Inch Cape Offshore Wind Farm

New Energy for Scotland

Offshore Planning and Policy Statement

May 2013

REPSOL

edp renewables

Contents

1 Introduction

1.1 This planning and policy statement has been prepared to support the applications for a proposed Offshore Wind Farm (the 'Wind Farm') at Inch Cape and the Offshore Transmission Works (OfTW) related to the Wind Farm (together 'the Project').

1.2 The Applicant is Inch Cape Offshore Limited (ICOL), a company owned by Repsol Nuevas Energías UK (51 per cent) and EDP Renewables UK (49 per cent) for the purpose of developing, financing, constructing, operating and maintaining the Wind Farm. ICOL is applying for the consents required for both the Wind Farm and separately for the associated OfTW. The transmission assets will be transferred to an offshore transmission owner (OfTO).

Site description

1.3 The site of the Project comprises the 'Development Area' outlined in red on the Location Plan [Location Plan – Fig 7.1 of the Environmental Statement] and the Offshore Export Cable Corridor outlined in black on the same plan. Chapter 7 of the Environmental Statement (ES) provides additional detail and lists coordinates for the Development Area in Table 7.1 and for the Offshore Export Cable Corridor in Table 7.2.

1.4 The Development Area will accommodate the Wind Farm, including wind turbine generators (WTGs), inter-array cables and up to three meteorological masts. It will also accommodate part of the OfTW comprising the offshore substation platforms (OSPs) and the initial sections of Offshore Export Cable. It has an area of approximately 150 square kilometres and is located in the North Sea approximately 15-22 km off the Angus coastline, to the east of the Firth of Tay.

1.5 The Offshore Export Cable Corridor will accommodate most of the Offshore Export Cables which will be required to transmit power from the Wind Farm to the shore. These will exit the Development Area and run south-west, passing to the east of Fife Ness and into the Firth of Forth to a landfall location on the Mean High Water Spring Tide line on the East Lothian coast. Two potential landfall areas have been identified; one near Cockenzie and the other at Seton Sands. One of these options will be selected as part of the detailed design process and will be the subject of a separate planning application to East Lothian Council.

1.6 The width of the Offshore Export Cable Corridor will vary in relation to water depth, ranging from around 1.4 km wide at the deepest point to a minimum of 300 m wide in shallower water near to the East Lothian coast. This variation in width is required to accommodate adequate separation between cables, allowing safe construction, operation and maintenance.

1.7 Both the Development Area and Offshore Export Cable Corridor lie entirely within Scottish Territorial Waters.

Description of Proposals (as relevant to the consents needed)

1.8 Chapter 1 of the ES gives an overview of the proposals and Chapter 7 of the ES gives a full description of the works relating to the Wind Farm and OfTW. The design of the Wind Farm and OfTW cannot be finalised at this stage. This is primarily due to procurement and supply chain considerations, the requirement for further site investigation and continuing refinement of the design and the timing of investment decisions. In order to accommodate sufficient flexibility, the Project design is expressed at this stage in a set of parameters relating to the discrete components within which the final design will lie. The Environmental Impact Assessment (EIA) has therefore been completed using a design envelop which sets broad parameters for the Project and its assumed methods of construction, operation, maintenance and decommissioning. This approach is recognised by the consenting authorities as appropriate for a project of this nature. The discrete components which make up the design envelope for the Project are described in full in Chapter 7 of the ES.

1.9 In terms of the Design Envelope, the Wind Farm will comprise:

- Up to 213 WTGs secured to the seabed through piled or gravity based foundations, of 3-bladed design and to be laid out in grid or off-set grid pattern, spaced a minimum of 820 m apart with a maximum height to blade tip of 215m above the lowest astronomical tide;
- inter-array cables to connection the WTGs to the substations. These cables will be laid on the sea bed and be either buried or protected;
- up to five OSPs which will collect the electricity generated by the WTGs and process for export;
- up to three meteorological masts (one of these masts has been the subject of a separate application process and is expected to have been installed in advance of the Project;
- up to three metocean buoys; and
- all foundations, substructures, fixtures, fittings, fixings, scour protections and cable crossings.

1.10 The OfTW will comprise:

- Up to 6 offshore export cables, each running for a maximum length of 84 km;
- landfall over the intertidal zone as far as the Mean High Water Spring Tide line at a point close to Cockenzie on the East Lothian coast; and
- all trenchings, foundations, substructures, fixtures, fittings, fixings, protections and cable crossings.

1.11 The main construction phase is expected to last for approximately four years and will require the use of a variety of vessels. Full details of the construction works can only be determined after detailed engineering has been undertaken but will include the following:

- pre-construction surveys and site investigations;
- installation/construction of foundations and associated site preparation for the WTGs and the OSPs;
- Installation of substructures for the WTGs and the OSPs;
- transportation, installation and commissioning of WTGs;
- installation and commissioning of meteorological masts;
- installation and commissioning of OSPs;
- installation of inter-array cables;
- installation of the Offshore Export Cables including in the intertidal area; and
- installation of metocean equipment

Environmental Context

1.12 The proposals lie close to the Firths of Forth and Tay and to the coast of Fife and Angus. The coastline ranges from generally rocky with some sandy bays to extensive intertidal and sub-tidal sandbanks. There are a number of islands, some of importance to protected species (e.g. the Isle of May) and rocky reefs including Inch Cape which accommodates the Bell Rock lighthouse. While there are no protected zones or designated sites within the Development Area, a number of Special Areas of Conservation (SACs) have been designated in the wider area giving protection to various marine mammals and several species are known to move between the Firths of Forth and Tay.

1.13 The Offshore Export Cable Corridor runs close by the Forth Islands Special Protection Area (SPA) and at landfall on the East Lothian coast it runs through the overlapping Firth of Forth SPA, Ramsar and SSSI.

Context of Other Proposals

1.14 There are various other wind farm proposals within the vicinity of the Project. These, together with range of other offshore and onshore projects have been assessed for cumulative impacts as part of the ES, as described in Chapter 4 and as assessed in the relevant technical chapters of the ES.

Submission Package

1.15 The submission package comprises the following:

- covering letter including applications for 2 consents under the Electricity Act 1989;
- 2 completed and signed Marine Licence application forms for the Wind Farm and supporting information;
- completed and signed Marine Licence application form for the OfTW and supporting information;
- Environmental Statement covering both the Wind Farm and the Offshore Transmission Works with a Non Technical Summary; and
- this Planning and Policy Statement.

2 Statutory Considerations

Statutory Context

2.1 The Development Area of the Wind Farm and the Offshore Export Cable Corridor both lie within Scottish Territorial Waters (STW). However European directives and both UK and Scottish legislation is applicable and must be considered when assessing the Project. Legislation relating to works within the marine environment flows from various European Directives and these are summarised in Table 1.1 in Appendix 1. This table also notes the relationship between international directives/conventions and UK and Scottish legislation.

2.2 Whilst the Project in its entirety requires work to take place onshore to form the connection to the national electricity transmission system (i.e. the national grid), such development work will be subject to a separate application for planning permission under the Town and Country Planning (Scotland) Act 1997. That application will be accompanied by the necessary assessments and information and will be subject to separate consideration.

Consents Being Sought

2.3 The Project requires the following consents:

2.3.1 Marine Licences are issued by The Scottish Ministers, acting through Marine Scotland. Separate licences are being applied for in respect of the Wind Farm and the OfTW to allow for transfer of the OfTW licence to an OfTO:-

(a) Three marine licences pursuant to Section 20 of the Marine (Scotland) Act 2010 (the 2010 Act) for the deposit of substances and objects, and the construction, alteration or improvement of the Wind Farm; and

(b) One marine licence pursuant to Section 20 of the Marine (Scotland) Act 2010 (the 2010 Act) for the deposit of substances and objects, and the construction, alteration or improvement of the Offshore Transmission Works.

2.3.2 Consent under Section 36 of the Electricity Act 1989 to construct and operate a generating station. This is required for the Wind Farm only, i.e. the WTGs and inter-array cables. A declaration under Section 36A of the Electricity Act 1989 will also be required to allow WTGs and other structures to interfere with rights of navigation.

2.4 Under Section 36B of the Electricity Act 1989 (as outlined in Section 99 of the Energy Act 2004) the Scottish Ministers may not grant Section 36 consent where the generating station would interfere with 'recognised sea lanes essential to international navigation'. In deciding whether navigation will be obstructed, the Scottish Ministers must take into account how

they intend to exercise their powers in relation to any application for a declaration to extinguish public rights of navigation and any application for a safety zone.

2.5 European or UK protected species licences will also be sought in order to give full consideration to the potential for disturbance of certain protected species.

2.6 The applicable EIA regulations are the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 and the Marine Works (Environmental Impact Assessment) Regulations 2007. The applicable Habitats Regulations Appraisal (HRA) regulations are the Conservation of Habitats and Species Regulations 2010 and the Conservation (Natural Habitats, &c.) Regulations 1994. The ES submitted as part of the application has been undertaken in accordance with good industry practice. It incorporates an assessment of the potential effects of the Project on nature conservation sites. These assessments have been included to provide the information for the Competent Authority, Marine Scotland on behalf of Scottish Ministers, to use in undertaking their Appropriate Assessments.

