APPIN WIND FARM

PUBLIC EXHIBITION

29 August –
19 September 2022

Statkraft

www.appinwindfarm.co.uk

Baillie Wind Farm, Thurso. 21 turbines, 110m tip height

Contents

Statkraft

Welcome

This exhibition is designed to share our early stage plans for Appin Wind Farm. We want to hear your views as we continue to shape the development during this phase.

About Statkraft

→ The largest generator of renewable energy in Europe

→ A state owned utility, with origins in Norwegian hydropower over 125 years ago

→ 4,800 employees in 19 countries, all working towards our low carbon future

→ Operating in the UK since 2006

→ Distributed over £2 million to communities near operating wind farms

Twentyshilling Hill Wind Farm, Dumfries and Galloway, 9 turbines, 140m tip height

Welcome

Statkraft in the UK

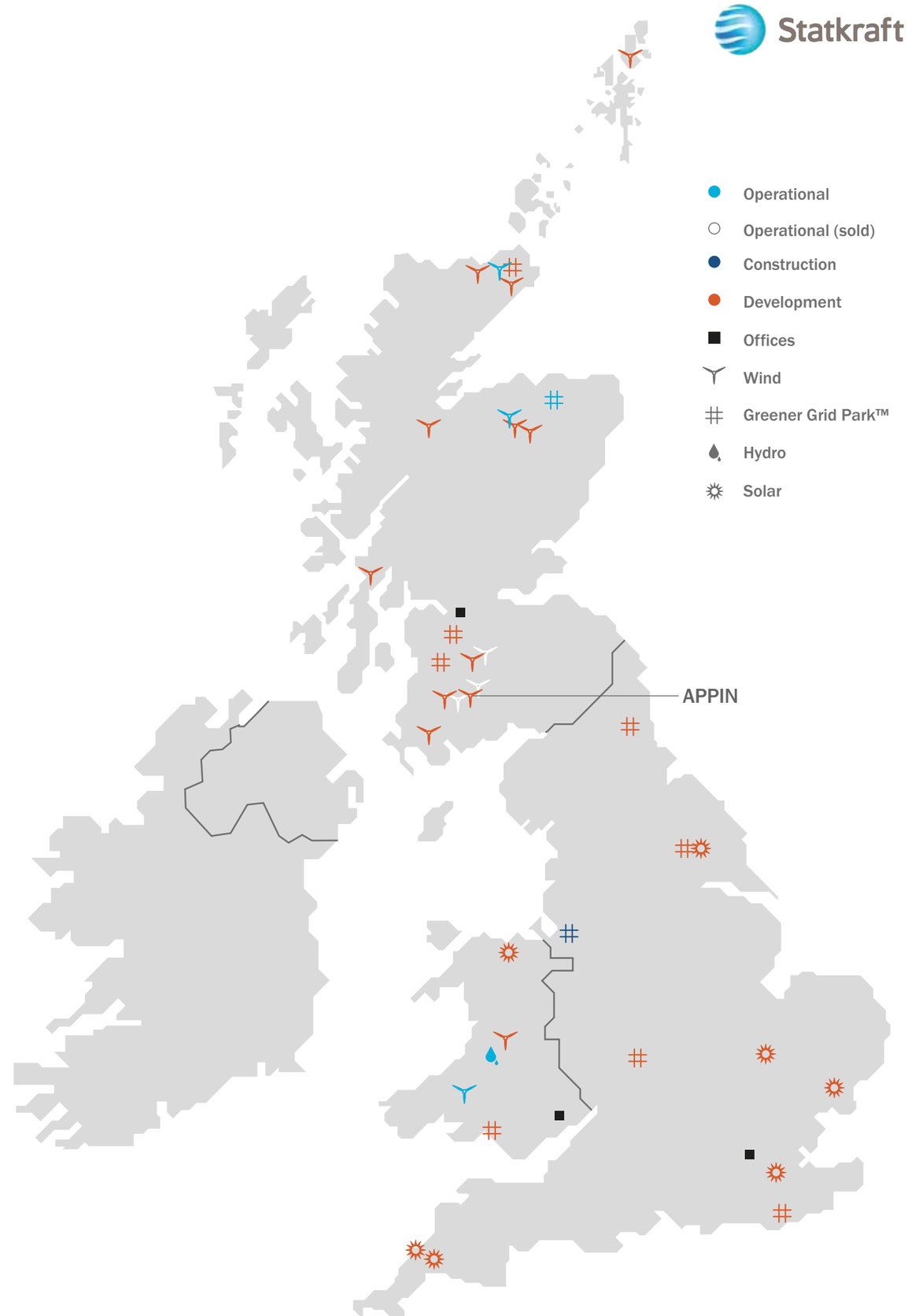
→ Scottish Head Office in Glasgow

→ Own or operate six wind farms and one hydro plant

→ Recently completed the construction of Windy Rig and Twentyshilling Wind Farms in Dumfries and Galloway, which we now operate

