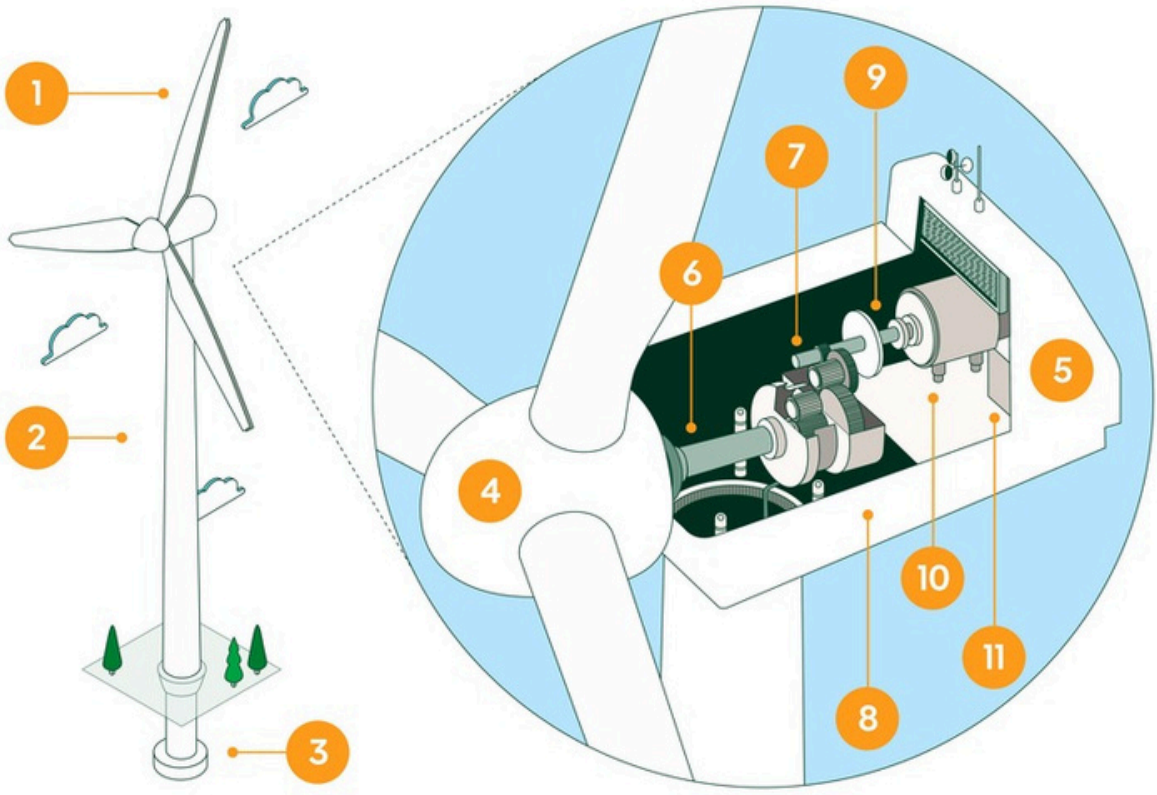
Iberdrola Australia

April 2026

Frequently Asked Questions

How do wind turbines work?

A wind turbine is made up of a number of components including blades, a nacelle, gearbox, generator, tower and foundation. As the wind turns the blades, it drives a generator that converts the mechanical energy into electrical energy. This electricity is then transmitted to the grid which is then delivered to households and business across Australia.



1. Blade
2. Tower
3. Base
4. Rotor
5. Nacelle
6. Rotor hub
7. Low-speed shaft
8. Gearbox
9. High-speed shaft
10. Generator
11. Control system

How much wind is needed to generate renewable energy?

Wind turbines do not need much wind to start spinning.
They start to operate at wind speeds of 10 to 15 kilometres (km) per hour.
To minimise safety risks, they stop operating during very high wind speeds of about 90 km per hour.

How long do wind turbines last?

A wind turbine is usually operational for 30 years. At the end of their service life, turbines will be either decommissioned or repowered.

Where does the power generated by a wind farm go?

