



Chapter 1

Introduction

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Chapter 1

Introduction

1.1 Introduction

1. ScottishPower Renewables (UK) Ltd (SPR) is applying to the Scottish Government's Energy Consents Unit (ECU) under Section 36 of the Electricity Act 1989 (as amended), seeking consent and deemed planning permission to construct and operate Clauchrie Windfarm (hereinafter referred to as the 'proposed Development'). The proposed Development is located at a site centred on British National Grid (BNG) reference BNG (229473, 588551). This Environmental Impact Assessment (EIA) Report has been prepared in support of the application to the ECU.
2. This chapter introduces the proposed Development and the background behind the proposal, as well as providing an overview of the purpose of the EIA Report, its structure and the team behind it.

1.2 The Applicant

3. ScottishPower is part of the Iberdrola Group, one of the world's largest integrated utility companies and a world leader in wind energy. We now only produce 100% green electricity - our focus is on wind energy, smart grids and driving the change to a cleaner, electric future and we're investing over £4m every working day to make this happen. We're committed to speeding up the transition to cleaner electric transport, improving air quality and over time, driving down bills. To deliver a better future quicker, for everyone.
4. ScottishPower Renewables is at the forefront of the development of the renewables industry through pioneering ideas, forward thinking and outstanding innovation. Our ambitious growth plans include offshore windfarms in East Anglia with our team also leading the Group's international offshore development including in Germany, France and the USA. With over 40 operational windfarms, we manage all of our sites through our world leading Control Centre at Whitelee Windfarm, near Glasgow.
5. SPR currently have five operational windfarms within the local area; Mark Hill, Kilgallioch, Arecleoch, Glen App and Dersalloch.

1.3 Background & Site Description

1.3.1 Site Description

6. The proposed Development application boundary (hereafter referred to as the 'Site') is located approximately 5.5 km northeast of Barrhill, 3 km south of Barr and 5.3 km east of Pinwherry, on the boundaries of South Ayrshire and Dumfries and Galloway councils. The Site occupies an area of 2971 hectares (ha), the majority of which lies within South Ayrshire Council (SAC) area. The elevation of the Site ranges from 155 - 565 m above ordnance datum (AOD). The Site location and Site boundary are shown in **Figure 1.1**.
7. The Site is mainly comprised of blocks of Sitka spruce forestry plantation which is part of the National Forest Estate, currently owned by Forestry and Land Scotland (FLS) – formerly Forestry Enterprise Scotland (FES). The Site is predominantly commercial plantation, with open hillside in the northern section of the Site. The eastern boundary of the Site is adjoining the minor road running from Bargrennan to Balloch through Glentroll village. There are no

inhabited properties within the Site boundary, but there is a derelict property to the west within the boundary and one waterbody, Loch Scalloch, which also lies in the north west of the Site.

1.3.2 The Proposed Development

8. The proposed Development comprises of 18 turbines of up to 200 m height from ground to blade tip when vertical, each turbine being around 5.6 megawatt (MW) in generating capacity. The overall generating capacity for the proposed Development will be in the region of 100 MW. The proposed Development will include a control compound within which will be a substation and control buildings which will have solar panels on the roofs. There will also be an on-site energy storage facility which will be able to import and export power to the network as required, providing a 'security buffer' to cope with supply and demand events (further information is provided in **Chapter 4: Development Description**).

1.3.3 Need for Development

9. The Scottish Government has committed, through the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, to ambitious targets to reduce carbon emissions and to reach a 'net-zero' emissions level by 2045. This reflects an acknowledgement of the climate emergency and is an intensification of the response to climate change, reflecting the scale and temporal dimensions required to address the emergency. This builds on the climate change plan and existing energy strategy which reflect, in part, the need to increase renewable energy production.
10. This is discussed further in the Planning Statement which is included as part of the application to Scottish Government.
11. SPR is a leader in the UK for the development and operation of renewable energy and is committed to reducing the impact of climate change. The proposed Development will pioneer established and new renewable energy generation technology, providing a fully integrated renewable energy development solution that would make a valuable and tangible contribution to carbon emission reduction and achieving government renewable energy targets, whilst also playing a positive role in the diversification of the UK's energy mix. Based on the anticipated capacity factor, the total annual energy output for the site would be approximately 320 GW hours per annum, meaning that the proposed Development could generate enough electricity to power the equivalent of around 84,000 UK households (based on average electricity consumption per household in the UK¹). As well as contributing to targets for renewable energy, the project would provide opportunities for community investment and create further employment opportunities in the local area.