3 Matters Relevant to the Determination - Policy Context

Marine Policy Context

3.1 The **Marine (Scotland) Act 2010** (MSA) introduced a framework for sustainable management of the seas around Scotland, aiming to ensure environmental protection is balanced with economic growth of marine industries. The **UK Marine Policy Statement** (UKMPS) 2011 is currently the only marine policy document in effect for this area. It sets out general principles and policy objectives for the marine environment and requires that decisions are consistent with obligations under international law.

3.2 The UKMPS establishes a presumption in favour of granting consent for sustainable development but also states that this has to be weighed against the environmental impacts including the extent to which development will impact on the ecosystem and other activities taking place within the marine environment.

> *A proposal for renewable energy generation is undoubtedly a sustainable form of development. The ES has been prepared in order to assess environmental and other impacts and to identify mitigation measures which will address adverse impacts.*

3.3 **Scotland's Draft National Marine Plan** (SDNMP) is in the course of preparation but until it is finalised it has no statutory force. A key priority under the heading of renewables is to "provide 10 Giga Watts of capacity by 2020 in place and under construction", the majority of which is expected to be offshore wind. This advocates adopting a presumption in favour of development while at the same time taking account of various environmental issues such as cultural heritage assets, National Scenic Areas, air quality, the coastal environment, and avoiding harm to marine ecology, biodiversity and geological conservation interests through location, mitigation and consideration of reasonable alternatives.

3.4 The SDNMP notes that implementation of the proposals could have "a major and permanent beneficial impact on climate, as it would help to reduce Scotland's greenhouse gas emissions and contribute to future renewable energy targets set by the EU."

3.5 The MSA allows for the designation of Marine Protected Areas (MPAs) in order to protect biodiversity, geodiversity and contribute to the UKs agreement with international partners to create an ecologically coherent network of well-managed MPAs in the North East Atlantic. As yet no such areas have been formally designated, but MPA areas of search have been identified. At the time of writing neither the Development Area nor the Offshore Export Cable Corridor overlap with any such areas of search. The closest MPA area of search is the Firth of Forth Banks Complex which lies approximately 12 nm to the east of the Development Area. The features of this potential MPA, which would form the basis for any future designation, are identified in ES Chapter 9: Designated Sites.

The ES has been prepared in order to assess the potential environmental and other impacts which should be considered in making a determination. As the site is not within an area of search for an MPA, this supports the view that the location is not especially sensitive in environmental terms.

3.6 **Scotland's seas – Blue Seas, Green Energy**, published in March 2011, is a sectoral marine plan relating to wind energy developments and so does not have statutory force. It was developed from a draft plan which was subject to a Strategic Environmental Assessment (SEA) which assessed ten short term options for wind energy development, including Inch Cape. Within the defined 'East' region, Inch Cape and Neart na Gaoithe are being progressed but the other short term site identified, Forth Array, has since been withdrawn. This plan established that there was significant potential for developing these short term options which at that time appeared to be publicly and environmentally acceptable. The SEA recommended that for these particular sites further consideration should be given to navigation mitigation, impacts on fishing, resolution of radar issues, completion of HRA (including an assessment of potential effects on the Moray Firth Dolphins), cumulative and in-combination effects and potential impacts on migratory fish. The SEA also identified other marine sectors that could potentially be affected including commercial fisheries, shipping/ports and recreational boating.

Blue Seas Green Energy considered the East region to have significant potential for economic investment and employment. Key issues to be addressed were noted as shipping and navigation, fishing, biodiversity, radar and defence activities and aviation. The ES has assessed the impact of the Project on the environment and its interaction with other activities, including shipping and navigation, fishing and aviation.

Scotland's National Planning Context

3.7 The National Planning Framework 2 (NPF2) was produced by the Scottish Government in 2009. It provides overarching guidance for the terrestrial plan-led system and is required by statute to contribute to sustainable development. Energy is noted as a key challenge, and there is support to realise the potential of Scotland's renewable energy resources and facilitate the generation of power and heat from all clean, low carbon sources. NPF2 encourages the development of offshore wind electricity generation, tempered by the need to safeguard the environment and communities and specifically refers to the potential for development of offshore wind farms in a zone to the east of the Firths of Tay and Forth It also refers to the Fife Energy Park at Methil demonstrating the potential for adapting coastal facilities to new uses related to renewable energy. The NPF2 recognises that the marine and coastal environment is a unique asset which helps to define Scotland's character and supports a wide range of economic activities, including fishing, aquaculture, energy production and tourism, hence there is a need to assess the impact of proposals on this range of economic activities and to demonstrate that the site has been carefully chosen to

minimise adverse impacts. In addition, one of the 14 'National Developments' within NPF2 is the collective 'Electricity Grid Reinforcements' which includes upgrading the East Coast transmission route to 400kV for the express purpose of realising the potential of Scotland's renewable energy resources.

3.8 The **Scottish Planning Policy** (SPP), published in February 2010, gives general support for renewables, including offshore wind. It constitutes the Scottish Government's policy on nationally important land use planning matters and includes a section on "Sustainable Development", referring to the need to tackle climate change and reduce emissions of the greenhouse gases. In the section relating to "Renewable Energy", the following is stated.

3.9 *"The commitment to increase the amount of electricity generated from renewable sources is a vital part of the response to climate change. Renewable energy generation will contribute to more secure and diverse energy supplies and support sustainable economic growth."*

3.10 Although a terrestrial planning document, the SPP gives advice specifically with regard to offshore renewable energy generation:

3.11 "*Offshore renewable energy generation presents significant opportunities to contribute to the achievement of Government targets. Although the planning system does not regulate offshore development, it is essential that development plans take into account the infrastructure and grid connection needs of the offshore renewable energy generation industry. Development plans should identify appropriate locations for facilities linked to the manufacture, installation, operation and maintenance of offshore wind farms and wave and tidal devices."*

3.12 In the section relating to "Coastal Planning", the SPP notes that the terrestrial planning system and the marine planning system are legally and functionally separate but overlap in the inter-tidal area. Planning authorities and Marine Planning Partnerships are asked to work closely together particularly with regard to the inter-tidal area and to the wider coastal zone. Planning authorities should take into account the likely effect of proposals on the marine environment when making decisions on applications and "Integrated Coastal Zone Management (ICZM)" is a useful strategic management tool.

3.13 In the section on "Landscape and Natural Heritage" the question of development impinging on local, national and international designations and development which may affect protected species is addressed.

> *At national level there is clear support in principle for the development of offshore wind electricity generation. These policies recognise the suitability of sites on the east coast, and particularly to the east of the Firth of Tay, for development. Whilst work has now commenced on reviewing and updating NPF2 and the SPP, revised policy documents are not anticipated until June 2014 and so this work is not sufficiently far advanced to be relevant to the*

policy assessment for the Project. However having considered the Main Issues Report for the National Planning Framework 3, it would appear to continue to support the principle for the development of offshore wind electricity generation.

Statutory Development Plans Relating to Coastal Areas

3.14 The approved and adopted Development Plans are not statutory documents for the purposes of determining applications for S36 consent and Marine Licences. However, they will be essential documents to guide the determination of the planning application for the onshore works (including the inter-tidal area where marine and terrestrial regimes overlap) and they also constitute material or relevant considerations for offshore consenting. The implications of the proposals for the onshore areas are likely to relate to landscape and visual effects, wildlife and protected species, socio-economics and, temporarily, construction traffic. The most relevant Development Plans are those relating to Angus and East Lothian Councils because they possess the nearest directly affected shorelines. However, Development Plans for Aberdeenshire, Dundee and Fife are also relevant with regard to the potential impact on costal landscapes and views out to sea, any adverse effects on wildlife and protected species, and socio-economic impacts and potential benefits. The relevant plans and their policies are listed in Appendix B. Without exception, these Development Plans give general support to the development of renewable energy and protect coastal environments in the following ways.

3.15 The coast around Arbroath is the closest terrestrial area to the Wind Farm and is expected to experience some landscape and visual impacts as well as socio-economic impacts This area is covered by:

- TAYplan Strategic Development Plan 2012-2032 (TAYplan SDP) (Approved June 2012); and
- Angus Local Plan Review (adopted 2009)[1].

3.16 The objectives of the TAYplan SDP support the switch to a low carbon and zero waste economy by providing for appropriate infrastructure and improvements and also seek to protect and enhance the quality of built and water environments, landscape, biodiversity and natural resources. TAYplan SDP seeks a strengthening of the economic base in order to support the renewable energy and low carbon technology sectors, and recognises the importance of growth in the off-shore renewable energy sector through the protection of the region's ports for port-related uses, particularly at Dundee and Montrose. Coastal management is another issue highlighted. Policy 3 – Managing TAYplan's assets – makes reference to the undeveloped coastline in Angus; Policy 6 – Energy and Waste/Resource Management Infrastructure – sets out considerations for development proposals, such as

[1] The Angus Local Plan Review 2009 will be replaced by a new Local Development Plan. Work has started on preparing this but it is at an early stage: consultation on a Main Issues Report and Environmental Report has only recently been completed.

assessing the anticipated effects of construction and operation on air quality, emissions, noise etc. and the sensitivity of the landscape with reference to landscape character, biodiversity, habitats, etc.

