AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Appendix A5. Network Investments

June 2026

Appendix to the 2026 Integrated System Plan for the National Electricity Market

We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country; and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO is proud to have launched its Innovate Reconciliation Action Plan (RAP) in June 2026. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation – a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

Important notice

Purpose

This is Appendix A5 to the 2026 Integrated System Plan (ISP) which is available at https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp. AEMO publishes the 2026 ISP pursuant to its functions under section 49(2) of the National Electricity Law (which defines AEMO's functions as National Transmission Planner) and its supporting functions under the National Electricity Rules. This publication is generally based on information available to AEMO as at 20 April 2026 unless otherwise indicated.

Disclaimer

AEMO has made reasonable efforts to ensure the quality of the information in this publication but cannot guarantee that information, forecasts and assumptions are accurate, complete or appropriate for your circumstances.

Modelling work performed as part of preparing this publication inherently requires assumptions about future behaviours and market interactions, which may result in forecasts that deviate from future conditions. There will usually be differences between estimated and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material.

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Version control

Version	Release date	Changes
1.0	25/06/2026	Initial release.

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AEMO's *Integrated System Plan* (ISP) is a roadmap for the National Electricity Market's (NEM's) transition, and outlines an 'optimal development path' (ODP) for generation, storage and network investments to meet both consumer needs and government policies, at least cost, to 2050. The 2026 ISP reaffirms that renewable energy, connected by transmission and distribution, firmed with storage and backed up by gas, presents the least-cost way to supply secure and reliable electricity to consumers through to 2050, as coal plants retire and while meeting government policies.

This appendix explores transmission developments that are needed to connect the new and diverse generation and storage capacity to towns, cities and industry across the NEM. The transmission network brings electricity where it is needed, when it is needed, and improves the power system's resilience. Current network capacity is well utilised, and new projects will better share future resources between regions, allow REZs to transfer their energy to where it is needed in future, and maintain a secure and reliable power system.

In the 2026 ISP, approximately 6,000 km of new transmission is projected to be needed by 2050 under the *Step Change* scenario to extend the existing 44,000 km network. More than half this work is already well underway in committed and anticipated projects.

This Appendix A5 provides detail on the network investments in the ODP[1]. It sets out:

- **A5.1 Transmission development overview** –an overview of the network investments in the ODP.
- **A5.2 Committed and anticipated transmission projects** – including their timing, project status and technical details. These projects often have regulatory approval and AEMO assesses that they are highly likely to proceed.
- **A5.3 Actionable transmission projects** – both actionable ISP projects and projects that are actionable under a jurisdictional scheme[2] – including their optimal timing based on advice from the proponents, the earliest in-service date, costs and technical detail. All actionable projects are underway or should commence relevant regulatory processes immediately after publication of this 2026 ISP.
- **A5.4 Future ISP projects** – including their optimal timing for each scenario, costs and technical detail. These projects will deliver net market benefits to consumers but are not needed until later in the horizon. The timings for each scenario are indicative, as they will depend on which scenario unfolds in future. If a project is intended to proceed under the ISP framework, a regulatory investment test for transmission (RIT-T) is not yet required. Proponents may start planning and engaging with communities now, if appropriate, to ensure the projects optimise long-term benefits for consumers, and social licence can be built. In some circumstances, proponents may even voluntarily choose to progress with a RIT-T on a future ISP project, to more comprehensively assess the potential benefits.
- **A5.5 Distribution projects** – including their optimal timing under each scenario, costs and technical detail. These projects support efficient connection of utility-scale generation and storage to the distribution network and improve overall system outcomes.

[1] The outcomes presented in this appendix are based on the ODP, which is CDP4 described in Appendix A6.

[2] The 2026 ISP may identify a project as an "Actionable New South Wales", "Actionable Queensland" or "Actionable Victoria" rather than an "Actionable ISP" project. This terminology means that these projects are expected to progress under the relevant jurisdictional framework – the *Electricity Infrastructure Investment Act 2020* (NSW), the *Energy (Infrastructure Facilitation) Act 2024* (Qld) or the *National Electricity (Victoria) Act 2005* provisions underpinning the Victorian Transmission Investment Framework – rather than the framework for actionable ISP projects in the National Electricity Rules (NER).

Key changes from the Draft 2026 ISP[3]

One anticipated project from the Draft 2026 ISP has achieved committed status: Hunter-Central Coast REZ Network Infrastructure project has been classified as committed for the final 2026 ISP.

Two actionable projects from the Draft 2026 ISP have been modified:

- **New England Renewable Energy Zone (REZ) Network Infrastructure Project** has been classified as anticipated and is now assumed to be underway for delivery in the ISP.
- **Victoria – New South Wales Interconnector West (VNI West)** now has the South West New South Wales REZ component classified as actionable New South Wales, assumed to progress under the *Electricity Infrastructure Investment Act 2020 (NSW),* while the interconnector scope of VNI West retains actionable ISP status and will progress under the National Electricity Rules (NER) framework.

Four new projects are now actionable:

- **Brisbane Area 275 kilovolts (kV) Reinforcement** is now an actionable ISP project. The upgrade is a small expansion of the network in South East Queensland to allow low-cost generation and storage to meet demand in central and northern Queensland. This project was previously assumed to proceed in the Draft 2026 ISP in line with Queensland Government policy. Following advice from Powerlink, the ISP's inputs that assumed this project would proceed have been revised, and the upgrade has been identified as optimal.
- **Central to North Queensland Reinforcement (Stage 1)** is now an actionable ISP project**.** This upgrade is also a smaller expansion of the network (previously expanded by the former future ISP project Queensland SuperGrid North) that improves the transfer capability between generation in Northern Queensland and load centres in Central Queensland and Southern Queensland. A larger expansion is considered as a future project (Central to North Queensland Reinforcement (Stage 2) project).
- **Central-West Orana REZ Expansion** has progressed from a future project to an actionable New South Wales project. In the final ISP, AEMO has refined its modelling of New South Wales REZ access rights to align with New South Wales government data. This project further expands the committed Central-West Orana REZ Network Infrastructure Project and allows more renewable generation to supply New South Wales load centres.
- **Tasmania REZ Expansion** (previously North West Tasmania REZ Expansion) has progressed from a future project (in the 2024 ISP) to an actionable ISP project. The identified need has broadened to support renewable generation development to meet the Tasmanian Renewable Energy Target following Project Marinus. The subsequent RIT-T should consider options to facilitate development of either the North West Tasmania REZ (selected in the final 2026 ISP) or the Central Highlands REZ (selected in the Draft 2026 ISP). The Second Tasmania REZ Expansion (previously Waddamana to Palmerston transfer capability upgrade project) within the Central Highlands REZ, previously identified in the 2024 ISP as actionable project, remains a viable option to meet this need, although it may not be the preferred solution.

[3]AEMO has published all inputs and assumptions in the 2026 ISP Inputs and Assumptions Workbook, including a change log of changes.

Three previously actionable projects are now future ISP projects:

- **Queensland – New South Wales Interconnector (QNI) Connect** is now a future ISP project. Updates to reduce assumed flexibility of Queensland coal generators and incorporate newly committed and anticipated batteries, meant that the identified need for QNI Connect was deferred almost a decade to the mid-2040s. The project is planned to connect into the New England REZ Network Infrastructure Project.
- **Northern Transmission Project** (previously known as the Mid-North South Australia REZ project) remains part of the ODP as a future ISP project. AEMO has revised its view on the most efficient timing for delivery based on updated assumptions regarding transmission costs, demand growth and generation and storage developments. AEMO's current assessment is that the efficient timing of the Northern Transmission Project (NTx), which is driven by the expected scale, location and timing of demand growth, is later than identified in previous ISPs. ElectraNet's recent NTx Project Assessment Draft Report (PADR) finds net benefits for consumers in the near term, and has considered resilience benefits. The NTx PADR also states that the 2024 ISP's actionable ISP candidate option for NTx is now "not commercially feasible", so the 2026 ISP has no longer considered this option. Given the project remains on the ODP and there is an active RIT-T underway, AEMO considers ElectraNet should conclude the RIT-T. This will allow further assessment of local factors, system resilience, option value, future load development, and additional credible options. Continuing community engagement may also help to narrow the corridor and reduce uncertainty for affected communities, while ensuring community considerations are reflected in future planning and decision-making. Stopping and restarting engagement can be disruptive, may erode trust, and could make it more difficult to build and maintain social licence for the project over time.
- **Second Tasmania REZ Expansion** (previously actionable) has been replaced by a newly actionable Tasmania REZ Expansion. With a broader scope, the new project will explore a wider range of options to reduce costs to consumers by accessing capacity from the transmission upgrades in North West Tasmania, Central Highlands, or elsewhere in Tasmania. Under one scenario, network augmentation to support development in both North West Tasmania REZ and Central Highlands REZ is needed, making this second REZ expansion a future ISP project.

One previously future project is no longer on the ODP: Central Queensland to Southern Queensland Expansion (formerly Queensland SuperGrid South) is no longer needed at its original size, as an alternate connection arrangement for Borumba Pumped Hydro offers more value for consumers, and supports a more efficient dispatch from Borumba Pumped Hydro.

One actionable project from the Draft 2026 ISP has been modified: Sydney Ring South has been adjusted, with both the power flow control option and the 500 kV option now identified as actionable, rather than power flow control alone, addressing an identified need for additional capacity to supply the Sydney, Newcastle and Wollongong load centres. The 500 kV option had been identified as a future ISP project in the Draft 2026 ISP.

One future ISP project was not previously on the ODP: Central to North Queensland Reinforcement (Stage 2) is now identified to allow efficient access to least-cost generation and storage from the north of Queensland.

One distribution project was not previously on the ODP: Hunter-Central Coast REZ Expansion, needed to support cost-effective connection of utility-scale generation, is newly identified as a result of some scope and size changes and in response to allocation of committed, anticipated and projected generation and storage developments in the final ISP.

A5.1 Transmission development overview

The development path proposed by AEMO as the ODP in the ISP includes a set of network investments which are coordinated and integrated with the projected development of new generation, storage and consumer energy resources (CER), to deliver the best outcomes for consumers across a range of scenarios and sensitivities. These network investments are categorised as:

- **flow path augmentations** – upgrades to the portion of the transmission network used to transport significant amounts of electricity across the backbone of the interconnected network to load centres, or
- **REZ expansions** – expansion of the network required to connect renewable generation in areas where clusters of large-scale renewable energy can be developed using economies of scale.

Figure 1 provides a summary of these network investments. Depending on the individual circumstances of each transmission project, each project is classified as follows:

- **Committed or anticipated ISP projects** are transmission augmentation projects being developed and delivered by transmission network service providers (TNSPs) or relevant NEM jurisdictional bodies which are categorised as committed or anticipated after meeting a certain threshold[4]:
  - Committed projects meet five criteria relating to planning, construction, land, contracts and financing.
  - Anticipated projects are in the process of meeting at least three of the criteria for committed projects.
- **Actionable ISP projects** optimise benefits for consumers if progressed before the next ISP. When actioned, AEMO specifies an identified need that must be addressed to form part of the ODP[5]. For newly actionable ISP projects, the actionable window is two years (based on the period between ISPs), meaning the project is needed within two years of its earliest in-service date. The window is longer for projects that have previously been actionable, reflecting the progress that has been made and the disruption to delivery, and costs incurred for work that may not be able to be reused, if the project is paused and then reinstated only a few years later. Project proponents are required to begin newly actionable ISP projects with the release of a final ISP, including commencing a RIT-T.
- **Actionable jurisdictional projects:**
  - **Actionable New South Wales projects** will proceed under the framework in the *Electricity Infrastructure Investment Act 2020* (NSW)[6].
  - **Actionable Queensland projects** will proceed under the framework in the *Energy (Infrastructure Facilitation) Act 2024* (Qld)[7].
  - **Actionable Victoria projects** will proceed under the Victorian Transmission Investment Framework[8] supported by the *National Electricity (Victoria) Act 2005* (Vic)[9].

[4] Further details about the criteria for committed and anticipated project status are in the AER's RIT-T and cost benefit analysis guidelines, and are also summarised in AEMO's Transmission Augmentation Information page.

[5] NER Chapter 10.

[6] See https://legislation.nsw.gov.au/view/html/inforce/current/act-2020-044.

[7] At https://www.legislation.qld.gov.au/view/html/asmade/act-2024-015. This is the retitled *Energy (Renewable Transformation and Jobs) Act 2024.*

[8] See https://engage.vic.gov.au/victorian-transmission-investment-framework.

[9] At https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/037.

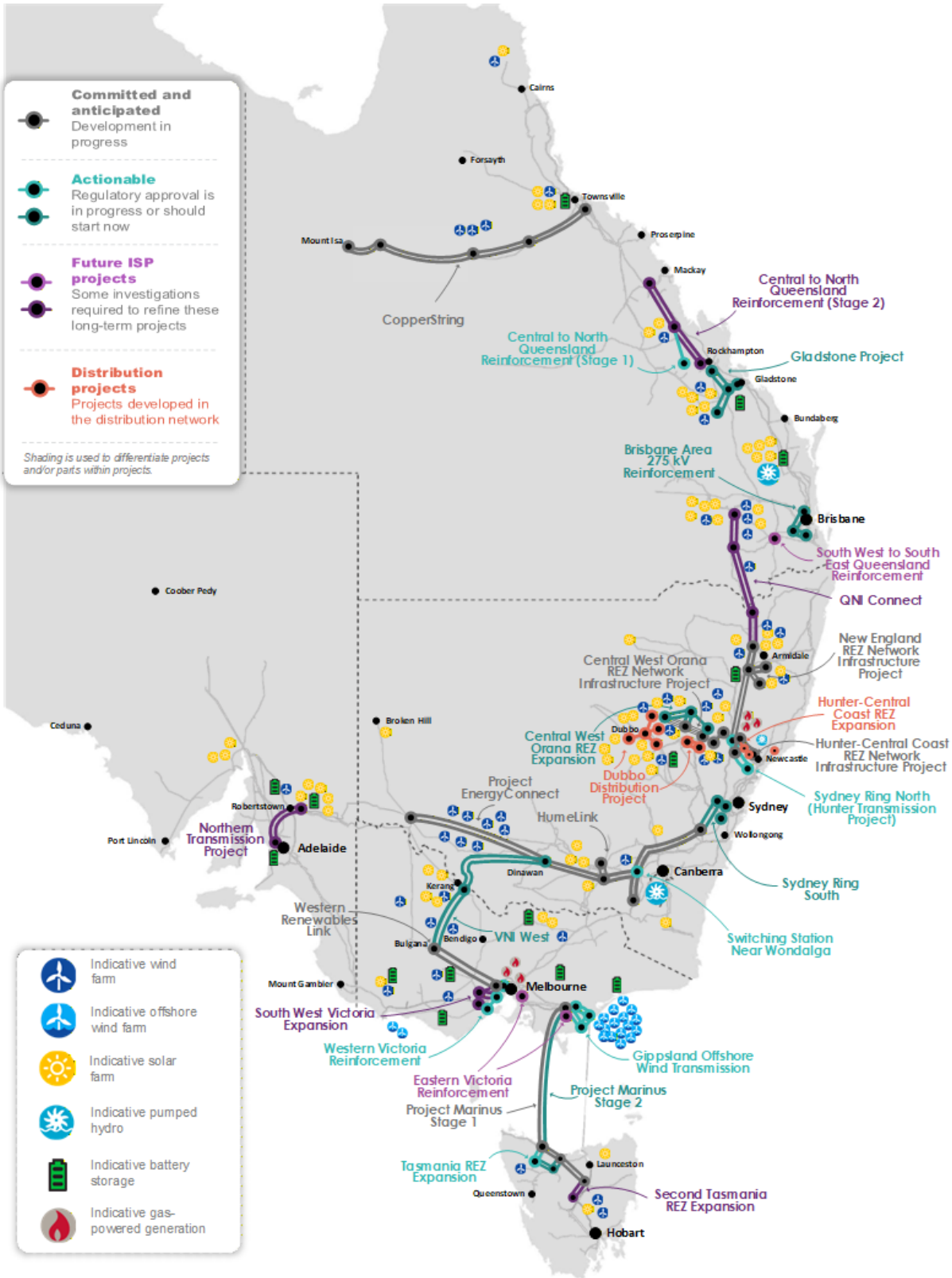
- **Future ISP projects** are transmission projects (or non-network options) that each address an identified need in the ISP, are part of the ODP, and are projected to be actionable in the future under at least one scenario.

In this 2026 ISP, there are 12 actionable projects, including five that are actionable under jurisdictional frameworks (see Section A5.3). There are seven future ISP projects needed in Step Change or with an ongoing RIT-T (Section A5.4).

In preparing the ISP, AEMO has consulted with network planners through joint planning and given due regard to the transmission annual planning reports. AEMO includes consultation on non-network options as part of the annual *Inputs, Assumptions and Scenarios Report* (IASR) consultation process, and is calling for submissions on non-network options on the three newly actionable ISP projects identified in this 2026 ISP[10].

[10] For details on the call for submissions on non-network options for Central to North Queensland Reinforcement (Stage 1), Tasmania REZ Expansion, and Brisbane Area 275 kV Reinforcement, please refer to https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2026-integrated-system-plan-isp/non-network-options-consultations. For the other newly-identified actionable project, Switching Station Near Wondalga, AEMO already called for non-network options in response to the Draft 2026 ISP.

Figure 1 Transmission projects in the 2026 ISP optimal development path



This map shows indicative new generation and storage in 2040, and transmission projects that include new transmission lines, increase capacity by 400MW or more, are required in *Step Change*, or have a regulatory test for transmission (RIT-T) underway. Transmission projects recently commissioned (for example, sections of Project EnergyConnect) are represented as thin light grey lines, consistent with the depiction of the existing network.

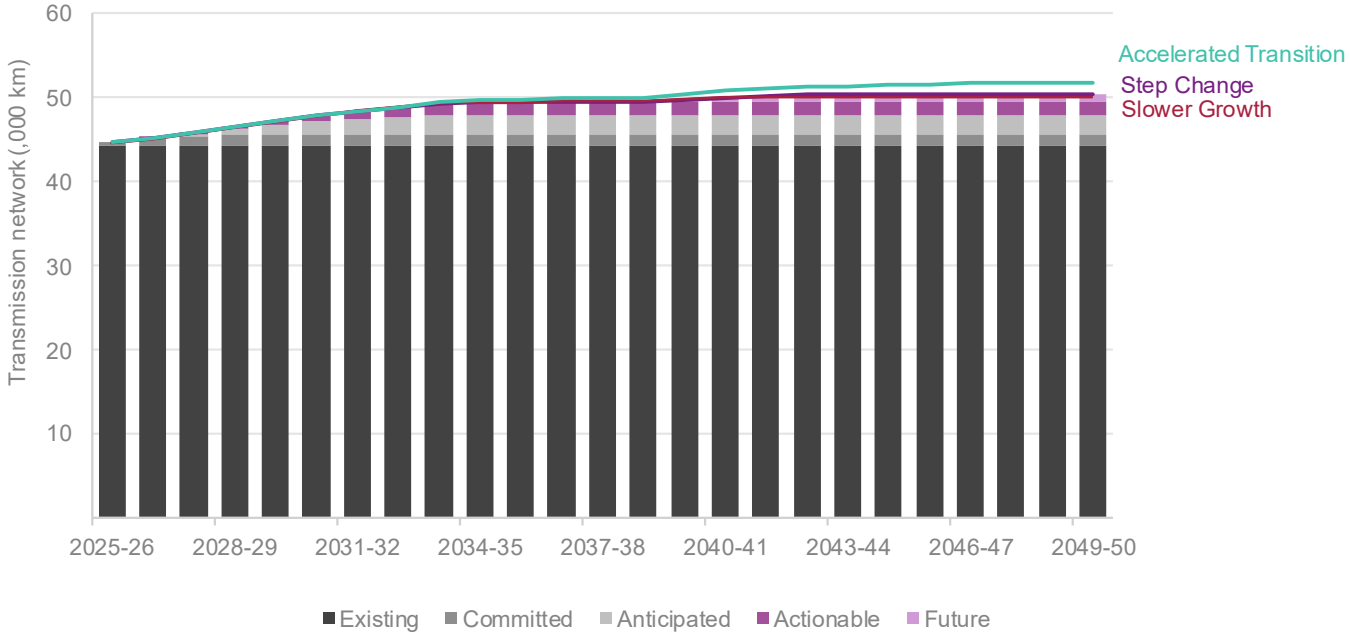
A5.1.1 Transmission development

The ISP identifies approximately between 5,600 km and 7,700 km of new transmission network investment across the three scenarios required to connect new generation and storage opportunities to demand centres through REZ and Flow Path transmission assets. **Figure 2** highlights the new network investments required per year in the *Step Change* scenario. Under this scenario, approximately 6,000 km of new transmission lines is required over the full ISP horizon. More than half this work is already well underway in committed and anticipated projects.

The overall cost of transmission in the ODP has been reduced. Although per kilometre capital costs are higher and there are more transmission projects, the overall length of transmission is about 1,435 km less under *Step Change* and some projects use less equipment. This, combined with the progression of some transmission projects to 'anticipated', reduces the required actionable and future transmission build by around 50%. These factors outweigh the higher per kilometre costs and the increased number of transmission projects.

The *Step Change* transmission build shows a reduction in total network build over the ISP horizon compared to previous reports. However, consistent with the Draft 2026 ISP, the 2026 ISP recommends over 5,000 km of transmission build is required in the next decade before tapering off in the latter stages of the horizon.

Figure 2 New transmission network investments required in the least-cost development path



Note: project line lengths are shown assuming a three-year construction period prior to the in-service date, with line kilometres per year distributed evenly over the construction period.

By 2050, the 2026 ISP *Step Change* scenario forecasts in total 6,046 km of additional transmission (7,483 km was forecast in the 2024 ISP). This is comprised of (and compared to the 2024 ISP *Step Change* scenario):

- 1,312 km of committed projects (up from 736 km):
  - Project Energy Connect Stage 1 progressed to commissioned: -165 km (200 km already commissioned).
  - Project Energy Connect total length has been revised from 936 km to 900 km: -36 km.
  - HumeLink, Central-West Orana REZ Network Infrastructure Project, Hunter-Central Coast REZ Network Infrastructure Project progressed to committed: +777 km.