→ Over 700MW in development

→ Delivering grid stability services for National Grid ESO in Moray and Liverpool



About Appin Wind Farm

This is an excellent site to contribute to Scotland's ambitions of reaching net zero emissions by 2045.

The wind farm is located approximately 12.5km west of Thornhill, 6.5km north west of Tynron and 6km north west of Moniaive.

Appin Wind Farm Key Facts:

17 Up to 17 wind turbines proposed

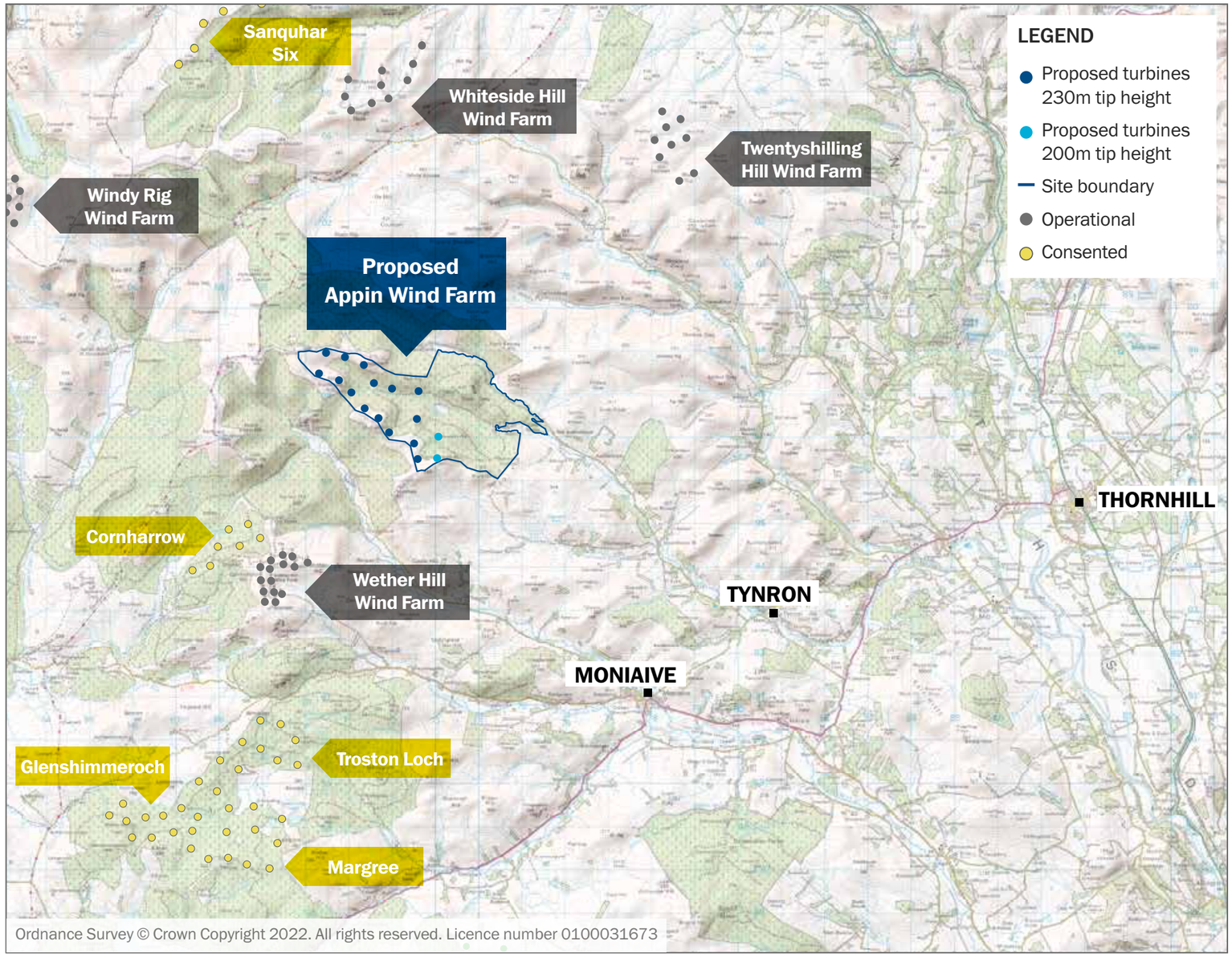
£5,000 Per MW installed per year for a Community Fund
As recommended by Scottish Government

