

13 February 2026

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Re: ElectraNet Draft 2026 ISP Submission

ElectraNet welcomes the opportunity to respond to the Draft 2026 Integrated System Plan (ISP).

We are concerned about the increasing risk to South Australian energy prices and reliability inherent in the Draft 2026 ISP.

We acknowledge and appreciate AEMO's constructive engagement across workshops, bilateral technical sessions and weekly joint planning touchpoints since publication of the Draft 2026 ISP. These have materially improved the shared understanding of South Australia's system conditions and the assumptions that drive modelling outcomes since publication of the Draft 2026 ISP. This engagement needs to continue as we settle AEMO's inputs for the Final 2026 ISP.

Our submission advances two central themes:

1. South Australia is on the cusp of an unprecedented increase in economic activity and development, underpinned by State and Federal government policy aiming to transform both regional and metro areas.

If this growth is to deliver benefits to South Australia, it is imperative that it be able to connect to the network efficiently and also that it have access to sufficient electricity to meet its needs. Doing so avoids causing increases in wholesale prices to the detriment of other South Australians.

As a key enabler of growth in both load and generation, the Northern Transmission Project (NTx) remains critical to South Australia's economic development, as well as to reliability and security outcomes for the SA energy system as a whole. As such, it is imperative that NTx remain an actionable project to enable ongoing analysis of the optimal timing and characteristics of the project.

2. AEMO conclusions for South Australia, as set out in the Draft 2026 ISP, are materially distorted by modelling inputs. In particular: the network representation, forecast growth in large industrial loads, and the representation of South Australia's Renewable Energy Target (SARET) fundamentally effect AEMO's conclusions.

ElectraNet's analysis, and that of our independent advisers, shows that the Draft 2026 ISP will adversely affect the reliability and affordability of the South Australian electricity system if carried into the Final 2026 ISP.

It is imperative that these inputs are updated to ensure that the ISP can support the National Electricity Objective.

ElectraNet considers that AEMO should take the following practical steps:

1. **Retain NTx as an actionable project** and recognise the delivery efficiencies of continuing early works already underway, including the value of sustained community engagement, land access continuity, and maintaining contractor market interest in a tight supply chain.

2. **Adopt a five-node South Australian network model** in the ISP core runs. Ideally this model would be applied for the entire ISP analysis. However, at the very least it should be applied for South Australian sensitivities and for any assessment that materially affects the actionability of South Australian projects.
3. **Include analysis of the sensitivity of South Australia to interstate renewable and storage delivery** that would constrain net imports to levels consistent with plausible delays in this delivery. This will demonstrate the resilience value of NTx.
4. **Integrate a probabilistic South Australian Large Industrial Load overlay** into scenario runs. Accept input from ElectraNet's connection pipeline under a transparent methodology that avoids double-counting with AEMO's own anticipated loads. Provide spatial detail so network impacts can be reflected.
5. **Align renewable policy constraints with South Australia's legislation** and transparently document how the target is enforced across hours and seasons.

The appendix to this letter sets out the detail of our central themes and the evidence underpinning our recommendations for the Final 2026 ISP.

ElectraNet supports a Final 2026 ISP that is realistic for South Australia, robust for the NEM, and anchored in least-regrets principles. With the amendments above, AEMO's plan could deliver a credible pathway that maintains reliability, unlocks renewable and industrial potential, and protects consumers from avoidable costs and risks.

This submission does not contain confidential information and can be published.

We value the constructive engagement to date and stand ready to continue joint planning, provide detailed network and connections insight, and work with AEMO to translate these recommendations into the Final 2026 ISP.

Yours sincerely



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Appendix

South Australia is on the cusp of an unprecedented increase in economic activity and development driven by Government policy settings

South Australia is entering a period of strong economic growth lead by private and public investment spanning green metals, critical minerals processing, water desalination, data centres, and defence precinct expansion.

A core element of SA Government economic policy is the industrial transformation of South Australia, centred on the State's transition to net zero. The focus of this transformation is to uplift areas across the State, including the Upper Spencer Gulf, to become hubs for the sustainable industries necessary for achieving the state's net-zero and economic transformation goals. The State Government views the convergence of renewable energy resources and the state's abundant mineral resources as an historic opportunity for development of major resource provinces that will also support the production of green iron and steel, consistent with both its net-zero and economic development ambitions. Projects under the umbrella of the State Prosperity Project, such as the Green Steel Transition at Whyalla and the Northern Water desalination plant on the Eyre Peninsula, have received strong industry buy-in and are supported by both the South Australian and Australian Governments. This is expected to drive significant increases in demand as new industrial customers connect and drive significant increases in renewable energy generation to support the increasing demand.

