

# FAQ

#### **Frequently Asked Questions**

Key information about the Winterbourne Wind Farm project to help answer common queries and concerns.

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# The project

The Winterbourne Wind Farm is a proposed renewable energy project in the Northern Tablelands of New South Wales near the Town of Walcha, about 425km from Sydney.

The project will comprise up to 118 wind turbines, each with a maximum blade tip height of 230 metres and with an indicative capacity of 731.5 megawatts (MW). The project is expected to generate around 2,100,000 megawatt hours (MWh) per year of clean, renewable energy — enough to power more than 375,000 average NSW homes.

The wind farm will deliver renewable, low-cost energy to the national grid and contribute to NSW net-zero emissions target by 2050. The project will provide a significant amount of the new generation capacity required as coal-fired power stations are retired over the next decade.

The origins of the project date back to 2001, when a group of local landowners conceived of a wind farm in the Walcha area. Vestas has been involved with the project since 2019 and is progressing project planning and approvals, with construction expected to start early 2027.

#### **Project at a glance**

Status	Planning and approvals stage		
Planned capacity	Approximately 700MW		
Investment	Around \$1.9 billion		
Turbines	Up to 118 turbines		
Blade tip height	Up to 230m		
Connection	Approx. 44km of new 330kV transmission line		

#### Did you know?

The generation from a single turbine in the Winterbourne Wind Farm will generate more electricity in six months than the town of Walcha consumes in an entire year.





### Who we are

Vestas is developing the project on behalf of WinterbourneWind Pty Ltd, which is majority-owned by Copenhagen Infrastructure IV, a fund managed by Copenhagen Infrastructure Partners (CIP). CIP is a fund management company specialised in offering tailor-made investments in energy infrastructure assets globally. Vestas is a global leader in sustainable energy solutions. Vestas designs, manufactures, installs and services wind turbines around the world. Vestas has delivered more than 189,000 MW of wind turbines in 88 countries.

Vestas has been active in Australia since 2001 and employs around 800 staff in Australia and New Zealand across the sales, construction and maintenance of wind farms.

Vestas is responsible for project development and design of this wind farm project, and will supply the wind turbines, manage project construction, and provide long-term operation and maintenance services for the plant.

Learn more about Vestas at www.vestas.com

#### **Vestas**

29,000

People employed



40

years of experience with wind energy







**Wind direction** 

# Why wind energy?

Australia and the world are transitioning from traditional fossil fuel generation. Wind is a clean and inexhaustible resource that generates zero pollution or carbon emissions during operation.

Wind energy is now cheaper than new generation from coal and natural gas. Together with solar and other renewable energy projects, wind energy is helping to drive down the cost of wholesale electricity.

Wind turbines convert the natural movement of air into mechanical energy through rotation of the turbine blades. This mechanical energy is converted into electricity, which is sent to the electrical grid.

Australia's leading source of clean energy generation in 2023 was wind, which accounted for 13.4% of Australia's total electricity generation mix (source: Clean Energy Australia report 2024).

# How do wind farms compare to traditional energy sources?

Compared to traditional energy sources such as coal and gas, wind farms:

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require no invasive mining, extraction or burning of fossil fuels



emit no greenhouse gas during operations



emit no fine particle pollution, sulphur dioxide, or oxides of nitrogen

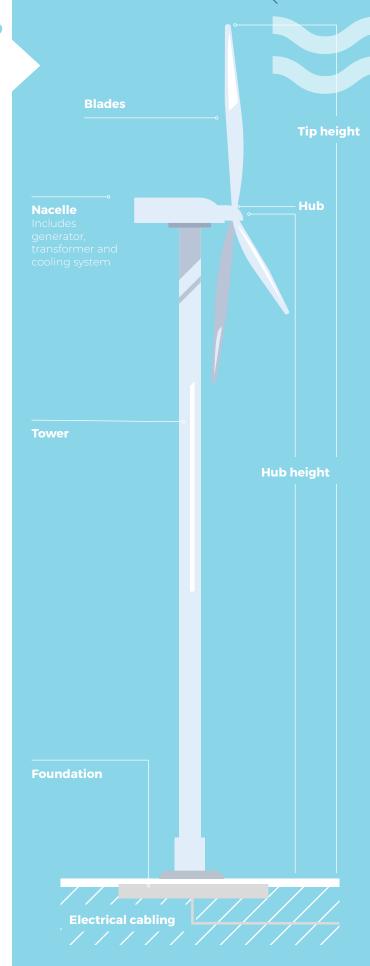


require no water during operation



have limited environmental impacts from construction.