A maximum height to blade tip
230m*

Exciting new opportunity to talk about shared ownership and local suppliers

Potential for improved broadband provision

* Current layout is based on 15 turbines @ 230m to blade tip height and 2 @ 200m to blade tip height.



About Appin Wind Farm

Why this site?

→ Excellent wind resource

→ No nationally or internationally designated sites within the site boundary

→ Compatible with existing commercial forestry

→ Will contribute towards Scotland's decarbonisation targets

Twentyshilling Hill Wind Farm, Dumfries and Galloway, 9 turbines, 140m tip height

	No. of Turbines	Max Blade Tip Heights	Expected Installed Capacity (MW)	Estimated Generation (homes equivalent)	Community Fund (per year)
Appin Wind Farm	Up to **17**	Up to **230m** (1)	Over **50 MW** (section 36 consent application)	Just over **47,000** Homes per year (2)	Minimum **£250,000** per year (3)

(1) Current layout is based on 15 turbines up to 230m to blade tip height and 2 turbines up to 200m to blade tip height.

(2) Based on 50 MW Installed Capacity, wind resource assessment and average Scottish domestic consumption of 3,520kWh pa (BEIS Dec. 2021). Candidate turbine still tbc'd.

(3) Community Benefit Fund based on 50MW x £5k per MW of installed capacity. If consented, value of fund determined by actual installed capacity. Candidate turbine still tbc'd.

The Story So Far

Our initial studies showed potential for up to 25 turbines for the site. Following further study and initial feedback we are currently proposing 17 turbines.

In March 2022 we requested the view of the Scottish Government, Dumfries and Galloway and East Ayrshire Councils, other statutory consultees and stakeholders on the level of study required (known as 'Scoping') to assess our Appin Wind Farm proposal for up to 25 turbines to 230m tip height.

This exhibition provides residents and other interested parties the opportunity to review our proposal and provide their views to help shape and further inform the Appin Wind Farm proposal.

Our design will strike a good balance between maximising the electricity output of the site while carefully relating to the existing environmental context and landscape.

We are in the process of carrying out extensive surveys and research to gather data and information on the following

- → **Landscape and Visual Amenity**
- → **Ecology**
- → **Ornithology**
- → **Forestry**
- → **Geology, Hydrology, Hydrogeology and Peat**
- → **Cultural Heritage**
- → **Noise**
- → **Shadow Flicker**
- → **Traffic and Transport**
- → **Climate Change**
- → **Land Use, Socioeconomics and Tourism**
- → **Aviation and Telecommunications**

Project Timeline

Throughout the process Statkraft continuously engages with the local community and stakeholders about the emerging project.

1. SITE SELECTION & SUITABILITY

(12 months)

Extensive research to identify site suitability: positive indicators include good wind speed and minimal environmental and technical constraints.

No public engagement is carried out during this time because the site may not pass the criteria required for being suitable for development.

2. PRE-PLANNING

(6 to 12 months)

We request the view of the Scottish Government, Dumfries and Galloway Council and East Ayrshire Councils, on the level of study required (known as “Scoping”).

Scoping is sent to local and neighbouring Community Councils and consultees such as NatureScot, SEPA and Historic Environment Scotland.

There are likely to be further changes to the layout as studies continue and feedback from communities and residents is received. Two public exhibitions will take place to discuss the design and its changes with the local community.

3.SUBMIT APPLICATION & AWAIT DECISION

(12 months)

An application for Section 36 consent is submitted to the Scottish Government, accompanied by a comprehensive Environmental Impact Assessment (EIA) Report showing the results of all studies undertaken. This is publicly available information and will be available on the project and Energy Consents Unit website.

Interested parties and consultees such as Dumfries and Galloway Council, East Ayrshire Council and Community Councils hosting and neighbouring the proposal can formally comment on the application and the EIA Report.

4. CONSTRUCTION

(12 to 24 months)

If Appin is approved, construction begins at least one year after consent.

