Appendix A3. Renewable Energy Zones

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 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 A3 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 document 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.

This publication does not include all of the information that an investor, participant or potential participant in the National Electricity Market might require, and does not amount to a recommendation of any investment.

Anyone proposing to use the information in this publication (which includes information and forecasts from third parties) should independently verify its accuracy, completeness and suitability for purpose, and obtain independent and specific advice from appropriate experts.

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Version control

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

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Executive summary

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 Australia's future energy needs.

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.

The ODP forecasts a need for nearly 100 gigawatts (GW) of utility-scale variable renewable energy (VRE) by 2049-50 in the *Step Change* scenario. It also indicates more battery energy storage systems (BESS) than in previous ODPs, firming renewables, enhancing the utilisation of existing transmission, and potentially deferring or reducing the need for new transmission.

Renewable energy zones (REZs) are high-quality resource areas where clusters of large-scale renewable energy projects can be developed using economies of scale. New network investment has been identified in the proposed ODP for the 2026 ISP to connect these areas, and efficiently and reliably supply consumers as coal generators retire.

Appendix A3 identifies a selection of candidate REZs, as well as renewable energy development opportunities and network investments identified in the proposed ODP[1]. It sets out:

A3.1 REZ candidates:

- A map of the 44 short-listed candidate REZs across eastern and south-eastern Australia that AEMO has identified following rigorous consultation.
- An overview of how these candidate zones were identified, including information on indigenous interests.

A3.2 REZ development overview:

- Summaries to help NEM stakeholders visualise the scale and speed of expected VRE development projected in all scenarios.
- Information on resource diversity, resource quality, and projected curtailment (as REZs with high-quality wind and solar resources generally experience high network utilisation and low curtailment).
- An outline of jurisdictional regulatory frameworks for REZ development.

A3.3 Regional outlook and REZ scorecards:

- Regional outlook to help NEM stakeholders visualise the scale and speed of expected VRE development projected in all scenarios, highlighting REZs of greatest near-term interest.
- REZ scorecards to provide NEM stakeholders with detailed data for specific REZs in all scenarios.

AEMO recognises the importance of consultative, coordinated and efficient REZ development in supporting state and federal governments to achieve emission reduction policies. AEMO is continuing to work with jurisdictions to ensure the ISP reflects their policies and development plans.

[1] Outcomes presented in this appendix are based on the optimal development path (ODP), which is CDP4 described in Appendix A6 Cost benefit analysis.

Key changes from the Draft 2026 ISP

This appendix has been updated in the final 2026 ISP to reflect refinements to both the representation REZ development and the modelling of associated network constraints, in response to stakeholder feedback. These updates improve alignment with access rights frameworks, current project development activity and recent transmission planning outcomes. The key changes relative to the Draft 2026 ISP are summarised below.

NEM-wide REZ development calibration

Across the NEM, AEMO has refined the calibration of near-term REZ development to better reflect observed market activity. In the Draft ISP, the location and timing of early-stage generation development were less closely aligned with the emerging connections pipeline. In the final ISP, generation development over the first three years has been recalibrated to better reflect areas with strong developer interest, based on AEMO's connections pipeline data.

New South Wales – updates to both the treatment of REZ generation and the representation of network constraints.

For the Central-West Orana and South West New South Wales REZs, the Draft ISP assumed generators could export up to nameplate capacity. In the final ISP, this has been refined to align with the access rights framework, with project-specific operating limits applied where awarded access rights are below nameplate capacity.

The projected generation mix has also been updated to reflect access rights tender outcomes. In the Draft ISP, the mix did not fully align with awarded access rights where projects were not yet committed or anticipated. The final ISP introduces technology-specific limits for wind and solar to better reflect allocated access rights.

AEMO has also revised the representation of some network limitations affecting REZ output – for example, CNSW1 has been updated to represent 330 kilovolts (kV) limitations near the Dubbo area, and SWNSW2 to capture constraints around Dinawan following Victoria – New South Wales Interconnector West (VNI West). The modelling of the Hunter-Central Coast REZ has also been refined, with the REZ separated into Central New South Wales (CNSW) (N9a) and Sydney, Newcastle, Wollongong (SNW) (N9b) portions to better reflect network topology, and HCC1 was introduced to represent thermal limits on Newcastle 330/132 kV transformers.

Queensland – updated the representation of network constraints affecting the Darling Downs REZ

The SWQLD1 group constraint has been revised to incorporate the updated transmission connection arrangements associated with the Borumba Pumped Hydro project.

South Australia – refined the modelling of network limits between the Mid North region and Adelaide

The existing MN1 group constraint has been updated to include terms for the S2 Riverland REZ and Murraylink interconnector, and a new constraint (MN2) has been introduced to reflect the expected most binding contingency on the 275 kV network with additional wind connection in S3 Mid North South Australia REZ. These changes are based on joint planning undertaken with ElectraNet and provide a more accurate representation of the network's ability to transfer generation from the Mid North REZ towards the Adelaide load centre. The locational allocation of green commodities electrolyser load in *Accelerated Transition* has also been updated to align with South Australian Government advice.

Victoria – updates have focused on improving the representation of transmission constraints affecting REZ output

AEMO has introduced a new group constraint (WV2) to represent transfer limitations into the Western REZ following the commissioning of the Western Renewables Link (WRL). In addition, a new constraint (NW1) has been introduced to reflect limitations affecting the North West REZ prior to the completion of the VNI West augmentation.

These updates provide a more accurate representation of how transmission development staging affects the utilisation of REZ capacity.

A3.1 REZ candidates

A3.1.1 Identifying REZ candidates

REZ candidates were initially developed in consultation with stakeholders for the 2018 ISP[2] and used as inputs to the ISP model. These candidates have been continuously updated and refined through subsequent ISP and *Inputs, Assumptions and Scenarios Report* (IASR) consultation processes.

Since the 2024 ISP, considerable government and transmission network service provider (TNSP) development of REZs has taken place. Jurisdictions have progressed REZ development through REZ roadmaps and emission reduction, energy generation and storage targets enshrined in policy.

An efficiently located REZ can be identified by considering a range of factors, primarily:

- quality of renewable resources, diversity relative to other renewable resources, and correlation with demand,
- the cost of developing or augmenting transmission connections to transport the renewable generation produced in the REZ to consumers,
- the proximity to load, and the network losses incurred to transport generated electricity to load centres,
- the critical physical requirements to enable the connection of new resources (particularly inverter-based equipment) and ensure continued power system security, and
- in some cases, the capability of the distribution network to host VRE[3].

Further details on the selection of REZ candidates are provided in the IASR[4], and the 44 REZs are shown in **Figure 1**. Details and costs of REZ augmentation options are in the 2025 *Electricity Network Options Report*[5].

Renewable energy developers, network companies and governments are responsible for development of REZs, including early and active engagement with communities, land title holders and affected persons as part of the detailed designs for REZs.

The following sections in this appendix present AEMO's identification of REZs within each NEM region. AEMO has worked with state and federal governments as part of defining the locations and renewable resources within the REZs in each state, cognisant that governments may have strategic land-use planning and rural and regional economic development objectives, among others, to overlay on REZ identification.

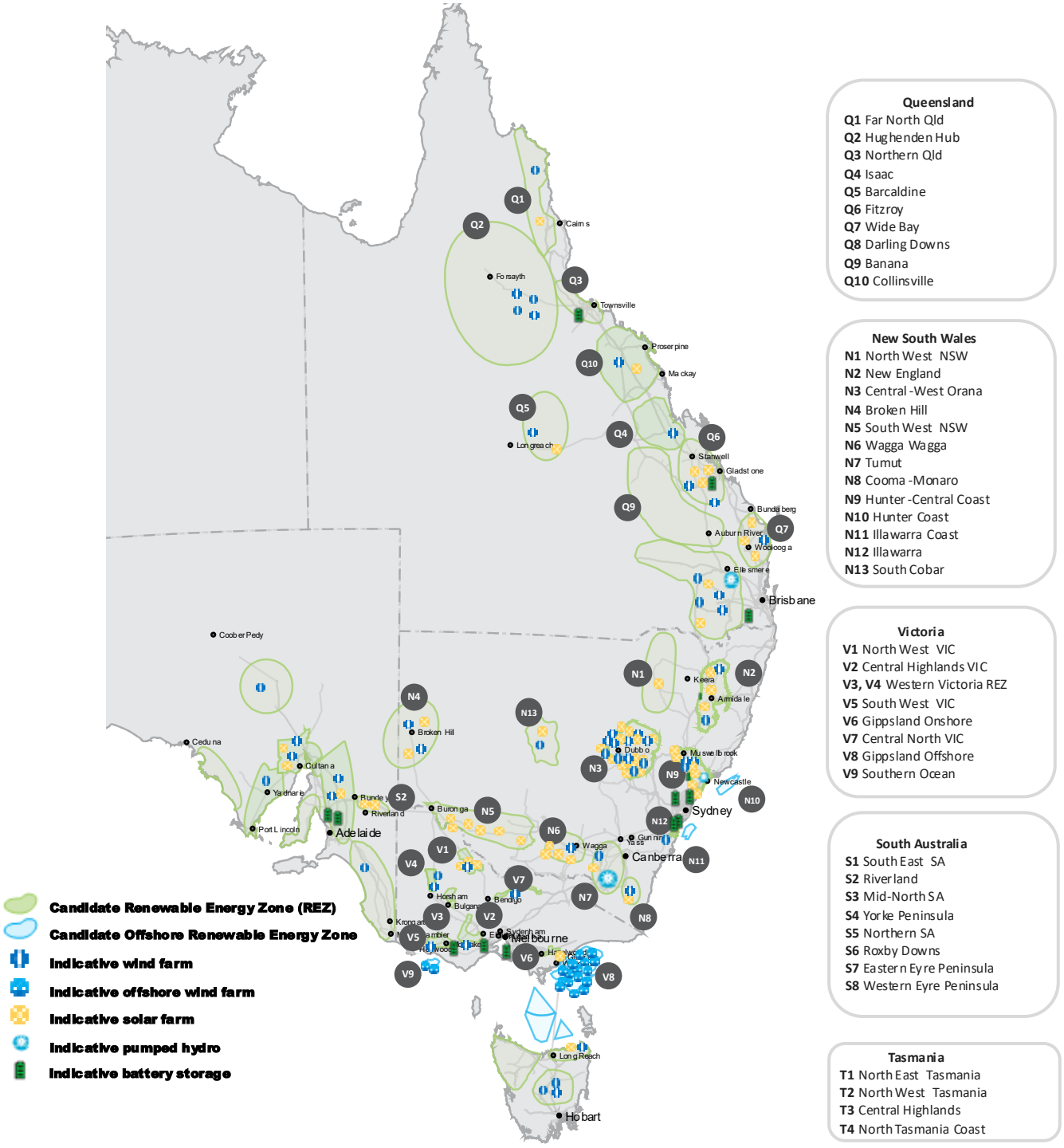
[2] At https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/isp/2018/integrated-system-plan-2018_final.pdf?la=enandhash=40A09040B912C8DE0298FDF4D2C02C6C.

[3] AEMO has modelled four regions of large utility-scale generation zones connected to distribution. The representation of these regions has been informed by inputs from the DNSPs, that were gathered and consulted on through AEMO's 2025 *Electricity Network Options Report*.

[4] At https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2025-iasr-scenarios/final-docs/2025-inputs-assumptions-and-scenarios-report.pdf?rev=63268acd3f044adb9f5f3a32b6880c27&sc_lang=en.

[5] 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?la=en.

Figure 1 2026 REZ candidates



Note: the location of generation symbols is illustrative only – these symbols do not reflect the location of actual projects or the location where projects should be developed. Similarly, the REZ boundaries are illustrative only. In some jurisdictions, where REZs are 'declared', the electrical boundaries of those REZs are defined through that declaration.

A3.1.2 Indigenous interests

REZ developments could provide a range of opportunities for Indigenous communities in regional and remote areas. As REZs progress from concepts to pre-feasibility studies, it is important that Traditional Owners and land councils are consulted early, often, and throughout the development process. Early and genuine engagement can:

- improve designs by considering local knowledge,

  minimise the impact on areas of cultural significance,

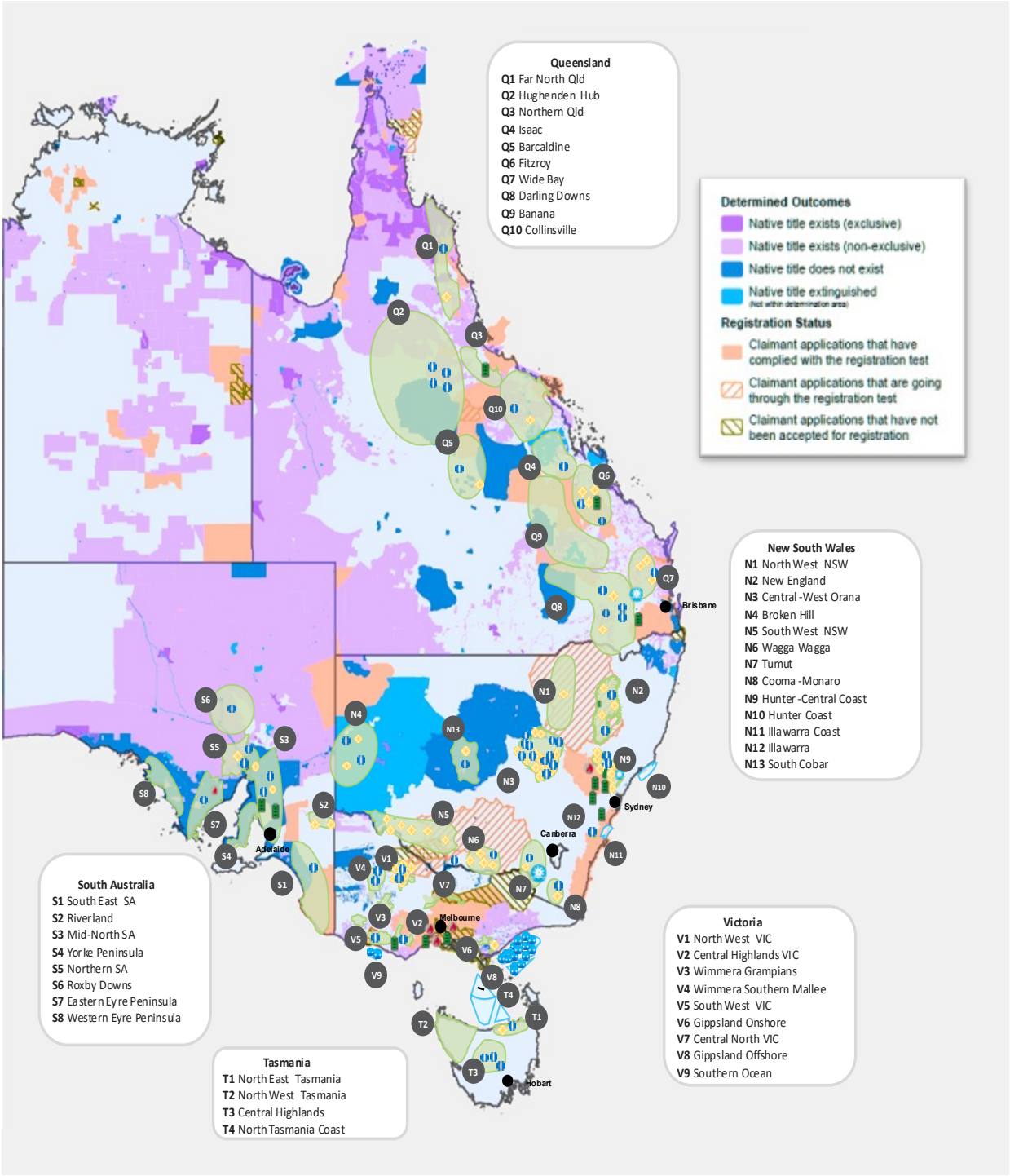
  identify opportunities for strong equity or revenue sharing agreements with First Nations communities,
- provide training, employment and other opportunities for local First Nations people, and
- build and maintain the social licence to deliver timely infrastructure.

The National Native Title Tribunal has developed a map of *Native Title Determinations and Claimant Applications*[6]. This map illustrates determination outcomes for native title claimant applications across Australia.

Figure 2 overlays candidate REZs across the native title map to illustrate the broader impacts that energy infrastructure development could have on Indigenous lands and interests, and to highlight a significant overlap between Indigenous land granted and potential energy infrastructure.

[6] National Native Title Tribunal Schedule and Determinations map. May 2026, at http://www.nntt.gov.au/Maps/Schedule_and_Determinations_map.pdf.

Figure 2 Candidate REZs shown on the National Native Title Tribunal, Native Title Determinations and Claimant Applications map



This figure has been reproduced with the permission of the National Native Title Tribunal.

A3.2 REZ development overview

This 2026 ISP projects the need for 80 GW of utility-scale VRE in the NEM out to 2034-35 in the *Step Change* scenario. Allowing for the strong growth in consumer energy resources (CER), the NEM will still need 84 GW to 211 GW of VRE by 2049-50, depending on the scenario. To supply consumers with reliable, low-cost electricity, this ISP considers efficient VRE development by identifying candidate REZs with strong development factors.

There are factors that generally affect the development of a REZ and may change between ISPs, even if the REZ is the same. They include but are not limited to:

- energy targets, policies and scenarios,
- the timing of coal exiting the system,
- resource quality,
- existing and forecast BESS in the REZ and at load centres,
- demand within the REZ itself, including future potential for data centres or hydrogen electrolyser co-located with renewable generation developments,
- existing transmission network capacity,
- demand correlation,
- cost of developing or augmenting the transmission network,
- proximity to the load centre,
- the amount of mid-scale solar and BESS connected to utility distribution networks, and
- social licence, or the trust and social acceptance for the development of generation, storage and associated network, by the people most affected by its impacts, opportunities and challenges.

The general increase in transmission costs, coupled with falling costs of BESS and government policies supporting dispatchable capacity (Capacity Investment Scheme, Firm Energy Reliability Mechanism), has resulted in a large uptake in BESS both within and outside of REZs, and at all voltage levels. BESS uptake helps firm VRE by allowing excess to be stored during VRE peaks and discharged during VRE droughts, even without new infrastructure, and improves the utilisation of both existing and new transmission infrastructure.

This uptake, along with slower decommitment of coal units than previously modelled and the 'winding back' of some existing renewable energy targets (specifically in Queensland), results in the need for some REZ transmission builds being deferred.

In every scenario – *Slower Growth, Step Change and Accelerated Transition* – large increases in VRE are needed. Targeted and strategic investment is required to balance resources across states and unlock much needed REZs while minimising infrastructure's environmental footprint on land and country.

Figure 3 to **Figure 5** illustrate the co-optimised geographical dispersion of VRE development for 2029-30, 2039-40 and 2049-50 in each scenario. Geographical VRE dispersion in each scenario emphasises the importance of efficient, coordinated and priority development of REZ candidates. REZs with projections of more than 5,000 megawatts (MW) by

2050 include Central West Orana, Fitzroy, New England, Hunter Central Coast, North West Victoria, Gippsland offshore and Darling Downs.

Figure 3 Forecast geographic dispersion of new VRE developments in the *Step Change* scenario in 2029-30 (left), 2039-40 (middle), 2049-50 (right)

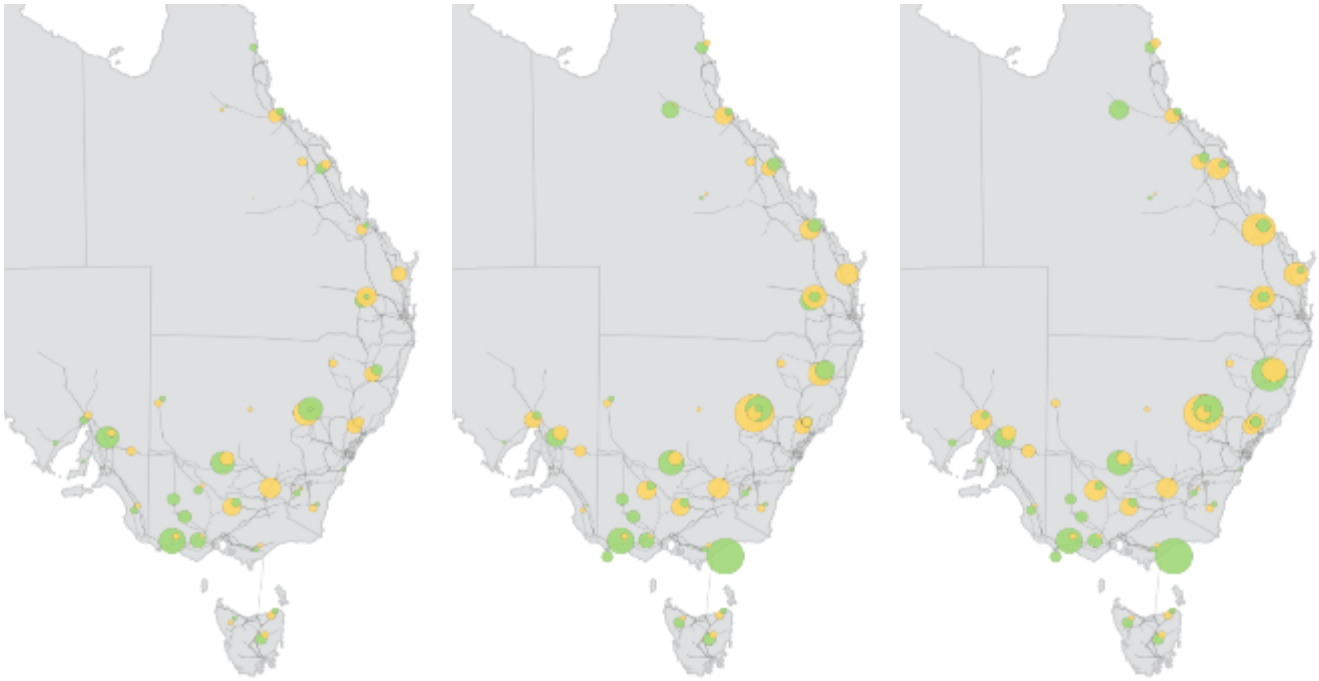


Figure 4 Forecast geographic dispersion of new VRE developments in the *Slower Growth* scenario in 2029-30 (left), 2039-40 (middle), 2049-50 (right)

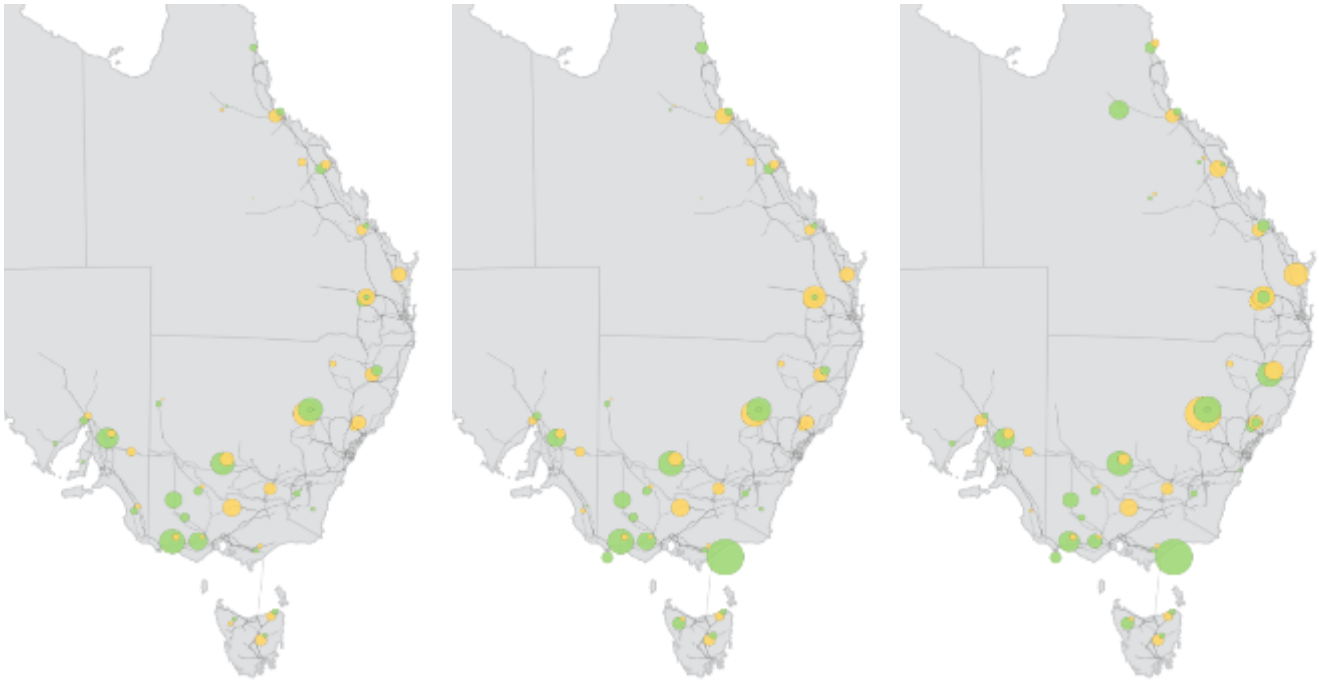
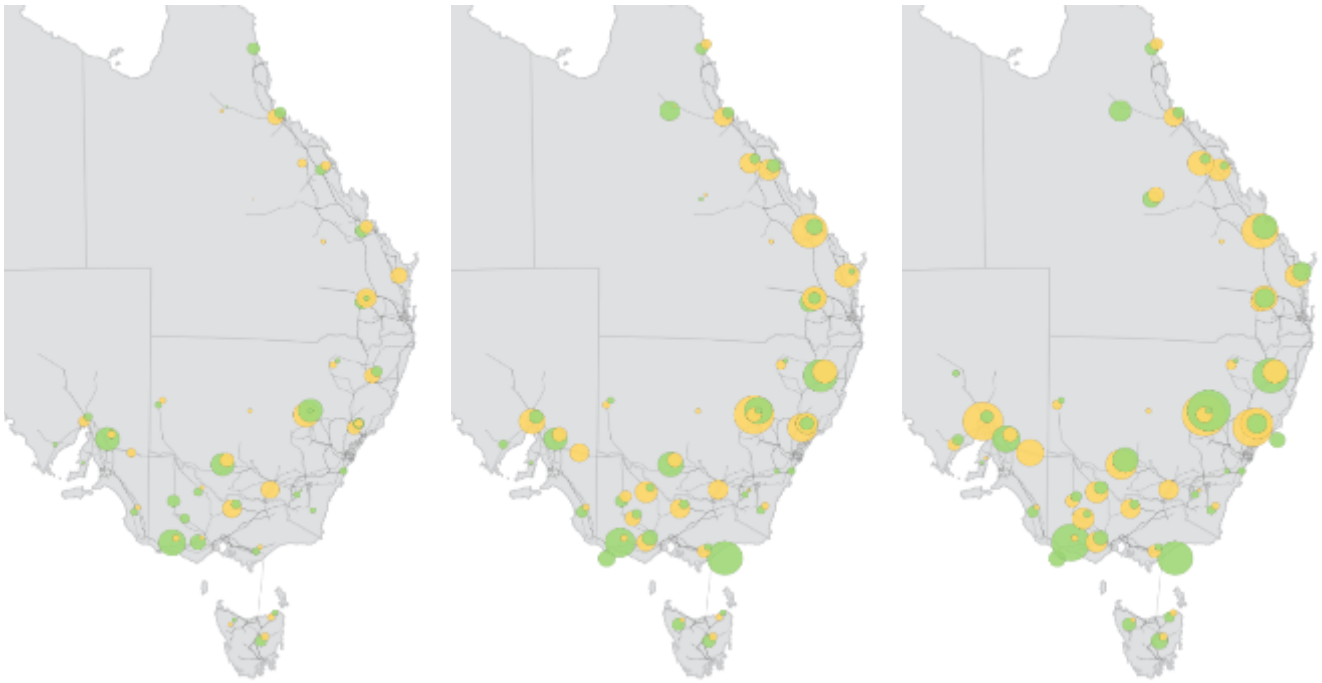


Figure 5 Forecast geographic dispersion of new VRE developments in the *Accelerated Transition* scenario in 2029-30 (left), 2039-40 (middle), 2049-50 (right)



A3.2.1 Regulatory framework for REZ development

AEMO aims to incorporate renewable energy targets and REZ development plans from state and federal governments into ISP modelling. Additionally, the REZ design report[7] framework in the National Electricity Rules (NER) aims to improve network planning for REZs.