3.17 The Angus Local Plan Review provides more detail, and although it pre-dates TAYplan SDP, it remains part of the statutory development plan[2]. It states that "*Angus Council supports the principle of developing sources of renewable energy in appropriate locations. Large-scale developments will only be encouraged to locate in areas where both technical (e.g. distribution capacity and access roads) and environmental capacity can be demonstrated*." In relation to offshore energy production, the Plan notes that such developments currently fall outwith the remit of the planning system (other than small-scale onshore support buildings) but nevertheless it notes the potentially significant contribution offshore renewables, including wind and tidal, could make to renewable energy production in Scotland. Policies ER34 and ER35 give support in principle to all forms of renewable energy developments and set out criteria against which the detail of proposals will be assessed. The criteria relating to wind energy developments include the impact on amenity, landscape character, sensitive viewpoints as well as the need to demonstrate reasons for site selection, no unacceptable emissions or interference with bird flights or radar systems and the need to address cumulative effects. Proposals should address decommissioning, and additional guidance about landscape character is given with reference to SNH's Tayside Landscape Character Appraisal (TLCA) which identified three broad zones – Highland, Lowland Hills and the Coast.

3.18 *"The impact of wind farm proposals will, in terms of landscape character, be assessed against the TLCA classifications within the wider context of the zones identified in SNH Policy Statement 02/02. The open exposed character of the Highland summits and the Coast (Areas 1 and 3) is sensitive to the potential landscape and visual impact of large turbines. The possibility of satisfactorily accommodating turbines in parts of these areas should not be discounted ….the fault line topography and coast are likely to be less suitable."* (paragraphs 3.79 and 3.80).

3.19 The Angus Local Plan Review also includes policies which seek to protect natural heritage and biodiversity as well as 'Designed Landscapes' and to conserve landscape character, and these are amplified by Supplementary Guidance. However, through Policy ER29 Coastal Development, there is an acceptance that where a development clearly demonstrates that it requires a coastal location, this should be favourably considered. In this regard reference is made to the Angus Shoreline Management Plan for further guidance.

3.20 The Wind Farm will also be visible from the coast in Aberdeenshire. Aberdeen City and Shire Structure Plan seeks an increasing supply of energy from renewable sources. However, the Aberdeenshire Local Plan is protective of landscape character and of the coastal zone and supplementary guidance provides more detail in this regard. The Wind Farm will also be

[2] As explained in Footnote 1

visible from Fife, and development plan policies are again protective of undeveloped coast and certain landscapes. However, Policy I1 contained in both the St Andrews and East Fife Local Plan and in the Mid Fife Local Plan encourages renewable energy development. The Fife Structure Plan, mindful of the potential benefits arising from this sector (and matching the statement in NPF2), identifies the waterfront at Methil as a Renewable Energy Park.

3.21 The East Lothian Coast will be directly affected by the landfall of transmission cables but views of the seascape from East Lothian will not be affected by the Wind Farm because the distance is greater than 50km. The Edinburgh and the Lothians Structure Plan 2015 (ELSP) [3] recognises the importance of the Firth of Forth's coastline to the economic, social and environmental wellbeing of Lothian. In accordance with national planning policy requirements, broad areas of developed and undeveloped coast are identified and defined on the key diagram. The Plan refers to the Forth Estuary Forum Management Strategy which promotes sustainable use of the Forth and, although non-statutory, the strategy should be assessed and, where appropriate, incorporated into future plans for the coastal area. There are two key policies: Policy ENV 6: Renewable Energy supports development of renewable energy if environmentally acceptable and Policy ENV 5: The Coast which supports development on the developed coast if a coastal location is needed. However proposals should demonstrate that benefits will outweigh detrimental environmental impact and that there is no alternative site.

3.22 The SESplan Proposed Plan (i.e. not yet approved) recognises the importance of renewables in terms of energy generation and economic development. It leaves detailed policy development to Local Development Plans, indicating in Policy 10 that they will need to:

a) Support the future development and associated infrastructure requirements of Longannet and Cockenzie power stations in relation to their role as non-nuclear, baseload capacity generators, Energy Park Fife at Methil, and developments connected with offshore renewable energy in Leith and Rosyth; and

b) Set a framework for the encouragement of renewable energy proposals, taking into account relevant economic, social, environmental and transport considerations.

3.23 The current adopted East Lothian Local Plan states that "The Council is supportive of Government policy to secure greater energy generation from renewable sources" and Policy NRG3 – Wind Turbines, relates to renewable energy, but is of limited relevance to the landfall works. It identifies the need to protect valued landscape features such as the undeveloped coast, and an Area of Great Landscape Value to the east of Seton Sands. Policies also seek to protect natural heritage, internationally protected areas and Sites of Special Scientific Interest which will be relevant to landfall. Policy NH1a is the most relevant, applying across Seton Sands and along the coastal strip west of Cockenzie Power Station. It

[3] SESplan, is the new strategic development plan which will eventually replace ELSP. A Proposed Plan has been finalised and is currently going through public examination and it therefore has a degree of relevance.

states that development which would have an adverse effect on the conservation interest of the designated area will only be permitted if there are no alternative solutions, and if there are imperative reasons of over-riding public interest, including those of a social or economic nature. A HRA may be necessary. In addition, Policy NRG1 - Electricity Generating Stations safeguards Cockenzie Power Station and associated land for use as or in association with a power generating station whilst Policies ENV4 and ENV5 protect the Conservation Area at Cockenzie/Port Seton which extends from Seton Sands west up to Cockenzie Power Station, lying between the two possible landfall cable options.

> *All the relevant development plans provide in principle support for developing renewable energy generation undertakings. Strategic development plans recognise the potential role that such developments can play in the local and regional economies. This support is tempered by the need to protect landscapes and wildlife habitats which can only be determined in relation to the detail of emerging proposals and the findings of the EIA.*

Other Current Policies (Energy, Renewables, Climate Change)

3.24 A number of relevant European, UK, Scottish and other regional non-statutory policies should influence decision-making, such as those relating to energy policy. These will also be material to the determination of applications for consents. The key polices which are relevant are as follows.

3.25 UK renewable energy policy is founded on objectives which are in accordance with overall European policy objectives, and are focused on a number of key challenges including: the reduction of CO_2 emissions to tackle climate change; the promotion of competitive energy markets in the UK and abroad to encourage sustainable economic growth and improve productivity; and securing national energy supply as part of a long term sustainable energy policy.

3.26 The UK's target under the Kyoto Protocol is to reduce greenhouse gas emissions by 12.5 per cent from 1990 levels within the five year period 2008 to 2012. The 2009 Renewable Energy Directive sets a binding target for the UK to achieve 15 per cent of its total energy consumption from renewable sources by 2020.

3.27 The **Draft Electricity Generation Policy Statement 2010: Scotland – A Low Carbon Society** sets out the Scottish Government's position on the role of renewable electricity in Scotland's future energy mix. It gives a clear view on the need for rapid expansion of renewable electricity across Scotland. The Policy Statement acknowledges a greater than expected role to be played by wind energy in the future electricity generation mix.

3.28 The **Scottish Government Draft Electricity Generation Policy Statement and 2020 Routemap**, published in February 2011, included a target of 30 per cent of all energy

demand to be met from renewable sources by 2020. This target has already been exceeded and the Scottish Government published a refreshed Renewable Energy Routemap on 30 October 2012 with a new target of 50 per cent of Scottish electricity demand to be met from renewable sources by 2015. Electricity generated by the Wind Farm will make a significant contribution towards this target.

3.29 One of the key objectives of national UK energy policy referred to in the **UK Renewable Energy Roadmap 2011** is to secure national energy supply as part of a long term sustainable energy policy. This is also referred to by the Scottish Government in their commitment to increase the amount of electricity generated from renewable sources and one of the key aims of Scottish energy policy is for renewable energy to contribute to more secure and diverse energy supplies. National planning policy, expressed in Scottish Planning Policy (SPP), asks planning authorities to support the development of a diverse range of renewable energy technologies. Delivery of the Wind Farm will reduce the need to rely on resources such as coal and gas which are often imported.

3.30 The **UK Low Carbon Transition Plan** was published in July 2009, and presents the UK Government's plan to tackle climate change. The plan consists of five strands, one of which is to build a low carbon UK. It notes that the development of renewable energy proposals will improve energy security in addition to providing low-carbon energy generation and mitigating climate change. Renewable energy developments must be implemented in order for the aims of the Low Carbon Transition Plan to come to fruition and the UK to meet its own targets. The Wind Farm will make a significant contribution to meeting these targets.

3.31 The **Climate Change Act 2008** sets a legally binding target for the UK to cut its greenhouse gas emissions by at least 80% below 1990 levels by 2050 and introduces a system of binding five-year "carbon budgets", to be set at least 15 years in advance, to provide certainty for investors and decision-makers. Progress towards targets is monitored by the Committee on Climate Change.