The power generated by a wind farm is fed into the electricity grid via a connection point, supplying homes, businesses, and industries across the state and other parts of Australia. This contributes to Australia's overall energy mix, helping reduce reliance on fossil fuels and supporting the transition to cleaner, renewable energy sources.

How tall will the wind turbines be?

Dimensions can vary and newer wind turbine generators are increasing in size, due to improvements in technology. A number of investigations and studies are yet to be completed to determine the potential size of wind turbines proposed for the Project.

Why are the turbines not spinning/ generating energy at all times?

There are a number of reasons why individual wind turbines may not be turning. This includes wind conditions and the safe operating parameters of the wind turbines, scheduled or unscheduled maintenance, and export constraints imposed by the AEMO or the Transmission Network Service Provider. Just because they are not spinning does not mean the wind farm is not viable.

Is wind energy affordable?

Solar and wind continue to be the cheapest source of newly built energy in Australia, as reconfirmed in the latest GenCost report from the CSIRO (May 2024).

Renewable energy, firmed with storage and backed up by gas-powered generation, is the lowest-cost way to supply electricity to homes and businesses as Australia transitions to a net zero economy, according to AEMO. This was confirmed in the 2024 Integrated System Plan by AEMO.

What is the carbon footprint of a wind turbine?

One of the global wind turbine manufacturers, Vestas, calculated the amount of time that wind turbines need to operate in order to payback the energy used in their manufacture. 'Energy payback' is the time required for a wind farm to produce as much energy as it consumes over the full lifecycle of the plant, considering the manufacturing of components, transport, construction, operation and decommissioning.

A typical wind turbine repays its carbon footprint in less than 12 months, after which it generates emissions free electricity for the remainder of its approximately 30 year operating life. By comparison, solar photovoltaic systems typically repay their carbon footprint within one to two years, while hydroelectric power plants do so within 9 to 13 months. In contrast, coal fired power stations produce more carbon pollution over their lifetime than they avoid, so they never repay their carbon footprint.

Who is Iberdrola Australia?

Iberdrola Australia is a long term developer, owner, and operator of renewable energy assets in Australia. Our portfolio includes 21 renewable energy and firming assets totalling 2.74 GW of operating capacity.

This local expertise, combined with Iberdrola Group's global leadership in renewable energy, enables us to combine the best of local and global. We always work closely with local communities and Traditional Owners to deliver long lasting investment for the economy, environment and communities.

Iberdrola Australia works closely with local communities and stakeholders to gather ideas on how our projects could be refined to minimise potential impacts on the local community, and to unlock social, environmental and economic opportunities.

What is Iberdrola Australia doing?

We are commencing early-stage feasibility investigations into the potential expansion of wind generation at the Woodlawn Eco-Precinct site.
This includes, but is not limited to:

- First Nations, local community, and stakeholder consultation;
- Preliminary environmental, social and technical assessments;
- Early wind monitoring; and
- Preliminary design and grid assessment studies.

If considered viable, the development phase of the project is expected to take around 4 to 6 years, prior to construction.

Where is the proposed site?

The investigation area is located about 6 kilometres west of Tarago in NSW, within Pejar Local Aboriginal Land Council area, and within Goulburn Mulwaree Council and Queanbeyan-Palerang Regional Council areas

What other infrastructure other than the wind turbines is planned for the wind farm?

In addition to wind turbines, typical infrastructure includes access roads, underground and overhead electrical cabling, substations, operations and maintenance buildings, and transmission line connections to the electricity grid. The inclusion of a battery is also being considered. Temporary facilities such as construction compounds and laydown areas may also be established during the construction phase. The NSW DPHI Wind Energy Guideline (2024) ensures the infrastructure minimises land use impacts, protects biodiversity, and local communities and stakeholders have been consulted throughout the planning and design process.

- Access roads
- Operations and maintenance building
- Electrical cabling
- Battery
- Transmission line
- Substation
- Temporary construction compound and laydown area

How will the Project be assessed?

