

Victoria to New South Wales Interconnector West (VNI West) Regulatory Investment Test for Transmission (RIT-T) Progress Update



This is the third project update on the Victoria to New South Wales Interconnector West (VNI West) Regulatory Investment Test for Transmission (RIT-T) process.

It provides an overview of the project, an update on the regulatory process and consultation opportunities, and background on the RIT-T progress and AEMO and Transgrid.

Overview

The energy transition

The Australian energy sector is transitioning away from coal-fired power to a greater mix of low-emission renewable energy sources, such as wind and solar.

These new electricity sources are varied in location and often far from the generation hubs that the transmission network was built to support, such as the Latrobe Valley in Victoria and the Hunter Valley in New South Wales.

There has also been strong state government policy support for future co-ordinated generation development, including renewable energy zones (REZs) to help meet state renewable energy targets. To support the transition and connect Australian communities and businesses to these lower-cost energy sources, the electricity grid needs to evolve.

An interconnector is a transmission line that allows electricity to flow in both directions between regions in the National Electricity Market (NEM).

The proposed VNI West project

VNI West, a new interconnector between Victoria and New South Wales, is one of several transmission investments proposed for the NEM to enable the low carbon energy transition for the benefit of all Australians.

This important link will deliver infrastructure required to support the energy sector transition by better connecting the energy grids across New South Wales and Victoria. It is a key project in Australia's transition to a net-zero emissions power system and economy.

The proposed VNI West interconnector (see figure below) would comprise a series of high voltage transmission lines and terminal stations to link resource-rich REZs of the Murray River, Western Victoria, and South West New South Wales. Linking these regions would help deliver renewable energy to where it is used, maintain reliability of electricity supply during peak demand conditions in either state, and provide resilience and flexibility for future changes in electricity supply, such as early/unexpected generator closures.

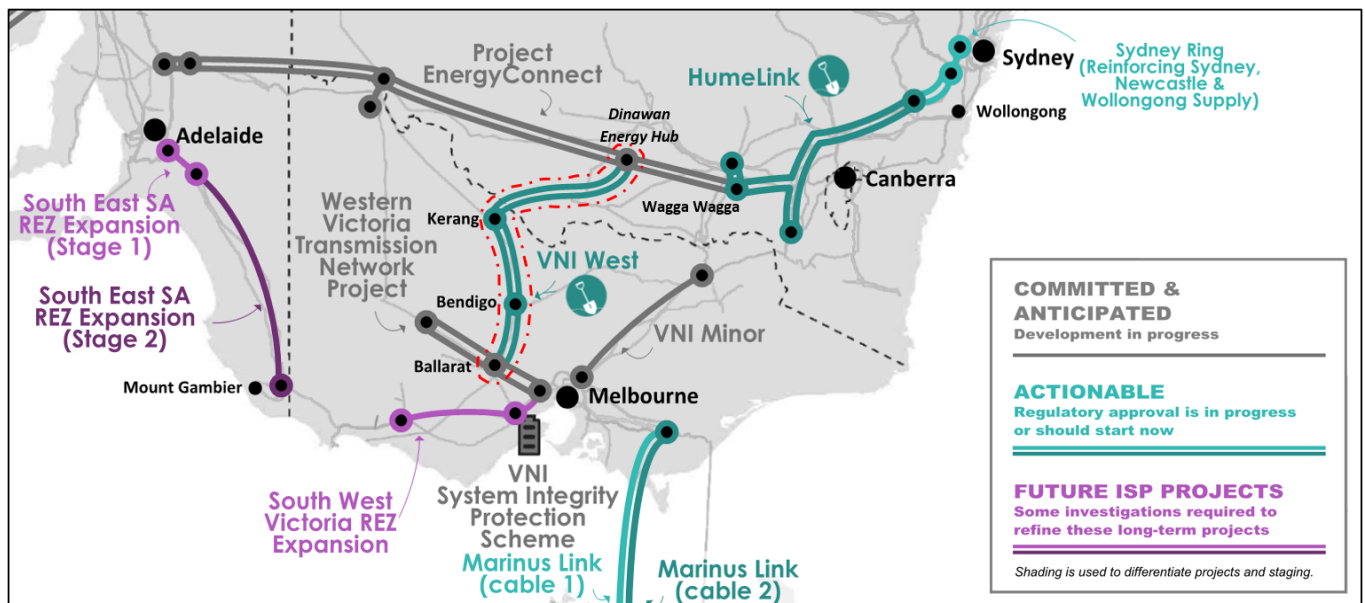
The VNI West project will:

- Unlock clean, lowest-cost electricity from existing and future REZs in Victoria and New South Wales as coal-fired power stations are retired.
- Provide a second interconnector to increase the capacity for sharing electricity between Victoria and New South Wales, improving the reliability and security of electricity supply for both states.
- Help achieve state-based renewable energy targets and facilitate the overall decarbonisation of the NEM, while continuing to deliver safe, reliable and affordable electricity to consumers.