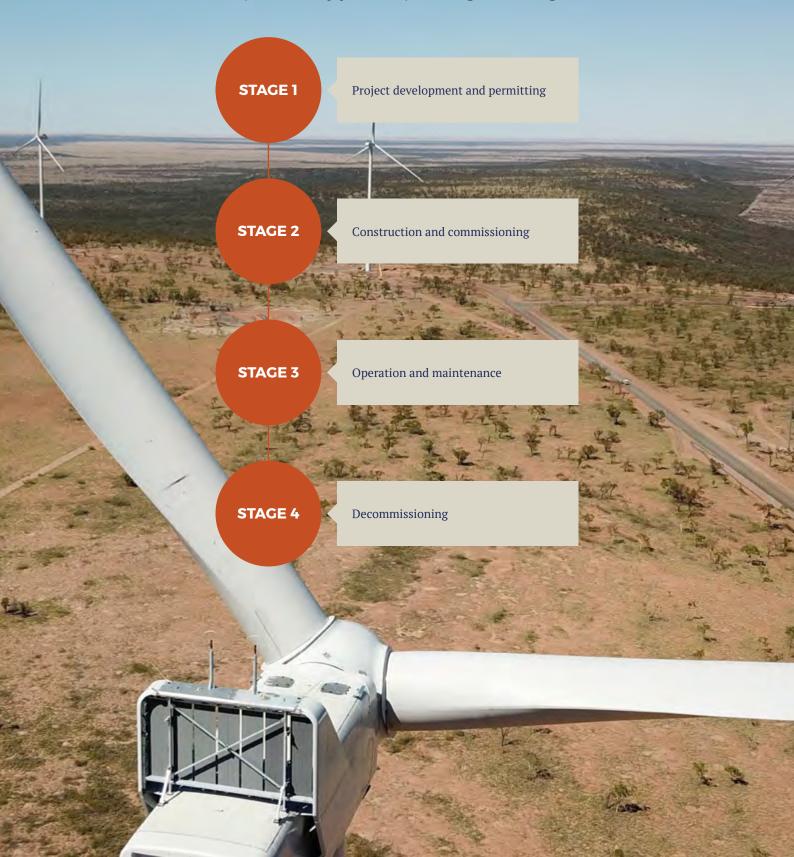
All emissions generated across the turbine lifecycle are offset in the first year of plant operation.





# What is the process to build a wind farm?

Developing and constructing a wind farm is a complex task that requires many years of planning and design.







## The development stage of a wind project includes:

discussions with potential host landowners

installation of wind monitoring equipment such as masts or remote sensing units

identification of potential wind turbine locations, and design of access routes and electrical infrastructure

consultation with local councils and State/Federal government stakeholders

engagement with the local community, project neighbours and First Nations People

environmental impact assessment including potential biodiversity, noise, visual, traffic, socioeconomic, bushfire, heritage, aviation and other impacts

preparation of State and Federal permitting applications and documentation

grid connection studies in accordance with requirements set by the Australian Energy Market Operator (AEMO) and the local network service provider (Transgrid)

financial modelling

project funding and investment decisions.

Project development is complex and requires continuous adjustment to meet the NSW Department of Planning and Environment's stringent environmental requirements and the challenging technical requirements of connecting a power station into the grid network.

#### Why is the Winterbourne Wind Farm near Walcha?

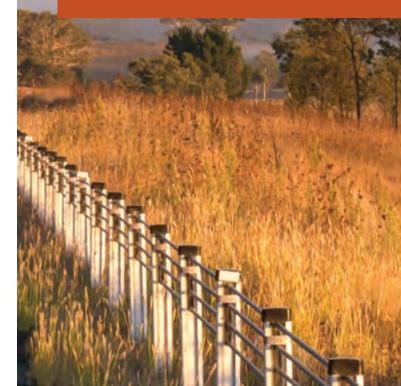
The Walcha region has several key feature: that support a wind energy project in the area, including more than 50 involved landowners who support the project.

