

1 Introduction

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1 Introduction

1.1 Executive Summary

- 1.1.1 This chapter sets out the background to the Proposed Development and information as to the purpose and structure of the Environmental Impact Assessment Report (EIA Report) and where the EIA Report can be viewed.

1.2 Introduction

- 1.2.1 SSE Generation Limited (hereafter referred to as ‘the Applicant’) is preparing an application for the Bhlaraidh Wind Farm Extension (hereafter referred to as the ‘Proposed Development’), located on the Glenmoriston Estate, near Invermoriston, Highlands.
- 1.2.2 The Applicant intends to apply to Scottish Ministers via the Scottish Government Energy Consents Unit (ECU) under Section 36 of the Electricity Act 1989 (as amended) seeking consent and deemed planning permission to construct and operate the Proposed Development.
- 1.2.3 The application is supported by this EIA Report as required by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (hereafter referred to as ‘the EIA Regulations’).

1.3 Background and Site Description

Site Description

- 1.3.1 The Proposed Development (Figure 1.1) is located adjacent to the operational 32 turbine Bhlaraidh Wind Farm (hereafter referred to as the ‘Operational Development’) (planning reference: 12/02556/S36) and will extend the Operational Development onto the adjoining land to the east (hereafter referred to as the ‘Turbine Development Area’) (refer to Figures 1.2 and 1.3). The British National Grid (BNG) reference for the centre point of the Turbine Development Area is 239512, 820991.
- 1.3.2 The Proposed Development is located west of Loch Ness and the Great Glen, on an area of high rocky plateau. This open, undulating moorland features several rocky outcrops, small hills, many lochs, lochans, watercourses, areas of bog, tracks, hydroelectric infrastructure and turbines of the Operational Development.
- 1.3.3 Outwith the Proposed Development site boundary (hereafter referred to as the ‘Site’) there are several distinctive summits, including Meall Fuar-mhonaidh which slopes steeply down to the Great Glen. To the west, this plateau transitions to a rugged, exposed landscape of large mountains, while to the north and south, there are the wooded glens of Glen Urquhart and Glen Moriston, and to the north, the farmed broad Strathglass valley.
- 1.3.4 The low lying areas of the glens and river valleys contain the majority of settlement and transport infrastructure. There is very little settlement in higher level areas and land use tends to be limited to grazing (sheep and deer) and country pursuits (e.g. shooting and fishing). Man-made features in the area include transmission towers (particularly those of the Beaully-Denny overhead line) and wind turbines.
- 1.3.5 The closest private dwelling is approximately 2.4km from the nearest proposed turbine.

The Proposed Development

- 1.3.6 The Proposed Development comprises a generating station, consisting of a wind farm with up to 18 wind turbine generators of up to a maximum height of 180m from ground to blade tip when vertical, supported by ancillary development. The installed generation capacity of the Operational Development is 108 megawatts (MW) and the total installed capacity of the Proposed Development alone, whilst dependent on the rated power of the turbine model procured, is anticipated to be in

excess of 100MW. Therefore, the combined capacity of the Operational Development and the Proposed Development is anticipated to be in excess of 208MW.

- 1.3.7 The Proposed Development will be supported by a number of proposed ancillary elements, including the following:
- crane hardstandings;
 - access tracks;
 - drainage;
 - watercourse crossings;
 - on-site substation;
 - underground cabling;
 - a LiDAR.
 - two construction compounds;
 - a batching plant; and
 - borrow pits (eight search areas).
- 1.3.8 The Proposed Development site layout is shown in Figure 1.2. The Turbine Development Area is shown on Figure 1.3.
- 1.3.9 The Proposed Development will benefit significantly from the presence of the extensive network of existing access roads and utilisation of existing infrastructure associated with the Operational Development and the Livishie hydroelectric power scheme.
- 1.3.10 The proposed location of the turbines has been identified in order to enable a robust and thorough Environmental Impact Assessment (EIA) of the Proposed Development. The BNG coordinates denoting where each of the turbines are proposed to be located are listed in Table 2.3 of Chapter 2 (Design Iteration and Proposed Development).
- 1.3.11 Whilst the location of the infrastructure described above has been determined through an iterative environmental based design process, there is the potential for these exact locations to be altered through micrositing allowances prior to construction. A micrositing allowance of up to 50m in all directions is being sought in respect of each turbine and its associated infrastructure in order to address any potential difficulties which may arise if preconstruction surveys identify unsuitable ground conditions or environmental constraints that need to be avoided. A larger micrositing allowance may be required to ensure optimum routing of any cross-country cable routes; it is proposed that the wording of any future condition provides the opportunity to agree any alterations to the proposed cross country cable locations beyond the 50m micrositing in order to optimise their routes following detailed design with respect to this specific piece of infrastructure.
- 1.3.12 Based on the Department for Business, Energy and Industrial Strategy (BEIS) capacity factor for new wind farms in Scotland (BEIS, 2020), the annual indicative total power output for the site would be around 233,191MW¹ hours per annum, indicating the Proposed Development would generate enough electricity to power the equivalent of approximately 65,174 average UK households (based on average annual electricity consumption per household in the UK (BEIS, 2020) of 3,578 kWh)². The Proposed Development would contribute towards international and national targets for the generation of renewable energy and reduction in greenhouse gas emissions.

