

LLANBRYNMAIR WIND FARM

Supplementary Environmental Information
December 2013

Volume 1 - Non-Technical Summary



NON-TECHNICAL SUMMARY

1.1 Introduction

- 1.1.1 In March 2009, an application for Section 36 consent under the Electricity Act 1989 was submitted by RES UK & Ireland Ltd ('RES') to the Department of Energy and Climate Change (DECC) for a wind energy development of up to forty-three (43) turbines on land between the villages of Llanbrynmair and Llanerfyl in Powys. The Section 36 application is currently under consideration and is being appraised at the Mid-Wales (Powys) Conjoined Wind Farms Public Inquiry. An Environmental Statement (ES) accompanied the Section 36 consent application.
- 1.1.2 The Proposal has undergone considerable changes since the original submission in 2009. Of particular note, the number of turbines has been reduced from forty three (43) to thirty (30). In order to update and consolidate these changes within the ES, six rounds of Supplementary Environmental Information (SEI) have been submitted between 2010 and 2013.

1.2 The Application

- 1.2.1 The application includes the erection of 30 three-bladed, horizontal axis wind turbines, each up to 126.5m maximum height to tip and associated infrastructure including, on-site tracks, underground cabling and crane hardstandings, a communications mast (25m high), a permanent (80m high) free standing lattice wind monitoring mast, borrow pits, water crossings, electrical transformers, electrical connection works, a substation and control building, for a period of 25 years.
- 1.2.2 Each wind turbine would have a capacity of between 2MW and 3MW, providing an installed capacity of 60MW to 90MW. This would be sufficient to power more than 37,000 homes, or nearly two-thirds of the houses in Powys.
- 1.2.3 Consultation has been ongoing with consultees since 2005. Such discussions offered instrumental advice and input into the detailed site design and mitigation options and therefore enabled development of a wind farm with minimal effect on the environment.

1.3 Purpose of this SEI

- 1.3.1 This SEI is provided to present the findings of additional survey, assessment and design work that has been undertaken since August 2013, together with other information that has been prepared in relation to cumulative effects of the Llanbrynmair Wind Farm together with other wind farms. This SEI comprises further and revised information which is subject to the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000 (as amended).
- 1.3.2 This Non-Technical Summary (NTS) has been prepared to summarise, in non-technical language, the findings of this SEI undertaken for Llanbrynmair Wind Farm.
- 1.3.3 This SEI collates relevant information requested by statutory consultees relating to the grid connection, strategic transport route and ecological surveys.
- 1.3.4 The SEI is contained within three separate volumes:
- Volume I: Non-Technical Summary (this document);
 - Volume II: Main Text and Supporting Appendices; and
 - Volume III: Supporting Figures.

1.4 Summary of Supplementary Environmental Information - Contained in Volume II

Mid Wales Conjoined Wind Farm Inquiry - Connection Options Review (December 2013)

- 1.4.1 This report provides a technical assessment of the options available for connecting Llanbrynmair, Carnedd Wen, Llanbadarn Fynydd and Llaithddu wind farms to the grid and the infrastructure that these will require. The report also considers the application made by Scottish Power Energy Networks (SPEN) to connect Celtpower's Llandinam Wind Farm to the grid.
- 1.4.2 The report assesses the likely connection options based on a range of potential decision scenarios as a result of the public inquiry that is currently being held to assess the wind farm projects and grid connections referred to in the previous paragraph ; one wind farm consented, two wind farms consented, three etc. The report also considers a scenario where all wind farms are granted consent.
- 1.4.3 A full copy of the report can be found at **Appendix 2.1 (Volume II)**.

Mid Wales Conjoined Wind Farm Inquiry - Grid Session 4 Evidence Supplementary Environmental Information on Grid Scenarios (December 2013)

- 1.4.4 This document has been prepared by LUC (Land Use Consultants) on behalf of Vattenfall, Fferm Wynt Llaithddu Cyf (FWL), RES UK & Ireland Limited (RES) and RWE Npower Renewables Limited (RWE) in response to questions that have been raised at the Inquiry regarding the environmental effects of the proposed Mid Wales Grid Connection. This report sets out the findings of a high level assessment of environmental effects of the possible alternative grid connection options.
- 1.4.5 A full copy of the report can be found at **Appendix 2.2 (Volume II)**.

