



# Chapter 1

## Introduction



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# Chapter 1

## Introduction

### 1.1 Introduction

1. ScottishPower Renewables (UK) Limited (SPR) is applying for consent to Scottish Ministers under section 36 of the Electricity Act 1989 (as amended), seeking consent and deemed planning permission to construct and operate the proposed Euchanhead Renewable Energy Development (hereinafter referred to as the proposed Development). This Environmental Impact Assessment (EIA) Report has been prepared in support of this application for consent.
2. This Chapter introduces the proposed Development and the need for the development, as well as providing an overview of the purpose of the EIA Report, its structure and the technical experts who prepared it. It also identifies where copies of this EIA Report can be viewed and obtained if required.
3. The UK and Scotland's current climate change ambitions are amongst the highest in Europe. The Scottish Government declared a climate emergency in May 2019. At the end of March 2020, the Scottish Government brought into force the measures in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 passed by the Scottish Parliament in September last year.
4. The UK government set a net zero CO<sub>2</sub> emissions target by 2050. In Scotland, The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 was passed in September 2019 which sets out a net zero target by 2045 and further interim targets of reductions in CO<sub>2</sub> emissions of 56% by 2020, 75% by 2030 and 90% by 2040. These targets build on the Scottish Energy Strategy's (Scottish Government 2017) target of 50% of all energy (including transport, heat and electricity) being supplied from renewables by 2030.
5. ScottishPower Renewables (UK) Ltd (SPR) is at the forefront of the operation and development of renewables in the UK and fully supports the fight against climate change and proposes to develop Euchanhead Renewable Energy Development near Sanquhar in Dumfries and Galloway. This would be a fully integrated renewable energy solution in direct response to meeting national and international climate change targets. Euchanhead Renewable Energy Development would be able to regulate output and provide clean power to people's homes when they need it most and would represent a state of the art development for Dumfries and Galloway. As well as contributing to targets for renewable energy, the proposed Development would provide opportunities for community investment and create further economic benefits, including employment opportunities, in the local area.

### 1.2 The Applicant

6. SPR is part of the ScottishPower group of companies operating in the UK under the Iberdrola Group, one of the world's largest integrated utility companies and a world leader in wind energy. ScottishPower now only produces 100 % green electricity – focusing on wind energy, smart grids and driving the change to a cleaner, electric future. The company is investing over £4 million every working day<sup>1</sup> to make this happen and is 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.
7. SPR is at the forefront of the development of the renewables industry through pioneering ideas, forward thinking and outstanding innovation. Its ambitious growth plans include expansion of its existing onshore wind energy portfolio, investment

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<sup>1</sup> Between 2018 and 2022

in new large scale solar deployment and innovative grid storage systems including batteries. The company is also delivering the Iberdrola Group's offshore windfarms in the Southern North Sea off East Anglia.

8. With over 40 operational windfarms, SPR manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.
9. This project is a result of SPR's partnership with Forestry and Land Scotland (FLS), where SPR was awarded exclusive rights to investigate the feasibility of onshore renewable energy projects within the National Forest Estate in south west Scotland.
10. SPR is already well established in south west Scotland and currently owns and operates seven onshore windfarms in the Dumfries and Galloway / East Ayrshire region (Harestanes, Ewe Hill, Wether Hill, Killgallioch, Hare Hill, Hare Hill Extension and Whitelee) as well as a number of others in the wider region such as Glen App and Dersalloch. SPR currently operate in excess of 1.7 gigawatt (GW) of windfarm generating capacity in Scotland.

## 1.3 Site description

### Site description

11. The proposed Development is located within commercial forestry managed by FLS and is approximately 9.8 km to the south west of Sanquhar, as measured to the nearest turbine location. The location of the application boundary (the Site), centred on NGR 269180, 601990, is shown on **Figure 1.1**.
12. The Site lies predominantly within the Dumfries and Galloway Council (DGC) administrative area. However, one of the proposed access options to the Site from the public highway lies with the East Ayrshire Council (EAC).
13. The application boundary covers 2,389 ha, and is shown on **Figure 1.2**. An aerial photograph of the Site is shown on **Figure 1.3**, showing the terrain and land use of the Site and the immediate surrounding area.
14. A detailed description of the Site is provided in **Chapter 2: Site Description and Design Evolution**.