1.4 Community benefit and investment

12. SPR is committed to offering a package of community benefits to local communities that could include the opportunity for community benefit and to invest in the operational windfarm. SPR has already shared initial information with the community about an opportunity to invest and has provided an introductory leaflet which outlines a potential investment structure. See **Technical Appendix 13.1** for further details.
13. SPR will discuss with local stakeholders and Forestry and Land Scotland which communities would be the appropriate 'Community Organisations' to participate. The criteria to define the appropriate Community Organisation come from the community right to buy under Land Reform legislation.
14. Interested Community Organisations would combine to form a single Community Vehicle that would administer the community benefit fund and under the proposed investment structure would also have the opportunity to invest in the operational windfarm, on behalf of all the interested Community Organisations.
15. SPR is committed to keeping local communities informed as the project progresses and, in line with Scottish Government guidance, will provide information in a timely manner so the communities are able to fully assess the opportunity.

¹ The Department of Business, Energy and Industrial Strategy (BEIS).

16. It is expected that any proposed income streams would provide a long term, flexible revenue which could be used to support community projects within South Ayrshire and Dumfries and Galloway. A range of options would be available to local communities who would have the flexibility to be able to choose how the money is spent and prioritise it on the things which matter most to them.
17. To date, SPR have voluntarily contributed over £6.3 million in community benefit funding to South Ayrshire communities and over £7 million to communities in Dumfries and Galloway. A wide range of local projects and community initiatives have been supported by the funds including:
- 224 community facilities and services projects totalling £602,237;
 - 74 community or local event projects totalling £218,490;
 - 27 environmental projects totalling £219, 861;
 - 15 heritage projects totalling £87,441;
 - 25 skills and employment projects totalling £183,067;
 - 143 sport and recreation projects totalling £561,503 and
 - 158 youth and education projects totalling £602,237.

1.5 EIA Project Team & Competency

18. The assessment was undertaken by the ITPEnergised (ITPE) environmental team supported by external consultants as shown in **Table 1.5.1** below.
19. ITPE are an environmental and energy consultancy, founded in 2013, who focus on renewable energy development and have worked on windfarm and other renewable energy technology applications across the UK.
20. The team of external consultants has been selected based on their extensive experience of windfarm developments across Ayrshire and Dumfries and Galloway, as well as for their excellent technical skills.

Table 1.5.1 EIA Project Team – Competent Experts

Discipline	Technical Lead	Qualifications	Years' of Experience
EIA project management	Paul Darnbrough ITPE	BSc (Hons), MSc, MIEMA, CEnv	19
Geology, hydrogeology, hydrology and soils	Jenny Hazzard ITPE	BSc (Hons), MSc, PIEMA	19
Ecology	Dr Mikael Forup ITPE	BSc (Hons), PhD, CEnv, MCIEEM	13
Socio-economics, tourism and recreation	Graeme Blackett BiGGAR Economics	BA (Hons), MIED, MEDAS	20
Archaeology and cultural heritage	George Mudie CFA Archaeology	MA (Hons) FSA, MCIfA,	18
Aviation and radar	Simon McPherson Cyrrus Ltd	BSc	23
Forestry	James Anderson DGA Forestry LLP	BArch, DipArch, RIBA Part 3	15
Noise and vibration	Mike Craven Hayes McKenzie	BSc, MloA	15
Planning and policy	Stuart Winter Jones Lang Lasalle	BLE (Hons), MRTPI	15

Discipline	Technical Lead	Qualifications	Years' of Experience
Ornithology	David MacArthur MacArthur Green	BSc (Hons), MSc, MCIEEM	15
Landscape and visual impact	Simon Martin Optimised Environments Ltd (OPEN)	MA (HONS) MLPM CMLI	17
Access, traffic and transportation	Gordon Buchan Pell Frischmann	BEng (Hons), MSc, MCILT, MCIHT	19
Engineering & design	Richard Buckland SSG Projects	Meng (Hons)	13

1.6 Purpose of the EIA Report

21. This EIA Report has been prepared in accordance with Section 36 of the Electricity Act and 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 and operation 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.
22. The main findings and conclusions of the EIA are summarised in a Non-Technical Summary (NTS), as required by the EIA Regulations. The NTS is a stand-alone document, summarising 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.
23. This EIA Report and NTS, comprise documentation in support of an application for consent under the terms of Section 36 of the Electricity Act 1989 (as amended) and for a direction for planning permission under Section 57 of the Town and Country Planning (Scotland) Act 1997, submitted to the ECU.