The economic investments being made will require very large quantities of electrical power to operate. The load growth associated is expected to be geographically concentrated in the Upper Spencer Gulf, Braemar and Mid North regions, with significant areas in Greater Adelaide and the South East.

Figure 1, below, sets out the size and location of the anticipated developments across South Australia, highlighting the geographic diversity of the activity. The requirement to facilitate connection of significant new load and provide adequate supply from ideally sited generation will be predicated on significant development of the South Australian transmission network. Also highlighted are the existing and emerging sources of congestion into Adelaide in ElectraNet's modelling of the *Step Change* scenario.

This investment will be in broad jumps as major facilities reach energisation. Adopting a credible, forward-looking view of these loads in the ISP is necessary to determine the transmission timing and scale.

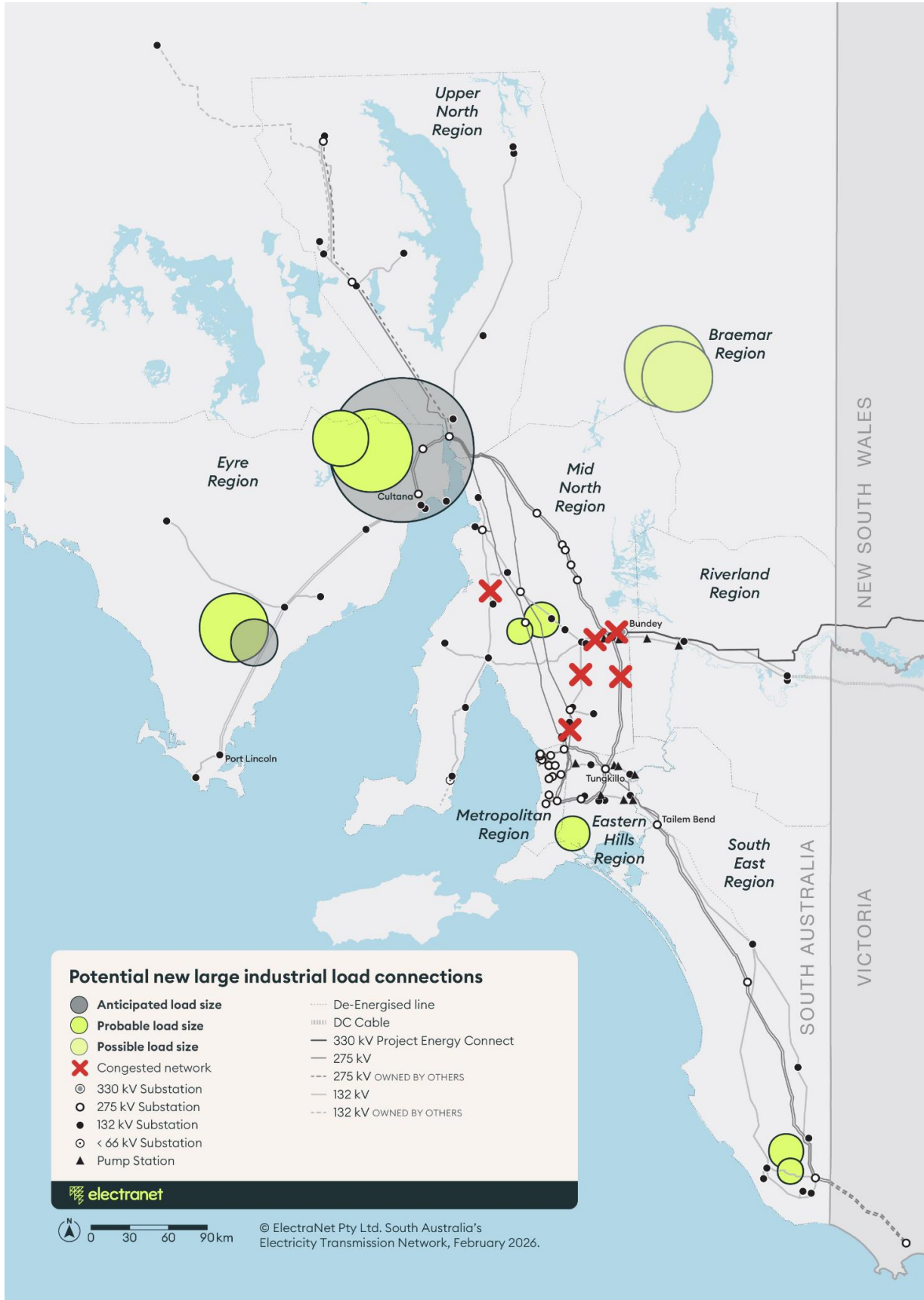


Figure 1: Current New Load Connection Interest in the South Australian Transmission Network and prominent mid-north congestion in the *Step Change* scenario.