This framework allows AEMO to trigger the requirement to prepare a REZ design report by the jurisdictional planning body if:

- a REZ including transmission network development is specified on the ODP of an ISP within 12 years of the publication of that ISP, and
- AEMO reasonably considers the Minister of the relevant jurisdiction supports the preparation of a REZ design report.

The requirement to prepare a REZ design report places obligations on the jurisdictional planning body to undertake consultation with potential generators, local councils, local community members, members of the public and any other relevant stakeholders wishing to express their views about developments in the REZ.

Additionally, the jurisdictional planning body and TNSPs (in their capacity as regulatory investment test for transmission [RIT-T] proponents) must engage with interested parties, including local community members, as part of preparatory activities in the planning process in accordance with community engagement expectations[8]. Specifically, the NER require

[7] NER 5.24.1 REZ design reports.

[8] Australian Energy Market Commission (AEMC). *Enhancing community engagement in transmission building*, at https://www.aemc.gov.au/rule-changes/enhancing-community-engagement-transmission-building. These NER changes commenced operation on 5 December 2023.

TNSPs to engage with interested parties when planning for ISP projects and REZ stages from the development of the ISP, through the joint planning process, to the completion of the RIT-T.

To date, AEMO has not triggered a REZ design report. Some jurisdictions are now progressing REZ projects under their own jurisdictional frameworks[9] rather than the NER framework for actionable ISP projects. Additionally, AEMO may receive information on REZ design considerations from the jurisdictional planning bodies through preparatory activities.

A3.2.2 REZ transmission limits

REZ transmission limits represent the maximum power that can be dispatched to the shared NEM transmission network at any point in time from within a REZ, reflecting the transfer capability of the shared transmission network, and considering any local load. Power system analysis is undertaken to identify transmission limits for REZs. These REZ transmission limits are able to be increased through:

- augmentation between sub-regions[10] – these could pass through a REZ and improve its access to the shared transmission network (for example, a new interconnector that passes through a REZ), and
- augmentation from a REZ[10] to the NEM shared transmission network.

The REZ transmission limit is expressed as an instantaneous generation constraint in the capacity outlook model. The purpose of the constraint is to limit the generation dispatch up to the REZ transmission limit which can be increased when it is economically optimal. The transmission projects that expand the REZ transmission limit for the *Step Change* and *Accelerated Transition* scenarios are shown in the transmission access expansion forecast section for each REZ. More information about each transmission project is detailed in Appendix A5 Network Investments.

A3.2.3 REZ group constraints

The transmission network is a complex and interconnected system. Transmission flows are influenced by generation and system services across multiple locations. Within AEMO's capacity outlook model, simplifications are needed to represent the power system to keep the optimisation problem tractable, which may rely on flow limits being influenced by single REZ outcomes. To address this need, 'group constraints' are applied. These constraints combine either the generation from more than one REZ, or the generation within a REZ with the power flow along a flow path, to reflect transmission limits that apply to multiple areas of the power system.

The 2025 IASR[11] contains a complete list of the group constraints that apply in the capacity outlook model. These have been developed by considering the limits observed from power system analysis, and in consultation with TNSPs.

[9] For example, the *Electricity Infrastructure Investment Act 2020* (NSW), the Victorian transmission investment framework established under the *National Electricity Victoria Act 2005* (NEVA) (Vic) and the *Energy (Infrastructure Facilitation) Act 2024* (Qld) (this Act was previously titled the *Energy (Renewable Transformation and Jobs) Act 2024* (Qld)).

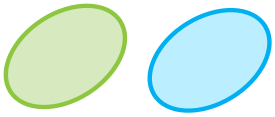
[10] The transmission options considered for flow path and REZ augmentations in the 2026 ISP are detailed in the 2025 *Electricity Network Options Report*, at https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/final/2025-electricity-network-options-report.pdf?rev=7fd2059752bd41eba55184df4e389e1e&sc_lang=en.

[11] At https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2026-integrated-system-plan-isp/2025-26-inputs-assumptions-and-scenarios.

A3.3 Regional outlook and REZ scorecards

A3.3.1 REZ scorecard details

The REZ scorecards in this section provide an overview of the characteristics of each REZ. The following table explains the criteria in the scorecards.

<table>
<tr><th colspan="7">REZ report card details</th></tr>
<tr><td colspan="7">REZ assessments</td></tr>
<tr><td>REZ grouping</td><td colspan="6">REZs are grouped into the following:
• REZs where design and community engagement are progressing.
• REZs where the coordination of generation infrastructure may be required.
• REZs where the coordination of transmission and generation infrastructure is required.
• REZs where the coordination of transmission and generation infrastructure can start later.
• REZs where .</td></tr>
<tr><td colspan="7">Renewable resources</td></tr>
<tr><td rowspan="3">Map legend</td><td colspan="6">Indicative generation is shown based on the Step Change VRE outlook in 2040:</td></tr>
<tr><td colspan="2">Wind
  </td><td colspan="2">Offshore Wind
  </td><td>Solar
  </td><td>Hydro
  </td></tr>
<tr><td colspan="3">The green and blue shading shows the indicative geographic area of onshore and offshore REZs, respectively. Augmentation options shown are described in more detail in the Electricity Network Options Report[12].</td><td colspan="3">  </td></tr>
<tr><td rowspan="8">Metrics</td><td colspan="6">Resource quality for solar is the average capacity factor based on 11 reference years:</td></tr>
<tr><td>≥30%</td><td>≥28%</td><td>≥26%</td><td>≥24%</td><td>≥22%</td><td><22%</td></tr>
<tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr>
<tr><td colspan="6">Resource quality for wind is the average capacity factor based on 11 reference years:</td></tr>
<tr><td>≥45%</td><td>≥40%</td><td colspan="2">≥35%</td><td>≥30%</td><td><30%</td></tr>
<tr><td>A</td><td>B</td><td colspan="2">C</td><td>D</td><td>E</td></tr>
<tr><td colspan="6">Demand correlation describes whether the REZ resources are available at the same time as the regional demand, using a statistical correlation factor. A higher correlation indicates that the resource is more available at regional demand:</td></tr>
<tr><td>≥0.12</td><td>≥0.06</td><td>≥0.0</td><td>≥-0.10</td><td>≥-0.20</td><td><-0.20</td></tr>
<tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td colspan="6">Renewable potential outlines possible REZ size in MW based on the geographical size and resource quality in the REZ. Additional capacity (in MW) above the resource limit is allowed for within the market modelling, but this incurs a penalty factor to account for likely social licence and community support costs. This can occur for all scenarios but is predominantly seen in the Accelerated Transition results.</td></tr>
</table>

[12] 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?la=en.

<table>
<tr><th colspan="3">REZ report card details</th></tr>
<tr><td colspan="3">Climate hazard</td></tr>
<tr><td></td><td colspan="2">The REZ temperature score is based on the projected once in 10-year maximum temperatures[A] for the years 2030 and 2050. Temperature scores for offshore REZs consider the area on land that is expected to connect.</td></tr>
<tr><td></td><td>Score</td><td>Description</td></tr>
<tr><td></td><td>A</td><td>Between 28°C and 38°C</td></tr>
<tr><td></td><td>B</td><td>Between 30°C and 44°C</td></tr>
<tr><td></td><td>C</td><td>Between 32°C and 48°C</td></tr>
<tr><td></td><td>D</td><td>Between 34°C and 50°C</td></tr>
<tr><td></td><td>E</td><td>Between 44°C and 52°C</td></tr>
<tr><td>Bushfire</td><td colspan="2">The REZ bushfire score is based on the projection of annual average Forest Fire Danger Index (FFDI) "high" fire danger days[B] around the years 2030 and 2050 and the probability of large bushfires occurring (a dominant input). Bushfire scores for offshore REZs consider the area on land that is expected to connect.</td></tr>
<tr><td></td><td>Score</td><td>Description</td></tr>
<tr><td></td><td>A</td><td>Model projections associate less than half the days of a year with high fire danger days and a probability of zero large fires in 20 years.</td></tr>
<tr><td></td><td>B</td><td>Model projections associate less than half the days of a year with high fire danger days and a probability of one large fire in 20 years.</td></tr>
<tr><td></td><td>C</td><td>Model projections associate more than half the days of a year with high fire danger days and a probability of one large fire in 20 years.</td></tr>
<tr><td></td><td>D</td><td>Model projections associate more than half the days of a year with high fire danger days and a probability of between one and four large fires in 20 years.</td></tr>
<tr><td></td><td>E</td><td>Model projections associate more than half the days of a year with high fire danger days and a probability of one large fire in three years.</td></tr>
<tr><td colspan="3">Variable generation outlook</td></tr>
<tr><td>Scenario</td><td colspan="2">Long-term market simulations of different scenarios named Slower Growth, Step Change and Accelerated Transition.</td></tr>
<tr><td>Existing, committed and anticipated generation</td><td colspan="2">The existing, committed and anticipated generation as of January 2026, based on the January 2026 Generation information page published by AEMO, as well as generation projects supported by government policies.</td></tr>
<tr><td>Projected variable generation, BESS and electrolyser load</td><td colspan="2">Long-term market simulations of projected variable energy outlook for utility-scale solar, wind and BESS generation as well as hydrogen electrolyser load at different time intervals across all scenarios. All VRE projections are based on the optimal development path and are in addition to existing, committed and anticipated generation. All values are rounded to the nearest 50 MW.</td></tr>
<tr><td colspan="3">Transmission expansion forecasts</td></tr>
<tr><td>Transmission limit</td><td colspan="2">The limit represents the network limit for the total VRE within a REZ. REZ expansion options are generally linearised, that is, they are not discrete options.</td></tr>
<tr><td>Network curtailment</td><td colspan="2">Curtailment happens when generation reduces output due to transmission network congestion. It is represented as a percentage of VRE. The network curtailment is calculated based on the electricity capacity outlook model, and is rounded to nearest 1%.</td></tr>
<tr><td>Economic spill</td><td colspan="2">Economic spill happens when generation reduces output due to market price. It is represented as a percentage of VRE and rounded to nearest 1%.</td></tr>
</table>

A. Once in 10-year maximum temperature data was provided by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) for 2030 and 2050.
B. A "high" fire danger day is defined as any day where the FFDI is greater than 12.
C. Advised seasonal generation capacities are taken into account in the modelling and are detailed in the Inputs and Assumptions Workbook.

A3.3.2 New South Wales

REZ outlook

In New South Wales, over 34 GW of new utility-scale wind and solar VRE located in REZs is projected by 2050 to replace retiring coal-fired generation capacity as well as meet the New South Wales emissions reduction targets set out by the New South Wales Government. New South Wales has an economy-wide emission reduction target relative to 2005 levels of 50% by 2030, 70% by 2035 and net zero by 2050 under the *Climate Change (Net Zero Future) Act 2023* (NSW)[13].

The New South Wales Government has also outlined its vision for the state through the Electricity Infrastructure Roadmap[14] which is enabled by the *Electricity Infrastructure Investment Act 2020* (NSW)[15]. The Act sets out minimum objective of construction of renewable generation infrastructure that produces at least the same amount of electricity in a year as 8 GW in New England, 3 GW in Central-West Orana and 1 GW of additional capacity by the end of 31 December 2029. The New South Wales Consumer Trustee determined this to be approximately 33,600 gigawatt hours (GWh) per year. The Act also includes a minimum target of the construction of long duration storage with at least storage of 16 GWh and capacity of 2 GW of long-duration (eight hours or more) by 31 December 2029 in addition to Snowy 2.0. An updated target of an additional 1.5 GW by the end of 2033 has been legislated.

The VRE projected in the Central-West Orana and South West REZs broadly aligns with the access rights awarded. A mixture of solar and wind is projected in Central-West Orana, with access rights awarded for both solar and wind. Mostly wind is projected in South West, as the access rights awarded are mostly for wind. From the start of the study horizon, there would be a rapid increase in VRE projected in the Central-West Orana and South West REZs, with around 3,100 MW and 3,500 MW respectively of new VRE capacity by 2030-31. After this, South West development stops, while Central-West Orana is projected to increase to over 13 GW in the 2040s (including existing, committed and anticipated plant).

From the start of the study horizon, there would be a rapid increase in VRE projected in the Wagga Wagga REZ, with around 2,100 MW of new VRE capacity by 2029-30. After this, Wagga Wagga development stops.

The VRE projected in New England REZ increases significantly following the New England REZ Infrastructure Project, with around 1,000 MW of new VRE capacity by 2033-34. The installed capacity is projected to increase above 10 GW after 2042-43 (including existing, committed and anticipated plant).

Other REZs in New South Wales – such as Broken Hill, Tumut, Cooma-Monaro, the Illawarra and South Cobar – also see smaller developments later in the study horizon, and account for less than 4% of the total projected utility-scale VRE developments in New South Wales.

Significant distribution connected VRE is projected to be unlocked throughout the distribution network. Over 5,000 MW is projected in Hunter-Central Coast REZ by 2050. Over 1,500 MW is projected by 2050 in the Dubbo area.

[13] New South Wales Government, 2023. "Climate Change (Net Zero Future) Act 2023 No 48". At https://legislation.nsw.gov.au/view/html/2023-12-11/act-2023-048.

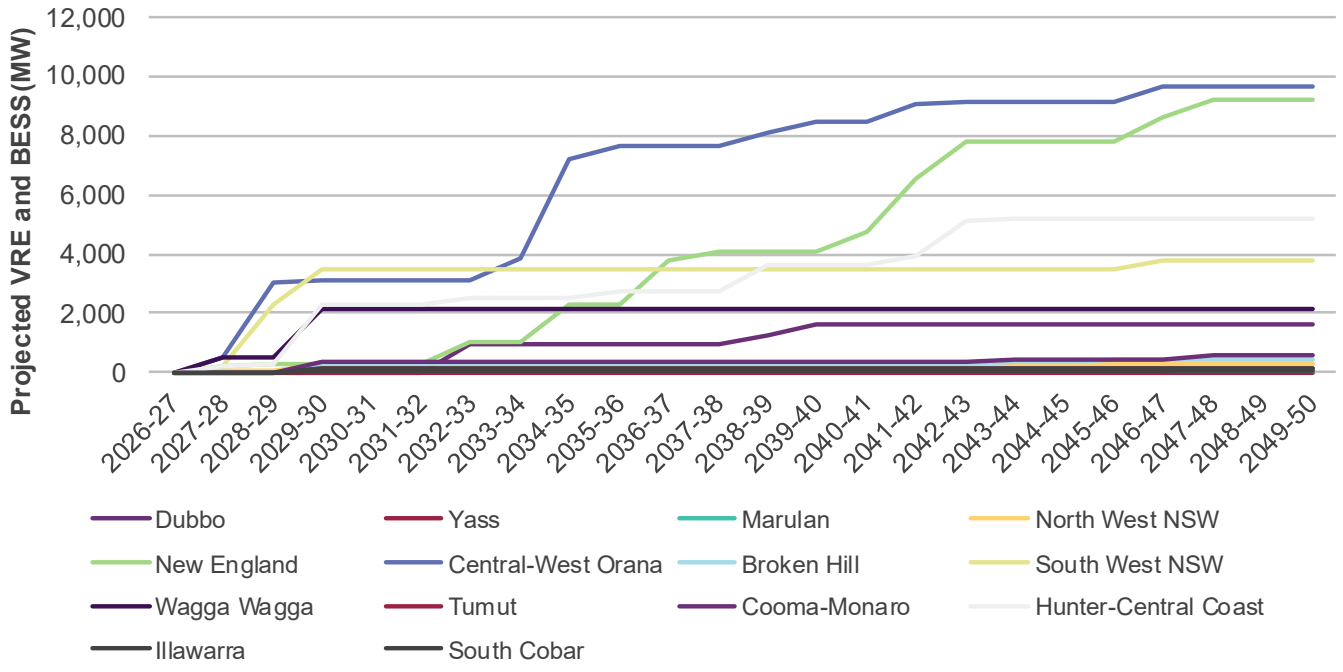
[14] See https://www.energy.nsw.gov.au/nsw-plans-and-progress/major-state-projects/electricity-infrastructure-roadmap.

[15] New South Wales Government, 2020. "Electricity Infrastructure Investment Act 2020 No 44". At https://legislation.nsw.gov.au/view/html/inforce/current/act-2020-044.

No offshore wind development is projected in the *Step Change* results for New South Wales, largely due to the assumptions around cost and availability.

By 2029-30 there is approximately 14 GW/40 GWh of utility-scale storage capacity projected, increasing slightly to nearly 14 GW/41 GWh by 2050. The majority (over 8 GW) is either committed or anticipated currently, including the committed Snowy 2.0.

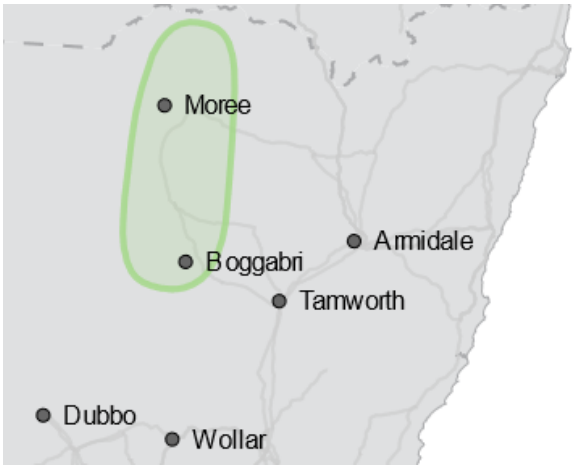
Figure 6 New South Wales utility-scale VRE and BESS development in REZs for *Step Change* (MW)



N1 – North West New South Wales

Summary

The North West New South Wales (NWNSW) REZ is located to the west of the existing Queensland – New South Wales Interconnector (QNI). While this zone has B grade solar resource quality, the wind resource is estimated to be mostly inadequate for wind farm development.



Existing network capability

The existing 132 kV network is weak and would require significant network upgrades to accommodate VRE greater than the transmission limit of approximately 170 MW.

REZ grouping

Coordination of generation infrastructure may be required	Modelling outcomes indicate no significant transmission infrastructure is projected in the ODP, beyond what is already committed/anticipated.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			E		
Renewable Potential (MW)	6,385			-		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	E

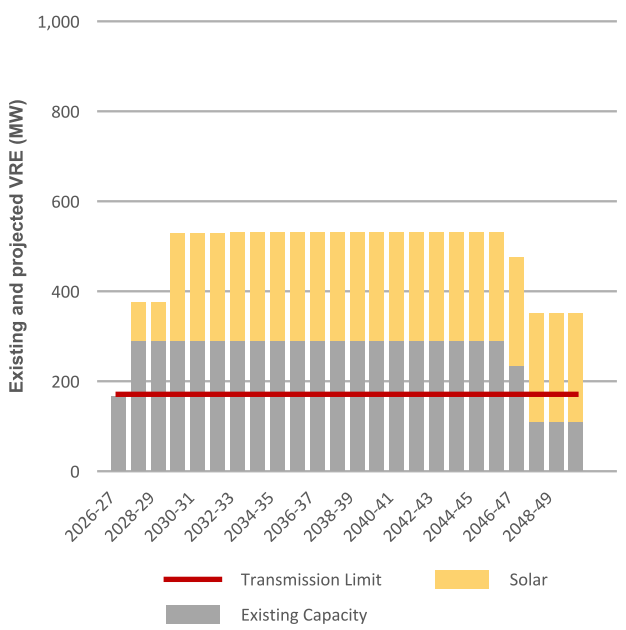
REZ Outlook

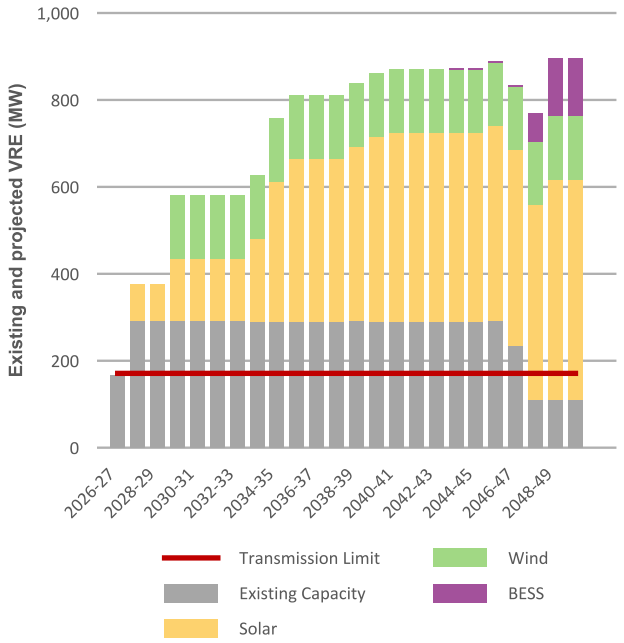
	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	166	100	100	150	0	0	0	0
Step Change		250	250	250		0	0	0
Accelerated Transition		150	400	500		150	150	150

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	125	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	150		0	100	100

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)





VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	11%	0%	10%	6%	34%
Step Change	6%	18%	1%	36%	5%	52%
Accelerated Transition	2%	8%	0%	35%	0%	48%

N2 – New England

Summary

New England REZ is located to the east of and along the existing QNI. The capacity of this REZ is supported by extensive Northern NSW – Central NSW corridor network options and it will be part of New England REZ infrastructure development. This REZ has C grade solar and wind resource quality 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.

Existing network capability

The existing network capacity, following completion of the committed QNI Minor upgrade, is limited by transient and voltage stability on the circuits between Bulli Creek, Sapphire and Dumaresq. Thermal limits on the 330 kV circuits between Armidale, Tamworth, Muswellbrook and Liddell can also restrict flows on this network.

The New England REZ Infrastructure Project is now categorised by AEMO as anticipated, based on information provided by the New South Wales government[16], and is progressing under the *Electricity Infrastructure Investment Act 2020* (NSW). As such, the network capability is assumed to be approximately 6,577 MW from 2033-34, incorporating the anticipated New England REZ Infrastructure Project (6,000 MW), as well as existing network capability (577 MW). More information about the delivery of the New England REZ is available on EnergyCo's website[17].

REZ grouping

REZ design and community engagement is progressing	On 17 December 2021, the New England REZ was formally declared to progress under the *Electricity Infrastructure Act 2020* (NSW) rather than through the RIT-T framework. This declaration identifies that EnergyCo is the appointed infrastructure planner responsible for coordinating the delivery of the REZ.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			C		
Renewable Potential (MW)	2,985			7,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	C	**Bushfire score**	E

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	1,256	0	0	950	652	50	50	3,450
Step Change		200	2,250	2,250		50	1,800	6,950
Accelerated Transition		200	2,250	2,250		50	6,300	7,400

[16] Letter from the Honourable Penny Sharpe MLC regarding the New England REZ Network Infrastructure Project, 12 May 2026, accessible via https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2026-integrated-system-plan-isp.

[17] See https://www.energyco.nsw.gov.au/ne-rez.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	899	0	0	0	0	0	50	100
Step Change		0	0	0		0	100	150
Accelerated Transition		0	0	0		0	700	1300

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: There is the anticipated New England REZ Infrastructure Project.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	16%	0%	3%	0%	4%
Step Change	9%	20%	0%	8%	0%	6%
Accelerated Transition	10%	20%	0%	10%	0%	15%

N3 – Central-West Orana

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 under the *Electricity Infrastructure Investment Act 2020* (NSW)[18]. The Central-West Orana REZ has an intended 6,000 MW[19] 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 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[20]. The 2026 ISP has refined its modelling of New South Wales REZ access rights to align with New South Wales Government data.

The project to establish the Central-West Orana REZ Infrastructure Project is considered a committed project as discussed in Appendix A5 Network Investments. 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

The project to establish the Central-West Orana REZ is considered committed. As such, the existing network capability is assumed to be approximately 5,400 MW, incorporating the committed Central-West Orana REZ Network Infrastructure Project (4,500 MW), as well as existing network capability (900 MW).

The Hunter Transmission Project (CNSW-SNW Option 1) is identified as an actionable New South Wales project, and 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 committed Central-West Orana REZ Network Infrastructure Project. The actionable Central-West Orana REZ Expansion (N3 Option 1) further increases its network capacity from 4,500 MW to 6,000 MW.

REZ grouping

REZ design and community engagement is progressing	The Central-West Orana REZ was formally declared in November 2021. EnergyCo, appointed as the Infrastructure Planner for the Central-West Orana REZ, consulted on the revised study corridor for the REZ transmission project in early 2022.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			C		
Renewable Potential (MW)	4,450			6,850		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

[18] See https://www.energyco.nsw.gov.au/our-projects/central-west-orana-renewable-energy-zone and Government Gazette No 569 of Friday 5 November 2021 at https://gazette.nsw.gov.au/gazette/2021/11/2021-569.pdf.

[19] See Government Gazette No 580 of Friday 15 December 2023, at https://www.energyco.nsw.gov.au/sites/default/files/2024-08/Gazette_2023_2023-580.pdf.

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

Climate hazard			
Temperature score	C	Bushfire score	E

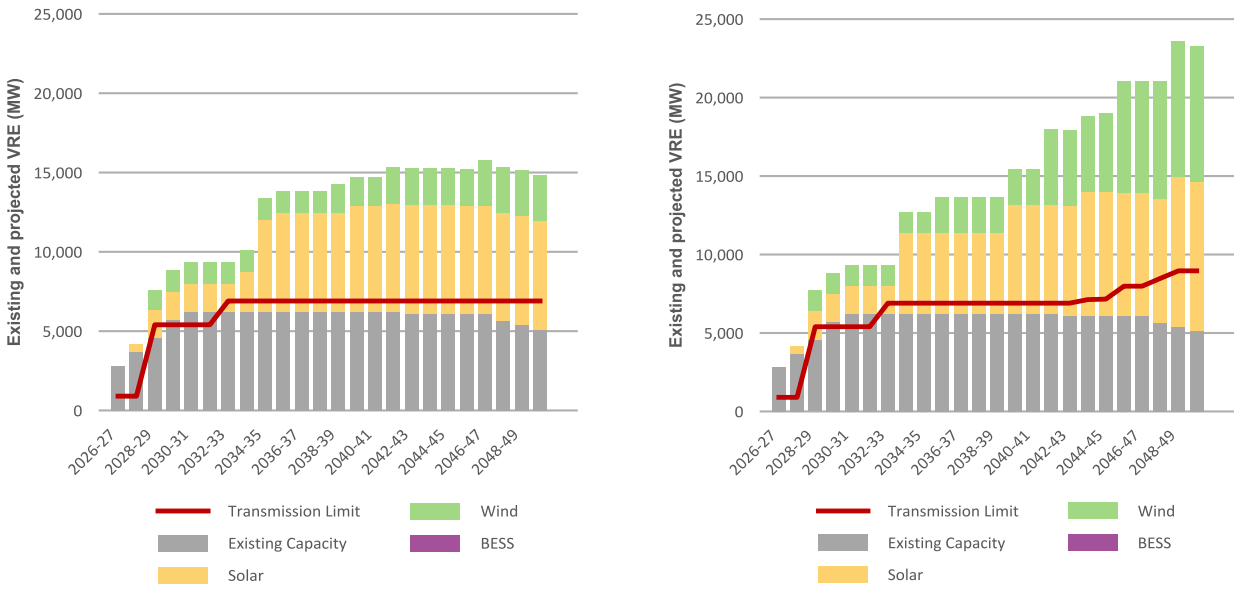
REZ Outlook

	Solar (MW)				Wind (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	2,424	1,800	1,800	5,550	2,286	1,350	1,350	2,300
Step Change		1,800	6,700	6,850		1,350	1,750	2,850
Accelerated Transition		1,800	7,000	9,550		1,350	2,300	8,600

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	1,495	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: In addition to the committed Central-West Orana REZ Network Infrastructure Project, there is an actionable New South Wales Central-West Orana REZ Expansion project required in the *Slower Growth*, *Step Change* and *Accelerated Transition* scenarios.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	2%	0%	2%	0%	5%
Step Change	0%	1%	0%	11%	0%	11%
Accelerated Transition	0%	0%	0%	13%	0%	16%

Dubbo distribution

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.

Options expand the distribution and transmission network in Central West New South Wales to export generation and storage to supply the Sydney, Newcastle, Wollongong area and local loads. The Dubbo distribution project is separate to the Central-West Orana REZ and has been modelled independently.

AEMO has identified a potential augmentation option to unlock capacity at Dubbo as a distribution project, outlined in Appendix A5 Network Investments.

Existing network capability

There is no additional network capacity within the Dubbo distribution project.

