Chapter 1: Introduction

Background

1.1 Your Energy Limited (YEL) is seeking to develop a wind farm on the Isle of Wight, and has submitted a planning application to the Isle of Wight Council (IoWC). This is the environmental statement that reports the outcome of a comprehensive environmental impact assessment of the proposals.

The West Wight wind farm

1.2 The wind farm site is proposed on land to the south of the villages of Thorley and Wellow, on the western side of the Island, approximately 2.5 km south-east of Yarmouth (figure 1.1). The site is described in more detail in chapter 3.

1.3 The wind farm will comprise six wind turbine generators, each with a tubular steel tower, three glass fibre-reinforced epoxy turbine blades, a fibreglass nacelle (which houses the generator, gearbox and yawing mechanisms), and an enclosed, weatherproof electrical transformer. While the choice of turbine model cannot be finalised at this stage the assessment has been based on the Vestas V82 model. If the model of turbine changes, the IoWC will be informed and any necessary re-assessment undertaken. The tower is likely to be 59 metres high, with a rotor diameter of 82 metres (ie each blade is 41 metres long). This gives the turbine a tip height of 100 metres. Two of the turbines are sited in localised hollows, and for visual conformity the tower heights of these will be raised to bring all of the tips to a similar height with respect to the general site level from important viewpoints. The proposals are described in detail in chapter 4.

1.4 The six wind turbines have a predicted installed generating capacity of between 9.9 and 12 megawatts (MW), depending on ultimate turbine selection. (As the technology evolves, the electrical capacity of comparable turbines may increase whilst maintaining the same environmental performance characteristics.) This supply of renewable electricity is equivalent to the approximate power demand of 6,500 homes, representing 10% of the dwellings on the Isle of Wight and approximately 10% of the Island's 138,400 population (the figures used for these calculations are provided in chapter 11 of this environmental statement.

The developer

1.5 The West Wight wind farm is being proposed by West Wight Wind Farm Limited (the developer), a specific project vehicle established by YEL to administer this project, and a wholly owned subsidiary of YEL.

1.6 YEL is a leading independent UK renewable energy company. It was established in 2001 and is owned by Mistral Invest Limited, the investment arm of an international shipping company.

1.7 YEL is actively developing a wind energy portfolio across the UK, which will assist in addressing the UK's renewable energy targets that ultimately contribute to the country's energy self-sufficiency. YEL has professional experience across all the key disciplines including planning, environmental services, wind turbine technology, contract law and project financing. Through careful attention to design, planning, development and consultation with the local community, the company has the proven ability to plan, build and operate wind farms in the UK. It has achieved planning permission for the Burton Wold wind farm near Kettering (20MW), Parham wind farm in Suffolk (12MW), and Sanday wind farm on the Orkney Islands (11MW). A further 166MW of projects are awaiting approval.

Economic and community benefits

1.8 Development of the wind farm will involve a capital investment of approximately £10 million and will generate opportunities for the supply of locally and regionally sourced personnel, materials and services during the construction, operation and decommissioning phases of the wind farm.

1.9 Denmark, the world leader in wind energy, now employs approximately 20,000 people in its wind energy industry and meets almost 20% of its domestic electricity demand from wind turbines. The proposal presents a particular opportunity to strengthen the position of the renewables sector and employment on the Isle of Wight. Vestas Blades UK Limited, formerly NEG Micon Rotors, is one of the Island's biggest private sector employers, employing over 500 people at its UK technology centre for the research, development and manufacture of wind turbine blades, at the St Cross Business Park in Newport. In the UK, Vestas Blades Ltd is one of the leading wind turbine manufacturers with over 20 years' experience and has installed over 12,000 wind turbines in 40 countries.

1.10 The development of the wind farm will facilitate industrial research, development and testing programmes to further strengthen the businesses' technical knowledge and market position as a leading turbine component manufacturing facility.

1.11 A summary of some of the national and local benefits associated with both the growth of the UK's renewable energy generation portfolio and the operation of the West Wight wind farm is presented in chapter 9 of this environmental statement.

Climate change and the need for renewable power

1.12 The West Wight wind farm would displace approximately 19,500 to 30,000 tonnes of carbon dioxide that would otherwise be emitted to the atmosphere per year from conventional fossil fuel electricity generation (based on an installed

electrical capacity of 9.9MW, derived from formulae available from the British Wind Energy Association, the Carbon Trust and Scottish Natural Heritage). More detailed information and calculations are given in chapter 11.

1.13 It is internationally acknowledged that the global climate is changing as a result of increasing levels of greenhouse gases such as carbon dioxide in the earth's atmosphere. Renewable energy, including wind-generated power, is seen as an essential element of the UK Government's and European Union's strategy to tackle global climate change. Climate change is recognised as one of the most serious environmental problems facing the world today.

1.14 The UK Government has committed under the Kyoto Protocol (the United Nations Framework Convention on Climate Change), to a binding target of reducing these greenhouse gas emissions by 12.5% below 1990 levels by 2008-2012. The UK Government has chosen to adopt further goals of reducing carbon dioxide emissions by 20% below base levels by 2010 and 60% by 2050.

1.15 As a large percentage of carbon dioxide emissions are derived from the production of energy through conventional burning of fossil fuels, a key part of the strategy is to increase the supply of electricity from renewable sources. The UK Government is obliged to encourage the use of renewable energy through the requirements of the European Union, and has set a commitment to ensure that 10% of the supply of electricity in the UK by 2010 will be from renewable sources.