- 2,196 km of anticipated projects (up from 1,360 km):
  - Central-West Orana REZ Network Infrastructure Project progressed to committed: -330 km.
  - New England REZ Network Infrastructure Project and Project Marinus Stage 1 progressed from actionable to anticipated: +1,166 km.
- 1,662 km of actionable projects (down from 3,675 km):
  - New England REZ Network Infrastructure Project (NIP)[11], Project Marinus Stage 1, Hunter-Central Coast REZ Network Infrastructure Project [12] progressed to anticipated: -996 km.
  - HumeLink progressed from actionable to committed: -365 km.
  - Sydney Ring South 500 kV option, Central-West Orana REZ Expansion, Gippsland Offshore Wind Transmission Project, Brisbane Area 275 kV Reinforcement have progressed to being actionable: +427 km.
  - QNI Connect, Second Tasmania REZ Expansion (previously Waddamana to Palmerston transfer capability upgrade), and Northern Transmission Project (previously Mid North South Australia REZ expansion) are deferred to future projects: -644 km.
  - Queensland SuperGrid South is no longer on the ODP: -492 km.
  - Minor scope revisions affecting transmission lengths to other previously actionable projects: +57 km.
- 876 km of future projects (down from 1,712 km).
- 655 km of commissioned projects (up from 490 km in the 2024 ISP) are excluded from the total 6,046 km length.

In addition to the transmission network required, between 1,200 km and 3,400 km of connection assets are required across the three scenarios to connect the generation and storage identified in this 2026 ISP to the transmission network. Under the *Step Change* scenario, approximately 1,800 km of network connection assets are required across the full ISP modelling horizon.

Generator connection assets account for the transmission infrastructure required to connect generation or storage to the shared transmission system. The proximity of the generation to the transmission network is assumed to vary depending on the generator technology. Due to resource location, wind and solar will often be located 5-10 km from the existing network, or assumed network developed as part of a REZ. Stand-alone storage (that is, grid-scale storage not co-located with generation) tends to be located in closer proximity to the network. More information on generator connection assets is in Section 6 of the 2025 *Electricity Network Options Report*[13].

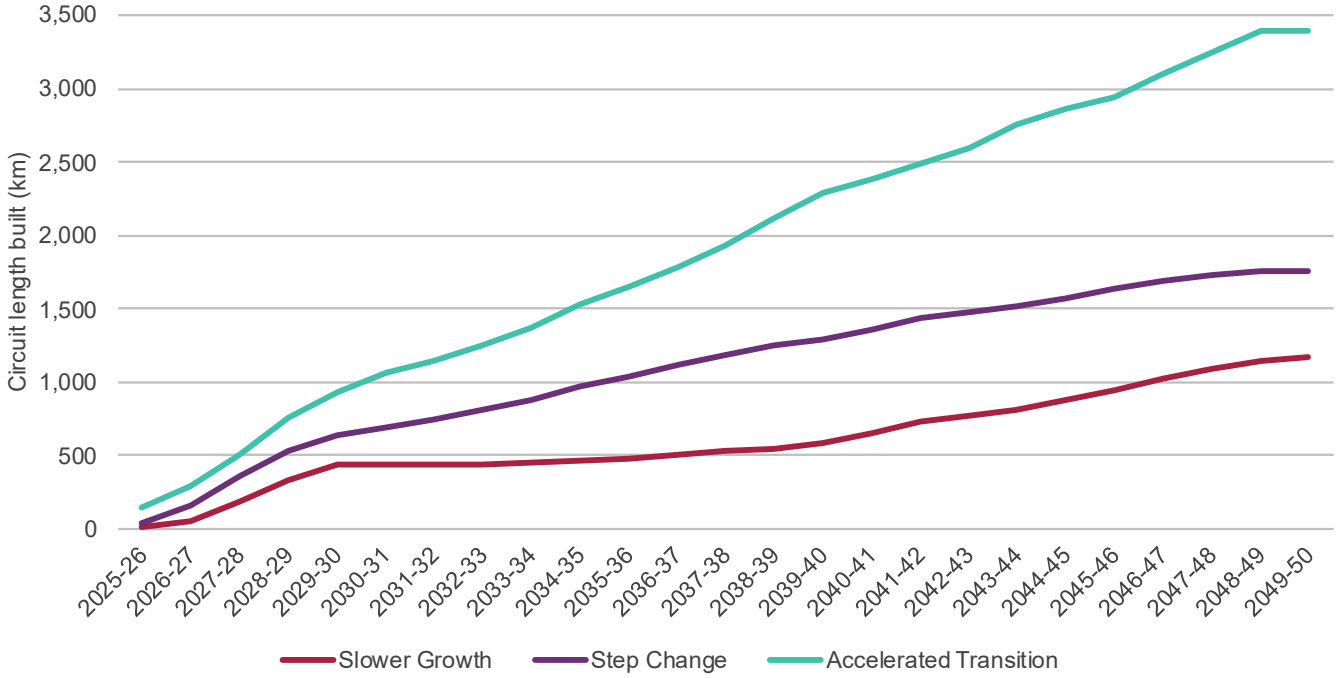
Figure 3 highlights the cumulative length of connection assets required per year across all scenarios. Approximately 1,800 km of connection assets are required under the *Step Change* scenario by 2049-50, bringing the total network investment required under this scenario to approximately 7,800 km.

[11] Since the 2024 ISP, the New England REZ NIP scope has been revised, including extending to Northern Hub with an additional 170 km.

[12] Since the 2024 ISP, the Hunter-Central Coast REZ NIP scope has changed from a switching station option to a sub-transmission line option with an additional 82 km.

[13] At https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/final/2025-electricity-network-options-report.pdf?rev=7fd2059752bd41eba55184df4e389e1e&sc_lang=en.

Figure 3 New network required to connect generation to the main transmission network



A5.1.2 Preparatory activities

Preparatory activities are activities to design and investigate the costs and benefits of actionable ISP projects, future ISP projects and REZ stages (as applicable)[14], including:

(a) *detailed engineering design,*

(b) route selection and easement assessment work,

(c) cost estimation based on engineering design and route selection,

(d) preliminary assessment of environmental and planning approvals, and

(e) engagement with stakeholders who are reasonably expected to be affected by the development of the actionable ISP project, future ISP project, or project within a REZ stage (including local landowners, local council, local community members, local environmental groups and traditional owners) in accordance with the community engagement expectations[15].

The ISP may specify whether preparatory activities must be carried out for future ISP projects and the timeframes for carrying out those activities. For all actionable ISP projects, relevant TNSPs must commence preparatory activities as soon as practicable (if not yet already commenced)[16].

AEMO has not triggered preparatory activities for any of the future ISP projects identified in the 2026 ISP.

[14] These terms are defined in NER 5.10.2 and Chapter 10, at https://www.aemc.gov.au/regulation/energy-rules/national-electricity-rules.

[15] Preparatory activities and community engagement expectations are both defined in NER 5.10.2.

[16] NER 5.22.6(c) and (d).

A5.1.3 Transmission costs

Since the 2024 ISP, AEMO has updated its Transmission Cost Database, to ensure that transmission project costs reflect the recent supply chain issues and the impact of inflation (both economy-wide and transmission asset-specific). Transmission costs have risen, particularly for overhead lines and for previously actionable projects under consideration by project proponents.

The 2026 ISP has re-visited all transmission network projects previously identified as needing to proceed, with the exception of projects that have advanced to anticipated or committed status, seeking to ensure that overall benefits for consumers are optimised.

After accounting for inflation, transmission cost estimates are markedly increased from equivalent estimates considered as inputs to the 2024 ISP, approximately 25% to 55% higher (in real terms) for overhead lines, and as much as nearly 100% higher in some cases. Key cost increase drivers are sustained supply chain pressures on materials, equipment and workforce, scope revision, and market competition driven by a high number of concurrent projects under development, as well as project complexity, social licence and additional contracting costs.

AEMO expects that transmission project costs will continue to increase beyond economic inflation while supply chains continue to adapt. For more information, refer to the 2025 *Electricity Network Options Report*[17].

[17] At https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/final/2025-electricity-network-options-report.pdf?rev=7fd2059752bd41eba55184df4e389e1e&sc_lang=en.

A5.2 Committed and anticipated projects

AEMO includes all committed and anticipated transmission projects in all scenarios. The projects are modelled as being completed at the time advised by the proponent and this does not vary across scenarios. The *ISP Methodology*[18] states that AEMO includes all committed and anticipated generation and transmission projects in all future states of the world, in accordance with the Australian Energy Regulator's (AER's) *Cost Benefit Analysis Guidelines*[19]. This means these projects are assumed to proceed and are not considered in the ISP cost benefit analysis.

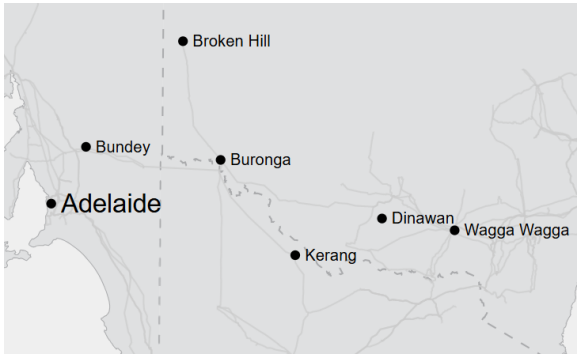
AEMO has modelled four committed transmission projects and four anticipated projects[20]. The details of these projects are discussed below.

[18] AEMO, 2025 *ISP Methodology*, at https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2026-isp-methodology/isp-methodology-june-2025.pdf?rev=e88a1f1bbeef447ba27692b785069a0a&sc_lang=en.

[19] At https://www.aer.gov.au/industry/registers/resources/guidelines/cost-benefit-analysis-guidelines/current-cba-guidelines.

[20] Status of the projects is informed by the December 2025 Transmission Augmentation Information page, at https://www.aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/transmission-augmentation-information/nem-transmission-augmentation-information-december-2025.xlsx?rev=379583e469734e8a9b1477fb14dddcea&sc_lang=en.

A5.2.1 Project EnergyConnect Stage 2

Summary	
Project EnergyConnect is a new 330 kV interconnector between New South Wales and South Australia. Project EnergyConnect is under construction and when completed the interconnector runs from Robertstown in South Australia to near Wagga Wagga in New South Wales, via the northernmost section of the transmission network in Victoria. It traverses between east and west, linking the REZs of Riverland and South West New South Wales, providing additional hosting capacity in these REZs. Project EnergyConnect has been split into two stages. Stage 1 connecting Robertstown (via Bundey) to Buronga was completed in late 2024 providing an initial transfer capability of 150 megawatts (MW) between New South Wales and South Australia. Stage 2 described below is currently underway[21].	
Existing network capability	
Project EnergyConnect Stage 1 is completed. The maximum transfer capability from SNSW to CSA is 150 MW in both directions. After the completion of Project EnergyConnect Stage 2, the Southern New South Wales – Central South Australia interconnector is expected to increase to 800 MW in both directions.	

Delivery scope

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
Stage 2: • Second 330 kV circuit closed on the Bundey–Buronga 330 kV double-circuit line (including 1 x 60 megavolt amperes reactive [MVAr] line reactor at Bundey and 1 x 50 MVAr line reactor at Buronga of each circuit). • A new 330 kV double-circuit line from Dinawan to Buronga (including 60 MVAr line reactors at both ends of each circuit). • A new 500 kV double-circuit line from Dinawan to Wagga Wagga operating at 330 kV (including 50 MVAr line reactors at the Dinawan end on each circuit). • A new 330 kV switching station at Dinawan. • Additional 4 x 200 megavolt amperes (MVA) 330 kV phase shifting transformers at Buronga. • Additional 2 x 200 MVA 330/220 kV transformers at Buronga.	Committed	**Stage 2:** 650 MW In both directions of NSW-SA 100 MW In both directions of VIC-SA REZ network limit increase: S2: 800 MW N5: 800 MW SWNSW1: 400	Committed project	**Stage 2**: November 2027		

[21] See Transgrid's website for project updates https://www.transgrid.com.au/projects-innovation/energyconnect/.

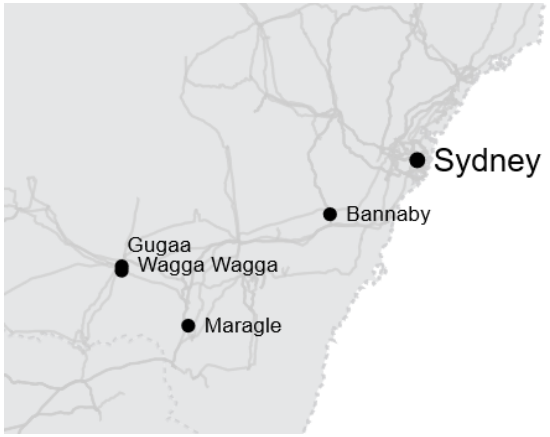
• An additional 1 x 100 MVA 330 kV connected synchronous condenser at Buronga. • New 2 x 100 MVA 330 kV connected synchronous condenser at Dinawan. • New 2 x 52 MVAr 330 kV capacitor banks at Dinawan. • A special protection scheme to detect and manage the loss of either of the alternating current (AC) interconnectors connecting to South Australia.				

A5.2.2 HumeLink

Summary

The transmission network between Southern New South Wales (SNSW) and Central New South Wales (CNSW) provides access for the hydroelectric generation in the Snowy mountains, renewable generation in SNSW, and import from Victoria and South Australia to New South Wales major load centres.

HumeLink[22] is a committed project that reinforces the southern New South Wales network, connecting the Snowy Mountains Hydroelectric Scheme and Project EnergyConnect to Bannaby, and is expected to be completed by December 2027. AEMO completed a feedback loop assessment on the project in December 2023[23] and the AER made a contingent project decision for construction of the project in August 2024[24].



Existing network capability

The maximum transfer capability from SNSW to CNSW is 2,700 MW at peak demand and summer typical and 2,950 MW winter reference periods. The maximum transfer capability is limited by thermal capacity of Collector – Marulan 330 kV lines following a credible contingency.

The maximum transfer capability from CNSW to SNSW is 2,320 MW at peak demand and summer typical and 2,590 MW at winter reference periods. The maximum transfer capability is limited by thermal capacity of Yass – Canberra or Marulan – Yass or Gullen Range – Bannaby 330 kV lines following a credible contingency.

The Waratah Super Battery (WSB) with System Integrity Protection Scheme (SIPS) increases the transfer capacity between SNSW to CNSW when paired with selected generators. When enabled during the five-year contract period, the SNSW to CNSW transfer capability is expected to increase by 250 MW in one direction only.

After HumeLink is in service, the transfer capability between SNSW and CNSW will increase by 2,200 MW in both directions.

Delivery scope

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
• New Gugaa 500/330 kV substation. • A new 500 kV double-circuit line between Gugaa and Wagga Wagga initially operated at 330 kV. • Three new 500 kV transmission circuits between: – Maragle and Bannaby 500 kV substations.	Committed	Forward: 2,200 Reverse: 2,200 REZ: N5: 400[25] N6 + N7: 2,200	Committed project	December 2027		

[22] See Transgrid's website for project updates https://www.transgrid.com.au/projects-innovation/humelink/.

[23] See https://www.aemo.com.au/-/media/files/major-publications/isp/2023/integrated-system-plan-feedback-loop-notice---humelink.pdf?rev=58188c7541134b11b8b40e3c81cd9f12&sc_lang=en.

[24] See https://www.aer.gov.au/industry/networks/contingent-projects/transgrid-humelink-contingent-project-stage-2.

[25] Transgrid has advised the additional capacity to accommodate South West New South Wales REZ generation is limited by the rating of conductors between Wagga Wagga – Gugaa built for HumeLink. This reduces the previous value from 800 MW to 400 MW.

– Maragle and Gugaa 500 kV substations. – Gugaa and Bannaby 500 kV substations. • Three 500/330 kV 1,500 MVA transformers at Maragle substation. • Two 500/330 kV 1,500 MVA transformers at new Gugaa substation. • 500 kV Line shunt reactors at the ends of Maragle – Bannaby, Maragle – Gugaa and Gugaa – Bannaby 500 kV lines. • Augmenting the substations at Maragle, Wagga Wagga and Bannaby to accommodate the additional transmission lines and transformers. Pre-requisite: None				

A5.2.3 Hunter-Central Coast REZ Network Infrastructure project

Summary

The Hunter-Central Coast (HCC) REZ[26] has been identified to assist industries to decarbonise and access renewable energy with a mix of solar, onshore and offshore wind energy projects.

The REZ was declared on 9 December 2022 with 1,000 MW of intended network capacity[27] and the New South Wales Energy Corporation (EnergyCo) has been appointed the Infrastructure Planner enabled by the *Electricity Infrastructure Investment Act 2020*.

The retirement of coal-fired power stations, re-purposing of mining land and the growth of offshore wind will likely present increased opportunities for renewable energy and storage projects within the Hunter and Central Coast regions.

This project was identified as an actionable New South Wales project in the 2024 ISP, and is now proceeding as a committed project.

EnergyCo has appointed Ausgrid as the network operator (Commitment Deed executed December 2024) to deliver the HCC REZ 1 GW network transfer capacity. The scope comprises of electricity distribution network upgrades between Kurri substation and Muswellbrook bulk supply point in three portions. In April 2025, the Consumer Trustee authorised Ausgrid to carry out the HCC REZ network infrastructure project (RNIP)[28].

Existing network capability

EnergyCo has announced this REZ will supply both CNSW and Sydney, Newcastle and Wollongong (SNW) via Ausgrid's sub-transmission network (132 kV network), with the network normally open, and has said this project will support up to 1,800 MW of generation and storage projects[29].

The upstream REZ transmission limit from Muswellbrook 330 kV substation is 400 MW, which assumes high southbound flows from Northern New South Wales (NNSW) to CNSW at peak demand.

Delivery scope

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
Portion 1: Upper Hunter Secondary Systems Modernisation: • Upgrade secondary systems in the Upper Hunter to enable bidirectional power flow. This includes remote end secondary systems works that will upgrade protection to duplicate differential line schemes on existing 132 kV lines between Muswellbrook bulk supply point, Muswellbrook substation and Mitchell line substation.	Committed	600[30]	Committed project	July 2028		

[26] See https://www.energyco.nsw.gov.au/our-projects/hunter-central-coast-rez.

[27] See Government Gazette of the State of New South Wales No. 569 of Friday 9 December 2022, https://gazette.nsw.gov.au/gazette/2022/12/2022-569.pdf.

[28] See https://www.aer.gov.au/about/strategic-initiatives/renewable-energy-zones/revenue-determinations-nsw-rez/hunter-central-coast-rez.

[29] See https://www.energyco.nsw.gov.au/sites/default/files/2025-04/HCC%20REZ%20IPRR%20-%20Public%20Report%20-%20For%20CEO%20Approval%20-%2030%20April%202025.pdf.

[30] This additional capacity has been reduced from 1,000 MW to 600 MW to correct the REZ transmission capacity from being double-counted.

Portion 2: Muswellbrook Network Rearrangement and Singleton to Kurri 132 kV link: • Construction of a new sub-transmission switching substation at Muswellbrook (Sandy Creek Sub-transmission Switching Station) to enable new 132 kV generator connections. • Rearrange the sub-transmission network at Muswellbrook sub-transmission substation and construct a 132 kV link from Singleton to Kurri. • Install a fibre communications link across the Hawkesbury River from Berowra to Somersby. Portion 3: New 132 kV switching station and Eastern Hub to Singleton 132 kV link: • Construction of a new 132 kV sub-transmission switching substation at the north-eastern bank of Lake Liddell (Antiene Sub-transmission Switching Station) to provide a point of connection for large scale generation/storage options in the Upper Hunter Region. • Re-terminate the portion 2 built Singleton to Kurri line as Antiene Sub-transmission Switching Station to Kurri. • Construct a new 132 kV sub-transmission line between Antiene Sub-transmission Switching Station to Kurri. • Augmentations to the Rothbury zone substation. Pre-requisite: None				

A5.2.4 Central-West Orana REZ Network Infrastructure Project

Summary	
Central-West Orana REZ has been identified by the New South Wales Government as the state's first REZ. The Central-West Orana REZ was declared on 5 November 2021 under the *Electricity Infrastructure Investment Act 2020* (NSW)[31]. The declaration was amended in December 2023 to increase the intended network capacity. The Central-West Orana REZ has an intended 6,000 MW[32] of additional network capacity, with an initial stage of 4,500 MW to be delivered from 2027-28, to be constructed in the Central-West New South Wales region of the state. The declaration identifies that EnergyCo will be the infrastructure planner responsible for coordinating the development of the REZ. EnergyCo undertook a competitive assessment to select a Network Operator for the Project. ACEREZ Partnership (ACEREZ), a consortium comprising Acciona, Cobra and Endeavour Energy, was the successful tenderer. In June 2024, AEMO Services (the Consumer Trustee) authorised ACEREZ to be the Network Operator for the Project under the *Electricity Infrastructure Investment Act 2020* (NSW). ACEREZ submitted a revenue proposal to the AER seeking to recover the costs established through the competitive assessment process for the Project[33]. In December 2024, the AER made a determination for the Project. In June 2025, the AER remade the determination for the project to reflect ACEREZ's adjustment proposal. The project to establish the Central-West Orana REZ is considered committed, with construction of this REZ having begun in June 2025[34] towards energisation in 2028. EnergyCo have awarded 7.15 GW of generation and storage projects under its access rights scheme with 7.7 GW as the current aggregate maximum capacity[35].	
Existing network capability	
The project to establish the Central-West Orana REZ is considered committed. The existing network capability is approximately 900 MW, which will increase by 4,500 MW once Central-West Orana REZ is established. Hunter Transmission Project 1.0 (CNSW-SNW Option 1) is required to address network constraints between CNSW and SNW to enable the increase in network capacity from 3,000 MW to 4,500 MW for the Central-West Orana REZ Transmission Project.	

[31] See https://www.energyco.nsw.gov.au/cwo-rez and Government Gazette of the State of New South Wales No 569, Friday 5 November 2021, https://gazette.nsw.gov.au/gazette/2021/11/2021-569.pdf.

[32] See Government Gazette of the State of New South Wales No 580, Friday 15 December 2023, https://gazette.nsw.gov.au/gazette/2023/12/2023-580.pdf.

[33] See https://www.aer.gov.au/industry/registers/determinations/main-central-west-orana-renewable-energy-zone-network-project-contestable.

[34] See https://www.energyco.nsw.gov.au/our-projects/central-west-orana-renewable-energy-zone/transmission-project.

[35] See https://www.energyco.nsw.gov.au/central-west-orana-access-scheme.