Large scale wind farms in NSW are assessed through a rigorous planning approval process at both the state and federal level through a bilateral agreement. Please refer to Section 2.3 *Process for assessing wind energy projects* in the NSW DPHI Wind Energy Guideline (2024). The first step of this process is to prepare a Scoping Report, which we are looking to finalise and submit this year. This report documents the process and outcomes of the scoping phase undertaken for the proposed Project in relation to visual, noise, biodiversity, Aboriginal and historic heritage, social, economic and benefit-sharing and other areas as required.

It then forms part of the proposed Project's Request for Secretary's Environmental Assessment Requirements (SEARs) lodged with the NSW DPHI, as part of the proposed Project's State Significant Development (SSD) application under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). Following the receipt of SEARs, we would take the project-specific requirements provided by the various departments and address these in the Environmental Impact Statement (EIS) phase. These processes include advice and rigorous assessment from government agencies and independent technical experts.

Please refer to the following guidelines for your reference:

- NSW DPHI State Significant Development Process (2024).
- NSW DPHI Wind Energy Guideline (2024).

In addition to the state process, the proposed Project will be referred to the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) for assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

How will the local environment be protected?

If the Project is considered viable, we will be developing a Biodiversity Development Assessment Report as part of EIS. This would include surveying the investigation area to identify key flora and fauna, including birds and bats.

Biodiversity surveys need to be conducted every season and across multiple years to ensure the potential impacts to vegetation, habitat, flora, fauna and migratory species are understood. The biodiversity assessment will guide the design process and explore avenues to minimise impacts. Iberdrola Australia is dedicated to preserving and enhancing the area's natural ecosystem and unique character.

The Flyers Creek Wind Farm Squirrel Glider Habitat Improvement Project was organised in partnership with ecologists from Habitat Innovation and Management in 2024.

As Squirrel Gliders had been spotted around our Flyers Creek Wind Farm, we wanted to help the population by improving their habitat. Our employees volunteered to plant over 1000 native trees favoured by the gliders! Visit our website to learn more about the initiative.

Iberdrola Australia staff and volunteers at a Flyers Creek Wind Farm Squirrel Glider Habitat Improvement Project

What investment will the community receive beyond the Project itself?

We are designing a Community Investment Program informed by feedback.

Potential initiatives include:

- Road upgrades: permanent improvements to local roads beyond construction needs.
- Local grants: funding for schools and community facilities.
- Economic development: prioritising local suppliers and workforce for construction and maintenance contracts.
- Community amenities: exploring options for shared facilities based on community input.

These benefits will be finalised through ongoing consultation and published in a transparent agreement.

Will I be able to see the wind turbines from my property?

At this early feasibility stage, Iberdrola Australia has engaged a specialist consultant to conduct a preliminary visual impact assessment. After the preliminary visual impact assessment is complete, we will have more information to engage with neighbours and the community on any potential visual impacts. Iberdrola Australia is considering a 2 km dwelling setback in the early design process to minimise impacts to adjacent properties. If the project is considered viable, we will complete progressively more detailed assessments to better understand potential impacts.

Will I be able to hear the wind turbines?

At this early feasibility stage, further investigations need to be undertaken to understand any noise impacts.

There are many factors that contribute to our perceptions of noise and its impact on us. Describing sound levels can be complex as a person's perception is influenced by factors like distance, topography, temperature, wind speed, and can differ from person to person. While wind turbines do make noise, they are quieter than most people expect. You can have a conversation under a turbine without having to raise your voice.

There are two noise sources from a wind turbine:

- Mechanical sound is the sound emitted from the nacelle, gearbox, and generator.
- Aerodynamic sound is the swoosh of the blades as they rotate past the tower.

Wind turbines are subject to strict noise criteria under the NSW DPHI Wind Energy Guideline (2024), which helps to ensure the protection of human health and residential amenity. Based on NSW guidelines, noise from turbines should not exceed 35.0 dB(A) or be 5 dB(A) above the background noise levels.

For residents with sensory sensitivities, we will provide tailored information and explore mitigation options such as vegetation screening.

How will the wind farm impact human health?

A number of peer reviewed, scientific studies have been conducted to understand the impact of wind farms on human health. The Clean Energy Council (CEC) has shared these studies on their website.

