



Harestanes South Windfarm Extension

A proposal to extend the operational Harestanes Windfarm in the National Forest Estate, South West Scotland.

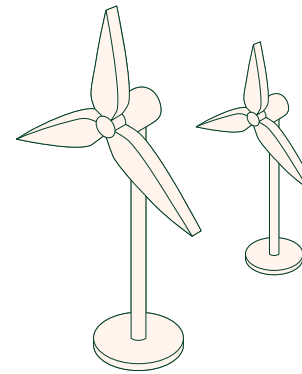


About ScottishPower Renewables

ScottishPower Renewables (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 is the first integrated energy company in the UK to generate 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 £8m 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.

Site Summary - Key Facts



8 wind turbines

each around
5.6MW capacity

Installed capacity
of around **45MW**

Up to **200m** tip height

Annual energy
generation is estimated
at approximately
106.4 gigawatt-hours
(GWh)



Generating enough power
for **30,331 homes**⁽²⁾

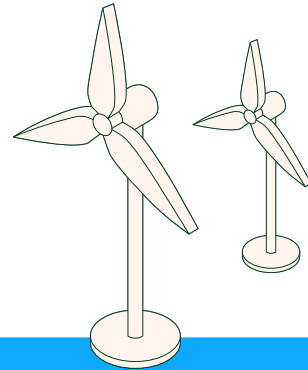
Approximately 31.5MW
energy storage capability
providing stability services
to the grid network



Harestanes
South Windfarm
Extension

Increasing the annual production
of our operational Harestanes by
approximately **37%**⁽¹⁾

Economic Benefits



Provision of a
Community
Benefit Fund

SPR will set out measures for the contractor to provide employment opportunities in the local area

The proposed windfarm will have direct employment and indirect opportunities generated in the supply chain and local economy from the spending of additional wages

Project turnover
estimated at
£59 million

58%
UK content

The local economy would be boosted by a total of **£3 million** of net Gross Value Added (GVA) during the construction period

The Scottish economy would benefit by some **£9.2 million** net GVA



Benefits to the Community and Recreational Enhancements

SPR's operational windfarms in Dumfries and Galloway have, to date, contributed more than £13 million of support towards community initiatives across the region. SPR's preferred approach is to empower local communities to determine how available funds are used to deliver the greatest benefit locally. In addition, SPR is proposing to implement enhancements to the local recreational facilities near Harestanes South*:

Provision of information boards regarding the proposed windfarm

Provision of a shelter with tools for bike maintenance and a place to shelter / picnic

Promotion of family friendly biking or horse-riding routes around the proposed windfarm using existing forest tracks



Support for the employment of a seasonal ranger to assist with the management of core footpaths in the area

Electric vehicle charging points in Ae Forest Carpark

Financial support to facilitate the purchase of E-bikes for rental at the 7 Stanes Forest of Ae Mountain Biking Centre

Harestanes South Windfarm Extension Economic Impact:

During the lifetime of the windfarm it is expected to create opportunities in the area for businesses to supply services such as:

- Haulage and transport services
- Traffic management
- Materials supply, e.g. aggregates
- Plant and equipment hire
- Vehicle servicing / tyres
- Forestry services
- Fencing
- Fuel
- Security
- Waste management
- Building construction: electrical, plumbing, roofing, flooring, plastering, decorating and joinery services
- Signing and lighting
- Telecommunications
- Drainage
- Planting and seeding
- Cleaning
- Catering
- Accommodation

“For the twenty-odd years we’ve been carrying out work for SPR, our relationship has been completely positive. SPR’s business has not only benefitted us, but also those other local businesses, such as suppliers and builders merchants, who we use in order to acquire materials for the works.”

Niall Corrigan, William & Henry Alexander (Civil Engineering) Ltd.



Construction & Operation

Construction Phase:

- During construction the proposed windfarm could support, in net terms, approximately 52 jobs in Dumfries & Galloway and Estimated 155 jobs for Scotland as a whole
- Other indirect local businesses such as builders merchants, restaurants, hotels and bars are likely to also experience an increase in business from the contractors working on the project

Operational Phase:

- During the operational phase, the proposed windfarm is expected to require between 3 and 5 new full-time employees (engineers and technicians). Additional benefits would extend to the local supply chain as a result of services supplied to the operational windfarm
- Other locally associated roles will include material suppliers, local shops, plant hire and environmental monitoring consultants

Climate Change & Carbon Reduction

The potential CO₂ emissions savings due to the proposed windfarm replacing other electricity sources over its lifetime are approximately:

- 115,135⁽³⁾ tonnes of CO₂ avoided annually compared with a fossil fuel-mix of electricity generation
- repayment of emissions related to its construction, operation & decommissioning in around 3.5 years

The development of Harestanes South Windfarm Extension will make an important contribution to reducing CO₂ emissions. 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 CO₂ emissions of 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.

Environment and Infrastructure

The proposed windfarm would be located in an existing commercial forest that is predominantly covered by Sitka spruce plantations. An Outline Habitat Management Plan (OHMP) is proposed for the windfarm which will enhance the nature conservation value of the renewable energy site.

The existing infrastructure at the operational Harestanes Windfarm and forest is to be utilised where possible:

- 79% of the proposed windfarm will utilise existing forestry tracks to reduce earthworks
- Existing water crossings are to be used & upgraded for new cable routes
- Limited movements to specific areas will avoid sensitive receptors such as deep peat
- The existing operational Harestanes Windfarm substation will be upgraded to provide a grid connection

Powering the Future

Onshore wind is one of the cheapest large-scale renewable energy sources that can be deployed at significant scale⁽⁴⁾. In Winter 2022, 85% of the public expressed support for renewable energy according to a Public Attitudes Tracker, published quarterly by the Department for Business, Energy and Industrial Strategy (BEIS) in March 2023⁽⁵⁾.



Whitelee Windfarm, turbine tip heights 110m.



References

- (1) Percentage derived from: operational Harestanes recorded capacity factor/yield (136MW x 8,760 hours/year x 0.241 = 287,117MWh) & Harestanes South forecast capacity factor/yield (45 MW x 8,760 hours/year x 0.23 (BEIS annual onshore wind capacity factor (2022), published March 2023) = 106,434MWh) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147126/ET_6.1_MAR_23.xlsx
- (2) BEIS; Sub-National Electricity and Gas Consumption Statistics, Dec 2022 (based on average UK household consumption 3509KWh) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1126284/subnational_electricity_and_gas_consumption_summary_report_2021.pdf
- (3) Harestanes South Windfarm Extension EIA Report – Chapter 13: Other Issues - Carbon Report, 2020. https://www.scottishpowerrenewables.com/userfiles/file/HAR_2021_Appendix_13.4_Carbon_Balance_Assessment.pdf
- (4) BEIS; Electricity Generation Costs 2020, Aug 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911817/electricity-generation-cost-report-2020.pdf
- (5) BEIS Public Attitudes Tracker: Energy Infrastructure and Energy Sources Winter 2022, published 9th March 2023. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1140685/BEIS_PAT_Winter_2022_Energy_Infrastructure_and_Energy_Sources.pdf
- *Subject to agreement

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Better future, quicker



Cover Image: Harestanes South Windfarm Extension Environmental Impact Assessment Report (2020) Figure 5.20d. Viewpoint 10: A710 South of Ae Bridgend. Photomontage, turbine tip heights 200m.
Other Images: Operational Harestanes Windfarm, turbine tip heights 120m.