Delivery scope						
Description[36]	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
• New Merotherie 500/330 kV substation with 4 x 500/330/33 kV 1,500 MVA transformers. • New 330 kV Elong Elong switching stations. • New 500 kV Barigan Creek switching station. • 2 x 500 kV double-circuit lines from Barigan Creek to Merotherie with Quad Orange conductor. • 2 x 500 kV double-circuit lines and initially operated at 330 kV from Merotherie to Elong Elong with Quad Orange conductor. • 3 x 250 MVAr synchronous condensers at Elong Elong switching station. • 4 x 250 MVAr synchronous condensers at Merotherie substation. • Provision of switch bays for future generator connections (cost estimation is not required) • An additional 330 kV single-circuit line from Bayswater to Liddell. • An additional 330 kV single-circuit line from Mt Piper to Wallerawang. Note: possible expansion to Uungula/Burrendong is subject to a separate and future project authorisation process Pre-requisite: CNSW-SNW Option 1 when Central-West Orana REZ exceeds 3 GW.	Committed	4,500	Committed project	December 2028		

[36] The description of the scope is as per 2025 *Electricity Network Options Report*, at https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/final/2025-electricity-network-options-report.pdf?rev=7fd2059752bd41eba55184df4e389e1e&sc_lang=en.

A5.2.5 Western Renewables Link

Summary

Western Renewables Link (WRL) is a planned 500 kV double-circuit overhead electricity transmission line from Bulgana in western Victoria to Sydenham in Melbourne's north-west. The augmentation will alleviate constraints identified on the 220 kV network in Western Victoria. Addressing these network constraints from existing and committed large-scale renewable generation within the area, additional REZ capacity and future VRE development will be unlocked.

A RIT-T was completed in July 2019[37]. Minor transmission line augmentations, including wind monitoring and upgrading station limiting transmission plant, on the Red Cliffs to Wemen to Kerang to Bendigo, and Moorabool to Terang to Ballarat, 220 kV transmission lines, were completed in 2021 through AusNet Services' Network Capability Incentive Project Action Plan (NCIPAP).

In May 2023, WRL's scope and timing was augmented as part of the Victoria – New South Wales Interconnector West (VNI West) Project Assessment Conclusions Report (PACR)[38] and subsequent *National Electricity (Victoria) Act 2005* (NEVA) order[39]. Updated scope includes relocation of the North Ballarat terminal station to Bulgana and upgrade of the transmission line from north of Ballarat to Bulgana from 220 kV to 500 kV.

WRL will unlock renewable energy resources, reduce network congestion, and improve utilisation of existing assets in western parts of Victoria. The updated scope results in a higher capacity and harnesses 1,460 MW of renewable capacity rather than the original design of 600 MW.

This project is classified as an anticipated project and is expected to be completed in November 2029

Existing network capability

The existing network capability does not allow full dispatch of existing and committed renewable generation in Central Highlands and Western Victoria REZs at times of high generation output.

Delivery scope

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slow Change*	*Step Change*	*Accelerated Transition*
• A new 500 kV double-circuit transmission line from Sydenham Terminal Station to Bulgana Terminal Station with switched shunt line reactors at the end of each circuit (approximately 70 MVAr). • Extension of the 500 kV Sydenham Terminal Station by two breaker-and-a-half switched bays • Additional 100 MVAr at 500 kV switched bus reactor at Sydenham Terminal Station.	Anticipated	695 MW In both directions of Greater Melbourne and Geelong (MEL) - West and North Victoria (WNV)	Anticipated project	November 2029		

[37] See AEMO. Western Victoria Renewable Integration, at https://www.vicgrid.com.au/transmission-planning/regulatory-investment-tests-for-transmission/western-victoria-renewable-integration.

[38] See AEMO. VNI West PACR Volume 1. Athttps://www.vicgrid.com.au/transmission-planning/regulatory-investment-tests-for-transmission/victoria-to-new-south-wales-interconnector-west.

[39] See Victoria Government Gazette No. S 267 of Saturday 27 May 2023, at https://www.gazette.vic.gov.au/gazette/Gazettes2023/GG2023S267.pdf.

• Rerouting of the existing No. 1 Sydenham to South Morang and Sydenham to Keilor 500 kV transmission lines to terminate into new bays at Sydenham Terminal Station. • Construction of new 220 kV circuit breakers and a second 220 kV bus at Bulgana Terminal Station. • A new 500 kV switchyard at Bulgana Terminal Station with two new 500/220 kV 1,000 MVA transformers, transmission line realignment, site provisioning and line cut in works for the existing Bulgana to Horsham 220 kV transmission line and Crowlands to Bulgana 220 kV transmission line. • Cut-in, termination and switching of the existing Ballarat to Moorabool No. 2 220 kV transmission line at Elaine Terminal Station, forming Ballarat to Elaine No. 2 line and Elaine to Moorabool No. 2 line. • Re-alignment and switching of the existing Ballarat to Elaine transmission line and Elaine to Moorabool transmission lines at Elaine Terminal Station and renaming them to Ballarat to Elaine No. 3 line and Elaine to Moorabool No. 3 line. • Implementation of new Special Control Schemes and/or amend some existing ones at multiple stations. • Validation of the capabilities of the existing earthing systems at multiple stations and the connected 220 kV transmission lines optic ground wire and/or earth wire. • Minor augmentations at existing terminal stations impacted by the WRL works.		REZ: V2:310 MW		

A5.2.6 Project Marinus Stage 1

Summary

Marinus Link is a proposed 1,500 MW capacity undersea and underground electricity interconnection between Tasmania and Victoria delivered by Marinus Link Pty Ltd, which will be operating in parallel with the existing Basslink interconnector. It is proposed to be delivered as two 750 MW high voltage direct current (HVDC) developments between Burnie area in Tasmania and Latrobe Valley in Victoria.

This project also includes high voltage alternating current (HVAC) transmission network developments in Tasmania progressed by TasNetworks, referred to as the North West Transmission Developments (NWTD), to support the interconnector capacity to be provided by Marinus Link.

Collectively, these investments are referred to as Project Marinus.

Project Marinus was identified as an actionable ISP project in the 2022 ISP, and confirmed in the 2024 ISP. Marinus Link Pty Ltd and TasNetworks have completed a RIT-T for this network augmentation. The PACR[40], the third report of the RIT-T, was published in June 2021. This RIT-T analysis was updated in July 2025[41]. Project Marinus passed AEMO's feedback loop assessment in August 2025[42].

Project Marinus Stage 1 is now considered an anticipated project. On 1 August 2025, Tasmanian, Victorian and Australian governments confirmed a Final Investment Decision to proceed with Stage 1 of Project Marinus[43]. Stage 2 is re-assessed for actionability (see Section A5.3.12).

Existing network capability

The transfer capacity between Tasmania and South East Victoria is limited by the thermal capability of Basslink (HVDC system between Tasmania and Victoria).

Transfer capacity from Tasmania to South East Victoria is limited to 594 MW and from Victoria to Tasmania is limited to 478 MW at times of peak demand, summer typical and winter reference periods. Additionally, a seasonally variable daily energy limit of around 10,600 megawatt hours (MWh) per day is applied to maintain gross flows within allowable thermal ratings of the cable.

Additional network upgrades may also be required as part of the Tasmania REZ Expansion (see Section A5.3.6) to connect new generation and access the network upgrades associated with Project Marinus.

Delivery scope

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
Project Marinus Stage 1: • A 750 MW monopole HVDC link between Burnie area in Tasmania and Hazelwood area in Victoria.	Anticipated	Forward: 750 Reverse: 750[44]	Anticipated project	December 2030		

[40] TasNetworks. Project Marinus PACR. At https://www.marinuslink.com.au/wp-content/uploads/2021/06/Project-Marinus-RIT-T-PACR.pdf.

[41] Marinus Link. RIT-T update report – 2025, at https://www.marinuslink.com.au/rit-t-process/.

[42] See https://www.aemo.com.au/newsroom/news-updates/project-marinus-passes-feedback-loop-assessment.

[43] See https://www.recfit.tas.gov.au/what_is_recfit/major_investment_projects/project_marinus.

[44] The combined transfer limit from Victoria to Tasmania is 978 MW, and from Tasmania to Victoria 1,344 MW. This is based on an assumption that the largest single contingency in Tasmania is limited to 500 MW.

• A new 750 MW HVDC monopole converter station in Burnie area. • A new 750 MW HVDC monopole converter station in Hazelwood area. • A new 220 kV switching station at Heybridge adjacent to the converter station. • A new double-circuit 220 kV transmission line between Sheffield, Heybridge and Burnie. • A new 220 kV double-circuit line from Palmerston to Sheffield with decommissioning of the existing single-circuit line. • A new 500 kV connection from converter station in Hazelwood area. • Decommission existing Sheffield – Burnie 220 kV line. • Some enabling design, survey and civil works for Stage 2 HVDC are assumed to be included in Stage 1. Note: HVDC interconnector components are referred to as Marinus Link Stage 1. Pre-requisite: None				

A5.2.7 CopperString

Summary	
In 2023, the Queensland Government announced that it will deliver the roughly 840 km CopperString project[45]. CopperString will connect the North-West Minerals Province of Queensland to the NEM near Townsville. The project scope includes 330 kV transmission capacity between Townsville and Hughenden to unlock the renewable energy potential of the region. AEMO is now considering the CopperString project as an anticipated project after outcomes from joint planning with Powerlink and the Queensland Government. The project features in the Queensland Energy Roadmap[46,47].	
Existing network capability	
The project to establish CopperString is considered anticipated. As such, the existing network capability from the Q2 Hughenden Hub is assumed to be approximately 2,100 MW, incorporating the CopperString project (1,400 MW) as well as existing network capability (700 MW)[48] for peak demand, summer typical and winter reference conditions. For the 2026 ISP, only the section of CopperString between Townsville and Hughenden was modelled. The existing network at the North-West Mineral Province is islanded from the NEM. The NEM only extends as far west as Julia Creek and is mainly energised at 66 kV in that area. The existing network for this REZ was designed to support North-West Queensland load, rather than building for future generation projects. The REZ can potentially support much more generation with more transmission infrastructure.	

Delivery scope

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
• Establish a new 330 kV substation south of Townsville (North Queensland [NQ] 330 kV Substation). • Install 2 x 330/275 kV 1,500 MVA transformers at NQ 330 kV substation. • Establish a new NQ 275 kV substation. • Cut-in the Strathmore to Ross 275 kV double-circuit line to the NQ 275 kV substation. • Establish a new 330 kV substation at Hughenden with associated switchgear.	Anticipated	This option increases the network limit in Q2 by at least 1,400 MW. Generation from CopperString will compete with generation in Far North Queensland	Anticipated project	2032[49]		

[45] See further information for CopperString at https://statements.qld.gov.au/statements/97314.

[46] See further information for CopperString in the Queensland Energy Roadmap 2025 published in October 2025, at https://www.treasury.qld.gov.au/files/Queensland-Energy-Roadmap-2025-25-043.pdf.

[47] Queensland Investment Corporation (QIC) will deliver the Eastern Link of CopperString with major construction commencing by 2028 and commercial operations by 2032 (subject to approvals). QIC is beginning work to deliver the Western Link. In the immediate term, QIC will partner with the private sector to support local generation and storage solutions, enabling affordable and reliable energy for the North West Power System.

[48] The existing network capacity assumes the 275 kV line from Guybal Munjan to Kidston being delivered as part of the committed Kidston pumped hydro energy storage project.

[49] AEMO has modelled this project with an earliest in-service date of June 2031, as advised by Powerlink for the 2025 *Electricity Network Options Report*. The December 2025 edition of the NEM Transmission Augmentation Information reflects a revised in-service date of 2032.

• Establish a new 330 kV substation (mid-point between NQ 330 kV and Hughenden substations) with associated switchgear and bays. • A new 330 kV double-circuit transmission line from NQ 330 kV to Hughenden. • Associated static and dynamic reactive plant.		(FNQ) and NQ for the 275 kV capacity south of the NQ Substation.		

A5.2.8 New England REZ Network Infrastructure Project

Summary

New England REZ is located to the east of and along the existing QNI. The capacity of this REZ is supported by extensive NNSW-CNSW corridor network options which form part of the New England REZ Network Infrastructure Project.

This REZ has moderate to good wind and solar resources in close proximity to the 330 kV network. Interest in the area includes large scale solar and wind generation as well as pumped hydro generation.

The New England REZ was declared on 17 December 2021 under the *Electricity Infrastructure Investment Act 2020* (NSW) with an intended 8,000 MW[50] of additional transmission network capacity to be constructed in the New England region of the state. The declaration identifies that the New South Wales Energy Corporation (EnergyCo) will be the infrastructure planner responsible for coordinating the development of the REZ[50]. REZ design and community engagement is currently progressing[51].

The New England REZ Network Infrastructure Project includes proposed 500 kV and 330 kV transmission lines and substations between central and northern NSW to access increased renewable generation in northern New South Wales, as well as a 330 kV REZ extension. In the 2022 ISP and 2024 ISP, major augmentation of the CNSW-NNSW flow path was identified as an actionable New South Wales project (New England REZ Transmission Link) rather than an actionable ISP project.

New England REZ Network Infrastructure Project is now classified by AEMO as 'anticipated', based on information provided by the New South Wales Government[52], and is progressing under the *Electricity Infrastructure Investment Act 2020* (NSW). It has an expected delivery date of January 2034[53].

EnergyCo is progressing the competitive procurement process to appoint a network operator to design, build, finance, operate, and maintain new transmission infrastructure in the New England REZ[54]. EnergyCo has also commenced procurement for a development finance entity to support the project. In June 2024, the New England REZ Network Infrastructure Project was declared a Critical State Significant Infrastructure project by the New South Wales Minister for Planning and Public Spaces as it is considered "essential for the State for economic, environmental or social reasons".

EnergyCo has advised that this project (previously modelled in two parts) will now be completed in one part (CNSW-NNSW Option 1) by January 2034[55]. This project is expected to progress under the *Electricity Infrastructure Investment Act 2020* (NSW). The latest 2025 *Infrastructure Investment Objectives Report* modelling included New England REZ Network Infrastructure Project in the 20-year development pathway that best met New South Wales' legislated objectives for energy infrastructure.

[50] See Government Gazette of the State of New South Wales No 643 of Friday 17 December 2021, at https://gazette.legislation.nsw.gov.au/so/download.w3p?id=Gazette_2023_2023-580.pdfhttps://www.energyco.nsw.gov.au/sites/default/files/2025-06/new-england-rez-declaration-order-dec-2021.pdf.

[51] See EnergyCo website regarding New England REZ Network Infrastructure Project, at https://www.energyco.nsw.gov.au/ne-rez.

[52] See letter from Minister Sharpe regarding the New England REZ Network Infrastructure Project, athttps://www.aemo.com.au/-/media/files/major-publications/isp/2026/supporting-materials/2026-isp-ministerial-letter-new-england-rez.pdf.

[53] See AEMO's Transmission Augmentation Information page, at https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/transmission-augmentation-information.

[54] See New England REZ network operator procurement process, at https://www.energyco.nsw.gov.au/ne#network-operator-update.

[55] See AEMO's Transmission Augmentation Information page, at https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/transmission-augmentation-information.

Existing network capability						
The CNSW to NNSW maximum transfer capability is 910 MW at peak demand, summer typical and winter reference periods. The maximum transfer capability is limited by voltage stability for loss of Kogan Creek generator. The NNSW to CNSW maximum transfer capability is 930 MW at peak demand and summer typical periods and 1,025 MW at winter reference period. The maximum transfer capability is limited by thermal capacity of Armidale – Tamworth 330 kV lines following a credible contingency. The WSB with SIPS increases the transfer capacity between NNSW to CNSW when paired with selected generators. When enabled during the five-year contract period, the SIPS will be capable of increasing the transfer capability of the NNSW to CNSW flow path by 300 MW in one direction only.						
Delivery scope						
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
Flow path (CNSW-NNSW Option 1)[56]: • New 500 kV DCST line between Central B and Bayswater South Substation with Quad Orange conductor. • New Central B Hub 500/330 kV substation with 4 x 500/330/33 kV 1,500 MVA transformers, and cut into the existing 330 kV lines between Tamworth and Armidale. • New 4 x 340 MVA phase shifting transformers at Central B. • 4 x 500 kV 150 MVAr line shunt reactors (in total), are required for 500 kV DCST line at Central B and Bayswater South. • New 330 kV North and East Hubs. • New 500 kV Central South Hub and connection into Central B and Bayswater South 500 kV DCST line. • New 330 kV DCST line between Central B and East with Twin Olive conductor. • New Central A Hub 500/330 kV substation with 3 x 500/330/33 kV 1,500 MVA transformers. • New 500 kV built, 330 kV operated DCST line between Central A and North with Quad Orange conductor. • Re-terminate 500 kV DCST line between Central B and Bayswater South to Bayswater.	Anticipated	Forward: 6,000 Reverse: 6,000[57]	Anticipated project	January 2034		

[56] The final scope and cost is subject to the competitive procurement process outcome, at https://www.energyco.nsw.gov.au/ne#network-operator-update.

[57] AEMO assumes a symmetrical uplift in both directions and reverse direction network capacity is dependent on the location of future generation.

• New 500 kV DCST line between Central A and Bayswater South Substation with Quad Orange conductor. • New 500 kV DCST line between Central A and Central B Hub with Quad Orange conductor. • Additional New 330 kV DCST line between Central B and East with Twin Olive conductor. • 4 x 500 kV 150 MVAr line shunt reactors (in total), are required for 500 kV DCST line at Central A and Bayswater.				

A5.3 Actionable transmission projects

- **Seven newly actionable projects are identified in this final ISP:**
  - **Two are situated in Victoria** and intended to progress under the Victorian Transmission Investment Framework (VTIF) for planning and developing its future REZs[58] rather than through the National Electricity Rules (NER) framework for actionable ISP projects. See sections A5.3.2 and A5.3.8.
  - **Two are actionable projects in New South Wales**, one to be assessed under the *Electricity Infrastructure Investment Act 2020* (NSW), and one to be progressed by the local transmission network service provider (TNSP) under the RIT-T framework, including publication of a PADR. See sections A5.3.11 and A5.3.7.
  - **One is an actionable project in Tasmania** which replaces another previously actionable project in Tasmania, where the local TNSP will begin assessing the project under the RIT-T framework by considering the ISP candidate option as one of the RIT-T credible options and preparing to publish a PADR. See Section A5.3.6.
  - **Two are actionable ISP projects in Queensland**, where the local TNSP will begin assessing the projects under the RIT-T framework by considering the ISP candidate option as one of the RIT-T credible options and publishing a PADR. See sections A5.3.4 and A5.3.10.
- **Five projects identified as actionable in the 2024 ISP remain actionable** for this final 2026 ISP, where the relevant TNSP is currently assessing or has already assessed the project under the RIT-T framework by considering the ISP candidate option as one of the RIT-T credible options.
- **Three projects identified as actionable in the 2024 ISP have now been identified as future ISP projects** in this final 2026 ISP. See Section A5.4.

[58] The VTIF is a new integrated approach to planning and delivering transmission infrastructure. See https://engage.vic.gov.au/victorian-transmission-investment-framework.

A5.3.1 Gladstone Project

Summary

Following the retirement or reduced generation from Gladstone Power Station and increased generation in North and Central Queensland, the transmission network supplying the Gladstone area will be constrained. As a result, forecast demand at Boyne Island, Calliope River, Larcom Creek and Raglan substations cannot be supplied. If major industrial loads are electrified, there is potential for a material shift in the supply-demand balance in the Gladstone area.

The Gladstone Project was identified as an actionable Queensland project in the 2024 ISP. This project is being progressed under the *Energy (Infrastructure Facilitation) Act 2024* (Qld)[59] rather than the ISP framework. In the 2026 ISP, the Gladstone Project remains an actionable Queensland project. The updated options include outcomes of Powerlink's development of the project through the Gladstone Priority Transmission Investment framework to increase thermal capability of transmission corridor to supply loads following retirement of generators in Gladstone and increased generation from North and Central Queensland. The majority of the project is expected to be delivered in March 2029 with some minor works to be completed later[60].

The Gladstone Project is expected to be implemented in stages, subject to several factors, including the Priority Transmission Investment (PTI) assessment, Ministerial direction, responsiveness to load growth in the region, and the need to be flexible and maximise delivery efficiency[61].

Existing network capability

The maximum power transfer capability is influenced by the amount of generation dispatch within northern and central Queensland, particularly at Gladstone. This limit is influenced by the thermal capacity of the Calvale – Wurdong, Bouldercombe – Calliope River, Bouldercombe – Raglan, Larcom Creek – Calliope River or Calliope River – Wurdong 275 kV circuits.

With typical generation output from Stanwell and Callide, Central Queensland to Gladstone Grid maximum transfer capability is 700 MW at peak demand and summer typical levels, and 1,050 MW at winter reference condition. In the reverse direction, Gladstone Grid to Central Queensland maximum transfer capability is 750 MW at peak demand and summer typical levels and approximately 1,100 MW at winter reference periods.

Identified need

The identified need for Gladstone Project is to ensure ongoing reliability and security of supply in the Gladstone area to:

- meet the forecast electrical load in anticipation of the closure of the Gladstone Power Station,
- support the decarbonisation of major industries, and
- compensate for loss of essential system services, such as inertia, system strength and voltage control capability, following the closure of Gladstone Power Station.

This project is classified as a reliability corrective action to meet reliability and service standards specified within Powerlink's Transmission Authority, consistent with Powerlink's Final Assessment Report as part of the Candidate Priority Transmission Investment Assessment released in June 2025[62].

[59] See https://www.legislation.qld.gov.au/view/whole/html/inforce/current/act-2024-015. This Act was previously titled the *Energy (Renewable Transformation and Jobs) Act 2024* (Qld).

[60] See https://engage.powerlink.com.au/pti-gladstone-project for further details on the project timeline.

[61] See project overview at https://www.powerlink.com.au/projects/gladstone-project.

[62] Gladstone Project: Candidate Priority Transmission Investment Assessment Final Assessment Report; see https://engage.powerlink.com.au/download_file/view/116/494.

