

ABN 70 250 995 390

180 Thomas Street, Sydney
PO Box A1000 Sydney South
NSW 1235 Australia
T (02) 9284 3000
F (02) 9284 3456

Friday, 13 February 2026

Nicola Falcon
Executive General Manager System Design
Australian Energy Market Operator

Lodged via email: ISP@aemo.com.au

Dear Nicola

Draft 2026 Integrated System Plan

Transgrid welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO's) Draft 2026 Integrated System Plan (ISP).

We strongly support AEMO's conclusion that there is an urgent and enduring need to progress all actionable transmission projects. Timely delivery is essential to ensuring that consumers continue to benefit from reliable, affordable energy as the power system transitions. The Draft ISP clearly demonstrates that efficient investment in transmission places downward pressure on electricity prices, reduces reliance on higher-cost generation, and minimises the risk of supply shortfalls.

Transgrid operates and manages the high-voltage electricity transmission network in NSW and the ACT, connecting generators, distributors and major end users. As the largest transmission provider in the National Electricity Market (NEM) and located centrally within it, we have an important role to play in delivering least-cost outcomes for consumers over the long-term through the timely connection of new renewable generation, supporting power system security and resilience, and ensuring that transmission services are delivered efficiently and reliably.

We are committed to delivering the major transmission investments that underpin these customer benefits. EnergyConnect, now nearing completion, will enable greater sharing of low-cost renewable energy across NSW, South Australia and Victoria when commissioned this year, enhancing reliability and reducing wholesale prices. We have also commenced construction on the HumeLink project, a nationally significant investment that will unlock Snowy 2.0 and support the integration of new renewable generation across the NEM.

Transgrid acknowledges and appreciates AEMO's comprehensive and collaborative approach to preparing the Draft ISP. The depth of analysis, quality of stakeholder engagement and integration of new insights - including enhanced joint planning with Distribution Network Service Providers and the first-time incorporation of gas sector interactions - has materially strengthened this iteration of the ISP. These improvements provide stakeholders with increased confidence in the ISP as a highly robust, evidence-based blueprint for efficient transmission investment that will deliver enduring value to consumers throughout Australia's energy transition.

We welcome the Draft ISP's strong emphasis on coordinated, whole-of-system planning and recognise the substantial improvements made in this area. Building on this positive foundation, Transgrid has identified several opportunities to further strengthen the Final ISP. We look forward to continuing to work collaboratively with AEMO to refine the plan so that it remains firmly anchored in the long-term interests of consumers and supports the orderly, efficient and affordable transition of the NEM.

If you require any further information or clarification on this submission, please feel free to contact me at Kasia.Kulbacka@transgrid.com.au or Doug Thomson at Doug.Thomson@transgrid.com.au.

Yours faithfully



Kasia Kulbacka
General Manager Network Planning

Submission to AEMO Draft 2026 ISP

Executive Summary

This submission provides Transgrid's response to the Australian Energy Market Operator's (AEMO's) Draft 2026 Integrated System Plan (ISP).

Transgrid is proud to be a key delivery partner for the critical projects outlined in the Draft ISP, projects that are essential to achieving the Commonwealth Government's clean energy vision and ensuring consumers benefit from cleaner, more affordable and reliable energy. We welcome the ISP's strengthened focus on coordinated national planning and acknowledge the substantial effort AEMO has invested in fostering collaboration and joint planning across the sector to develop this plan. This collective, whole-of-system approach has materially improved the effectiveness of this comprehensive planning framework. Transgrid looks forward to continuing to work closely with AEMO, DNSP's, EnergyCo and other stakeholders to build on this momentum and further refine the 2026 ISP.