REZ grouping

Coordination of generation and transmission infrastructure may be required	Modelling outcomes identify this zone for development of moderate amounts of solar by 2032-33 and small amounts of wind by 2038-39. Network augmentation may be required to unlock this zone.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			C		
Renewable Potential (MW)	1,300			1,050		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	C	**Bushfire score**	E

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	1,300	1,300		0	300	300
Accelerated Transition		0	1,300	1,600		0	300	300

	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: There is a distribution project, Dubbo Distribution Project, required in the *Step Change* and *Accelerated Transition* scenarios, which include both DN1 Option 1 and DN1 Option 2a.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	0%	18%	1%	10%
Accelerated Transition	-	-	0%	23%	0%	32%

N4 – Broken Hill

Summary

Broken Hill REZ has grade A solar resource quality and grade B wind quality. It is connected to the New South Wales grid via a 220 kV line from Buronga with an approximate length of 270 km.

AEMO has not identified actionable or future ISP projects for this REZ.

Existing network capability

Due to the existing utility-scale solar and wind generation projects already operating in this REZ, there is limited network capacity within this REZ. Further development of new generation in this REZ requires significant transmission network augmentation due to the distance of the REZ from the main transmission paths of the shared network.

REZ grouping

Coordination of generation infrastructure may be required	Modelling outcomes identify this REZ for development of solar generation mostly in the 2030s. Coordination of generation infrastructure may be required.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	A			B		
Renewable Potential (MW)	8,000			5,100		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

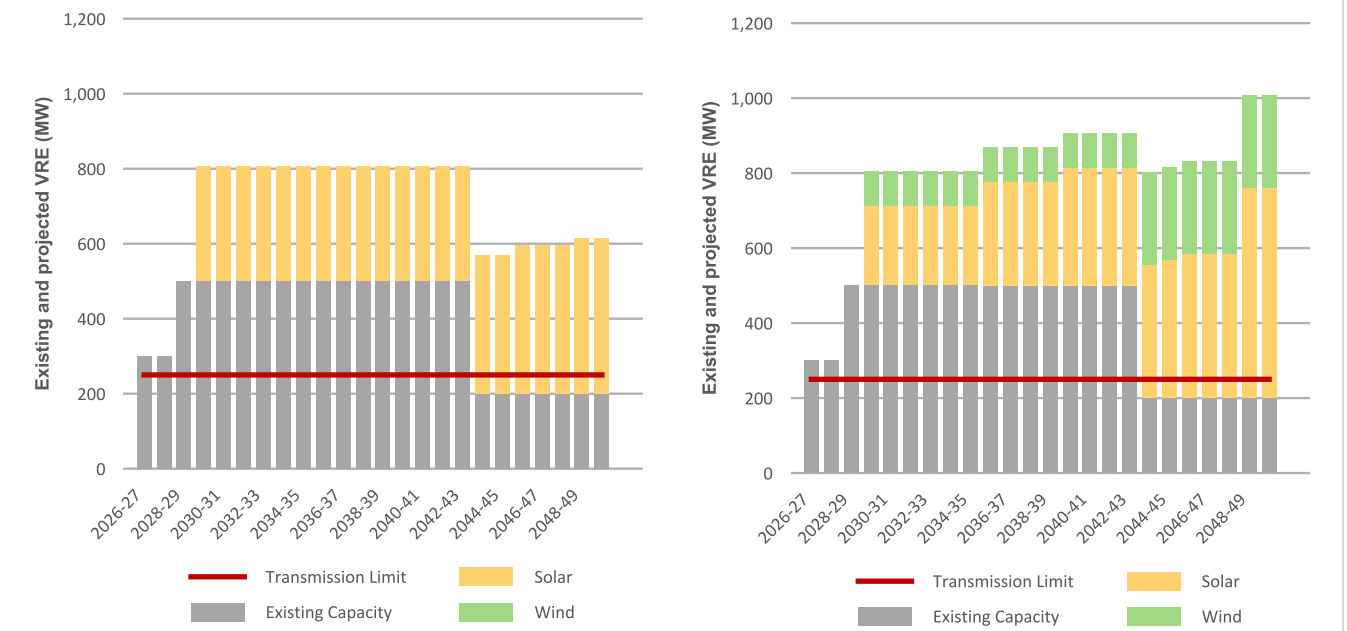
Climate hazard

Temperature score	E	**Bushfire score**	C

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	53	0	0	0	198	0	0	0
Step Change		300	300	400		0	0	0
Accelerated Transition		200	300	550		100	100	250
	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	250	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	7%	0%	17%	0%	33%
Step Change	1%	11%	0%	34%	0%	46%
Accelerated Transition	1%	4%	0%	38%	1%	61%

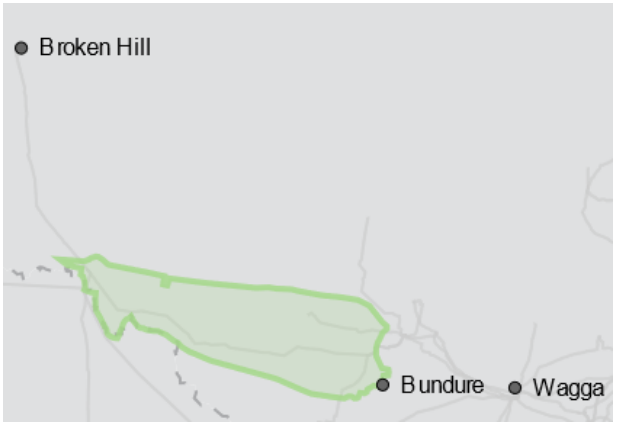
N5 – South West New South Wales

Summary

The South West New South Wales REZ has grade B solar resource quality and grade C wind resources. The REZ incorporates the Dinawan 330 kV substation built as part of the committed Project EnergyConnect. Further west, the 220 kV links to North West Victoria and Broken Hill. This REZ is one of the REZs being targeted for further development under the NSW Electricity Infrastructure Roadmap.

Transmission network limits associated with the existing voltage stability limit for loss of the existing Darlington Point to Wagga 330 kV line are represented by the SWNSW1 secondary transmission limit.

EnergyCo has allocated access rights to generation and storage projects under the REZ access scheme and will continue to support community and stakeholder consultation.



Existing network capability

Due to the existing utility-scale solar projects already operating within this REZ, there is no additional network capacity. Further development of new generation in this REZ requires network augmentation towards the greater Sydney load centre. The capacity within this REZ and ability to transfer energy from the REZ to the main load centres in the greater Sydney area will be improved with the construction of the committed Project EnergyConnect and HumeLink projects. Furthermore, VNI West, which continues to be an actionable project in this ISP, would also increase the capacity of this REZ.

REZ grouping

REZ design and community engagement is progressing	The South-West NSW REZ[21] was formally declared in November 2022 under *the Electricity Infrastructure Investment Act 2020*[22], which is the first step in formalising the REZ under the Act. Outside the committed Project EnergyConnect Stage 2 project, the committed Humelink project, and the actionable VNI West project, it is unlikely transmission infrastructure will be required under the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	5,677			14,000		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	E	**Bushfire score**	D

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	1,014	200	200	200	595	3,250	3,250	3,250
Step Change		200	200	500		3,300	3,300	3,300
Accelerated Transition		200	300	5,000		3,250	3,250	3,250

[21] EnergyCo, South West Renewable Energy Zone, at https://www.energyco.nsw.gov.au/our-projects/south-west-rez.

[22] New South Wales Government, *Electricity Infrastructure Investment Act 2020* (NSW), at https://legislation.nsw.gov.au/view/html/inforce/current/act-2020-044.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	288	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	22%	0%	8%	0%	6%
Step Change	17%	22%	0%	11%	0%	8%
Accelerated Transition	18%	22%	0%	10%	0%	22%

N6 – Wagga Wagga

Summary

This REZ extends to the west of Wagga Wagga and has C grade solar resource quality.

Existing network capability

There is no additional capacity within this REZ due to congestion in the surrounding 330 kV networks. Further development of new generation in this REZ requires network augmentation towards the greater Sydney load centre. Additionally, the capacity within this REZ and ability to transfer energy from the REZ to the main load centres in the greater Sydney area are improved with the committed HumeLink project.

REZ grouping

Coordination of generation infrastructure may be required	Modelling outcomes identify this REZ for the development of solar generation, utilising the capacity unlocked by the committed HumeLink project. Significant investment in VRE is identified in the next five years under the ODP. Ongoing community engagement is underway for HumeLink.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			C		
Renewable Potential (MW)	2,146			1,000		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

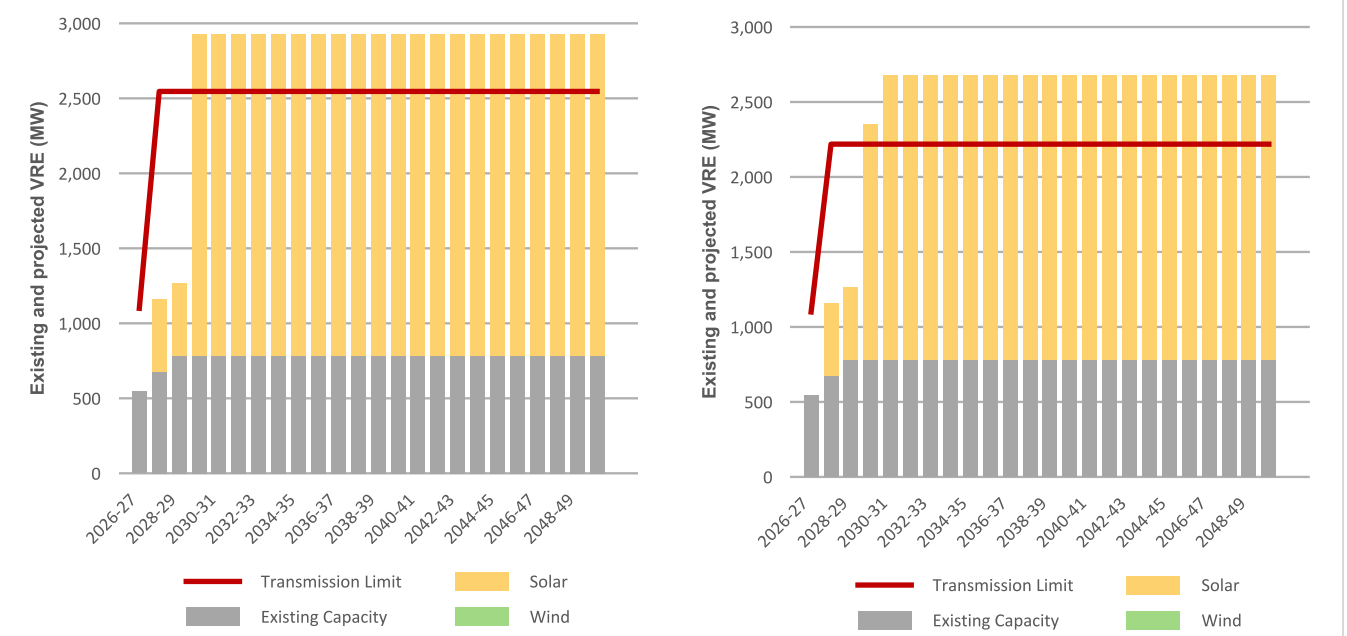
Climate hazard

Temperature score	D	**Bushfire score**	D

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	466	500	500	500	0	0	0	0
Step Change		2,150	2,150	2,150		0	0	0
Accelerated Transition		1,550	1,900	1,900		0	0	0
	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	315	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



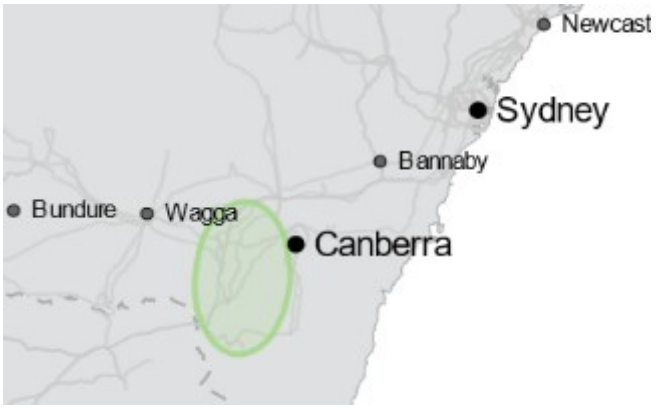
VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	5%	0%	7%	0%	11%
Step Change	0%	3%	0%	6%	0%	5%
Accelerated Transition	0%	1%	0%	15%	0%	27%

N7 – Tumut

Summary

The Tumut REZ has been identified due to the potential for additional pumped hydro generation in association with the committed Snowy 2.0 and HumeLink projects. The HumeLink project will enable the connection of more than 2,000 MW of pumped hydro generation (Snowy 2.0) in the Tumut REZ area.



Existing network capability

There is no additional network capacity within this REZ. Further development of new generation in this REZ is associated with the committed HumeLink project. Currently the 330 kV transmission network around Lower and Upper Tumut is congested during peak demand periods. A careful balance of generation from the existing hydro units and flow between Victoria and New South Wales is required to prevent overloads within this area.

REZ grouping

Design and community engagement are progressing	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP. Ongoing community engagement is underway for the committed HumeLink project.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	D			C		
Renewable Potential (MW)	100			400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	B	B	B

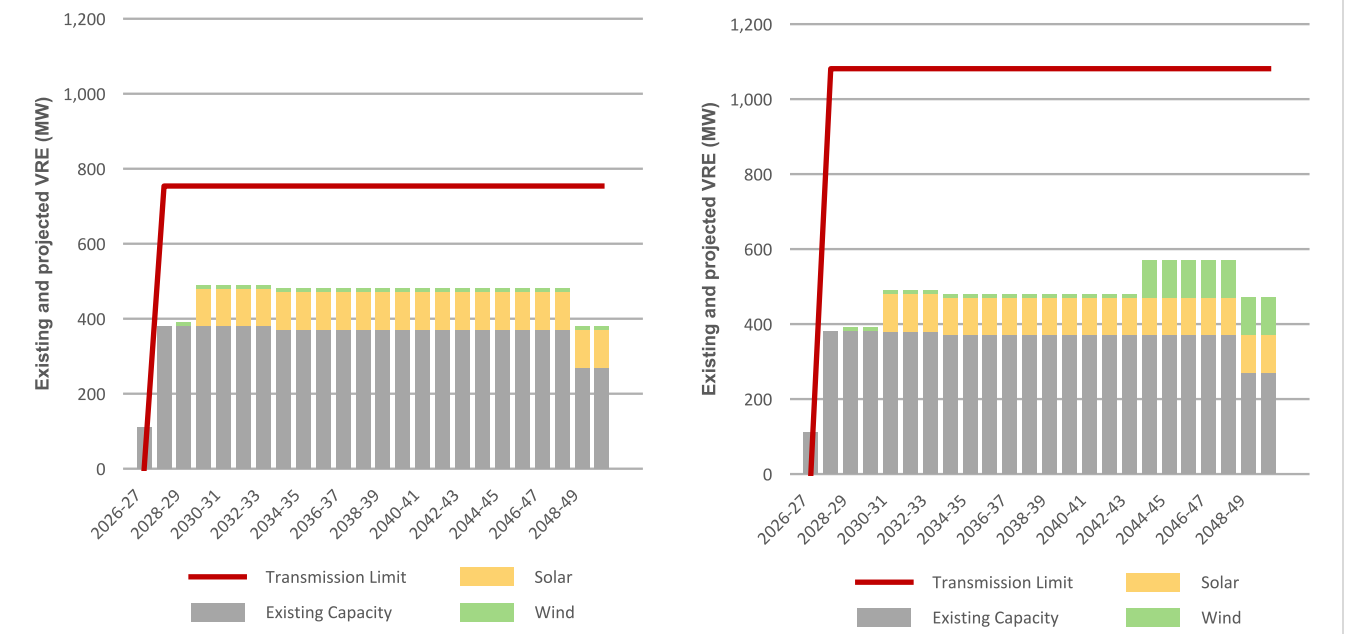
Climate hazard			
Temperature score	C	**Bushfire score**	E

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	270	0	0	0
Step Change		100	100	100		0	0	0
Accelerated Transition		0	100	100		0	0	100

	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	110	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	5%	0%	1%	0%	1%
Step Change	0%	5%	0%	1%	0%	1%
Accelerated Transition	0%	1%	0%	1%	0%	8%

N8 – Cooma-Monaro

Summary

The Cooma-Monaro REZ has been identified for its pumped hydro potential. This REZ has C grade wind resource quality.

Existing network capability

The existing 132 kV network connecting Cooma-Monaro REZ to Canberra, Williamsdale and Munyang can accommodate approximately 200 MW of additional generation.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of mostly solar generation with wind projected later in the horizon. This REZ could benefit from early community engagement and from the coordination of generation.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	D			C		
Renewable Potential (MW)	350			300		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	B	B	B

Climate hazard			
Temperature score	B	**Bushfire score**	E

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	113	0	0	0
Step Change		350	350	350		0	0	200
Accelerated Transition		0	350	350		100	300	500

	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	1	0	50	100
Step Change		0	0	0		0	50	150
Accelerated Transition		0	0	0		0	200	300

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	1%	0%	0%	-	-
Step Change	0%	9%	0%	22%	0%	20%
Accelerated Transition	0%	2%	0%	26%	0%	24%

N9 – Hunter-Central Coast

Summary

The Hunter-Central Coast (HCC) REZ[23] 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[24] and EnergyCo has been appointed the Infrastructure Planner enabled by the *Electricity Infrastructure Investment Act 2020*.

The capacity of the HCC REZ is likely to increase over time with the retirement of coal-fired power stations, re-purposing of mining land and the growth of offshore wind.

AEMO has identified potential augmentation options to unlock capacity at HCC REZ as a distribution project, with the Hunter-Central Coast REZ Expansion distribution project outlined in Appendix A5 Network Investments.

Existing network capability

EnergyCo has announced this REZ will supply both 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.

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 comitted Hunter-Central Coast REZ Infrastructure Project, the transfer capacity will increase by 600 MW.

The amount of generation that can be exported from this REZ to SNW is limited to 750 MW, which is limited by thermal capacity of the Newcastle 330/132 kV transformers.

REZ grouping

REZ design and community engagement is progressing	The HCC REZ was formally declared in December 2022, and generation, distribution and transmission infrastructure coordination is progressing. The modelling outcomes identify this zone for significant development of VRE generation and utility-scale storage for all scenarios, as well as hydrogen electrolyser load. Hunter-Central Coast REZ Network Infrastructure Project is now proceeding as a committed project. Further expansions to this REZ, the Hunter-Central Coast REZ Expansion, has been identified as a distribution network opportunity in the 2026 ISP. The Hunter-Central Coast REZ Expansion includes two network augmentations, N9b Option 2a and N9a Option 2b, as identified in Appendix A5.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	D			D		
Renewable Potential (MW)	953			1,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	C	C	C

Climate hazard			
Temperature score	A	**Bushfire score**	E

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	1,750	1,750	1,750	0	50	50	1,300
Step Change		2,050	2,250	3,700		300	1,400	1,500
Accelerated Transition[25]		1,550	7,950	15,250		1,300	3,950	6,150

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

[24] See https://gazette.nsw.gov.au/gazette/2022/12/2022-569.pdf.

[25] The *Accelerated Transition* scenario assumed REZs to have a land use limit of 5% for solar and an indicative land usage of 0.02 km^2/MW for solar. The area of N9 is 7,317 km^2, resulting in an 18,292 MW solar land use limit in *Accelerated Transition*.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	50	0
Step Change		0	0	1,400		0	100	250
Accelerated Transition		450	1,700	4,000		0	1,100	1,600

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: In the 2026 ISP, N9 was modelled with a CNSW component (N9a) and a SNW component (N9b). There is the committed Hunter-Central Coast REZ Infrastructure Project. There is also the distribution project, Hunter-Central Coast REZ Expansion, required in the *Slower Growth*, *Step Change* and *Accelerated Transition* scenarios, which include both N9b Option 2a and N9a Option 2b.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	29%	2%	14%	1%	11%
Step Change	13%	27%	0%	19%	0%	16%
Accelerated Transition	6%	10%	0%	22%	0%	28%

N10 – Hunter Coast

Summary

The Hunter Coast offshore REZ has been identified for the offshore wind resource potential in relatively shallow waters close to shore, with a connection point near to the SNW load centre[26].

Existing network capability

Newcastle has multiple 330 kV lines already connected and is situated within the SNW load centre. Network capacity is shared with local gas generation and coal generation output. The current network limit is approximately 5,500 MW for new generation connections in the Newcastle and Eraring areas. This capacity could also be shared with any new generation connecting in the Hunter Central Coast REZ.

REZ grouping

REZ design and community engagement is progressing	Following consultation and being satisfied that it is considered suitable for offshore renewable energy infrastructure, on 12 July 2023, the Federal Government declared an area in the Pacific Ocean off the Hunter, New South Wales, under the *Offshore Electricity Infrastructure Act 2021*[27]. Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP

Metrics

Resource	**Offshore Wind (fixed)**			**Offshore Wind (floating)**		
Resource Quality	-			A		
Renewable Potential (MW)	-			7,420		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	A	A		A	A	

Climate hazard			
Temperature score	A	**Bushfire score**	E

VRE outlook

	Offshore Wind – fixed (MW)				**Offshore Wind – floating (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

[26] Federal Government, 'Hunter, NSW declared offshore wind area', at https://www.dcceew.gov.au/energy/renewable/offshore-wind/areas/hunter.

[27] Offshore Electricity Infrastructure (Declared Area OEI-01-2023) Declaration 2023, at https://www.legislation.gov.au/F2023L01005/asmade/2023-07-12/text/original/pdf.

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	-	-	-	-
Accelerated Transition	-	-	-	-	0%	12%

N11 – Illawarra Coast

Summary

The Federal Government has proposed an area for future offshore renewable energy projects in the Pacific Ocean off the coast of the Illawarra region, and is currently finalising consultation prior to any declaration.

Existing network capability

Dapto has multiple 330 kV lines already connected and is situated within the SNW load centre. Network capacity is shared with local gas generation and hydro generation output. The current network transfer capacity is approximately 1,000 MW. This capacity is shared with any new generation connecting in the Illawarra REZ.

REZ grouping

REZ design and community engagement is progressing	The Minister for Climate Change and Energy declared an area in the Pacific Ocean off the Illawarra for offshore renewable energy, including offshore wind, on 15 June 2024[28]. Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP

Metrics

Resource	**Offshore Wind (fixed)**			**Offshore Wind (floating)**		
Resource Quality	-			B		
Renewable Potential (MW)	-			4,452		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	A	A		A	A	

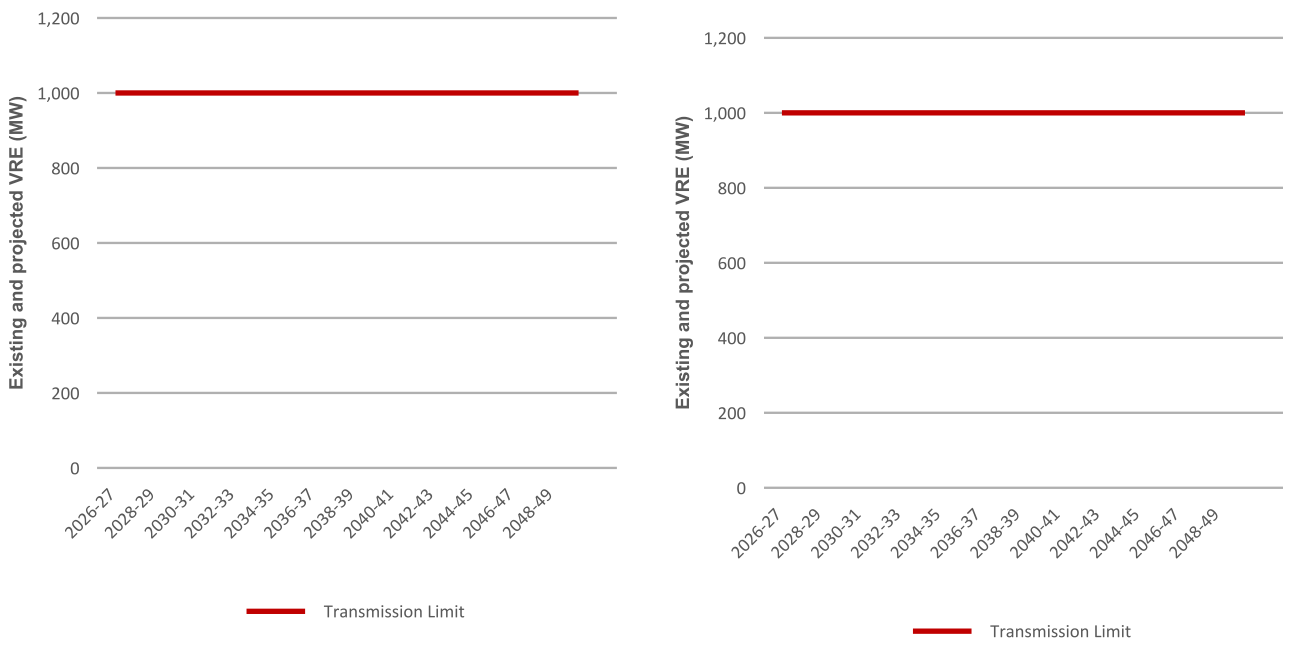
Climate hazard			
Temperature score	C	**Bushfire score**	C

VRE outlook

	Offshore Wind – fixed (MW)				**Offshore Wind – floating (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

[28] Federal Government, Illawarra declared offshore wind area, at https://www.legislation.gov.au/F2024L00685/asmade/text.

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	-	-	-	-
Accelerated Transition	-	-	-	-	-	-

N12 – Illawarra

Summary

The Illawarra REZ[29] was declared on 27 February 2023 with 1,000 MW of intended network capacity, and EnergyCo has been appointed the Infrastructure Planner for the REZ, under the *Electricity Infrastructure Investment Act 2020* (NSW)[30]. Community consultation has been initiated by EnergyCo, following an earlier Registration of Interest that highlighted potential for wind (onshore and offshore), solar, energy storage, pumped hydro, hydrogen production, and green steel manufacturing.

Existing network capability

Dapto has multiple 330 kV lines already connected and is situated within the SNW load centre. Network capacity is shared with local gas generation and hydro generation output. The intended network capacity for this REZ is approximately 1,000 MW.

REZ grouping

REZ design and community engagement is progressing	EnergyCo is also in the early stages of planning for a REZ, as set out under the *Electricity Infrastructure Investment Act 2020*, in the Illawarra region of New South Wales. Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP, except in *Accelerated Transition,* where augmentation supports hydrogen electrolyser load.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	F			E		
Renewable Potential (MW)	-			-		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	-	**Bushfire score**	-

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	50
Step Change		0	0	0		50	50	50
Accelerated Transition		0	0	0		350	350	350

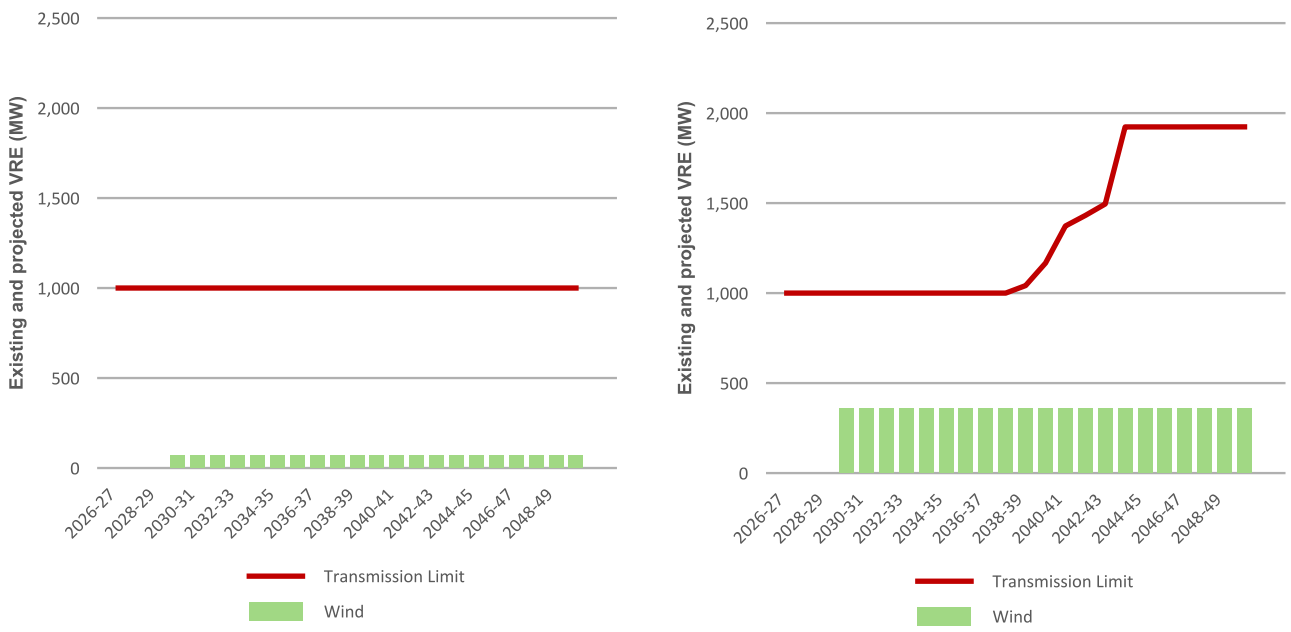
[29] At https://www.energyco.nsw.gov.au/our-projects/illawarra-rez.