3.32 The **Climate Change (Scotland) Act 2009** sets a greenhouse gas emissions target, for a reduction of 80 per cent from 1990 levels by the year 2050 and requires annual targets to be set for greenhouse gas emissions in Scotland. Following consultation with the relevant advisory bodies, Scottish Ministers must report on progress. As of January 2011, public sector bodies in Scotland must now comply with new Scottish Government guidelines. In September 2011, the current Scottish targets are:

- At least 30 per cent of all energy demand (heat and transport, as well as electricity) will be from renewables by 2020; and
- An output equivalent to 100 per cent of Scotland's demand for electricity to be met by renewables by 2020.

3.33 A number of technologies will contribute to these targets, including tidal, biomass technologies and landfill gas, but it is onshore and offshore wind that are recognised as

being most reliable, and the Scottish Government acknowledges that there are significant opportunities in Scotland to generate electricity from offshore wind technologies to help meet these ambitious targets.

> *Whilst none of these plans is statutorily binding for the consenting process, their provisions are relevant to consideration of the applications. They give clear support to the development of offshore wind farms, and identify the east coast of Scotland as a particularly suitable location. They create an imperative for the development of renewable energy projects and lend support in principle to the Project. Development of an offshore wind farm will clearly make a significant contribution towards achieving the target for the equivalent of 100 per cent of Scotland's demand for electricity to be met by renewables by 2020.*

4 Matters Relevant to the Determination

4.1 In this section, matters which are relevant to the determination of the submission are now considered further. These matters, which together constitute 'relevant considerations' include the findings of the EIA, compliance with the various legal tests, the extent to which the proposals are consistent with national and other policies (statutory and non-statutory), and other matters which are relevant or material to the determination. In order to draw matters together coherently, the section has been structured around the four legal tests of the MSA (see below).

Legal tests within the Electricity Act 1989 and the MSA

4.2 The extent to which the Applicant has complied with Schedule 9 of the Electricity Act 1989 is reflected through the ES as a whole, and is further considered within the conclusions section of each chapter and the overall conclusions.

4.3 The MSA requires decisions made by the Scottish Ministers on Marine Licence applications to be in accordance with specified marine plans and policy documents unless 'relevant considerations' indicate otherwise. Section 15 of the MSA sets out the key legal test:-

4.4 *"A public authority must take any authorisation or enforcement decision in accordance with the appropriate marine policy documents, unless relevant considerations indicate otherwise. If a public authority takes an authorisation or enforcement decision otherwise than in accordance with the appropriate marine policy documents, the public authority must state its reasons."*

4.5 Section 27 of the MSA defines the matters to be taken into account in decision-making and these can be considered to be relevant considerations. They are:

- The need to protect the environment;
- The need to protect human health;
- The need to prevent interference with legitimate users of the sea; and
- To have regard to any representations received from any person having an interest in the outcome of the application.

4.6 As there is no marine policy yet in place in Scotland, the proposals are not required by statute to conform to any specific policy documents. However, the relevant considerations to be taken into account in decision-making include government policy, such as the UKMPS, terrestrial planning policy, and any other matters which Scottish Ministers may consider to be relevant to the determinations. It is only by assessing the proposals against the relevant considerations that the determining issues will become clear. In order to review relevant considerations, it is important to consider the weight that should be attached to the various

policy documents referred to in the previous section both in terms of the principle of the Project and the details that are known at this stage and presented in the application.

> *The primary objectives of the legislation are to protect both the marine ecosystem and human health and to minimise interference and nuisance to other legitimate users of the sea. Compliance with these objectives is discussed below.*

Relevant Considerations – In Principle

4.7 With regard to the principle of the proposed Project, the statutory documents are considered to have the greatest weight. Although several of these do not strictly apply to the marine domain they have been subject to a thorough process of public participation and scrutiny and accordingly should be given greater weight. The statutory documents in this case are the UKMPS, NPF2 and the relevant approved or adopted Development Plans.

4.8 The UKMPS clearly states that there is a presumption in favour of sustainable development and supports the development of offshore wind generation noting in particular that offshore wind is expected to "provide the largest single renewable energy contribution". It also requires a healthy marine ecosystem to be maintained, and establishes the principle that development should aim to cause no harm to marine ecology, biodiversity and geological conservation interests. However, it is clear that "where significant harm cannot be avoided, then appropriate compensatory measures should be sought." The ES highlights where embedded mitigation is contained within the Project as well as identifying the further mitigation measures that could be taken.

4.9 NPF2 also gives support to realising the potential of Scotland's renewable energy resources and facilitating the generation of power and heat from all clean, low carbon sources. It gives encouragement to the development of offshore wind as a growing contributor and is specific about the potential for development within a "zone to the east of the Firths of Tay and Forth" as a location with potential for development of offshore wind farms. Reference is also made to the Fife Energy Park at Methil in relation to the development of renewable energy. This support is tempered by the need to safeguard the environment and communities, hence the need to assess the impact of proposals on the full range of economic marine-related activities, including fishing, aquaculture, energy production and recreational boating as well as on the environment. It is therefore necessary to demonstrate that the application site has been carefully chosen to minimise adverse effects. This is addressed in chapter 6 of the ES.

4.10 The relevant approved/adopted Development Plans relating to the landward Councils' areas are also supportive in principle to renewable energy developments, although these plans also have policies which recognise the sensitivity of their coastal zones and landscapes. Policies in emerging plans continue to be equally supportive.

4.11 In summary, therefore, the Project complies in principle with the terms of the statutory plans and policy statements and these are of the greatest importance. Underlying this support in principle is a requirement to maintain a healthy ecosystem.

4.12 Non statutory policies are also a relevant consideration to the principle of the development, although lesser weight should be attached to these. These also support the Project in principle. Of particular relevance are the sectoral plans for offshore wind energy in Scottish territorial waters - Blue Seas-Green Energy and the Pre-consultation Draft of Scotland's National Marine Plan.

There is clear support in principle within all the established policies for developing an offshore Wind Farm within the general zone of the Development Area. This support is tempered by an acknowledgement that there are more localised environmental and other matters which will require to be assessed in a degree of detail and taken into account in the determination, as noted below.

The Need to Protect the Environment

4.13 The need to protect the environment has underpinned the project design. The policy document Blue Seas - Green Energy identified the need for completion of HRA (including an assessment of potential effects on the Moray Firth Dolphins) and assessment of cumulative and in-combination effects and potential impacts on migratory fish. This assessment has been carried out and is contained in the ES at Chapters 13 and 14. The key findings of the EIA and an assessment of the extent to which the proposals fit with the various policies now follows.

4.14 With regard to fish and shellfish, the ES concludes that the Project will not result in any significant effects on fish or shellfish, either alone or cumulatively with other projects. While there will be some disturbance to habitat temporarily and permanently, the extent of such disturbance is considered to be small in the context of similar habitat beyond the Development Area and Offshore Export Cable Corridor and so no significant impacts are predicted.

4.15 In terms of the HRA, the main concerns are for the protected fish: Atlantic Salmon, river lamprey and sea lamprey are all protected by virtue of the SAC designation and it is these species which are the most sensitive to changes within the marine environment. These species are highly sensitive primarily because they may potentially migrate through areas which will be the focus of construction works and future operations. The main areas of concern are electromagnetic fields associated with the cabling (both in the Development Area and the Offshore Export Cable Corridor), sediment deposition and construction noise. The inclusion of soft start piling as embedded mitigation will reduce the risk of disturbance,

injury and mortality but will not remove this. However no impacts are predicted on the integrity of the SACs and their qualifying features.

4.16 With regard to **marine mammals**, the EIA has examined the potential for a range of impacts on several marine mammal species which are known to move between the Firths of Forth and Tay (both SACs). The key species considered in the ES are grey seal, harbour or common seal, bottlenose dolphin, harbour porpoise, white-beaked dolphin and minke whale.

4.17 Four SACs have been considered to lie within a potential zone of ecological impact of the proposals, and the risks to designated species that could arise have been noted as collision with construction and/or maintenance vessels (including propeller injury), displacement to avoid construction and maintenance activities, changes to habitats of prey species (such as sand eels) affecting feeding patterns, disturbance/confusion arising from electromagnetic field (EMF), and contamination that may arise from accidental spillages, primarily during construction works.

4.18 The ES identifies a number of mitigation measures, namely identifying specific navigation lanes for vessels, requiring vessels to move at slow speeds, laying cables at a target depth of 1m to reduce the effects of EMF and putting an environmental management plan (EMP) in place to address any spillages and ensure proper waste disposal.

4.19 The ES notes that the main concerns relate to the impact of construction works: the noise arising from piling for foundations may disturb or adversely affect the movement of harbour seals, grey seals, minke whales, harbour porpoises, bottlenose dolphins and white-beaked dolphins and the movement of vessels risks collisions with and injury to mammals, particularly through propellers. These risks can be reduced if a 'soft start' is made to piling works and by the employment of a Marine Mammal Observer to identify any mammals which come close to vessels and then take action to mitigate collisions/injury risk. The ES concludes that the effects arising from the construction phase are considered to be minor in the long term, and that any potential impacts during the operational and maintenance phases are also minor. The potential impacts of the Offshore Export Cable are also predicted to be minor.