Progress and next steps				
• In June 2025, Powerlink published and submitted the Final Assessment Report to the Queensland Government. The report assesses options to meet the identified need and recommends a preferred option. A summary of non-confidential submissions is available in the Final Assessment Report. • Gladstone priority transmission investment process is well progressed[63].				
Credible option(s)				
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
Central Queensland (CQ)-Gladstone Grid (GG) Option 2[64]: • New Gladstone West 275 kV switching station. • New 275 kV high capacity double-circuit line between Calvale and Calliope River (switched into Gladstone West). • A new (third) 275/132 kV transformer at Calliope River. • 150 MVAr reactor at Gladstone West. • 2 synchronous condensers in the Gladstone area[65]. • Wide area monitoring, control and protection scheme. • Rebuild Bouldercombe – Calliope River 275 kV (#812) as a high capacity Bouldercombe – Larcom Creek 275 kV double-circuit line (switched into Gladstone West). Notes: • Retain the existing Calliope River – Larcom Creek – Raglan – Bouldercombe 275 kV line (#s 8859, 8875, 871, 818 and 811) in service. • Decommission #812 from Bouldercombe to Gladstone West but retain #812 from Gladstone West to Calliope River. Pre-requisite: None	Actionable Queensland Project [Queensland candidate option]	Forward: 2,600 Reverse: 500	2,367[66] Class 5 (-20% to +30%)	**Timing advised by proponent** March 2029[67]

[63] Currently at step 4 of a five step process assessment reviewed by the Queensland Government, at https://engage.powerlink.com.au/pti-gladstone-project.

[64] Powerlink recommended this option under the Priority Transmission Investment. Final assessment report at https://engage.powerlink.com.au/pti-gladstone-project.

[65] Powerlink has assessed the synchronous condensers as part of the Addressing System Strength Requirements in Queensland from December 2025 Project Assessment Conclusions Report, at https://www.powerlink.com.au/sites/default/files/2025-07/Addressing%20System%20Strength%20Requirements%20from%20Dec%202025%20-%20PACR%20-%20June%202025.pdf

[66] Powerlink has provided a cost estimate for this project as part of its ongoing consideration of options for this flow path. This estimate includes Queensland landholder payments. AEMO adjusted the ISP inputs accordingly to account for this inclusion. This estimate excludes the costs of synchronous condensers.

[67] Powerlink has advised the timing of the new transmission line is March 2029, with the balance of the project by mid-2030.

A5.3.2 Western Victoria Reinforcement

Summary

The Greater Melbourne and Geelong (MEL) to West and North Victoria (WNV) flow path represents connections between the main load centre of Melbourne and Geelong to the north via South Morang to Dederang and Thomastown to Eildon, and connections to the west via Geelong to Moorabool, Sydenham to Moorabool, and Sydenham to Bulgana.

The 2024 ISP identified a future ISP project in the west (Western Victoria Reinforcement), and this new flow path allows more detailed analysis of this corridor. Since then, AEMO Victorian Planning (AVP)[68] has published a Project Specification Consultation Report (PSCR)[69] and VicGrid has published the 2025 Victorian Transmission Plan[70] which initiates the public consultation process.

The Western Victoria Reinforcement program is identified as an actionable Victoria project in the 2026 ISP. This project will progress under the Victorian Transmission Investment Framework as part of the Victorian Transmission Plan (VTP)[71].

Existing network capability

Generation from MEL is not expected to supply WNV (forward direction) at times of high demand periods. MEL to WNV maximum transfer capability is 3,000 MW for cases where Victorian load is between 4,000 MW and 6,000 MW. The maximum transfer capability is limited by the thermal capability of the 220 kV lines between Ballarat and Bendigo.

WNV to MEL maximum transfer capability is 2,300 MW at peak demand, 2,550 MW at summer typical and 4,880 MW at winter reference periods. The maximum transfer capability is limited by the thermal capability of the 220 kV lines between Moorabool and Geelong.

Identified need

The identified need for the Western Victoria Reinforcement program is to deliver net market benefits for consumers by:

- meeting forecast demand growth and avoiding expected unserved energy with limitations identified in the western metro network, and
- enabling greater transfer capacity between the Western Victoria REZs, key load centres within the greater western metropolitan network, and western metropolitan Melbourne.

Progress and next steps

- AVP published the PSCR for this Western Victoria Reinforcement program RIT-T in March 2025. On 1 November 2025, responsibility for planning Victoria's transmission network transferred to VicGrid. VicGrid is responsible for coordinating the planning, procurement and development of the Western Victoria Reinforcement program[72].

[68] On 1 November 2025, Victoria's electricity transmission network planning responsibilities transitioned from AEMO, through its AEMO Victorian Planning (AVP) division, to VicGrid. See https://www.aemo.com.au/newsroom/media-release/aemo-supports-vicgrids-new-role-in-leading-victorias-transmission-planning.

[69] Western Metropolitan Melbourne Reinforcement, at https://www.vicgrid.com.au/transmission-planning/regulatory-investment-tests-for-transmission/western-metropolitan-melbourne-reinforcement.

[70] 2025 Victorian Transmission Plan, at https://www.energy.vic.gov.au/renewable-energy/vicgrid/the-victorian-transmission-plan.

[71] VTIF sets the policy framework for the development of the VTP.

[72] The passage of the *National Electricity (Victoria) Amendment (VicGrid – Stage 2 Reform) Bill* 2025 in the Victorian Parliament allows VicGrid to plan and procure transmission augmentations effectively. See https://www.legislation.vic.gov.au/bills/national-electricity-victoria-amendment-vicgrid-stage-2-reform-bill-2025.

Credible option(s)				
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
MEL-WNV Option 1 • Cut-in both existing Geelong to Keilor 220 kV lines into Deer Park. • Replace existing Keilor 500/220kV transformers with 1,000 MVA units (expected to be completed as part of asset replacement project)[73]. • Operate the three Deer Park to Keilor 220kV circuits as normally open, with supply to Deer Park provided from Geelong. • Install minor interplant replacements to increase rating on both existing Geelong to Moorabool 220 kV lines. Pre-requisite: None	Actionable Victoria project[74]	Forward: N/A Reverse: 800	128 Class 5b (±50%)[75, 76]	**Timing advised by proponent:** June 2029

[73] In May 2025, AusNet Services published its *Maintaining reliable transmission network services at Keilor Terminal Station* Project Assessment Draft Report (PADR) which noted it is targeting a commissioning date of "end [of] 2030" for the Keilor 500/220 kV transformer replacement works only, the timing for the remainder of the Western Victoria Reinforcement scope is June 2029.

[74] Elements of the Western Victoria Reinforcement program are expected to be delivered under a mix of the Victorian Transmission Investment Framework (VTIF) and the ongoing AusNet and Powercor RIT-Ts.

[75] This is the 2024 cost of Option 1B of the Western Metropolitan Melbourne Reinforcement project presented in the PSCR.

[76] The estimated cost includes only the incremental cost of upgrading the Keilor transformers to 1000 MVA. Costs for the replacement of the transformers is expected to be covered by the asset replacement RIT-T that is nearing completion. Further information is at https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nsp_consultations/2025/kts-a-transformer-replacement-padr-final.pdf?la=en.

A5.3.3 Sydney Ring North (Reinforcing Sydney, Newcastle, and Wollongong Supply)

Summary

The transmission network in the SNW area was originally designed to connect large coal-fired generators in the Hunter Valley to supply SNW load centres. When these coal-fired generators retire, the network has insufficient capability to supply SNW load centres from generators located outside of the Hunter Valley. The Sydney Ring North Project increases transfer capacity into the SNW load centres.

This project is named the Hunter Transmission Project and includes the WSB and related upgrades. This option increases the transfer capacity by up to 5,000 MW, and allows additional power to be exported from Central-West Orana REZ, New England REZ, and the Hunter- Central Coast REZ to SNW load centres.

The Hunter Transmission Project (Sydney Ring North Project[77]) is classified as a 'priority transmission infrastructure project'[78] under the *Electricity Infrastructure Investment Act 2020* (NSW). This project was identified as an actionable project in the 2022 ISP and 2024 ISP, and is continuing to proceed as an actionable New South Wales project rather than under the RIT-T framework. It is scheduled to be completed by November 2029.

The WSB project is a priority transmission project in New South Wales. WSB with a SIPS is proposed to increase transfer capacity from CNSW to SNW. This project also includes minor network augmentation to increase thermal capacity of Bannaby – Sydney West, Yass – Marulan and Yass – Collector – Marulan 330 kV lines. A network transfer capacity increase resulting from WSB with SIPS and minor network augmentation was included in ISP modelling.

Existing network capability

The existing transfer capability varies depending on load and generation distribution within the SNW area, as well as the generation within CNSW and power transfer from NNSW and SNSW sub-regions to CNSW. For better representation of these limitations, the existing transfer capability between CNSW and SNW is separately identified as North and South flow paths.

CNSW-SNW North flow path is assumed to be the sum of flows on Bayswater – Sydney West, Bayswater – Regentville, Liddell – Newcastle, Liddell – Tomago, Wallerawang – Ingleburn and Wallerawang – Sydney South 330 kV lines and Stroud – Brandy Hill, Stroud – Tomago, Hawks Nest tee – Tomago and Singleton – Rothbury 132 kV lines. The maximum transfer capability of the CNSW-SNW North flow path is 4,490 MW at peak demand and summer typical periods, and 4,730 MW at winter reference periods. The maximum northern transfer capability is limited by several 330 kV lines and the most limiting elements are Liddell – Newcastle and Liddell – Tomago 330 kV lines.

The WSB with SIPS increases the transfer capacity between CNSW to SNW when paired with selected generators. When enabled during the five-year contract period, the SIPS will be capable of increasing the transfer capability of the CNSW-SNW North by up to 660 MW.

Identified need

The identified need for Sydney Ring project has not changed since the 2022 ISP and 2024 ISP. This section covers the Sydney Ring North Project. The identified need for the Sydney Ring North project is to deliver net market benefits for consumers by increasing the power system's capability to supply the SNW load centres, replacing supply capacity that will be removed on the closure of coal-fired power stations in the Newcastle area.

[77] The Sydney Ring North project is named the Hunter Transmission Project and may include the WSB and related upgrades.

[78] See https://www.energyco.nsw.gov.au/projects/hunter-transmission-project.

Progress and next steps				
The Hunter Transmission Project (Sydney Ring North project) will progress as an actionable New South Wales project and will proceed under the *Electricity Infrastructure Investment Act 2020* (NSW) rather than the RIT-T framework. The project is now in the New South Wales Government's independent assessment phase. If the Hunter Transmission project is approved, construction is expected to start in late 2026.				
Credible option(s)				
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
Sydney Ring Northern 500 kV loop or the Hunter Transmission Project (HTP)[79] (CNSW-SNW Option 1). • A new 500 kV double-circuit line between Olney substation and Bayswater South substation. • New switching stations at Bayswater South (near Bayswater substation) and Olney (near Eraring substation). • 500 kV connections between Bayswater and Bayswater South substations, and between Eraring and Olney substations. • Two 500/330 kV 1,500 MVA transformers at Eraring substation. • Line reactors on 500 kV transmission lines between Olney and Bayswater South. Pre-requisite: None	Actionable New South Wales Project[80] [New South Wales candidate option]	Forward: 5,000 (This capacity increase for accommodation of additional new generation from North of Bayswater and 2/3 generation from Central West New South Wales) Reverse: N/A REZ: N10: 2,000	1,364 Class 5b (±50%)	**Timing advised by proponent:** November 2029

[79] The Sydney Ring North project is named the Hunter Transmission Project and includes the Waratah Super Battery and related upgrades.

[80] Sydney Ring North project is an actionable New South Wales project rather than an actionable ISP project. This project will progress under the *Electricity Infrastructure Investment Act 2020* (NSW) rather than the ISP framework. See https://www.energyco.nsw.gov.au/our-projects/hunter-transmission-project/transmission-infrastructure.

A5.3.4 Central to North Queensland Reinforcement (Stage 1)

Summary

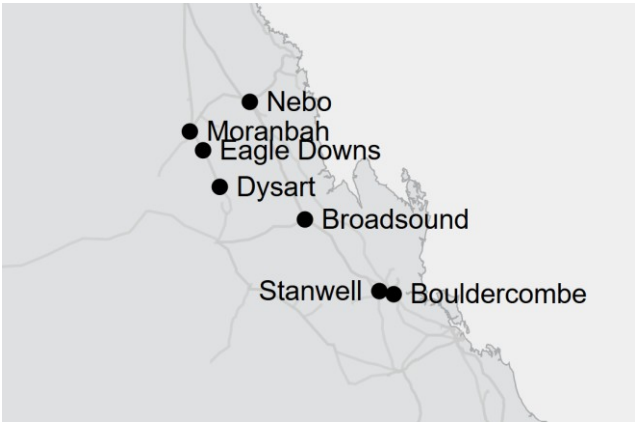
The CQ to Northern Queensland (NQ) flow path represents connections between Broadsound in CQ and Nebo in NQ, and supports the export of renewable generation from northern Queensland.

The Central to North Queensland Reinforcement (Stage 1) improves transfer capability between generation in Northern Queensland and load centres in Central Queensland, Gladstone Grid and Southern Queensland. The augmentation supports the export of generation from Q1, Q2, Q3 and Q10 renewable energy zones.

In the 2024 ISP, the Queensland SuperGrid North project was identified as a future project to increase transfer capacity between Central and Northern Queensland. The Central to North Queensland Reinforcement (Stage 1) represents the initial stage of an upgrade of the Central to Northern Queensland flow path capacity, providing a more targeted augmentation of this corridor to address emerging transfer limitations. A further expansion of this flow path is identified as a future project in the 2026 ISP.

Following joint planning with Powerlink and consultation on the Draft 2025 IASR, the flow path boundary was amended to help better model limitations between Nebo and Broadsound (previously between Strathmore-Ross). This resulted in no change to CQ-NQ forward capability compared to the 2024 ISP. These limits were determined with the inclusion of a minor Strathmore to Ross line upgrade. The maximum transfer capability from Northern Queensland to Central Queensland was revised in the 2026 ISP[81].

The 2026 ISP identifies the Central to North Queensland Reinforcement (Stage 1) as an actionable ISP project.



Existing network capability

The current network was designed to facilitate the transmission of power from CQ to support the load in NQ. As a result, the Central and Northern Queensland sub-regions can only support up to 2,500 MW of generation across the four REZs in Northern Queensland, depending on the level of storage in the sub-region.

From CQ to NQ, the maximum transfer capability is 1,200 MW in peak demand and summer typical periods, and 1,400 MW in winter reference periods. From NQ to CQ, maximum transfer capability is 800 MW in peak demand, summer typical and winter reference periods. The maximum transfer capability is limited by voltage or transient stability for the loss of CQ or NQ transmission network elements.

Identified need

The identified need for this project is to realise net market benefits by:

- increasing the capability of the transmission network between Central Queensland and Northern Queensland, and
- enabling access to lower-cost generation from Northern Queensland to meet demand in the Queensland major load centres.

[81] The maximum transfer capacity between Northern Queensland and Central Queensland was revised from 1,440 MW (peak demand and summer typical) and 1,910 MW (winter reference) to 800 MW for all seasons. This revised limit reflects a transient stability constraint identified in collaboration with Powerlink.

Progress and next steps
AEMO has identified the Central to North Queensland Reinforcement (Stage 1) project as a newly actionable ISP project for this 2026 ISP. For this project, AEMO specified that: • RIT-T proponent(s): Powerlink, • ISP candidate option: Option 3 see below, • The PADR must be published and made available to relevant persons by 25 June 2028, • Scenarios to be assessed: *Slower Growth* (27%), *Step Change* (46%), and *Accelerated Transition* (27%), and • AEMO has called for submissions on non-network options[82] for this project with the potential to satisfy, or contribute to satisfying, the identified need. AEMO will provide all submissions to the RIT-T proponent for consideration in the PADR. Early works for the Central to North Queensland Reinforcement (Stage 1) project may include: • Stakeholder engagement – implementing meaningful engagement programs, including engagement with Traditional Owners and land councils, landholders, government, local communities, councils, environmental groups and other impacted stakeholders. • Land use planning – planning approval activities, cultural heritage studies, environmental impact assessments and other necessary approval activities. • Land acquisition – secure access to enable investigations; and acquire land and/or negotiate binding land options. • Procurement activities – contractor engagement, procurement of equipment with long lead times, tendering activities to refine accuracy of cost estimates, and pre-construction works. • Project development – additional activities required to support timely delivery of the project, for example some project management and design activities.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	Timing
CQ-NQ Option 3: • String the second circuit between Stanwell and Broadsound 275 kV.	Actionable ISP Project [ISP candidate option]	Forward: 350 Reverse: 500	209 Class 5b (±50%)	**Timing advised by proponent:** July 2031[83]

[82] For details on the call for submissions on non-network options, see https://www.aemo.com.au/consultations/current-and-closed-consultations/2026-isp-non-network-options-consultation-central-to-north-qld-reinforcement.

[83] AEMO modelled this project with an earliest in-service date of December 2029, as advised by Powerlink for the 2025 *Electricity Network Options Report*, but Powerlink has subsequently advised of this later timing.

A5.3.5 Sydney Ring South (Reinforcing Sydney, Newcastle, and Wollongong Supply)

Summary

The transmission network in the SNW area was originally designed to connect large coal-fired generators in the Hunter Valley to supply the SNW load centres. When these coal-fired generators retire, the network has insufficient capability to supply SNW load centres from generators located outside of the Hunter Valley. The Sydney Ring South Project increases transfer capacity into the SNW load centres.

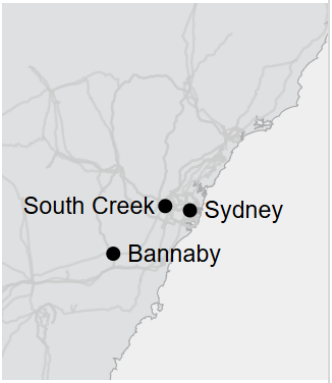
AEMO identified the Sydney Ring South project as an actionable ISP project in the 2024 ISP. It remains an actionable ISP project in the 2026 ISP. Timing for any need to increase power system capability to support the SNW load centres from the south of New South Wales depends on load distribution and sizing within SNW, as well as power transfer from SNSW to CNSW, NNSW to CNSW and CNSW to SNW. Direction and amount of power transfer on the 500 kV lines between Bannaby and Mt Piper would highly influence timing of the Sydney Ring South project.

Two Sydney Ring South options have been identified as a single actionable ISP project. The 2026 ISP recommends that both options should be progressed as soon as possible:

- Sydney Ring South – power flow control option (actionable in 2024 and 2026 ISP), and
- Sydney Ring South - 500 kV transmission line option from Bannaby to South Western Sydney (actionable in 2026 ISP).

Transgrid published its PADR, which identified that the preferred option[84] is also a combined option featuring both power flow control and new 500 kV transmission lines delivered at their earliest in-service dates.

Both augmentations meet the one identified need to support the growing demand centres of Sydney, Newcastle, and Wollongong, and may be potentially delivered together or sequenced to maximise their benefits while managing any potential delivery risks.



Existing network capability

The existing transfer capability varies depending on load and generation distribution within the SNW area, as well as generation within CNSW and power transfer from NNSW and SNSW sub-regions to CNSW. For better representation of these limitations, the existing transfer capability between CNSW and SNW is separately identified as North and South flow paths:

- CNSW-SNW South flow path is modelled as the sum of flows on Bannaby – Sydney West, Marulan – Dapto, Marulan – Avon and Kangaroo Valley – Dapto 330 kV lines. The maximum transfer capability of CNSW-SNW South flow path is 2,540 MW at peak demand and summer typical, and 2,720 MW at winter reference periods. The maximum southern transfer capability is limited by several 330 kV lines and the most limiting element is typically the Bannaby-Sydney West 330 kV line.
- Refer to Section A5.3.3 for information on the northern CNSW to SNW flow path.

The WSB with SIPS increases the transfer capacity between CNSW to SNW when paired with selected generators. When enabled during the five-year contract period, the SIPS will be capable of increasing the transfer capability of the CNSW-SNW South flow paths by up to 250 MW.

Identified need

The identified need for the Sydney Ring South project is:

- to deliver net market benefits for consumers to increase the power system's capability to supply the Sydney, Newcastle and Wollongong load centres, replacing supply capacity that will be removed on the closure of coal-fired power stations in the Newcastle area, and
- efficiently service increasing peak demand.

[84] Option 6 of Transgrid's Sydney Ring South PADR is the preferred option, which is the combination of a power flow control solution and 500 kV transmission line delivered at their earliest in-service dates; see https://www.transgrid.com.au/media/k5jlt3a3/sydney_ring_south_project_padr.pdf.

Progress and next steps
• AEMO identified the Sydney Ring South project as an actionable ISP project in the 2024 ISP. It remains an actionable ISP project in the 2026 ISP and includes both the power flow control and 500 kV line augmentations. • Transgrid's Sydney Ring South PADR is currently under consultation. The preferred option (PADR Option 6) is the staged delivery of both actionable ISP options (that is, the power flow control option and the 500 kV transmission line). Transgrid is engaging stakeholders and communities in relation to the sequencing and staging of works to deliver the actionable Sydney Ring South project to provide greater certainty to communities on the overall project scope and timing, and to minimise the impacts of duplicated consultation processes. Early works for Sydney Ring South may include: • Stakeholder engagement – implementing meaningful engagement programs, including engagement with Traditional Owners and land councils, landholders, government, local communities, councils, environmental groups and other impacted stakeholders. • Land use planning – planning approval activities, cultural heritage studies, environmental impact assessments and other necessary approval activities. • Land acquisition – secure access to enable investigations; and acquire land and/or negotiate binding land options. • Procurement activities – contractor engagement, procurement of equipment with long lead times, tendering activities to refine accuracy of cost estimates, and pre-construction works. • Project development – additional activities required to support timely delivery of the project, for example some project management and design activities.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	Timing
Power flow control augmentation (CNSW-SNW Option 2d): • Install power flow control devices in the 330 kV network supplying Sydney from the south. Pre-requisite: CNSW-SNW Option 1 (HTP)	Actionable ISP Project [ISP candidate option]	Forward: 0 MW Reverse: N/A The power flow control improves power flow sharing between the northern and southern segments of the CNSW-SNW flow paths. This allows more generation to be transferred to Sydney from SNSW.	261[85,86] Class 5(±50%)	**Timing advised by proponent:** July 2030 (power flow control)

[85] The $2025 cost of this option $2,621 million, consisting of $261 million (power flow control option) and $2,360 million (500 kV transmission option) was provided by Transgrid for the 2025 *Electricity Network Options Report* and has been modelled in the 2026 ISP. Transgrid's Sydney Ring South PADR has identified the preferred option (PADR Option 6) with a capital cost estimate of $3,519 million (nominal). AEMO notes that four effectively equal ranked first options (PADR Option 3, 4, 5, 6) have capital cost estimates between $3,353 million (nominal) and $4,915 million (nominal).Transgrid has applied escalation to 2025-26 cost estimates considering the assumed development and delivery programs for each option.