[30] At https://gazette.nsw.gov.au/gazette/2023/2/2023-98.pdf.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	1	0	300	650
Step Change		0	0	0		0	550	950
Accelerated Transition		0	0	0		0	1,350	1,950

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission import limit increasing is due to the hydrogen load (1,950 MW in 2049-50 in *Accelerated Transition*). The *Accelerated Transition* scenario projects the REZ to supply full hydrogen load at times of low or no local REZ generation.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	0%	9%
Step Change	0%	4%	0%	15%	0%	17%
Accelerated Transition	0%	1%	0%	12%	0%	17%

N13 – South Cobar

Summary

South Cobar REZ is a new candidate REZ proposed in the 2026 ISP with high quality wind and solar resources. It is connected to the New South Wales grid via the existing 132 kV line from Cobar.

Existing network capability

South Cobar REZ has a limited initial network capacity of approximately 100 MW due to the single 132 kV connection to the New South Wales grid. Further development of new generation in this REZ requires significant transmission network augmentation due to the distance of the REZ from the main transmission paths of the shared network.

REZ grouping

No significant transmission or generation infrastructure is projected	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	3,285			2,094		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	-	**Bushfire score**	-

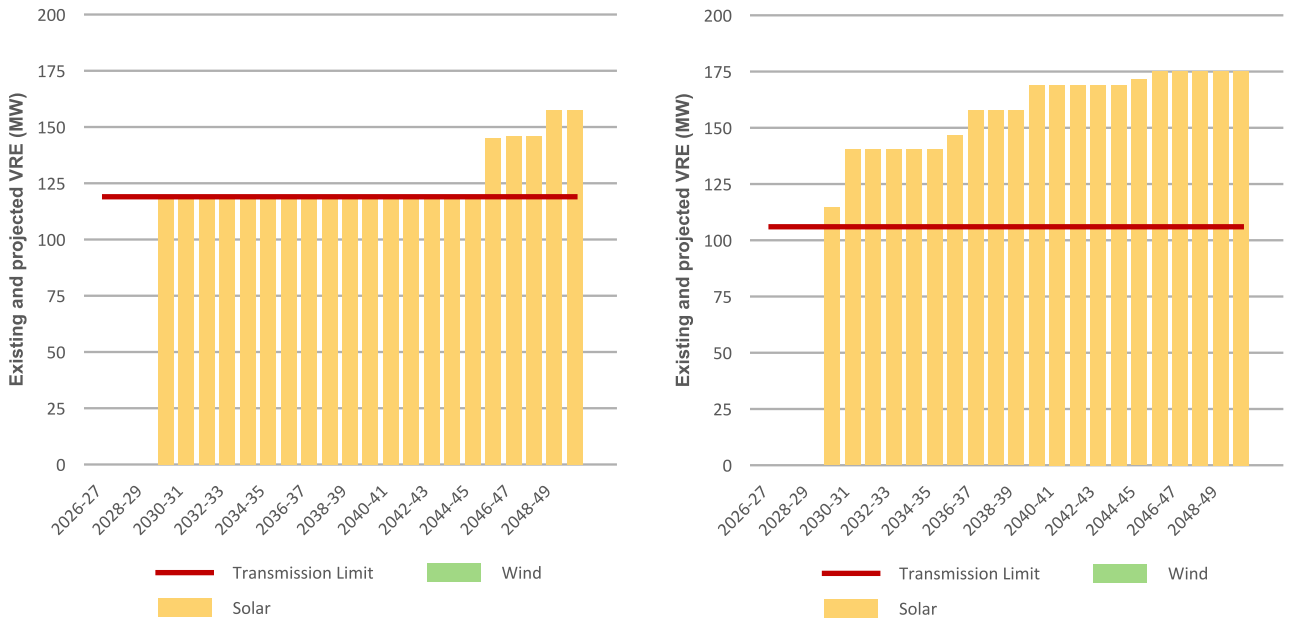
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		100	100	150		0	0	0
Accelerated Transition		100	150	200		0	0	0

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	0	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	1%	16%	0%	50%	0%	51%
Accelerated Transition	1%	7%	0%	60%	0%	73%

Yass distribution

Summary

The Yass distribution project is located near Yass in South New South Wales, proposing to initially connect 1.55 GW of generation and storage to both distribution (Essential Energy) and transmission (Transgrid). The Yass distribution project has been jointly planned between EnergyCo, Essential Energy and Transgrid.

The option expands the distribution and transmission network in Southern New South Wales to export generation and storage to supply the Sydney, Newcastle, Wollongong area and local loads.

Existing network capability

There is no additional network capacity within this REZ.

REZ grouping

No significant transmission and generation infrastructure is projected	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP.

Metrics

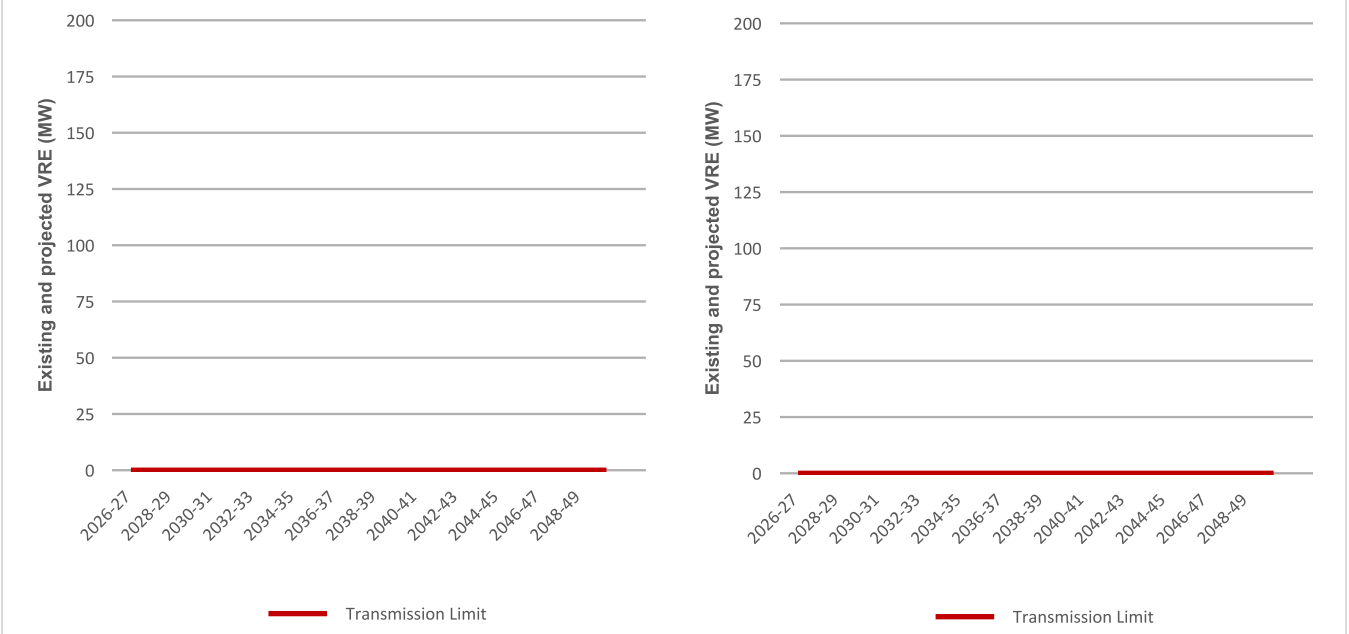
Resource	**Solar**			**Wind**		
Resource Quality	E			D		
Renewable Potential (MW)	825			825		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	B	**Bushfire score**	E

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0
	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	-	-	-	-
Accelerated Transition	-	-	-	-	-	-

Marulan distribution

Summary

The Marulan distribution project is located near Marulan in South New South Wales, proposing to initially connect 1.65 GW of generation and storage to both distribution (Essential Energy) and transmission (Transgrid). The Marulan distribution project has been jointly planned between EnergyCo, Essential Energy and Transgrid.

Existing network capability

There is no additional network capacity within this REZ.

REZ grouping

No significant transmission and generation infrastructure is projected	Modelling outcomes identify this zone for moderate amounts of wind later in the horizon, around 2040. Generation infrastructure coordination may be required at this time.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	E			D		
Renewable Potential (MW)	775			775		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	B	**Bushfire score**	E

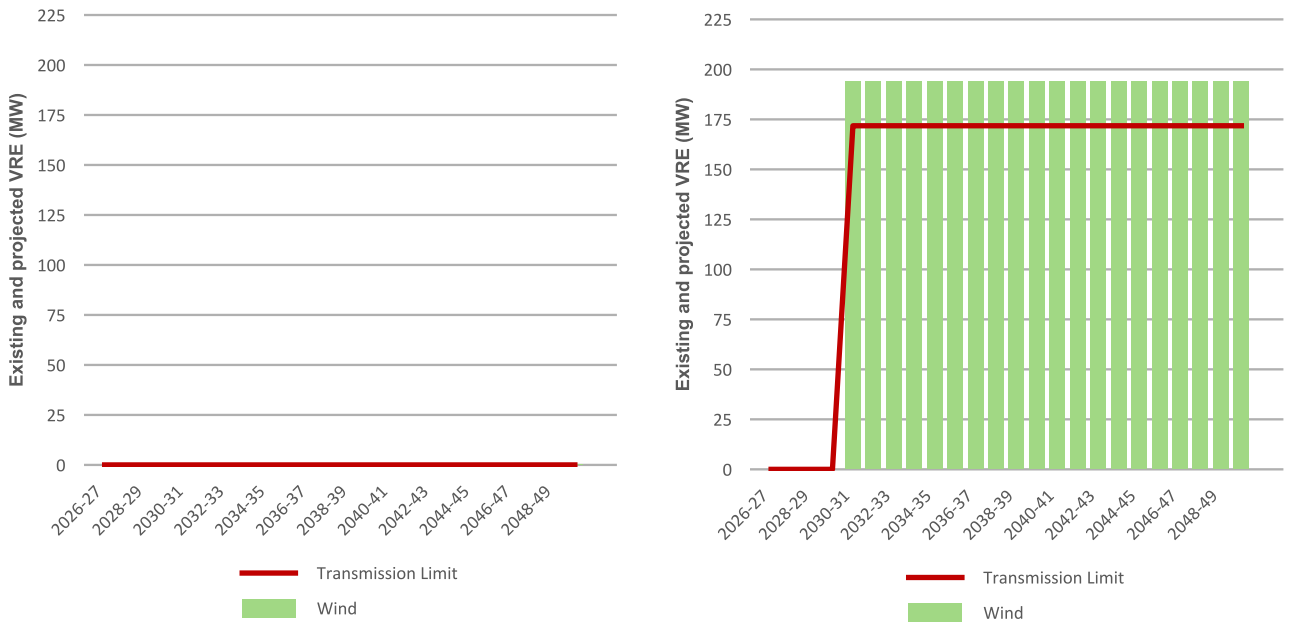
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	200	200

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0	0
Accelerated Transition		0	0	0		0	0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	-	-	-	-
Accelerated Transition	-	-	0%	6%	0%	19%

A3.3.3 Queensland

REZ outlook

Approximately 26.5 GW of new utility-scale wind and solar VRE is projected to be required in Queensland by 2050 to assist in replacing retiring generation and meet forecast load. **Figure 7** shows the new utility-scale VRE projected for each REZ in Queensland under *Step Change*. This modelling indicates:

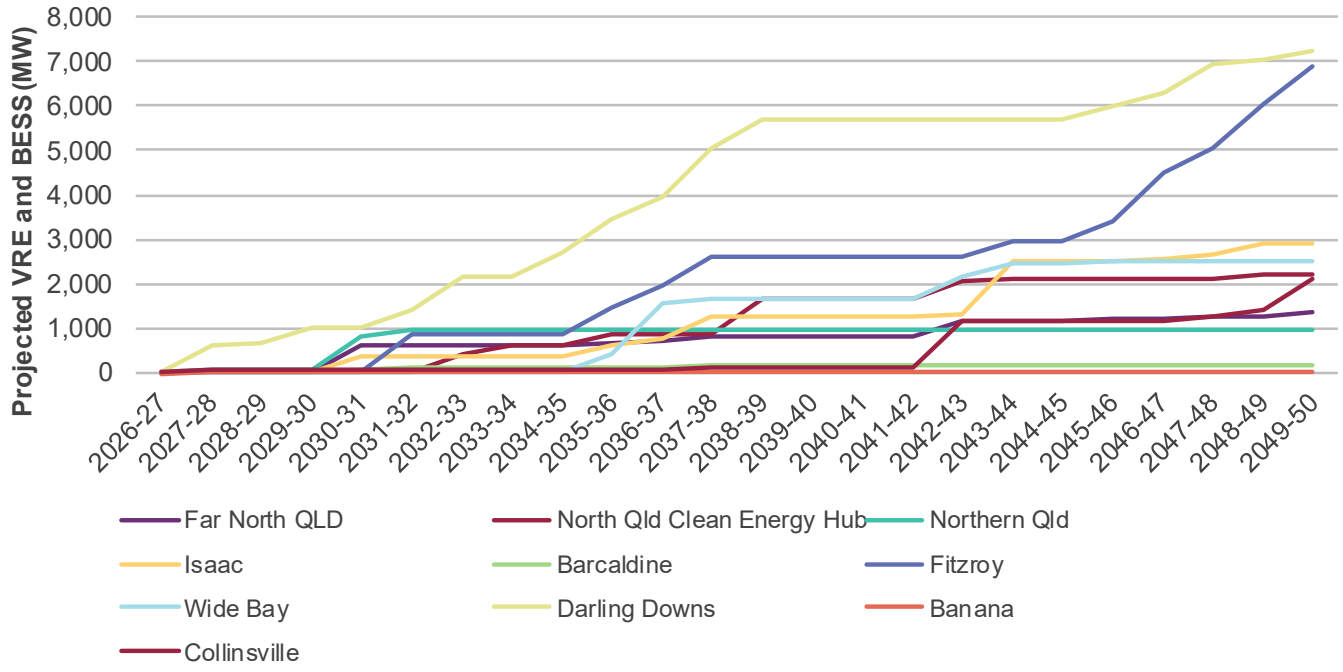
The majority of new VRE capacity is installed in Darling Downs, Fitzroy, Isaac, Wide Bay, and the Hughenden Hub.

Darling Downs sees the largest amount of projected new VRE capacity, with rapid developments utilising existing spare network capacity, and with 2,700 MW new VRE by 2034-35, and over 7,000 MW by 2049-50.

Fitzroy REZ also has a large amount of VRE connecting, with 850 MW of new VRE capacity installed by 2034-35, increasing to nearly 7,000 MW by 2050.

Although there is limited utility-scale storage within Queensland's REZs, substantial utility-scale storage (including pumped hydro) is projected across the region. This capacity is primarily concentrated near the Southern Queensland load centre and within the Gladstone Grid. By 2029–30, total utility-scale storage is expected to reach around 8 GW/28 GWh, with the majority (7.5 GW) already existing, committed, or anticipated. This grows to over 15 GW/112 GWh by 2050.

Figure 7 Queensland utility-scale VRE and BESS development in REZs for *Step Change* (MW)



Q1 – Far North Queensland

Summary

The Far North Queensland (FNQ) REZ is at the most northerly section of Powerlink's network. It has grade A wind resource quality with C grade solar and existing hydroelectric power stations.

Existing network capability

The current total REZ transmission limit for existing and new VRE before any network upgrade in Far North Queensland is approximately 750 MW for peak demand, summer typical and winter reference conditions.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of solar and wind generation in all scenarios in the 2030s and further expansion in the 2040s. Coordination of generation infrastructure may be required.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			A		
Renewable Potential (MW)	1,100			2,280		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	C	C	B

Climate hazard				
Temperature score	B	**Bushfire score**	A	

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	450	332	0	550	750
Step Change		0	250	550		0	550	800
Accelerated Transition		0	650	950		550	550	1,050

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	0	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

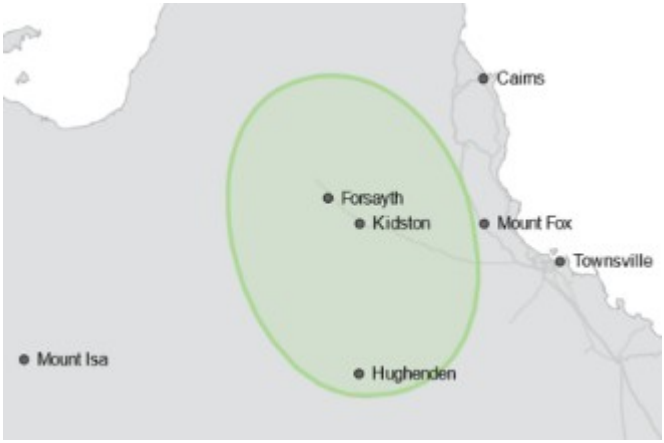
Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	3%	0%	2%	0%	8%
Step Change	0%	0%	0%	9%	1%	16%
Accelerated Transition	0%	1%	0%	21%	1%	23%

Q2 – Hughenden Hub

Summary

The Hughenden Hub REZ is at the north-western section of Powerlink's network and has grade A and B solar and wind resource quality respectively.

The Queensland Government has announced that it will deliver the section of the CopperString project from Townsville to Hughenden, with investigations continuing for the section between Hughenden and Mount Isa. CopperString aims to connect the North West Minerals Province of Queensland to the NEM via a proposed new substation 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.



Existing network capability

The existing network capability is assumed to be up to 2,100 MW, incorporating the anticipated CopperString project addition of up to 1,400 MW to the existing 700 MW of network capability. For the 2026 ISP, only the section of CopperString between Hughenden and Townsville is modelled.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of wind generation in the 2030s across the *Step Change* and *Accelerated Transition* scenarios. This build is delayed under the *Slower Growth* scenario. Outside of the anticipated CopperString project, no significant transmission infrastructure is projected in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	A			B		
Renewable Potential (MW)	8,000			18,600		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	C

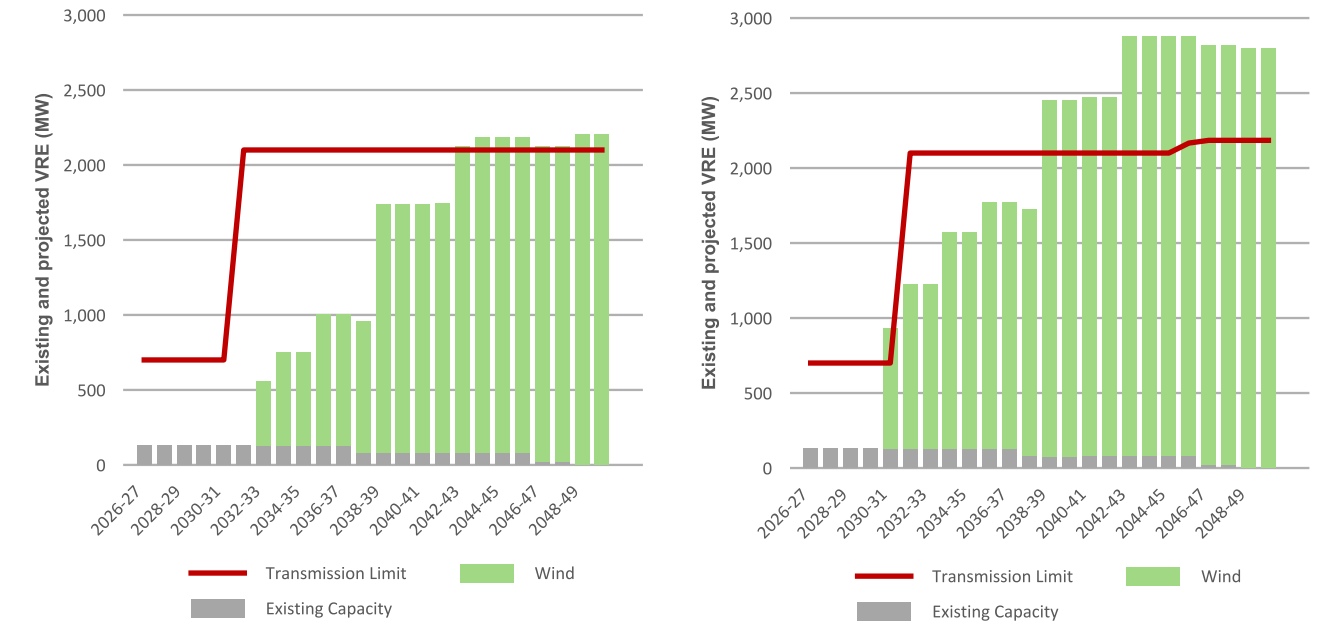
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	85	0	0	0	43	0	0	2,200
Step Change		0	0	0		0	1,650	2,200
Accelerated Transition		0	0	0		0	2,350	2,800

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0	0
Accelerated Transition		0	0	0		0	0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	10%	0%	5%	0%	2%
Step Change	0%	1%	0%	6%	0%	6%
Accelerated Transition	0%	3%	0%	12%	0%	13%

Q3 – Northern Queensland

Summary

The Northern Queensland REZ encompasses Townsville and the surrounding area. It has B grade solar resource quality and is situated close to the high-capacity 275 kV network. There is already nearly 1,500 MW of existing, committed and anticipated large-scale renewable generation projects within this REZ.

Existing network capability

Existing network capacity can allow for up to approximately 2,420 MW of new generator connections under summer typical and peak demand conditions, shared between Q1, Q2 and Q3. Transmission limits are modelled by the North Queensland group constraint (NQ1) limits.

REZ grouping

Coordination of generation infrastructure may be required.	The modelling outcomes identify this zone for solar development throughout the modelling horizon across the *Step Change* and *Accelerated Transition* scenarios, with wind development also identified under *Accelerated Transition*. No significant transmission infrastructure is projected in the ODP under *Step Change*.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			E		
Renewable Potential (MW)	3,400			-		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	C	**Bushfire score**	E

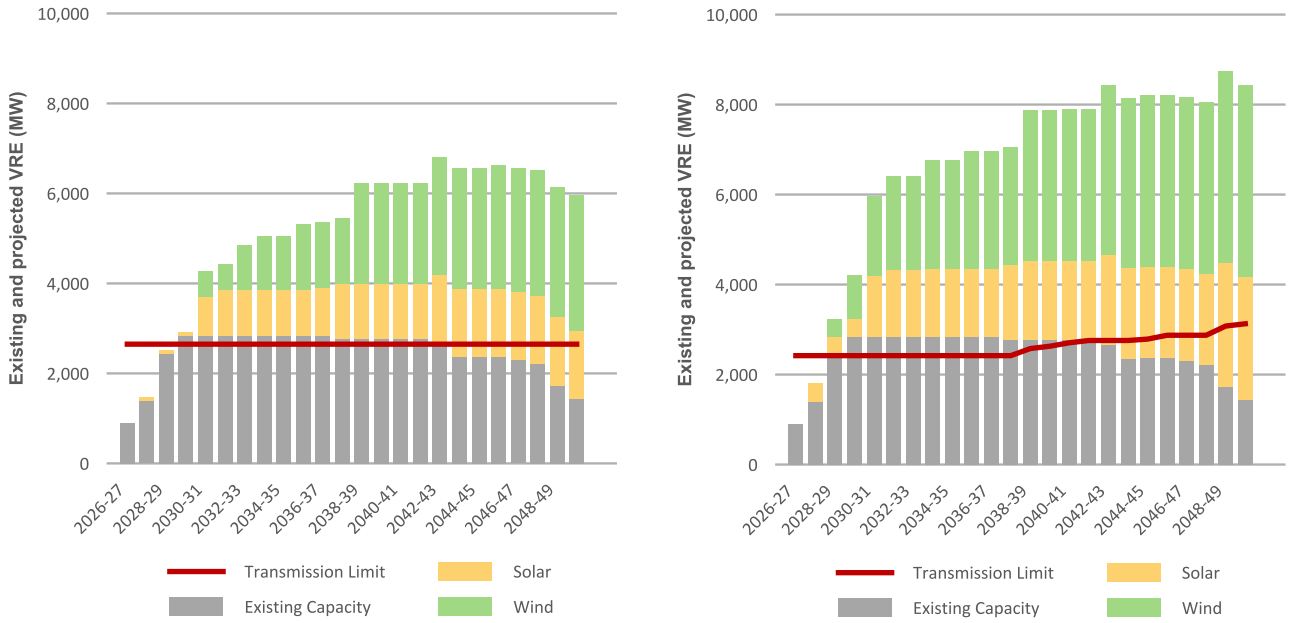
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	1,067	0	650	700	400	0	0	0
Step Change		100	950	950		0	0	0
Accelerated Transition		400	1,100	1,800		400	400	400

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	904	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission limit was modelled using the NQ1 group constraint limit, and includes VRE projections for Q1, Q2 and Q3. There may be a future REZ expansion project required later in the horizon in the *Accelerated Transition* scenario.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	4%	0%	3%	0%	10%
Step Change	0%	0%	0%	16%	0%	25%
Accelerated Transition	0%	1%	0%	31%	0%	38%

Q4 – Isaac

Summary

The Isaac REZ is now placed further south, between Mackay and Rockhampton, following recent boundary adjustments. The region previously covered by Collinsville and Mackay is now designated as Q10 – Collinsville REZ.

Isaac retains B-grade solar resource quality and offers a strong diversity of resources, including wind and solar.

Existing network capability

Augmentation options are identified to increase capacity on the Central Queensland (CQ) to North Queensland (NQ) flow path, which also support the network capacity of this REZ.

The Isaac REZ is modelled as part of the CQ1 group constraint, with the network capable of supporting up to approximately 1,700 MW of generation under summer peak and summer typical conditions, and up to 2,070 MW under winter reference conditions across REZs in northern Queensland.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of solar and wind generation in the 2030s and 2040s across the *Step Change* and *Accelerated Transition* scenarios. Coordination of generation infrastructure may be required. While there are flow path augmentations projected that also uplift the REZ transmission limit of Isaac, there are no REZ specific expansion projects projected in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	2,500			1,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	C	**Bushfire score**	C

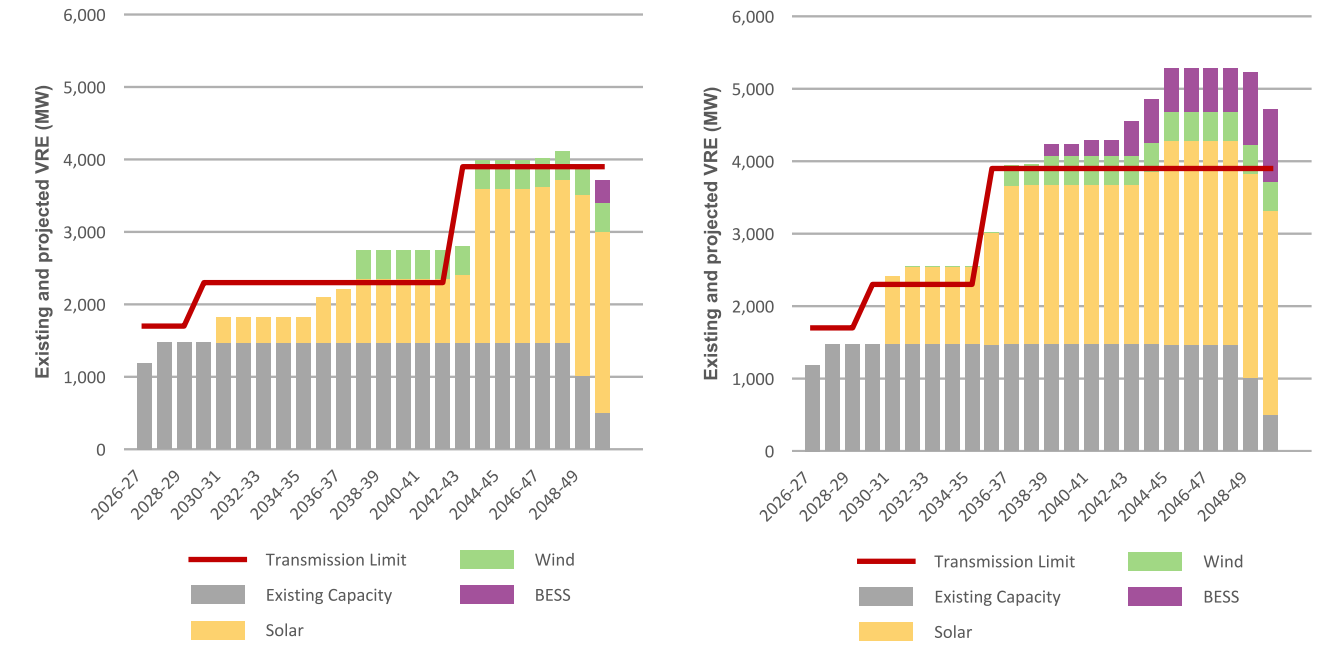
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	569	0	0	1,450	724	0	0	100
Step Change		0	850	2,500		0	400	400
Accelerated Transition		0	2,200	2,800		0	400	400

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	180	0	0	0	0	0	0	0
Step Change		0	0	300		0	0	0
Accelerated Transition		0	150	1,000		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission access expansion forecasts show the results for CQ1 group constraint, which includes VRE projections for Q1, Q2, Q3, Q4 and Q5. The discrete increases in the REZ transmission limits are from flow path upgrades modelled in the ODP and not REZ specific transmission projects.