4.20 Four SACs have been designated for marine mammals which are within travelling distance (by the animal) of the Development Area and Offshore Export Cable Corridor. Information to inform an HRA has been presented and has predicted that the Project, alone or in-combination with other plans or projects, will not cause deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the each of the sites is maintained and each of the sites makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features in the long term.

4.21 With regard to birds, again no significant impacts are predicted. During the construction phase, the largest impact on birds will occur through indirect disturbance via prey impacts

from impact piling during the breeding season. However these impacts are predicted to be minor/moderate and not significant. There may be direct disturbance during construction for example from vessel movements however such impacts are considered to be negligible.

4.22 During the operational phase the largest impact on birds will occur through displacement and collision risk. While there may be minor displacement impacts for kittiwake, guillemot, razorbill and puffin and minor collision impacts for kittiwake and gannet, effects on all other receptors are considered to be negligible.

4.23 Information to inform an HRA has been presented in relation to seven Special Protection Areas (SPAs). The assessment is contained in Chapter 15 of the ES. For those SPAs designated for non-breeding qualifying interests, it has been concluded that the site integrity of these SPAs would not be adversely affected. Similarly, for those SPAs designated for breeding qualifying interests, the Project alone would not adversely affect the site integrity.

4.24 Another impact on the environment that has been assessed is that arising from changes to the offshore physical environment and in particular the benthic ecology. The assessment can be found at Chapters 10 and 12 of the ES. While there may be short term effects including localised disturbed sediment, and a small loss of original habitat, which will be replaced through the creation of new habitat, there are no significant impacts.

4.25 The results of the seascape, landscape and visual assessment (SLVIA) are presented in Chapter 16 of the ES. The study area for this covers a 50km radius from the outer edges of the proposed Wind Farm and OSPs, as requested by SNH during consultations with specific regard to the potential height of the turbines. In accordance with SNH guidelines, the SLVIA has considered the cumulative effects arising from combined and/or consecutive (concurrent) visibility (where the observer would be able to see two or more developments from one viewpoint location), and sequential effects (where a number of similar developments would be visible individually or simultaneously over a sequence of connected viewpoints, such as would be found along a road or footpath).

4.26 Aside from direct effects on seascape character experienced within and adjacent to the proposed Development Area itself, the effects on seascape and landscape character will be indirect as they will mostly be experienced by land-based receptors at least 15.4 km distant from the proposed Wind Farm and OSPs (this being the distance between the nearest turbine of the proposed development and the closest point on the coast). The effects will be long-term but reversible.

4.27 A key role in preparing the SLVIA has been undertaken by the Firth and Tay Offshore Wind Developer Group (FTOWDG). This group was formed in 2009, primarily to identify potential cumulative effects on the environment of multiple wind farm development in the outer Firths of Forth and Tay. The SLVIA used 29 viewpoints which were agreed by FTOWDG, various Councils and SNH. A design sensitivity analysis was also carried out.

4.28 The SLVIA considered Inch Cape in conjunction with existing and consented wind farms and will undoubtedly impact on the character of seascapes on the Angus, Aberdeenshire and Fife coasts. However, no overall significant impacts on landscape character areas within the study area are predicted, although there may be localised significant effects on landscape character, for example, parts of the Dipslope Farmland landscape in which sea views are an important element of the landscape. The SLVIA concluded that there may be a potential adverse effect on the Designed Landscape at Cambo close to Fife Ness on the basis that there are open sea views towards Inch Cape. Significant landscape effects on designated areas are limited to two coastal LLAs in Fife, namely the St Andrews to Fife Ness LLA, and the Forth Islands LLA (Isle of May only).

4.29 Overall visibility of Inch Cape from within coastal and inland settlements is likely to be limited. However, the visual amenity of properties which have views of the open sea in the direction of Inch Cape may be affected - coastal settlements and properties in Angus, Fife and Aberdeenshire may experience some adverse effect on visual amenity. Significant effects on the visual amenity of road users, walkers and recreational cyclists are also predicted along limited sections of the A92, the Fife Coastal Path and NCN Route 1.

4.30 With regard to Inch Cape in conjunction with wind farms which are at application and scoping stage, the adverse effects on seascape character are predicted to be similar. Effect on landscape character is also similar, but more pronounced at St Andrews (Designed Landscape) and impacting on additional LLAs, namely the St Andrews Links LLA, and the Tentsmuir Coast LLA. Significant cumulative effects on visual amenity follow the same pattern as the effects of Inch Cape on its own or with existing/consented wind farms.

4.31 It is generally recognised that commercial wind energy developments are likely to give rise to some significant effects on seascape/landscape character and visual amenity. The Inch Cape Offshore Wind Farm will consist of a large number of tall turbines, occupying an extensive sea area but it will be more than 15.4 km away from the nearest land. In general, the significant effects are predicted at ranges greater than would typically be experienced with onshore wind energy developments. This is due to the size and scale of the Wind Farm, both in terms of wind turbine numbers and heights, but also in relation to the area of the sea which it will occupy. However, the assessment has assumed a “worst-case” scenario. Conditions of good weather and bright daylight when visibility will be at its clearest are assumed while the SLVIA shows that at a distance of around 27 km from the Wind Farm, visibility of the wind turbines is only likely to occur for on average, 50% of the year. It is also important to note that, in line with the design envelope being considered, actual turbine numbers and heights may be less than assumed for the assessment

4.32 Reducing CO_2 emissions will also help to protect the environment from further damage and degradation arising through the effects of climate change.

Weighing up the various impacts on the environment, requires a judgement to be made about the weight to be attached to adverse impacts and the benefits to the environment which will result in the longer term. There are no significant impacts predicted for fish and shellfish, marine mammals or birds. There are no significant impacts predicted for the offshore physical environment or benthic ecology. While there are likely to be significant effects on seascape areas and visual amenity in some cases, it should be remembered that the assessment has assumed the worst case scenario and so the impacts could be less than predicted.

The Need to Protect Human Health

4.33 With regard to human health, the Development Area is at a considerable distance from centres of population such as Arbroath and Dundee area and no direct effects on human health are anticipated in the broad sense. The potential of the Project to give rise to pollution and waste could have a direct impact on the health of those living in coastal settlements. However, the applicant is committed to the preparation of an EMP which will include monitoring of emissions during construction and operational phases. Surveys have revealed unexploded ordnance on the seabed and there is potential for this to be a safety hazard. Other indirect effects may arise through impact on aviation, including civil and military radar systems and search and rescue operations (particularly helicopter movements. The SEA carried out for 'Blue Seas – Green Energy' recommended that further consideration should be given to navigation mitigation, impacts on fishing, and resolution of radar issues.

4.34 A desk study was therefore carried out to identify the risk posed by unexploded munitions, Allied and Axis Sea Mines, Torpedoes, Dumped Munitions, Artillery Projectiles and High Explosive (HE) Bombs. The findings were that the Development Area has a “medium” level of risk arising in relation to construction works, namely geotechnical investigations, turbine installations and PLGR seabed operations. The Offshore Export Cable Corridor is considered to have a higher risk being closer to terrestrial bombing targets and historic and military training areas. Mitigation in the form of robust strategic risk management procedures is recommended, including careful choice of the actual sites for foundations for WTGs and other structures, and the cable routes, but the study notes that although the degree of risk can be reduced to 'As Low As Reasonably Practicable', it is not capable of being reduced to zero.

The ES also includes an assessment of physical obstruction to aviation, interference with radar systems and search and rescue operations. The predicted residual effect is an impact on radar systems but only once the WTGs are operational. While this has been assessed as significant, particularly in terms of a cumulative effect combined with the other proposed offshore wind farms in the area, potential technical mitigation measures are currently being discussed with stakeholders. A collaborative approach to mitigation by the Forth and Tay Offshore Wind Farm Developer Group will be sought and the final position will also be

informed by a 'Radar Technology Demonstration Programme' which is being promoted at the time of writing.

4.35 Reducing the effects of climate change will help to protect human health and also yield potential benefits.

It is unlikely that the Project will be detriment to human health. A technical mitigation solution is anticipated for the impact on radar systems and work to achieve this is underway. Balanced against the clear benefits that the Project will bring to human health through the reducing in emissions, it is submitted that overall the Project will help to protect human health.

The Need to Prevent Interference with Legitimate Users of the Sea

4.36 A Navigational Risk Assessment (NRA) has been carried out following discussion with all the stakeholders who could be identified. The potential for increased collision risk, interference with anchoring, risk of snagging and interference arising from EMF has been investigated. The key users relate of the sea relevant to the Project were identified in relation to cargo and fishing vessel activities, commercial shipping lanes, a submarine exercise area and emergency services. There are no oil and gas surface platforms or licensed aggregate dredging sites nearby. Furthermore, there is little interface with recreational sailing vessels. The NRA included a survey of vessel movements which was carried out over a 28 day period and recorded some traffic, mostly from cargo and vessels. The Development Area is crossed by domestic and international main routes and the Offshore Export Cable Corridor is crossed by traffic several times a day.