Wind speed is critical to energy generation, so it is important to place turbines in areas of high and consistent winds. The Walcha area is considered one of the best wind resource areas in NSW. It is within the 6 New England Renewable Energy Zone, identified by the NSW Government as one of several priority areas for renewable energy development.

Importantly, existing high voltage transmission lines located between Walcha and Uralla enable connection of the proposed wind farm into the grid network.

In addition, the proposed project area comprises relatively cleared agricultural land, which means potential biodiversity impacts are minimised

Also, landholdings in the project vicinity are relatively large, and the wind farm infrastructure can be designed with suitable separation distances from neighbouring residences.

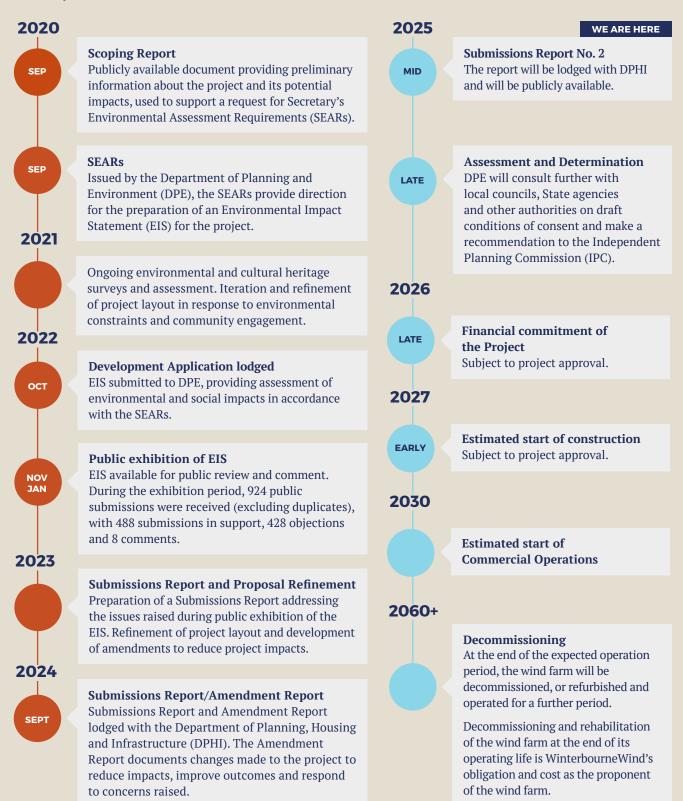




#### What are the steps in the approval process?

The diagram below shows the key steps in the environmental permitting process for wind farms in New South Wales. Project development is an iterative process that takes into consideration the results of technical and environmental investigations, and feedback from the community and other stakeholders.

#### Past, current & estimated timeline





#### What environmental studies are needed?

A wind farm project must obtain rigorous local, State and Federal approvals to ensure its compliance with relevant legislation and regulations.

To support the application for approval, various environmental studies are conducted to identify project impacts including:

traffic and transport

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electromagnetic interference (EMI)

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noise

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bushfire

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biodiversity

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waste

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visual & landscape



socioeconomic

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Indigenous and historic heritage



water

#### What is the impact to biodiversity?

The proposed development must satisfy the stringent biodiversity impact assessment requirements of both the NSW Government (via the Environmental Impact Statement) and the Australian Government (through the EPBC process).

The project site mainly consists of exotic grasslands with sparse woodland and scattered trees. Extensive flora and fauna studies have been undertaken since 2019 to identify, avoid, and minimise potential biodiversity impacts.

The project layout has been designed to minimise impacts to biodiversity by establishing infrastructure and roads to avoid areas of high conservation significance.

Vegetation clearing will be offset through the NSW Biodiversity Offset Scheme. A Bird and Bat Management Plan will be developed before construction to define measures for reducing potential impact on avifauna during project construction and operation.

