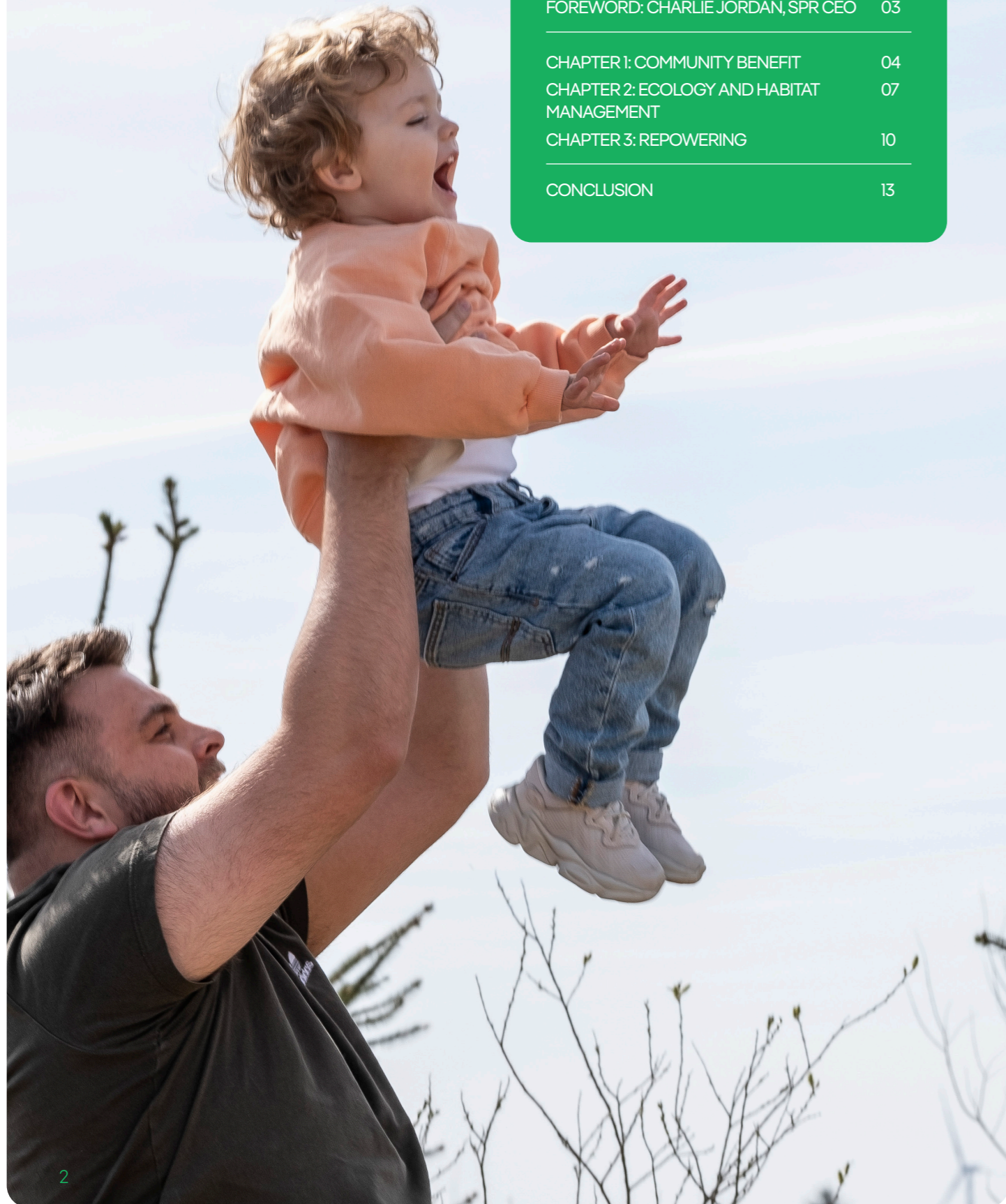




# Powering Communities 2023

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# Foreword

A new era of renewable generation is about to begin. The technology that was used in pioneering wind and solar farms of the early 2000s has evolved and more powerful and efficient wind turbines and solar panels are now available.