Construction typically takes 12–24 months and planning conditions are used to manage elements of construction.

5. OPERATION

(Up to 50 years)

The turbines are managed from a regionally based maintenance team, and operations are controlled by detailed planning conditions.

We are committed to community benefit and shared ownership opportunities. A community fund is active throughout the operational lifetime of the project for a range of community initiatives.

6. DECOMMISSION

(12 months)

At the end of the planning period, turbines are removed. A financial bond or guarantee is put in place before construction starts, to cover the decommissioning cost.

Environmental Impact Assessment

The process of gathering robust environmental baseline data on a site is vital to designing a wind farm. This is carried out by specialist environmental and technical consultants.

This information is incorporated into an Environmental Impact Assessment (EIA) Report and will be publicly available when an application is submitted to planning.

As part of designing and assessing this wind farm, additional consultation has been undertaken by specialist environmental consultants with a number of consultees including Dumfries and Galloway Council, East Ayrshire Council, NatureScot, Scottish Environment Protection Agency and Historic Environment Scotland.

Photo taken from Bail Hill looking across to the proposed location of Appin Wind Farm.

The EIA Report will cover a range of topics including:

- → **Landscape and Visual Amenity**
- → **Ecology**
- → **Ornithology**
- → **Forestry**
- → **Geology, Hydrology, Hydrogeology and Peat**
- → **Cultural Heritage**
- → **Noise**
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Landscape and Visual Assessments

What will the project look like?

As part of our studies, we have created images showing how the wind turbines could look from several locations in the surrounding area.

We are working with Dumfries and Galloway Council, East Ayrshire Council and NatureScot to finalise the viewpoint locations for assessment. This means the viewpoint locations may change slightly between now and when we submit a planning application.

A selection of the finalised viewpoint locations will be available at our second exhibition.

As developers, our challenge is to find the right balance between maximising the electricity output of a site and carefully siting and designing the proposal to relate to the existing landscape, including other wind developments.

Our studies will include a landscape and visual assessment of the proposed development within a 45km study area. The assessment will consider the proposed development on its own, as well as in the context of other existing, consented and proposed wind farm developments.

One of our key design objectives will be creating a wind farm which is appropriate for and takes into account the existing landscape character and visual features of the surrounding area.

The assessment will pay particular regard to:

→ Effects on the landscape character of the site's immediate area, as well as the character of the wider area.

→ Effects on the special qualities of landscape designations up to 45km, such as the Thornhill Uplands and Galloway Hills Regional Scenic Areas (RSA).

→ The amenity of residential properties near to the proposed development and in the surrounding area (up to 2.5km).

→ Other viewpoints, such as within settlements, commuter routes, walking routes and local areas of interest.

→ Visual effects associated with visible night-time turbine lighting.

Environmental Impact Assessment

Ecology, Ornithology & Forestry

Experts have completed surveys including habitat, protected mammals, fish and birds. These have been carried out according to NatureScot guidance and the findings will be used to inform the wind farm design.

The site is predominantly plantation forestry with some grassland around the periphery. The project will be designed to minimise the loss of woodland area and fit within the current forestry management plans as far as possible.

A number of species and birds have been recorded flying over the site but there are no designated ecological or ornithological protections in place. To conserve and carefully manage protected bird species, a Species Protection Plan and Breeding Bird Protection Plan would be implemented during the construction period.

Geology, Hydrology, Hydrogeology & Peat

Desk and field-based surveys are being undertaken to establish the baseline conditions across the site. This will determine the underlying bedrock, peat, groundwater and surface water catchments, and identify private and public water supplies in the area that need to be avoided. Nearby residents will be contacted to fully understand the location and catchments of private water supplies.

Careful design will minimise impacts where possible, such as including buffers around watercourses i.e. the Appin Burn, and by designing appropriate watercourse crossings.

Initial surveys to identify the presence of peat showed some isolated areas of deeper peat, but in general indicated peat of less than 0.5m. We will avoid peat excavation where possible. A Peat Management Plan will ensure the appropriate management including re-use of any excavated peat during construction, should the wind farm be consented.

Environmental Impact Assessment

Cultural Heritage

The cultural heritage assessment will be undertaken inline with Historic Environment Scotland (HES) guidance. Non-designated assets of local importance within the site are being identified through consultation, desk-based research of historical environment records and a walkover survey of the site. Any potential direct impacts on identified assets will be minimised as far as possible through the design process.