4.37 On the basis of embedded mitigation, WTGs will be designed in accordance with the relevant Marine Guidance Note, a 'rolling' safety zone will be retained around any working areas during construction works and major maintenance operations, and WTG rotor blade clearance will be at least 22m above high water springs level. The ES identifies further mitigation through management measures such as marine co-ordination, the possible use of 'guard vessels' and establishing 'deviations' to identified main shipping routes. Another issue that has emerged is potential interference with the scallop fishery and inshore creel fishing. Overall the proposals in terms of construction and operation/maintenance will not give rise to concerns for other vessel movements. Impact on creel fishing can be minimised through the identification of proposed 'transit lanes' as a further management measure. Whilst the risk arising from cumulative impacts is slightly greater, the actual level of risk will depend on the timing of all construction works. As such works are capable of co-ordination and management, this should not be a matter of concern.

It appears that any concerns relating to other legitimate users of the sea can be addressed through a management regime. The Project will not interfere with 'recognised sea lanes essential to international navigation' and so there

would be not grounds under section 36A of the Electricity Act 1989 to refuse to grant the Section 36 consent.

Relevant considerations – Benefits

Representations and Any Other Relevant Considerations

4.38 The applicant has engaged with a diverse range of stakeholders throughout the process of preparing this submission. Parties consulted include statutory consultees, organisations who have an interest in the project, and those who live, work or have an interest in areas affected by the proposals. In order to engage with these parties, a variety of communication methods have been used – letters, targeted meetings, six public engagement exhibitions in various locations, and website information. Key communication opportunities were considered to be at the stage of scoping in the EIA process, and at the later pre-submission stage. In addition, exhibitions have been held at various community galas in order to engage with a wider audience. Points raised at scoping stage have been addressed through the process of preparing the ES.

Relevant considerations – Benefits of the Proposals

4.39 The benefits associated with the Project are considered to be:

- Economic benefits arising directly and indirectly from the Project;
- Mitigation of the effects of climate change; and
- Delivery of secure domestic supplies of energy and contribution to a sustainable energy mix within the UK (Energy Security).

4.40 The development of the Wind Farm will lead to significant economic benefits, locally, regionally and nationally. These can be summarised as increased investment in infrastructure, development and diversification of industry, increased income, employment and skills, and reduced negative economic impacts of climate change.

4.41 The appropriate infrastructure must be put in place to support the development of the Wind Farm and OfTW. Port and construction facilities will be required and a supply chain of sufficient scale will be critical in terms of manufacturing, especially during construction, and servicing during the operational life of the Project. There is potential for new engineering and other businesses to be established and these will then have the opportunity to gain from domestic and export markets. There is likely to be a general upskilling of the established workforce and transfer of skills from the UK's long-established oil and gas industry expertise.

4.42 New employment opportunities will support established communities, encouraging regeneration of local economies, and underpinning the sustainability of neighbourhoods. Once a critical mass of offshore wind-related businesses develops in the UK and Scotland, more investment, businesses and labour will be attracted.

4.43 It has been estimated that the Project is expected to support investment in the renewables industry in Scotland by creating between £154 million and £507 million of Gross Value Added in the construction phase and between £15.6 million and £22.4 million per annum in the operation and maintenance phase. Employment in Scotland will be created during all phases of the Project in the offshore industry sector and its supply chain which could peak at around 1,600 jobs during construction and is estimated to be equivalent to between 117 and 169 full time jobs during operation and maintenance. In addition to jobs, there will be opportunities for training and further education. Work is already in hand to assess the skills available within the existing UK workforce and future upskilling and training needs. Training courses are already being developed across the UK by higher and further education providers. The Project would increase the imperative to deliver the necessary training within an appropriate timeframe.

4.44 In order to combat climate change the European Union (EU), UK and Scotland have legislation and binding targets for reductions in carbon emissions and corresponding renewable electricity power generation targets. The Wind Farm will offset greenhouse gas

emissions and help to achieve the renewable energy targets for Scotland and the UK. It has been calculated that the amount of CO_2 that will be offset in comparison with other forms of generation could be equivalent to 17.8 per cent (over gas-fired generation), 26.8 per cent (over fossil fuel mix generation) to 40.9 per cent (over coal-fired generation) of the total CO_2 emissions estimate for Scotland in 2010, assuming that gas-fired, coal-fired of fossil fuel mix generation are replaced alone. The time taken to payback the CO_2 costs of the Project through offsetting emissions from fossil fuel mixed generation would be slightly less than 12 months.

4.45 Offshore wind farms are a critical element to ensure EU, UK and Scottish carbon emissions targets are met as part of the wider international climate change reduction commitment. This is in itself a benefit. The Offshore Valuation Report suggested that Britain's offshore renewable resources could also deliver CO_2 reductions of 1.1 billion tonnes by 2050. Overall, there is considered to be 206 GW of offshore wind, wave and tidal resource which has the potential to be harnessed from Scottish Waters. There are also indirect economic benefits in terms of avoiding the consequences of unmitigated climate change. This single project must be viewed within the context of the international drive to reduce CO_2 emissions in the medium to long term thereby stabilising climate patterns and reducing the incidence of extreme weather events. Mitigation of climate change will therefore reduce wasteful expenditure on the emergency responses and clean-ups which are necessitated by extreme events.

4.46 The aim of energy security is to ensure domestic consumers can meet their energy requirements at prices that are not excessively volatile. The UK has historically experienced strong energy security through a diverse energy mix and extensive North Sea resources. However, the UK energy system is changing; older infrastructure is being shut down, North Sea fossil fuel reserves are in decline and current policies establish low-carbon objectives. There is an urgency to this, as explained in the UK Government's first Energy Security Strategy (ESS), published in 2012, which notes that one-fifth of power stations are due to close within a decade. There is enormous potential in offshore wind around the UK to secure security of supply. The Offshore Valuation Report provided a full economic valuation of this renewable resource and found that using just one-third of the UK's wind, wave and tidal resource could unlock the electricity equivalent of one billion barrels of oil a year, thus matching annual North Sea oil and gas production. It could also deliver significant CO_2 reductions as noted above. Given the suitability of Scotland's east coast for this form of development, there is an expectation that wind farm development should be secured within the marine environment to help deliver this benefit.

The Project will potentially deliver a wide range of benefits which together would help to deliver sustainable economic growth in Scotland. This is one of the key aims of Scottish Planning Policy which is cascaded down into strategic and local development plans. Policies such as those within the Fife Structure Plan and the potential to regenerate the Methil area through

successful delivery of the Fife Energy Park are examples of this cascade effect. It is therefore important to consider the proposals within this wider perspective.

5 Conclusion

5.1 In determining the applications the Scottish Ministers must have regard to the following:-

5.1.1 In the case of the section 36 application the test in Schedule 9 of the Electricity Act 1989; and

5.1.2 In the case of the marine licence applications, sections 15 and 27 of the Marine (Scotland) Act 2010.

5.2 Considering these tests, and having regard to all relevant considerations set out above, it is concluded that:-

5.2.1 While there are no marine policy documents in place in respect of which the decision of the Scottish Ministers would require to be in accordance with, other key policy documents are in favour of development of the Project in principle, provided no harm will be caused to marine ecology, biodiversity and geological conservation interests. In fact the UKPMS clearly states that there is a presumption in favour of sustainable development and supports the development of offshore wind generation. If significant harm cannot be avoided, then appropriate compensatory measures may be able to be put in place. The key question is whether or not the concerns arising from the design, construction and operation of the Project or the sensitivities about their design and location outweigh this support in principle.

5.2.2 In this case:-

(a) The site has been carefully chosen to minimise adverse effects;

(b) Embedded mitigation will reduce the impacts of the Project to, in most cases, an acceptable level i.e. in most cases there will be no significant adverse impacts;

(c) Where there are predicted to be adverse impacts, those are outweighed by the benefits that the Project will bring namely direct and indirect economic benefits, mitigation of the effects of climate change; and the delivery of secure domestic supplies of energy and contribution to the sustainable energy mix within the UK and Scotland.

5.3 Accordingly Scottish Ministers are asked to give their approval to the proposals and grant the applications.

APPENDIX A

Statutory references

Table 1.1: Summary of International Conventions/Legislation, European Directives and National Regulations Relevant to Offshore Wind Farms and Related Works

International European Directives	National Legislation
Marine Strategy Framework Directive (2008/56/EC) (MSFD).	Marine (Scotland) Act 2010. (See also Electricity Act 1989 (Section 36) as amended by the Energy Act 2004 (Section 95) and The Crown Estate Act 1961).
Conservation of natural habitats and of wild fauna and flora (Habitats Directive) 92/43/EEC.	Conservation (Natural Habitats, &c.) Regulations 1994, as amended; and The Conservation of Habitats and Species Regulations 2010;
Conservation of wild birds (Birds Directive) 79/409/EEC (as amended).	Conservation (Natural Habitats, &c.) Regulations 1994; The Conservation of Habitats and Species Regulations 2010; and The Wildlife and Countryside Act 1981 (as amended by the Countryside Rights of Way Act 2004).
Ramsar Convention	Not applicable.
Environment Assessment (The EC Directive 85/337/EEC as amended by Directive 97/11/EC and 2003/35/EC (the EIA Directive).	Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 and amended in 2008; and Marine Works (Environmental Impact Assessment) Regulations 2007.
Water Framework Directive 92/43/EEC (WFD).	Water Environment and Water Services

	(Scotland) Act 2003 (WEWS Act); and Controlled Activities Regulations, (CAR).The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR).