In summary, the CEC states that:

- There are no direct health effects.
- There is no consistent evidence that wind farms cause adverse health effects in humans.
- The Australian Medical Association and the National Health and Medical Research Council (NHMRC) have also concluded that there's no direct link between wind farms and health problems.
- Studies have shown that the levels of low-frequency noise from wind turbines are well below the threshold for human perception and negative health effects.
- The NHMRC suggests that any further health-based studies should be limited to close exposures.

In addition to this, the NHMRC assessed the impacts of wind farms on human health, under the guidance of a reference group. The findings of this review informed the development of the NHMRC Statement: Evidence on Wind Farms and Human Health and the NHMRC Information Paper: Evidence on Wind Farms and Human Health released in February 2015.

Will the wind farm result in an increase to my insurance premiums?

There is no evidence to support an increase in premiums due to the proximity of wind farms.
A variety of considerations go into the calculation of insurance premiums including claims history, risk, business practices and cost of capital.

The Insurance Council (2024) of Australia states that:
"*Current information indicates that insurers generally do not have specific concerns related to a property hosting transmission lines or neighbouring energy infrastructure. At the time of writing, the Insurance Council is not aware of any instances where Insurance Council members have been unable to provide insurance or have increased premiums as a result of a wind farm (or a neighbouring property) hosting energy infrastructure*".

The Insurance Council reiterated this position in a statement to the ABC (2024):
"*The rising cost of cover has nothing to do with renewables. Premiums are rising because of the escalating costs of natural disasters, the increasing value of homes and vehicles making them more expensive to replace, and inflation pushing up building and vehicle repair costs*".

Will the proposed Project impact property values?

Studies in Australia and internationally that assessed property sale data over a 20-year period, before and after wind farm construction, show that wind farms do not change property prices. The CEC has collated a factsheet for ease of reference: CEC Fact sheet - Renewable Energy Property Prices and Insurance.

For properties directly impacted by infrastructure, compensation mechanisms will be discussed as the project progresses.

Will the wind farm affect TV or internet reception?

While interference is rare, Iberdrola Australia will:

- Investigate any reported issues promptly.
- Provide technical solutions such as signal boosters or alternative reception methods.
- Liaise with telecommunications providers if infrastructure adjustments are required.

Iberdrola Australia employees at the Bodangora Wind Farm

How will Iberdrola Australia manage impacts to air quality during construction?

During construction of the proposed Project, Iberdrola Australia will implement a range of measures to minimise impacts on air quality, in accordance with relevant environmental standards. These measures are designed to protect the health and amenity of nearby residents, workers, and surrounding environment.

Activities such as earthworks and vehicle movements can generate dust and emissions, particularly on dry or windy days. To manage this, we will prepare a Construction Environmental Management Plan which will include specific air quality controls. These controls include using water carts to suppress dust on unsealed roads, covering material stockpiles, limiting vehicle speeds, and scheduling dust-generating activities to avoid excessively windy periods. Air quality monitoring may also be implemented in sensitive locations to ensure compliance with relevant standards.

How are wind turbines transported?

Due to their large size, wind turbines are transported as separate components such as tower sections, blades, nacelles and hubs. These components are typically manufactured off-site and transported to the project location using a combination of road, rail and sea freight.

In NSW, most components arrive at a major port such as Port Kembla or Newcastle and are then moved by specialised heavy haulage trucks to the wind farm site. Transport usually occurs during off-peak hours and may involve temporary road modifications, such as widening corners or reinforcing bridges. Once all components have arrived at the wind farm site, cranes and heavy machinery are used to assemble the wind turbines.

Is Iberdrola Australia responsible/liable for damage to roads during construction?

Iberdrola Australia is responsible for identifying and mitigating potential road and traffic impacts through extensive community consultation, traffic and transport studies, and consultation with local councils and transport authorities.

Transporting wind farm equipment and infrastructure may require road upgrades, temporary laydown areas and traffic signage. We will assess both the proposed Project and cumulative impacts of other major projects on the road network. Any potential impacts will be identified and addressed in the EIS.