[86] Following completion of the RIT-T, a TNSP may seek written confirmation from AEMO that the preferred option identified in the RIT-T remains aligned with the ODP in the most recent ISP and that the cost of the preferred option does not change the status of the actionable ISP project as part of the ODP. This process is referred to as the "feedback loop". AEMO confirmation via the feedback loop must be provided for a TNSP to be eligible to submit a contingent project application (CPA) to the AER for an actionable ISP project.

Sydney Ring South 500 kV transmission (CNSW-SNW Option 3)[87] to a: • Establish a new 330 kV South Creek switching station cutting into 330 kV Sydney West – Bayswater (#32), Sydney West – Regentville (#38) and Bannaby – Sydney West (#39). • Double-circuit 330 kV transmission line built to a 500 kV design between Bannaby substation and the new South Creek switching station along a new 70 m wide greenfield easement. • Two new 330 kV transmission line switch bays at Bannaby. • Rebuild 7 km of existing single-circuit 330 kV between South Creek and Sydney West as double-circuit, including stringing with high temperature low sag (HTLS) conductor. • Re-conductor approx. 7 km of existing double-circuit 330 kV lines 32 and 38 with high temperature low sag (HTLS) conductor (twin Olive equivalent) between South Creek and Sydney West. • One new 330 kV transmission line switch bay at Sydney West. • Upgrade South Creek to a 330/500 kV substation with separate 500 kV and 330 kV yards connected by underground cable cutting into 500 kV Eraring - Kemps creek (#5A1, #5A2) with three 1,500 MVA 500/330 kV transformers. • Two new 500 kV transmission line switch bays at Bannaby. • Re-termination of 500 kV designed transmission lines at Bannaby and South Creek. 4x 120 MVAr line shunt reactors on the 500kv lines between Bannaby and South Creek Pre-requisite: None	Actionable ISP Project [ISP candidate option]	Forward: 3,600 MW Reverse: N/A REZ: N11 + N12: 2,000 MW SNW1: 3,600 MW	2,360[85], Class 5(±50%)	**Timing advised by proponent:** July 2033

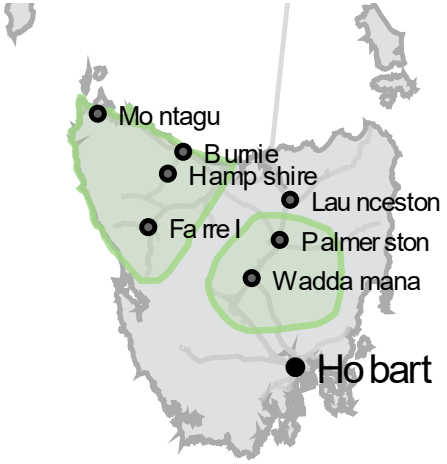
[87] The 2026 ISP's ODP considers both Stage 1 and Stage 2 of Option 3 delivered in 2033-34, which is equivalent in terms of scope to delivering both Stage 1 and Stage 2 of Option 4 in 2033-34 (see the 2025 Electricity Network Options Report for details of the stages). This is consistent with the scope included in the preferred option identified by the Sydney Ring South PADR, except for timing of the South Creek 500/330 kV substation, which Transgrid's PADR considers to be delivered in 2030-31 at the same time as the power flow control solution.

A5.3.6 Tasmania REZ Expansion (previously North West Tasmania REZ Expansion)

Summary

The Tasmania REZ expansion increases hosting capacity for potential renewable generation development in one or more Tasmanian REZs. One option for delivering this project is the North West Tasmania REZ expansion which has excellent quality wind resources, but network augmentation to facilitate greater development in Central Highlands REZ, such as the previously actionable Second Tasmanian REZ Expansion (previously Waddamana to Palmerston transfer capability upgrade), remains a viable alternative. The optimal timing of the Tasmania REZ augmentation option is influenced by the timing of Project Marinus augmentations.

The Tasmania REZ Expansion is identified as an actionable project in the 2026 ISP.



Existing network capability

The current total REZ transmission limit for existing (112 MW Granville Harbour Wind Farm) and new VRE before any network upgrade (considering minor operational improvements) in North West Tasmania is approximately 277 MW for peak demand and summer typical conditions and 112 MW for winter reference condition.

This REZ is affected by transient stability network constraints for VRE connection at Farrell 220 kV substation. Future REZ generators are assumed to have a runback scheme in place to reduce generation output post contingency to within network capacity for lines currently covered by the Network Control System Protection Scheme (NCSPS), but not for new transmission lines.

Identified need

The identified need[88] for the Tasmania REZ Expansion is to support the expected increase in renewable generation in Tasmania.

Progress and next steps

AEMO has identified the Tasmania REZ Expansion as a newly actionable ISP project for this 2026 ISP. While the ISP modelling identifies North West Tasmania REZ as the preferred REZ expansion, the need for this project could be met through alternate REZ expansions, subject to further modelling by TasNetworks.

For this project, AEMO specified that:

- RIT-T proponent(s): TasNetworks,
- ISP candidate option: Option 1 see below,

[88] The identified need does not specify which REZ in Tasmania should be expanded and therefore represents a broader system need than that underpinning the Second Tasmania REZ Expansion (previously Waddamana to Palmerston transfer capability upgrade) identified as actionable in the 2024 ISP, which focusses on expansion of the Central Highlands REZ. As a result of the broader need, the Tasmania REZ Expansion is identified as a newly actionable project with a different ISP candidate option (T2 Option 1) that was previously included in the North West Tasmanaia REZ Expansion, a future project in the 2024 ISP. A Central Highlands REZ expansion (T3 Option 1A) remains a viable option to address the broader need for the Tasmania REZ Expansion project, but is no longer identified as the preferred option in this ISP. In one scenario, a subsequent Central Highlands REZ expansion is identified as needed in the future, making Second Tasmania REZ Expansion a future ISP project in this 2026 ISP (see Section A5.4.6).

- The PADR must be published and made available to relevant persons by 25 June 2028,
- Scenarios to be assessed: *Slower Growth* (27%), *Step Change* (46%), and *Accelerated Transition* (27%), and
- AEMO has called for submissions on non-network options[89] for this project with the potential to satisfy, or contribute to satisfying, the identified need. AEMO will provide all submissions to the RIT-T proponent for consideration in the PADR.

Early works for the Tasmania REZ Expansion may include:

- Stakeholder engagement – implementing meaningful engagement programs, including engagement with Traditional Owners and land councils, landholders, government, local communities, councils, environmental groups and other impacted stakeholders.
- Land use planning – planning approval activities, cultural heritage studies, environmental impact assessments and other necessary approval activities.
- Land acquisition – secure access to enable investigations; and acquire land and/or negotiate binding land options.
- Procurement activities – contractor engagement, procurement of equipment with long lead times, tendering activities to refine accuracy of cost estimates, and pre-construction works.
- Project development – additional activities required to support timely delivery of the project, for example some project management and design activities.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	Timing
T2 Option 1: • Build a new double-circuit Burnie – Hampshire Hills 220 kV line (brought forward from Project Marinus Stage 2). • Build a new Hampshire Hills wind collector station. Pre-requisite: Project Marinus Stage 1	Actionable ISP Project [ISP candidate option]	800	245 Class 5b (-50% to +50%)	**Timing advised by proponent:** July 2030
T3 Option 1A: • Convert Waddamana–Palmerston 110 kV line to 220 kV operation (line did previously operate at 220 kV). – Re-string with High Temperature and Low Sag conductor. – Re-build 3 km 220 kV transmission line with High Temperature and Low Sag conductor. • Install 220/110 kV transformer at Waddamana Substation. Pre-requisite: Project Marinus Stage 1	Alternative option	555	224 Class 4 (-30% to +50%)	**Alternative option timing advised by proponent:** December 2030

[89] For details on the call for submissions on non-network options, see https://www.aemo.com.au/consultations/current-and-closed-consultations/2026-isp-non-network-options-consultation-tasmania-rez-expansion.

A5.3.7 Switching Station Near Wondalga

Summary
The Switching Station Near Wondalga project increases the transfer capacity between southern and central New South Wales. The transmission network between SNSW and CNSW provides access for the hydroelectric generation in the Snowy mountains, renewable generation in SNSW, and import from Victoria and South Australia to New South Wales major load centres. HumeLink[90] is a committed project that reinforces the southern New South Wales network, connecting the Snowy Mountains Hydroelectric Scheme and Project EnergyConnect to Bannaby, and is expected to be completed by December 2027. The 2026 ISP identifies Switching Station Near Wondalga as an actionable ISP project which is a switching station at the Y-point connecting three 500 kV HumeLink lines, providing an additional 450 MW of transfer capacity to the SNSW to CNSW flow path. It provides load centres in New South Wales with increased access to REZ generation from SNSW, long duration storage in Snowy 2.0 and imports from Victora and South Australia.
Existing network capability
The maximum transfer capability from SNSW to CNSW is 2,700 MW at peak demand and summer typical and 2,950 MW winter reference periods. The maximum transfer capability is limited by thermal capacity of Collector – Marulan 330 kV lines following a credible contingency. The maximum transfer capability from CNSW to SNSW is 2,320 MW at peak demand and summer typical and, 2,590 MW at winter reference periods. The maximum transfer capability is limited by thermal capacity of Yass–Canberra or Marulan–Yass or Gullen Range–Bannaby 330 kV lines following a credible contingency. The WSB with SIPS increases the transfer capacity between SNSW to CNSW when paired with selected generators. When enabled during the five-year contract period, the SNSW to CNSW transfer capability is expected to increase by 250 MW in one direction only. After HumeLink is in service, the transfer capability between SNSW and CNSW will increase by 2,200 MW in both directions.
Identified need
The identified need for this project is to realise net market benefits by: • increasing the capability of the transmission network between southern and central New South Wales, and • enabling access to lower-cost generation from Victoria, South Australia and southern New South Wales to meet demand in the New South Wales major load centres.
Progress and next steps
AEMO has identified the Switching Station Near Wondalga project as an newly actionable ISP project for this 2026 ISP. For this project, AEMO specified that: • RIT-T proponent(s): Transgrid, • ISP candidate option: Option 5 see below,

[90] See Transgrid's website for project updates, at https://www.transgrid.com.au/projects-innovation/humelink/.

- The PADR must be published and made available to relevant persons by 30 April 2028
- Scenarios to be assessed: *Slower Growth* (27%), *Step Change* (46%), and *Accelerated Transition* (27%), and
- AEMO called for submissions on non-network options[91] by 20 March 2026. AEMO did not receive any submissions for this project.

Early works for the Switching Station Near Wondalga project may include:

- Stakeholder engagement – implementing meaningful engagement programs, including engagement with Traditional Owners and land councils, landholders, government, local communities, councils, environmental groups and other impacted stakeholders.
- Land use planning – planning approval activities, cultural heritage studies, environmental impact assessments and other necessary approval activities.
- Land acquisition – secure access to enable investigations; and acquire land and/or negotiate binding land options.
- Procurement activities – contractor engagement, procurement of equipment with long lead times, tendering activities to refine accuracy of cost estimates, and pre-construction works.
- Project development – additional activities required to support timely delivery of the project, for example some project management and design activities.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	Timing
SNSW-CNSW Option 5 • A new Switching Station near Wondalga at the Y point connecting the 3 x 500 kV HumeLink lines: – Bannaby – Gugaa 500 kV line. – Bannaby – Maragle 500 kV line. – Gugaa – Maragle 500 kV line. • 4 line reactors Pre-requisite: HumeLink	Actionable ISP Project [ISP candidate option]	Forward: 450 Reverse: 450	220 Class 5b (±50%)	**Timing advised by proponent:** April 2031[92]

[91] See notice of consultation for Switching Station Near Wondalga, at https://www.aemo.com.au/consultations/current-and-closed-consultations/draft-2026-isp-non-network-options-consultation-switching-station-near-wondalga.

[92] AEMO has modelled this project with an earliest in-service date of December 2030, as advised by Transgrid following the Draft 2026 ISP.

A5.3.8 Gippsland Offshore Wind Transmission Project

Summary

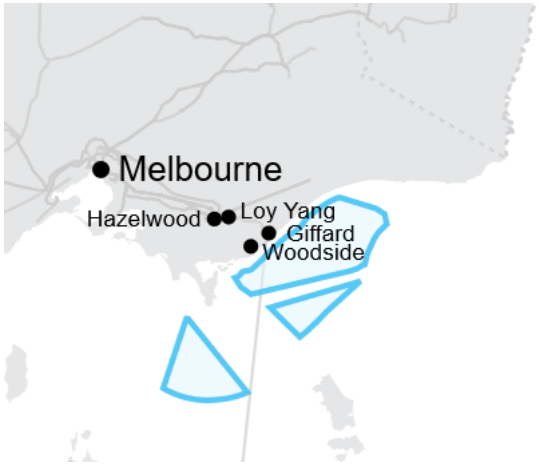
The Gippsland Offshore REZ has been identified for offshore wind resource potential in relatively shallow waters, with a connection point close to existing 500 kV networks at Loy Yang/Hazelwood. There is currently significant interest in this area, but proposed projects have not developed sufficiently to be considered anticipated.

The Victorian Government has announced that VicGrid will provide a coordinated transmission connection point for offshore wind near the Gippsland Shoreline. New transmission lines will also be developed where needed to link the common connection points with the existing energy grid.

AEMO understands that transmission augmentation projects for Gippsland Shoreline REZ are likely to be delivered as a dedicated asset of some kind.

VicGrid is currently undertaking consultation on the development of this infrastructure and AEMO will continue to co-ordinate with VicGrid on this matter[93].

The Gippsland Offshore Wind Transmission Project (all three phases) is identified as an actionable Victoria project in the 2026 ISP. This project will progress under the VTIF.



Existing network capability

- Gippsland Offshore REZ requires connection to the 500 kV network.
- Gippsland Offshore has no existing capability.

Identified need

The identified need for the Gippsland Offshore Wind Transmission Project is to unlock Gippsland Offshore REZ to meet the Victorian government offshore wind targets[94].

Progress and next steps

VicGrid is managing the Project on behalf of the Victorian Government.

- VicGrid has developed a roadmap for offshore wind transmission planning and refined the study area through surveys and community engagement.
- VicGrid is also preparing an Environment Effects Statement (EES) for the project.

[93] See https://www.vicgrid.com.au/transmission-projects/gippsland-offshore-wind-transmission.

[94] See Victorian Government has legislated offshore wind energy generation targets at https://www.energy.vic.gov.au/renewable-energy/offshore-wind-energy/developing-offshore-wind-in-victoria.

Credible option(s)				
Description[95]	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
V8 Option 1: • 500 kV double-circuit radial line from Loy Yang to Giffard. Pre-requisite: None	Actionable Victoria project[96]	REZ V8: +2,000	1,500[97] Class 5 (+100%/-50%)	**Timing advised by proponent:** July 2031
V8 Option 2: • Second 500 kV double-circuit radial line from new terminal station near Woodside to new terminal station near Hazelwood. Pre-requisite: V8 Option 1	Actionable Victoria project	REZ V8: +2,000	790 Class 5 (+100%/-50%)	**Timing advised by proponent:** July 2033
South East Victoria group constraint (SEVIC1) Option 1 • Tie-in loop between Giffard and new terminal station near Woodside (500 kV double-circuit line linking the two Gippsland radial lines). Pre-requisite: V8 Options 1 and 2	Actionable Victoria project	REZ V8: +3,000 SEVIC1: +4,600	400 Class 5 (+100%/-50%)	**Timing advised by proponent:** July 2038

[95] V8 Option 1, V8 Option 2 and SEVIC1 Option 1 refer to Gippsland offshore wind transmission Stage 1, Stage 2-Phase 1 and Stage 2-Phase 2 respectively in the 2025 Victorian Transmission Plan.

[96] VTIF sets the policy framework for the development of the VTP, see https://www.planning.vic.gov.au/__data/assets/pdf_file/0028/719506/Gippsland-Offshore-Wind-Transmission-Project_Project-Outline.pdf.

[97] As advised by VicGrid, AEMO has used the upper bound of the range for the purposes of use in the ISP modelling.

A5.3.9 Victoria – New South Wales Interconnector West (VNI West)

Summary

VNI West is a proposed 500 kV interconnector from near Bulgana in Victoria to Dinawan in south-west New South Wales. The 2022 and 2024 ISPs identified VNI West (via Kerang) as the ISP candidate option in the ODP. VNI West remains actionable for the 2026 ISP. In May 2023, AVP[98] and Transgrid concluded the RIT-T and confirmed option 5A (VNI West Project Assessment Conclusions Report Volume) as the preferred option.

Also in May 2023, the Victorian Minister for Energy and Resources used powers under the *National Electricity (Victoria) Act* 2005 to issue an order that identifies VNI West as a specified augmentation, for the Victorian part of the project[99].This option connects from near Bulgana to Dinawan via a new Tragowel Terminal Station, which is near Kerang.

VNI West will connect, at a terminal station near Bulgana, to Western Renewable Link (WRL), which is an anticipated double-circuit 500 kV line from Sydenham to near Bulgana. VNI West remains as an actionable ISP project for the 2026 ISP, as it was in the 2022 ISP and 2024 ISP.

Consistent with testing undertaken for the Draft 2026 ISP, the ISP analysis reconfirmed the relative efficiency of delivering VNI West as a single integrated project rather than staging the South West NSW REZ component ahead of the interconnector upgrade.

In June 2026 the New South Wales Government announced[100] investment to support critical grid upgrades for the South West New South Wales REZ. This investment will support the timely delivery of network infrastructure required to support Access Right Holders connecting to the system. Accordingly, the South West New South Wales REZ component of VNI West is now categorised as an actionable NSW project and will progress under the *Electricity Infrastructure Investment Act 2020* (NSW).

Existing network capability

Transfer capability of future options has been modelled with the VNI Minor upgrade and Victoria SIPS with battery storage in-service for increased transfer capability from SNSW to Victoria.

Victoria to SNSW maximum transfer capability is 870 MW at peak demand and 1,000 MW at summer typical and winter reference periods. The maximum transfer capability is limited by voltage stability or transient stability limit.

The maximum transfer capability from SNSW to Victoria is 400 MW at peak demand, summer typical and winter reference periods. This is limited by a voltage stability limit. When available, Victoria's SIPS allows the 330 kV lines between South Morang and Murray to operate at a higher thermal capacity for a short period following a critical contingency.

Identified need

The identified need for the VNI West project has not changed since the previous ISPs. VNI West will increase transfer capacity between New South Wales and Victoria to realise net market benefits by:

- efficiently maintaining supply reliability in Victoria following the closure of further coal-fired generation and the decline in ageing generator reliability – including mitigation of the risk of existing plant closing earlier than expected,
- facilitating efficient development and dispatch of generation in areas with high quality renewable resources in Victoria and southern New South Wales through improved network capacity and access to demand centres, and

[98] From 1 November 2025, AEMO's Victorian network functions transferred to a new State Business Corporation, VicGrid Body Corporate (VicGrid), including responsibility for Transmission Company Victoria (TCV) and the VNI West project.

[99] See https://www.vicgrid.com.au/transmission-projects/victoria-to-nsw-interconnector-west.

[100] See https://www.energyco.nsw.gov.au/225-million-south-west-rez-investment-secure-nsw-energy-future.

• enabling more efficient sharing of resources between NEM regions.				
Progress and next steps				
VNI West was determined to be an actionable ISP project in the 2020 (different candidate option), 2022 and 2024 ISPs and remains actionable in the 2026 ISP. The RIT-T proponents for this project are Transgrid and AVP (now VicGrid). The RIT-T was completed in May 2023. AEMO provided feedback loop confirmation to Transgrid in December 2023 that the project addresses the identified need and aligns with the optimal development path in the most recent ISP. Early works and community engagement and consultation are being undertaken by Transgrid and Transmission Company Victoria (TCV) [101]. The Minister issued the final scoping requirements for the Environment Effects Statement (EES) for VNI West, following consideration of public comments received on the Draft scoping requirements[102]. In November 2025, Iberdrola was awarded the contract to design and develop the project in collaboration with TCV and subsequently submit a proposal to build, own and operate the transmission line. Independent experts are carrying out a range of technical studies and field surveys to assist in identifying potential project impacts.				
Credible option(s)				
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
VNI West: South West NSW REZ (N5 Option 1, N5 Option 2) Stage 1 • Upgrade Dinawan – Wagga Wagga – Gugaa double-circuit line from 330 kV to 500 kV operation and bypass at Wagga Wagga (lines built at 500 kV as part of Project EnergyConnect and HumeLink). • Establish Dinawan 500 kV switchyard with three[103] 500/330 kV 1,500 MVA transformers. • 500 kV line shunt reactors at both ends of the 500 kV double-circuit Dinawan – Gugaa lines. • Bring forward the line shunt reactors for the Dinawan – Tragowel 500 kV double-circuit for voltage support at Dinawan.	South West NSW REZ: Actionable NSW Project[104] [ISP candidate option]	REZ: N5: 600 (+1,800[105])	7,600[106] (South West NSW REZ + Interconnector) Class 4 (-30%/+50%) ($2025)	**Timing advised by proponent:** South West NSW REZ: August 2029[107]

[101] From 1 November 2025, AEMO's Victorian network functions transferred to a new State Business Corporation, VicGrid Body Corporate (VicGrid), including responsibility for Transmission Company Victoria (TCV) and the VNI West) project.

[102] See https://vniwproject.com.au/about-vni-west/project-overview.

[103] A third Dinawan transformer (N5 Option 2) has been added to the South West NSW REZ scope to expand the REZ transfer capacity from Dinawan by 1,800 MW. This has been modelled separately at an additional cost of $116 million Class 5b (±50%), above the $7,600 million cost of VNI West, which includes two transformers only.

[104] The South West NSW REZ component of VNI West is an actionable New South Wales project rather than an actionable ISP project. This project will progress under the Electricity Infrastructure Investment Act 2020 (NSW) rather than the ISP framework.

[105] A third Dinawan transformer (N5 Option 2) has been added to the South West NSW REZ scope to expand the REZ transfer capacity from Dinawan by 1,800 MW, based on advice from Transgrid and EnergyCo.

[106] AEMO has reported the total project cost. Transgrid has advised $565 million of this amount relates to approved early works and other incurred costs. These already incurred costs have been excluded from the 2026 ISP CBA in accordance with the AER's CBA Guidelines.

[107] AEMO has assumed an earliest in-service date of June 2030 for the SW REZ component of VNI West per Transgrid advice for the 2025 Electricity Network Options Report. Transgrid has since advised that the timing for this component is now August 2029. The 2026 ISP has found that it is more efficient to deliver VNI West as a single integrated project rather than staging the South West NSW REZ component ahead of the interconnector upgrade.

