fuels. For electricity alone, Ireland has set a national target of 40% by 2020 as outlined in Section 3.4 of this Chapter.

Government policies identify the development of renewable energy, including wind energy, as a primary strategy in implementing national energy policy. Currently over 2,816MW of installed wind generating capacity is connected to the system on the island Ireland^{xxix}. It is estimated that approximately 3,500MW to 4,000MW of installed wind generating capacity will be required to meet the 40% target^{xxx}. In the event of wind generating capacity being surplus to the national target, it will be beneficial to offset against the heat and transport targets as indicated in Table 3.1, both of which are expected to be short of their respective targets. With a capacity of 125MW, the proposed Maighne Wind Farm will assist significantly towards meeting this target by contributing approximately 3 - 3.5% of the total wind generating capacity required to meet the 40% national target.

Ireland is one of the most energy import-dependent countries in the European Union, importing 85% of its fuel in 2012^{xxxi}. From an operational perspective, the proposed Maighne Wind Farm would have environmental benefits with the reduction of fossil fuels (which produce greenhouse gases) and would contribute towards Ireland's Greenhouse Gas Emissions Projections as outlined in Section 3.4.9. The Sustainable Energy Authority of Ireland (SEAI) Annual Report for 2012 indicated that renewable electricity was 'estimated to have saved as much as €300 million in fossil fuel imports' by meeting 20% of Ireland's total electricity needs for the year^{xxxii}. No single wind farm can be said to make a significant contribution to this achievement, but the cumulative effect can be expected to be high to reducing fossil fuel imports. The proposed development will also displace the emission of carbon dioxide (CO₂) from other less clean forms of energy generation and will assist Ireland in meeting its targets and obligations. It is estimated that a potential output of 125MW for Maighne Wind Farm will result in the net displacement of 190,000 tonnes of CO₂ per annum. This is addressed further in Chapter 5 Air and Climate Change.

³ Submitted under Article 4 of Directive 2009/28/EC.

3.8 References

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