AEMO's ISP navigates a highly complex and dynamic energy system through extensive consultation and rigorous analytical processes. The ISP draws on insights from more than 1,400 stakeholders and 200 written submissions, ensuring the plan reflects the perspectives of industry, communities and consumers. Its modelling framework is comprehensive, assessing approximately 2,000 potential development pathways and stress-testing shortlisted options across multiple scenarios to identify the least-cost and lowest-risk pathway for consumers. Importantly, the ISP provides an expanded whole-of-system view, integrating grid-scale generation, storage, transmission, gas development projections and the evolving role of consumer energy resources (CER). Above all, the ISP offers a clear and coherent strategic direction, reaffirming that renewable energy - supported by storage, flexible gas generation and coordinated transmission investment - remains the lowest-cost and most reliable replacement for retiring coal generation while meeting demand growth and government emissions targets.

Transgrid is committed to ensuring the reliable transition of the National Electricity Market (NEM). We remain focused on delivering the anticipated, committed and actionable ISP projects that will unlock the benefits of the least-cost transition for consumers. We also recognise the critical role of the 2026 ISP in articulating the need for and value of transmission projects, enabling stakeholders to understand the long-term customer benefits these projects will provide to electricity consumers.

Our submission is structured as follows:

- **Section 1** sets out our input on matters relating to Government policy alignment, demand, CER, distribution projects and generation assumptions.
- **Section 2** sets out our views on specific transmission projects, including opportunities to progress new projects that have the potential to deliver significant net benefits to consumers.

In relation to the matters addressed in Section 1 of our submission, our key points are:

- **Implementation of Government energy policies:** Greater coordination is needed between the ISP and NSW Electricity Infrastructure Roadmap to prevent divergence in generation and network upgrades and create a consistent vision and plan for the energy transition that stakeholders can have confidence in. Assumptions for Renewable Energy Zone (REZ) development – including New England REZ and South West REZ allocated access rights – must be consistent to support efficient, integrated planning.
- **Load growth (data centres):** Transgrid recommends that AEMO update its forecast and consider sensitivities for data centre load for the Final 2026 ISP. Connection activity in NSW has accelerated significantly in recent months, with applications increasing sharply since August 2025. Up to 3.4 GW of new data centre connections could reach agreement by mid-2026, representing a step-change in demand beyond what is currently reflected in the ISP. Updating these forecasts is essential to ensure planning decisions are grounded in the best available information, ensuring investment signals are efficient, timely and fair to all consumers.
- **Importance of CER:** Transgrid supports the ISP's recognition of the important role of CER in the supply mix and energy transition, including consideration of distribution-level constraints and opportunities for the first time. We welcome the evolving maturity of forecasting and modelling approaches that support efficient system-wide outcomes, whether at the transmission or distribution level.
- **Fuel Constraints:** The ISP acknowledges the potential for liquid fuels (e.g. diesel) to support peaking generators when gas supplies are constrained. However, excessive reliance on diesel may not be logistically feasible, or consistent with community expectations with respect to air pollution, emissions and local amenity. We recommend sensible limits be considered in the Final ISP, such as those imposed in environmental licensing conditions.
- **Coal Reliability:** As ageing coal generation units approach the end of their technical lives, their reliability is likely to deteriorate. This is particularly true if they are also operating more flexibly (such as two-shifting) in response to variable system and market conditions, as is implied in the Draft ISP results. We recommend that AEMO review outage rate assumptions used in the Final ISP to ensure they appropriately account for these factors.
- **Distribution Projects:** Transgrid supports leveraging distribution networks to help meet ISP objectives. Effective coordination between transmission and distribution planning can help unlock lower-cost, community-supported solutions to deliver whole-of-system solutions that support a fair, least-cost transition for customers.

As outlined in Section 2, our key points regarding individual transmission projects are:

- **Sydney Ring South:** Transgrid welcomes the inclusion of the 500kV Sydney Ring South option as a future ISP project. This project will play a key role in unlocking the full benefits of NSW Renewable Energy Zones and new firming capacity- lowering consumer energy prices, improving reliability, and reducing curtailment as coal generation retires and demand continues to grow. Throughout the upcoming Regulatory Investment Test for Transmission (RIT-T), Transgrid will test and consult on a range of project options to identify the optimal timing and infrastructure combination to maximise benefits for NSW consumers.
- **Victoria-NSW Interconnector (VNI) West:** We welcome AEMO's confirmation that VNI West remains an actionable ISP project, critical to the transition, and AEMO's view that maintaining the project's momentum is in the long-term interest of consumers. Transgrid considers that early delivery of VNI West Stage 1 should be assessed, to deliver benefits sooner by unlocking South West REZ generation and reducing the risk of late delivery.
- **Switching Station near Wondalga project:** Transgrid welcomes AEMO's confirmation that the switching station near Wondalga is now an actionable ISP project, recognising its importance in strengthening network resilience and improving power flows across southern and central NSW.
- **Queensland-NSW Interconnector (QNI) Connect:** We recognise that recent policy changes in Queensland may impact the timing and optimal configuration of QNI Connect. Transgrid welcomes the Draft ISP's continued recognition of QNI Connect as an actionable project and is committed to collaborative joint planning efforts to complete further analysis and progress the project if and when it is in the best interests of consumers to do so.

1. Government policy alignment and other core assumptions

Implementation of Government energy policies

Significant differences are emerging between the NSW Electricity Infrastructure Roadmap and the Draft ISP. These differences relate to the:

1. type and scale of generation assumed within declared REZs
2. timing and certainty of associated network investments
3. treatment of new generation areas outside REZ boundaries.

To support an efficient, nationally coordinated pathway, stronger alignment is needed between the ISP and state-based implementation frameworks. A single integrated forecasting approach – supported by clearer linkage between ISP modelling and the delivery mechanisms under the *Electricity Infrastructure Investment Act 2020* (NSW) – is essential.

Access rights

Under the current NSW policy framework, generation without access rights cannot connect inside the EnergyCo administered REZ access schemes. Only projects that have been awarded access rights are able to progress in these regions and other projects are effectively locked out. If projects with access rights ultimately do not progress (for whatever reason) a commercial process would be required to cancel and reauction access rights to other projects, which could take several years.

The Draft ISP does not reflect the 3.56 GW of awarded access rights in South West REZ – predominantly wind – and instead assumes that these projects can be substituted with solar generation in the region instead. This appears to be inconsistent with the REZ access regime framework. While the South West REZ projects with access rights do not yet strictly meet AEMO’s criteria to be considered ‘anticipated’, we consider their special status needs to be recognised in some way, because they cannot be easily swapped for other projects (which is plausible elsewhere in the open access network).

This issue has material implications for the NSW power system. The Draft ISP’s assumption of a greater reliance on solar in the South West REZ shifts wind development to other regions and may understate the benefits associated with VNI West Stage 1 (including the third Dinawan transformer) and Sydney Ring South.

Ensuring the ISP accurately represents access rights and committed development pathways across all NSW REZs is critical for robust system planning. Transgrid would be happy to share connection enquiry trends, to assist in the assessment of the plan’s generation development, at AEMO’s request.

New England REZ

We also note that while Stage 1 of New England REZ remains classified as actionable in the Draft 2026 ISP, Stage 2 has not progressed. We understand that EnergyCo is running a competitive procurement process to appoint a network operator for both stages, and has recently shortlisted consortia to proceed to the request for proposal stage (based on a detailed reference design that includes scope and capacity for both Stages 1 and 2). We support this continued progression and encourage AEMO to incorporate the latest information from EnergyCo into the Final ISP so that the plan accurately reflects expected REZ development and associated network needs.

Renewable energy and climate policies

The ISP assumes that aspirational climate and renewable targets are achieved in all scenarios, including near-term cases where the enabling policy mechanisms are not yet fully in place, such as the Federal Government’s 82% renewable target by 2030 and a binding carbon budget for the electricity sector. These assumptions may risk creating a disconnect between modelled outcomes and observable investment dynamics and delivery challenges, particularly in the next few years. Transgrid supports AEMO’s testing of scenarios and sensitivities that consider incomplete or delayed achievement of policy targets so that any system risks (reliability, emissions, cost and system resilience) can be identified and appropriate responses can be developed and implemented.