¹ This has been calculated by multiplying the indicative installed capacity (100MW) by the number of hours in a year (8760) by BEIS's long term average load factor for onshore wind (26.62%).

² This has been calculated by multiplying the indicative installed capacity (100MW) by BEIS's long term average load factor for onshore wind (26.62%) and then multiplying by the number of hours in a year (8760) divided by the UK average domestic household consumption (3.578MWh).

1.4 Need for Development

- 1.4.1 The science behind climate change is well established and points strongly towards a need to reduce our reliance on fossil fuels in order to avoid negative economic, environmental and social effects. International and European commitments to reducing CO₂ and tackling climate change have been made by all major economies. In response to these issues the UK and Scottish Governments have made significant, legally binding commitments to increase the use of renewable energy. The Climate Change (Emissions Reduction Targets) (Scotland) Act (2019) set a target date of 2045 for reaching net-zero emissions (Scottish Government, 2019) and The Highland Council (THC) has declared a climate and ecological emergency (THC, 2019). The Proposed Development relates directly to those commitments.

1.5 The Applicant

- 1.5.1 The Applicant is part of SSE Renewables, a leading developer, owner and operator of onshore and offshore wind farms in the UK and Ireland, with a vision to make renewable energy the foundation of a zero-carbon world. Part of the FTSE-listed SSE plc, the Applicant's strategy is to drive the transition to a low-carbon future through the world class development, construction and operation of their fleet of onshore and offshore wind energy generation sites, and flexible hydro.
- 1.5.2 The Applicant operates one of the largest onshore wind energy fleets in the UK and Ireland, with almost 2GW of installed green energy capacity and another 1GW in development. The Applicant has around 600MW of operational offshore wind capacity including a share of Scotland's current largest, Beatrice (588MW). They aim to be the largest and most efficient developer and operator of onshore and offshore wind in the UK and Ireland with a development pipeline of over 7GW they have made the commitment to treble their renewable energy output by 2030. SSE Renewables continues to take forward development options for new onshore wind farms and extensions to existing wind farms and is well placed to take advantage of any future opportunities as they emerge.
- 1.5.3 The Applicant is committed to supporting local supply chains. Their Responsible Procurement Charter and Procurement Policy both highlight the importance of sustainable supply chains. Key to this is sharing economic opportunities with the people and businesses close to their operations. As well as working with communities directly, the Applicant has a structured approach to engaging with its strategic suppliers and looks to them to form constructive local relationships so that communities gain from the Applicant's significant capital investments. The Applicant recognises that it must be an active contributor to the communities it is part of and has an on-going commitment to share value where it has been created.
- 1.5.4 SSE Renewables' Community Investment Funds support a diverse range of community projects near their renewable developments. In 2019/20, SSE Renewables provided its largest ever award, with £600,000 granted to build the Fort Augustus Medical Centre in the Great Glen, Scotland. In 2019/20 the Applicant invested over £8m supporting over 1000 projects in communities across the UK and Ireland, this brings the Applicant's total investment in communities over the past six years to around £40m.
- 1.5.5 The Applicant develops great sites, undertakes excellent construction, has strong relationships with suppliers and has extremely high standards of operation.

1.6 Purpose of the EIA Report

- 1.6.1 ITP Energised (ITPE) has been commissioned by the Applicant to coordinate the EIA process for the Proposed Development in accordance with 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 possible, offset potential significant adverse environmental impacts. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented.

