

CHAPTER 1: INTRODUCTION

BACKGROUND

- 1.1 This Environmental Statement (ES) has been prepared by Ecotricity to accompany an application under section 36 of the Electricity Act 1989 for up to 22 wind turbines on land at Six Hundreds Farm, near East Heckington in the County of Lincolnshire.
- 1.2 Ecotricity submitted an application under Section 36 of the Electricity Act 1989 in December 2009. The application was acknowledged as valid by the Department of Energy and Climate Change on the 23 December 2009 (see **Appendix 1.1: DECC Application Response Letter**).
- 1.3 Under the provisions of the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000 Part II (6), where an application is made under s36 of the Electricity Act 1989 the Secretary of State is required to determine if the development as submitted is EIA development. The outcome of that determination was contained in the letter from DECC to Ecotricity dated the 23 December 2009 (**Appendix 1.1**) which confirmed that, in the opinion of the Secretary of State, the proposal is EIA development.
- 1.4 An EIA Development is described as a Schedule 2 development under the Town and Country Planning Environmental Impact Assessment (England and Wales) Regulations 1999, being an installation for the harnessing of wind power for energy production (wind farms), that exceeds the applicable thresholds and criteria:
- more than two turbines; or,
 - hub height exceeding 15 metres.
- 1.5 This proposed development comprises the erection of up to 22 wind turbines and associated infrastructure including access tracks, electricity sub-station and underground cabling on agricultural land to the north of East Heckington. The proposed turbines would have maximum dimensions of 80m to hub and 125m to blade tip and a rated capacity of up to 3.0MW. Full project description details are provided in **Chapter 4: Project Description**.
- 1.6 It is estimated that this proposed development would generate approximately 131.12GWh per annum¹. This is enough electricity to meet the annual electricity needs of approximately 39,700 typical UK households². This is equivalent to 102% of the households within North Kesteven and 1 in 7 of the household in Lincolnshire³. In generating electricity from a renewable source it is expected that the proposed development would prevent the emission of 56,382 tonnes of CO₂ each year⁴ as well as significant quantities of SO₂ and NO_x.

¹ Assuming average UK wind farm performance with a capacity factor of 27.7% (2005-2009 average figure from Digest of UK Energy Statistics, DECC). Please note that the actual performance of the Heckington Fen Wind Park may vary.

² Based on 'medium' UK domestic electricity consumption of 3,300kWh/pa as used by Ofgem and Lincolnshire having 272,153 households as per the 2001 census.

³ Based on figures from Census (2001) where North Kesteven District has 38,870 households and Lincolnshire has 272,153 households.

⁴ <http://www.statistics.gov.uk/statbase/ssdataset.asp?vlnk=6582&More=Y>

⁵ This figure is derived using a carbon dioxide offset ratio of 430g carbon dioxide per kWh of wind generation. It should be noted that future changes in the power generating mix and fuel costs in the UK over the life of the wind park means this figure may change over time.

THE DEVELOPER

- 1.7 Ecotricity is the UK's first 'green' electricity company, and has been involved in developing wind energy projects across the UK since it was founded in 1996. It is also a registered electricity supplier, providing green electricity to homes and businesses in the UK. As well as private individuals, commercial clients include Oxfam and the Co-operative Bank. It is the only developer and supplier of green energy which directly invests its profits into developing new sources of renewable energy.
- 1.8 Since its inception 14 years ago Ecotricity has been involved in pioneering wind energy projects across the UK, including building London's first wind turbines and the first multi-megawatt wind turbine in the UK. To date, Ecotricity has built 52 turbines, with a further 20 wind turbines consented and awaiting construction. Ecotricity's operating and consented wind energy developments include those listed in **Table 1.1** below.

Table 1.1: Ecotricity wind parks (operating and consented)