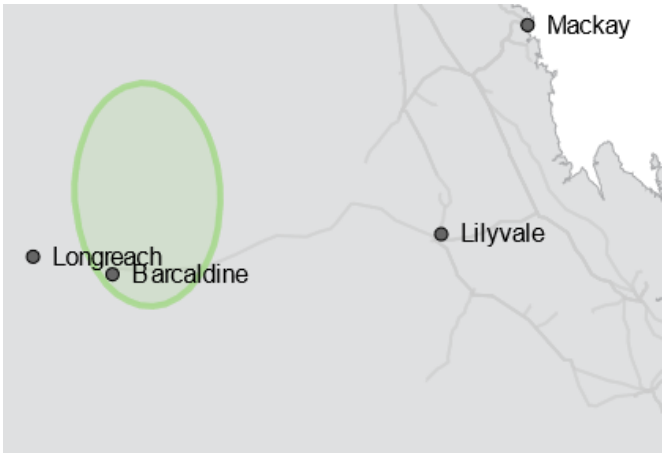
VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	2%	0%	1%	0%	5%
Step Change	0%	0%	0%	5%	0%	12%
Accelerated Transition	0%	0%	0%	17%	0%	22%

Q5 – Barcaldine

Summary

This REZ has grade A solar resource quality but is remote from the Queensland transmission backbone.



Existing network capability

The current total REZ transmission limit for existing and new VRE before any network upgrade in Barcaldine is approximately 85 MW.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for modest development of solar and wind generation in the ODP *Step Change* scenario, but no significant transmission infrastructure is projected. There may be a future Barcaldine REZ expansion project required late in the horizon in the *Accelerated Transition* scenario.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	A			B		
Renewable Potential (MW)	8,000			3,900		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	D	**Bushfire score**	C

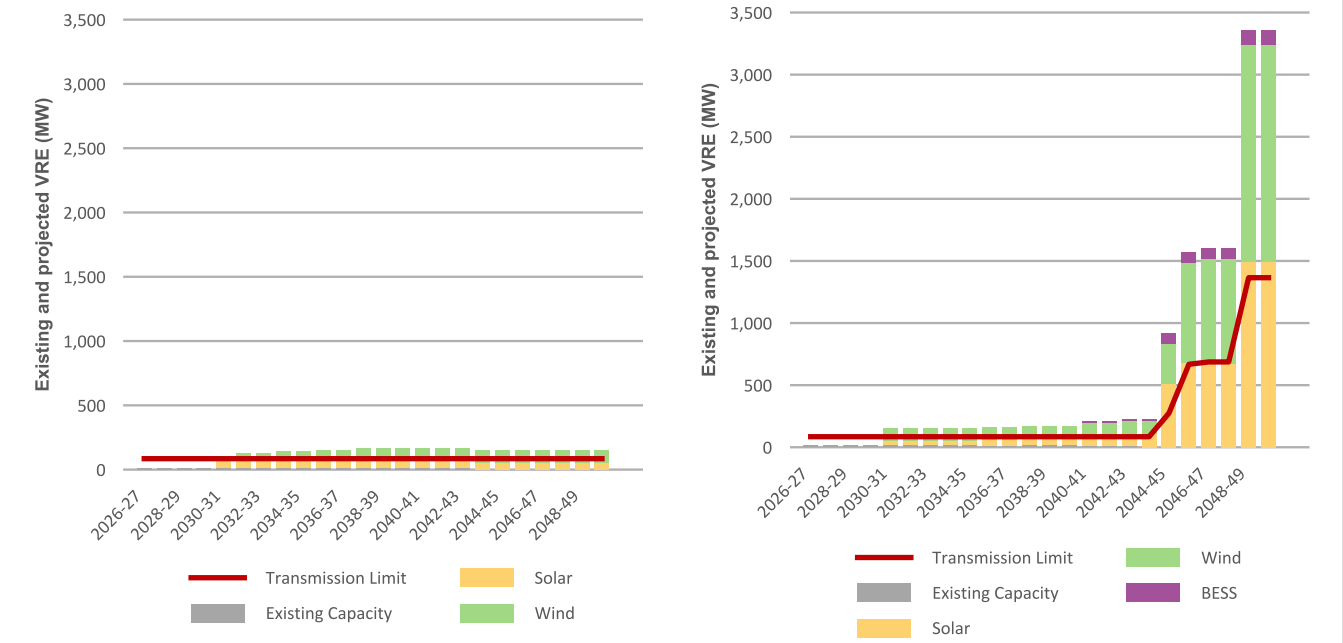
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	15	0	0	100	0	0	0	100
Step Change		0	50	50		0	100	100
Accelerated Transition		0	50	1,500		0	100	1,750

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0	0
Accelerated Transition		0	0	100		0	0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	24%	0%	10%	3%	18%
Step Change	0%	3%	1%	20%	1%	25%
Accelerated Transition	0%	4%	1%	40%	0%	26%

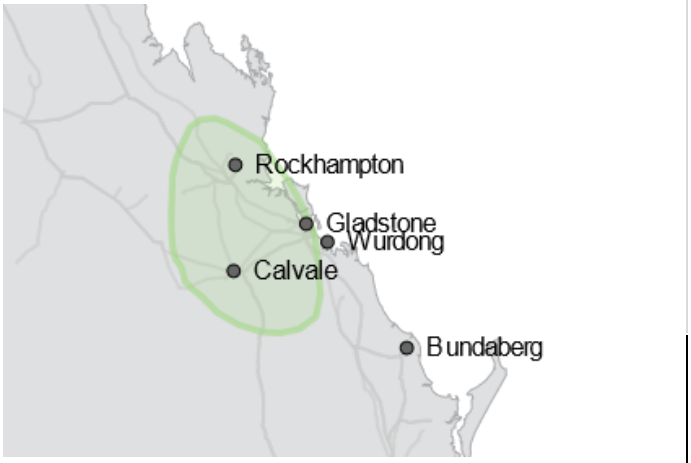
Q6 – Fitzroy

Summary

The Fitzroy REZ is in Central Queensland and covers a strong part of the network where Gladstone and Callide generators are connected. This REZ has grade B and C solar and wind resource quality respectively.

Generation within the Q6 Fitzroy REZ directly serves the large industrial loads in the Gladstone Grid region as well as projected Hydrogen demand, resulting in relatively low levels of economic spill and curtailment across the ISP horizon.

AEMO understands from the Queensland Government and Powerlink that transmission augmentation projects for the Fitzroy REZ are likely to be delivered as a designated network asset. This has been treated similarly to a generation connection asset in the ISP model, rather than a network augmentation option.



Existing network capability

The network capability for Fitzroy REZ to export electricity to southern Queensland is shared with other generation including coal and gas in northern and central Queensland. Due to the existing high voltage infrastructure, there are no augmentation options specifically for this REZ. The associated augmentations are the Central Queensland to Gladstone Grid and Central Queensland to Southern Queensland flow path augmentations, as detailed in the 2025 *Electricity Network Options Report*.

REZ grouping

Generation infrastructure coordination is required	Generation infrastructure coordination is required for the Fitzroy REZ. Outside of the actionable Queensland project, the Gladstone Project, there is no transmission infrastructure coordination projected in this area in the ODP *Step Change* scenario.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	7,533			3,500		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	C	**Bushfire score**	B

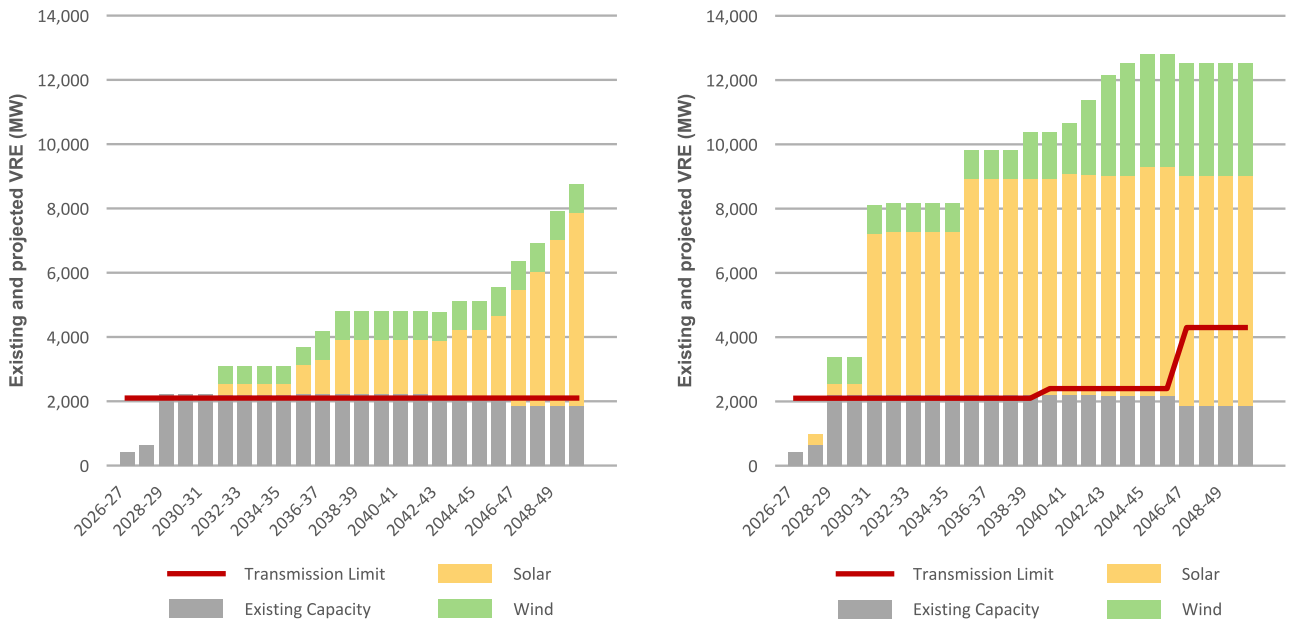
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	682	0	0	400	221	0	0	700
Step Change		0	1,700	6,000		0	900	900
Accelerated Transition		300	6,700	7,150		800	1,450	3,500

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	1,318	0	0	0	22	0	50	50
Step Change		0	0	0		0	100	250
Accelerated Transition		0	0	0		0	1,000	2,300

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission limit was modelled using the SQ-CQ sub-regional flow path limit. There may be a future REZ expansion project required in Fitzroy late in the horizon in the *Accelerated Transition* scenario.

VRE curtailment

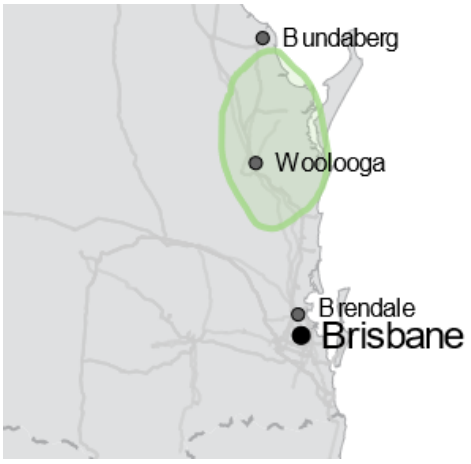
Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	5%	0%	3%	0%	8%
Step Change	0%	2%	0%	6%	0%	7%
Accelerated Transition	0%	1%	0%	11%	0%	12%

Q7 – Wide Bay

Summary

The Wide Bay area has grade C solar resource quality and already has a number of large Solar generators operational within the REZ.

The Queensland Government has announced in the Queensland Government Energy Roadmap that it will review the 2,000 MW/24-hour Borumba pumped hydro energy storage project in southern Queensland. AEMO considers Borumba to be an anticipated project. The project's impact is included in the SQ1 group constraint in the ISP modelling process.



Existing network capability

The existing network facilitates power transfer from Central Queensland to the load centre in Brisbane. This is a 275 kV transmission backbone and currently supports up to approximately 1,400 MW of power flow from CQ into Brisbane. This means the maximum VRE output in the REZ is highly dependent on CQ-SQ flow.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of wind and solar generation. Coordination of generation infrastructure may be required. The connection of the anticipated Borumba Pumped Hydro generation project and associated transmission will uplift the REZ transmission limit.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			D		
Renewable Potential (MW)	2,200			1,100		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	B	**Bushfire score**	E

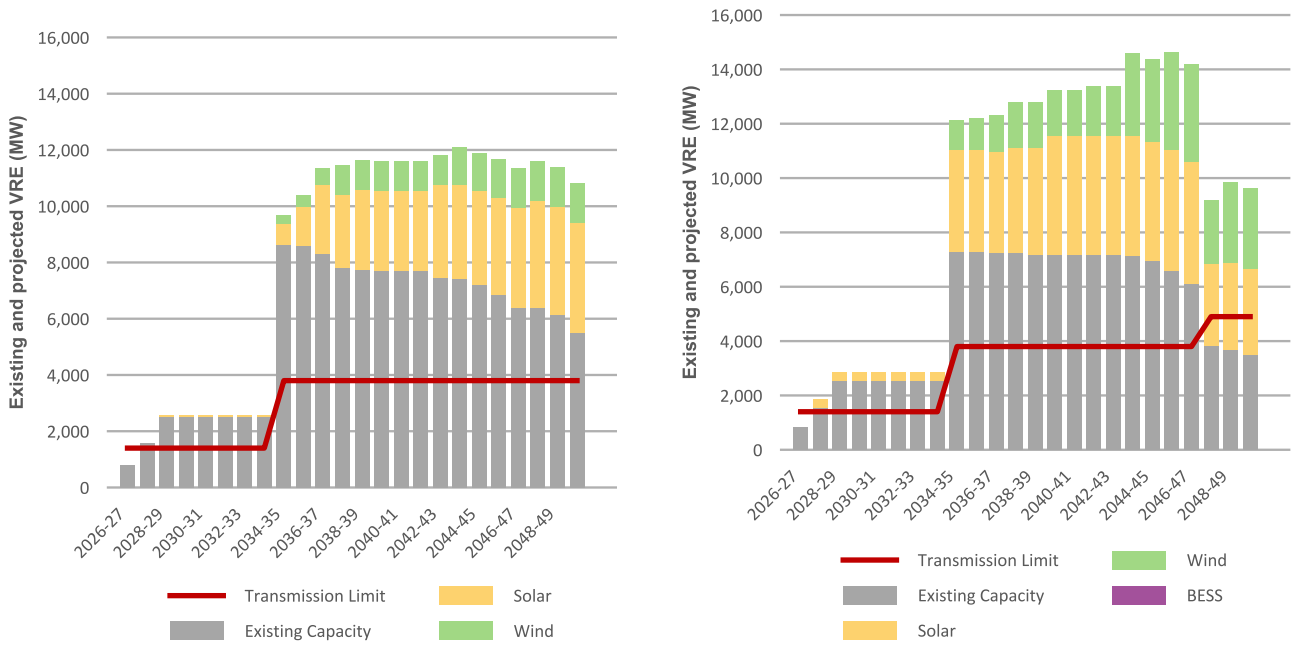
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	1,334	0	0	2,200	0	0	0	0
Step Change		50	1,650	2,200		0	0	300
Accelerated Transition		300	2,200	2,200		0	200	2,150

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	1,193	0	0	0	0	0	50	200
Step Change		0	0	0		0	100	200
Accelerated Transition		0	0	0		0	300	900

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission access expansion charts show the results for SQ1 group constraint augmentation, which includes Q7 as well as the effect of SQ-CQ flow. The transmission limit was modelled using the SQ1 group constraint limit which only increases in the *ODP Step Change* scenario with the Anticipated Borumba Pumped Hydro Energy Storage (PHES) project. From 2034-35 existing - capacityshown includes the anticipated Borumba PHES project as well as the thermal coal generation in Southern Queensland.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	5%	0%	3%	0%	6%
Step Change	0%	4%	0%	10%	0%	13%
Accelerated Transition	0%	3%	0%	20%	0%	23%

Q8 – Darling Downs

Summary

The Darling Downs REZ extends from the border of New South Wales around Dumaresq up to Columboola within the Surat region of Queensland, and has B and C grade solar and wind resource quality. A number of large solar and wind projects are already connected within the zone.

The Darling Downs REZ has been subdivided into three sub-regions to better reflect network constraints and resource distribution: Q8a Western Downs, Q8b Darling Downs, Q8c Southern Downs. This enables more accurate modelling of transmission limits and generation potential across distinct connection points.

Existing network capability

The Darling Downs REZ has high network capacity and is near QNI and Brisbane. The ultimate retirement of generation within this REZ will allow for increased VRE connections. 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. This capability is shared with existing coal and gas generation in the REZ, the flow of power from New South Wales, and the flow of power from central Queensland. This sharing is captured by the SWQLD1 transmission limit constraint that facilitates power flow to load centres in south east Queensland. Changes to network capability for this REZ are therefore reflected in the SWQLD1 limit.

REZ grouping

Generation infrastructure coordination may be required	The modelling outcomes identify this zone for development of wind and solar generation. Coordination of generation. There may be very minor transmission coordination required in relation to the *Facilitating power to South East Queensland* project later in the horizon.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	6,992			5,600		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	C	**Bushfire score**	E

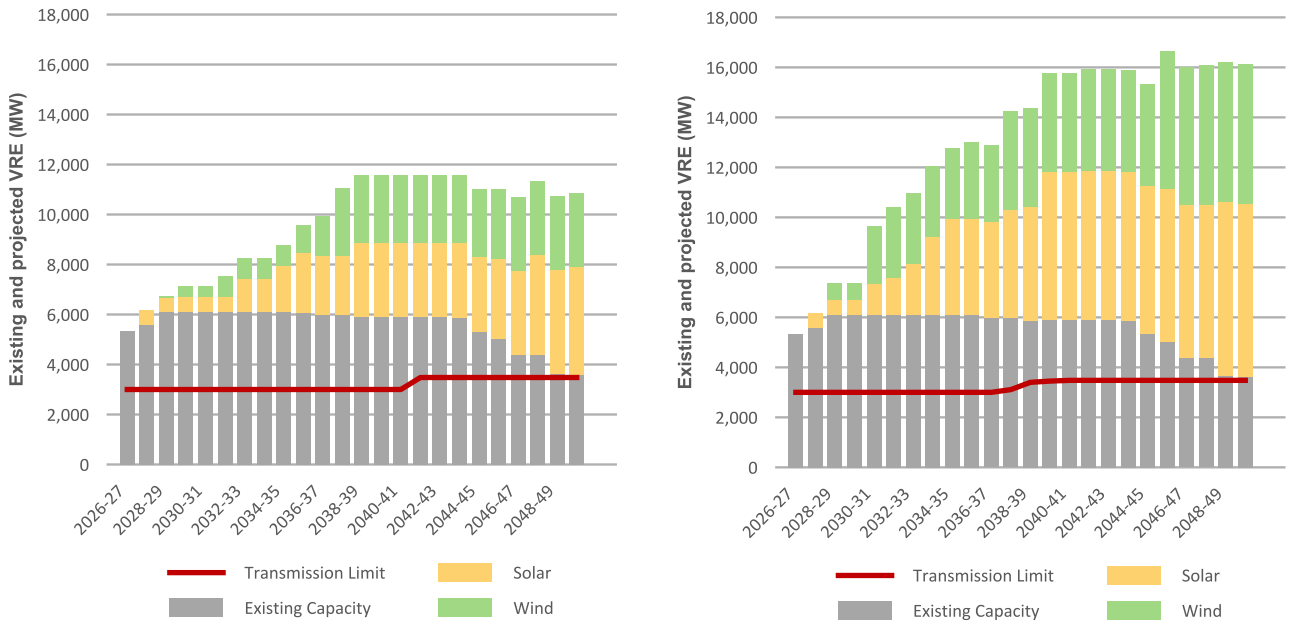
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	2,980	0	2,550	4,050	1,755	0	0	4,100
Step Change		600	3,000	4,300		400	2,150	2,850
Accelerated Transition		600	5,950	6,950		650	3,900	5,550

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	1,365	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission access expansion charts show the results for Q8 which include Q8a (Western Downs and Tarong area), Q8b (Darling Downs area) and Q8c (Southern Downs area). The transmission limit was modelled using the SWQLD1 REZ transmission limit, which includes Q8 as well as CQ-SQ and QNI flow and has a minor uplift required in the early 2040s.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	2%	0%	1%	0%	4%
Step Change	0%	2%	0%	5%	0%	9%
Accelerated Transition	0%	1%	0%	13%	0%	17%

Q9 – Banana

Summary

The Banana REZ is located roughly 200 km south-west of Gladstone and lies north of the CQ-SQ flow path. It has B grade solar resource quality. There are currently no generators and only limited high voltage network in this area.

Existing network capability

There is currently very little high voltage network in the area. There is some 132 kV network on the edge of the REZ, supporting the townships of Moura and Biloela. There is very little spare capacity within the network.

REZ grouping

Generation infrastructure coordination can start later	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP.

Metrics

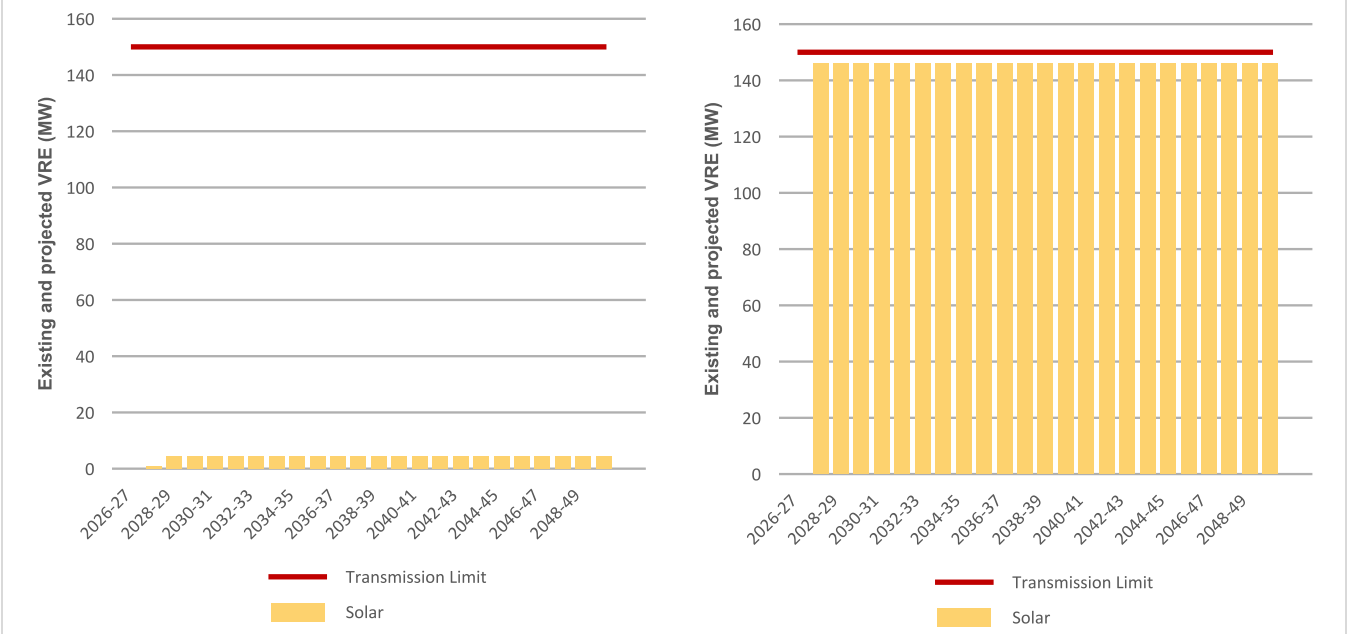
Resource	**Solar**			**Wind**		
Resource Quality	B			D		
Renewable Potential (MW)	6,100			3,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	C	**Bushfire score**	B

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		150	150	150		0	0	0
	Battery energy storage systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

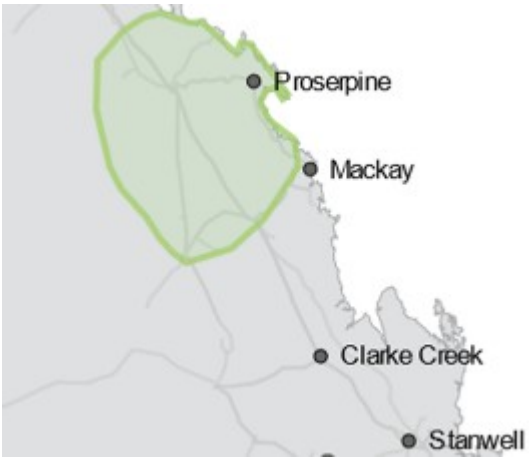
Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	0%	34%	0%	40%
Accelerated Transition	0%	2%	0%	58%	0%	63%

Q10 – Collinsville

Summary

The Collinsville REZ encompasses the region around Proserpine and Mackay, offering strong wind and solar resource quality and a good diversity of renewable options, including storage. Several large-scale solar generation projects are already operational within this REZ. Locating storage in this zone could maximise transmission utilisation towards Brisbane. The previously proposed Pioneer-Burdekin PHES project has been cancelled and is no longer considered in planning scenarios.

The Queensland Government's Energy Roadmap has replaced the former Queensland Energy and Jobs Plan (QEJP), guiding future development priorities.



Existing network capability

The Collinsville REZ forms part of the Northern Queensland transmission backbone between Strathmore and Nebo. Due to the existing high-voltage infrastructure, there are no augmentation options specifically for this REZ. Associated augmentations are linked to the CQ–NQ flow path, which facilitates power transfer from Northern Queensland south to major load centres. Current transfer capability from NQ to CQ is approximately 800 MW under all conditions.