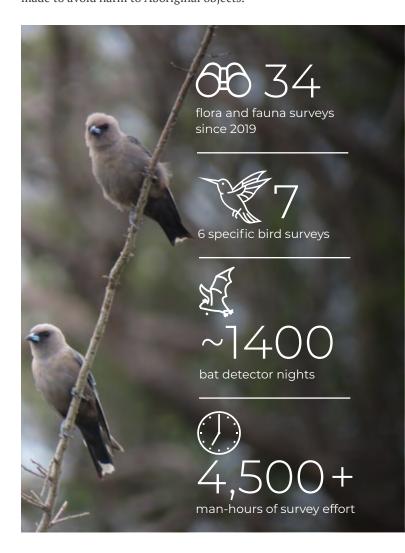
The findings of the biodiversity assessment and proposed mitigation measures are presented in the EIS.

# How have First Nations People been engaged?

WinterbourneWind engaged a specialised heritage consultant who followed the NSW Aboriginal Cultural Heritage Consultation Requirements (ACHCRs) for proponents. The Registered Aboriginal Parties (RAPs), including the Amaroo Local Aboriginal Land Council, have been consulted extensively since 2020 and have been actively involved with several heritage field survey investigations.

#### What is the impact to cultural heritage?

Together with a specialist consultant and with assistance from Registered Aboriginal Parties (RAPs), WinterbourneWind completed cultural heritage surveys to identify items and locations of cultural significance within the proposed project area. Five field surveys have been conducted since 2020 over 286 person days totalling 2,288 hours of survey effort. These surveys identified 23 artefact sites. No evidence of human burials or skeletal material were recorded. Of the 23 sites, 17 will be avoided by the project as they are either outside of the project footprint or protected during construction works. There are six sites that could potentially be harmed by the project, and these artefacts will be salvaged prior to construction in consultation with the RAPs. The findings of the cultural heritage investigation are presented in an Aboriginal Cultural Heritage Assessment Report (ACHAR), included in the EIS and made available for public review and comment. An updated ACHAR was provided as part of the Amendment Report. For a project of the scale of the Winterbourne Wind Farm, the cumulative harm to Aboriginal objects is low and consists of six artefact sites that will have visible artefacts moved to a place of safe keeping. Project design changes have been made to avoid harm to Aboriginal objects.







We expect to begin construction in 2027, subject to development consent and grid connection approval. Construction will take around 4 years to complete.

# How do you minimise or avoid construction disturbance to the local community?

WinterbourneWind will work closely with contractors, local communities, neighbours and local councils to plan and manage construction to minimise disturbance. Construction management will include:

- $\bigcirc$
- regular and ongoing communication with the community
- $\bigcirc$
- working during standard construction hours as much as possible
- $\bigcirc$
- communicating with affected stakeholders where it may be necessary to work outside standard hours, or where work is expected to be disruptive
- **(V)**
- a rigorous safety culture
- $\bigcirc$
- environmental monitoring.

#### What can I expect during construction?



#### Safety

Safety is our highest priority, and we will ensure it is the highest priority for all workers, contractors and visitors. We will prepare a detailed health and safety plan to identify and mitigate all potential safety risks, and we will ensure all construction employees and contractors are appropriately trained and qualified.



#### **Working hours**

If the project is approved, construction will occur during standard construction hours Monday through Friday, 7am to 6pm and Saturday, 8am to 6pm, with no work on Sundays and public holidays. However, if work needs to happen outside these standard hours, we will provide advance notice and put in place measures to minimise disruption.



#### Noise

Some construction activities will create localised noise including road construction, turbine foundation excavation and construction, concrete batching, rock crushing and heavy vehicle movements.

Construction noise criteria will be specified in the conditions of consent for the project, and will be based on noise guidelines published by the NSW Government. We will take all feasible and reasonable control strategies to minimise noise impacts during construction, and we will provide advance notice if we expect noise levels to exceed the criteria.



#### Dust

Construction work may generate dust. We will wet down construction areas and unsealed roads to minimise the dust.







#### Quarry

The wind farm has an estimated demand of 1 million tonnes (1 Megatonne) of quarry materials over the predicted 3-4 year construction period construction period. Quarried materials may be used for construction of access tracks and hardstand areas, for drainage mitigation works, for upgrades to public roads, and as aggregates for use in concrete for construction of footings and pads.

WinterbourneWind is proposing an on-site quarry to supply these materials for the wind farm project. By sourcing the majority of this material demand from within the wind farm footprint, WinterbourneWind can significantly reduce the requirement to haul this material through Walcha and on the surrounding local and regional road network. The proposed quarry will be temporary and its sole purpose will be to supply materials to the wind farm project.