Whilst many of the oldest windfarms around the UK are coming to the end of their operational life, that's not the end. We have a fantastic opportunity to do even more via life extension and repowering works – enabling new developments which will power the country's transition to a cleaner, cheaper and better future over the next two decades.

However, it isn't just the impact on emissions of this first generation that matters. The value to communities, who have supported windfarms in their local areas for the past 20 years, is a crucial part of the story.

That impact has been far-reaching. Education facilities have been improved, sports and leisure services supported, local tourism schemes have been boosted or created from scratch, and community hubs restored amongst many other initiatives. And of course, training and employment opportunities have been nurtured and developed to benefit those in and around their local areas.

As we look to the future, what we've learnt – about how best to enable communities to benefit from hosting these sites – will be vital as the UK moves forward with a new generation of renewables. Working with these communities to put them at the forefront of the shift to a low-carbon society is one of our biggest priorities.

Whilst our work facilitates the country's transition to a cleaner, greener future and benefits host communities, we also strive to not only protect, but to enhance the natural environment. Everywhere we work, it is our mission to leave the local ecological environment more diverse and richer than we found it.

Reducing our carbon emissions and getting to Net Zero is a huge part of addressing the climate emergency. But it is only one part of the answer. Restoring our natural world is fast becoming a key driver of tackling climate change and at ScottishPower Renewables, we are committed to playing our part.



**Charlie Jordan**  
CEO ScottishPower Renewables

As the first integrated energy company in the UK to generate 100% green electricity, ScottishPower has led from the front in tackling climate change. We are equally proud of the emphasis we place on ecology and biodiversity, showing how we can protect biodiversity and combat climate change hand in hand.

# Chapter 1: Community Benefit

**A good and trusted neighbour to our communities**

ScottishPower Renewables believes that as a responsible developer and operator of renewable energy, the benefits of our projects should be shared with the communities in which we work.

We provide funding through dedicated community benefit funds at 36 onshore windfarms from Wick to the West Country – putting money directly into the hands of local communities and empowering them to allocate the funds in the way that will have the greatest impact locally.

## £60million contributed

To date, our community benefit funds have provided over £60million to create community facilities and bring disused buildings back to life, boost rural transport services and enable people to get around for work and leisure, support environmental improvements and provide employment opportunities, deliver education programmes and skills development to enhance career opportunities, fund Net Zero initiatives and help grow heritage and tourism – and much, much more.

The one thing they have in common is that the priorities for the windfarm funds, and how they are spent, are set locally by the local communities and those who know best what will make the most difference for them.

We are extremely proud of the positive relationships we have built and the impact we are able to make by contributing to the areas in which we operate. We have purposely designed these funds to be long-term initiatives, which is why they empower communities to get the most out of being our neighbour in the present and the future.



## Case Study 1: New Luce Community Trust

**The Killgallioch Community Fund has re-opened the doors to a beloved social hub for the New Luce community - the Kenmuir Arms.**

Through funds generated by Killgallioch Windfarm, the New Luce Community Trust chose to completely renovate the building which had been closed for five years and bring back a 'jewel in the crown' of the village.

The investment saw renovations carried out by local contractors who were able to create three new apprenticeships as part of the works as well as several new jobs based within the local area.

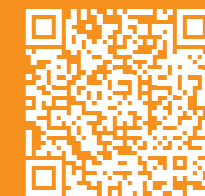
The Kenmuir Arms is now run by its tenants – a couple (chef and manager) who employ six people to support the day-to-day running of the business.

Now open, the pub is continuing to provide investment within the community, utilising the finest, fresh, organic local produce to create spectacular meals for locals and tourists alike. The restaurant has just been awarded a 5-star AA rating and thanks to the major renovation of the building, now boasts a glass-front, snug bar with extensive drinks menu and three beautifully decorated bedrooms.