REZ grouping

Generation infrastructure coordination can start later	The modelling outcomes identify this zone for development of wind and solar generation late in the horizon, coordination of generation infrastructure may be required. Outside of the projected Central Queensland to North Queensland flow path transmission augmentations, there is no REZ expansion transmission projected in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	4,400			2,440		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	C	**Bushfire score**	C

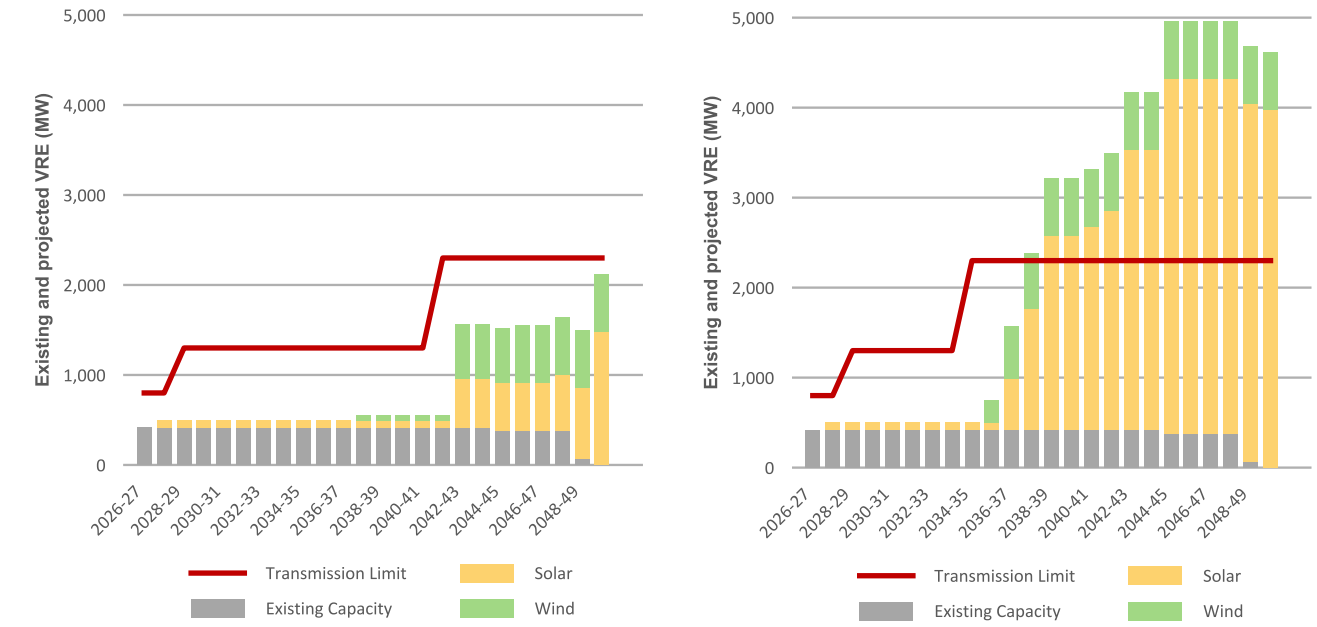
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	420	0	0	100	0	0	0	100
Step Change		100	100	1,500		0	50	650
Accelerated Transition		100	2,150	4,000		0	650	650

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	50
Step Change		0	0	0		0	50	50
Accelerated Transition		0	0	0		0	50	400

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission limit for Collinsville is the CQ-NQ sub-regional flow path limit. Any REZ transmission limit uplifts are the result of CQ-NQ flow path transmission upgrades projected in the ODP.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	4%	0%	3%	0%	12%
Step Change	0%	0%	0%	19%	0%	19%
Accelerated Transition	0%	1%	0%	28%	0%	32%

A3.3.4 South Australia

REZ outlook

In South Australia, nearly 7 GW of new utility-scale wind and solar is projected as being required by 2050 to meet increasing demand from electrification and increased industrial load, while satisfying South Australian policy targets including the South Australian Renewable Energy Target (SA RET). The 2026 ISP applies the SA RET for net 100% renewable energy from 2027 onwards.

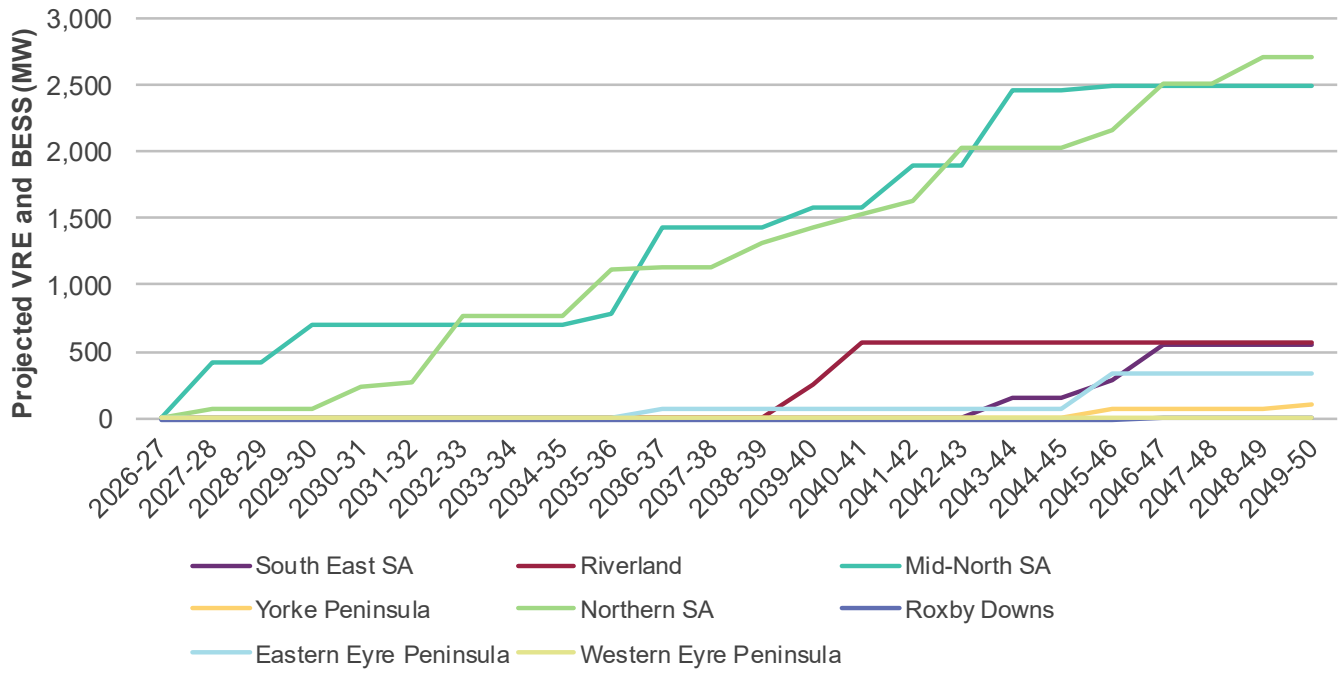
Figure 8 shows the new utility-scale VRE projected for each REZ in South Australia in *Step Change*. This modelling indicates:

- The largest share of utility-scale VRE development prior to 2032-33 is in the Mid North South Australia REZ due to the high-quality wind and solar resource, with around 700 MW of wind and solar capacity. Further major developments in both solar and wind occur here from the late 2030s, with 2,500 MW new VRE capacity by 2043-44.
- From 2032-33 there is solar development in the Northern South Australia REZ, starting at around 750 MW, then increasing to 2,000 MW by 2042-43 and reaching over 2,500 MW by 2049-50.
- The Riverland REZ observes solar build later in the horizon, with over 550 MW from 2040-41.
- The Eastern Eyre Peninsula REZ also sees some wind developments, initially around 50 MW in the late 2030s and increasing to around 300 MW in the mid-2040s.
- The South East South Australia REZ sees a gradual increase in wind later in the horizon, with 550 MW by 2049-50.

In terms of utility-scale battery storage, South Australia has a significant pipeline of around 4 GW/11 GWh of projects that have either achieved anticipated or committed status, or have secured Capacity Investment Scheme (CIS) agreements. In addition to these projects, *Step Change* projects around 560 MW of eight-hour BESS (270 MW assumed close to Adelaide and 290 MW in the Mid-North South Australia REZ) by 2029-30 to satisfy the South Australian Firm Energy Target[31] (FET), and a further 600 MW of two-hour and four-hour BESS in Central South Australia by 2029-30 to satisfy the CIS Dispatchable South Australia targets. Later in the horizon, a further 500 MW of capacity is built in Central South Australia (CSA) and over 1,800 MW in Northern South Australia (NSA) by 2050 to replace retiring battery and gas capacity. Battery capacity close to Adelaide is assumed to be subject to a 1 GW new entrant capacity limit across the horizon, based on joint planning advice from ElectraNet on available substation capacity for battery connections.

[31] 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 SA FET, rather than actual projects. The 2026 ISP includes 565 MW of eight-hour BESS to meet the FET, while SA FERM 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 eight hours during lack of reserve (LOR) 2 and LOR 3 events).

Figure 8 South Australia utility-scale VRE and BESS development in REZs for *Step Change* (MW)



S1 – South East

Summary

The South East SA REZ lies on the major 275 kV route of the South Australia – Victoria Heywood interconnector. It has B grade wind resource quality.

Around 300 MW of wind capacity is currently forecast to retire by 2039-40 in this REZ.

Existing network capability

The existing network capacity of this REZ is modelled as part of South East South Australia (SESA) – CSA sub-regional maximum transfer capability of 800 MW (winter reference periods) and 750 MW (summer typical and peak demand periods). There are no augmentation options specifically for this REZ. The associated augmentations are the West and North Victoria (WNV)-SESA and SESA-CSA flow path augmentations

REZ grouping

Infrastructure coordination can start later	Modelling outcomes indicate a low likelihood that significant investment in generation and transmission infrastructure will be required in the next 10 years in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	D			B		
Renewable Potential (MW)	100			3,200		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	D

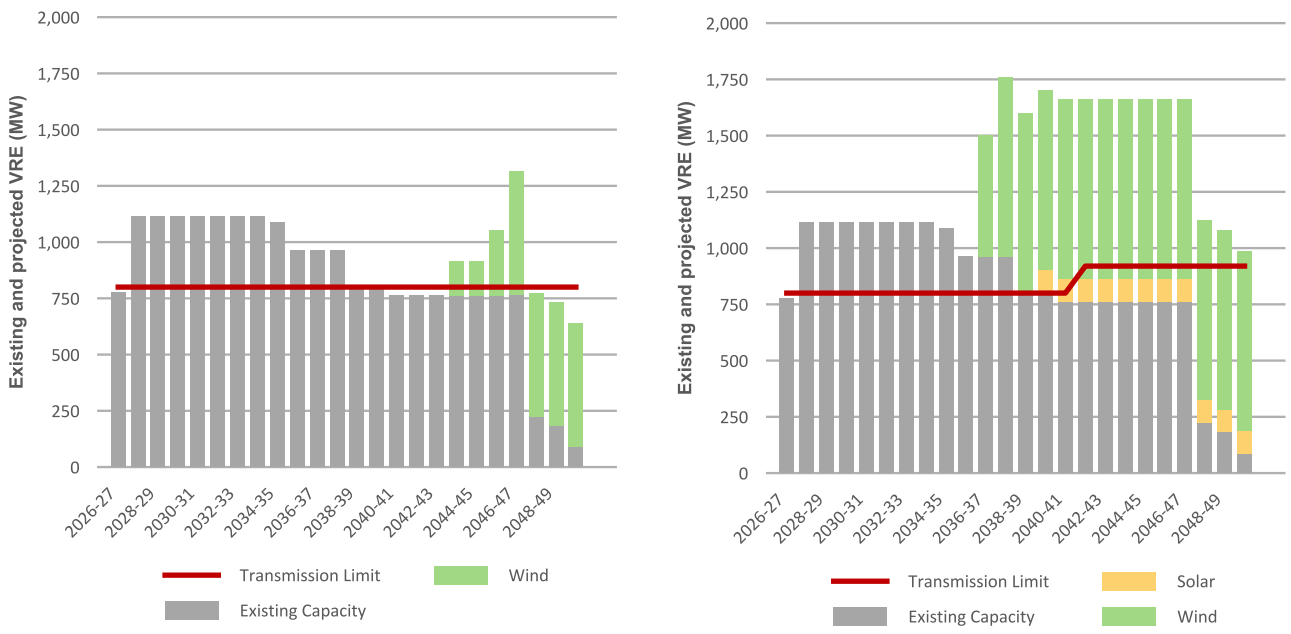
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	182	0	0	0	324	0	0	0
Step Change		0	0	0		0	0	550
Accelerated Transition		0	100	100		0	800	800

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	606	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	50	
Accelerated Transition		0	0	0		50	100	300	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission limit shown is SESA to CSA forward limit (winter reference). There is augmentation to the SESA-CSA flow path network limit from 2042-43 in *Accelerated Transition.*

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	8%	0%	0%	0%	11%
Step Change	0%	0%	0%	1%	0%	11%
Accelerated Transition	0%	3%	0%	18%	0%	15%

S2 – Riverland

Summary

The Riverland REZ is on the South Australian side of the Project EnergyConnect route. It has grade B solar and grade C wind resource quality.

Around 0.6 GW of solar and 1.6 GW of battery storage projects are anticipated, committed or have secured CIS agreements in this REZ.

Existing network capability

There is minimal existing renewable generation in the zone. Prior to Stage 2 of Project EnergyConnect, approximately 130 MW can be connected in this REZ for all three operating conditions (peak demand, summer typical and winter reference). Once Project EnergyConnect Stage 2 is commissioned, the REZ transmission limit increases by approximately 800 MW.

REZ grouping

Infrastructure coordination can start later	Modelling outcomes indicate a low likelihood that significant investment in generation and transmission infrastructure will be optimally required in the next 10 years in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			C		
Renewable Potential (MW)	4,000			1,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	E	**Bushfire score**	C

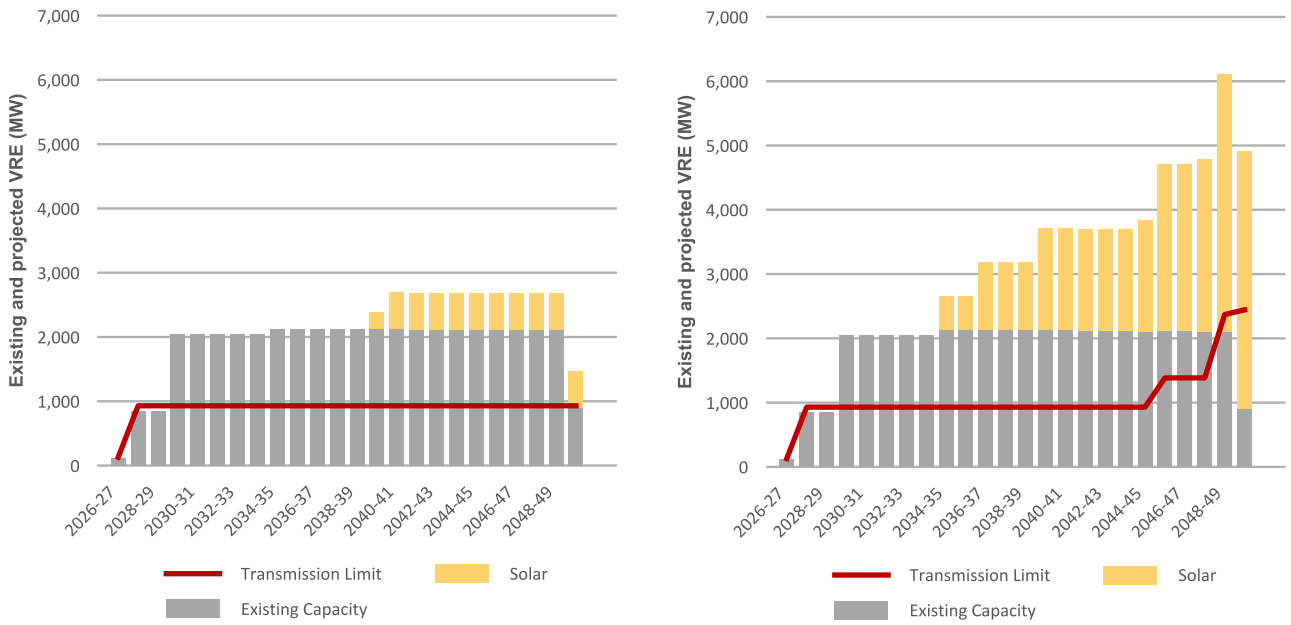
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	572	0	0	0	0	0	0	0
Step Change		0	250	550		0	0	0
Accelerated Transition		0	1,600	4,000		0	0	0

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	1,556	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: Outside of the Project EnergyConnect Stage 2 increase to the REZ transmission limit of Riverland in 2027-28, only the S2 Option 1 augmentation is required in *Accelerated Transition* from 2045-46 to integrate additional solar generation.

VRE curtailment

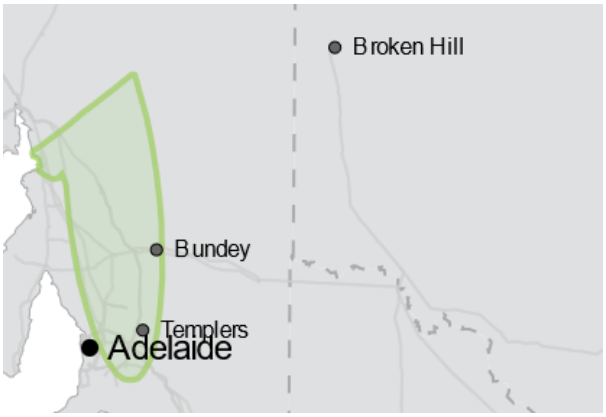
Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	8%	0%	0%	0%	7%
Step Change	0%	0%	0%	2%	0%	26%
Accelerated Transition	0%	3%	0%	42%	0%	41%

S3 – Mid-North

Summary

The Mid-North South Australia REZ has moderate quality wind and solar resources. There are many major wind farms in service, anticipated, committed or policy-supported in this REZ, totalling nearly 2,700 MW of capacity.

Four 275 kV parallel circuits provide the bulk transmission along the corridor from Davenport to near Adelaide (Para) which traverse this REZ. This transmission corridor forms the backbone for exporting power from REZs north and west of this REZ in South Australia towards the Adelaide load centre.



Existing network capability

This REZ is subject to the MN1[32] constraint, representing the maximum flows that can be supported between Mid North South Australia and Adelaide, and MN2[33], reflecting the most binding 275 kV contingency with expected future planting of wind and solar concentrated at Bundey and Robertstown.

REZ grouping

Coordination of generation and transmission infrastructure may be required	Modelling outcomes for this REZ currently indicate development of further solar and wind in the 2030s, increasing by the 2040s. While no immediate need for transmission infrastructure has been identified, 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.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			B		
Renewable Potential (MW)	1,300			4,600		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	D

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	400	600	750	2,687	0	0	1,200
Step Change		400	1,300	1,300		300	300	1,200
Accelerated Transition		400	1,300	1,300		800	1,200	3,300

[32] MN1 (shown in the charts on the next page): the collective generation from S2, S3 and S4, the reverse flow on the CSA-NSA flow path, and flow into South Australia on Project EnergyConnect 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.

[33] MN2: 0.9 x S2, 0.6 x existing S3, 0.9 x new entrant S3, and 0.4 x S4 REZ generation, 0.5 x the reverse flow on the CSA-NSA flow path, flow into South Australia on Project EnergyConnect and 0.8 x 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 275 kV line for loss of the parallel line.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	1704	162	162	0	2	0	0	50
Step Change		291	291	0		0	50	100
Accelerated Transition		200	200	0		150	350	850

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: The red line shows the MN1 transmission limit. Northern Transmission Project (MN1 Option 2) augments the MN1 limit at a future timing of 2041-42 in *Accelerated Transition*.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	2%	0%	0%	0%	2%
Step Change	0%	0%	0%	0%	0%	9%
Accelerated Transition	0%	1%	0%	15%	0%	15%

S4 – Yorke Peninsula

Summary

The Yorke Peninsula REZ has grade B wind resource quality.

A single 132 kV line extends from Hummocks to Wattle Point (towards the end of Yorke Peninsula).

Existing wind generation and battery projects in this REZ are currently forecast to retire by 2030-31.

Existing network capability

The existing 132 kV network has 100 MW of additional network capacity for all three operating conditions (peak demand, summer typical and winter reference). Transmission augmentation is required to connect any significant additional generation in this REZ. The capability of this zone to accommodate new generation is subject to the MN1 and MN2 mid-north group constraints.

REZ grouping

No significant generation or transmission infrastructure projected in the ODP	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP[34].

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	None			B		
Renewable Potential (MW)	-			1,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	C

REZ Outlook

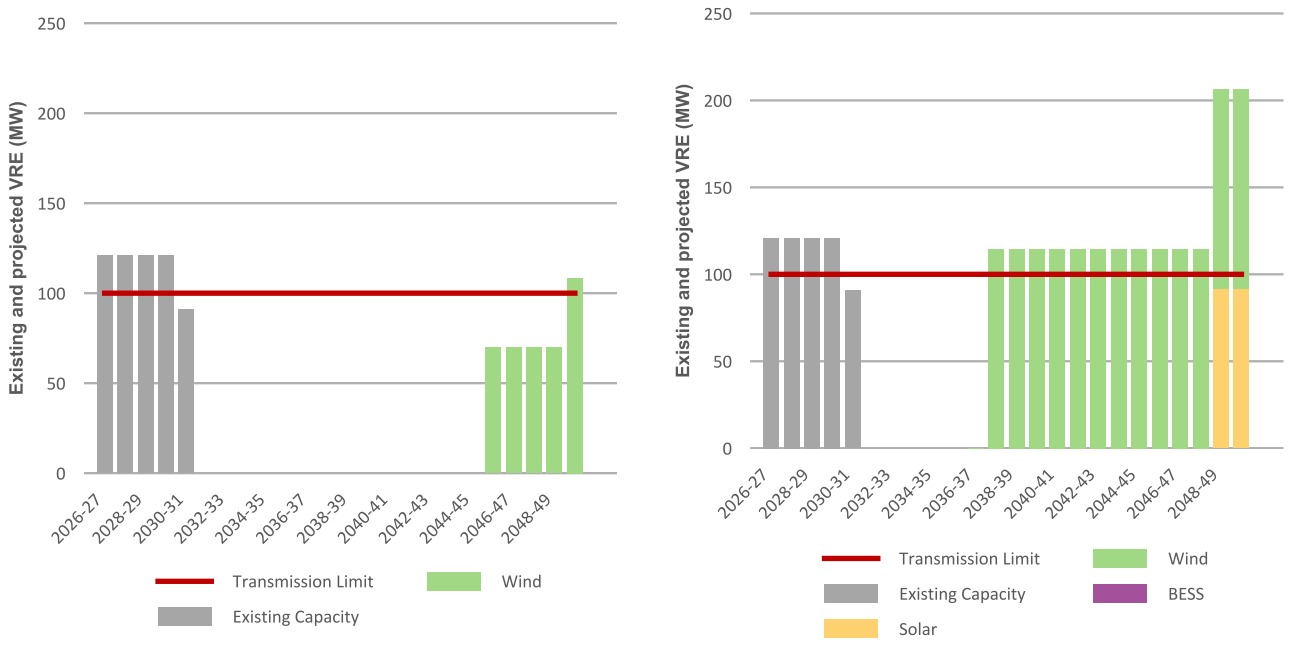
	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	91	0	0	0
Step Change		0	0	0		0	0	100
Accelerated Transition		0	0	100		0	100	100

[34]Around 100 MW of wind is developed by 2049-50 in *Step Change* and *Accelerated Transition,* and around 100 MW of solar by 2049-50 in *Accelerated Transition,* but this largely replaces retiring existing wind capacity.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	30	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	15%	-	-	0%	17%
Step Change	0%	0%	-	-	0%	25%
Accelerated Transition	0%	4%	0%	37%	0%	49%

S5 – Northern South Australia

Summary

The Northern South Australia REZ has grade B solar resource quality. This REZ forms a candidate for a hydrogen electrolyser facility in South Australia.

The west portion of this REZ contains the Whyalla West release area declared together with the Gawler Ranges East release area under the *Hydrogen and Renewable Energy Act* on 22 January 2026. A call for tenders for renewable energy feasibility licenses in these release areas closes on 28 June 2026.

Existing network capability

The capability of this zone to accommodate new generation is subject to the NSA1 northern group constraint and CSA-NSA flow path reverse limit.

REZ grouping

Coordination of generation and transmission infrastructure may be required	Modelling outcomes currently indicate solar development from 2032-33 in *Step Change*, increasing significantly later in the horizon as local industrial load increases. Very high levels of solar development are observed in *Accelerated Transition* from 2039-40, to meet the ~ 1 GW of projected green commodities hydrogen load development in this REZ for this scenario. *Accelerated Transition* also shows value for augmenting the network between Cultana and Davenport (NSA1 Option 1) from 2035-36, to integrate the additional REZ solar and wind build with the wider South Australian network.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			B		
Renewable Potential (MW)	5,000			2,360		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	E	**Bushfire score**	D

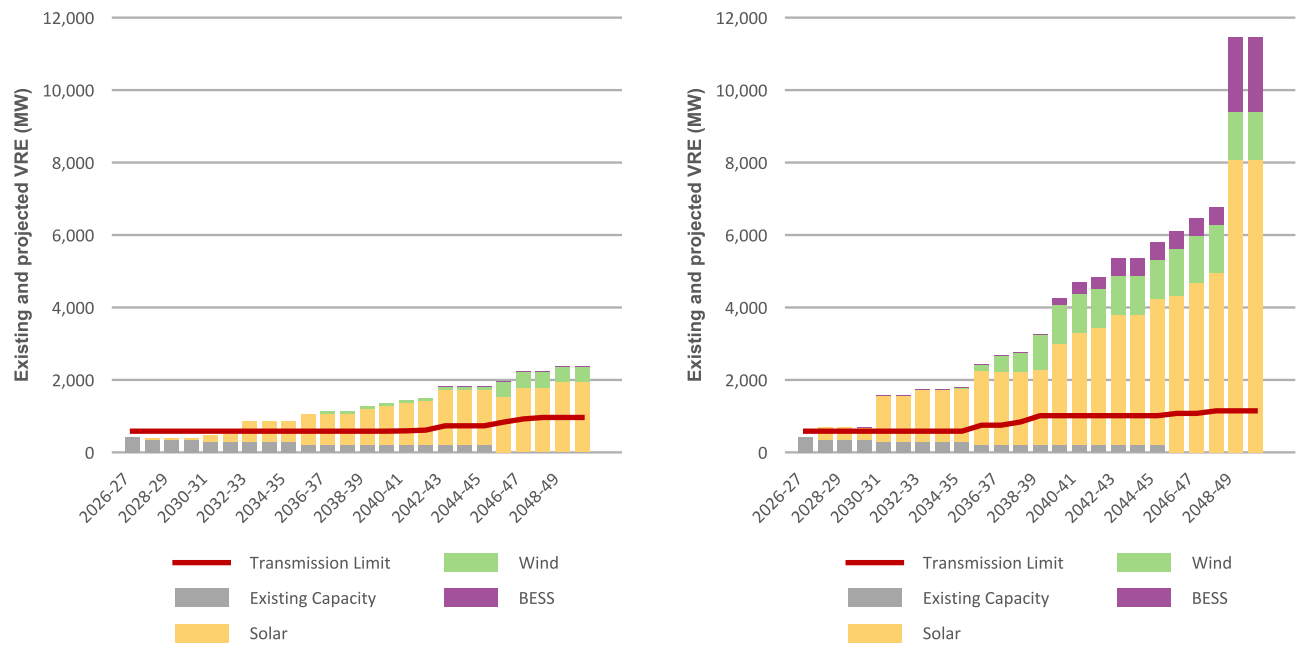
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	296	50	200	950	408	0	0	0
Step Change		50	1,450	2,600		0	0	150
Accelerated Transition		450	3,700	9,450		0	750	750

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	235	0	0	0	0	0	0	50
Step Change		0	0	0		100	150	250
Accelerated Transition		0	0	0		100	600	1300

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The red line shows the NSA1 transmission limit. NSA1 Option 1 is required from 2035-36 in *Accelerated Transition.* The *Accelerated Transition* graph includes BESS from the NSA sub-region and not within the S5 REZ itself.

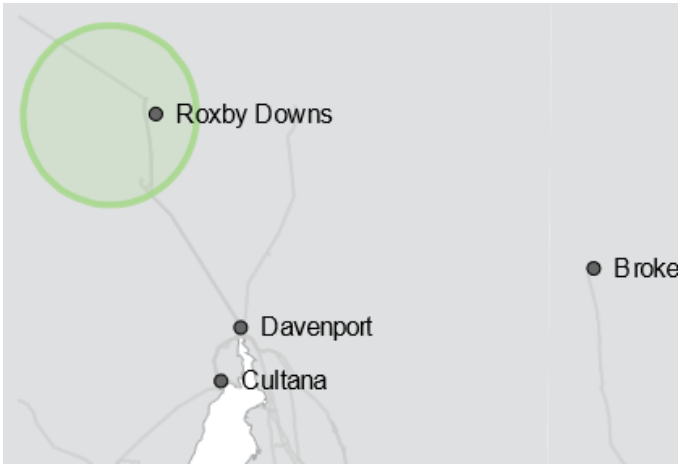
VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	8%	0%	0%	0%	6%
Step Change	0%	0%	0%	8%	0%	20%
Accelerated Transition	0%	3%	0%	34%	0%	27%

S6 – Roxby Downs

Summary

Roxby Downs REZ is located a few hundred kilometres northwest of Davenport. It has excellent solar resource quality. The only significant load in the area is the Olympic Dam and Carrapateena mines. This REZ is currently connected with a 132 kV line that provides supply to small loads, and two privately owned 275 kV lines from Davenport that provide supply to large mines in the area.