The quarry will be located on a small parcel of grazing land within the existing project area, adjacent to the eastern end of Bark Hut Road. The quarry would operate under an Environmental Protection Licence issued by NSW Environmental Protection Agency.

The on-site quarry will have significant benefits for the community:

- Significant reduction in heavy vehicle movements – the on-site quarry directly addresses community concerns associated with heavy vehicle traffic through Walcha and on the local and regional road network.
- Significant reduction in haulage distance compared to the alternative of sourcing quarry materials from other quarries in the wider region, the on-site quarry will reduce haulage distance on the regional road network by nearly 10 million km (based on 1 Mt supply).
- Significant reduction in risk by removing tens of thousands of heavy vehicles from the wider road network, there will be a significant improvement in overall safety for all users by reducing potential interactions with light vehicle traffic.



#### Social and economic

There will be more people and vehicles in town and on the road during construction. This will mean more economic activity at local restaurants, shops and businesses and possibly higher occupancy rates in temporary accommodation. We will work with Walcha and Uralla Shire councils and our contractors to identify solutions, reduce impacts, and provide a strong economic benefit to the local area.

# Will water be required, and where will it be sourced?

We understand that water is a critically important issue for the Walcha community. During construction, water will be required for concrete batching, earthworks and potentially for dust suppression. WinterbourneWind will likely source water from local groundwater bores, subject to state licensing requirements. Once the wind farm is operational, water will only be required to meet domestic / personal requirements for maintenance staff.



#### Traffic

Wind farm construction involves a large number of oversize and/or overmass vehicle movements to transport wind turbine tower sections, blades and other equipment. These movements will be planned and involve support vehicles and traffic control where required. Construction will also require heavy vehicles for transport of raw materials (e.g. sand, aggregate, cement, gravel), and equipment (e.g. cabling, fencing, machinery). In addition, construction workers and project staff will travel to and from the site in light vehicles and utes.

WinterbourneWind prepared a detailed traffic and transport assessment, which incorporates input from Walcha Council and other stakeholders. This assessment was included in the EIS. Following review of EIS submissions, the oversize and/or overmass transport route was modified to avoid Oxley Highway. The project proposes to utilise a new route which follows the New England Highway to just south of Uralla, and then follows Thunderbolts Way back south towards Walcha. An updated traffic and transport assessment was provided as part of the Amendment Report. We will also work with road authorities and local councils to prepare a Traffic Management Plan before construction, describing how we will manage traffic and transport to ensure efficient and safe movements.



#### Cultural heritage

Vestas will consult with Aboriginal stakeholders throughout the life of the proposed project to ensure that all cultural heritage sites identified prior to construction, as well as any unexpected finds during construction, are protected and preserved in accordance with the wishes of these stakeholders.





Vestas will operate and maintain the wind turbines and other infrastructure to ensure safe and efficient works that optimise energy generation. The Vestas service team will include around 16 skilled staff permanently based in Walcha or surrounding towns, and who will become part of the local community.

# Do wind farms impact livestock or farming operations?

The majority of wind farms are developed on agricultural land and wind turbines are very much compatible with existing farming operations. Turbines occupy only a small amount of land, and landowners can continue normal grazing or cropping activities. Livestock has often been seen using turbine towers for shade and shelter from wind and rain. The income provided to landowners hosting wind farm infrastructure can help make farms more resilient to the impacts of droughts, fires and commodity price fluctuations.

### Are there any health risks associated with wind farms?

Numerous reviews of research literature conducted by leading health and research organisations worldwide, including Australia's National Health and Medical Research Council (NHMRC), have concluded there is no published evidence to link wind turbines with adverse health effects.

In February 2015, the NHMRC released a statement providing advice to the community and policymakers on the issue, available here: <a href="https://www.nhmrc.gov.au/health-advice/environmental-health/wind-farms">www.nhmrc.gov.au/health-advice/environmental-health/wind-farms</a>.

#### Will there be loud noise from the turbines?

Wind turbine movement creates sound; however, people generally find they can have a conversation at the wind turbine base without having to raise their voices.

The noise impact from a wind turbine will depend on wind speed, wind direction, topography, vegetation, and the distance from the turbine.

