

Offshore Wind Energy Transmission Gippsland Options Assessment

Community Summary

March 2024

This fact sheet describes the proposed new transmission infrastructure in Gippsland to connect offshore wind energy to the existing power grid. It sets out next steps to work with landholders, communities, stakeholders and First Peoples to inform the decision about the new transmission.

Offshore wind is a key pillar in the renewable energy transition and Victoria has some of the best offshore wind resources in the world. That is why the Victorian Government has set targets to generate at least 2 gigawatt (GW) of offshore wind energy by 2032, 4 GW by 2035, and 9 GW by 2040.

New transmission infrastructure is needed to extend the existing network from the Latrobe Valley to a connection hub near the Gippsland coast, which offshore wind generators will connect to.

VicGrid is the Victorian Government agency leading this transmission development to avoid multiple developers building individual transmission lines that could create a 'spaghetti effect' of powerlines criss-crossing the landscape.

Why Gippsland?

Offshore wind farms can only be built in areas approved by the Australian Government, which declared an area in Bass Strait as Australia's first offshore wind zone in December 2022. This area spans approximately 15,000 square kilometres (km) in Commonwealth waters off the Gippsland coast.

Transmission Study Area for further development

VicGrid has identified a Study Area for the new transmission infrastructure through an assessment of a wide range of potential corridor and technical options. VicGrid used the Options Assessment Method which was developed in 2023 with community and stakeholder feedback to help assess and balance a range of competing factors.

The proposed new transmission in Gippsland is a new set of overhead alternating current (AC) 330 kilovolt (kV) or 500 kV transmission lines from a new connection hub near Giffard to a grid connection point near Loy Yang Power Station.

VicGrid has created a broad Study Area between 3 km and 12 km wide that provides opportunities to reduce impacts by exploring alignment with other infrastructure

The Study Area will be refined through further engagement and detailed investigations to select a corridor, a route and ultimately an easement.

Assessment of environmental, visual, heritage, cost and technical factors found that new overhead transmission lines along an area away from major towns provided the best way of balancing the need to keep household energy bills down while minimising impacts for Gippsland communities.

Study Area – A broad geographic area that we will progressively narrow over time as we undertake detailed studies and consultation with landholders, First Peoples, community and stakeholders.

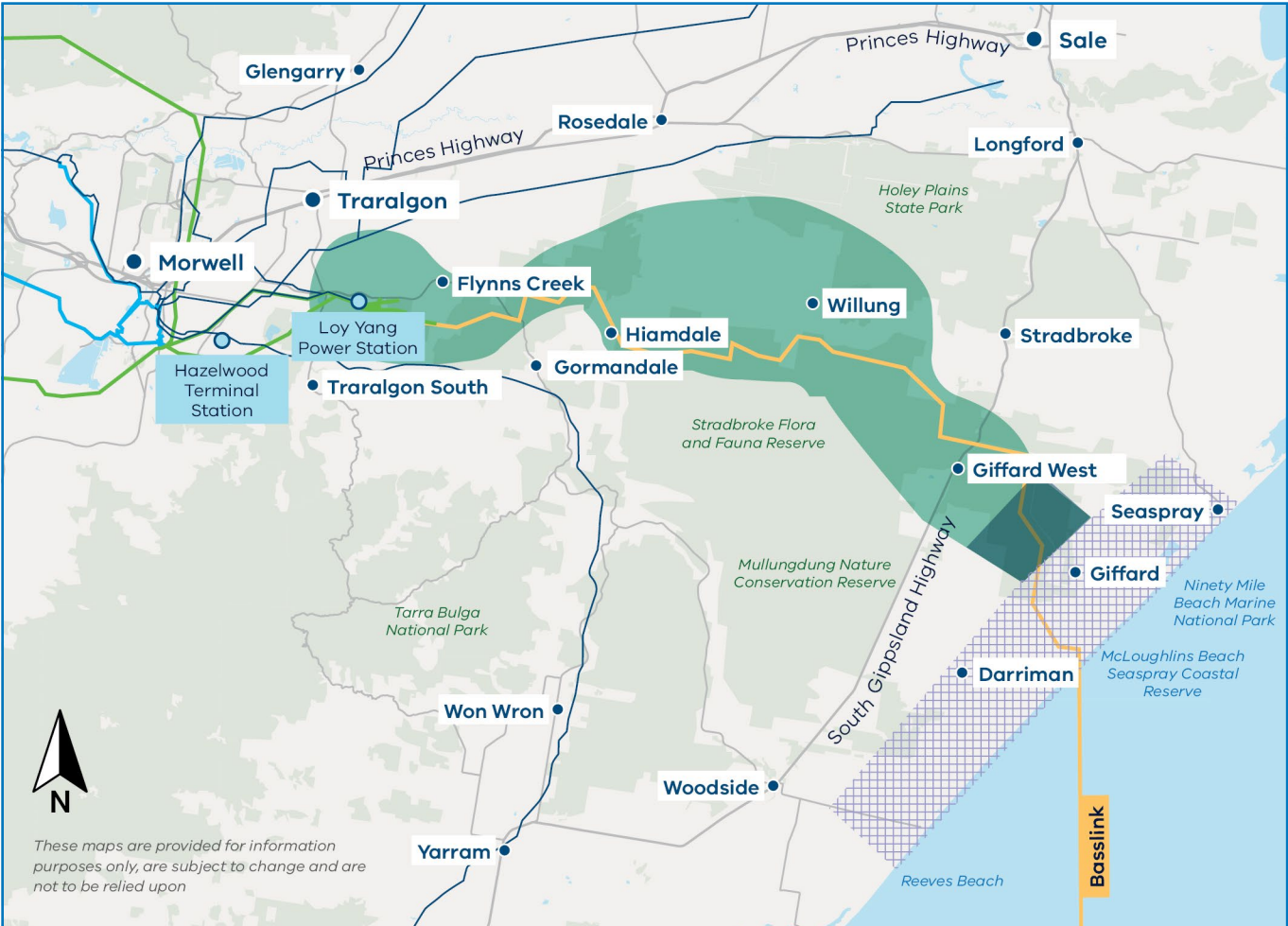
Corridor – One or more geographic areas narrowed down from the Study Area that are considered suitable for transmission infrastructure. There is flexibility within a corridor to undertake site-specific consultation with landholders to identify suitable routes.

