

1 Introduction

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1 Introduction

1.1 Background and Site Description

- 1.1.1 Douglas West Extension Ltd is part of the same group of companies as 3R Energy Solutions Ltd (3R Energy) and is hereafter referred to as “the Applicant”. The Applicant intends to apply to the Scottish Ministers for Section 36 (S36) consent and deemed planning permission, under the terms of the Electricity Act 1989, for an extension to the consented Douglas West Wind Farm (the proposed extension hereafter referred to as the “Proposed Development”), at site centre British National Grid (BNG) NS 80399 32105. Whilst the Proposed Development has been designed as a physical extension to the consented Douglas West Wind Farm, it is a standalone project capable of delivery in its own right.
- 1.1.2 This application will be supported by an Environmental Impact Assessment Report (EIA Report) as required by The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
- 1.1.3 This EIA Report has been prepared to assess the environmental impacts of the Proposed Development and will accompany the S36 Application submitted to the Scottish Ministers.
- 1.1.4 The Proposed Development will comprise 13 wind turbines up to 200 m blade tip height when vertical, each being around 6 megawatt (MW) in power rating. The Proposed Development generation capacity will be approximately 78 MW, plus around 20 MW of energy storage capacity. The associated infrastructure will include: site access, access tracks, crane hardstandings, underground cabling, on-site substation and maintenance building, energy storage compound, temporary construction compound, laydown area, concrete batching plant, potential excavations/borrow workings and two permanent meteorological masts.

Site Description

- 1.1.5 The site lies west of the M74 in rural South Lanarkshire, approximately 2.68 km to the north-west of the village of Douglas, and approximately 1.56 km to the south of Coalburn to the nearest turbine (refer to Figure 1.1). Figure 1.2 shows the main development area overlain on an aerial photograph base. The Proposed Development layout is shown in detail on Figure 1.3.
- 1.1.6 The site is in the ownership of Electricity Supply Nominees (Forestry) Limited, with the exception of the access roads beyond the main body of the site (the forest) which are in the ownership of William Mitchell and Sons Ltd, Mitchell Energy Ltd and Hargreaves Land Limited (refer to Figure 1.5 Land Ownership Plan).
- 1.1.7 The Proposed Development will extend the consented Douglas West Wind Farm onto the adjoining eastern block of Cumberhead Forest to infill the remaining gap between Douglas West Wind Farm, Hagshaw Hill Wind Farm, and a number of other wind farms on the north side of the Douglas Valley. The site comprises an area of approximately 372.6 hectares (ha) and gradually rises from 275 m Above Ordnance Datum (AOD) in the north to 465 m AOD in the south.
- 1.1.8 The site area currently comprises commercial coniferous plantation. The surrounding land comprises rolling moorland to the north, east and south, with further forestry plantation to the west. A number of watercourses traverse the site including the Shiel Burn and tributaries of the Hagshaw Burn, the latter which forms the western boundary of the site. The Poniel Water flows just north of the site boundary. No residential properties lie within the site boundary.
- 1.1.9 The total power output of the Proposed Development would be around 78 MW. Based on a calculated site-specific capacity factor, the annual indicative total power output for the site would be around 220.7 GW hours per annum, indicating the Proposed Development would generate enough electricity to power approximately 57,000 average UK households (based on average electricity consumption per household in the UK quoted by RenewableUK in 2018, of 3,781 kW). The Proposed Development would contribute towards international and national targets for the

generation of renewable energy and reduction in greenhouse gas emissions (further information is provided on this matter in Chapter 3).

- 1.1.10 The electricity produced will be exported to the electricity network. The proposed point of connection to the wider electricity network is via the Coalburn Transmission Substation to the north-east of the site via a new collector substation at the entrance to the site (adjacent to J11 of the M74).