1.7 Structure of the EIA Report

24. The EIA Report is split into four volumes, with the NTS forming a separate document. **Volume 1** of the EIA Report is structured as follows:
- **Chapter 1 Introduction** introduces the proposed Development and the EIA Report;
 - **Chapter 2 EIA Process & Methodology** sets out the methodology and process for the completion of the EIA and the EIA Report (EIAR);
 - **Chapter 3 Site Selection & Design** provides a description of the existing Site, the need for the development, a description of the design iteration process and the consideration of alternatives;
 - **Chapter 4 Development Description** details the proposed Development, including the construction and operation processes;
 - **Chapter 5 Scoping and Consultation** details the scope of the EIA and the consultation undertaken;

- **Chapter 6 Landscape & Visual Impact** assesses the potential landscape and visual impact of the proposed Development;
 - **Chapter 7 Hydrology, Hydrogeology, Geology & Soils** assesses the potential effects on hydrology, hydrogeology, geology and soils;
 - **Chapter 8 Ecology & Biodiversity** assesses the potential effects on ecology and biodiversity;
 - **Chapter 9 Ornithology** assesses the potential effects on ornithology;
 - **Chapter 10 Noise** assesses the potential effects on noise and vibrations;
 - **Chapter 11 Archaeology & Cultural Heritage** assesses the potential effects on archaeology and cultural heritage;
 - **Chapter 12 Access, Traffic & Transport** assesses the potential effects on access, traffic and transportation;
 - **Chapter 13 Socio-economics, Tourism & Recreation** assesses the potential effects on socio-economics, tourism and recreation;
 - **Chapter 14 Other Issues** assesses the potential effects on other issues, including: aviation and radar, forestry, telecommunications, shadow flicker, climate and carbon, human health, and major accidents and disasters; and
 - **Chapter 15 EIA Summary** provides a summary of this EIA Report, which includes the Schedule of Environmental Commitments, setting out all mitigation measures presented, and a summary of all predicted residual effects.
25. **Volume 2** contains the EIA Report figures except for the Landscape and Visual Impact Assessment visualisations.
26. **Volumes 3a and 3b** contains the Landscape and Visual Impact Assessment visualisations that inform **Chapter 6: Landscape and Visual Impact**.
27. **Volume 4** contains supporting information and appendices for each of the technical chapters, and additional studies that have been prepared to inform relevant assessments as reported in the EIA Report.
28. Additional supporting documents which form part of the Section 36 Consent application submission include a Planning Statement and a Pre-Application Consultation (PAC) Report.

1.8 Availability of the EIA Report

29. In accordance with the EIA Regulations 2017, regulation 18, copies of the EIA Report are available for inspection by the public, notice of which will be published on the application website, in the Edinburgh Gazette, and in relevant newspapers within the locality of the development.
30. Copies of the EIA Report are available by request from:

ScottishPower Renewables,
9th Floor ScottishPower House,
320 St Vincent Street,
Glasgow
G2 5AD

Email: clauchriewindfarm@scottishpower.com

31. Electronic copies of the EIA Report can be accessed at <http://www.energyconsents.scot/> and will be made available for download from the SPR corporate website at:

https://www.scottishpowerrenewables.com/pages/clauchrie_windfarm

32. Hard copies of the Non-Technical Summary (NTS) are available free of charge from SPR. Due to the cost of printing and distribution, the cost of a hard copy of the EIA Report Volumes 1 to 4 is £1,000. In addition, all documents are available (as a PDF for screen viewing) on a DVD/USB for £15. The price of the hard copy reflects the cost of producing all of the Landscape and Visual photographs at the recommended size. As such, a DVD/USB version is recommended.

33. Copies of the EIA Report will be available to view free of charge during opening hours at the following locations:

- South Ayrshire Council, Burns House, Ayr, KA7 1UT;
- Dumfries & Galloway Council Headquarters, English Street, Dumfries, DG1 2DD;
- Barrhill Memorial Hall, Main Street, Barrhill, KA26 0RY
- Barr Village Hall, Stinchar Road, Barr, KA26 9TW
- Scottish Government Library, Victoria Quay, Edinburgh, EH6 6QQ

1.8.1 Representations to the Application

34. 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

1.9 References

Legislation

UK Government (1989). *Electricity Act 1989 (as amended)* Available at:
<https://www.legislation.gov.uk/ukpga/1989/29/introduction?view=extent>

Scottish Government (1997). *Town and Country Planning (Scotland) Act 1997*. Available at:
<https://www.legislation.gov.uk/ukpga/1997/8/contents>

Scottish Government (2017). *Electricity Works Act (Environmental Impact Assessment) (Scotland) Regulations 2017*. Available at: <http://www.legislation.gov.uk/ssi/2017/101/contents/made>

Climate Change (Scotland) Act 2009

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