AEMO and Transgrid are progressing a joint regulatory assessment of VNI West to determine if the anticipated market benefits from a new interconnector outweigh the estimated cost to energy consumers, who would

ultimately fund the project. This assessment involves evaluating the technical and economic feasibility of a new transmission link between Victoria and New South Wales, together with credible non-network options.

VNI West (shown in red dotted line): from Draft 2022 Integrated System Plan (ISP) for illustrative purposes only



Update on current position

Regulatory process

VNI West is in the regulatory investment assessment stage, which means the project is not yet validated under the National Electricity Rules (NER). Its technical and economic feasibility are still being investigated, and no design or route has been identified.

If VNI West is validated through the RIT-T process, early works such as extensive community consultation, environmental assessment, route development, and technical design would then be progressed.

AEMO's [Draft 2022 Integrated System Plan](#) (ISP) assessed a wide range of transmission network alternatives for VNI West and identified the option via Kerang as potentially the most beneficial. As a result, the remainder of the RIT-T will focus on refining this option along with credible non-network options.

In New South Wales, the Wagga Wagga to Dinawan section of the project will be delivered as part of Transgrid's part of [Project EnergyConnect](#), an interconnector between South Australia and New South Wales.

See 'Background' below for more about RIT-Ts.

Project Assessment Draft Report (PADR)

The PADR is the second report in the three-part RIT-T process required for significant transmission investments proposed for the NEM. (See below for more details on the three reports.)

The VNI West PADR is required to be published before 31 August 2022. At this stage, AEMO and Transgrid intend to publish the PADR in late June or in July.



How you can get involved in the VNI West RIT-T process

Upcoming consultation

A six-week consultation period with opportunities to seek clarification, ask questions and provide feedback will open when the PADR is released.

This consultation period will include online industry forums and a formal submission process. All stakeholders are welcome to provide written submissions on the PADR.

AEMO and Transgrid are committed to collaborating with industry, government, investors and consumers, while working to secure and shape Australia's energy future in the long-term interests of consumers.

There will be opportunities throughout the regulatory investment assessment process and any subsequent project planning processes for stakeholders to learn more about VNI West and be consulted.

Near-term opportunities include exploring the VNI West RIT-T assessment findings through formal reports and supporting resources and events, and participating in the PADR written submission process.

AEMO and Transgrid will host two technical forums for stakeholders after publication of the PADR, to discuss the inputs, analysis and choice of draft preferred option as they relate to the technical and economic cost-benefits assessment.

More information on the PADR findings, planned technical forums, and the submission/consultation period will be available in the next VNI West RIT-T Progress Update.

Submissions to the RIT-T

All stakeholders are welcome to provide written submissions on the PADR. The deadline for submissions will be confirmed in the PADR but usually closes six weeks after publication.

AEMO and Transgrid value and encourage feedback across the broad range of issues and opportunities associated with this project. All forms of feedback will be carefully considered in the preparation of the final report (the PACR) and all written submissions will be published online.

It is important to note, however, that AEMO and Transgrid are limited in what can and cannot be considered in the final assessment, as set out in the Australian Energy Regulator's (AER's) [Cost benefit analysis: Guidelines to make the Integrated System Plan actionable](#). These guidelines reflect the objective of protecting consumers from paying more than necessary for their electricity and specifically relate to the technical, cost and time parameters of a credible option. Environmental and social impacts of the project will be assessed in detail by state and federal government regulators during subsequent processes for development approvals for the project.

It is important to note that at this early stage, the route, design and location of any new infrastructure required to deliver VNI West has not been determined, and any maps that appear in the RIT-T or ISP reports are illustrative only.



Background

The RIT-T process for VNI West

What is a RIT-T?

A RIT-T is a three-step technical and economic assessment required under the NER for significant transmission projects proposed for the NEM. The overall objective is to protect consumers from paying more than necessary for their electricity by determining the most economically efficient and technically feasible investment option to address an identified need. The RIT-T framework provides a transparent decision-making process to ensure network planners make prudent investments on behalf of electricity consumers who ultimately fund the projects.

A RIT-T can be likened to a business case for any project or venture. Underpinned by the ISP framework, credible options are ranked according to their technical and economic merits, to determine the preferred option that best meets the need and timeframes and delivers the highest net market benefits to all those who produce, consume and transport electricity in the NEM.