1.2 The Applicant

- 1.2.1 Douglas West Extension Ltd is part of the same group of companies as 3R Energy which was established in 2009, with its head office situated in Lanark. 3R Energy was initially established to help farms and rural businesses benefit from renewable energy, with the mainstay of the business being farm sized wind turbines, CHP systems and biomass boilers. More recently, a successful application to develop a 49 MW wind farm at Douglas West represented the next step in the development of the business into larger-scale renewables. The current proposal to extend the Douglas West Wind Farm (the Proposed Development), together with an application to repower the nearby Hagshaw Hill Wind Farm, build on 3R Energy's experience and knowledge of renewable generation in the local area, helping to grow and diversify the business for the future.

- 1.2.2 3R Energy is part of a family group of companies which also includes: Holz Energie UK Ltd, also based in Lanark, which is a wholly owned UK import franchise of the successful German wood-gas CHP manufacturer, Holz Energie Wegscheid. Mitchell Farming Partnerships and William Mitchell & Sons (WMS) Ltd, based at Newtonhead Farm Rigside and Hazelside Farm Douglas respectively, manage the farming assets of the Group. Mitchell Energy Ltd is the parent company of 3R Energy. Together the Group:

- owns and manages 3,500 acres of land in the Douglas Valley
- has farmed the land for over 120 years
- generates a combined annual turnover of ca. £6m
- employs 18 people on a full and part time basis

- 1.2.3 As a local company, 3R Energy is committed to working with the local communities in the Douglas Valley for the long term to develop and deliver successful projects which create significant and tangible benefits for the surrounding communities.

- 1.2.4 3R Energy's Forward Strategy for the development of their business and landholding in the Douglas Valley can be found in Appendix 1.1. The Proposed Development forms one component of a wider strategy for the future of the Hagshaw Wind Cluster (refer to Figure 1.4).

1.3 Purpose of the EIA Report (EIAR)

- 1.3.1 ITP Energised (ITPE) was appointed by the Applicant to undertake an Environmental Impact Assessment (EIA) of the Proposed Development in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations'). The EIA process is the systematic process of identifying, predicting and evaluating the environmental impacts of a proposed development. The EIA process is reported in this EIA Report, which identifies the methodologies used to assess the environmental effects predicted to result from the construction, operation and decommissioning of the Proposed Development. Where appropriate, it also sets out mitigation measures designed to prevent, reduce and, if at all possible, offset potential significant adverse environmental impacts. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented.

- 1.3.2 The main findings and conclusions of this EIA Report are summarised in a Non-Technical Summary (NTS), as required by the EIA Regulations. The NTS, provided as a stand-alone document, summarises the key findings of the EIA in easily accessible, non-technical language, ensuring

everyone with an interest in the project can understand and access information on its predicted environmental effects.

1.3.3 This EIA Report and NTS accompany the application for S36 consent, being submitted to the Scottish Ministers.

1.4 Structure of the EIA Report

1.4.1 The EIA Report is split into four volumes, with the NTS forming a separate document. **Volume 1** of this EIA Report is structured as follows:

- Chapter 2 provides a description of the design iteration process, detailing how the Proposed Development evolved through the course of the assessment process and the elimination of alternative development options;
- Chapter 3 provides a description of the existing site, details of the Proposed Development, the construction, operation and maintenance processes, decommissioning process, need for the development and carbon considerations;
- Chapter 4 is the methodology of the EIA process including the scope of the process, justification for topics scoped out of the EIA, and details of the Public Consultation process;
- Chapter 5 is the planning policy context;
- Chapter 6 assesses the potential and residual effects on landscape and visual amenity;
- Chapter 7 assesses the potential and residual effects on ecology and nature conservation;
- Chapter 8 assesses the potential and residual effects on ornithology;
- Chapter 9 assesses the potential and residual effects on noise and vibration;
- Chapter 10 assesses the potential and residual effects on the historic environment;
- Chapter 11 assesses the potential and residual effects on hydrology, hydrogeology and geology;
- Chapter 12 assesses the potential and residual effects on traffic and transport;
- Chapter 13 assesses the potential and residual effects on socio-economics, tourism and recreation;
- Chapter 14 assesses the potential and residual effects on aviation, radar and telecommunications;
- Chapter 15 assesses the potential and residual effects from shadow flicker and reflectivity;
- Chapter 16 assess the potential and residual effects on the forestry resources;
- Chapter 17 provides a summary of all predicted cumulative effects;
- Chapter 18 is the Schedule of Environmental Commitments, which summarises all of the mitigation measures presented in this EIA Report; and
- Chapter 19 provides summary tables of all predicted residual effects.