1.16 In addition to preventing emissions of carbon dioxide, wind power avoids many of the other external environmental costs of conventional generation, including poor local air quality and the damage to the natural and built environment caused by acid rain.

1.17 More renewable energy generation can also provide greater diversity in our energy mix, which is vital in ensuring security and continuity of supply as fossil fuels continue to deplete and the UK becomes more dependent on overseas sources of fossil fuel.

1.18 Wind, both onshore and offshore, is currently the only viable technology with the potential to help reach the short term targets set by international obligation and national policy, with limited further potential for hydro power, and some of the tidal and wave power technologies still in the early stages of development. The sector is expected to supply three-quarters of the target, equivalent to some 8,000 MW of installed capacity. This is expected to be split roughly equally between onshore and offshore wind farm developments

1.19 The West Wight wind farm would contribute approximately 8.6% of the Hampshire and Isle of Wight indicative sub-regional target for renewable electricity generation for 2010.

1.20 The supporting statement that accompanies the planning application and this environmental statement presents a more detailed summary of the policy context

and the accepted need for the continued growth of the UK's renewable energy generation portfolio.

The need for environmental impact assessment

1.21 The proposed wind farm falls within Schedule 2 (3i) of the Town and Country (Environmental Impact Assessment) (England and Wales) Regulations 1999 (hereafter referred to as the 'Regulations'), which specify the types of developments for which environmental impact assessment should be considered in order to support a planning application. Under the Environmental Impact Assessment Regulations, a developer may consult the local authority for a 'screening opinion' as to whether the impacts of a Schedule 2 development are likely to be significant and therefore if an environmental impact assessment is required. YEL believes in the benefits of undertaking environmental impact assessment for projects of this nature, and therefore volunteered one in any case. The environmental impact assessment process is described in chapter 5 of this ES.

1.22 YEL commissioned a comprehensive and independent environmental impact assessment of the proposed development. A team of specialist consultants has carried out the work, originally co-ordinated by Sinclair Knight Merz and latterly by Terence O'Rourke. Both companies are Registered Assessor Members of the Institute of Environmental Management and Assessment. Table 1.1 shows the consultants that have assisted YEL with the EIA.

Consultant	Responsibility
Sinclair Knight Merz (SKM)	Project management of the EIA and many of the technical baseline studies and assessments.
E4environment	Assisted SKM with the landscape and visual assessment studies for the EIA.
Hayes McKenzie	Assisted SKM with the noise studies for the EIA.
Cambrian Archaeological Projects Limited	Assisted SKM with the archaeological assessment of the site.
Jonathan Cox Associates	Some preliminary bird surveys for the EIA.
Terence O'Rourke	Review of the EIA findings, further survey and assessment work, co-ordination & ES production.
Wessex Archaeology	Assisted Terence O'Rourke with further archaeological assessment and evaluation.
Ecosa	Assisted Terence O'Rourke with protected species surveys.
Entran	Assisted Terence O'Rourke with review and update of traffic studies.

Table 1.1: consultant team

1.23 During the environmental impact assessment, the developer has consulted stakeholders through the preparation of a formal scoping report submitted to the IoWC in March 2004, attendance at public meetings, hosting of a public exhibition, meetings and continued dialogue with key consultees throughout the development process, and a second round of formal scoping in early 2006. These discussions have informed the scope and methodology of the environmental

impact assessment. Full details are set out in the scoping and consultation technical appendix to this environmental statement.

1.24 Alternatives that have been considered over the life of the project are discussed in chapter 2 and a technical appendix provides background documents to the process undertaken. The location for the wind farm was chosen in accordance with YEL's site selection philosophy. Major design modifications included: the reduction of the number of turbines from seven to six; the reduction in turbine height from 110m to 100m for four turbines; the reduction in turbine blade diameter from 90m to 82m; the micrositing of wind farm components including turbines, access roads and construction compound; and the substitution of sections of permanent site access track with temporary ones that will be removed after construction.

This environmental statement

1.25 An environmental statement is the formal written report of the findings of an environmental impact assessment. It identifies and addresses the predicted significant positive and negative impacts on the environment during the construction, operation, decommissioning and restoration of the wind farm. Mitigation measures are considered where appropriate and the residual impacts assessed.

1.26 The environmental statement comprises several separately bound documents:

- non-technical summary
- main environmental statement
- a series of technical appendices.

1.27 The non-technical summary will be made widely available and is available to download at www.your-energy.co.uk. The environmental statement is distributed to the local planning authority and main consultee groups, and is available for public inspection at the offices of the IoWC. Copies can be purchased on a CD from Terence O'Rourke at £20, a price that reflects the production cost. A few paper copies may also be available from Terence O'Rourke, at a cost of £150. Technical appendices contain detailed technical data and are generally made available only to the relevant specialist consultees. In a few cases (such as legally protected species), the technical appendices are confidential. Cheques should be made payable to Terence O'Rourke. Cash should not be sent by mail.

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1.28 This environmental statement accompanies a formal planning application to IoWC. The planning application also includes the prescribed planning application forms and certificates, A1 size planning drawings showing the proposed turbine and electrical switching station structures, and a separate planning statement that considers the proposed development in the context of national, regional and local planning policies.