Accessible and reliable transport options are vital within rural communities and following cuts to the local bus service the Killgallioch Community Benefit Fund chose to create a community transport scheme which entitles every household in the village to apply for a pre-paid taxi voucher ensuring everyone has access to transport when needed.

Neale McQuistin, Chair of the local Community Council, said: "Thanks to the Killgallioch Windfarm Community Benefit Fund, our shop has been saved and is now a thriving, bustling shop, the village hall is doing great and our new hotel here in New Luce is the jewel in our crown. We also have a fabulous play park – it's turned into a great asset for the whole of Wigtonshire. Lots of families from Newton Stewart, Stranraer and surrounding towns bring their children to play here – and they may well stay here and have lunch in the hotel, so it's all beginning to come together – great times ahead for the village of New Luce."



**Scan here for  
more info on  
Ken Muir Arms**

## Case Study 2: Reducing Eaglesham Bowling Club's Carbon Footprint

ScottishPower Renewables is committed to helping the UK achieve Net Zero by generating the green, renewable electricity the country needs. But our work towards Net Zero doesn't end there. We want to empower our communities to take control of their own carbon footprint through the local funding our renewables projects provide.

This was the case for Eaglesham Bowling Club. At the heart of the Eaglesham Community for over 100 years, the club began investigating how it could reduce its carbon emissions during lockdown.

Following consultation with Zero Waste Scotland the club used £26,724 of funds from Whitelee Windfarm – the UK's largest onshore wind farm – to action their recommendations and put in place solar panels, upgrade the boiler at the site, install roof insulation and make the change to LED lighting.

Over their 25 year lifetime, the solar panels alone are estimated to save the club around £13,000 in energy bills and result in 14 tonnes of carbon savings.



## Case Study 3: Explore North Carrick by E-Bike Net Zero / Tourism South West Scotland

With its rolling countryside, incredible shoreline and a host of historic landmarks including Culzean Castle, North Carrick welcomes tourists and locals alike all year long. The North Carrick Community Benefit Company recognised the popularity of the area and wanted to find a way to help reduce the carbon footprint of some of its visitors.

Using £14,500 of funds from the nearby Dersaloch Wind Farm, the North Carrick

Community Benefit Company has been able to provide 12 professionally maintained bikes for rent across the community. Money generated by the bike rental is then reinvested within the local area, supporting other community initiatives.

The project is a great example of collaboration at a local level, with businesses and community organisations working together to host the bikes making them available at collection points across North Carrick.



# Chapter 2: Ecology and habitat management

## Creating an environmental legacy for our communities

Being a good neighbour isn't just about how we interact with the people in our communities, it's also how we support and nurture the natural environment in and around our windfarms.

We have a proud track record for taking a leading role in the enhancement of the environment around our developments. We understand that a healthy natural environment can work to complement the other steps local communities take on their journey to Net Zero.

We have a dedicated ecology team supporting our portfolio of onshore wind, solar and battery in the UK and Ireland – from early inception to operations. The team are highly experienced with specialisms in areas such as ornithology, bats, peatlands, Environmental Impact Assessment, habitat management and invertebrates. They are responsible for ensuring all of our ecological commitments are delivered on time and to a high standard, and do so by monitoring and managing wildlife and habitats, carrying out extensive biodiversity and ecological surveys to understand the unique nature of our sites.

From restoring peatland habitats to planting trees, from conserving wildlife to protecting rare plants, birds and animals, we see our task not just as custodians of the land we operate, but as defenders and builders of biodiversity.

It is well documented that the planet is facing a biodiversity crisis. The main drivers of the biodiversity

crisis are habitat destruction, pollution, the spread of invasive species, over exploitation of natural resources, and climate change.

ScottishPower has the goal of having a net positive impact on biodiversity by 2030. We will achieve this through a combination of measuring the net impact on biodiversity across our portfolio and then using the data to implement new, and inform existing, Biodiversity Plans with the ultimate aim of enhancing biodiversity.