Route – A route is narrower again and is the final stage before an easement is selected. This still allows flexibility for locating (or micro-siting) of towers to minimise impacts on landholders and landholder operations.

Easement – An easement is a legally secured right-of-way for the transmission infrastructure to be built and maintained.

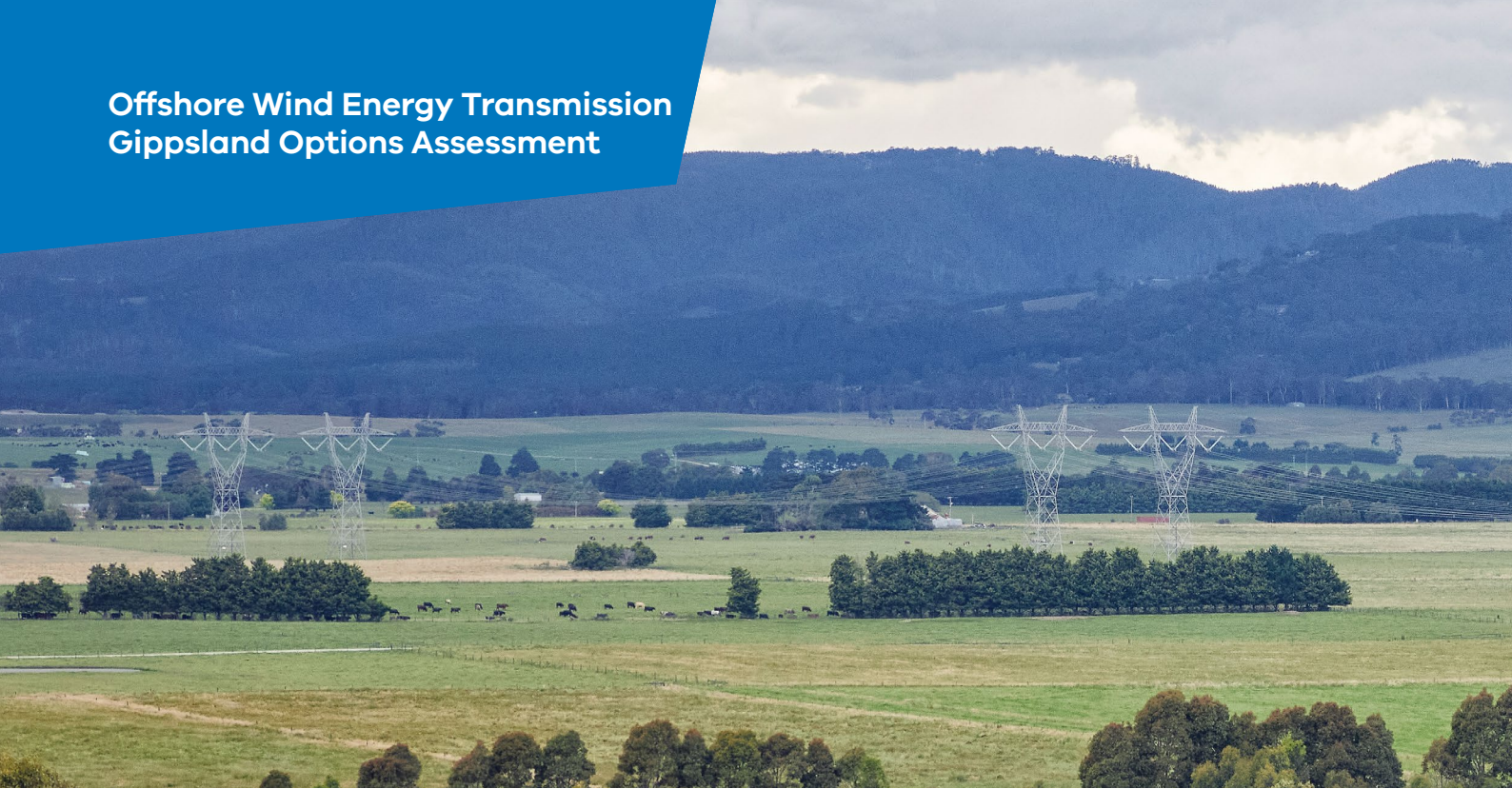


Study Area and indicative connection hub



Legend

- Existing 66 kV transmission
- Existing 220 kV transmission
- Existing 500 kV transmission
- Basslink
- Study Area
- Offshore wind energy connections to the VicGrid connection hub are subject to the outcome of the feasibility licence process which is pending
- Connection hub to be sited within this area, subject to further investigations



Features of the Study Area and technology

- Lower proportion of agricultural land than almost all other options
- Away from major residential areas
- Higher proportion of public and plantation land than other options
- Overhead technology proven to minimise energy costs paid by households and businesses
- Provide opportunities to explore alignment with other infrastructure such as roads and Basslink
- Allow for potential connection with existing assets at Loy Yang Power Station
- Shorter length than most other options
- Connect Victorian households and businesses to affordable renewable energy.

Why overhead lines are preferred

VicGrid's assessment of technical options considered multiple overhead and underground technical options and balanced complex and competing technical, social, environmental and heritage factors.

The assessment showed that AC 330 kV and 500 kV overhead options scored the highest overall, due to lower cost impacts to energy consumers, lower engineering complexities and proven performance for long-distance large-scale energy transport.

For the first 2 GW offshore wind energy target, the preferred HVAC overhead options are estimated to cost between approximately \$700 million and \$1.5 billion, compared with between approximately \$2 billion and \$4.5 billion for the HVDC underground option.



