VicGrid

Gippsland offshore wind 2 GW transmission project

Project overview

October 2026



Victoria's energy system is changing. We urgently need to change our power grid to carry energy from a variety of sources across the state to Victorian homes, businesses, hospitals, schools and other vital services.

VicGrid is developing the shared transmission line to connect offshore wind energy generated off the Gippsland coast to Victoria's electricity grid.

A key step in Victoria's renewable energy future

Offshore wind energy will play an important role in Victoria's energy transition. As we move away from coal, different energy sources need to work together to keep our system strong. Offshore wind works well alongside solar, batteries and onshore wind. It can generate power in the evenings and in winter, when we need it most.

The Victorian Government has legislated offshore wind energy targets - building to 9 gigawatts (GW) of offshore wind energy by 2040.

The waters off the Gippsland cost have some of Australia's strongest and most consistent wind resources, enabling offshore turbines to generate large amounts of electricity year-round.

To support the generation of the first 2 GW, VicGrid is developing the Gippsland offshore wind 2 GW transmission project (the project), a new shared transmission line to connect offshore wind energy to the power grid.

Without this shared infrastructure, each offshore wind developer would have to build its own transmission line.

The project is proposed to run from a new onshore terminal station in Giffard to a substation near the Loy Yang Power Station in the Latrobe Valley.

The project does not include offshore infrastructure.

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What new infrastructure will the project include?

The transmission infrastructure will have three main parts:

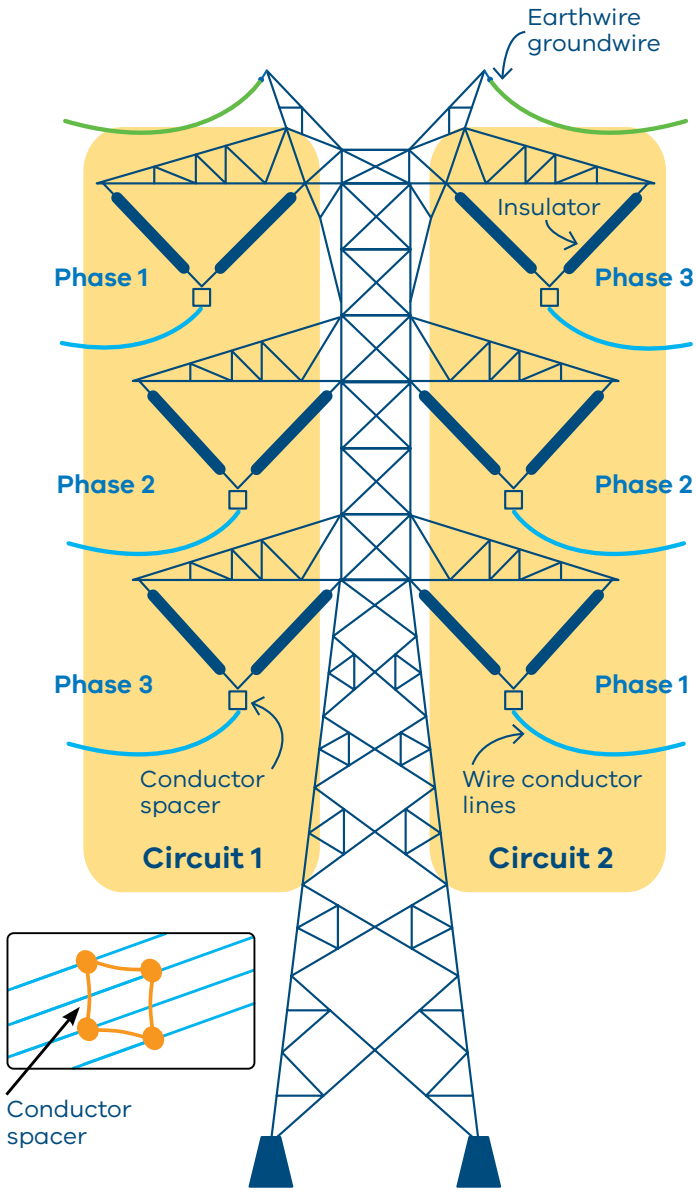
- A **500 kilovolt (kV) terminal station in Giffard** where power from offshore wind energy cables will feed into the grid
- A **500 kV double-circuit overhead transmission line,** about 60 km long, connecting the new terminal station to the existing Loy Yang Power Station switchyard
- **Upgrades at the existing Loy Yang substation**, including new high-voltage connection points to link the new transmission circuits to the existing network

What will the lines and towers look like?

The transmission line will use a **500 kV double circuit design,** meaning:

- Two independent **electrical circuits** will run on the same tower
- Each circuit has **three phases**
- Each phase will carry **four 'sub conductors' (wires)**
- Towers will typically be about **58-83 m tall** (about the height of a 15-25 storey building), and spaced about 300-500 m apart

You can read more about transmission types and key terms at **vicgrid.com.au/transmission-planning/about-energy-infrastructure**





Coordinating with offshore wind energy projects

To connect power generated at sea to the electricity grid, cables will run on or under the sea floor to the shore at selected locations (called shoreline crossings). Once onshore, the cables will run underground to the proposed terminal station in Giffard. The cable routes will be located in a limited area called the Gippsland Shoreline Renewable Energy Zone.

We're helping to reduce potential impacts by:

- Identifying suitable locations for cable landings (shoreline crossings)
- Supporting cable route planning to minimise impacts
- Setting expectations for how offshore wind energy projects connect to the grid
- Supporting engagement with landholders, Traditional Owners and coastal communities

To learn more about how offshore wind energy will connect to Victoria's electricity grid visit **vicgrid.com.au/transmission-planning/renewable-energy-zones/gippsland-shoreline-renewable-energy-zone** and download Draft Gippsland Shoreline Renewable Energy Zone factsheet.