• Cut-in Gugaa substation between Lower Tumut – Wagga 330 kV single-circuit overhead line (line TL51). • Rebuild 330 kV line between Gugaa and Wagga (section of TL51) as a new double-circuit overhead line, using the Line TL51 easement. Pre-requisite: HumeLink, Project EnergyConnect				
VNI West: Victoria – New South Wales (Bulgana – Kerang – Dinawan) Stage 2 • A new 500 kV double-circuit overhead line from near Bulgana to Tragowel (near Kerang) to Dinawan, including series compensation on the line near Tragowel. • Establish new Tragowel Terminal Station with two 500/220 kV 1,000 MVA transformers. • 220 kV connections from the new Tragowel Terminal Station to the existing 220 kV lines near Kerang. • Eildon – Thomastown and Rowville – Thomastown 220 kV lines are to be cut into at South Morang creating normally operating direct connection between Eildon 220 kV and Rowville 220 kV, in place of previously proposed modular power flow controllers, to prevent overloading on the 220 kV lines between Dederang and Thomastown. South Morang – Thomastown sections of lines are to be bridged together with existing South Morang – Thomastown lines increasing the capacity of those lines. • 500 kV line shunt reactors at both ends of the two following 500 kV circuits: – (i) near Bulgana – Tragowel. – (ii) Tragowel – Dinawan. At Dinawan by reconfiguring the 500 kV busbar reactors installed in Stage 1. • Two new 500 kV bays and line exits with a total of two 500 kV line shunt reactors at the Terminal Station near Bulgana. • Up to +/- 400 MVAr dynamic reactive compensation at the new 220 kV Tragowel Terminal Station. • Reconfigure 2 x 120 MVAr reactors at Wagga 330 kV substation for voltage support. • Series compensation capacitors on both of the 500 kV circuits between Tragowel and near Bulgana, to reduce impedance on the new 500 kV network and thereby improve network load sharing with, and manage network loading on the existing 330 kV Victoria – New South Wales Interconnector and the existing 220 kV western Victoria network between Bendigo and Kerang. Pre-requisite: VNI West – South West NSW REZ Stage 1, Victorian Western Renewables Link, HumeLink, Project EnergyConnect	VIC-NSW: Actionable ISP Project [ISP candidate option]	Forward: 1,890 Reverse: 1,670 REZ: V1: 1,580 WV2: 200		**Timing advised by proponent:** VIC-NSW: November 2031.

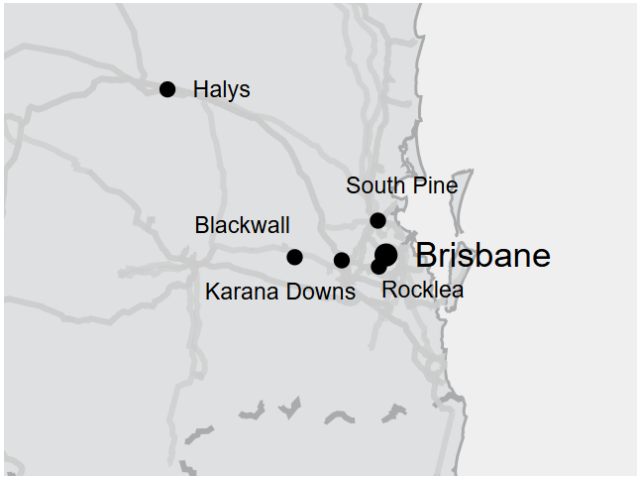
A5.3.10 Brisbane Area 275 kV Reinforcement

Summary

The 2024 ISP and Draft 2026 ISP reflected Queensland Government policy settings and advice from Powerlink at the time, which indicated that constraints in the 275 kV network around the Blackwall, South Pine and Rocklea area would be addressed as part of broader network development and were therefore not explicitly modelled. Since the Draft 2026 ISP, Powerlink has advised that an augmentation to address these constraints should no longer be assumed to proceed and AEMO's ISP input and assumptions for the Southern Queensland (SQ) to CQ flow path be revised. A new separate Brisbane Area 275 kV Reinforcement option has been proposed by Powerlink in the 2026 ISP to address these constraints.

The Brisbane Area 275kV Reinforcement is a 275 kV network augmentation in South East Queensland that strengthens the transfer capability between SQ and CQ. The Brisbane Area 275 kV Reinforcement enhances the ability of generation in Southern Queensland and New South Wales to support demand in Central Queensland, Gladstone Grid and Northern Queensland.

The 2026 ISP identifies the Brisbane Area 275 kV Reinforcement as an actionable ISP project. The Central Queensland to Southern Queensland Expansion previously known as Queensland SuperGrid South is no longer an actionable ISP project in the 2026 ISP.



Existing network capability

From CQ to SQ, the maximum transfer capability is approximately 2,100 MW. This capability is applicable in peak demand, summer typical, and winter reference periods. The maximum power transfer from CQ to SQ is limited by transient or voltage stability following a Calvale to Halys 275 kV circuit contingency.

From SQ to CQ, maximum transfer capability is approximately 415 MW[108] in peak demand and summer typical periods, and approximately 850 MW in winter reference periods. The maximum power transfer from SQ to CQ is limited by the thermal capacity of the South Pine – Blackwall 275 kV line following a contingency of the South Pine to Mount England 275 kV line.

Identified need

The identified need for this project is to realise net market benefits by:

- increasing the capability of the transmission network between SQ and CQ, and
- enabling access to lower-cost generation from SQ to meet demand in CQ, GG and NQ.
- supporting reliability outcomes by enabling supply to meet demand in CQ as local coal-fired generation retires.

Progress and next steps

AEMO has identified the Brisbane Area 275 kV Reinforcement project as a newly actionable ISP project for this 2026 ISP.

For this project, AEMO specified that:

RIT-T proponent(s): Powerlink,

[108] In the Draft 2026 ISP, the Brisbane Area 275 kV Reinforcement (previously referred to as Karana Downs) was assumed to proceed and the SQ to CQ transfer capability was 1,100 MW after its completion. Following discussions from Powerlink, the existing transfer limit has been reduced from 1,100 MW to 415 MW, representing the network before the Brisbane Area 275 kV Reinforcement.

- ISP candidate option: Option 7 see below,
- The PADR must be published and made available to relevant persons by 25 June 2028
- Scenarios to be assessed: *Slower Growth* (27%), *Step Change* (46%), and *Accelerated Transition* (27%), and
- AEMO has called for submissions on non-network options[109] for this project with the potential to satisfy, or contribute to satisfying, the identified need. AEMO will provide all submissions to the RIT-T proponent for consideration in the PADR.

Early works for the Brisbane Area 275kV Reinforcement project may include:

- Stakeholder engagement – implementing meaningful engagement programs, including engagement with Traditional Owners and land councils, landholders, government, local communities, councils, environmental groups and other impacted stakeholders.
- Land use planning – planning approval activities, cultural heritage studies, environmental impact assessments and other necessary approval activities.
- Land acquisition – secure access to enable investigations; and acquire land and/or negotiate binding land options.
- Procurement activities – contractor engagement, procurement of equipment with long lead times, tendering activities to refine accuracy of cost estimates, and pre-construction works.
- Project development – additional activities required to support timely delivery of the project, for example some project management and design activities.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	Timing
SQ-CQ Option 7 • New high-capacity double-circuit 275 kV between Blackwall and the Karana Downs location. • Rearrange existing 275 kV circuits between Blackwall, South Pine and Rocklea as Blackwall to Rocklea double-circuit, and Blackwall to South Pine double-circuit.	Actionable ISP Project [ISP candidate option]	Forward: 685 Reverse: 0	63 Class 5 (-20% to +30%)	**Timing advised by proponent:** June 2032

[109] For details on the call for submissions on non-network options, see https://www.aemo.com.au/consultations/current-and-closed-consultations/2026-isp-non-network-options-consultation-brisbane-area-275kv-reinforcement.

A5.3.11 Central-West Orana REZ Expansion

Summary

Central-West Orana REZ has been identified by the New South Wales Government as the state's first pilot REZ. The Central-West Orana REZ is electrically close to the Sydney load centre and has moderate wind and solar resources.

The Central-West Orana REZ was declared on 5 November 2021 and amended in December 2023 under the *Electricity Infrastructure Investment Act 2020* (NSW)[110]. The Central-West Orana REZ has an intended 6,000 MW[111] of additional network capacity, with an initial stage of 4,500 MW to be delivered from December 2028, to be constructed in the Central-West New South Wales region of the state. The declaration identifies that EnergyCo New South Wales will be the infrastructure planner responsible for coordinating the development of the REZ.

EnergyCo has awarded 7.7 GW of generation and storage projects under its access rights scheme[112]. The 2026 ISP has refined its modelling of NSW REZ access rights to align with New South Wales government data.

The project to establish the Central-West Orana REZ Network Infrastructure Project is considered a committed project as discussed in Section A5.2.4. The 2026 ISP identifies the subsequent Central-West Orana REZ Expansion as an actionable New South Wales project. This Central-West Orana REZ Expansion project further expands the committed Central-West Orana REZ Network Infrastructure Project and allows more renewable generation to supply New South Wales load centres.

Existing network capability

With committed project Central-West Orana REZ Network Infrastructure Project identified in Section A5.2.8, the Central-West Orana REZ transfer capacity increases by 4,500 MW, subject to the downstream Hunter Transmission Project augmentation completing.

Identified need

- The identified need for this project is to realise net market benefits by enabling increased access to lower-cost generation from Central-West Orana REZ to meet demand in Sydney, Newcastle, Wollongong following the completion of the initial stage of Central-West Orana REZ Network Infrastructure Project.

Progress and next steps

The Central-West Orana REZ Network Infrastructure Project (refer to Section A5.2.4) is considered a committed project, with ACEREZ appointed as the network operator after contract and financial close was reached in April 2025, following a robust procurement process overseen by the AER.

Central-West Orana REZ Expansion is a subsequent expansion to the Central-West Orana REZ Network Infrastructure Project. Central-West Orana REZ Expansion will progress as an actionable New South Wales project and will proceed under the *Electricity Infrastructure Investment Act 2020* (NSW) rather than the RIT-T framework. The Central-West Orana REZ declaration[111] identifies that EnergyCo NSW is the appointed infrastructure planner responsible for coordinating the delivery of the REZ. More information about the delivery of the Central-West Orana REZ is available on EnergyCo NSW's website[110].

[110] See https://www.energyco.nsw.gov.au/cwo-rez.

[111] See Government Gazette of New South Wales No 580 of Friday 15 December 2023, at https://gazette.nsw.gov.au/gazette/2023/12/2023-580.pdf.

[112] See https://www.energyco.nsw.gov.au/central-west-orana-access-scheme.

Credible option(s)				
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
N3 Option 1: • Construct Merotherie-B 500/330 kV substation with 3 x 500/330/33 kV 1,500 MVA transformers (at least 2 km away from Merotherie substation – re-named as Merotherie-A). • Terminate one of the existing 500 kV DCST transmission lines between Merotherie – Barigan Creek at Merotherie-B and Wollar 500 kV substations respectively. • Construct a DCST 500 kV transmission line between Merotherie-A and Merotherie-B 500 kV substations. • Expand Elong Elong as 500/330 kV substation with 3 x 500/330/33 kV 1,500 MVA transformers. • Operate Merotherie – Elong Elong transmission lines at 500 kV. • Terminate one of the 500 kV DCST transmission lines from Merotherie – Elong-Elong at Merotherie-B. Pre-requisite: Central-West Orana REZ Network Infrastructure project	Actionable New South Wales Project[113]	1,500	855 Class 5b (±50%)	**Timing advised by proponent:** March 2033

[113] Cetnral-West Orana REZ Expansion project is an actionable New South Wales project rather than an actionable ISP project. This project will progress under the *Electricity Infrastructure Investment Act 2020* (NSW) rather than the ISP framework.

A5.3.12 Project Marinus Stage 2

Summary

Marinus Link is a proposed 1,500 MW capacity undersea and underground electricity interconnection between Tasmania and Victoria delivered by Marinus Link Pty Ltd, which will be operating in parallel with the existing Basslink interconnector. It is proposed to be delivered as two 750 MW HVDC developments between Burnie area in Tasmania and Latrobe Valley in Victoria. Project Marinus Stage 1 is now considered an anticipated project covered in Section A5.2.7, comprising the first 750 MW development. Project Marinus Stage 2 comprises the second 750 MW development.

This project also includes HVAC transmission network developments in Tasmania progressed by TasNetworks, referred to as the North West Transmission Developments (NWTD), to support the interconnector capacity to be provided by Marinus Link.

Collectively, these investments are referred to as Project Marinus.

Project Marinus was identified as an actionable ISP project in the 2022 ISP, and confirmed in the 2024 ISP. Marinus Link Pty Ltd and TasNetworks have completed a RIT-T for this network augmentation. The PACR[114], the third report of the RIT-T, was published in June 2021. This RIT-T analysis was updated in July 2025[115]. Project Marinus passed AEMO's feedback loop assessment in August 2025[116].

On 1 August 2025, Tasmanian, Victorian and Australian governments confirmed a Final Investment Decision to proceed with Stage 1 of Project Marinus.

Stage 2 is reassessed to be actionable for this 2026 ISP.

Existing network capability

The transfer capacity between Tasmania and South East Victoria is limited by the thermal capability of Basslink (the HVDC system between Tasmania and Victoria).

Transfer capacity from Tasmania to South East Victoria is limited to 594 MW and from South East Victoria to Tasmania is limited to 478 MW at times of peak demand, summer typical and winter reference periods. Additionally, a seasonally variable daily energy limit of around 10,600 MWh per day is applied to maintain gross flows within allowable thermal ratings of the cable.

Following the anticipated Stage 1, the combined transfer limit from Victoria to Tasmania will be 978 MW, and from Tasmania to Victoria 1,344 MW. This is based on an assumption that the largest single contingency in Tasmania is effectively limited to 500 MW.

Additional network upgrades may also be required as part of the Tasmania REZ Expansion (see section A5.3.6) to connect new generation and access the network upgrades associated with Project Marinus.

[114] TasNetworks. Project Marinus PACR. At https://www.marinuslink.com.au/wp-content/uploads/2021/06/Project-Marinus-RIT-T-PACR.pdf.

[115] Marinus Link. RIT-T update report – 2025, at https://www.marinuslink.com.au/rit-t-process/.

[116] See https://www.aemo.com.au/newsroom/news-updates/project-marinus-passes-feedback-loop-assessment.

Identified need				
The identified need for Project Marinus Stage 2 has not changed since the 2022 ISP: the characteristics of customer demand, generation and storage resources vary significantly between Tasmania and the rest of the NEM. Increased interconnection capacity between Tasmania the other NEM regions has the potential to realise a net economic benefit by capitalising on this diversity.				
Progress and next steps				
On 15 August 2025, AEMO confirmed that Project Marinus passed the feedback loop assessment. AEMO's feedback loop assessment confirms that: • Project Marinus addresses the relevant identified need specified, and aligns with the ODP referred to, in the 2024 ISP, and • the total cost (in $2023) of the project ($7,570 million), including Stage 1 ($5,035 million) and Stage 2 ($2,535 million), does not change the status of the actionable ISP project as part of the ODP specified in the 2024 ISP[117]. The progression of Project Marinus Stage 2, under the ISP framework, is subject to the ISP feedback loop and contingent project process.				
Credible option(s)				
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	**Timing**
Project Marinus Stage 2 (TAS-SEV Option 2A[119]): • An additional 750 MW monopole HVDC link between Burnie area in Tasmania and Hazelwood area in Victoria. • An additional new 750 MW HVDC monopole converter station in Burnie area. • An additional new 750 MW HVDC monopole converter station in Hazelwood area. • A new 220 kV switching station at Staverton. • A new double-circuit 220 kV transmission line from Staverton to Hampshire. • Cut-in both Sheffield-Mersey Forth double-circuit 220 kV lines at Staverton. • Capacity increase of the four Sheffield–Staverton 220 kV transmission circuits. • A new 500 kV connection from converter station in Hazelwood area. Pre-requisite: Project Marinus Stage 1, T2 Option 1	Actionable ISP Project [ISP candidate option]	Forward: 750 Reverse: 750[118]	2,485[119,120,121] Class 4(±30%)	**Timing advised by proponent:** December 2034.

[117] Project Marinus passes feedback loop assessment, at https://www.aemo.com.au/newsroom/news-updates/project-marinus-passes-feedback-loop-assessment.

[118] The combined transfer limit from Victoria to Tasmania is 1,728 MW, and from Tasmania to Victoria 2,094 MW. This is based on an assumption that the largest single contingency in Tasmania is limited to 500 MW.

[119] TAS-SEV Option 2A is a variant of Project Marinus Stage 2 (TAS-SEV Option 2) that has the Burnie-Hampshire Hills double-circuit 220 kV lines scope ($184 million) removed, as these lines are built earlier under the Tasmania REZ Expansion (T2 Option 1), which forms a separate actionable ISP project.

[120] The reported cost of $2,485 million (in $2025) represents the total cost of TAS-SEV Option 2A, escalated from the $2023 cost of $2,351 million (proponent cost $2,535 million less $184 million for Burnie-Hampshire Hills).

[121] Marinus Link Pty Ltd has advised that $51 million, in $2023, of this amount relates to approved early works and other incurred costs. These already incurred costs have been excluded from the 2026 ISP CBA in accordance with the AER's CBA Guidelines.

A5.4 Future ISP projects

Future ISP projects deliver net market benefits to consumers under at least one scenario but are not needed until later in the horizon. The optimal timing for each scenario for the least-cost candidate development path is shown in this section.

Details are provided for seven future ISP projects that are developed in *Step Change* by 2050 or are currently undergoing a RIT-T.

Other future ISP projects that are developed in only one scenario are listed in Section A5.4.8.

A5.4.1 Eastern Victoria Reinforcement

Summary

The 2024 ISP identified a future ISP project for the Eastern Reinforcement program, which is now called Eastern Victoria reinforcement program.

The South East Victoria (SEV) to the MEL flow path, introduced since the 2024 ISP, represents connections between the Gippsland region of Victoria and the main load centre of Melbourne and Geelong. This new SEV to MEL flow path allows more detailed analysis of this corridor. Since then, AVP (now VicGrid) published a PSCR[122] and VicGrid has published the 2025 VTP[123] which initiates the public consultation process.

The 2026 ISP identifies the Eastern Victoria reinforcement program as a future ISP project. In all scenarios, a third transformer is identified as being needed in the mid- to late 2030s, either at Rowville or Cranbourne. This would increase the thermal capability of the SEV to MEL transmission corridor to supply load following the retirement of generators in the Latrobe Valley, increased export from Tasmania after the commissioning of Project Marinus Stage 1, and increased generation from Gippsland offshore wind. In the *Slower Growth* scenario, more extensive augmentation may be required to reinforce Eastern Victoria. This is because average flows from Tasmania to Victoria are higher in this scenario, driven by lower Tasmanian demand while still satisfying the Tasmanian Renewable Energy Target (TRET).

Existing network capability

SEV to MEL maximum transfer capability is 7,100 MW at peak demand, 7,430 MW at summer typical and 8,170 MW at winter reference periods. The maximum transfer capability is limited by the thermal capability of the 220 kV lines between Rowville and Yallourn or Brunswick and Richmond.

The same transfer limits apply in the reverse direction, however power is not expected to frequently flow from MEL to SEV, since the major load centre is Greater Melbourne and Geelong, represented in the MEL sub-region.

These transfer limits are applicable for the existing network before retirement of Yallourn Power Station. After the retirement of Yallourn Power Station and the implementation of the modified parallel operation mode of Latrobe Valley reconfiguration and inter-trip protection project being progressed by VicGrid[124], the forward direction limit is expected to reduce by 1,175 MW for peak demand, 1,560 MW for summer typical and 2,000 MW for winter reference.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
SEV-MEL Option 1: • Install a third 1,000 MVA 500/220kV transformer at Rowville on bus 3-4 group. Pre-requisite: Post Yallourn power station closure. Latrobe Valley modified parallel mode switching configuration and inter-trip protection scheme to prevent overloads on Hazelwood-Yallourn 220 kV lines or Hazelwood 500/220 kV transformers.	Future	Forward: 1,000 Reverse: N/A	70 Class 5 (+100/-50%)	-	2033-34	2033-34

[122] Eastern Victoria Grid Reinforcement, at https://aemo.com.au/-/media/files/initiatives/eastern-victoria-grid-reinforcement/eastern-victoria-grid-reinforcement-pscr.pdf?la=en.

[123] 2025 Victorian Transmission Plan, at https://www.energy.vic.gov.au/renewable-energy/vicgrid/the-victorian-transmission-plan.

[124] AEMO 2025 *Victorian Annual Planning Report* at https://www.vicgrid.com.au/transmission-planning/victorian-annual-planning-report.

Pre-requisite: None **Earliest in-service date:** 2031-32.						
SEV-MEL Option 2: • Install a third 1,000 MVA 500/220kV transformer at Rowville on bus 3-4 group. • Install series impedance on the Hazelwood 500/220 kV transformers. Pre-requisite: Post Yallourn power station closure. Latrobe Valley modified parallel mode switching configuration and inter-trip protection scheme to prevent overloads on Hazelwood-Yallourn 220 kV lines or Hazelwood 500/220 kV transformers. Pre-requisite: None **Earliest in-service date:** 2031-32.	Future	Forward: 2,700 Reverse: N/A	350 Class 5 (+100/-50%)	2038-39	-	-
SEV-MEL Option 4 (ISP alternate option to SEV-MEL Option 2[125]): • Install 2nd 1,000 MVA 500/220kV transformer at Cranbourne. • Transfer existing Rowville 500/220kV A2 transformer from bus group 1-2 to bus 3-4 group. • Install series impedance on the Hazelwood 500/220 kV transformers. Pre-requisite: Post Yallourn power station closure. Latrobe Valley modified parallel mode switching configuration and inter-trip protection scheme to prevent overloads on Hazelwood-Yallourn 220 kV lines or Hazelwood 500/220 kV transformers. Pre-requisite: None **Earliest in-service date:** 2031-32.	Future	Forward: 2,500 Reverse: N/A	350 Class 5 (+100/-50%)	2038-39	-	-

[125] AEMO acknowledges that there may be fault level issues associated with installing a third transformer at Rowville (option 2) that could not be costed to a class 5 accuracy at the time of the publication for the 2026 ISP. As such, SEV – MEL option 4 is listed as an alternate ISP project with the same timing, which may become more cost effective than option 2 when considering fault level mitigation requirements.