If the current road network cannot accommodate the proposed transport equipment and movements, Iberdrola Australia will work with road authorities and local councils, as well as local communities, to propose upgrades.

If approved, and before construction begins, Iberdrola Australia will develop a Traffic Management Plan to ensure the safe and efficient movement of traffic around the Project.

In addition, Iberdrola Australia will repair any road damage caused by construction traffic and coordinate with councils on long term improvements. Heavy haulage will be scheduled during off-peak hours to minimise disruption.

What would happen if a fire were to break out at a wind farm?

The RFS and other fire-fighting authorities have power to enter any land impacted by fire under section 23 of the *Rural Fires Act 1997* (Rural Fires Act). In the unlikely event of a fire at a wind farm, the fire-fighting authorities would not need to wait for permission from Iberdrola Australia to suppress a fire.

The Rural Fires Act also makes provisions for fire-fighting officers to enter land to:

- inspect a fire; and
- for hazard management purposes.

All fire-fighting authorities work closely together and communicate about fires by radio, phone and the ICON (Incident Control Online) operational management system.

Iberdrola Australia will be involved in fire prevention, suppression and management initiatives. In developing the proposed Project, Iberdrola Australia would need to develop Risk Management Plans to be reviewed once wind farm designs are progressed. This includes supporting bushfire prevention and firefighting capacity. We will also carry out a detailed fire risk assessment as part of the NSW Government's planning approval process and will work closely with the RFS and other fire-fighting authorities to manage any risks. This will include site familiarisation training.

Iberdrola Australia will monitor the site 24/7, 365 days per year to ensure rapid response in the unlikely event of incident.

How might wind turbines impact the use of light aircraft and larger water bombers during firefighting operations?

In the event there is a fire detected, all turbines would be shut down via our 24/7 control centre. The spacing between turbines would provide sufficient room for helicopters to operate.

Firefighting requirements are addressed through a Bushfire Emergency Management Plan, which Iberdrola Australia would develop alongside fire authorities in line with the NSW state planning approval process.

Spotlight

Across our sites, we work closely with local RFS groups to support wherever we can.

The team at Capital Renewable Energy Precinct (CREP) prepared and donated ration packs for firefighters across five brigades supported by CREP: Bungendore RFS, Boro / Mount Fairy Rural Fire Brigade, Taylors Creek, Tarago Bushfire Brigade and NSW RFS - Gundary Brigade. Each pack included electrolyte drinks, energy supplements, dried fruit, muesli bars, beef jerky, biscuits and confectionery - practical supplies to help firefighters and volunteers stay fuelled and hydrated during long deployments.

The CREP team also supported the NSW RFS Gundary Brigade by contributing towards new workshop equipment, including a bench, vice and storage unit, to assist with the maintenance of firefighting gear and support the brigade's operational readiness.

Thomas from our Capital Renewable Energy Precinct with the Gundary Rural Fire Brigade

How will Iberdrola Australia ensure the wind turbines are not left behind once the wind farm reaches the end of its operating life?

Iberdrola Australia is one of the largest owners and operators of renewable infrastructure in Australia. We are committed to fully managing the decommissioning and rehabilitation of all of our projects.

Under NSW Renewable Energy Planning Framework, all wind farm developers are legally required to plan for and fund the full decommissioning of the project. This means that when a wind farm reaches the end of its operational life, the owner must safely remove infrastructure and rehabilitate the site—at no cost to the community.

The Clean Energy Council has summarised the expected decommissioning practices in their factsheet.

Iberdrola Australia employees at Flyers Creek Wind Farm

Iberdrola Australia employees at Flyers Creek Wind Farm

Contact Us

If you have any questions, feedback, local knowledge or suggestions, please reach out to the Project Team via the contact details below.

Visit our website:
www.iberdrola.com.au

Email the Project Team:
pylarawindfarm@iberdrola.com.au

Call the Project Team:
1800 917 372

Acknowledgement of Country

Iberdrola Australia acknowledges the Traditional Owners throughout Australia and their continuing values, culture and connection to land, waters and sky. We pay our respects to Elders past and present.

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