1.4.2 **Volume 2** contains the figures that inform the EIA Report.

1.4.3 **Volume 3** contains supporting information and appendices for each of these technical chapters, and additional studies that have been prepared to inform the relevant assessments as reported in the EIA Report. A **Confidential Annex** to the EIA Report, which include confidential information on protected species will be provided separately to the Scottish Government Energy Consents Unit, South Lanarkshire Council (SLC) and Scottish Natural Heritage (SNH).

1.4.4 **Volume 4** contains the landscape and visual impact assessment visualisations that inform Chapter 6 Landscape and Visual Assessment.

1.4.5 Additional supporting documents which form part of the S.36 Consent application submission include a **Non-Technical Summary** of the EIA Report, a **Planning Statement** and a **Pre-Application Consultation (PAC) Report**.

1.5 Assessment Team

1.5.1 The assessment was undertaken by ITPE's environmental teams supported by the following external consultants:

- ACIA Acoustics (Noise Assessment);
- AECOM (Engineering Design);
- Bidwells LLP (Forestry Assessment);
- BiGGAR Economics (Socio-Economic Assessment);
- CFA Archaeology (Cultural Heritage Assessment);
- MacArthur Green (Ecology and Ornithology Assessments);
- Pegasus Group (Landscape and Visual Assessment and Residential Visual Amenity Assessment);
- Transport Planning (Traffic and Transport Assessment);
- Wind Business Support (Aviation and Telecommunications Assessment); and
- Jones Lang LaSalle (Planning and Energy Policy Assessment).

1.6 Availability of the EIA Report

1.6.1 Copies of the EIA Report are available from:

3R Energy
Lanark Auction Market,
Hyndford Road,
Lanark
ML11 9AX
Tel: (01555) 660244
Email: info@3renergy.co.uk

1.6.2 The cost of a hard copy of the EIA Report Volumes 1 and 3 (EIA chapters and technical appendices) is £250.00, and a hard copy of the EIA Report Volume 2 and 4 (figures) is £500.00. In addition, all documents are available (as a PDF) on a DVD for £15.00. The Non-Technical Summary (NTS) is available free of charge. Copies of the other supporting documents are also available in hard copy with the cost to be confirmed on request.

1.6.3 Copies of the EIA Report will also be available for viewing during opening hours at the following locations:

South Lanarkshire Council
Planning and Building Standards HQ
Montrose House
154 Montrose Crescent
Hamilton
ML3 6LB

Coalburn Miners Welfare
42 Coalburn Road
Coalburn
ML11 0LH

St.Brides Centre
Braehead
Douglas
ML11 0PT

1.7 Representations to the Application

1.7.1 Any representations to the application should be made directly to the Scottish Government at:

Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU
Email: representations@gov.scot

1.8 References

RenewableUK (2019). UKWED Figures Explained. Available at:
<http://www.renewableuk.com/en/renewable-energy/wind-energy/uk-wind-energy-database/figures-explained.cfm>

Scottish Natural Heritage (2018). Assessing the impact of repowered wind farms on nature (Consultation Draft). Available at:
<https://www.nature.scot/sites/default/files/2018-06/Guidance%20-%20Assessing%20the%20impact%20of%20repowered%20wind%20farms%20on%20nature%20-%20consultation%20draft%20-%20June%202018.pdf>

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