Lynch Knoll Wind Park (Gloucestershire)	A single 500kW Enercon E-40 wind turbine installed in 1996.
Ecotech Wind Park (Norfolk)	A single 1.5MW Enercon E-66 wind turbine with unique viewing platform installed in August 1999.
Somerton Wind Park (Norfolk)	A single 1.5MW Enercon E-66 wind turbine installed in July 2000.
East Kilbride Wind Park (Scotland)	A single 600kW Enercon E-40 wind turbine installed in March 2001.
Mablethorpe Wind Park (Lincolnshire)	Two 600kW Enercon E-40 wind turbines installed in June 2002.
Swaffham II (Norfolk)	A single 1.8MW Enercon E-66 wind turbine built in July 2003.
Ford Motor Company (Dagenham)	Three 1.8MW Enercon E-66 wind turbines were approved in 2003, two of which were installed in 2004.
Bambers Farm Wind Park (Lincolnshire)	Eight 600kW Enercon E-40 turbines installed in October 2004.
Green Park (Reading)	One 2MW Enercon wind turbine built close to the M4 in 2005.
Michelin Tyre Factory (Dundee)	Two 2MW Enercon E-70 turbines became operational in May 2006.
Mablethorpe Wind Park Ext. (Lincolnshire)	Six 800kW Enercon E-48 turbines were installed in November 2006.
Bristol Port Wind Park (Avonmouth)	Three 2MW Enercon E-82 wind turbines were installed in July 2007.
Fen Farm Wind Park (Lincolnshire)	Twenty 800kW Enercon E-48 turbines were installed in April 2008
Shooters Bottom Wind Park (Somerset)	One 2MW Enercon wind turbine was installed in June 2008.

B&Q (Worksop)	One Enercon 2MW E82 turbine was installed on the B&Q site in February 2009.
Galsworthy (Devon)	Four 2.3MW wind turbines will be erected at Galsworthy Farm in Devon in 2010.
Alveston (South Gloucestershire)	Three 2MW turbines will be erected at Old Green Farm, Alveston in 2010.
Michelin Tyre Factory (Ballymena, N. Ireland)	Two E-82 turbines granted planning permission February 2010.
Ford Motor Company II (Dagenham)	Construction started on a third 2MW turbine at the Ford plant in May 2011.
Queen Elizabeth Hospital (Kings Lynn)	A single 800kW turbine was given permission in January 2010.
G24i (Cardiff)	A single 2.3MW turbine which has been operational since February 2011.
Dalby (Leicestershire)	Nine E48 wind turbines granted planning permission in December 2010.

THE NEED FOR DEVELOPMENT

Climate Change

- 1.9 The proposed development is being brought forward in response to climate change and changes to the way in which the UK secures its energy supplies for the future.
- 1.10 Climate change is caused by the emission of greenhouse gases – such as carbon dioxide (CO₂), methane (CH₄) and nitrogen oxides (NO_x) – primarily from the combustion of fossil fuels. Greenhouse gases affect the climate by trapping heat energy from the sun that would otherwise be radiated back into space, raising global temperatures.
- 1.11 Scientific findings of the Intergovernmental Panel on Climate Change (IPCC), an international body of the world's leading climate change scientists, have demonstrated that climate change is being driven by anthropogenic factors. Greenhouse gas contributions include industrial and agricultural emissions and other effects such as land use changes which reduce the ability of the natural environment to recycle these gases. In the UK, the carbon dioxide emission from power stations accounted for 32 per cent of the total carbon dioxide emissions in 2007.⁵
- 1.12 In 2007, the Intergovernmental Panel on Climate Change (IPCC) completed its Fourth Assessment Report “Climate Change 2007”. This report was the culmination from the study of 2500 scientists from more than 130 countries who contribute to the IPCC. The Fourth Assessment report states that global warming is ‘unequivocal’, ‘very likely’ man-made and will ‘continue for centuries’.⁶
- 1.13 Climate change is a threat to the wellbeing of people across the world, including the UK. The UK is highly vulnerable to possible effects of climate change such as:

- rising sea levels;
- more frequent and stronger storms;
- increased rainfall and associated flooding;
- changes to sea currents, such as the Gulf Stream, affecting the UK's weather and overall temperature;
- loss of species diversity;
- increased risks of heat waves, droughts, crop failure and desertification.

- 1.14 The Stern Review: The Economics of Climate Change (2007) commissioned by HM Treasury, quantified the impacts of climate change from an economic perspective. The Stern Review covers in great detail the issue of climate change, and describes the need to reduce greenhouse gas emissions:

“The scientific evidence is now overwhelming: climate change presents very serious global risks, and it demands an urgent global response;

“Reducing the expected adverse impacts of climate change is...both highly desirable and feasible;

“Policies are required to support the development of a range of low-carbon and high-efficiency technologies on an urgent timescale; and,

“There is still time to avoid the worst impacts of climate change if strong collective action starts now.”⁷

- 1.15 To reflect the seriousness that climate change presents to the UK, in 2008 the Department of Energy and Climate Change (DECC) was created with the purpose to manage energy and climate change mitigation policy. DECC states that:

“Climate change is not only a massive threat to the global environment, it is also perhaps the greatest economic challenge facing us in the twenty-first century. It demands an urgent and radical response across the developed and developing world.”⁸

- 1.16 In November 2008, the UK introduced the Climate Change Act which set ambitious targets for the reduction in carbon dioxide emissions. As well as a legally binding target of at least an 80% reduction in CO₂ emissions by 2050 (para 1.1), the Act also set a reduction target of 26% by 2020 (para.5.1a).⁹
- 1.17 This need to reduce greenhouse gas emissions has been transposed into UK and European law and is reflected in the policy framework in which this application will be considered.