APPENDIX B

Relevant Development Plan Policies

The relevant Development Plans are those relating to coastal areas in Aberdeenshire, Angus, Dundee, North and South Fife and East Lothian. The table below shows which plans are relevant for each area of coastline.

Table 1.2: Relevance of Development Plans

Location	Strategic Development Plan	Local Development Plan
Aberdeenshire	Aberdeen City and Shire Structure Plan	Aberdeenshire Local Development Plan (2012)
Angus	TAYplan SDP	Angus Local Plan Review (2009)
Dundee	TAYplan SDP	Dundee Local Plan Review (2005)
North Fife	TAYplan SDP	St Andrews and East Fife Local Plan (2012)
South Fife	Fife Structure Plan 2006-2026 (SESplan SDP at an advanced stage of preparation)	Mid Fife Local Plan (2012)
East Lothian	Edinburgh and the Lothians Structure Plan 2015 (2004) (SESplan SDP at an advanced stage of preparation)	East Lothian Local Plan

1.1. ABERDEEN CITY AND SHIRE STRUCTURE PLAN

OBJECTIVE: To be a city region which takes the lead in reducing the amount of carbon dioxide released into the air, adapts to the effects of climate change and limits the amount of non-renewable resources it uses.

"We also need to tackle both the supply of and demand for energy during the plan period. This

will involve increasing the supply of energy from renewable sources (making a significant contribution

towards meeting Scottish targets) and reducing demand from new developments."

TARGET: "For the city region's electricity needs to be met from renewable sources by 2020."

1.2. Aberdeenshire Local Plan

Policy 4: Special Types of Rural Land: Aberdeenshire Council will protect the special character of the greenbelt and the coastal zone. In these areas we will have special controls on development. These include a presumption against development that would erode the special nature of these different areas. The following types of development may be acceptable in appropriate circumstances in the greenbelt: extensions or ancillary uses; development for the purposes of agriculture, forestry, horticulture, nature conservation, essential public infrastructure, or recreation; the restoration, conservation or extension of vernacular buildings or buildings of architectural merit; accommodation required for a worker in a primary industry; development identified as a national priority; or development identified under the policy for safeguarding of resources and areas of search as required to meet established need. The detailed circumstance in which development in both the coastal zone and greenbelt may be acceptable is set out in the following supplementary guidance:

SG STRLtype1: Development in the coastal zone

SG STRLtype2: Greenbelt

Policy 77: Landscape Conservation: Aberdeenshire Council will plan for and promote the improvement and protection of all landscapes in Aberdeenshire by recognising and using landscape character areas. All the landscapes of Aberdeenshire are valuable assets and vulnerable resources, which are facing various pressures of change. We will use the Landscape Character Area framework as a basis for our future planning and management policy. We will also take into consideration particular opportunities, sensitivities and vulnerabilities of different landscapes, and make sure that the implications of development on these are managed in an appropriate and sensitive way. The way we will do this is set out in the following supplementary guidance.

SG Landscape1: Landscape character

SG Landscape2: Valued views

1.3. TAYPLAN's Strategic Development Plan 2012-2032 (Approved June 2012)

OBJECTIVE: Support the switch to a low carbon and zero waste economy by providing for appropriate infrastructure and improvements in our resilience to climate change and other potential risks.

OBJECTIVE: Protect and enhance the quality of the TAYplan area's built and water environments, landscape, biodiversity and natural resources.

OBJECTIVE: Continue to protect the important landscape settings and historic cores of St. Andrews and Perth with green belts

OBJECTIVE: Strengthen the economic base to support the renewable energy and low carbon technology sectors, the further and higher education sector including commercialisation and research, the region's ports, food research, forestry, life sciences, digital media and tourism.

POLICY 6 - Energy and Waste/Resource Management Infrastructure: Ensures that energy and waste/resource management infrastructure are in the most appropriate locations. Reason - To deliver a low/zero carbon future and contribute to meeting Scottish Government energy and waste targets:

……development proposals should ensure that all areas of search, allocated sites, routes and decisions on development proposals for energy and waste/resource management infrastructure have been justified, at a minimum, on the basis of these considerations:

- The specific land take requirements associated with the infrastructure technology and associated statutory safety exclusion zones where appropriate;
- Waste/resource management proposals are justified against the Scottish Government's Zero Waste Plan and support the delivery of the waste/resource management hierarchy;
- Proximity of resources (e.g. woodland, wind or waste material); and to users/customers, grid connections and distribution networks for the heat, power or physical materials and waste products, where appropriate;
- Anticipated effects of construction and operation on air quality, emissions, noise, odour, surface and ground water pollution, drainage, waste disposal, radar installations and flight paths, and, of nuisance impacts on of-site properties;
- Sensitivity of landscapes (informed by landscape character assessments and other work), the water environment, biodiversity, geo-diversity, habitats, tourism, recreational access and listed/scheduled buildings and structures;
- Impacts of associated new grid connections and distribution or access infrastructure;
- Cumulative impacts of the scale and massing of multiple developments, including existing infrastructure;

- Impacts upon neighbouring planning authorities (both within and outwith TAYplan); and,
- Consistency with the National Planning Framework and its Action Programme.

1.4. Angus Local Plan Review (2009)

Policy ER4: Wider Natural Heritage and Biodiversity: The Council will not normally grant planning permission for development that would have a significant adverse impact on species or habitats protected under British or European Law, identified as a priority in UK or Local Biodiversity Action Plans or on other valuable habitats or species. Development proposals that affect such species or habitats will be required to include evidence that an assessment of nature conservation interest has been taken into account. Where development is permitted, the retention and enhancement of natural heritage and biodiversity will be secured through appropriate planning conditions or the use of Section 75 Agreements as necessary.

Policy ER5: Conservation of Landscape Character: Development proposals should take account of the guidance provided by the Tayside Landscape Character Assessment and where appropriate will be considered against the following criteria:

a) sites selected should be capable of absorbing the proposed development to ensure that it fits into the landscape;

b) where required, landscape mitigation measures should be in character with, or enhance, the existing landscape setting;

c) new buildings/structures should respect the pattern, scale, siting, form, design, colour and density of existing development;

d) priority should be given to locating new development in towns, villages or building groups in preference to isolated development.

Policy ER20: Historic Gardens and Designed Landscapes: Sites included in the "Inventory of Gardens and Designed Landscapes in Scotland", and any others that may be identified during the plan period, will be protected from development that adversely affects their character, amenity value and historic importance. Development proposals will only be permitted where it can be demonstrated that:

(a) the proposal will not significantly damage the essential characteristics of the garden and designed landscape or its setting; or

(b) there is a proven public interest, in allowing the development, which cannot be met in other less damaging locations or by reasonable alternative means. Protection will also be given to non-inventory historic gardens, surviving features of designed landscapes, and parks of regional or local importance, including their setting.

Policy ER29: Coastal Development: New development requiring a coastal location will generally be directed toward the developed coast. Development proposals for the undeveloped coast will generally only be considered acceptable where it can be demonstrated that:

- the proposal requires a coastal location; and

- no other suitable alternative site exists within the developed coast; and
- the social and economic benefits of the proposal outweigh the potential detrimental impact on the Angus coastal environment.

In addition, all development proposals affecting either the developed or undeveloped coast will be assessed against the Angus Shoreline Management Plan and other relevant policies of this Local Plan.

Policy ER34 : Renewable Energy Developments: Proposals for all forms of renewable energy development will be supported in principle and will be assessed against the following criteria:

(a) the siting and appearance of apparatus have been chosen to minimise the impact on amenity, while respecting operational efficiency;

(b) there will be no unacceptable adverse landscape and visual impacts having regard to landscape character, setting within the immediate and wider landscape, and sensitive viewpoints;

a) the development will have no unacceptable detrimental effect on any sites designated for natural heritage, scientific, historic or archaeological reasons;

b) no unacceptable environmental effects of transmission lines, within and beyond the site; and

c) access for construction and maintenance traffic can be achieved without compromising road safety or causing unacceptable permanent and significant change to the environment and landscape.

Policy ER35 : Wind Energy Development: Wind energy developments must meet the requirements of Policy ER34 and also demonstrate:

a) the reasons for site selection;

b) that no wind turbines will cause unacceptable interference to birds, especially those that have statutory protection and are susceptible to disturbance, displacement or collision;

c) there is no unacceptable detrimental effect on residential amenity, existing land uses or road safety by reason of shadow flicker, noise or reflected light;

d) that no wind turbines will interfere with authorised aircraft activity;

e) that no electromagnetic disturbance is likely to be caused by the proposal to any existing transmitting or receiving system, or (where such disturbances may be caused) that measures will be taken to minimise or remedy any such interference;

f) that the proposal must be capable of co-existing with other existing or permitted wind energy developments in terms of cumulative impact particularly on visual amenity and landscape, including impacts from development in neighbouring local authority areas;

g) a realistic means of achieving the removal of any apparatus when redundant and the restoration of the site are proposed.