Existing network capability

The existing network capacity of this REZ is 500 MW, although the capability of this zone to accommodate new generation is subject to the CSA-NSA flow path reverse limit.

REZ grouping

No significant transmission or generation infrastructure is projected in the ODP	Modelling outcomesindicate no significant transmission or generation infrastructure is projected in the ODP.[35].

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	A			-		
Renewable Potential (MW)	3,400			-		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	C

REZ Outlook

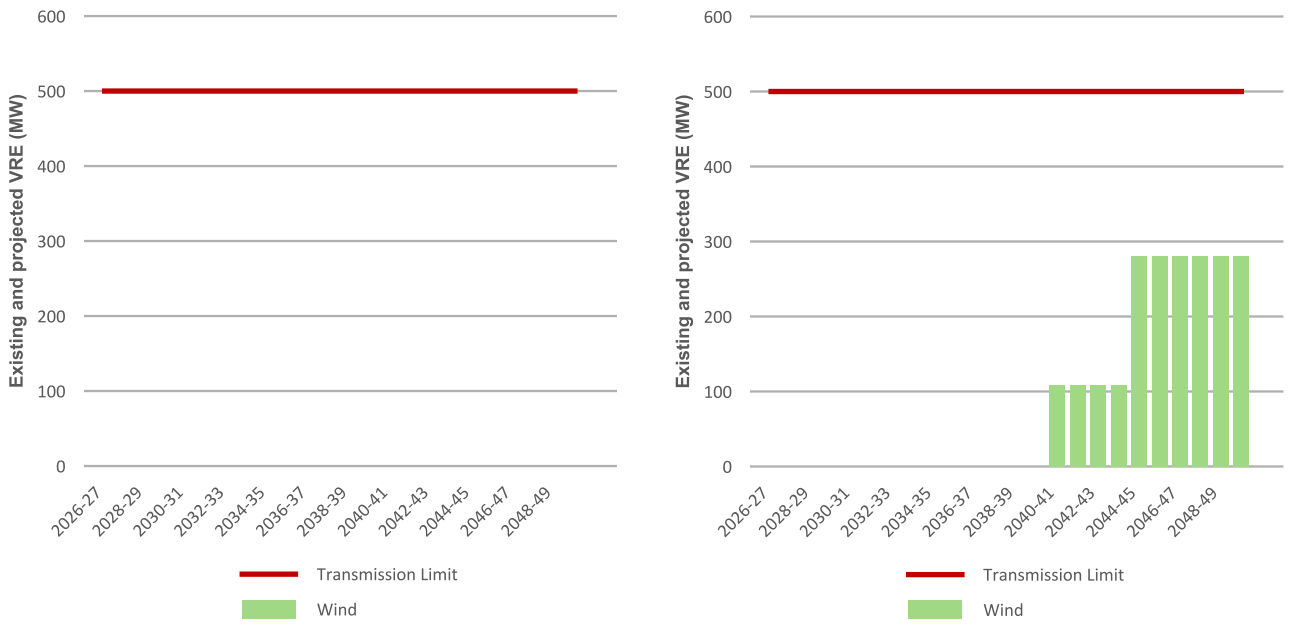
	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	300

[35] Around 300 MW of wind is developed by 2049-50 in *Accelerated Transition,* but this remains within the existing transmission limit.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0	0
Accelerated Transition		0	0	0		0	0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	-	-	-	-
Accelerated Transition	-	-	-	-	0%	22%

S7 – Eastern Eyre Peninsula

Summary

The Eastern Eyre Peninsula REZ has strong wind resource quality.

The Eyre Peninsula Link was completed in February 2023. It replaced the existing Cultana–Yadnarie–Port Lincoln 132 kV single-circuit line with a new double-circuit 132 kV line. The section between Cultana to Yadnarie is built to operate at 275 kV, however, initially energised at 132 kV.

Existing network capability

The existing network capacity of this REZ is 300 MW (subject to the capacity of the 275/132 kV transformers). The capability of this zone to accommodate new generation is subject to the NSA1 northern group constraint and CSA-NSA flow path reverse limit.

REZ grouping

Infrastructure coordination can start later	Modelling outcomes indicate a low likelihood that significant investment in generation infrastructure will be required over the next 10 years. There is increased wind and solar development in *Accelerated Transition* from 2044-45, to meet the ~ 200 MW of projected green commodities hydrogen load development in this REZ for this scenario .

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	D			A		
Renewable Potential (MW)	5,000			2,300		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	E	**Bushfire score**	C

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	134	0	0	200
Step Change		0	0	0		0	50	350
Accelerated Transition		0	0	1,000		0	500	750

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	100	200

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: The S7 Option 1 augmentation is required in *Accelerated Transition* only from 2037-38 to integrate additional wind and solar generation.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	10%	-	-	0%	9%
Step Change	0%	0%	0%	13%	0%	18%
Accelerated Transition	0%	3%	0%	24%	0%	40%

S8 – Western Eyre Peninsula

Summary

The Western Eyre Peninsula REZ shares the same electrical network as the Eastern Eyre Peninsula. It has good solar and moderate wind resources. There are no generators currently connected or committed within this REZ.

Existing network capability

There is no additional network capacity within this REZ. The capability of this zone to accommodate new generation is subject to the NSA1 northern group constraint and CSA-NSA flow path reverse limit.

REZ grouping

No significant transmission or generation infrastructure is projected in the ODP ODP	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			A		
Renewable Potential (MW)	4,000			1,500		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	D

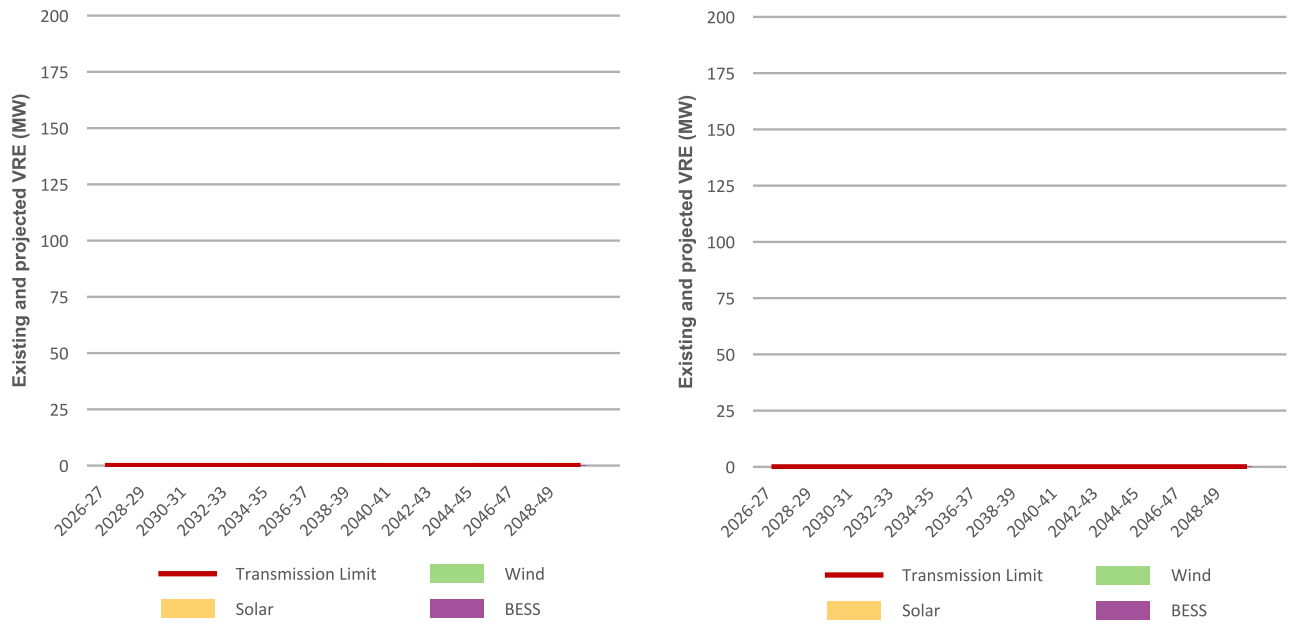
REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	0	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	-	-	-	-
Step Change	-	-	-	-	-	-
Accelerated Transition	-	-	-	-	-	-

A3.3.5 Tasmania

VRE outlook

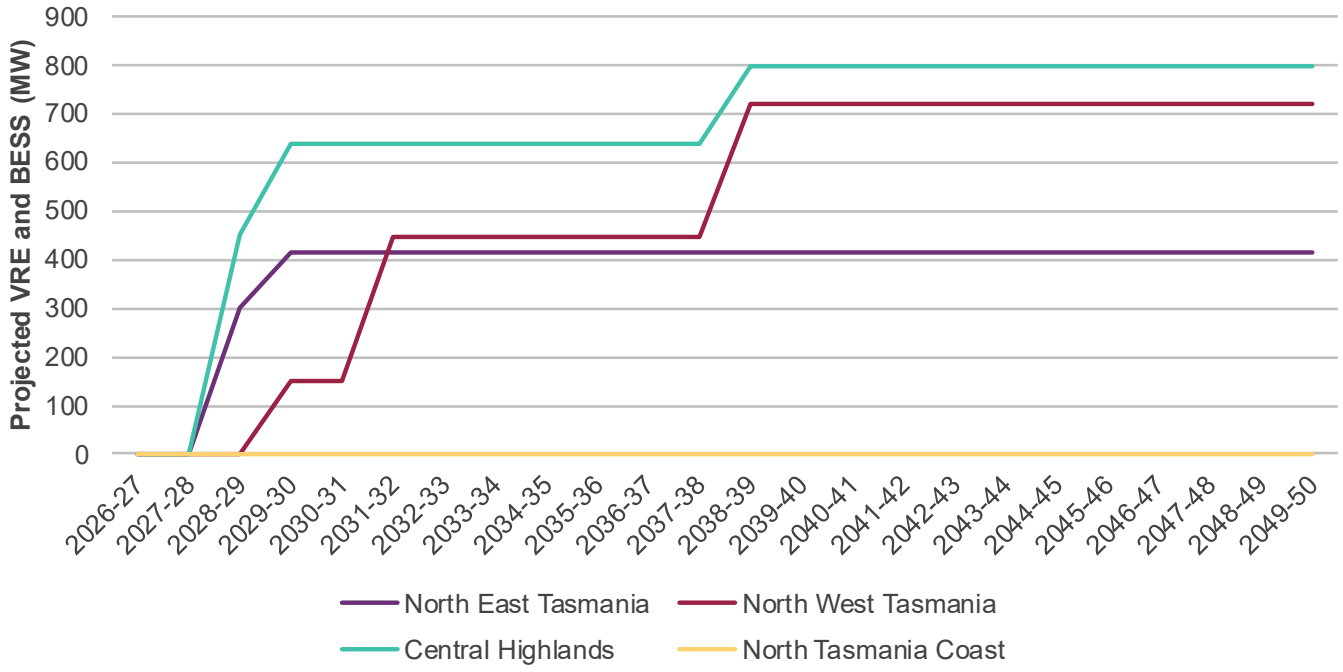
In Tasmania, over 900 MW of new utility-scale wind VRE as well as around 560 MW of utility-scale solar VRE is projected to be required by 2031-32, utilising transmission capacity released by the development of Project Marinus Stage 1.

The Tasmanian Government has legislated the Tasmanian Renewable Energy Target (TRET) to drive investment in renewable generation, with a target to double production to 200% of the 2020 baseline (21,000 GWh) by 2040, and an interim target of 150% (15,750 GWh) by 2030.

Figure 9 shows the new utility-scale VRE projected for each REZ in Tasmania in *Step Change*. This modelling indicates:

- Around 640 MW of new wind is projected for the Central Highlands REZ by 2029-30, to support the interim TRET. This REZ has the highest VRE projection in Tasmania, with around 800 MW required by 2039-40.
- Around 300 MW of new utility scale wind is projected for the North West Tasmania REZ by 2031-32, with around 570 MW required by 2039-40.
- Over 400 MW of new utility-scale solar is projected for the North East Tasmania REZ by 2029-30.
- No major change in utility-scale VRE capacity would be required beyond 2039-40, once the 200% TRET has been met.
- No offshore wind development is projected in any scenario for Tasmania.

Figure 9 Tasmania utility-scale VRE and BESS development in REZs for *Step Change* (MW)



T1 – North East Tasmania

Summary	
This REZ has a B grade wind resource quality. North East Tasmania is remote from the actionable Project Marinus and therefore upgrades are less influenced by its status.	
Existing network capability	
Currently there is no capacity on the 110 kV network from Hadspen to Derby. There is approximately 400 MW of VRE resource capacity available within the vicinity of George Town. The capability of this zone to accommodate new generation is subject to the NET1 northeast Tasmania group constraint.	

REZ grouping	
Infrastructure coordination can start later	Modelling outcomes identify moderate generation development in the late 2020s, but significant investment in transmission infrastructure is not projected in the ODP.

Metrics							
Resource	**Solar**			**Wind**			
Resource Quality	E			B			
Renewable Potential (MW)	300			1,400			
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**	
	F	F	F	B	B	A	

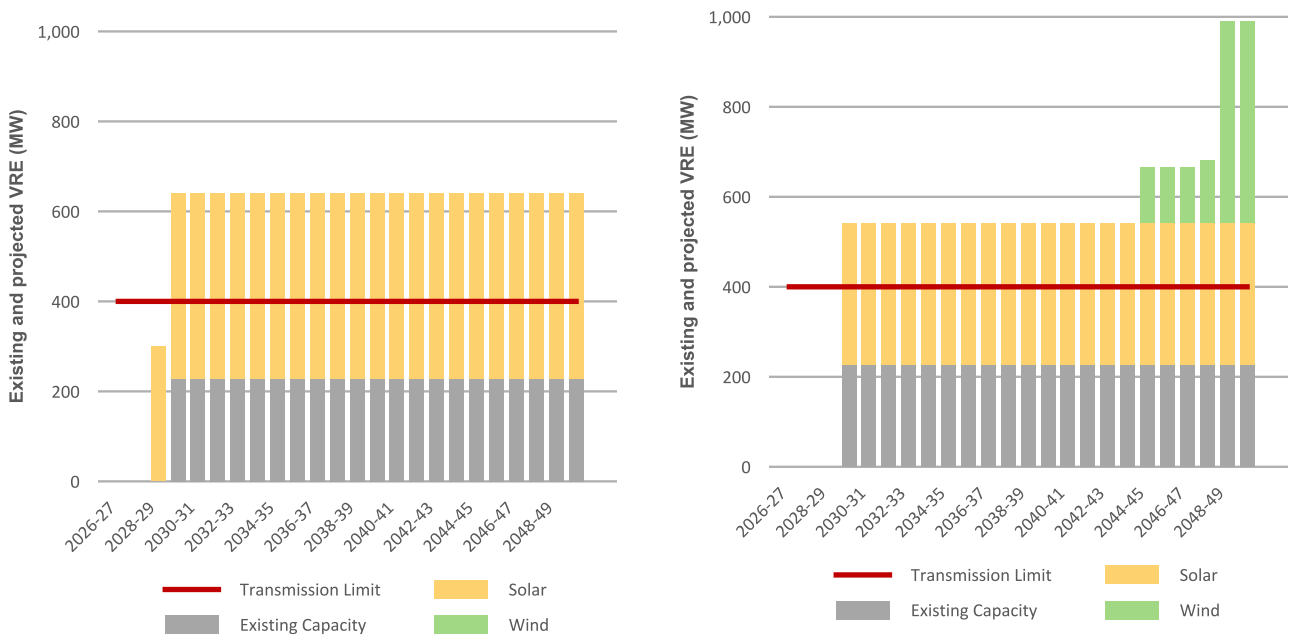
Climate hazard			
Temperature score	A	**Bushfire score**	B

REZ Outlook

	Solar (MW)				Wind (MW)			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	550	550	550	228	0	0	0
Step Change		400	400	400		0	0	0
Accelerated Transition		300	300	300		0	0	450

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	50
Step Change		0	0	0		0	100	150
Accelerated Transition		0	0	0		50	200	850

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	7%	0%	3%	0%	0%	19%
Step Change	2%	0%	1%	0%	0%	21%
Accelerated Transition	0%	0%	0%	0%	0%	13%

T2 – North West Tasmania

Summary

This REZ has grade A wind resource quality and good pumped hydro resources. Timing of the North West Tasmania REZ augmentation options are highly dependent on Project Marinus.

Augmentation of this REZ may be considered as part of the actionable Tasmania REZ Expansion project.

Existing network capability

The current total REZ transmission limit for existing (112 MW Granville Harbour Wind Farm) and new VRE before any network upgrade 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 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.

REZ grouping

Design and community engagement are progressing.	The modelling outcomes identify this zone for development of wind generation in the 2030s across all scenarios. Ongoing community engagement for network upgrades between Sheffield, Staverton, Hampshire and Burnie is underway as part of the North West Transmission Developments.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	F			A		
Renewable Potential (MW)	150			5,000		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	B	A	A

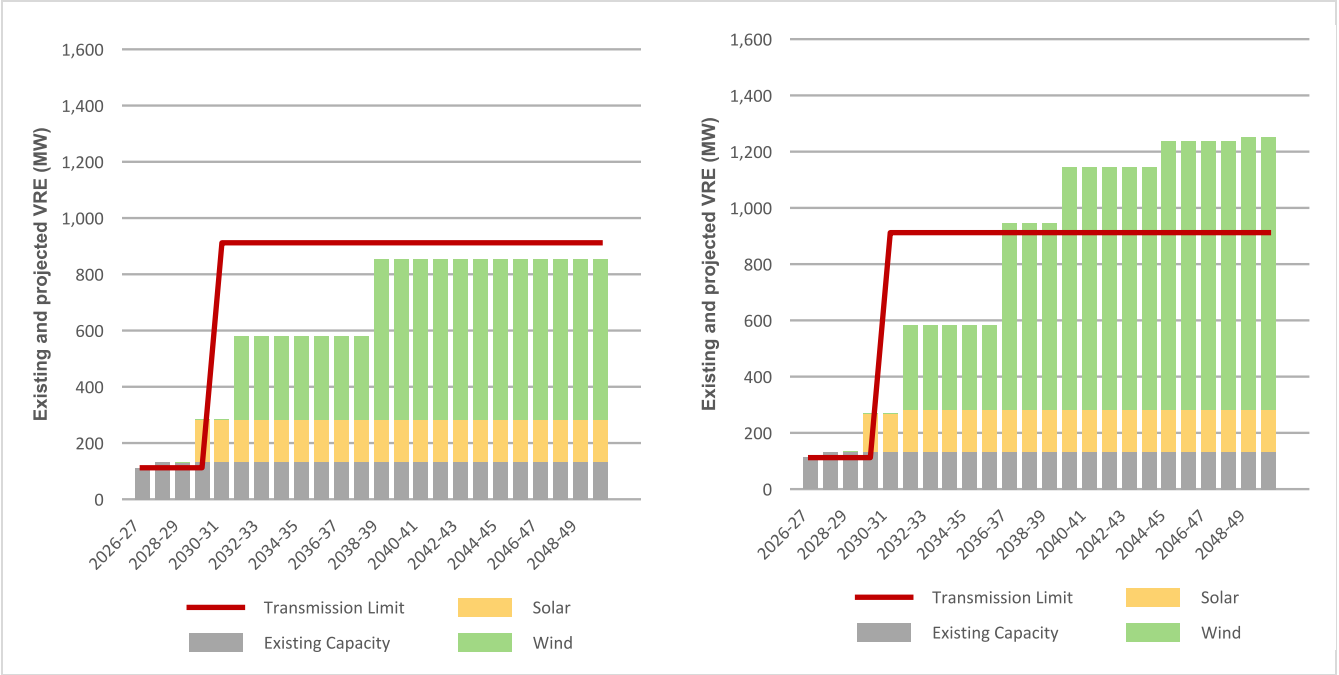
Climate hazard			
Temperature score	A	**Bushfire score**	A

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	150	150	150	133	0	900	900
Step Change		150	150	150		0	550	550
Accelerated Transition		150	150	150		0	850	950

	Battery Energy Storage Systems (MW)					**Hydrogen load (MW)**		
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0
Accelerated Transition		0	0	0		0	0	0

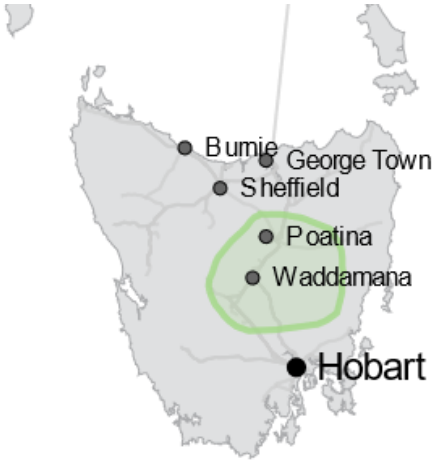
Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	7%	1%	0%	0%	0%	9%
Step Change	7%	0%	0%	0%	0%	12%
Accelerated Transition	4%	3%	0%	0%	1%	12%

T3 – Central Highlands

Summary	
This REZ has grade A wind resource quality and has good pumped hydro resources. It is located close to major load centres at Hobart. Timing of the Tasmania Central Highlands REZ augmentation options are influenced by the timing of Project Marinus augmentations. Augmentation of this REZ may be considered as part of the actionable Tasmania REZ Expansion project.	
Existing network capability	
The current total REZ transmission limit for existing (144 MW Wild 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.	

REZ grouping	
Design and community engagement are progressing	The modelling outcomes identify this zone for development of wind generation. Ongoing community engagement for network upgrades between Palmerston and Sheffield is underway as part of the North West Transmission Developments.

Metrics						
Resource	**Solar**			**Wind**		
Resource Quality	F			A		
Renewable Potential (MW)	150			3,400		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	B	A	A

Climate hazard			
Temperature score	A	**Bushfire score**	D

REZ Outlook

	Solar (MW)				Wind (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	310	500	500	500	144	0	200	200
Step Change		0	0	0		650	800	800
Accelerated Transition		100	100	100		650	900	1,650

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	0	0	0	0	0	0	0	0	0
Step Change		0	0	0		0	0	0	0
Accelerated Transition		0	0	0		0	0	0	0

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

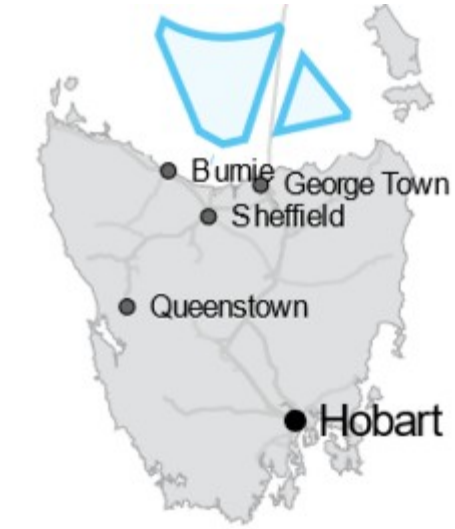
Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	8%	3%	0%	1%	16%
Step Change	1%	0%	4%	0%	0%	11%
Accelerated Transition	2%	1%	0%	0%	0%	12%

T4 – North Tasmania Coast

Summary

The North Tasmania Coast REZ has been identified for the offshore wind resource potential in relatively shallow waters close to shore, with a connection point close to existing 220 kV networks.

There is interest from offshore wind proponents in this REZ but no proposed projects are sufficiently progressed to be considered as anticipated or committed by AEMO's criteria.



Existing network capability

North West Tasmania Coast REZ connects to the 220 kV network within the North West REZ or North East REZ. Two potential connection points for this offshore REZ are in the vicinity of Burnie or George Town, and the REZ transmission network limit for each connection point is considered differently.

For a connection to the 220 kV network in the vicinity of Burnie, the total REZ transmission network limit for existing and new VRE is included as part of the North West REZ limit of approximately 277 MW for peak demand and summer typical conditions and 112 MW for winter reference condition.

For a connection to the 220 kV network in the vicinity of George Town, the total REZ transmission network limit for existing and new VRE is included as part of the North East Tasmania NET1 group constraint with a combined network limit of 1,600 MW for offshore wind and onshore VRE from T1.

REZ grouping

No significant transmission and generation infrastructure is projected	Modelling outcomes indicate no significant transmission or generation infrastructure is projected in the ODP.

Metrics

Resource	**Offshore Wind (fixed)**			**Offshore Wind (floating)**		
Resource Quality	A			A		
Renewable Potential (MW)	8,024			20,360		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	C	B	B	C	B	B

Climate hazard			
Temperature score	A	**Bushfire score**	A

VRE outlook

	Offshore Wind – fixed (MW)				**Offshore Wind – floating (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	There is no existing, committed or anticipated offshore wind generation for this REZ. The modelling outcomes, for all scenarios, did not project any offshore wind for this REZ.							
Step Change								
Accelerated Transition								

Transmission access expansion forecast and VRE curtailment

There are no existing, committed or anticipated VRE projects for this REZ, and the modelling outcomes, for all scenarios, did not project any additional VRE for this REZ. Therefore, no VRE curtailment or transmission expansion occurs in this REZ.

A3.3.6 Victoria

VRE outlook

In Victorian REZs, approximately 17 GW of new utility-scale wind and solar VRE is projected by 2050 to replace retiring generation as well as meet the Victorian Renewable Energy Target (VRET) set out by the Victorian Government which stipulates at least 65% renewable generation by 2030, and 95% by 2035[36].

The Victorian Government has also outlined its vision[37] for offshore wind and has set targets for at least 2 GW of offshore wind capacity by 2032, 4 GW by 2035 and 9 GW by 2040.

In May 2026, the Victorian Minister for Energy and Resources formally declared five REZs in regional Victoria[38]. These declared REZs differ slightly from those identified in the 2025 Victorian Transmission Plan, which formed the basis of the 2026 ISP modelling. This may change resource limits slightly in the effected REZs which may impact what generation, and transmission is optimally required in the future. Accordingly, the REZ boundaries shown in this section reflect the newly declared geographic boundaries, while the modelled generation outcomes are based on the REZs defined in the 2025 Victorian Transmission Plan.

Figure 10 shows the new utility-scale VRE capacity projected for each REZ in Victoria in *Step Change*. This modelling indicates:

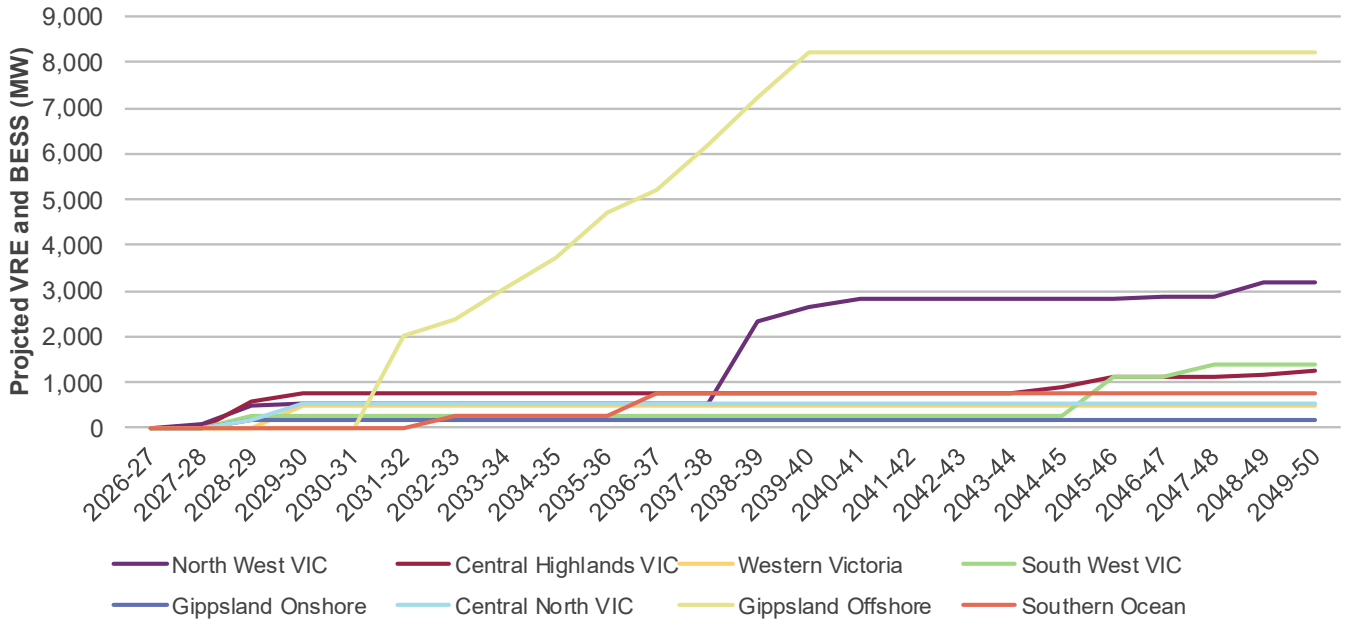
- Approximately 3,600 MW new utility-scale VRE is forecast to be required in Victoria by 2029-30. This new VRE generation is predominantly located in the Western REZ and the Central Highlands, using the additional REZ network capacity from the WRL, with the rest of the VRE spread evenly across most of the other REZs.
- Past 2032, the offshore wind primarily in Gippsland Offshore REZ provides the majority of the REZ capacity increase and are drivers for future project upgrades to the south-east Victoria.
- By 2035, the Southern Ocean REZ develops with approximately 300 MW. By 2040, the Gippsland Offshore and Southern Ocean REZs are projected to develop 8,200 MW and 800 MW of offshore wind respectively.
- After 2039, new utility-scale solar is projected to connect to the North West Victoria REZ, with over 2 GW by 2049-50. North West Victoria has good access to both the Victorian and New South Wales markets, being on the border and the key transmission backbone between the two regions.
- There is limited generation projected in the South West REZ under the *Step Change* scenario, with generation being planted in the 2040s to replace existing VRE which is retiring.
- There is significant utility-scale storage projected across Victoria. By 2034-35 there is nearly 8 GW/24 GWh of utility-scale storage capacity projected, the vast majority (over 7 GW) is either committed or anticipated currently.