A5.4.2 Queensland – New South Wales Interconnector (QNI) Connect

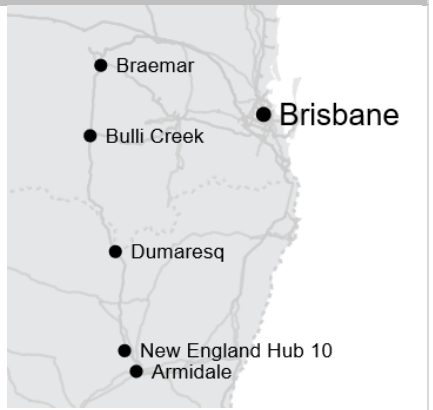
Summary

The NNSW and SQ corridor represents a portion of the network which forms part of the QNI. Development options on this corridor include the northern sections of proposed QNI Augmentations.

A project to increase the transfer capacity of the existing QNI (referred as 'QNI Minor') has been completed. The QNI Minor project, which increases the transfer capacity of the existing QNI, has been commissioned and inter-network testing is at the final hold point stages. Transgrid, Powerlink and AEMO continue to look for opportunities to undertake the testing to release full capacity of QNI Minor.

An additional new interconnection between Queensland and New South Wales (QNI Connect) would increase transfer capacity between Queensland and New South Wales to share renewable energy and firming services between regions. Powerlink and Transgrid completed preparatory activities report[126] for QNI Connect 500 kV and 330 kV options in June 2023, and Transgrid provided an addendum to that report in March 2024[127].

QNI Connect was identified as an actionable ISP project in the 2024 ISP. However, it is now classified as a future ISP[128] project in the 2026 ISP. While QNI Connect continues to provide net market benefits, these benefits are later in the horizon than previously assessed, so the project is no longer considered actionable. QNI Connect is still assessed as being needed in all three scenarios post 2040, making it a future ISP project.



Existing network capability

Transfer capabilities are modelled with the QNI Minor upgrade now in service, which is nearing the final stages of inter-network testing to release the designed maximum capacity.

NNSW to SQ expected transfer capability is 950 MW at peak demand, summer typical and winter reference period.

In the reverse direction, SQ to NNSW expected transfer capability is 1,450 MW at peak, summer typical and winter reference periods.

The maximum transfer capacity is limited by the thermal capacity of Sapphire-Armidale 330 kV line for an outage of Dumaresq-Armidale 330 kV line.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
NNSW-SQ Option 2: • A new 330 kV double-circuit line from New England North Hub (Hub 10) to Dumaresq to Bulli Creek to Braemar.	Future	Forward: 1,260 Reverse: 1,700	2,989 (Total project cost)	2040-41	2041-42	2041-42

[126] See Preparatory Activities page, at https://aemo.com.au/consultations/current-and-closed-consultations/2023-transmission-expansion-options-report-consultation.

[127] See 2023-24 inputs, assumptions, and scenarios page, at https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2024-integrated-system-plan-isp/current-inputs-assumptions-and-scenarios.

[128] Powerlink and Transgrid, the proponents of QNI Connect, are no longer progressing a PADR as the project is no longer actionable in the 2026 ISP.

• New 330/275 kV transformers at Braemar. • 330 kV Line shunt reactors at New England North (Hub 10) , Dumaresq, Bulli Creek, and Braemar, for the 330 kV lines between North (Hub 10) and Braemar (via Dumaresq and Bulli Creek). Pre-requisite: New England REZ Network Infrastructure Project **Earliest in-service delivery date:** 2033-34			Class 5b (±50%) (NSW) Class 5 (+50%/-30%) (QLD)			

A5.4.3 South West to South East Queensland Reinforcement

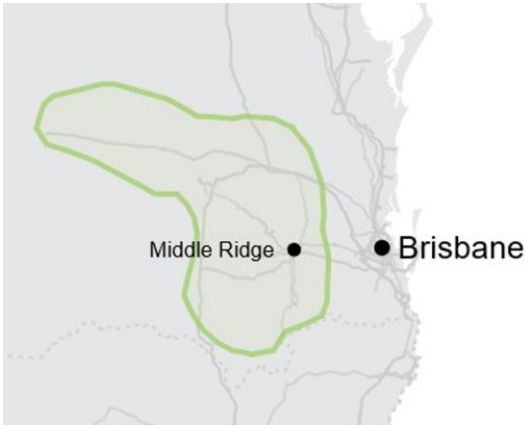
Summary

The South West to South East Queensland Reinforcement project allows generation in the Darling Downs REZ in south-west Queensland to supply Brisbane. The Darling Downs REZ extends from the border of New South Wales around Dumaresq to Columboola within the Surat region of Queensland, and has good solar and wind resources. A number of large solar and wind projects are already connected within the zone.

Upgrade options associated with the Group Constraint SWQLD1 may be required to increase the generation capacity in south-west Queensland. These augmentations will facilitate transmission of this generation to load centres in the locality of Brisbane.

These options are primarily driven by the continued development of renewable generation in the Darling Downs REZ, where strong resource availability and increasing generation capacity are expected to place greater demand on the existing transmission network.

In the 2024 ISP, the Darling Downs REZ expansion was identified as a future project. The project is now known as South West to South East Queensland Reinforcement, which remains as a future project eventually needed in all three scenarios in the 2026 ISP. Both Option 1 and Option 2 are required for this REZ. Joint planning between AEMO and Powerlink will be conducted to further the delivery sequence of these options.



Existing network capability

The existing network facilitates power transfer from south-west Queensland to the load centre in Brisbane. This transmission can support up to approximately 5,300 MW of generation into Brisbane during summer peak, summer typical and winter reference conditions.

This capability depends on the generation in the Western Downs area, the generation in the Darling Downs area, the generation in the Southern Downs area, the flow of power from New South Wales, and the flow of power from central Queensland.

Credible option(s)

Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
SWQLD1 Option 1: • Replace existing 330/275 kV 1,300 MVA transformer at Middle Ridge with 330/275 kV 1,500 MVA transformer. Pre-requisite: None **Earliest in-service date:** 2028-29	Future	150	26 Class 5b (±50%)	2040-41	2041-42	2037-38

SWQLD1 Option 2: • Implement a limit extension special protection scheme – run back of generation in south-west Queensland with 300 MW battery energy storage system (BESS) response in south-east Queensland (similar to a virtual transmission line). Pre-requisite: None **Earliest in-service date:** 2028-29	Future	330	7 Class 5b (±50%)	2040-41	2041-42	2037-38

A5.4.4 Central to North Queensland Reinforcement (Stage 2)

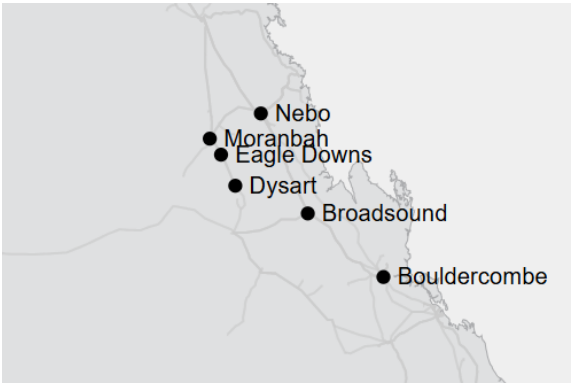
Summary

The Central to North Queensland Reinforcement (Stage 2) project improves transfer capability between northern generation zones and load centres in central and southern Queensland. The augmentation supports the efficient export of renewable generation from Northern Queensland REZs, where resource availability is strong but local demand is relatively limited.

This option is primarily driven by the progressive development of renewable generation in Northern Queensland. As capacity increases, existing network capability becomes increasingly constrained, resulting in higher losses and reduced ability to transfer energy south. The augmentation would alleviate these limitations by increasing transfer capacity and improving the efficiency of north-to-south power flows.

Powerlink has identified that without further augmentation (in addition to Central to North Queensland Reinforcement [Stage 1]), the existing network in this area is approaching end-of-life and would require replacement expenditure over the ISP horizon, estimated at $920 million ($2025)[129].

The 2026 ISP identifies the Central to North Queensland Reinforcement (Stage 2) project as a future ISP project in two of the three scenarios, driven by increased demand in central and southern Queensland and continued development of renewable generation in Northern Queensland.



Existing network capability

The existing network capability, including augmentation under CQ-NQ Option 3 (the actionable Central to North Queensland Reinforcement (Stage 1) , is characterised by a forward transfer limit of approximately 1,550 MW under peak demand and typical summer conditions, increasing to approximately 1,750 MW under winter reference conditions. This forward limit is primarily constrained by voltage stability in NQ, particularly following the loss of key transmission elements in either NQ or CQ.

In the reverse direction, the transfer limit increases to approximately 1,300 MW across all seasons with the inclusion of Central to North Queensland Reinforcement (Stage 1). The dominant constraint remains a transient stability limitation associated with power transfer from NQ to CQ. While these limits vary depending on generation dispatch, the lowest observed reverse limit typically occurs under conditions of high generation output in NQ combined with high southward transfer from CQ to SQ.

[129] The reported cost of $1,850 million (in $2025) reflects the expected capital expenditure required to deliver CQ-NQ Option 4. However, Powerlink has advised AEMO that delivering CQ-NQ Option 4 within the 2026 ISP horizon will enable replacement expenditure to be avoided. Therefore, the cost applied by AEMO for CQ-NQ Option 4 in ISP modelling, and in AEMO's cost-benefit analysis, reflects the estimated cost of CQ-NQ Option 4 ($1,850 million, $2025) less the estimated value of the replacement expenditure ($920 million, $2025) that are expected to be avoided if CQ-NQ Option 4 is delivered within the 2026 ISP horizon. This results in a cost of $930 million being applied in ISP modelling.

Credible option(s)						
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
CQ-NQ Option 4: • A new 275 kV high-capacity double-circuit line between Bouldercombe and Broadsound. • A new 275 kV high-capacity double-circuit line between Broadsound and Nebo. • Decommission the existing single circuits Bouldercombe-Broadsound (#820), Bouldercombe-Nebo (#821) and Broadsound-Nebo (#834). **Earliest in-service date:** 2033-34	Future	Forward: 500 Reverse: 1,000	1,850[130] Class 5b (±50%)	-	2042-43	2035-36

[130] The reported cost of $1,850 million (in $2025) reflects the expected capital expenditure required to deliver CQ-NQ Option 4. However, Powerlink has advised AEMO that delivering CQ-NQ Option 4 within the 2026 ISP horizon will enable replacement expenditure to be avoided. Therefore, the cost applied by AEMO for CQ-NQ Option 4 in ISP modelling, and in AEMO's cost-benefit analysis, reflects the estimated cost of CQ-NQ Option 4 ($1,850 million, $2025) less the estimated value of the replacement expenditure ($920 million, $2025) that are expected to be avoided if CQ-NQ Option 4 is delivered within the 2026 ISP horizon. This results in a cost of $930 million being applied in ISP modelling.

A5.4.5 Northern Transmission Project (formerly Mid North South Australia REZ Expansion)

Summary

In the 2024 ISP, the Mid North South Australia REZ Expansion was identified as actionable. Since then, the project has been renamed the Northern Transmission Project (NTx), with significant scope and cost revisions as part of the RIT-T.

NTx is intended to expand the reach and capability of the transmission network to support projected demand growth and enable access to renewable energy resources beyond the high-value agricultural areas of the Mid North. This includes supporting potential development in the northern and eastern regions of South Australia, where mining, renewable generation, green iron and steel, and other industrial activity are being considered.

The 2026 ISP finds that forecast demand growth in South Australia can be met over the medium term through a combination of grid-scale storage, renewable generation, and improved utilisation of the existing transmission network. Within the ISP optimal development path, NTx is identified as a future ISP Project that will become actionable under scenarios with strong load growth (for example, in *Accelerated Transition*).

Following preparatory activities required by AEMO in 2022 and as part of the RIT-T process commenced in the 2024 ISP, ElectraNet published a PADR in April 2026 assessing the candidate development option identified in the 2024 ISP as well as other credible options. The PADR identified that the preferred option (PADR Option S2) provides net benefits for consumers, at an earlier timeframe than has been able to be confirmed in this 2026 ISP. The benefits in the PADR included resilience benefits which are not assessed in the ISP, in accordance with the current *ISP Methodology*.

Given the project remains on the ODP and there is an active RIT-T underway, AEMO considers ElectraNet should conclude the RIT-T. This will allow further assessment of local factors, system resilience, option value, future load development, and additional credible options. Continuing community engagement may also help to narrow the corridor and reduce uncertainty for affected communities, while ensuring community considerations are reflected in future planning and decision-making. Stopping and restarting engagement can be disruptive, may erode trust, and could make it more difficult to build and maintain social licence for the project over time.

Existing network capability

There are many wind farms in service in the S3, S4, S5 and S7 REZs, totalling around 2,400 MW of installed capacity, and 850 MW more committed and anticipated by 2030. Likewise, BESS totalling 380 MW of installed capacity are in service across these REZ, with 1,200 MW more committed or anticipated by 2030[131]. Two REZ group constraints (MN1 and MN2) are applied to represent thermal limits on the four parallel 275 kV and one 132 kV transmission lines from Mid-North South Australia to Adelaide (Para). This considers limits on S2, S3 and S4 REZ generation, imports to South Australia via the Project EnergyConnect and Murraylink interconnectors, and flows from Northern South Australia to Central South Australia.

The S2 and S4 REZs which form part of these group constraints each have their own individual existing network capabilities. In addition, two collective limits are modelled:

- MN1: The collective generation from S2, S3 and S4, the reverse flow on the Central South Australia-Northern South Australia flow path, and flow into South Australia on PEC and MurrayLink cannot exceed 1,630 MW (winter reference) or 1,460 MW (summer typical and peak demand) without additional network augmentation between Mid North South Australia and Adelaide.

[131] In addition to existing, anticipated, and committed battery storage, *Step Change* projects around 560 MW of eight-hour BESS (270 MW assumed close to Adelaide and 290 MW in the Mid-North SA REZ) by 2029-30 to satisfy the South Australia Firm Energy Target (FET). At the time of inputs being finalised for the final 2026 ISP, the South Australia Firm Energy Reliability Mechanism (SA FERM) tender 1 results (https://asl.org.au/-/media/services/files/sa-ferm/tender-round-1/260529-sa-ferm-t1-tender-outcomes-market-briefing-note) had not yet been released, so the firm capacity requirement was based on the FET, rather than successful projects in the SA FERM tender. The tender 1 results have awarded Firm Energy Reliability Mechanism Agreements (FERMAs) for projects with a Committed Output Capacity of 517 MW (the projects must be able to dispatch this capacity for 8 hours during LOR2 and LOR3 events).

• MN2: 90% of S2, 60% of existing S3, 90% of new entrant S3, and 40% of S4 REZ generation, 50% of the reverse flow on the Central South Australia-Northern South Australia flow path, 100% flow into South Australia on PEC and 80% of flow into South Australia on MurrayLink cannot exceed 1,120 MW without additional network augmentation between Mid North South Australia and Adelaide. This reflects potential overload on a Robertstown to Tungkillo 275kV line for loss of the parallel line.						
Credible option(s)						
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
Northern Transmission Project (NTx) "South[132]" (MN1 Option 2[133]) • Build a 275 kV double-circuit line from Bundey to a location close to Bolivar/Dry Creek. • 2 x new line-connected reactors at Bundey. • 2 x new line-connected reactors at a location close to Bolivar/Dry Creek. • New 275 kV substation at a location close to Bolivar/Dry Creek. • Connect new substation to existing metropolitan 275 kV network. • Disconnect existing Waterloo-Templers and Roseworthy-Para 132 kV lines at each end. • Build a 132 kV single-circuit line from Templers West to Templers. • 1 x 160 MVA, 275/132 kV transformer at Templers West. • Two new 132 kV single-circuit lines from Templers West to Templers and from Roseworthy to Templers West. • Replacement of 275/132 kV transformer at Robertstown with a 250 MVA unit. **Earliest in service date:** 2031-32[134]	Future	1,200 (MN1)	1,429[135] Class 5b (±50%)	-	-	2041-42

[132] The NTx PADR (https://ntxproject.com.au/wp-content/uploads/2026/04/NTx-PADR.pdf) also considers NTx "North" options, which were referred to as Central South Australia (CSA) to Northern South Australia (NSA) flow path options in the 2025 *Electricity Network Options Report*. The NTx PADR notes that NTx North options are subject to a RIT-T re-opening trigger for "additional new LILs assumed in Northern South Australia (as well as a higher assumed penalty for developing new solar generation in this region)". The final 2026 ISP has tested CSA-NSA Option 1 (NTx Option N1) as part of the development path building process, and also in the 2026 ISP high LIL and data centre sensitivity, and it was not found to provide positive net market benefits in the ISP core scenarios or sensitivities at an actionable or future ISP timing.

[133] This is the preferred option (NTx Option S2) identified in the NTx PADR which is also the "top-ranked credible option". The NTx PADR notes that the previous candidate ISP option from the 2024 ISP (MN1 Option 1) is "not commercially feasible" due to additional future costs involved for expanding the network with that option, elevated bushfire risk for that option and "the need to quarantine the existing spare bays at Para for future expansion".

[134] AEMO modelled this project with an earliest in-service date of July 2029, as advised by ElectraNet for the 2025 *Electricity Network Options Report*, and consistent with the NTx PADR (https://ntxproject.com.au/wp-content/uploads/2026/04/NTx-PADR.pdf) timing of "2029-30". ElectraNet has subsequently advised a later timing of "2031-32" in June 2026.

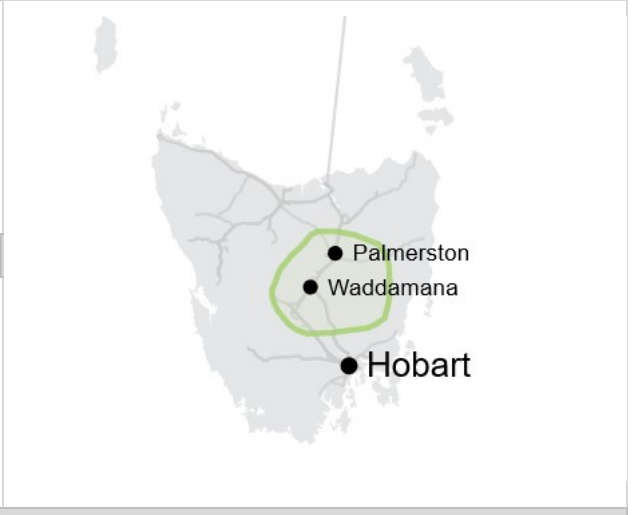
[135] This is the $2025 cost of this option provided by ElectraNet. Note that ElectraNet has advised that approximately $23 million of this amount relates to approved early works costs and other incurred costs. These already incurred costs have been excluded from the 2026 ISP CBA in accordance with the AER's CBA Guidelines.

A5.4.6 Second Tasmania REZ Expansion (formerly Waddamana to Palmerston transfer capability upgrade)

Summary

The Second Tasmania REZ Expansion (formerly Waddamana to Palmerston transfer capability upgrade) increases hosting capacity in Tasmania's Central Highlands REZ for potential renewable generation development. The Tasmania Central Highlands REZ has excellent quality wind resources and has good pumped hydro resources for potential future build. It is located close to major load centres at Hobart. Timing of the Tasmania Central Highlands REZ augmentation options is influenced by the timing of Project Marinus augmentations.

Waddamana to Palmerston transfer capability upgrade was an actionable project in the 2024 ISP. The 2024 ISP had Option 1 as the candidate ISP option. For the 2026 ISP, TasNetworks provided an additional Option 1A via joint planning, which is lower cost and provides similar amounts of capacity. TasNetworks will now consider this scope as an alternative option as part of the Tasmania REZ Expansion actionable project, see Section A5.3.6.



Existing network capability

The current total REZ transmission limit for existing (144 MW Cattle Hill Wind Farm) and new VRE before any network upgrade (but considering minor operational improvements) in the Central Highlands is approximately 702 MW for peak demand and summer typical conditions and 843 MW for winter reference condition. VRE development opportunities are anticipated around the Waddamana substation.

Note that a runback scheme is not considered for any new transmission lines.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
T3 Option 1A: • Convert Waddamana-Palmerston 110 kV line to 220 kV operation (line did previously operate at 220 kV). – Re-string with High Temperature and Low Sag conductor. – Re-build 3 km 220 kV transmission line with High Temperature and Low Sag conductor. • Install 220/110 kV transformer at Waddamana Substation. Pre-requisite: Project Marinus Stage 1	Future	555	224 Class 4 (-30% to +50%)	-	-	2034-35

A5.4.7 South West Victoria Expansion

Summary

The Greater Melbourne and Geelong (MEL) to West and North Victoria (WNV) flow path (introduced since the 2024 ISP) represents connections between the main load centre of Melbourne and Geelong to the north via South Morang to Dederang and Thomastown to Eildon, and connections to the west via Geelong to Moorabool, Sydenham to Moorabool, and Sydenham to Bulgana. The primary reason for selecting the South West Victoria Expansion is to increase the flow path capability between the WNV and MEL sub-regions[136].

The 2024 ISP identified a future ISP project in the west (Western Victoria Grid Reinforcement, now called Western Victoria Reinforcement, see section A5.3.2), and this new MEL to WNV flow path allows more detailed analysis of this corridor. Since then, AEMO Victorian Planning (now VicGrid) published a Project Specification Consultation Report (PSCR)[137] and VicGrid has published the 2025 Victorian Transmission Plan[138] which initiates the public consultation process.

Western Victoria Reinforcement has been identified as an actionable project in the 2026 ISP. In addition, this South West Victoria Expansion has been identified as a future project in the 2026 ISP. The Victorian Transmission Plan option (4.1 and 4.3) has been provided by VicGrid through joint planning, with the South West Victoria Expansion having the Western Victoria Reinforcement as pre-requisite.

Existing network capability

Generation from MEL is not expected to supply WNV (forward direction) at times of high demand periods. MEL to WNV maximum transfer capability is 3,000 MW for cases where Victorian load is between 4,000 MW and 6,000 MW. The maximum transfer capability is limited by the thermal capability of the 220 kV lines between Ballarat and Bendigo.

WNV to MEL maximum transfer capability is 2,300 MW at peak demand, 2,550 MW at summer typical and 4,880 MW at winter reference periods. The maximum transfer capability is limited by the thermal capability of the 220 kV lines between Moorabool and Geelong.

Following the Western Victoria Reinforcement (MEL-WNV Option 1 or 2), the MEL to WNV transfer capacity increases by 800 MW.

South West Victoria Expansion is a new double-circuit 500 kV line and associated works in South West Victoria. The augmentation would support the connection of high-quality wind generation in Victoria's west, including additional generation in the proposed South West and Central Highlands REZs.