1.5. Dundee Local Plan Review

Policy 77: Renewable Energy and Energy Efficiency: The Council will continue to support the generation of renewable energy via the Waste to Energy plant in Dundee. Small scale wind energy developments will be favourably considered where they are consistent with other Environmental policies of the Plan, they do not necessitate ancillary developments that may have an adverse environmental impact, e.g. power lines, and where they have no significant adverse or cumulative effects on:

a) neighbouring residential occupiers, other uses or road safety by reason of visual disturbance, noise emission, shadow flicker, reflected light or electro-magnetic influences;

b) landscape; and

c) aircraft activity or known flight paths of migratory birds.

Other small scale renewable energy and energy efficiency measures that benefit communities and households in Dundee will also be favourably considered where they are consistent with Environmental policies of the Plan.

1.6. St Andrews and East Fife Local Plan (2012)

Policy E11: Historic Gardens and Designed Landscapes: Development affecting Historic Gardens and Designed Landscapes shall protect, preserve, and enhance such places and shall not impact adversely upon their character, upon important views to, from or within them, or upon the site or setting of component features which contribute to their value.

Policy E19: Local Landscape Areas: Development proposed within a Local Landscape Area or outwith the boundary but which may impact upon the designated area will only be permitted where it has no significant adverse effect on the identified landscape qualities of the area and/or its overall landscape integrity and setting. Proposals must demonstrate, through form, scale, layout, detailing, siting, design, materials, and landscape treatment, how the development will contribute to the conservation, restoration or enhancement of the Local Landscape Area and its associated landscape character and qualities.

Policy E27: The Coast: Development on the undeveloped coast will not be supported unless it can be demonstrated that:

a) there is a proven need for a coastal location;

b) the proposal avoids the use of greenfield sites and can reuse vacant land;

c) the proposal demonstrates high standards of design and siting;

d) the proposal does not contribute to or is at risk of coastal erosion;

e) the proposal is not subject to nor will it contribute to flood risk;

f) the proposal safeguards cultural and natural heritage resources;

g) the proposal does not prejudice the footpath and/or cycle network; and

h) the proposal does not result in the coalescence of coastal villages.

Development which is proven to require a coastal location or which contributes to the economic regeneration of coastal settlements should be located on the developed coast in the first instance.

Policy I1: Renewable Energy: ***(EXTRACT)*** A range of technologies for renewable energy generation, including micro-renewables, will be encouraged. Renewable energy developments will be supported provided that:

a) there is no significant adverse impact on local communities and/or the built and natural environment;

b) they provide employment opportunities, particularly diversification of the rural economy; and

c) they make use of brownfield or contaminated land, where possible.

All proposals will be required to provide detailed information on associated infrastructure required; including roads and grid connections, impact during construction and operational phases of the development, including visual and environmental impact, noise, and odour issues; and provisions for the restoration of the site.

1.7. FIFE STRUCTURE PLAN 2006-2026

OBJECTIVE: Encouraging the use of renewable energy technologies, including wind power, as an alternative to fossil fuels.

Policy E1: New Employment Land: Local Plans will identify specific employment sites for:

- new strategic sites in Proposal PE1;
- a 7-year supply in settlements above 5,000 population and in clusters within rural areas;
- Class 4 office use in the sub-regional and district centres; and,
- hotels throughout Fife to further assist in growing the economy and tourism sector.

These sites will be safeguarded.

NB Proposal PE1 includes a site of 40 ha at Methil Waterfront for development as a Renewable Energy Park

Policy R1: Wind Turbines: Preference will be given to commercial wind farms within the identified broad area of search. Within such areas, proposals are most likely to be supported where:

- the landscape is capable of accommodating them;
- through careful siting within the landform and high quality of design and materials, they respect the key features and character of the landscape and minimise their impact on the landscape and wider environment;
- they do not have a significant detrimental effect on the amenity of nearby residents;
- they do not have a detrimental impact on groundwater resources or private water supplies; and,
- they are not located on migratory flight paths of birds nor located on flight paths between breeding and feeding areas or on the breeding areas themselves.

Wind farm and individual turbine proposals will be considered in relation to the criteria above and the Fife Landscape Character Assessment.

1.8. Mid Fife Local Plan (2012)

Policy references are the same as St Andrews and East Fife Local Plan

1.9. EDINBURGH AND THE LOTHIANS STRUCTURE PLAN 2015 (Approved June 2004)

Policy ENV 5: The Coast: Local plans should define the detailed boundaries of the developed and undeveloped coast. Development on the developed coast will be supported where it demonstrates a need for a coastal location, or contributes to the renewal and regeneration of an area. Development on the undeveloped coast will only be permitted where it demonstrates a need for a coastal location, that the benefits outweigh any detrimental environmental impact and that there is no alternative site.

Policy ENV 6: Renewable Energy: The development of renewable energy resources will be supported where this can be achieved in an environmentally acceptable manner. Local plans should set out the specific criteria against which renewable energy developments will be assessed, including cumulative impact. They should also consider whether it is appropriate to define broad areas of search, or specific sites, suitable for wind or other renewable energy developments.

1.10. East Lothian Local Plan

POLICY DC1: DEVELOPMENT IN THE COUNTRYSIDE AND UNDEVELOPED COAST : Development, including changes of use, will be acceptable in principle within the countryside and undeveloped coast where it is directly related to agriculture, horticulture, forestry and countryside recreation. Other business use will also be acceptable where it is of an appropriate scale and character for its

proposed location in the countryside, it can be suitably serviced and accessed and there are no significant traffic or other environmental impacts.

In all cases:

a) Having regard to its nature and scale, new development must be integrated into the landscape, reflect its character and quality of place, and be compatible with its surroundings;

b) New development must be sited so as to minimise visual intrusion and landscape impact within the open countryside or undeveloped coast, for example, by locating as part of an existing group of buildings, woodland or other well-contained setting, and by respecting and making use of the setting provided by landform or existing landscape features;

c) The proposal must have no significant adverse impact on nearby uses;

d) The proposed development must minimise the loss of prime agricultural land;

e) Account must be taken of the design policy framework contained in the local plan (refer to Chapter 13);

f) Suitable access and infrastructure is or can be made available;

g) Where an existing building is demolished, any proposals for a replacement building will be treated as new build and considered as such against Policy DC1.

POLICY NH1a : INTERNATIONALLY PROTECTED AREAS : Development which would have an adverse effect on the conservation interest of a Natura 2000 area (including proposed SPAs or SACs) or a Ramsar site will only be permitted in the following circumstances:

a) there are no alternative solutions; and

b) there are imperative reasons of over-riding public interest, including those of a social or economic nature.

Where a priority habitat or species (as defined in Article 1 of the Habitats Directive) would be affected, prior consultation with the European Commission is required unless the development is necessary for public health or safety reasons.

POLICY NH1b : SITES OF SPECIAL SCIENTIFIC INTEREST: Development affecting SSSI's will only be permitted where it can be demonstrated that:

a) the objectives of designation and overall integrity of the site will not be compromised; or

b) any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, economic or environmental benefits of national importance; and

c) there are no alternative solutions

POLICY NH4: AREAS OF GREAT LANDSCAPE VALUE: Development that harms the landscape character and appearance of Areas of Great Landscape Value will not be permitted.

POLICY ENV4: DEVELOPMENT WITHIN CONSERVATION AREAS: All new development in Conservation Areas must be located and designed to preserve or enhance their special architectural or historic character. New development should accord with the size, proportions, orientation, positioning, density, materials, and boundary treatment of nearby buildings and public and private spaces. In addition, the following requirements must be met:

POLICY NRG1: Electricity Generating Stations: Land identified for use as or in association with a power generating station is safeguarded for that purpose. Uses incompatible with such use will not be permitted.

POLICY NRG3: WIND TURBINES: Subject to consistency with other plan policies, proposals for individual turbines or wind farms and associated access tracks and transmission lines will be supported where:

1 they would not change the existing landscape character in an unacceptable way;

2 they would not have an unacceptable visual impact on landscape or townscape including the impact on distinctive public views, landmark buildings or natural features, or routes;

3 they would not have an unacceptable impact from noise at any noise sensitive property including the gardens of such properties however large; the Council will refer to guidelines in PAN45 and PAN56 or successor guidance;

4 there would be no demonstrable nuisance from a shadow flicker effect;

5 they would have no unacceptable adverse impacts on hydrogeology or hydrology;

6 alternative, better, sites are not available; and

7 there are no unacceptable cumulative impacts.

In assessing all proposals the Council will have regard to the findings and recommendations of the Landscape Capacity Study for Wind Turbine Development in East Lothian (May 2005).

POLICY NRG4: WIND POWER SITES – RESTORATION: Prior to the determination of a planning application the planning authority will require wind turbine developers and landowners to enter into a legal agreement to secure removal of the turbines and associated infrastructure and restoration of the site once electricity generation has ceased.