### The proposed development

15. The proposed Development comprises of 21 wind turbines, an energy storage facility and associated permanent and temporary ancillary infrastructure.
16. Each wind turbine would have a maximum overall height (to vertical blade tip) of up to 230 m. It is expected that each wind turbine would have a rated capacity of approximately 6 megawatts (MW) and the overall generating capacity of the wind turbines will therefore be in the region of 126 MW.
17. The capacity of energy storage facility will be dependent upon storage technology and economics at the time of procurement. However, it is anticipated that the energy storage facility will have a capacity in the region of 31.5 MW. This facility will be used to store the electricity generated by the wind turbines and may also be used to smooth out variances between wind resource and electricity demand. It may also be used to provide services to help stabilise the operation of the local electricity network.
18. The proposed Development is described in further detail in **Chapter 3: Description of the proposed Development**.

### Need for development

19. The UK and Scottish Governments have both declared a climate emergency. In response, the UK Government has committed to reducing net greenhouse gas emissions to net zero by 2050 and the Scottish Government to net zero greenhouse gas emissions by 2045. Interim targets have also been set for Scotland for greenhouse gas reductions of at least 56 % by 2020, 75 % by 2030 and 90 % by 2040.
20. In its advice to the UK and Scottish Governments on achieving the net-zero target, the UK Committee on Climate Change stated that renewable electricity generation "*must quadruple*" and that the Scottish Government should make "*use of planning*"

*powers to drive decarbonisation.*” Significant deployment of additional renewable energy capacity, well in excess of historical deployment levels, is therefore needed to achieve our climate change commitments.

21. In June 2019, Dumfries and Galloway Council declared a Climate Emergency and agreed a 12 point Action Plan to reinvigorate the pursuit of net zero carbon emissions in the region. Point 10 of the plan states that the Council will produce a “*Climate Change Strategic Action Plan which will incorporate our obligations under the Climate Change (Emission Reduction) (Scotland) Bill when enacted, encapsulate everything that we can do to reduce or eliminate carbon emission and, will incorporate actions on loss of biodiversity and our natural environment*”. The plans identified in the 12 point Action Plan are currently under development.
22. East Ayrshire Council is yet to declare a Climate Emergency. However, does acknowledge in their “*State of the Environment Report*” from 2016 that, future carbon reductions, needed to meet the targets, will require “*the continued growth of the renewables sector*” in Scotland.
23. The annual generation from the proposed wind turbines, based on an anticipated 35 % capacity factor, is estimated at approximately 386<sup>2</sup> gigawatt-hours (GWh). The proposed wind turbines will therefore supply renewable electricity equivalent to the approximate annual domestic needs of up to 101,689<sup>3</sup> average UK households. Each unit of renewable electricity transmitted will displace a unit of conventionally generated electricity, therefore displacing carbon dioxide (CO<sub>2</sub>) emissions. It is estimated that the proposed wind turbines will displace approximately 173,840<sup>4</sup> tonnes of CO<sub>2</sub> emissions per year.
24. As well as making a positive contribution towards climate change and renewable energy targets, the proposed Development would provide opportunities for community investment and create further employment opportunities in the local area.
25. Further information on the need for and benefits of the proposed Development are provided in **Chapter 14: Socio economics, Recreation and Tourism**, and the Planning Statement which accompanies this application.

## 1.4 EIA project team and competency

26. This EIA has been led by SLR Consulting Limited (SLR) with assistance from other specialist technical and environmental consultants. SLR is a large multi-disciplinary environmental and advisory consultancy. Within the energy sector, SLR provides a wide range of planning, environmental and technical services relating to the design and development of windfarms and other renewable energy developments. The company undertakes all aspects of development support, from initial concept design, through planning and permitting to supporting detailed design, construction management and closure stages with a focus on environmental assessment and management.
27. SLR is a holder of the Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark. The IEMA Quality Mark is awarded to companies that have achieved the required standards in EIA following regular independent review of EIA work by IEMA. The company has significant experience in the preparation of planning applications and undertaking EIA for a wide variety of projects, including renewable energy, minerals, waste and infrastructure developments.
28. Further information on SLR can be found on its corporate website at [www.slrconsulting.com](http://www.slrconsulting.com).
29. For this project, SLR is responsible for co-ordinating the production of the EIA Report and preparing the following technical assessments:
  - Climate Change, Renewable Energy and Planning Policy;
  - Access, Traffic and Transport;

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<sup>2</sup> For example using a 35% capacity factor, figures are derived as follows: 126 MW × 8,760 hours/year × 0.35 (capacity factor) = 386,316MWh.