That's why our in-house ecologists devise bespoke Habitat Management Plans (HMPs) with the principal aim of enhancing our sites to benefit biodiversity. We've developed 24 of these plans to date, enabling us to manage 10,000 hectares of land across our portfolio. We have also planted over 1.3 million trees to date – driving benefits for biodiversity and carbon capture.

So far, we have invested £4m on peatland restoration works and further research on methodology and best practice for such processes, as it's such a vital part of what we do to protect and promote the environment around our developments.



10,000ha


managed under our portfolio

1.3m trees

planted to date.

## Case Study I: Focus on Whitelee Windfarm

The largest onshore windfarm in the UK, Whitelee windfarm is home to 215 turbines able to generate enough green electricity to power over 350,000 homes each year. Addressing biodiversity concerns and restoring degraded habitats has been a key element of the design, construction and operational management of Whitelee Windfarm, which has resulted in us being recognised for leading the way in delivering large-scale high-quality habitat management for the benefit of biodiversity.



**350,000**  
215 turbines able to generate enough green electricity to power over 350,000 homes each year.

### Recognising our work on biodiversity



**'Sustainable Development Awards' at the RSPB Nature of Scotland Awaad**



**'In Practice' award from the Chartered Institute of Ecology and Environmental Management**



**The only windfarm to receive the 'Green Flag' Award**


### Meet our Rangers

We fund two full-time Countryside Ranger posts at Whitelee Windfarm. The Rangers work to promote responsible access within the windfarm, whilst also educating visitors on the biodiversity of the site. They organise a large number of free events at Whitelee, with many having an emphasis on biodiversity. Thanks to their work to provide a positive environmental legacy by enhancing ecological habitats for native bird species and restoring natural peatland, we were also presented with a Green Flag Award for the third consecutive year in 2023 for Whitelee Windfarm. We're the only windfarm to receive the accolade which recognises spaces that meet the needs of communities they serve.



### From flying insects...

Whilst many people will be more familiar with bird and bat surveys around renewables developments, invertebrate (or insect) analysis – and work to support them – is just as important as they are part of the food chain, providing food for the ecosystems that depend on them.



**Scan here for more info on BIOSCAN**

That's why we're proud to be the only renewable energy developer participating in the Wellcome Sanger Institute's BIOSCAN project – a cutting edge project that's studying the genetic diversity of one million flying insects across the UK that could lead to the discovery of undescribed species.

Over a period of at least two years our Ecology team set up what's known as a Malaise trap at Whitelee every month. The insects caught in this are then sent to the Sanger Institute team for analysis, where scientists will then use the Barcode of Life DNA database to identify species present and, over time, monitor how species diversity and abundance changes.

Excitingly, DNA is extracted from each insect non-destructively. Once the DNA has been extracted, the actual specimens will then go to a collection in a museum, for example the National Museum Collection Centre in Edinburgh, where they can be used for other research in the future.

Data from the project will allow the ecology team to detect what impact our peatland restoration work has on the insect communities at Whitelee.

### ...down to burrow pits

In cases where there is a surplus of excavated peat there

are various options to 're-use' this peat – but data is lacking to determine the success of such methods. So we developed a study that monitors a 15-year-old burrow pit that was filled with excavated peat from our Whitelee Windfarm. The results will determine if this is a successful way to 're-use' peat to ensure the carbon within the peat is preserved and not oxidised into the atmosphere.

Preliminary results from our study indicate that the burrow pit has been successful in 're-using' peat, not only recording a range of bog plant species and ensuring that carbon within the peat is preserved, but also highlighting the presence of many peat-building mosses that indicate the peat is also storing additional carbon.

The final results of this piece of work could help inform future peat 're-use' practices across the entire industry. The project is currently ongoing with full results expected at the end of 2024.



## Case Study 2: Beinn an Tuirc Golden Eagle Project

**We have proudly watched on and monitored as golden eagles have made themselves at home close to our Beinn an Tuirc Windfarm in Argyll.**

Thanks to research during the development phase of the windfarm back in 1998, we were able to identify the eagles' core territory, allowing us to make changes to the windfarm that helped the eagles to flourish.