Working with communities to refine the transmission option

Further engagement and in-depth investigations are now needed to inform the decision about where the new transmission should go.

VicGrid will talk with landholders, farmers and residents of nearby townships to better understand their needs, their properties and activities like agricultural practices with the aim of improving the project and minimising impacts as much as possible.

The Study Area needs further discussion with the Traditional Owner Corporation, Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) on ways to avoid and minimise potential impacts to cultural heritage and values. VicGrid will continue working to build a partnership with GLaWAC.

Next steps for working with communities to refine the Study Area and confirm the transmission location

2024	2025	2026 - 2027	2027 - 2030
In depth engagement and environment assessments and approvals			Delivery and commissioning
Refine Study Area to identify preferred corridor	Refine corridor to identify preferred route	Refine route to confirm transmission easement	Construction of new transmission ready for at least 2 GW by 2032 offshore wind target
<p>Direct discussions with landholders</p> <p>On-the-ground environment and heritage studies</p> <p>Major planning and environment assessments and community submissions to independent panel</p> <p>Understanding land use, agriculture and business operations</p> <p>Engagement with public land managers and businesses</p> <p>Coordination with offshore wind developers</p> <p>Design of transmission infrastructure and connection hubs</p>			<p>Finalise delivery plan in accordance with planning and environment approvals</p> <p>Mobilise construction partner</p> <p>Construction supported by ongoing engagement</p> <p>Ready to connect offshore wind projects</p>
<p>Community and landholder engagement Traditional Owner/First Peoples engagement and partnership approach</p>			

Note: This timeline and associated activities are indicative and subject to change



Contact us



Phone: 1800 418 341

Email: vicgrid@deeca.vic.gov.au

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