Renewable Energy

- 1.18 Government policy is unambiguous: renewable energy capacity is essential in addressing climate change. The Energy Review 2006 made it clear that the Government is committed to ensuring

⁵ DECC (2009). Digest of United Kingdom Energy Statistics 2009.

⁶ IPCC (2007). Fourth Assessment Report: Climate Change 2007. <http://www.ipcc.ch/index.htm>

⁷ HM Treasury (2007), The Stern Review: The Economics of Climate Change (Executive Summary) http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

⁸ DECC (accessed February 2010). <http://www.decc.gov.uk/en/content/cms/about/about.aspx>

⁹ OPSI (2008), Climate Change Act (2020 CO₂ figure revised to 34% below 1990 baseline) http://www.opsi.gov.uk/acts/acts2008/ukpga_20080027_en_1

renewables has an important role to play in helping the UK meet its energy policy goals. It highlights the fact that although projects do not always appear to show benefits locally “they provide crucial national benefits”.¹⁰

1.19 The Renewables Statement of Need goes on to state that:

“Individual renewable energy projects are part of a growing proportion of low-carbon generation that provides benefits to communities through emission reductions and a more diverse energy mix which increases the reliability of our supplies... These wider benefits are not always immediately visible to the specific locality in which the project is sited. However, the benefits to society and the wider economy as a whole are significant and this must be reflected in the weight given to these considerations by decision makers in reaching their decision.” (pg 205)

1.20 **Appendix 1.2** is ‘Box 5.3.3: Renewables Statement of Need’, part of the Meeting the Energy Challenge : A White Paper on Energy 2007 (BERR).

1.21 The ‘Planning for a Sustainable Future’ White Paper (2007) identifies the need to install renewable energy within the UK in order to meet the 20% of renewables by 2020. This paper outlines the important role Local Authorities have in this decision making process and that:

“Applicants for renewable energy will no longer have to demonstrate the need for their project, either in general or in particular locations”.¹¹ (para.7.18)

1.22 Renewable energy is one of the most important ways in which the UK can reduce its greenhouse gas emissions and meet the targets set in the Climate Change Act. Renewable energy sources generate electricity without emitting any CO₂ or other greenhouse gas emissions, and therefore replacing fossil fuel generation with renewable energy is a proven choice for reducing our emissions and helping to mitigate the effects of climate change.

1.23 In support of renewable energy, in December 2008 the UK Government signed up to the EU Renewable Energy Directive. The Directive includes a target for the UK to produce 15 per cent of all energy from renewables by 2020¹². This target is equivalent to a seven-fold increase in UK renewable energy consumption from 2008 levels and a significant proportion of this is expected to come from changes in electricity generation.

1.24 In 2009 the Government published The UK Renewable Energy Strategy (2009) which sets out the path for meeting the carbon reduction targets agreed in the EU Renewable Energy Directive. The Strategy’s lead scenario states that:

“by 2020 about 30% or more of all our electricity (about 117 TWh) – both centralised and small-scale generation – could come from renewable sources, compared to around 5.5%

today. We expect the majority of this growth to come from wind power, through the deployment of more onshore and offshore wind turbines.”¹³ (para.2.18)

1.25 The document states that much of the renewables energy target will be from wind power. It also emphasises the need to streamline the delivery of renewable energy generation, stating:

“Our planning system must enable renewable deployment in appropriate places, at the right time, and in a way that gives business the confidence to invest. Thus we must speed up the system and make it more predictable, while ensuring that we continue to protect our environment and natural heritage and respond to the legitimate concerns of local communities.” (para.3.6)

1.26 Published alongside the UK’s Renewable Energy Strategy (2009) is the UK Low Carbon Transition Plan (2009). The document reiterates the pressing need to increase renewable generation within the UK to “deliver emission cuts of 18% on 2008 levels by 2020.”¹⁴

1.27 Refer to the ‘Planning Context’ section at para.1.40 for a description of policies that are applicable to this application, including Development Plan Documents.