The NSW Wind Farm Noise Guidelines specify some of the most stringent noise criteria in the world and are lower than comparable criteria in the US and Europe. The allowable level is somewhere between a whisper and a quiet library in terms of noise. This level is set to ensure that noise levels from wind turbines are compatible with surrounding land uses and to ensure that noise levels do not significantly affect the living experience of people residing in the area.

The noise assessment for the WinterbourneWind project predicts the operational noise at all non-involved neighbouring dwellings will be lower than relevant noise criteria in accordance with the NSW Wind Farm Noise Guidelines

The EIS includes a detailed noise assessment report prepared by a specialised third-party consultant. Our team will monitor noise during operations to ensure the actual operational noise does not exceed the relevant noise criteria and, if it does, we will fix the issue.

#### Will there be transmission lines?

The wind farm will connect to the existing electricity grid via a 330 kilovolt (kV) transmission line. This will be similar to the existing transmission line that runs between Tamworth and Armidale, south of Uralla.

#### Will turbines affect property values?

Several studies commissioned by the NSW and Victorian governments examining the potential impacts of wind farms on property values have found no evidence that wind farms lower the value of a rural property.





# STAGE 4 Decommissioning

The Winterbourne wind farm has been designed to operate for 30 years. At the end of that period, it may be possible to replace some equipment and extend the project for a further period. Such extension would require a new development approval.

Decommissioning of wind farm infrastructure at the end of project life will be a legal condition of the development consent. In addition, contracts with landowners also require that wind turbines and other infrastructure are removed at the end of the lease term.

At the end of the project life, WinterbourneWind will be fully responsible for plant decommissioning, including removing the wind farm infrastructure and rehabilitating the site in compliance with the conditions of development consent. The wind farm will be de-constructed in accordance with a Decommissioning Plan, which must be approved by the NSW Department of Planning and Environment.

Decommissioning will involve de-energising, disconnecting, dismantling, demolishing and removing the wind turbines and other operational infrastructure (e.g. maintenance buildings, substations and power lines). We will also rehabilitate roads and fencing in consultation with host landowners.

The proposed Vestas wind turbine is around 88% recyclable. This includes the steel that forms the tower and the aluminium and copper used in electrical equipment within the turbine.

Vestas has announced a goal of achieving zero-waste wind turbines by 2040. Turbine blades are the most challenging component to recycle, but there are already a number of technologies available for recycling of blades, and no turbine blades will be disposed in the Walcha landfill. Blades are constructed of carbon and glass fibre composites, polyurethane foam and epoxy adhesives.

The recycling process aims to separate the polymer (resin) and fibre composites. Once separated, the resins are usually used for energy production while the fibre can be reused or recycled. As the global wind industry continues to grow, and as increasing numbers of older wind farms require repowering or decommissioning, more commercial options for recycling of wind turbine blades are becoming available. Vestas has committed to not landfill any blades in Europe by 2025, which means that the wind industry is now upscaling and investing in recycling solutions.

The concrete foundations will be removed to a depth of at least 500 mm below ground surface, but the bulk of the

foundation will be left in-situ. The excavated area will be backfilled with compatible local material and then covered with topsoil to ensure that grazing and farming activities can be resumed.

WinterbourneWind commissioned an engineering consultancy to prepare a Decommissioning and Rehabilitation Plan and cost estimate for the project. The study makes some assumptions about decommissioning methods and costs, the extent of rehabilitation of access road and hardstand areas, and the value of scrap metal. The assessment found that the total cost (in 2021 dollars) of project decommissioning and rehabilitation varied between approximately \$28.8 million (\$242,000 per turbine) and -\$13.1 million (-\$111,000 per turbine), depending on the demolition method, and net of the return from salvage. The lower figure indicates that the value of the scrap metal recovered would more than offset the cost of decommissioning.

#### How does energy payback work?

Energy payback' is the time required for a wind farm to produce as much energy as it consumes over the full life cycle of the plant, considering manufacturing of components, transport, construction, operation and decommissioning.

For Vestas turbines, the typical 'break even' point – where energy output exceeds energy required – is between 6 to 9 months, depending on the wind speed and other site-specific factors. This means that a typical wind farm becomes carbon neutral in less than one year of operation. By comparison, a coal-fired power station always consumes more energy than it generates, and never achieves an energy payback.