[36] Victorian Government, 2017. "Renewable Energy (Jobs and Investment) Act 2017", at https://content.legislation.vic.gov.au/sites/default/files/2024-03/17-56aa003-authorised.pdf.

[37] Victorian Government, 2023. "Offshore Wind Transmission Development and Engagement Roadmap", at https://engage.vic.gov.au/offshore-wind-transmission-in-gippsland-and-portland.

[38] Victorian Government, 2026. "Victoria's renewable energy zone declaration orders", at https://www.energy.vic.gov.au/about-energy/legislation/victorias-renewable-energy-zone-declaration-orders.

Figure 10 Victoria utility-scale VRE and BESS development in REZs for *Step Change* (MW)



V1 – North West

Summary

The North West REZ (in previous ISPs this was part of V2 – Murray River REZ) has good solar and wind resource quality. Voltage stability and thermal limits currently restrict the output of generators within this REZ.

The actionable VNI West project will upgrade transfer capability between Victoria and New South Wales via Bulgana and significantly increase the ability for renewable generation to connect in this zone.

Existing network capability

The current REZ transmission limits for existing and new VRE before any network upgrade in North West is heavily reliant on the output of the existing VRE from Kerang to Red Cliffs. This is represented by the new group constraint 'NW1'. For peak demand, summer typical and winter reference conditions the limit is approximately 310 MW.

REZ grouping

REZ design and community engagement is progressing.	Modelling outcomes indicate moderate amounts of wind over the next few years and large amounts of solar being built around 2040 in the ODP. Outside of the actionable VNI West project, no significant transmission infrastructure is projected in the ODP.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	B			B		
Renewable Potential (MW)	3,000			1,500		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard

Temperature score	E	**Bushfire score**	C

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	30	100	100	100	0	450	450	450
Step Change		100	2,200	2,750		450	450	450
Accelerated Transition		100	2,900	3,000		450	450	1,150

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	0	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	12%	0%	23%	0%	11%
Step Change	0%	8%	0%	27%	0%	20%
Accelerated Transition	0%	6%	0%	28%	0%	29%

V2 – Central Highlands

Summary

The Central Highlands REZ (in previous ISPs this was part of V3 – Western Victoria REZ) has good wind resource quality. The existing and committed renewable generation within this REZ exceeds 800 MW. Additionally, there is a large amount of utility-scale storage committed in this REZ exceeding 600 MW.

The WRL uprated is an anticipated project and increases the ability for renewable generation to connect in this zone.

Existing network capability

The current REZ transmission limits for existing and new VRE before any network upgrade in Central Highlands are approximately 600 MW for peak demand and summer typical conditions and 800 MW for winter reference condition.

REZ grouping

REZ design and community engagement is progressing	The modelling outcomes identify this zone for development of wind generation around 2030 across all scenarios. This REZ could benefit from early community engagement and from coordination of generation.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	E			B		
Renewable Potential (MW)	2,500			2,000		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	C	**Bushfire score**	D

REZ Outlook

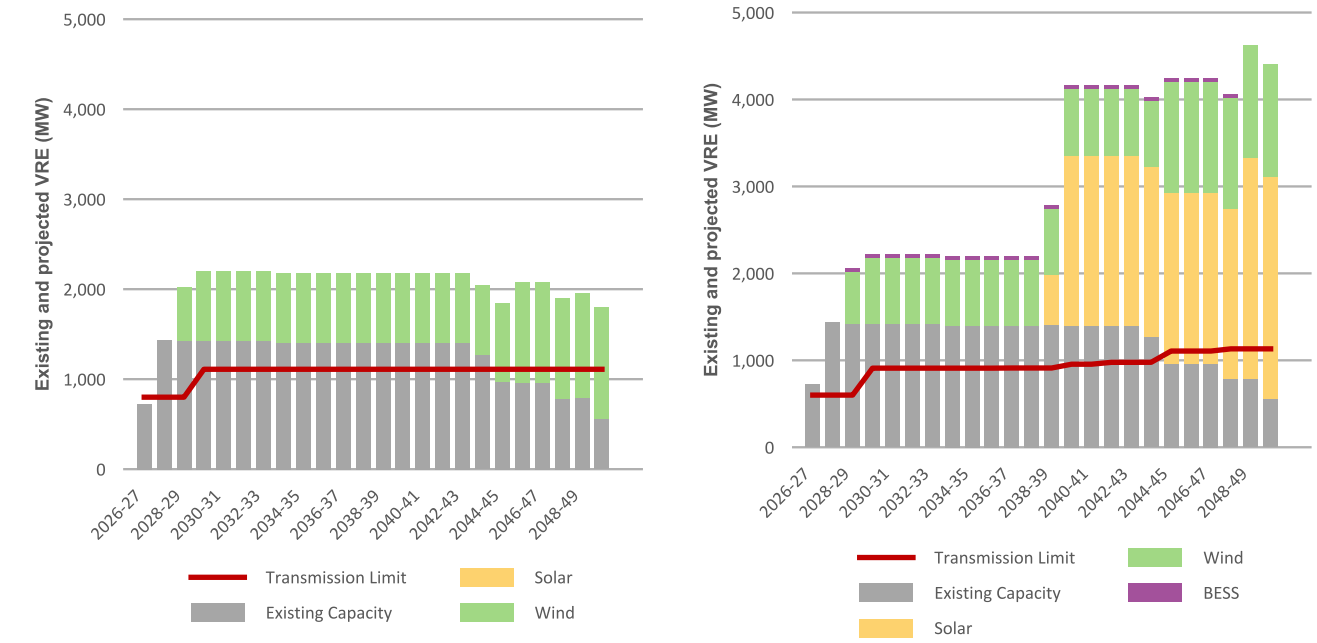
	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	125	0	0	0	693[39]	1,250	1,250	1,250
Step Change		0	0	0		750	750	1,200
Accelerated Transition		0	1,950	2,550		750	750	1,250

[39] Although there is more wind generation located geographically in this REZ (such as Golden Plains Wind Farm), it is modelled separately in the SWV1 group constraint as this constraint better represents its capacity in the network.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	606	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		50	50	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



The Anticipated WRL adds to the V2 REZ transmission limit when it is commissioned in 2030. There is a future Central Highlands REZ expansion project required later in the horizon in the *Accelerated Transition* scenario.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	27%	1%	31%	0%	7%
Step Change	6%	13%	0%	20%	0%	12%
Accelerated Transition	8%	11%	0%	30%	1%	34%

V3,V4 – Western Victoria REZ

Summary

The Western Victoria REZ as defined in the Victorian Transmission Plan[40] includes the ISP REZ of Wimmera Grampians (V3) and Wimmera Southern Mallee (V4). It has good wind resource quality.

The existing and committed renewable generation within this REZ exceeds 600 MW of wind and 270 MW of utility-scale storage. The WRL uprated is an anticipated project and increases the ability for renewable generation to connect in this zone.

Existing network capability

The current REZ transmission limits for existing and new VRE before any network upgrade in the Western REZ are approximately 500 MW for peak demand and summer typical conditions and 700 MW for winter reference conditions. Wimmera Grampians and Wimmera Southern Mallee's (combined as the Western Victoria REZ) ability to export to the wider network was modelled under the group constraints WV1 and WV2.

REZ grouping

REZ design and community engagement is progressing	The modelling outcomes identify this zone for development of wind generation in the 2030s across all of the scenarios Community consultation and engagement for both transmission and generation is ongoing for WRL.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	F			B		
Renewable Potential (MW)	-			3,100		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	D

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	0	0	639	1,575	1,575	1,575
Step Change		0	0	0		1,285	1,285	1,285
Accelerated Transition		0	2,325	4,010		865	865	865

[40] See https://www.vicgrid.com.au/transmission-planning/victorian-transmission-plan.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	270	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		100	100	100		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: The transmission access charts show the group constraint transmission limits for the Western REZ pre and post the WRL (WV1 and WV2).

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	13%	0%	9%	0%	3%
Step Change	0%	16%	0%	13%	0%	11%
Accelerated Transition	0%	4%	0%	15%	0%	24%

V5 – South West

Summary	
The South West REZ has moderate wind resource quality in close proximity to the 500 kV and 220 kV networks in the area. The total committed and in-service wind generation in the area exceeds 4.5 GW. Additionally, there is around 1 GW of committed and in-service utility-scale storage, as well as over 1 GW of hydrogen electrolyser load projected in every scenario which impacts the need for further transmission build and lowers the observed curtailment rates.	
Existing network capability	
The current REZ transmission limits for existing and new VRE before any network upgrade in South West Victoria are limited by voltage stability, and this REZ was modelled with the SWV1 group constraint. This limit is approximately 2,495 MW now the Victorian Government's REZ Development Plan's Mortlake turn in project is completed.	

REZ grouping	
REZ design and community engagement is progressing	The modelling outcomes identify this zone for development of moderate wind generation in the 2030s across the *Step Change* and *Accelerated Transition* scenarios.

Metrics						
Resource	**Solar**			**Wind**		
Resource Quality	F			B		
Renewable Potential (MW)	-			2,100		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	C	**Bushfire score**	D

REZ Outlook

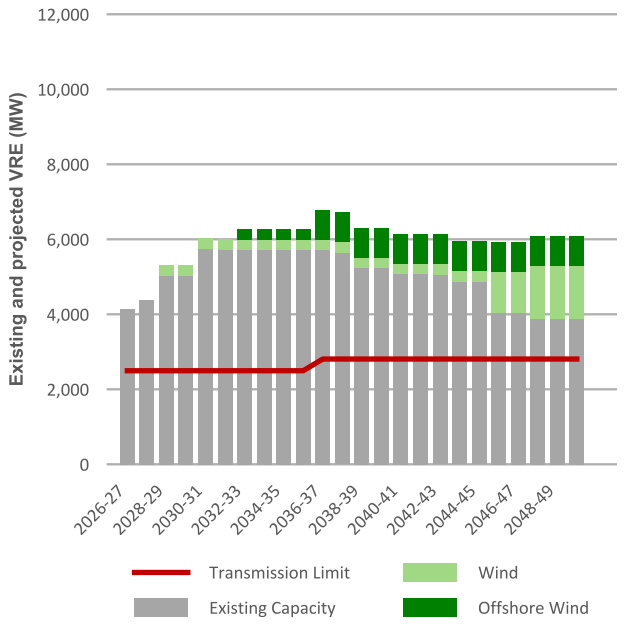
	Solar (MW)				Wind (MW)			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	300	0	0	0	4,526[41]	0	0	0
Step Change		0	0	0		300	300	1,450
Accelerated Transition		0	0	0		550	1,450	6,050

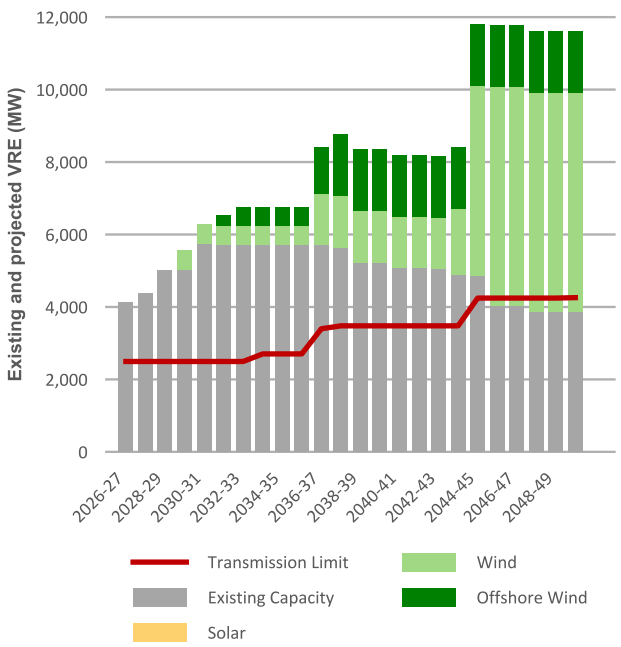
[41] This sum includes wind generation that doesn't form part of the geographic area of South West REZ, however needs to be represented in this group constraint (SWV1) due to the network configuration and getting this generation to supply Melbourne demand.

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	918	0	0	0	0	0	500	1,150
Step Change		0	0	0		0	900	1,600
Accelerated Transition		0	0	0		0	2,750	4,250

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)





Note: The transmission access expansion forecasts show the results for SWV1 group constraint augmentation, which includes VRE projections for V5 and V9 (Offshore REZ). The offshore wind in these charts is exclusively modelled in the V9 REZ. There is a future South West Victoria REZ expansion project required in the *Accelerated Transition* scenario.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	3%	0%	19%	0%	4%
Step Change	0%	8%	0%	12%	0%	6%
Accelerated Transition	0%	8%	0%	7%	0%	6%

V6 – Gippsland Onshore

Summary

The Gippsland Onshore REZ has moderate wind resource quality, in proximity to the 500 kV networks.

Existing network capability

The transmission limit of the Gippsland REZ is modelled with the South East Victoria (SEV)-Melbourne (MEL) flow path limit.

Due to the high capacity of the network in this REZ (with four 500 kV and six 220 kV lines from Latrobe Valley to Melbourne designed to transport energy from major Victorian brown coal power stations), significant generation can be accommodated. However, limitations exist at key points of 500/220 kV transformation.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of very moderate levels of wind generation in the next few years across all scenarios.

Metrics

	Solar			Wind		
Resource						
Resource Quality	F			D		
Renewable Potential (MW)	900			500		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	B	B	A

Climate hazard			
Temperature score	C	**Bushfire score**	D

REZ Outlook

	Solar (MW)				Wind (MW)			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	157	0	0	0	0	200	200	200
Step Change		0	0	0		200	200	200
Accelerated Transition		0	900	900		350	350	350

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)		
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected		
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50
Slower Growth	760	0	0	0	0	0	50	150
Step Change		0	0	0		0	150	200
Accelerated Transition		0	0	0		0	300	500

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

Note: The transmission limit of the Gippsland REZ is modelled with the SEV-MEL flow path limit. The flow path transfer limit initially reduces with the retirement of Yallourn Power StationStation and the resulting Latrobe Valley modified parallel operational mode[42], before the SEV-MEL flow path transmission augmentation in 2033.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	12%	0%	27%	0%	18%
Step Change	0%	7%	0%	27%	0%	24%
Accelerated Transition	0%	3%	0%	23%	0%	21%

[42] For more information on the Latrobe Valley transmission modified parallel operating mode, see the 2025 *Victorian Annual Planning Report*, at https://www.vicgrid.com.au/transmission-planning/victorian-annual-planning-report.

V7 – Central North

Summary

The Central North REZ has moderate solar and wind resource quality. This REZ was not formally declared by the Minister for Energy and Resources in May 2026, but it was detailed in the 2025 Victorian Transmission Plan and modelled in the 2026 ISP.

There is nearly 2 GW of existing and committed solar generation and over 1 GW of committed utility-scale storage in this REZ.

Existing network capability

The current REZ transmission limits for existing and new VRE before any network upgrade in Central North Victoria are approximately 650 MW for peak demand and summer typical conditions and 1,300 MW for the winter reference condition.

REZ grouping

Coordination of generation infrastructure may be required	The modelling outcomes identify this zone for development of a moderate amount of wind generation around 2030 across multiple scenarios, and some solar generation in *Accelerated Transition*.

Metrics

Resource	**Solar**			**Wind**		
Resource Quality	C			B		
Renewable Potential (MW)	500			5,000		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	F	F	F	A	A	A

Climate hazard			
Temperature score	D	**Bushfire score**	D

REZ Outlook

	Solar (MW)				**Wind (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	1,974	0	0	0	0	0	0	0
Step Change		0	0	0		550	550	550
Accelerated Transition		150	350	500		550	550	550

REZ Outlook (continued)

	Battery energy storage systems (MW)					Hydrogen load (MW)			
	Existing/ committed/ anticipated	Projected			Existing/ committed/ anticipated	Projected			
		2029-30	2039-40	2049-50		2029-30	2039-40	2049-50	
Slower Growth	1,183	0	0	0	0	0	0	0	
Step Change		0	0	0		0	0	0	
Accelerated Transition		0	0	0		0	0	0	

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	0%	20%	2%	35%	5%	28%
Step Change	7%	18%	0%	30%	1%	27%
Accelerated Transition	12%	18%	0%	33%	0%	42%

V8 – Gippsland Offshore

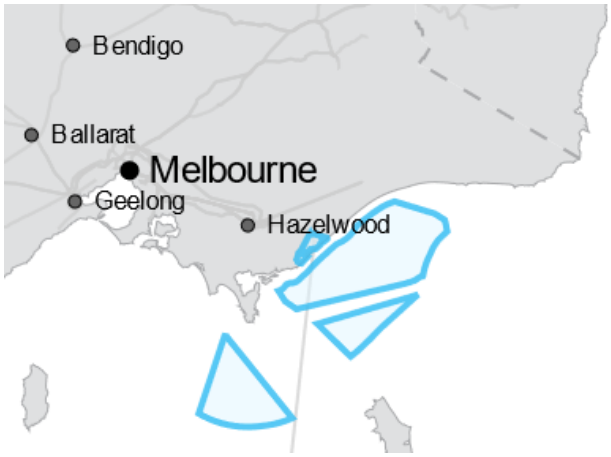
Summary

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[43]. 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.

VicGrid is currently undertaking consultation[44] on the development of this infrastructure and AEMO will continue to co-ordinate with VicGrid on this matter.



Existing network capability

Gippsland Offshore REZ requires connection to the 500 kV network.

REZ grouping

Design and community engagement are progressing	The Federal Minister for Climate Change and Energy proposed an area off the Gippsland Coast in Victoria for offshore renewable energy, including offshore wind, on 5 August 2022. Consultation on this proposed area closed on 7 October 2022. VicGrid is currently undertaking community consultation on the development of connection infrastructure.

Metrics

Resource	**Offshore Wind (fixed)**			**Offshore Wind (floating)**		
Resource Quality	A			A		
Renewable Potential (MW)	55,000			5,000		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	B	B	B	B	B	B

Climate hazard			
Temperature score	C	**Bushfire score**	D

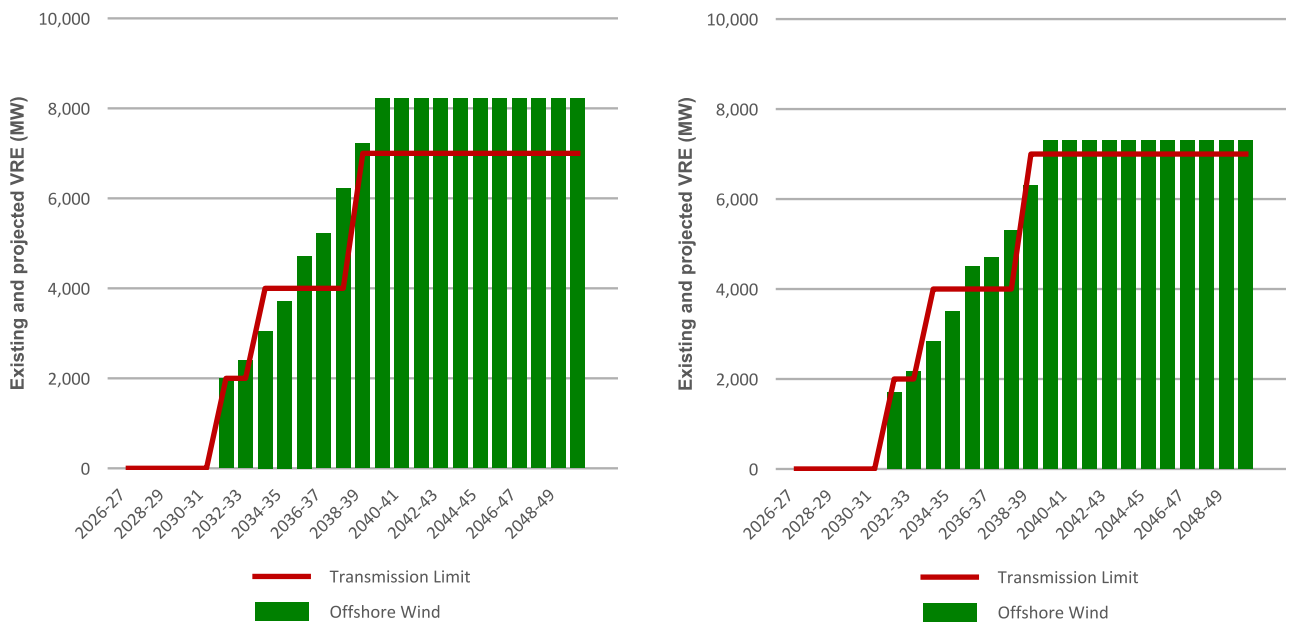
VRE outlook

	Offshore Wind – fixed (MW)				**Offshore Wind – floating (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	8,200	8,200	0	0	0	0
Step Change		0	8,200	8,200		0	0	0
Accelerated Transition		0	6,700	6,700		0	600	600

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

[44] See https://www.vicgrid.com.au/about/news/news-stories/consultation-offshore-wind-transmission.

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	0%	10%	0%	2%
Step Change	-	-	0%	6%	0%	2%
Accelerated Transition	-	-	0%	4%	0%	3%

V9 – Southern Ocean

Summary

The Southern Ocean REZ has been identified for offshore wind resource potential in relatively shallow waters, with a connection point close to existing 500 kV networks at Alcoa Portland (APD)/Heywood.

The Victorian Government has announced that VicGrid will provide a coordinated transmission connection point near Portland[45]. VicGrid is currently undertaking consultation on the development of this infrastructure[46] and AEMO will continue to co-ordinate with VicGrid on this matter.

Existing network capability

The current REZ transmission limit is 1,425 MW under all conditions. This REZ is also subject to the SWV1 group constraint which limits V5 and V9 REZ generation less exports to South Australia on the Heywood Interconnector.

REZ grouping

Design and community engagement are progressing	The Federal Minister for Climate Change and Energy proposed[47] an area in the Southern Ocean off Victoria and South Australia for offshore renewable energy, including offshore wind, on 28 June 2023. Consultation on this proposed area closed on 31 August 2023. VicGrid is currently undertaking community consultation on the development of connection infrastructure.

Metrics

Resource	**Offshore Wind (fixed)**			**Offshore Wind (floating)**		
Resource Quality	A			A		
Renewable Potential (MW)	780			3,330		
Demand Correlation	**2029-30**	**2039-40**	**2049-50**	**2029-30**	**2039-40**	**2049-50**
	0	0		0	0	

Climate hazard			
Temperature score	C	**Bushfire score**	D

VRE outlook

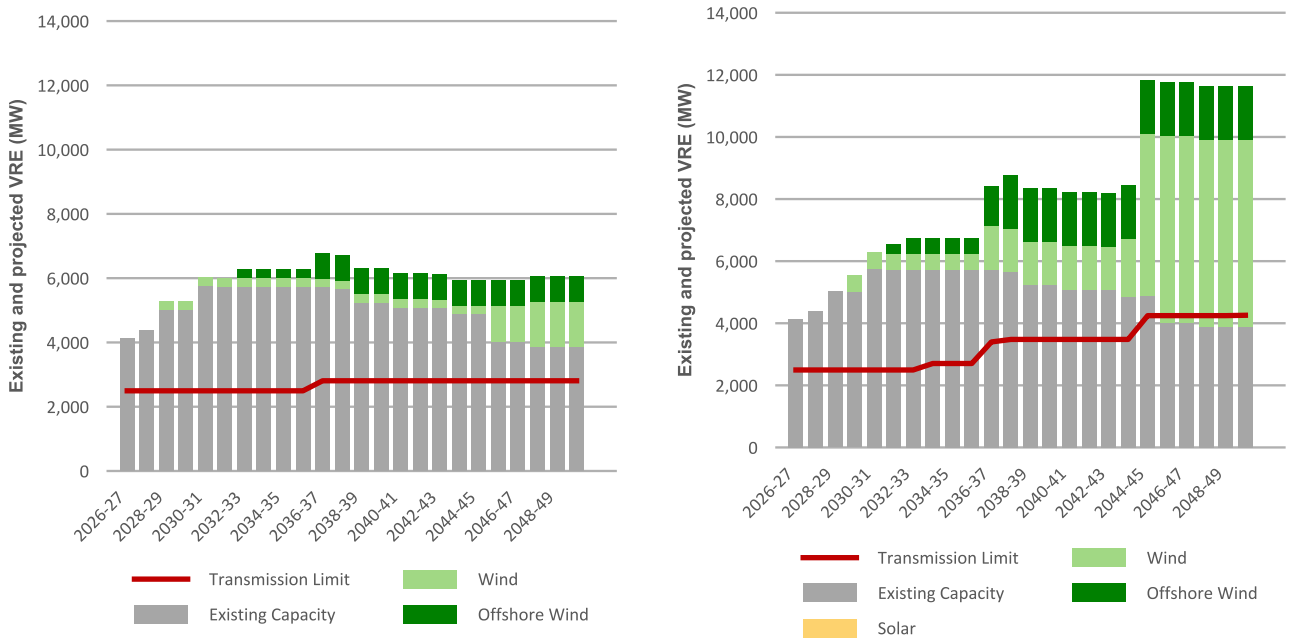
	Offshore Wind – fixed (MW)				**Offshore Wind – floating (MW)**			
	Existing/ committed/ anticipated	**Projected**			**Existing/ committed/ anticipated**	**Projected**		
		2029-30	**2039-40**	**2049-50**		**2029-30**	**2039-40**	**2049-50**
Slower Growth	0	0	800	800	0	0	0	0
Step Change		0	800	800		0	0	0
Accelerated Transition		0	800	800		0	950	950

[45] See https://www.dcceew.gov.au/energy/renewable/offshore-wind/areas/southern-ocean-region.

[46] See https://www.vicgrid.com.au/about/news/news-stories/consultation-offshore-wind-transmission.

[47] See https://consult.dcceew.gov.au/oei-southern-ocean.

Transmission access expansion forecast for *Step Change* (left) and *Accelerated Transition* (right)



Note: The transmission access expansion forecasts show the results for SWV1 group constraint augmentation, which includes VRE projects for V5 and V9. The offshore wind generation in these charts is explicitly modelled in the offshore V9 REZ, and the onshore wind explicitly in V5.

VRE curtailment

Scenario	2029-30		2039-40		2049-50	
	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill	Transmission curtailment	Economic spill
Slower Growth	-	-	0%	20%	0%	5%
Step Change	-	-	0%	20%	0%	11%
Accelerated Transition	-	-	0%	15%	0%	19%

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 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.
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.

Term	Acronym	Explanation
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 flexibility, 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.
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.

Term	Acronym	Explanation
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.