Wind Power

1.28 Wind turbines convert the kinetic energy of wind to electrical energy by rotating the wind turbine hub as it passes over the aerodynamically designed blades. Onshore wind parks (or wind farms) may consist of over a hundred turbines or just a single wind turbine. Fewer large wind turbines are often selected over several smaller ones, as they tend to be more efficient and can utilise the greater wind speeds higher up, however much depends on the specific site conditions.

1.29 The report on *Wind Power in the UK* by the independent Sustainable Development Commission (SDC) gives a thorough assessment of why onshore wind power is one of the most viable renewable technologies that must be exploited effectively in order for the UK to meet its renewable energy targets and play an effective role in preventing climate change¹⁵. Key points of the report are:

The UK has some of the best and most geographically diverse wind resource in Europe, more than enough to meet current renewable energy targets.

Wind variability is not a problem for the electricity grid. Increasing the proportion of wind power in the electricity system does not require greater “back up” capacity, as is often believed.

The generation costs of onshore wind power are around 3.2p/kWh (+/-0.3p/kWh), with offshore at around 5.5p/kWh, compared to a wholesale price for electricity of around 3.0p/kWh.

As a carbon free source of energy, wind power contributes positively to the UK’s effort to reduce our carbon emissions to tackle the threat of climate change. (Executive Summary)

¹⁰ DTI (2006), *The Energy Challenge: Energy Review Report 2006 (Annex D: Renewables Statement of Need)*
<http://www.berr.gov.uk/files/file32017.pdf>

¹¹ CLG, DEFRA, DTI, DoT (2007) *Planning for a Sustainable Future*
<http://www.official-documents.gov.uk/document/cm71/7120/7120.pdf>

¹² Directive 2009/28/EC of the European Parliament and of the Council (2009), Annex I
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT>

¹³ DECC (2009), *The UK Renewable Energy Strategy*
http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/res/res.aspx

¹⁴ DECC (2009), *The UK Low Carbon Transition Plan: National Strategy for Climate Change and Energy (Summary)*
http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx

¹⁵ *Wind Power in the UK* (2005), Sustainable Development Commission
<http://www.sd-commission.org.uk/pages/wind-power-in-the-uk.html>

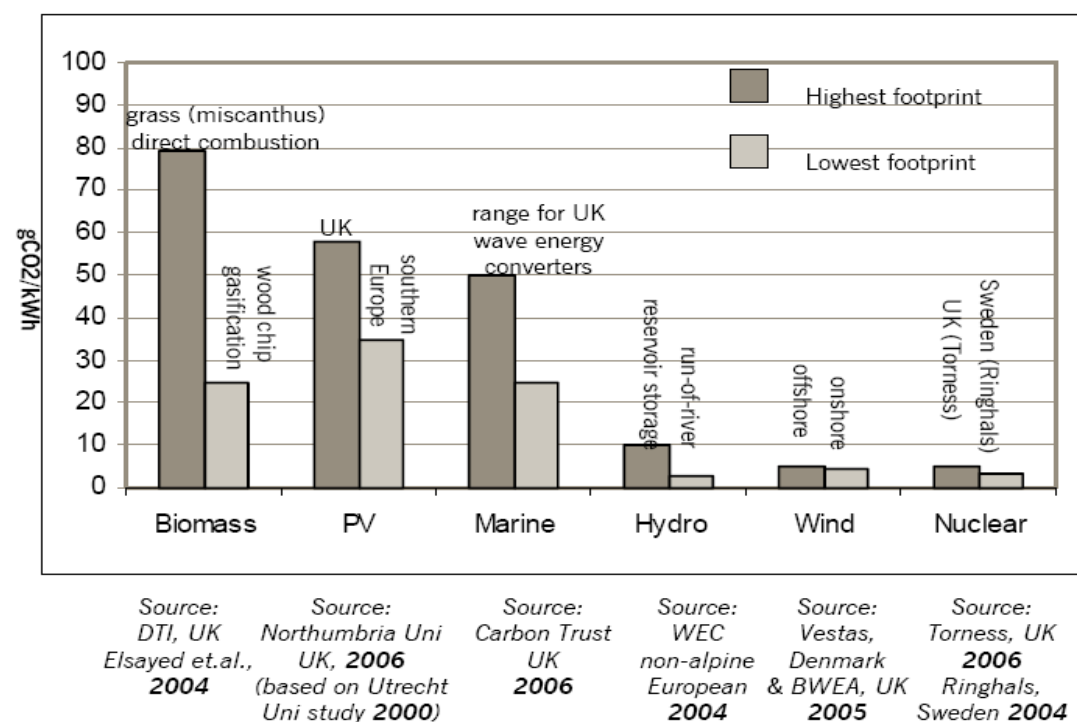
- 1.30 Using life cycle assessment to analyse the total carbon dioxide and other greenhouse gas emissions caused by different electricity generation systems in the UK, the Parliamentary Office of Science and Technology (POST) established that:

"Electricity generated from wind energy has one of the lowest carbon footprints."¹⁶ (pg 3)

- 1.31 **Chart 1.1** (overleaf) shows the greenhouse gas emissions throughout the life cycle for 'low carbon' electricity generation technologies – this is expressed as grams of carbon dioxide equivalent per kilowatt hour of generation (gCO₂eq/kWh). The analysis shows that onshore wind energy has one of the lowest carbon footprints of all the technologies, less than a fifth of that of solar photovoltaic (PV) energy.

- 1.32 Consideration of alternatives is discussed in greater detail in **Chapter 3: Site Selection and Design**.

Chart 1.1: Range of carbon footprints for UK & European 'low carbon' technologies¹⁷



- 1.33

- 1.34 Wind energy is a secure energy source in that it is both renewable and plentiful within the UK. In several European countries wind energy has already become an established major source of electricity generation. In Denmark wind power currently supplies more than 20% of the Danish annual electricity consumption, with onshore wind developments providing over 15% of the country's total electricity needs for the last 7 years.¹⁸ In November last year wind turbines met 54% of Spain's electricity demand on several occasions, and with 14.3% of Spain's electricity coming from wind energy in 2009 it provided more electricity generation than coal last year.¹⁹

¹⁶ POST (2006). Carbon Footprint of Electricity Generation. POSTnote 266. <http://www.parliament.uk/documents/upload/postpn268.pdf>

¹⁷ POST (2006). Carbon Footprint of Electricity Generation. POSTnote 266. <http://www.parliament.uk/documents/upload/postpn268.pdf>

¹⁸ Danish Wind Industry Association (accessed March 2010). http://www.windpower.org/en/knowledge/statistics/the_danish_market.html

¹⁹ Spanish Wind energy Association (accessed in March 2010). <http://www.aeeolica.es/en/>

- 1.35 Using wind energy does not affect the reliability of electricity supply. In fact, the National Grid has stated that:

"... the diversity of wind turbine output, over a relatively small distance, is such that the large scale output changes are extremely unlikely over short time scales. We are confident that the intermittency and diversity of wind does not pose insoluble problems for provision of response and reserve."²⁰

- 1.36 This view was recently re-emphasised by the National Grid in a June 2009 report which concluded that technology such as wind can be made "capable of meeting our requirement for flexibility in operating the transmission networks."²¹

- 1.37 Wind power has additional benefits as a localised energy supply. The 2007 *Energy White Paper*²² outlines the decline of the UK's indigenous energy supply stating that:

"the UK will become more dependent on imported fuels to meet its energy demand. By 2020, around 80% of our fuels are likely to come from overseas." (para. 1.19)

- 1.38 The White Paper (2007) addresses the risks to security of electricity supply "by encouraging the development of low carbon electricity generation technologies and a market framework that encourages companies to invest in them, thereby helping to ensure a more diverse and secure electricity mix for the future." (pg 22)

- 1.39 Distributing and transmitting energy through the National Grid results in losses in the region of 7%²³. Embedded generators, such as wind power connected to the local grid, within areas of electricity demand have lower distribution losses, and are therefore the most economical and environmentally sound method of generation and supply.

THE PLANNING CONTEXT

- 1.40 The purpose of this section is to present relevant National, Regional and Local Planning Policy which relates to this application and is relevant to the proceeding assessment chapters within the Environmental Statement.

- 1.41 A **Planning Statement** has also been prepared which considers the acceptability of the development in terms of the current planning policy framework and any material considerations which should be taken into account in the determination of the planning application. The Planning Statement accompanies the planning application but does not form part of this Environmental Statement.