VicGrid will evaluate expanding the South West further through the Victorian Transmission Plan and *National Electricity (Victoria) Act 2005* (NEVA).

[136] AEMO will continue joint planning with VicGrid to understand any discrepancies between the Draft 2026 ISP and the Victorian Transmission Plan, and will address any necessary changes in the final ISP.

[137] Western Metropolitan Melbourne Reinforcement, at https://aemo.com.au/-/media/files/initiatives/western-metropolitan-melb-reinforcement/western-metropolitan-melbourne-reinforcement-project-specification-consultation-report.pdf?la=en.

[138] 2025 Victorian Transmission Plan, at https://www.vicgrid.com.au/transmission-planning/victorian-transmission-plan.

Credible option(s)						
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
MEL-WNV Option 3 • A new 500 kV double-circuit line from Moorabool to locality of Truganina. • A new 500 kV single-circuit line from locality of Truganina to Sydenham. • New 500 kV substation in locality of Truganina with two 500/220 kV transformers, cut-in between Moorabool and Sydenham. • Two new 220 kV double-circuit lines from locality of Truganina to Deer Park. • Operate the three Deer Park to Keilor 220 kV circuits as normally closed, and operate the three Geelong to Deer Park circuits as normally open. • Rebuild the three existing Deer Park to Keilor 220 kV lines as high-capacity lines. Pre-requisite: MEL-WNV Option 1 or 2 **Earliest in-service date:** 2033-34.	Future	Forward: N/A Reverse: 2000	1,330[139] Class 5 (+100/-50%)	-	2045-46	-

[139] This is the $2025 cost of this option provided by VicGrid.

A5.4.8 Other future ISP Projects

In addition to the projects identified earlier in Section A5.4, **Table 1** lists indicative projects only selected in single scenarios, or required towards the end of the modelling horizon which are expected to evolve from one ISP to the next. These projects are conceptual and are only optimal in one scenario[140]. The augmentation projects listed in **Table 1** refer to projects outlined in the 2025 *Electricity Network Options Report*.

Table 1 Indicative transmission and REZ augmentations required later in the horizon in one scenario

REZ / flow path / project	Augmentation option (REZ network limit increase)	*Slower Growth*	*Step Change*	*Accelerated Transition*
New South Wales				
N3 – Central-West Orana	N3 Option 3	-	-	2043-44
N9b – Hunter-Central Coast (Sydney, Newcastle, Wollongong side)	N9b Option 3	-	-	2033-34
Queensland				
Group constraint NQ1	NQ1 Option 1	-	-	2038-39
Q5 – Barcaldine	Q5 Option 1	-	-	2044-45
	Q5 Option 2	-	-	2046-47
CQ-GG flow path	CQ-GG Option 3	-	-	2035-36
Central Queensland to Southern Queensland Expansion (formerly Queensland SuperGrid South)	SQ-CQ Option 2	-	-	2040-41
	SQ-CQ Option 5	-	-	2047-48
South Australia				
S2 – Riverland	S2 Option 1	-	-	2045-46
S7 – Eastern Eyre Peninsula	S7 Option 1	-	-	2037-38
Group constraint NSA1 (S5, S7, S8)	NSA1 Option 1	-	-	2035-36

[140] For an outline of each project's scope, see the 2025 *Electricity Network Options Report*, at https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/final/2025-electricity-network-options-report.pdf?rev=7fd2059752bd41eba55184df4e389e1e&sc_lang=en.

REZ / flow path / project	Augmentation option (REZ network limit increase)	*Slower Growth*	*Step Change*	*Accelerated Transition*
SESA-CSA flow path	SESA-CSA Option 1	-	-	2042-43
Victoria to South Australia interconnector				
Heywood Interconnector Upgrade	WNV – SESA Option 1	-	-	2042-43
Victoria				
V2 – Central Highlands	V2 Option 1	-	-	2039-40
South West Victoria REZ expansion	SWV1 Option 1C	-	-	2033-34

A5.5 Distribution projects

Several projects have been identified in this 2026 ISP as distribution network development opportunities – either to facilitate connection of utility-scale generation and storage to the distribution network, or to support operation of CER. This section outlines the distribution and transmission network augmentation options to facilitate the connection of utility-scale generation and storage connecting to the distribution network. The augmentation options contain both distribution and transmission augmentations recognising the impact on both upstream and downstream limitations. The following information is presented for each augmentation option:

- a description of the option,
- the expected increase in transfer capacity,
- the project cost, including the class of the estimate and associated accuracy (both distribution and transmission), and
- the optimal timing in each scenario.

The identification of a distribution project in this ISP does not confer any regulatory obligation on any distribution network service provider, or substitute for detailed cost-benefit analysis required to be undertaken under a regulatory investment test for distribution (RIT-D) or RIT-T.

Please also see Appendix A9 for distribution network development opportunities to support operation of CER, and Appendix A2 for generation and storage development opportunities.

A5.5.1 Hunter-Central Coast REZ Expansion

Summary

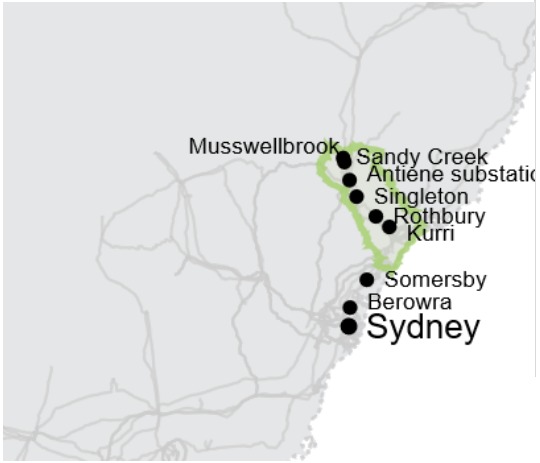
The HCC REZ[141] has been identified to assist industries to decarbonise and access renewable energy with a mix of solar, onshore and offshore wind energy projects.

The REZ was declared on 9 December 2022 with 1,000 MW of intended network capacity[142] and EnergyCo has been appointed the Infrastructure Planner enabled by the *Electricity Infrastructure Investment Act 2020*. In April 2025, the Consumer Trustee authorised Ausgrid to carry out the HCC REZ network infrastructure project (RNIP)[143].

The retirement of coal-fired power stations, re-purposing of mining land and the growth of offshore wind will likely present increased opportunities for renewable energy and storage projects within the Hunter and Central Coast regions.

Hunter-Central Coast REZ Network Infrastructure Project is now proceeding as a committed project. Two further expansions to this REZ have been identified as distribution network development opportunities in the 2026 ISP.

Hunter-Central Coast REZ is located across SNW and CNSW sub-regions. Hunter-Central Coast REZ Expansion includes two network augmentations for both SNW and CNSW sub-regions. N9b Option 2a uplifts the 132 kV network near Singleton, Kurri, Newcastle and Tomago, providing additional network capacity to the SNW side of the Hunter-Central Coast REZ (N9b). N9a Option 2b uplifts the 132 kV and 330 kV network near Muswellbrook, providing additional network capacity to the CNSW side of the Hunter-Central Coast REZ (N9a). Both options are found to be beneficial in all ISP scenarios with optimal timings shown below.



Existing network capability

EnergyCo has announced this REZ will supply both CNSW and SNW via Ausgrid's sub-transmission network (132 kV network), with the network normally open, and has said this project will support up to 1,800 MW of generation and storage projects[144].

The upstream REZ transmission limit from Muswellbrook 330 kV substation is 400 MW, which assumes high southbound flows from NNSW to CNSW at peak demand. Following the HCC REZ Network Infrastructure Project, the transfer capacity will increase by 600 MW.

Following the Hunter-Central Coast RNIP, the generation that can be exported from this REZ to SNW through the Ausgrid 132 kV network is 600 MW. The current upstream transmission limit for this component of the REZ is 750 MW, which is limited by thermal capacity of the Newcastle 330/132 kV transformers.

[141] See https://www.energyco.nsw.gov.au/our-projects/hunter-central-coast-rez.

[142] See Government Gazette of the State of New South Wales No 569, Friday 9 December 2022, https://gazette.nsw.gov.au/gazette/2022/12/2022-569.pdf

[143] See https://www.aer.gov.au/about/strategic-initiatives/renewable-energy-zones/revenue-determinations-nsw-rez/hunter-central-coast-rez

[144] See https://www.energyco.nsw.gov.au/sites/default/files/2025-04/HCC%20REZ%20IPRR%20-%20Public%20Report%20-%20For%20CEO%20Approval%20-%2030%20April%202025.pdf.

Credible option(s)						
Description	**Status**	**Additional network capacity (MW)**	**Reported cost ($ million)**	***Slower Growth***	***Step Change***	***Accelerated Transition***
N9b Option 2a • 132 kV lines augmentation between Singleton, Kurri, Newcastle and Tomago on existing easement (~183 km – 129 km dual circuit + 54 km single circuit + 3.5 km UG). • New Rothbury 132 kV switching station on existing Ausgrid land. • Existing Beresfield 132 kV bus rebuild. • Expand existing Tomago 330/132 kV substation with one 375 MVA transformer. • Includes upgrades to switch bays. **Earliest in service date:** 2030-31.	Distribution project	900 HCC1: 750	636[145] Class 5b (±50%)	2030-31	2030-31	2030-31
N9a Option 2b • A new Kayuga Hub 132 kV switching station. • New 132 kV lines (~24km – dual circuit) on new easement. • New 330 kV line from Muswellbrook to Liddell. • Expand existing Muswellbrook 330/132 kV substation with one 375 MVA transformer and busbar reconfiguration, and connect three new 132 kV lines. **Earliest in service date:** 2030-31.	Distribution project	900	327[146] Class 5b (±50%)	2035-36	2038-39	2030-31

[145] $636m is the cost in $2025 based on cost estimates advised by Ausgrid for the final 2026 ISP. Due to a modelling error, AEMO has modelled N9b Option 2a with REZ cost forecasts from the Draft 2026 ISP (which consider a reported cost of $599m in $2025) rather than the updated forecasts. AEMO estimates that applying the updated forecasts would not have significantly affected the outcomes for this option.

[146] $327m is the cost in $2025 based on cost estimates advised by Ausgrid for the final 2026 ISP. Due to a modelling error, AEMO has modelled N9a Option 2b with REZ cost forecasts from the Draft 2026 ISP (which consider a reported cost of $528m in $2025) rather than the updated forecasts. AEMO estimates that applying the updated forecasts would have further strengthened the case for this option.

A5.5.2 Dubbo distribution project

Summary

The Dubbo distribution project is located near Dubbo in Central New South Wales, proposing to initially connect 2.4 GW of generation and storage to both distribution (Essential Energy) and transmission (Transgrid). The Dubbo distribution project has been jointly planned between EnergyCo, Essential Energy and Transgrid.

The Dubbo Distribution Project is located within the Central-West Orana REZ geographical boundary.

AEMO identifies the Dubbo distribution project as a distribution network development opportunity. EnergyCo, Transgrid and Essential Energy will continue to jointly plan on this project, which may progress under the *NSW Electricity Infrastructure Investment Act 2020* (NSW)[147] or alternative framework.

Existing network capability

Essential Energy has an existing and substantial pipeline of generation projects that are seeking to connect. The Dubbo expansion is part of the broader Dubbo distribution project to unlock 2.4 GW of generation and is targeting 700 MW of continuous export to the 330 kV system while supporting 200 MW of local load. This enables a total transfer capacity of 900 MW to serve New South Wales consumers.

The Dubbo distribution project supports the connection of renewable energy projects by enabling energy flows from Essential Energy's 132 kV network. Its primary objective is to transfer energy to Transgrid's 132/330 kV bulk supply point through Wellington substation. At the moment the limitation is the Wellington 330/132 kV transformer, and the option is to add an additional transformer at Wellington substation.

Credible option(s)

Description	Status	Additional network capacity (MW)	Reported cost ($ million)	*Slower Growth*	*Step Change*	*Accelerated Transition*
DN1 Option 1 • New Forest Glen and Mendooran 132 kV Energy Hubs. • Rebuild Geurie Zone substation and Narromine to 132 kV switching stations. • Rebuild 132 kV lines: – Narromine switching station – Forrest Glen Energy Hub – Dubbo West Zone Substation (L9GG).	Distribution project	700 CNSW1: 200	607[148] Class 5b (±50%)	-	2032-33	2032-33

[147] See https://www.energyco.nsw.gov.au/cwo-rez and https://gazette.nsw.gov.au/gazette/2021/11/2021-569.pdf.

[148] $607 million is the $2025 cost, which has been escalated from the $2024 proponent cost of $601 million.

– Narromine switching station – Forrest Glen Energy Hub – New Energy Hub (L943). – Wellington Substation – Geurie switching station – Dubbo Zone Substation (L94F). – New Energy Hub – Mendooran – Dubbo Zone Substation (L94W/1). • Upgrade protection systems. • Expand existing Wellington 330/132 kV substation with one 375 MVA transformer. Pre-requisite: None **Earliest in service date:** 2030-31.						
DN1 Option 2a • Rebuild Wollar West-Wollar 330 kV line (L75) as double-circuit. • Expand existing Wollar 500/330 kV substation with one 1500 MVA transformer. • Upgrade Wollar substation. Pre-requisite: DN1 Option 1 **Earliest in service date:** 2031-32.	Distribution project	500 CNSW1: 500	126[149] Class 5b(±50%)	-	2033-34	2033-34

[149] $126 million is the $2025 cost, which has been escalated from the $2024 proponent cost of $125 million.

Glossary

This glossary has been prepared as a quick guide to help readers understand some of the terms used in the ISP. Words and phrases defined in the National Electricity Rules (NER) have the meaning given to them in the NER. This glossary is not a substitute for consulting the NER, the Australian Energy Regulator's (AER's) Cost Benefit Analysis Guidelines, or AEMO's *ISP Methodology*.

Term	Acronym	Explanation
Actionable ISP project	-	Actionable ISP projects optimise benefits for consumers if progressed before the next ISP. A transmission project (or non-network option) identified as part of the ODP and having a delivery date within an actionable window. For newly actionable ISP projects, the actionable window is two years, meaning it is within the window if the project is needed within two years of its earliest in-service date. The window is longer for projects that have previously been actionable. Project proponents are required to begin newly actionable ISP projects with the release of a final ISP, including commencing a RIT-T.
Actionable project progressing under a jurisdictional framework	-	A transmission project (or non-network option), other than an actionable ISP project, which optimises benefits for consumers if progressed before the next ISP, is identified as part of the ODP, and which will progress under a jurisdictional policy that AEMO considers under NER 5.22.3 (b) and includes in the ISP.
Anticipated project	-	A generation, storage or transmission project that is in the process of meeting at least three of the five commitment criteria (planning, construction, land, contracts, finance), in accordance with the AER's Cost Benefit Analysis Guidelines. Anticipated projects are included in all ISP scenarios.
Candidate development path	CDP	A collection of development paths which share a set of potential actionable projects. Within the collection, potential future ISP projects are allowed to vary across scenarios between the development paths. Candidate development paths have been shortlisted for selection as the ODP and are evaluated in detail to determine the ODP, in accordance with the ISP Methodology.
Capacity	-	The maximum rating of a generating or storage unit (or set of generating units), or transmission line, typically expressed in megawatts (MW). For example, a solar farm may have a nominal capacity of 400 MW.
Committed project	-	A generation, storage or transmission project that has fully met all five commitment criteria (planning, construction, land, contracts, finance), in accordance with the AER's Cost Benefit Analysis Guidelines. Committed projects are included in all ISP scenarios.
Consumer energy resources	CER	Generation or storage assets owned by consumers and installed behind-the-meter. These can include rooftop solar, batteries and electric vehicles (EVs). CER may include demand flexibility.
Consumption	-	The electrical energy used over a period of time (for example a day or year). This quantity is typically expressed in megawatt hours (MWh) or its multiples. Various definitions for consumption apply, depending on where it is measured. For example, underlying consumption means consumption being supplied by both CER and the electricity grid.
Cost-benefit analysis	CBA	A comparison of the quantified costs and benefits of a particular project (or suite of projects) in monetary terms. For the ISP, a cost-benefit analysis is conducted in accordance with the AER's Cost Benefit Analysis Guidelines.
Counterfactual development path	-	The counterfactual development path represents a future without major transmission augmentation. AEMO compares candidate development paths against the counterfactual to calculate the economic benefits of transmission.
Demand	-	The amount of electrical power consumed at a point in time. This quantity is typically expressed in megawatts (MW) or its multiples. Various definitions for demand apply, depending on where it is measured. For example, underlying demand means demand supplied by both CER and the electricity grid.

Term	Acronym	Explanation
Demand-side participation	-	The capability of consumers to reduce their demand during periods of high wholesale electricity prices or when reliability issues emerge. This can occur through voluntarily reducing demand, or generating electricity, and is a form of 'demand flexibility'.
Development path	DP	A set of projects (actionable projects, future projects and ISP development opportunities) in an ISP that together address power system needs.
Dispatchable capacity	-	The total amount of generation that can be turned on or off, without being dependent on the weather. Dispatchable capacity is required to provide firming during periods of low variable renewable energy output in the NEM.
Distribution network service provider	DNSP	A business which owns, controls or operates a distribution system (including a distribution network).
Distribution project	-	A distribution project that is part of the ODP and forecast to be needed in the future. The project is an ISP development opportunity and does not address an identified need specified in the ISP. The ISP cannot make a distribution project 'actionable' or require commencement of the Regulatory Investment Test for Distribution (RIT-D).
Economic offloading	-	Refers to a VRE generator being dispatched below its maximum availability as its output is offered at a higher price, typically during periods of negative prices due to an oversupply of generation. This may also be referred to as economic 'spill' or 'spilled energy'.
Firming	-	Grid-connected assets that can provide dispatchable capacity when variable renewable energy generation is limited by weather, for example storage (pumped-hydro and batteries) and gas-powered generation.
Future ISP project	-	A transmission project (or non-network option) that addresses an identified need in the ISP, that is part of the ODP, and is forecast to be actionable in the future.
Identified need	-	The objective a TNSP seeks to achieve by investing in the network in accordance with the NER or an ISP. In the context of the ISP, the identified need is the reason an investment in the network is required, and may be met by either a network or a non-network option.
ISP development opportunity	-	A development identified in the ISP that does not relate to a transmission project (or non-network option) and may include generation, storage, demand-side participation, or other developments such as distribution network projects.
Mid-scale	-	Generation and storage typically connected to the distribution network rather than to either the transmission network or behind the meter at a business or residence. For the 2026 ISP, these resources are assumed to have a generation or charge/discharge capacity of between 5 MW and 30 MW. For ease of reporting in this document, mid-scale generation and storage are sometimes included within the totals for utility-scale generation and storage. In other AEMO documents, such as the *Demand Side Factors Information Guidelines* and the *ISP Methodology*, these resources are sometimes referred to as 'other distributed resources'.
National Electricity Rules	NER	The Rules are legally binding rules made under the National Electricity Law, which govern the operation of the National Electricity Market and the ways in which AEMO manages power system security. The Rules also provide the regulatory framework for network connections and access, national transmission planning and pricing for network services. The Rules are mainly made by the AEMC having regard to the National Electricity Objective.
Net market benefits	-	The present value of total market benefits associated with a project (or a group of projects), less its total cost, calculated in accordance with the AER's Cost Benefit Analysis Guidelines. The net market benefits of the ODP through to 2050 is the difference between the cost of the ODP and the cost of a 'counterfactual' development path which has no new transmission build.

Term	Acronym	Explanation
Non-network option	-	A means by which an identified need can be fully or partly addressed, that is not a network option. A network option means a solution such as transmission lines or substations which are undertaken by a Network Service Provider using regulated expenditure.
Optimal development path	ODP	The development path identified in the ISP as optimal and robust to future states of the world. The ODP contains actionable projects, future ISP projects and ISP development opportunities, and optimises costs and benefits of various options across a range of future ISP scenarios.
Regulatory Investment Test for Transmission	RIT-T	The RIT-T is a cost benefit analysis test that TNSPs must apply to prescribed regulated investments in their network. The purpose of the RIT-T is to identify the credible network or non-network options to address the identified network need that maximise net market benefits to the NEM. RIT-Ts are required for some but not all transmission investments.
Reliable (power system)	-	The ability of the power system to supply adequate energy to satisfy consumer demand, allowing for credible generation and transmission network contingencies.
Renewable energy	-	For the purposes of the ISP, the following technologies are referred to under the grouping of renewable energy: "solar, wind, biomass, hydro, and hydrogen turbines". Variable renewable energy is a subset of this group, explained below.
Renewable energy zone	REZ	An area identified in the ISP as a high-quality resource area where a cluster of large renewable energy projects can be developed using economies of scale.
Renewable lull	-	A prolonged period of very low levels of variable renewable output, typically associated with dark and still conditions that limit production from both solar and wind generators.
Rooftop solar and other small-scale solar	-	Solar photovoltaic (PV) generation assets that are not centrally controlled by AEMO dispatch. Examples include residential and business rooftop PV as well as larger commercial or industrial "non-scheduled" PV systems.
Scenario	-	A possible future of how the NEM may develop to meet a set of conditions that influence consumer demand, economic activity, decarbonisation, and other parameters. For this ISP, AEMO has considered three scenarios: *Slower Growth*, *Step Change* and *Accelerated Transition*.
Secure (power system)	-	The system is secure if it is operating within defined technical limits and is able to be returned to within those limits after a major power system element is disconnected (such as a generator or a major transmission network element).
Sensitivity analysis	-	Analysis undertaken to determine how sensitive modelling outcomes are to a change in input or assumption (or a collection of related inputs and assumptions).
Spill	-	Refers to a VRE generator being dispatched below its maximum availability as its output is offered at a higher price, typically during periods of negative prices due to an oversupply of generation. Also referred to as 'economic offloading' or 'spilled energy'.
Transmission network service provider	TNSP	A business that owns, controls or operates a transmission network.
Utility-scale or utility	-	For the purposes of the ISP, 'utility-scale' and 'utility' refers to technologies connected to the high-voltage power system rather than behind the meter at a business or residence.
Value of greenhouse gas emissions reduction	VER	The VER estimates the value (dollar per tonne) of avoided greenhouse gas emissions. The VER is calculated consistent with the method agreed to by Australia's Energy Ministers in February 2024.
Variable renewable energy	VRE	Renewable resources whose generation output can vary greatly in short time periods due to changing weather conditions, such as solar and wind.
Virtual power plant	VPP	An aggregation of resources coordinated to deliver services for power system operations and electricity markets. For the ISP, VPPs enable coordinated control of consumer-scale batteries.