We recommend:

- a single integrated generation forecast for NSW, jointly informed by AEMO and EnergyCo
- explicit representation of REZ access rights as allocated under NSW schemes currently and going forward (e.g., South West REZ's access rights allocations),
- recognition of EnergyCo's REZ reference design work and commitment to delivering New England Stage 1 and Stage 2.

Stronger alignment between national and state planning processes will deliver more efficient network outcomes, lower costs and greater stakeholder certainty in a consistent and coordinated plan for NSW. This in turn supports the growth of the generation pipeline which is required to achieve climate and renewable energy targets.

Acceleration of NSW data centre demand

NSW is experiencing an unprecedented acceleration in data centre development, consistent with national and global trends in digital-infrastructure expansion. This wave of investment presents a significant economic opportunity, strengthening Australia's digital capabilities and supporting growth in advanced IT services, high-value supply chains and the emerging export market for digital services.

Since data centre demand was last forecast for the Draft 2026 ISP, Transgrid has seen an unprecedented uplift in the scale and number of connections from data centres. We now have over 6 GW of connection applications to the transmission network alone in the Sydney region, with more seeking connection to distribution networks as well. If even a fraction of these projects eventuates, electricity demand could materially exceed projections embedded in the Draft 2026 ISP.

Transgrid recommends that AEMO update the data-centre demand forecasts for the Final 2026 ISP, to reflect current sectoral growth and acceleration, which has shifted materially since the forecast prepared for the Draft ISP. Given the scale and pace of change we also recommend new ISP sensitivities that test different levels of data centre growth into the future.

Incorporating a broader range of data centre demand forecasts will ensure national planning reflects the latest connection pipeline and supports an efficient, coordinated development pathway for both digital infrastructure and the electricity system which underpins it. In parallel, Transgrid welcomes cross-sectoral collaboration to develop complimentary policy responses that enable the timely delivery of infrastructure needed for data centre growth while protecting other energy consumers from higher prices or reliability risks.

Consumer Energy Resources

CER features prominently in AEMO's ISP, reflecting their growing role in shaping a lower-cost, more flexible and resilient future energy system. The Draft 2026 ISP highlights that consumers are expected to contribute significantly through continued uptake of rooftop solar, behind-the-meter batteries and electric vehicles, which together could provide substantial distributed capacity across the NEM.

Transgrid supports the ongoing refinement and joint development of CER forecasts and operational models, as the maturity and sophistication of the segment evolves and becomes an increasingly important part of the energy supply mix. We welcome opportunities to engage alongside other stakeholders, including DNSPs and consumer advocates, to ensure that scenarios, forecasts and modelling assumptions fully reflect contributions and consumer benefits that can be realised with CER optimisation.

Consideration of diesel as a backup fuel for gas-powered generators

Transgrid welcomes the sophisticated representation of gas networks adopted for the Draft ISP, particularly in the Sydney, Newcastle and Wollongong region, where the interaction of reciprocal transmission and gas network constraints have material implications for planning new gas-powered generation to support reliability as coal retires.

While the Draft ISP acknowledges the opportunity for liquid fuels such as diesel to power generators to overcome constraints on gas networks, excessive reliance on diesel may not be logistically feasible, or consistent with community expectations with respect to air pollution, emissions and local amenity. We recommend sensible limits on the use of liquid fuels be applied in the Final ISP, such as those imposed in environmental licensing conditions.

Transgrid intends to explore these implications in the RIT-T for the Sydney Ring South project.

Coal reliability

The Draft ISP notes increasing reliability risks from ageing coal plants presents increasing challenges to system reliability as the generators operate in more complex conditions, require more frequent repairs and experience a greater frequency of extended outages.

The Draft ISP projects full unplanned outages around 7% of the time and a partial loss of capacity 17% of the time between 2027 and 2035. However, outage factors for black and brown coal fleets show no clear upward trend and long-duration outage factors remain flat, at 0.91% through to 2035.