- 1.6.2 The main findings and conclusions of the EIA are summarised in a Non-Technical Summary (NTS), as required by the EIA Regulations. The NTS provides a stand-alone document which summarises the key findings of the EIA in easily accessible, non-technical language, ensuring everyone with an interest in the Proposed Development can understand and access information on its predicted environmental effects.

1.7 Structure of the EIA Report

1.7.1 The EIA Report is split into five volumes, with the NTS forming a separate document. Volume 1 of this EIA Report (this document) is structured as follows:

- Chapter 1 provides an introduction to the Applicant, the Proposed Development and the EIA;
- Chapter 2 provides a description of the design iteration process, detailing how the design and layout of the Proposed Development evolved through the course of the assessment process and the elimination of alternative development options. It then provides a description of the existing site, details of the Proposed Development, the construction, operation and maintenance, and decommissioning processes;
- Chapter 3 presents 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 4 provides the planning policy context. This chapter does not assess the accordance of the Proposed Development against planning policy; instead a separate Planning Statement has been prepared to support the application and should be referred to for a detailed planning policy appraisal;
- Chapters 5 to 15 assess the likely significant effects on a range of receptors. These include: ecology and nature conservation; ornithology; archaeology and cultural heritage; landscape and visual amenity; hydrology and hydrogeology; geology and soils; noise and vibration; traffic and transport; socio-economics, recreation and tourism; climate change; and aviation and radar;
- Chapter 16 is the Schedule of Environmental Mitigation, which summarises all the mitigation measures presented in this EIA Report; and
- Chapter 17 provides summary tables of all predicted residual effects.

1.7.2 Volume 2 contains the non-landscape and visual figures that inform the EIA Report.

1.7.3 Volume 3 contains the landscape and visual figures and visualisations, and cultural heritage visualisations.

1.7.4 Volume 4 contains supporting information and appendices for each of the technical chapters, and additional studies that have been prepared to inform the relevant assessments as reported in the EIA Report.

1.7.5 Volume 5 contains confidential technical appendices.

1.7.6 Additional supporting documents which form part of the application submission include a Non-Technical Summary of the EIA Report, a Planning Statement, a Pre-Application Consultation (PAC) Report, a Design and Access Statement (DAS) and an Outdoor Access Plan.

1.8 EIA Project Team

1.8.1 The assessment was undertaken by the ITPE EIA team supported by external consultants as shown in Table 1.1 below.

Table 1.1 – EIA Team

Person	Role	Expertise	Qualifications
Paul Darnbrough (ITPE)	EIA Project Director	Over 19 years' experience leading and undertaking EIAs for energy generation projects across the UK.	BSc (Hons), MSc, MIEMA, CEnv
Gavin Spowage (ITPE)	EIA Review and Support	17 years' experience of EIA project management including renewable energy, urban generation, ports & harbours, and residential developments	BSc (Hons), MSc, PIEMA
Roy Ferguson (ITPE)	EIA Project Manager	Over 14 years' experience leading and undertaking EIAs for energy generation projects across the UK.	BSc (Hons.), MSc
Sarah Tullie (ITPE)	EIA Project Manager	Over 2 years' experience in environmental planning.	BSc (Hons), MSc
Craig Wallace (Montagu Evans)	Planning and consenting lead	Over 24 years' planning and development consultancy experience including EIA and expert witness roles.	BSc (Hons), MRTPI
Nadine Little (Ramboll)	Ecology and nature conservation	Over seven years' experience of undertaking ecology surveys and Ecological Impact Assessments (EiAs).	BSc, MSc, ACIEEM
Rafe Dewar (MacArthur Green)	Ornithology lead	15 years' ecology consultancy experience, leading on ornithological and ecological impact assessments for onshore and offshore renewables development, HRAs, and Habitat Management Plans.	Member of the Chartered Institute of Ecology and Environmental Management. BSc. (hons) Zoology; MSc. Environmental Sustainability.
Victoria Oleksy (AOC Archaeology)	Archaeology and Cultural heritage lead	16 years' experience working on cultural heritage assessments. Victoria specialises in EIAs, Archaeological Impact Assessment and Conservation Management Plans and has	BA (Hons), MA (Commendation), Member Chartered Institute for Archaeologists.