Llanbrynmair Grid Connection Route - Environmental Assessment (December 2013)

- 1.4.6 This document reviews and updates environmental advice relating to the proposed Llanbrynmair Wind Farm grid route following new grid connection information published by National Grid and SPEN during 2013 and the new substation locations determined during this period. This document should be read in conjunction with the information set out at Appendix 4.4 of the Consolidated SEI Pack dated August 2013
- 1.4.7 The review concludes that the revised substation locations will not substantially alter the conclusions reached in the original grid connection assessment relating to Designated Landscapes, Landscape, Visual and Habitats. It is concluded that the chosen National Grid substation location does not alter the findings of the 2010 grid connection assessment and the identified National Grid substation location west of Cefn Coch does not alter the findings of the 2011 ecology assessment study.
- 1.4.8 A full copy of the report can be found at **Appendix 2.3 (Volume II)**.

Mid Wales Wind Farms Transport Route - Environmental Assessment (December 2013)

- 1.4.9 This document has been prepared by AMEC on behalf of Vattenfall, Fferm Wynt Llaithddu Cyf (FWL), RES UK & Ireland Limited (RES) and RWE Npower Renewables Limited (RWE).
- 1.4.10 This report sets out the potential environmental effects arising from proposals for highway works to facilitate the delivery of abnormal load vehicles into mid Wales, for the construction of wind farms in TAN 8 Strategic Search Areas (SSAs) B and C. These works include the creation of lay by areas (passing places) lay down areas and construction works required as a result of swept path and vertical alignment analysis.

1.4.11 The report concludes that no significant effects in EIA terms are predicted to occur on ecological, cultural heritage, landscape and visual receptors as a result of works set out in the Strategic Traffic Management Plan (sTMP) for the proposed transport of wind turbine components into Mid Wales SSAs.

1.4.12 A full copy of the report can be found at **Appendix 2.4 (Volume II)**.

Road Safety Audit (RSA) for Sections 2-5 of the Strategic Traffic Management Plan (sTMP) for Mid Wales Wind Farms (December 2013)

1.4.13 This report results from a Stage 1 Road Safety Audit (RSA) carried out on the various off-site highway works to enable the transportation of Abnormal Indivisible Loads (AIL's) from Ellesmere Port to Mid Wales (Sections 2-5).

1.4.14 The RSA produced three issues that could occur as a result of the movement of AILs along the proposed route, and offered recommendations on how to deal with these. These issues related to overhanging branches, misuse of passing place lay-bys and forward visibility to back of traffic queues.

1.4.15 A full copy of the report can be found at **Appendix 2.5 (Volume II)**.

Addendum to Strategic Traffic Management Plan (sTMP) for Mid Wales Wind Farms (December 2013)

1.4.16 The addendum was produced by Grontmij in July 2013. This addendum is an amendment to Table 3-5 of Section 3, Chapter 6, of the Strategic Traffic Management Plan (sTMP) for Mid Wales Wind Farms. The document was produced to clarify the survey requirements at the B4381 Severn Street Howell canal bridge.

1.4.17 A full copy of the report can be found at **Appendix 2.6 (Volume II)**.

Strategic Transport Technical Review of Alternate Routes around Welshpool (December 2013)

1.4.18 This report confirms the appropriateness and suitability of the A483 trunk road corridor, south of Oswestry (as proposed in sTMP Section 2) for AIL convoys in preference to the use of the A458 from Shrewsbury to Welshpool (not reported upon in the sTMP). The report also examines the appropriateness of a number of alternative routes for the transportation of AILs towards and around Welshpool and confirms that the route via Welshpool town centre is the most suitable.

1.4.19 The report demonstrated that there are potential impacts associated with each of the routes assessed that raise doubts about the feasibility or desirability of using such corridors. It was concluded that the route selected as part of the sTMP is the most appropriate to ensure the safe delivery of turbine components.