Energy amortization time for and disposal	or construction, operations
Wind	6 to 9 months
Hydro	9 to 13 months
Solar PV	1 to 2 years
Natural Gas	Never
Nuclear	Never
Coal	





# **Local jobs**

The Winterbourne Wind Farm project will boost local jobs and create new opportunities for local businesses.

The Winterbourne Wind Farm will create up to an estimated 390 new jobs during construction and approximately 16 long-term service and maintenance jobs during operations.

Construction and operation will require a range of skills such as:

engineering

trade (electrical, mechanical, construction)

**y** transport

ouilding material providers

equipment operators

consultants

oroject management

administration.

The Service Team will include wind turbine technicians, managers, warehouse staff and administrative staff. These will be permanent roles, based in Walcha or surrounding communities.

Vestas is committed to ensuring strong local employment and economic benefit from the project. If you are interested in working for or with the project, you can register your interest at winterbournewindfarm.com.au



# Working with Walcha

We want to be part of the Walcha community for the next generation and are committed to working hard to build strong long-term relationships with residents, businesses and organisations.

# What benefits will Walcha gain from the wind farm?

WinterbourneWind engaged a specialist economic consultant to prepare a Socioeconomic Assessment of the proposed project. The assessment found that the proposed project will generate more than \$150 million in direct wages and profits, and more than \$160 million in indirect wages and profits, per year of construction. Furthermore, during project operations, the project would be expected to generate more around \$25 million per year in direct and indirect economic benefit for the local region.

# Will there be a Community Benefit Fund?

Walcha Council, Uralla Shire Council, and WinterbourneWind Pty Ltd have signed a Voluntary Planning Agreement (VPA) which will establish a Community Benefit Fund (CBF) for the wind farm project. The VPA documents our obligations to make initial and ongoing contributions to the CBF, and the obligation of each local Council to administer the CBF.

We will provide \$1,000,000 to the fund when the project achieves financial commitment, and \$750,000 annually to the Fund from the start of commercial operations through to project decommissioning (based on a delivered project up to 600 MW capacity).

In addition, for every megawatt over 600 MW built, WinterbourneWind will contribute an extra \$1,000 per MW annually to the CBF. The initial payment and the annual payment will be adjusted for inflation according to the Consumer Price Index (CPI).

# How will the CBF be managed?

The VPA will document our obligations to make initial and ongoing contributions to the CBF, and the obligation of each local Council to administer the CBF. The funds in the CBF will be split 90% to the Walcha community and 10% to the Uralla Shire community, which matches the relative geographic and infrastructure split of the proposed project within each LGA.

An Advisory Committee will be established in each council area to make recommendations to the Councils about projects which thecommunity wants to invest in.

# The project will deliver significant benefits to the region and local community.



Substantial capital investment in Walcha and the broader New England region



Opportunities for local contractors and businesses to supply services to project construction and operation



Up to **390** new jobs to be created during construction



Up to **16** long-term service and maintenance jobs created during project operation



Training and development of new skilled labour in the region in the growing renewable energy industry



Upgrades to some local roads and construction of new access roads which may support emergency response activities in the future



# How can locals have a say in planning and decisions?

We are committed to positive engagement for all the stages of the wind farm's lifecycle – from site selection to decommissioning.

We will continue to engage with local councils, landowners, neighbours and surrounding communities, keeping people informed and involving them in decisions they can influence.

A Community Consultative Committee (CCC) was established for the project during the EIS preparation phase. The CCC consisted of an independent Chair, community members, local government representatives, and project team members. The CCC performed an advisory and consultative role, providing a forum for open discussion on issues directly related to the project. Meeting minutes are available on winterbournewindfarm.com.au.

# How do I stay updated on the project?

We keep the community up-to-date through our website, our website, email updates, regular newsletters, information displays in the local community and at local events, phone calls, direct emails and/or letters to anyone directly affected, and presentations to community groups and organisations.

For more information, visit winterbournewindfarm.com.au.

#### How do I have my say?

Vestas is committed to ensuring that the local community has multiple opportunities to learn about, ask questions, and provide input to, the proposed wind farm. Opportunities to do this include:

Website: www.winterbournewindfarm.com.au

**Project Update:** Approximately bi-monthly

Email: info@winterbournewindfarm.com.au

**Phone:** 1800 252 040