²⁰ National Grid (2002). *New Connections – A Guide for Renewable Generation Projects*.

http://www.ngtgroup.com/responsibility/fp/aspenn/public/download/New_Connections_Brochurecdf7eff19a3b2295fa15540659c96622.pdf

²¹ 'Operating the system beyond 2020', National Grid Policy Brief, June 2009

<http://www.nationalgrid.com/NR/rdonlyres/45D855F7-32B6-41E5-9BD5-1B9A65DB9197/35114/FactSheet2020SO1.pdf>

²² DTI (2007). *Meeting the Energy Challenge: A White Paper on Energy*, May 2007

http://www.decc.gov.uk/en/content/cms/publications/white_paper_07/white_paper_07.aspx

²³ DTI (2009) *Digest of United Kingdom Energy Statistics*.

<http://www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx>

National Guidance**Planning Policy Statement 1: Delivering Sustainable Development (PPS1)**

- 1.42 PPS1 sets out how planning should enshrine sustainable development advising that “sustainable development is the core principle underpinning planning” (para.3).²⁴
- 1.43 Relevant 'key principles' of national planning policy, as set out in para.13 of PPS1, including the following:
- “i). Development plans should ensure that sustainable development is pursued in an integrated manner, in line with the principles for sustainable development set out in the UK strategy. Regional planning bodies and local planning authorities should ensure that development plans promote outcomes in which environmental, economic and social objectives are achieved together over time.
- ii). Regional planning bodies and local planning authorities should ensure that development plans contribute to global sustainability by addressing the causes and potential impacts of climate change - through policies which reduce energy use, reduce emissions (for example by encouraging patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight), promote the development of renewable energy resources, and take climate change impacts into account in the location and design of development . . .”

Planning Policy Statement 1 Supplement: Planning Climate Change

- 1.44 The Planning Policy Statement 1 Supplement (PPS1 Supplement) provides advice on how planning should help to reduce carbon emissions and stabilise climate change. It sets out a number of Key Planning Objectives intended to help address these overall aims. These include the need for local planning authorities to: “respond to the concerns of business and encourage competitiveness and technological innovation in mitigating and adapting to climate change” (para.9).²⁵
- 1.45 Local planning authorities are advised to provide “a framework that promotes and encourages renewable and low-carbon energy generation, with policies that promote and not restrict renewable and low-carbon energy” (para.19).
- 1.46 In deciding which areas or sites are suitable, local planning authorities should take into account the extent to which existing or planned opportunities for renewable / low-carbon energy could contribute to the energy supply of development. The PPS1 Supplement requires local planning authorities to ensure that development proposals are consistent with the policies contained within it in the interim period before the development plan is updated to reflect its contents, and stresses the Supplement’s function: “as a material consideration which may supersede policies in the development plan” (para.11).
- 1.47 Paragraph 40 of the PPS Supplement states that:

“An applicant for planning permission to develop a proposal that will contribute to the delivery of the Key Planning Objectives set out in this PPS should expect expeditious and sympathetic handling of the planning application” (para.40).

Planning Policy Statement 22: Renewable Energy

- 1.48 This provides the principle national planning policy guidance relevant to wind energy developments, and states within the introduction that: “increased development of renewable energy resources is vital to facilitating the delivery of the Government’s commitments on both climate change and renewable energy” (pg 6).²⁶
- 1.49 PPS22 directly refers to the Government’s aspiration in the Energy White Paper (2003) to double renewables’ share of electricity generation between 2010 and 2020 from 10% to 20% in order to meet national energy targets, reduce greenhouse gas emissions and maintain reliable and competitive energy supplies (pg.6).
- 1.50 PPS22 sets out eight key principles that underpin National Planning Policies, which local planning authorities should adhere to in their approach to planning for renewable energy, including that:
- “Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily.” (pg.7)
- 1.51 Among the other key principles are that:
- “The wider environmental and economic benefits of proposals for renewable energy projects, whatever their scale, are material considerations that should be given considerable weight in determining whether proposals should be granted planning permission;
- 1.52 and that,
- “Regional spatial strategies and local development documents contain policies designed to promote and encourage, rather than restrict, the development of renewable energy resources.” (pg.7)
- 1.53 Paragraph 2 and 3 indicate that the Regional Spatial Strategy should include the target for renewable energy capacity in the region, with these expressed as a minimum, set for achievement by 2010 and 2020. Paragraph 3 goes on to clarify that:
- “The fact that the target has been reached should not be used in itself as a reason for refusing renewable energy projects.”
- 1.54 PPS22 acknowledges the impact that wind farm development can have on internationally important sites and seeks to protect them as appropriate. With regard to local landscape and local nature conservation designations PPS22 states that these: “should not be used in themselves to refuse planning permission for renewable energy developments.” (p12). In terms of other location