1.4.20 A full copy of the report can be found at **Appendix 2.7 (Volume II)**.

Non-AIL Cumulative Transport Assessment (December 2013)

1.4.21 This document details the process of appraising and modelling the impact on the strategic road network of non-AIL construction traffic for the proposed Mid Wales wind farm schemes. This has been done through the use of a Cumulative Impact Model and the Institute of Environmental Assessment (IEA) Guidelines for the Environmental Assessment of Road Traffic. The model has been produced with the purpose of modelling the impact of construction traffic on the trunk road and principal road network in Mid Wales during the construction periods of the proposed wind farms in the area.

- 1.4.22 The report concludes that the daily cumulative impact of construction traffic does not exceed the 30% increase in overall traffic identified by IEA Guidelines as the screening threshold for assessment of potential significance. In terms of HGV construction traffic levels contained within overall construction traffic levels, the daily cumulative impact of the wind farm proposals on the majority of the strategic road network does not exceed the 30% increase in overall traffic identified by IEA Guidelines as the screening threshold for assessment of potential significance. The A483 south of Newtown and Dolfor in the vicinity of the SSA C application sites of Llandinam, Llaithddu and Llanbadarn Fynydd is the one exception.
- 1.4.23 A full copy of the report can be found at **Appendix 2.8 (Volume II)**.

Llanbrynmair Non-AIL Transport Assessment on the Strategic Road Network (December 2013)

- 1.4.24 This technical note assesses the impact of the Llanbrynmair wind farm on the strategic road network of non-AIL construction traffic. The document should be read in conjunction with Appendix 2.8 Non-AIL Cumulative Transport Assessment (December 2013). The technical note concludes that:
- The construction traffic impact of Llanbrynmair wind farm on the adjacent strategic road network is not discernible and has no significance in accordance with IEA guidelines;
 - The HGV construction traffic impact is not discernible and has no significance apart from the A470 in the vicinity of the site which has negligible traffic impact and neutral significance during 2017 overall and within a number of specific months in both 2016 and 2017; and
 - In all cases, for both construction traffic overall and HGV construction traffic, the impact does not exceed the 30% increase in overall traffic identified by the IEA Guidelines as the screening threshold for assessment of potential significance.
- 1.4.25 A full copy of the report can be found at **Appendix 2.9 (Volume II)**.

1.5 Summary of Supplementary Environmental Information - Contained in Volume III

Conjoined Cumulative Landscape and Visual Graphics and Visualisations (December 2013)

- 1.5.1 This report was commissioned by RES UK & Ireland Ltd (RES), RWE Npower renewable (RWE), Vattenfall, Scottish Power Renewables and Fferm Wynt Llaithddu Cyf (FWL) to be produced by LUC (Land Use Consultants) to produce conjoined cumulative landscape and visual graphics and visualisations.
- 1.5.2 Eight Conjoined Cumulative Viewpoints (CCVPs) were identified. Each of the viewpoints was chosen to illustrate the theoretical combined and successive visibility of wind energy developments located in both SSA-B and SSA-C. CZTVs (Cumulative Zones of Theoretical Visibility) have been produced to illustrate the potential visibility of wind energy developments and their associated grid connection infrastructure within both SSA-B and SSA-C.
- 1.5.3 Please refer to **Volume III, Section 3.1**.

Strategic Traffic Management Plan (sTMP) Figures Sections 1-3 (December 2013)

- 1.5.4 This document includes Figures from Sections 1-3 of the Strategic Traffic Management Plan submitted as SEI in August 2013. These Figures were omitted from the SEI in error.
- 1.5.5 Please refer to **Volume III, Section 3.2.**

Landscape and Visual Impact Assessment - Residential Amenity Section 4.1 (August 2013)

- 1.5.6 This document assesses residential visual amenity impacts of the proposed Llanbrynmair and Carnedd Wen wind farms. The document includes figures showing the zone of theoretical visibility (ZTV) of the turbines associated with the Proposed Development, and a cumulative assessment along with the proposed Carnedd Wen Wind Farm. The document also includes a series of wireframes from a range of viewpoints, representing the potential residential amenity impact as a result of the proposed Llanbrynmair and Carnedd Wen wind farms. These figures were due to be submitted as part of SEI submitted in August 2013, but, was omitted in error.
- 1.5.7 Please refer to **Volume III, Section 3.3.**