Over twenty years of research has concluded, and we created additional foraging habitat and restored moorland to benefit not just the eagles but other prey such as the red grouse.

We continue to monitor the eagles and were proud when a female nesting nearby was joined by a mate. The pair has fledged seven chicks in the nine years since, substantially improving previous breeding performance. Monitoring also found that one of their offspring is now nesting close to our Cruach Mhor Windfarm in Cowal.

This project has shown that with careful design, golden eagles and wind turbines can co-exist peacefully, and has allowed us to play our part in sustaining the Kintyre golden eagle population for years to come. Scotland is the stronghold of golden eagles in the UK and the chicks fledged at our Beinn an Tuirc Windfarm will undoubtedly have a legacy for future generations.



## Case Study 3: Dorset heath restoration, Carland Cross Repower



As part of the repowering of Carland Cross Windfarm in Cornwall an area of Dorset heath was created within an existing arable field. Dorset heath is an internationally rare habitat home to a range of endangered species. Innovative methods were used to collect seed from an adjacent area using bespoke machinery. The result has been the successful establishment of Dorset heath habitat and monitoring will take place long-term to ensure continued success.

## Case Study 4: Lynemouth geese and swans

**The Northumberland Coast is home to a range of birds, such as swans and geese. Our Lynemouth Windfarm, adjacent to the beautiful coast, presented an opportunity to create a haven for the birds to go to over the winter months.**

An investment of £65,000 was used to create a home for wintering swans and geese near to the windfarm. We also planted hedgerows around the windfarm to divide the area up to discourage the birds from getting too close to it.

Monitoring of the birds over a decade has shown success, with geese and swans making use of the habitat we created for them and only occasionally visiting the windfarm areas.

Our work also included the re-introduction of a winter crop which has provided economic benefits for the landowner too.



# Chapter 3: Repowering

## the next generation of renewable power and community benefits

Building new renewable generation, whether onshore or offshore wind, is critical if the UK is to reach its 2030 goal – but repowering is a crucial part of the mix. Repowering, at its heart, is about extending the lifespan of our windfarms, increasing their efficiency and energy capacity by replacing the existing turbines with fewer, larger, and more efficient turbines.

Some of the windfarms we are due to repower have successfully operated in a community for almost 30 years. The infrastructure works in harmony with the environment and the associated community benefit funds have delivered a raft of projects to support residents.

Existing infrastructure like the access roads and electricity networks means our windfarm sites are in strong wind locations and are well placed to take advantage of new technology. On average, repowering an onshore windfarm site will more than double the overall generation capacity while tripling the electricity output.

Almost one fifth of the UK's entire renewable power output could be retired over the next two decades. If we're to replace all that with new projects, then we are simply running to stand still – not adding on the vital additional clean energy needed to serve the growing demand for electricity.

Over the life of these windfarms we have built up a wealth of knowledge about the land, about the species who live there and visit, and about how to be a good neighbour to our communities. This puts these projects in a great place to help inform and educate about the land they operate on, meaning we can move toward a more efficient consenting processes for established sites. A slicker process, that still retains the opportunity for stakeholder engagement, can free up local resources to be directed elsewhere and help us get to Net Zero more quickly.

There are several benefits to repowering existing sites, including ensuring better integration of wind power in electricity grids, driving further cost reductions in wind energy by reducing operational costs, improving social acceptance and benefits to local communities, and on a macro level, significantly contributing to growing the circular economy for a just transition.

For our communities, repowering can mean supercharged Community Benefit and greater opportunities to create a lasting legacy for their area.



### Circular Economy

Considering how the materials removed from our older sites can be utilised for other sustainable purposes is a big focus across the industry. Whether that's further use of parts for research and training for future generations, or recycling and restoration into assets like bus shelters and re-usable components that we can offer to local communities to unlock further value in a circular economy.