AEMO's thermal audit highlights that coal generators are now required to cycle and operate more flexibly as the penetration of renewables rises. This creates additional mechanical stress and further erodes reliability introducing additional risks, which do not appear to be reflected in reliability assumptions used in ISP modelling.

Transgrid recommends:

- Reviewing assumed coal outage rates applied in the Final ISP to better capture reliability risks and ensure consistent assumptions across AEMO's comprehensive system planning assessments.

Distribution projects (Distribution REZ's)

Transgrid supports the leveraging of distribution networks to meet to the ISP objectives and has been working with NSW DNSP's, AEMO and EnergyCo in assessing various options that would enable effective integration of Distribution REZ's into the network. The Optimal Development Path (ODP) provides a valuable first step in identifying distribution investment opportunities, we recommend incorporating two additional considerations to ensure these investments deliver optimal outcomes:

Upstream transmission constraints

Distribution-level solutions should be assessed in the context of any upstream transmission limitations to ensure coordinated development of transmission and distribution infrastructure. In some areas, generation embedded on the low-voltage side of the transmission network may exceed the load at the bulk supply point. The connection of generation that exceeds the load supplied at the bulk supply point may therefore face high levels of curtailment because it cannot be exported via the transmission system to other load centres.

Because these low-voltage network characteristics are highly localised and detailed, they may not be fully represented in the current base-case modelling. A holistic assessment that accounts for these upstream constraints will help ensure that investment decisions remain effective, efficient, and aligned with system needs.

Coordinated assessment of infrastructure

We consider that the ISP should holistically consider both the transmission and distribution investments needed to unlock distribution-connected generation and firming capacity. In particular, recognising the growing role of Distribution REZs is essential to ensuring that the network can effectively integrate increasing amounts of embedded renewable generation. A coordinated assessment of infrastructure needs and associated costs will help ensure the solutions identified are economically efficient, support capability of Distribution REZ's to contribute to system needs and deliver the best overall consumer outcomes.

Transgrid will continue engaging with AEMO, EnergyCo and distribution network service providers (DNSPs) to support coordinated planning and a shared understanding of these constraints, so that this joint work strengthens the treatment of Distribution REZs and contributes to shaping the best possible outcomes in the Final 2026 ISP - ensuring future investments deliver long-term value for consumers.

Weighted Average Cost of Capital and cost-benefit analysis

AEMO's 2025 Input Assumptions and Scenarios Report (IASR) introduced a technology-specific Weighted Average Cost of Capital (WACC), which has been applied in the Draft 2026 ISP. Under this approach, regulated transmission assets are annualised using a lower WACC, which decreases the present value of forecast transmission costs and increases the modelled net market benefits in the cost-benefit analysis. Transgrid currently applies a different method for regulatory investment tests, using a single commercial discount rate and assessing the full upfront capital cost together with a terminal value, without annualising costs. Transgrid is considering whether this method is appropriate for future RIT-T assessments. We note that the development of the ISP is a different task to developing a RIT-T and so it may be appropriate for approaches to differ.

2. Network Development

Transgrid welcomes the Draft 2026 ISP's finding that renewables with storage, gas, and transmission are the least-cost replacement for coal. We support inclusion of key NSW transmission projects on the ODP and urge these must be delivered at pace to ensure reliability and lower costs for consumers.

Sydney Ring South

Transgrid welcomes the inclusion of a 500 kV Sydney Ring South option as a future ISP project in addition to the power flow control option which remains actionable from the 2024 ISP. Transgrid is progressing a RIT-T for this project, assessing a range of options, consistent with AEMO's recommendations in the Draft 2026 ISP. Our assessment will focus on identifying the option that delivers the greatest long-term value for consumers - minimising whole-of-system costs, strengthening reliability and supporting a smooth transition for customers that provides certainty and minimises disruption for rapidly growing communities along this emerging urban corridor.

The forthcoming Sydney Ring South Project Assessment Draft Report (PADR) – to be published by 30 April 2026 will allow us to fulsomely assess and consult with stakeholders to identify the option(s) that delivers the greatest long-term value for NSW consumers.