Person	Role	Expertise	Qualifications
		appeared as an expert witness for planning appeals and called-in planning applications.	
Jennifer Skrynka (ASH Design + Assessment Ltd.)	Landscape and visual lead	Over 35 years' experience working on a broad range of projects across many aspects of the landscape profession, including in LVIA, EIA, landscape planning and design. Jennifer has been Project Director for several wind farm LVIA's and has prepared and presented evidence as an expert witness at Public Inquiry.	Chartered Member of the Landscape Institute (CMLI), BA Landscape Architecture, Post Graduate Diploma Landscape Architecture
Zak Ritchie (ITPE)	Hydrology and hydrogeology lead	Chartered Water and Environment Manager, and Chartered Engineer with 10 years' consultancy experience within the water environment and built environment. Zak provides hydrology, hydrogeology and engineering support to wind farm projects through all development and EIA stages.	BEng (Hons), MSc, Chartered Engineer (C.Eng), Full Chartered Member (MCIWEM) of the Chartered Institute of Water and Environmental Management (CIWEM) and a Chartered Water and Environment Manager (C.WEM).
Alison Tourish (Mott MacDonald)	Geology and soils	Chartered Geologist with over 13 years' experience working in onshore wind farm development and construction. Alison specialises in peat stability risk assessment, borrow pit and aggregate appraisal, environmental impact assessment and the design, supervision and reporting of intrusive ground investigations.	BSc (Hons), CGeol, FGS
Jim Singleton (TNEI)	Noise lead	Jim has 13 years' experience working on noise projects across the UK and abroad and previously lectured in acoustics for 6 years.	BSc (Hons), Diploma in Acoustics and Noise Control. MIOA.

Person	Role	Expertise	Qualifications
Jordan Dunn (Tetra Tech)	Traffic and transport lead	Jordan has over 18 years' experience as a Transport Consultant, having worked on a diverse number of projects across the UK and Ireland.	BSc (Hons) Civil Engineering
Simon Cleary (BIGGAR Economics)	Socio-economic lead	Over nine years' experience in assessing the economic, tourism and recreation impacts of renewable energy developments across the UK. Developed the quantitative model that is used to evaluate such projects and is now considered best practice in the industry. In addition, he has led numerous studies of onshore wind energy supply chains and, as a result, has a strong understanding of the supply chain opportunities available, particularly in Highland and Scotland.	MA (Hons)
Malcolm Spaven (Aviatica)	Aviation lead	25 years' experience of assessing the impact of wind energy projects on all aspects of aviation, including writing EIA chapters, appearing as an expert witness at planning inquiries and developing mitigation schemes for radar, navigation aids, flight procedures, turbulence and obstruction lighting schemes.	MA (Hons), MSc, Commercial Pilot's Licence, Flight Instructor rating

1.9 Availability of the EIA Report

- 1.9.1 In line with The Electricity Works (Miscellaneous Temporary Modifications) (Coronavirus) (Scotland) Regulations 2020 that came into place on the 24th April 2020, hard copies may not be available for inspection at public locations. Electronic copies will however be available online on the application website at www.sserenewables.com/bhlaraidhextension or on the Scottish Government Energy Consents website at www.energyconsents.scot.
- 1.9.2 Copies of the EIA Report may be obtained from SSE Generation Limited (contact: SSE Renewables, FAO Jane MacDonald, 1 Waterloo Street, Glasgow, G2 6AY or via email at jane.macdonald@sse.com) at a charge of £450 for a hard copy, or on electronic USB or DVD free of charge. Copies of a short Non-Technical Summary are also available free of charge.
- 1.9.3 The EIA Report will be advertised on the project website and in the following newspapers upon submission of the application:
- Edinburgh Gazette;
 - The Herald;

- The Press and Journal; and
- The Inverness Courier.

1.10 Representations to the Application

- 1.10.1 Any representations in respect of the application may be submitted via the Energy Consents Unit website at www.energyconsents.scot/Register.aspx; by email to The Scottish Government, Energy Consents Unit mailbox at representations@gov.scot or by post, to The Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the proposal and specifying the grounds of representation.
- 1.10.2 Representations should be dated, clearly stating the name of the project (in block capitals), full return email and postal address of those making representations. Representations sent by email to representations@gov.scot will receive acknowledgement.
- 1.10.3 All representations should be received no later than the date falling 30 days from the date of the last published notice, although Ministers may consider representations received after this date. Additional information which is submitted by the Applicant will be subject to further public notice in this manner, and representations to such information will be accepted as per this notice.

1.11 References

BEIS (2020). Subnational Electricity and Gas Consumption. Regional and Local Authority, Great Britain, 2019. Published 22 December 2020. Available at:

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