There is recognition across the industry of the need for a long-term approach for wind turbine component recycling as more sites begin to be decommissioned. The Scottish Government's recently published Onshore Wind Sector Deal sets out commitments to working together to capitalise on a unique opportunity for Scotland to become a world leader in decommissioning, remanufacturing and

recycling onshore wind assets – with a specific agreement to collaborate on the delivery of a blade treatment facility in Scotland by 2030.

In addition to playing a key role in the delivery of those Sector Deal commitments, SPR is also part of the Coalition for Wind Industry Circularity – an industry-led group aiming to urgently improve the green credentials in the UK wind industry and achieve full supply chain circularity by 2030.

And just this year we have become members of SusWind – an industry group set up to focus on solutions for the sustainable management of wind turbine blades, including recycling strategies, utilisation of sustainable materials for new blades, and the development of future designs for blades that include end of life considerations.

## Case Study 1: Carland Cross

**Carland Cross Windfarm near Newquay in Cornwall was one of the first windfarms installed in the UK. Repowered in 2013, the original 15 turbines were removed and replaced with ten more powerful machines, increasing the installed capacity to 20MW.**



The original windfarm did not provide a community benefit fund but when repowered in 2013, ScottishPower Renewables set up an annual fund of £40,000 per year, index linked for the benefit of St Newlyn East Parish Council.

Similarly, the original Coal Clough Windfarm, near Burnley, did not provide a community benefit fund. The repowered windfarm became operational in 2015 and at that time ScottishPower Renewables introduced an annual fund of £32,000 per year, index linked for the benefit of the village of Cliviger.

## Case Study 2: Hagshaw Hill Windfarm

**After almost 30 years of service, Scotland's first commercial windfarm has been powered down in preparation to supercharge the site to help meet the UK's Net Zero targets.**

Operational since 1995, ScottishPower Renewables' Hagshaw Hill Windfarm in South Lanarkshire was at the forefront of wind energy production in Scotland and kickstarted a clean energy industry. Generating more than 895MWh over its 28-year lifespan, it's now about to undergo a process of repowering, which will see the windfarm capable of producing around five times the amount of clean, green energy than before, from just over half the number of turbines.

As part of ScottishPower Renewables' repowering strategy, which maximises the efficiency of existing sites by replacing older turbines with fewer, more powerful and efficient models, the 26 turbines at Hagshaw Hill will be replaced by 14, with 79.8MW capacity – enough to power almost 61,000 homes. Three new turbines will be able to generate the same amount as the previous 26.

It's not just the output that will be supercharged; the community benefit fund provided by the windfarm will receive a bumper boost from the repowering – allocating £399,000 per year with the local community deciding how it should be spent, putting the power in their hands.



**Scan here for more info on Hagshaw Hill**

# Conclusions

We are proud to be a good neighbour and want to make sure we leave our communities with lasting and positive legacies for generations to come.

**As a responsible developer, ScottishPower Renewables strives to provide an overall net biodiversity benefit on our projects; building community wealth, rather than simply minimising the impact of the project.**

**We believe there is the need for urgent action to address the biodiversity crisis and we are committed to protecting, and acting for, nature.**

**Repowering is critical to achieving Net Zero ambitions, but we need to be able to do it faster. We know these sites, we are good neighbours to our communities, we understand the land and have spent years studying the species who live and visit. We know all there is to know about how to look after these sites. And we know how much more they can deliver for the UK if we can repower them fast enough.**

**With more powerful wind turbines will come supercharged Community Benefit and the opportunity to make sustainable and lasting legacies for our neighbours. Our local communities have been at the heart of what we do since we first started operating windfarms in 1994.**

**What better than an ambition to create Net Zero towns and villages across the UK from the funds generated by our 100% green power.**

**Central to this is a revolution in homes and businesses. The way they're heated, the efficiency of their materials, the vehicles that are parked outside, and where they draw their power from. A long term plan to bring down energy use.**

**Harnessing strengths across ScottishPower, we are uniquely placed to work with communities to accelerate a clean and decarbonised future, while making sure we continue to listen to those who know best – the people who live there.**





If you would like to get in touch,  
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**Decemeber 2023**