<sup>3</sup> Calculated using the most recent statistics from the Department of Business, Energy and Industrial Strategy (BEIS) showing that annual UK average domestic household consumption is 3,799 kWh (BEIS, 2019). Calculation is as follows: 386,316 / (3,799/1000).

<sup>4</sup> Compared to fossil fuel burning power stations, as per RenewableUK guidance, using a figure of 450 tonnes of carbon dioxide per GWh of electricity supplied in the Digest of UK Energy Statistics (July 2019) p96 Table 5E (“Estimated carbon dioxide emissions per GWh of electricity supplied 2016 to 2018”). Calculation is as follows: 386,316 × (450/1000).

- Archaeology and Cultural Heritage;
- Ecology;
- Hydrology, Hydrogeology, Geology and Soils; and
- Socio-Economics, Recreation and Tourism.

30. SLR is supported by a number of technical specialists from other organisations:

- Stephenson Halliday (Landscape & Visual);
- Hoare Lea Acoustics (Noise);
- Natural Research (Projects) Limited (Ornithology);
- DGA Forestry LLP (Forestry); and
- Cyrrus Limited (Aviation).

31. SLR confirms on behalf of SPR that the technical experts that have carried out the EIA and produced the EIA Report have the skills and relevant competency, expertise and qualifications to undertake EIA for the proposed Development. **Table 1.1** demonstrates the relevant competency for each technical discipline covered in this EIA Report.

Table 1.1 EIA team competencies

Discipline	Specialist Assessor	Qualifications	Years of Experience
Climate Change, Renewable Energy and Planning Policy	Michael Fenny, SLR	MA, MSc, MRTPI	15 years
Landscape and Visual Amenity	Ken Halliday, Stephenson Halliday	BSc Mphil, CMLI	32 years
	Kelly Anderson, Stephenson Halliday	BLA, CMLI	24 years
Ornithology	Alex Ash, NRP Ltd	BSc	18 years
	Fiona Leckie, NRP Ltd	BSc	28 years
Ecology	Duncan Watson, SLR	BSc, MSc, CEnv, MCIEEM	18 years
	Ida Bailey, SLR	BSc, PhD, Prince2, CIEEM.	10 years
	Michael Austin, SLR	MCIEEM	30 years
	Daniel Hulmes, SLR	BSc, MSc, BTO, CIEEM	5 years
Soils, Geology and the Water Environment	Gordon Robb, SLR	BSc, MSc, MBA, C.WEM, FCIWEM	27 years
	Colin Duncan, SLR	BSc, MSc	37 years
	Adrian Cowe, SLR	BSc, MSc	6 years
Archaeology and Cultural Heritage	Tim Malim, SLR	BA FSA MCIfA	38 years
	Andy Bates, SLR	BSc MSc ACIfA	21 years
Noise	Matthew Cand, Hoare Lea Acoustics	Dipl Eng, PhD, MIOA	12 years
	Mark Jiggins, Hoare Lea Acoustics	MSc MIOA	21 years
Access, Traffic and Transport	Daniel Moran, SLR	BA, MCIHT, MRTPI	15 years
	David Price, SLR	BEng, HNC	30 years
Aviation	Simon McPherson, Cyrrus	BEng	25 years
	John Van Hoogstraten	MBCI, CBCP, SIIRSM	30 years
Socio-Economics, Recreation and Land Use	Anne Dugdale, SLR	BSc, MA, MRTPI	35 years
	Clare Anthony, SLR	BSc	3 years
	Steve Lucas, Development Economics.	MA	27 years



Discipline	Specialist Assessor	Qualifications	Years of Experience
Forestry	Sandy Anderson, DGA Forestry	BSc, MBA	18 years
	James Anderson, DGA Forestry	BArch, PhD Forestry	7 years
Shadow Flicker	Scott Pritchard, SLR	SVQ, NC, HNC	24 years
Carbon Emissions	Colin Duncan, SLR	BSc, MSc	37 years
Telecommunications	Tim Doggett, SLR	BSc, MSc	14 years
GIS	Scott Pritchard, SLR	SVQ, NC, HNC	24 years
	Jonathan Salter, SLR	BSc	6 years

## 1.5 Purpose of the EIA Report

32. This EIA Report has been prepared in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations). Additionally, as the proposed Development is located within a commercial forestry plantation and would require some felling of trees, the assessment also considers the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.
33. The purpose of this EIA Report is to report the outcome of the EIA for the proposed Development. It identifies the methodologies used to assess the significant environmental effects predicted to arise as a result of the construction and operation of the proposed Development. Where appropriate, it sets out mitigation measures designed to prevent, reduce and/or offset any significant adverse environmental impacts. An assessment of residual effects (those environmental effects that remain following the implementation of mitigation measures) is then presented.