The Mid-North is increasingly supplying the state's energy needs but will be limited without network expansion

The geographic distribution of energy supply in South Australia is varied. Dispatchable capacity is focused on the western suburbs of Adelaide around Torrens Island and the Lefevre Peninsula. Given the age of these assets, their departure from the market is imminent. As they retire, dispatchable capacity will shift out of Greater Adelaide, most recently with the retirement of the Torrens Island A steam turbines in 2022, and further with the anticipated retirements of;

- The Osborne CCGT by 2027,
- Torrens Island B steam turbines by 2028, and
- Pelican Point CCGT by 2037¹.

The retiring capacity will need to be replaced and the efficient place for this to happen is the Mid North region, where the renewable energy resource is among the best in the country. Wind Generators in South Australia's Mid North have demonstrated that very high-capacity factors are achievable, particularly relative to the rest of the National Electricity Market (NEM). Wind generation supplies 49% of the states total and the mid-north contributes around 73% of this. The State's development pathway naturally builds around connecting these high-quality resources to the principal growing demand centres in South Australia, namely: Greater Adelaide, the Upper Spencer Gulf, and the Mid-North.

The existing mid-north transmission corridor was designed to transmit coal power into Adelaide. Coal generation peaked at around 780 MW². Market led renewable and storage investments have vastly exceeded this capacity at 1,850 MW with over 860 MW more wind anticipated to be connected in the mid-north along with 2,310 MW of BESS³, or 65% of the state's capacity. This information is available via AEMO's published generator information.

To enable the optimal mix of renewable generation and storage to be developed to meet South Australia's needs as dispatchable capacity retires and industrial activity grows it is imperative that the transmission network be extended and strengthened to enable access to the world class resources in the northern part of the Mid North region, and outside of the high value farming lands of the mid-north.

NTx is essential to link economic growth with efficient supply

NTx is the least regrets way to relieve network congestion between the Mid North and Adelaide. The project will both enable access to the Upper Spencer Gulf and sustain South Australia's role as both a net renewable producer and a competitive host for electrified industry. The identified option set indicates a scalable backbone with ratings of at least 2,000MW across the two stages of NTx, South and North, providing capacity that can be matched to credible load growth via a staged approach to the build.

¹ AEMO Retirements.

² Northern (2*270 MW) and Playford (240 MW) Power Stations

³ AEMO, Generator Information

ElectraNet will be publishing the Project Assessment Draft Report by July 2026 outlining the costs and benefits of the various options that meet the identified need. ElectraNet recognises the level of uncertainty around electrical growth. We seek not to go faster than load requires while also making decisions that are lowest long run costs.

Congestion relief where it matters

As highlighted in Figure 1 the Davenport–Robertstown–Adelaide experiences congestion across the corridor. Across the scenarios, congestion patterns differ, with *Accelerated Transition* forecasting congestion into Adelaide as well as the Upper Spencer Gulf. Below and in Figure 2 we highlight the congestion patterns that prevail in ElectraNet’s modelling of the *Step Change* scenario.

ElectraNet’s modelling indicates that a tipping point will be reached around 2030 whereby congestion in the mid–north will increase dramatically into Adelaide. The congestion will cause curtailment, which is not costless: it reduces average capacity factors, raises the cost of abatement, and forces more onsite or metro–proximate storage than is efficient. Alternatively, and what is observed to be happening, storages will locate in the mid–north and will also face access restrictions serving Adelaide at times of high demand. By strengthening the Bunday–Adelaide path and providing a complementary Bunday–Cultana/Whyalla link, NTx lifts utilisation of high–quality Mid North wind, and will increase access to Adelaide for both renewable and dispatchable capacity. It also diversifies transmission corridors, which is increasingly important for climate resilience and natural disaster risk management.

Figure 2 illustrates the ElectraNet forecast of increasing congestion in the mid–north. Each chart highlights for a section of transmission, the hours that power transmission has been and will be restricted into Adelaide. For an accurate assessment of the South Australian network, it is imperative that this congestion be incorporated into AEMO’s model.