The VNI West RIT-T timeline

The RIT-T process is defined in the NER. It requires network planners considering significant investment in new transmission infrastructure to conduct extensive market modelling and technical consultation in three phases:

1. Project Specification Consultation Report (PSCR) – the [VNI West PSCR](#) was published December 2019. A PSCR seeks feedback and advice on the identified need for new transmission infrastructure.
2. Project Assessment Draft Report (PADR) – the VNI West PADR is to be published by 31 August 2022. The PADR identifies and seeks feedback on the draft preferred infrastructure investment option.
3. Project Assessment Conclusion Report (PACR) – the VNI West PACR is to be published by early 2023. The PACR concludes on the final preferred

infrastructure investment option to deliver the highest net market benefits for consumers, and outlines an intended course of action.

AEMO and Transgrid have also published [two Project Updates](#) since the PSCR (March 2021 and December 2021) to update stakeholders on the RIT-T progress and changed reporting timelines.

The VNI West RIT-T under the Actionable ISP Framework

As mentioned above, VNI West is a staged actionable ISP Project. If validated through the RIT-T, the project would be undertaken in two stages, providing the flexibility to adapt project delivery to future uncertainties, while continuing to provide consumers with confidence that projects are beneficial before proceeding with the full investment. Stage 1 would involve undertaking early works such as community consultation, environmental assessments, route development and technical design. These studies would provide additional information, providing greater rigour in the decision as to whether the net market benefits are sufficient to proceed with Implementation (Stage 2).

As an actionable project, the RIT-T assessment will be undertaken using the Australian Energy Regulator's (AER's) Guidelines mentioned above. This framework streamlines the VNI West RIT-T process to reflect the increasing need for timely and responsive interventions in a period of significant change. Key changes to the RIT-T parameters under this framework are set out in the latest ISP published in December 2021 and include:

- The RIT-T assessment is focused on:
 - The ISP candidate option: a new transmission network from Western Victoria to Dinawan¹ in New South Wales via Bendigo and Kerang (see figure), and
 - Credible non-network options.

¹¹ For the purposes of the RIT-T, costs also include those associated with upgrading the capacity of Project Energy Connect's Dinawan to Wagga Wagga section from 330 kV to 500 kV including additional infrastructure at Wagga Wagga to connect at this higher voltage.



Modelling is to assume the Optimal Development Path conditions apply as stated in the ISP, and is to use the inputs and assumptions from AEMO's latest Inputs, Assumptions and Scenarios Report ([IASR](#)), which was developed in collaboration with a broad range of industry participants, governments and consumer representatives.

The assessment will consider three scenarios used in the ISP (*Progressive Change*, *Step Change*, and *Hydrogen Superpower*), each assuming different environments and installation dates.

What can be assessed in the VNI West RIT-T

The matters that can and cannot be considered in the RIT-T are set out in the AER's guidelines mentioned above. These guidelines reflect the objective of protecting consumers from paying more than necessary for their electricity, and maximising the net economic benefit in the long-term interest of consumers.

Specifically, the RIT-T guidelines require consideration of the technical, cost, and time parameters of credible options.

There are critical social, safety, environmental, amenity and cultural matters that need to be considered when planning and constructing infrastructure projects. Should the economic and technical benefits of VNI West be validated through the RIT-T process, social and environmental impacts will be assessed in detail as part of the federal, New South Wales and Victorian planning and environmental approvals processes.

Similarly, while VNI West would likely stimulate broader economic and social benefits, including increased jobs, training, economic activity and investment in the regions, these are not part of the benefits that are able to be considered through the RIT-T assessment.

About AEMO and Transgrid

As the legislated transmission planning bodies for their respective jurisdictions, AEMO (Victoria) and Transgrid (New South Wales) are jointly undertaking the VNI West RIT-T.

AEMO has a broader role as the independent power system and energy market operator, and national transmission planner, with primary responsibility for managing and maintaining energy system security for all Australians. In Victoria, AEMO is also responsible for planning and directing improvements on the shared Victorian electricity transmission network to ensure that it continues to meet power system security needs, and deliver safe and reliable electricity to consumers at the least cost.

Transgrid owns, operates and manages the high voltage electricity transmission network in New South Wales and the Australian Capital Territory, connecting generators, distributors and major end users.

The Transgrid network is the backbone of the NEM, enabling energy trading between Australia's three largest states along the east coast and supporting the competitive wholesale electricity market

Where can I find more information?

Please contact Transgrid if you are in New South Wales or AEMO if you are in Victoria:

- Transgrid (New South Wales) – email VNIW@transgrid.com.au, phone 1800 222 537, visit <http://www.transgrid.com.au/VNIW>
- AEMO (Victoria) – email VNIWestRITT@aemo.com.au, phone 1800 845 044, visit <https://aemo.com.au/initiatives/major-programs/victoria-to-new-south-wales-interconnector-west-regulatory-investment-test-for-transmission>