## 1.6 Structure of the EIA Report

34. The EIA Report is presented in four volumes as follows:
- Volume 1: Non-Technical Summary (NTS).
35. The NTS provides a non-technical overview of the EIA Report and is intended for review by the general public. It includes a description of the proposed Development and a summary of the predicted environmental effects.
- Volume 2: Environmental Impact Assessment Report (EIA Report).
36. The EIA Report written text is structured as follows:
- Chapter 1: Introduction;
  - Chapter 2: Site Description and Design Evolution;
  - Chapter 3: Description of the proposed Development;
  - Chapter 4: Climate Change, Renewable Energy and Planning Policy;
  - Chapter 5: EIA Approach and Methodology;
  - Chapter 6: Scoping and Consultation;
  - Chapter 7: Landscape and Visual Impact Assessment;
  - Chapter 8: Ecology;
  - Chapter 9: Ornithology;
  - Chapter 10: Hydrology, Hydrogeology, Geology and Soils;
  - Chapter 11: Archaeology and Cultural Heritage;
  - Chapter 12: Access, Traffic and Transport;

- Chapter 13: Noise;
  - Chapter 14: Socio-economics, Recreation and Tourism;
  - Chapter 15: Other Issues; and
  - Chapter 16: Schedule of Commitments.
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- Volume 3a – 3d: EIA Report Figures and Visualisations; and
  - Volume 4a – 4b: EIA Report Technical Appendices (including Forestry).
37. The technical appendices that are referred to in each Chapter of the EIA Report are compiled separately in Volume 4. They are numbered sequentially for each Chapter in which they are principally referred to.

## 1.7 Publicity of the EIA Report

38. Printed copies of the NTS and EIA Report (including figures and appendices) may be obtained from:

ScottishPower Renewables  
9<sup>th</sup> Floor Scottish Power House  
320 St Vincent Street  
Glasgow  
G2 5AD

Email: [euchanheadrenewables@scottishpower.com](mailto:euchanheadrenewables@scottishpower.com)

39. The Non-Technical Summary is available free of charge, and a limited number of hard copies of the EIA Report is available for £1,000 per copy. The price of the hard copy reflects the costs of producing the Landscape and Visual visualisations.
40. Alternatively, a DVD or USB memory stick containing PDF files of the EIA Report are available for £15 per CD. These PDF files can also be downloaded for free from the Euchanhead project website page at:  
  
[www.scottishpower.com/EuchanheadRED](http://www.scottishpower.com/EuchanheadRED)
41. The Electricity Works (Miscellaneous Temporary Modifications) (Coronavirus) (Scotland) Regulations 2020 came into force on 24 April 2020, and was extended to March 2021 in August 2020. These Regulations have made provision to temporarily suspend the requirement to provide physical copies of the EIAR for public viewing in the interests of public safety, if electronic copies are made available.
42. In the interest of public health, SPR is thereby making electronic copies of the EIA Report available online on the Energy Consents Unit website as well as on both DGC's and EAC's respective planning portals, and on the project website.

## 1.8 References

East Ayrshire Council (2016). State of the Environment Report, August 2016. Available at <https://www.east-ayrshire.gov.uk/PlanningAndTheEnvironment/Development-plans/State-of-the-Environment-Report.aspx#:~:text=The%20State%20of%20the%20Environment,of%20planning%20and%20related%20applications.>

Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.

The Electricity Act 1989.

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

The Electricity Works (Miscellaneous Temporary Modifications) (Coronavirus) (Scotland) Regulations 2020

UK Government, Department for Business, Energy and Industrial Strategy. DUKes 2019.  
<https://www.gov.uk/government/statistics/digest-of-uk-energy-statistics-dukes-2019>

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