Why not build the line underground?

In 2023, we reviewed several design options for the transmission line. Overhead 500 kV options were identified as the most practical because they:

- Are proven for long-distance, large-scale electricity transport
- Have lower costs for energy users
- Involve fewer engineering risks and are easier to maintain

You can read more about the technologies considered on Engage Victoria in the Gippsland Options Assessment Summary **engage.vic.gov.au/project/offshore-wind-transmission/page/document-library**

Developing the project in stages

We've been engaging with communities since early 2023 to help identify the most suitable location for the transmission line.

Project development steps

Early development

Environment, planning and design

Construction and commissioning

- Study area refinement
- Planning and environmental approvals
- Design development
- Development partner procurement

2023

- Start engaging on offshore wind transmission
- Consult on options assessment method
- Used options assessment method to assess options

2024

- Environment assessment referrals
- Identify study area using options assessment method and report on how options were assessed

2025

- Environment Effects Statement (EES) Scoping Requirements
- Start detailed EES assessments
- Identify corridor and draft preferred route
- Invitation to Tender for a development partner

2026

- Continue EES technical assessments
- Identify a preferred route
- Appoint a development partner

2027

- Exhibit the EES for public review
- Minister's assessment for EES
- Identify a transmission easement
- Commence early works

2028 - 2032

- Construction of new transmission ready for the first 2 GW of offshore wind



How the project is planned and refined

We're using a staged process to identify, assess and refine the new transmission line. This process includes technical studies, environmental assessments and feedback from landholders, communities and Traditional Owners.

Assessing options

Identified suitable areas for new transmission through desktop studies, assessing social, environmental, cultural and economic factors.

Refining the study area

Applied detailed assessment criteria to narrow the study area to a corridor.

Draft preferred route

Conducted further technical and environmental studies and engaged with landholders to identify a draft preferred route.

Preferred route and design

Landholder feedback and further technical studies will inform the preferred route and reference design.

Appoint a development partner

We selected a development partner to work alongside VicGrid on design, procurement and project management, and to prepare the project for delivery.

Final easement and tower locations

We'll work closely with the development partner to set the final easement and confirm the exact location of towers.

Assessing environmental impacts

In October 2024, the Victorian Minister for Planning declared the works to be 'public works' under the *Environment Effects Act 1978* (Vic). This means we must prepare an Environment Effects Statement (EES) – a comprehensive assessment of the project's potential environmental, social, economic and cultural impacts.

Seventeen specialist studies are being prepared to inform the EES and the project's design, including where towers and other infrastructure should be located.

Designing the transmission line

To decide where transmission infrastructure could go, engineers consider three main inputs:

- **Technical factors** – designs must meet strict safety and operational standards
- **Environmental and cultural heritage assessments** – findings from the EES and Cultural Heritage Management Plan inform design decisions
- **Landholder, community and Traditional Owner feedback** – local knowledge helps shape design choices and minimise impacts

Relevant legislation

- *Environment Effects Act 1978* (Vic)
- *Planning and Environment Act 1987* (Vic)
- *Environment Protection Biodiversity and Conservation Act 1999* (EPBC) (Cth)
- *Aboriginal Heritage Act 2006* (Vic)
- *Flora and Fauna Guarantee Act 1998* (Vic)



Procurement and delivery

We ran a two-stage competitive tender process to select a development partner to work alongside VicGrid on design development, procurement and project management, helping prepare the project for delivery.

ACCIONA was selected through a competitive tender process that began in 2024 and required proponents to demonstrate how they would work with landholders, Traditional Owners and communities throughout project delivery.

At the end of the development phase, ACCIONA will submit a final project offer to VicGrid for the construction of the transmission line.

Building the transmission line

Construction is expected to take about 2.5 years and include these key steps:

1. **Site preparation and access.** This step includes setting up laydown areas, temporary access tracks and site offices, and removing vegetation as needed.
2. **Building tower foundations.** This step includes installing by drilling or driving piles to create a stable base. This typically involves boring holes into the ground, placing a reinforcing steel cage and filling with concrete, or driving steel piles where ground conditions require it.
3. **Assembling towers.** This step includes delivering, assembling and lifting tower sections into place using cranes.
4. **Stringing the wires.** This step includes installing conductors between towers. An initial line may be placed using ground vehicles, drones or helicopters, before the final conductors are pulled into place using winches.
5. **Testing and commissioning.** This step includes checking and confirming the line operates safely.
6. **Rehabilitation.** This step includes cleaning up work areas, restoring land, and replanting vegetation in line with agreed commitments and plans.



Operations and maintenance

Once operating, the transmission line will be inspected regularly to ensure safety and reliability.

Maintenance crews will arrange access to the line to carry out:

- Seasonal bushfire risk inspections
- Routine servicing and repairs
- Vegetation management
- Emergency response work

Delivering benefits for Gippsland communities

We're committed to ensuring the project delivers long-term social and economic benefits for Gippsland.

The Victorian Government is introducing a new approach to delivering benefits, which will include:

- **Payments to landholders** who host transmission easements for the project
- **Payments to nearby landholders** significantly affected by the new transmission infrastructure
- A **Renewable Energy Zone Community Energy Fund,** supporting regional infrastructure and programs for the region hosting the project
- A **Traditional Owners Fund** that supports self-determination and community initiatives

These benefits payments and funds are in addition to compensation payments to landholders under the *Land Acquisition and Compensation Act 1986* and compensation arrangements for Traditional Owners under the *Traditional Owner Settlement Act 2010* and the *Native Title Act 1993* (Cth).

Contact us

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