Designated assets, including Scheduled Monuments, Listed Buildings, and Gardens and Designed Landscapes have been identified within a 10km study area from the site. The theoretical visibility of the Appin Wind Farm from these identified assets will be used to assess the effect on their setting, and this will be supplemented by the provision of viewpoint visualisations in the EIA Report.

Noise

A noise assessment will be undertaken in accordance with the current best practice guidance and standards. The noise assessment will consider the potential effects of construction works and traffic and operation of the proposed wind farm on nearby residential properties. The assessment will take into account other wind farm schemes operating or in development in the area.

Background noise monitoring is being carried out surrounding the site to understand existing noise levels. The background noise levels will be used to determine the noise limits that the wind farm would have to operate within.

These limits are informed by Government guidance (ETSU-R-97). If consented, the future operational site would operate within levels considered acceptable under these guidelines.

Traffic & Transport

The transport routes to the Site are still being considered. However, we can confirm that the Shinnel Glen Road will not be used for construction or abnormal load deliveries.

A transport assessment will consider the impacts of increased traffic volumes expected on local roads during construction and how to minimise this impact. Likely measures include a Wear and Tear Agreement with Dumfries and Galloway to ensure the roads are returned to the same condition they were in before construction commenced, and the provision of a Construction Traffic Management Plan.

All road works and measures required to ensure the safe and efficient access for the turbine deliveries will be published in the EIA Report.

Environmental Impact Assessment

Climate Change

The Scottish Government has set a legally binding target to achieve net-zero emissions by 2045. Developments such as Appin Wind Farm are key to meeting this target. Whilst Scotland has continued to make good progress in reducing its greenhouse gas emissions, the need for low carbon energy supplies is paramount if Scotland is to achieve this net zero target.

By 2030, The Scottish Energy Strategy calls for 50% of 'all energy' to come from renewables. It emphasises that onshore wind is now one of the cheapest forms of electricity and will therefore continue to play an important role in this.

A carbon balance assessment will quantify the anticipated emissions savings of Appin Wind Farm using Scottish Government guidance. A "carbon payback period" will be calculated, demonstrating how long it will take for the carbon emissions saved by Appin Wind Farm's renewable electricity generation to offset the carbon generated for its development.

"We need more renewable energy, but why here?"

This is one of the most common questions we are asked when we propose a wind farm. This is a very understandable question, and the answer goes beyond the fact that Scotland has one of the strongest wind speeds in Europe. We were pleased to be able to answer this question with the detail it deserves during a webinar hosted by the news website FutureNetZero. You may be surprised to know that our analysis shows less than 10% of land in Scotland is suitable for development of onshore wind.

You can watch the full webinar here.

RICHARD MARDON,
Head of Business & Project Development, Statkraft UK

Richard takes us behind the scenes of the development process, with a step by step guide on the challenges faced in finding the best sites to maximise Scotland's excellent natural wind resource.

Since 2002 Richard has worked exclusively in onshore wind in the UK, and has had oversight of the development, construction and operation of several completed Scottish wind projects.

Environmental Impact Assessment

Andershaw Wind Farm, South Lanarkshire. 11 turbines

What is “Net Zero”?

Credit: www.nationalgrid.com/stories/energy-explained

Net zero means achieving a balance between the greenhouse gases put into the atmosphere and those taken out.

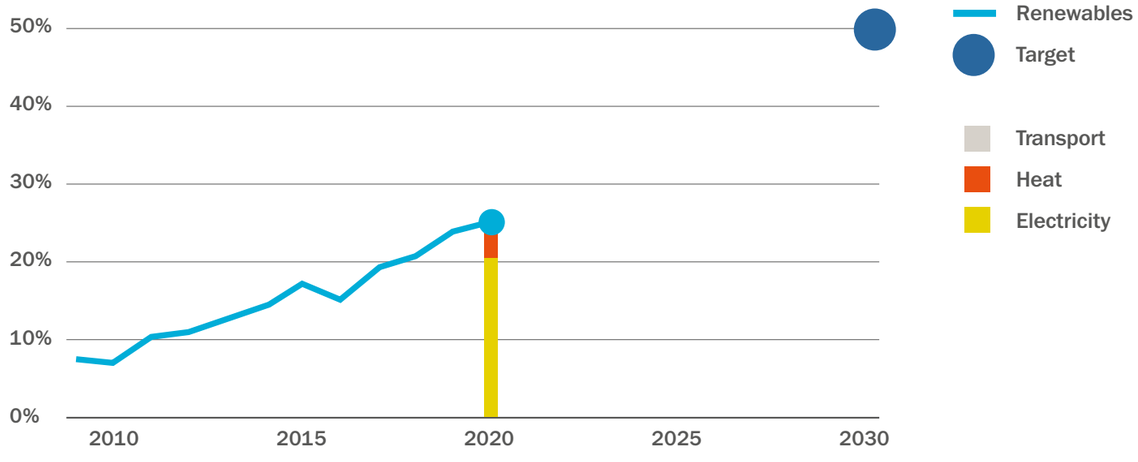
“Think about it like a bath – turn on the taps and you add more water, pull out the plug and water flows out. The amount of water in the bath depends on both the input from the taps and the output via the plughole. To keep the amount of water in the bath at the same level, you need to make sure that the input and output are balanced.