²⁴ Office of the Deputy Prime Minister (2005), Planning Policy Statement 1: Delivering Sustainable Development
<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps1/>

²⁵ Office of the Deputy Prime Minister (2007), Planning Policy Statement 1 Supplement: Planning Climate Change, December 2007
<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/ppsclimatechange/>

²⁶ Office of the Deputy Prime Minister (2004), Planning Policy Statement 22: Renewable Energy; 2004
<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps22/>

considerations it outlines that local authorities should not adopt a sequential approach in determining the suitability of sites.

- 1.55 PPS22 also makes reference to specific impacts which may arise from renewable energy projects, principally:
- Landscape and visual impacts
 - Noise
 - Odour
- 1.56 Wind turbines do not give rise to odour emissions however it is relevant to consider the advice on landscape and visual and noise. In respect of wind generation PPS22 advises that “*the final decision on landscape and visual effects will be, to some extent, one made by professional judgment*” (pg.13). It also advises that the cumulative impact of generation projects in particular areas are to be considered.
- 1.57 In respect of noise considerations it states local authorities should ensure the schemes are designed to minimise noise increases and that ETSU guidelines should be used to assess and rate noise from wind energy developments.
- 1.58 Finally, PPS22 acknowledges that the potential impact of wind turbines on aviation and radar, and guidance on separation distances from power lines, roads, and railways are the responsibility of the developer and therefore require no specific regional or local planning policies. (pg.14)

The Development Plan

- 1.59 Section 38 (6) of the Planning and Compulsory Purchase Act 2004 states that:
- ‘If regard is to be had to the development plan for the purpose of any determination to be made under the Planning Acts, the determination must be made in accordance with the plan unless material considerations indicate otherwise.’²⁷*
- 1.60 The starting point for any development proposal is therefore conformity with the Development Plan, with this defined under the Planning and Compulsory Purchase Act 2004. This comprises:
- The East Midlands Regional Plan; and,
 - the Development Plan documents (taken as a whole) which have been adopted or approved in relation to that area; or,
 - any existing Local Plan saved policies.

East Midlands Regional Plan (2009)

- 1.61 The East Midlands Regional Plan (EMRP) (adopted March 2009) replaced the Structure Plan 1996 – 2016 which has now expired. The key policy in the East Midlands Regional Plan (EMRP) is **Policy 40** ‘Regional Priorities for Low Carbon Energy Generation. It states that: “*Local Authorities,*

energy generators and other relevant public bodies should promote: the development of a distributed energy network using local low carbon and renewable resources.”²⁸

- 1.62 Furthermore, **Policy 40** goes on to say that Local Planning Authorities should: “*develop policies and proposals to achieve the indicative regional targets for renewable energy set out in Appendix 5*”.
- 1.63 The EMRP outlines the key factors in relation to determining onshore wind energy developments, as listed below:
- “Landscape and visual impact, informed by local Landscape Character Assessments;*
- The effect on the natural and cultural environment (including bio-diversity, the integrity of designated nature conservation sites of international importance, and historic assets and their settings);*
- The effect on the built environment (including noise intrusion);*
- The number and size of turbines proposed;*
- The cumulative impact of wind generation projects, including intervisibility;*
- The contribution of wind generation projects to the regional renewables target; and,*
- The contribution of wind generation projects to national and international environmental objectives on climate change.”*

- 1.64 Appendix 5: ‘Renewable Energy Targets’ states indicative renewable energy targets for the East Midlands region. It sets a target of 122MWe installed onshore wind capacity and a corresponding 319GWh a year from onshore wind technology in the region by 2010. The target for 2020 is 175MWe installed capacity and 460GWh a year.
- 1.65 On 17th October 2008 the East Midlands Regional Assembly launched a public consultation on proposals for a further Partial Review of the East Midlands Regional Plan, looking at key regional spatial planning issues through to 2031. A key issue that was proposed to be considered by the Partial Review is dealing with the causes and effects of climate change by generating more power from renewable sources and managing the potential impacts of sea level rise on the Lincolnshire Coast. As part of the review a study was undertaken by Faber Maunsell ‘Reviewing Renewable Energy Targets for the East Midlands’ (2009). The study was intended to update the technology specific targets in the Regional Spatial Strategy (RSS8) by looking not only at the resource potential, but also at what the region is likely to require through future changes to national policy and what can be achieved through growth.
- 1.66 The report stated that the current capacity data indicates that the accessible resource has been underestimated in previous assessments and that higher output turbines combined with relaxations on land designation may allow an increase of at least circa 100% on the existing resource potential. The report identifies a revised resource potential of 472MW for onshore wind by 2021 and 776MW by 2031, or 31 wind farms. The report goes on to state:

‘This capacity is twice the previous assessed potential, although is still relatively low compared with the available unconstrained wind resource. The region should aim to

²⁷ Planning and Compulsory Purchase Act 2004, Chapter 5; 2004

²⁸ Government Office for the East Midlands, East Midlands Regional Plan, March 2009
<http://www.gos.gov.uk/497296/docs/229865/EMRP>

maximise onshore wind where possible as a key contributor to renewable energy in the region.'

Local Development Framework (LDF)

- 1.67 The Planning and Compulsory Purchase Act 2004 requires all Local Planning Authorities to prepare Local Development Frameworks to replace Local Plans. The North Kesteven Local Development Framework (NKLDF) is currently being prepared and will replace the 2007 Adopted North Kesteven Local Plan.
- 1.68 The City of Lincoln, North Kesteven District and West Lindsey District; in partnership with Lincolnshire County Council, have joined together to prepare a joint development plan (Core Strategy) for their area which is collectively known as Central Lincolnshire. This document is going through consultation in 2011.

Local Plan

- 1.69 The Local Plan was Adopted on 21st September 2007. All of the policies in the Plan were saved under the provisions of the Planning and Compulsory Purchase Act 2004.

Policy C17 - Renewable Energy

- 1.70 Within the North Kesteven Adopted Local Plan 2007 the policy that relates to renewable energy is policy **C17 – Renewable Energy** which states that planning permission will be granted for renewable energy development subject to:
- *the environmental, economic and social impacts can be addressed satisfactorily;*
 - *the proposal minimises the landscape and visual effects of the development through appropriate siting, design and landscaping schemes;*
 - *where the proposal would have an adverse effect on a site of international importance for nature and heritage conservation, there is no alternative solution and there are imperative reasons of overriding public interest;*
 - *where the proposal is in a nationally designated area, the objectives of the designation of the area will not be compromised, and any adverse effects on the qualities of the area are outweighed by the environmental, social and economic benefits.*
- 1.71 The supporting text highlights the finite fossil fuel resources and the need to harness renewable energy sources which limit the help to limit the effects of Climate change. It also states that many types are likely to be exploited in North Kesteven specifically of which wind power (either in small clusters or in large wind farms) is highlighted. It discusses the need to analysis and assess the environmental factors from wind turbines but states that;
- 'despite these potentially harmful effects upon the districts environment, development that will lead to increased exploitation of renewable energy sources is to be welcomed in principle.'*

CLIMATE CHANGE STRATEGY

- 1.72 In 2008 North Kesteven released their climate change strategy which covers the period to 2013. Within it sets the regions objectives.

Objective 2 : Lower the emissions of greenhouse gases from the district as a whole in conjunction with government commitments in the Climate Change Act 2008.

Objective 4 : Ensure that biodiversity is conserved and enhanced in North Kesteven, considering the impact that climate change will have on species and habitats.

SUMMARY

- 1.73 This EIA identifies and assesses all the potentially significant environmental effects arising from the construction, operation and decommissioning of up to 22 wind turbines each with a capacity of up to 3.0MW in the Heckington Fen Wind Park. The phenomenon of climate change is now accepted by governments internationally, and the UK is at the forefront of policy implementation and developing a legislative framework to address the causes of climate change – carbon emissions.
- 1.74 Electricity generation from fossil fuels is the largest source of carbon emissions in the UK and as such the government has made it explicitly clear in recent white papers and planning policy, that renewables, and specifically onshore wind turbines *"have a vital role to play in increasing energy from renewable sources and helping us to meet our carbon emission reduction targets"*²⁹.
- 1.75 National, regional and emerging local planning policy provides the framework which underpins the decision-making process for wind turbine developments. The issue of the weight to be attached to material considerations is not addressed here, this chapter only summarises the Development Plan process and policies that will be used to assess this application. The **Planning Statement** presents the statutory and non-statutory policy and advice relevant to the Heckington Fen Wind Park and should be read in conjunction with this ES.

²⁹ DTI (2007). *Planning for a Sustainable Future: White Paper.*