Preliminary analysis suggests the project will play a key role in unlocking the full benefits of NSW REZs and new firming capacity, lowering consumer energy prices, improving reliability, and reducing curtailment as coal generation retires and demand continues to grow. There may also be considerable benefits in delivering Sydney Ring South in stages over time. We will continue to collaborate with AEMO via Joint Planning to share insights from the PADR development to inform the development of the Final 2026 ISP, including consideration of staged delivery of the infrastructure.

The RIT-T process will facilitate early and meaningful engagement with affected communities across all relevant matters. Insights from our detailed modelling and option analysis will underpin transparent and well-informed discussions with landowners, local councils and other important stakeholders. This engagement will shape a solution that achieves the best possible balance of economic, social, environmental and technical considerations, enabling better community outcomes and strengthening social licence in support of a more efficient and sustainable delivery pathway for the project.

VNI West

Transgrid welcomes AEMO's confirmation in the Draft 2026 ISP that VNI West remains an actionable ISP project and a critical component of the energy transition. We strongly support AEMO's assessment that maintaining momentum on VNI West is in the long-term interests of consumers, given the project's system-wide benefits and its role in enabling timely connection of renewable generation and storage.

In particular, Transgrid considers that the potential for early delivery of VNI West Stage 1 warrants further assessment within the Final ISP. Bringing forward Stage 1 could deliver substantial benefits to consumers by:

- **Accelerating access to the South West REZ:** Earlier delivery would unlock high-quality renewable resources and reduce reliance on aging thermal generation.
- **Reducing the risk of late delivery:** Given the scale and complexity of VNI West, starting earlier provides greater schedule certainty and reduces the likelihood of future congestion, curtailment and project bottlenecks.
- **Enhancing resilience across the NEM:** Earlier interconnection of capacity strengthens system reliability during the transition period as coal exits the market.

We also note the Draft ISP's finding that delaying VNI West beyond its actionable window increases regret across all scenarios. This reinforces the importance of progressing the project without interruption and of considering opportunities to bring forward elements that can deliver early benefits.

Switching station near Wondalga project

Transgrid welcomes AEMO's confirmation in the Draft 2026 ISP that the switching station near Wondalga project is likely to become actionable. We welcome this progression, which underscores the importance of the project to contribute to strengthening network resilience, improve system operability and optimise the sharing of low-cost renewable energy with major load centres in NSW.

These load centres will have greater access to low-cost renewable generation and reduce reliance on higher-cost thermal generation during periods of constraint. As AEMO notes, "the transmission network between Southern New South Wales (SNSW) and Central New South Wales (CNSW) provides access for the hydroelectric generation in the Snowy mountains, renewable generation in Southern NSW, and import from Victoria and South Australia to New South Wales major load centres."¹.

Transgrid will continue to work with AEMO as planning advances to ensure the project is progressed in a way that best supports system needs and consumer outcomes.

¹ Draft 2026 ISP Appendix A5. Network Investments A5.3.4 Switching Station Near Wondalga

QNI Connect

The QNI Connect project was first identified as an actionable project in the 2024 ISP. It responds to several important system needs, including:

- supporting the anticipated increase in renewable generation across Queensland and New South Wales, and sharing of generation between regions
- enabling the efficient integration of REZs by providing alternative network flow paths
- improving supply to consumers.

Collectively, these outcomes enable an efficient build out of renewable generation and firming across the NEM and reduce reliance on high-cost thermal generation, delivering long-term benefits for consumers.

Transgrid acknowledges that the recent policy changes in Queensland may impact the timing of the optimal configuration of QNI Connect. While this may influence delivery timeframes, we consider it prudent to assess the implications of the updated policy before progressing further. This approach ensures that planning decisions remain aligned with the long-term interests of consumers, system efficiency, and prudent investment. Any changes to REZ developments in NSW, including the New England REZ, should also be considered as part of this assessment.

We support the continued joint assessment of QNI Connect and welcome the opportunity to incorporate latest Queensland and New South Wales policy developments into the next stage of project considerations.