Reaching net zero applies the same principle, requiring us to balance the amount of greenhouse gases we emit with the amount we remove. When what we add is no more than what we take away we reach net zero. This state is also referred to as carbon neutral; although zero emissions and zero carbon are slightly different, as they usually mean that no emissions were produced in the first place.”

HOW IS SCOTLAND DOING?

Scotland’s share of renewable energy (gross final consumption)

Scotland, 2009 - 2020



Source: Scottish Energy Statistics Hub

Local Benefits & Investment

We want our wind farms to bring benefits to the local area. We have several new initiatives that will be available for Appin Wind Farm that we want to talk to you about.

" Windy Rig Wind Farm is another valuable contract for GTR. We are just one of several local businesses who are directly benefiting from the many wind farm developments within this area. This can only be a good thing for both local businesses and the local economy especially during the current pandemic."

Tanya Russell, Director, GTR Contracts Ltd

Statkraft recently completed construction of Windy Rig and Twentyshilling Hill Wind Farms in Dumfries and Galloway.

Community Benefit Fund

Committed to setting up a Community Benefit Fund for Appin of £5,000 per MW installed per year. We are keen to work with communities to deliver a fund that can meet local community needs and priorities.

Shared Ownership

Progress the opportunity, if there is interest for local groups to have a financial interest in our project, with the support of organisations such as Local Energy Scotland.

Local Investment

Work with local business groups to increase awareness of the opportunities in construction and operations. We have successfully used local contractors on our construction projects in Dumfries and Galloway.

Education & Enterprise

We welcome ideas on how our project can support local education and employment opportunities and boost local businesses.

Broadband

Invest in a broadband feasibility study to identify potential for improved internet connection, and support communities to develop their own broadband initiatives.

Broadband

Statkraft

We are always exploring ways in which we can provide positive benefits to local communities near our projects.

We are often asked by people if we can help deliver faster broadband, or even get them connected in the first place.

With this in mind, we have started commissioning broadband feasibility studies to investigate the potential for our projects that are in development and are doing this for Appin too.

The Broadband Feasibility Study explores the potential for using the infrastructure of our project to deliver super fast broadband.

Our study will find out:

FEASIBILITY

We require a **reliable broadband service** to operate our wind turbines and the study explores the potential for **improving local infrastructure** as the wind farm is connected.

FIBRE & FIXED WIRELESS

Fibre is the optimal connection, but fixed wireless broadband also offers opportunities to connect some locations that can be difficult or costly to reach.

A BENEFIT

Potential to provide **improved internet connection for commercial and residential properties.**

NEXT STEPS

We would like to hear your views on the Broadband Feasibility Study. If you would like to be kept **up to date** on the Broadband Feasibility Study please contact us and **register on the website for updates.**

Your Views are Important to Us

We hope to submit a planning application early in 2023. Before then we will hold another public exhibition to share further details of the proposal.

We welcome your comments and feedback as our proposal develops. Please register your comments by completing a feedback form **by 17 October 2022.**

As the project progresses, we will continue to engage with local stakeholders and communities.

Comments made to Statkraft are not representations to the consenting authority. If an application is submitted there will be an opportunity for you to submit a formal response to the Scottish Government at that time.

Thank you for attending the Appin Wind Farm Exhibition.

Statkraft

We would like to keep you updated as our plans progress:

	Click here to complete the online feedback form
	Register for updates: www.appinwindfarm.co.uk
	0800 772 0668 (local call rate applies)
	Freepost Statkraft (no stamp or further address details required)
	UKProjects@statkraft.com

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