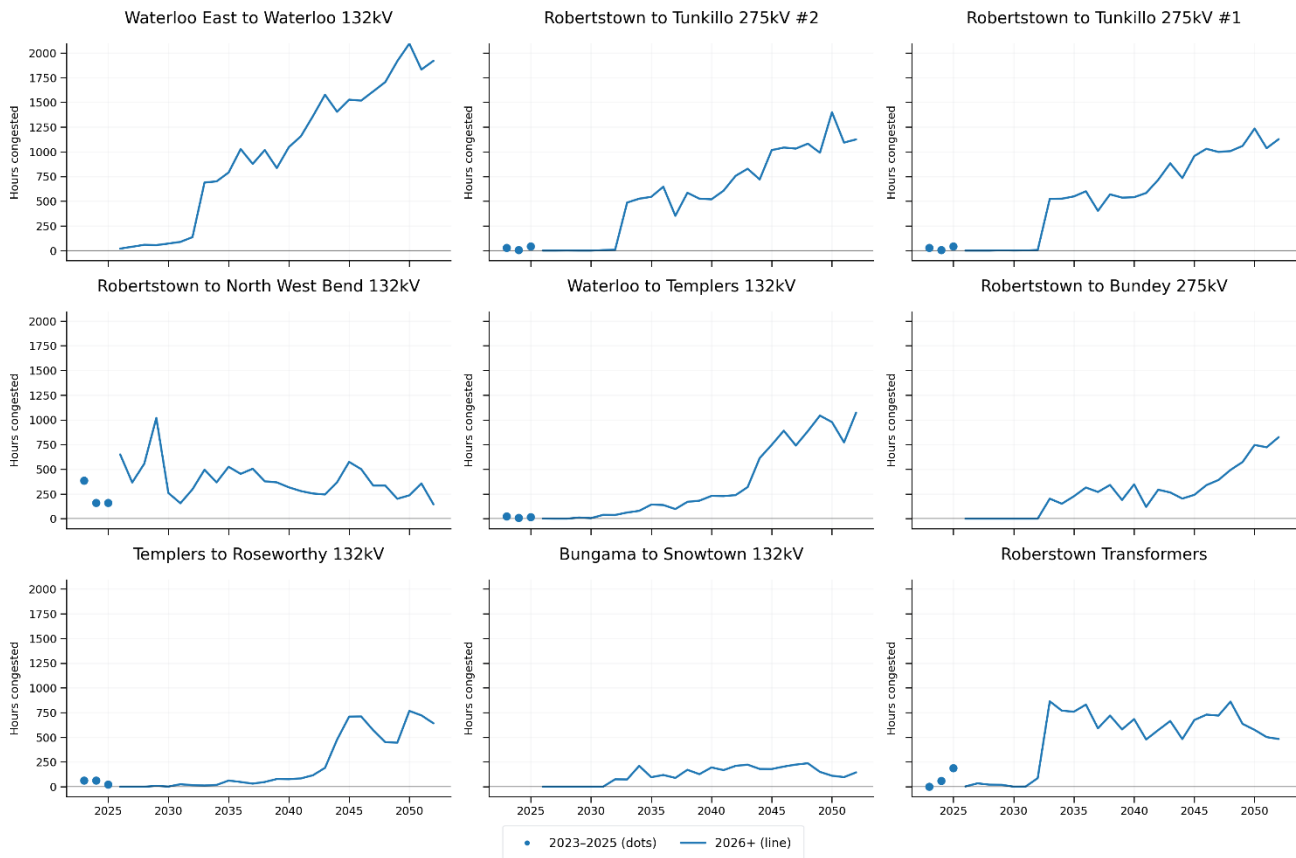


Figure 2: Historical and forecast mid-north congestion in the *Step Change* scenario.

Efficient access for industrial load growth

An actionable NTx creates the certainty needed for ElectraNet to determine the appropriate backbone on which major loads, steel, desalination, minerals processing and data centres, can be supplied at lowest long run system cost. In practice, these locational changes in power flows call for North and South reinforcements that balance the opportunity of economic growth while minimising the risk of over investment.

Export capability and interregional value

NTx is complementary to interconnector capability. By moving surplus Mid North renewable generation to Project EnergyConnect and Heywood when local demand is met, it reduces curtailment and increases net market benefits. In turn, during periods of low local renewable output, strengthened paths support reliable supply to Adelaide without overreliance on interstate imports into a congested Adelaide interface.

Resilience

As we develop the detailed options for delivering NTx, we are exploring alternative paths into Adelaide to account for identified risks associated with the resilience of critical infrastructure in the long-term. Options, including paths other than the Candidate Development Option (CDO) increase network resilience to factors such as bushfire and extreme wind events. This increased resilience has a definable value and as such must be accounted for in assessments of options to deliver reliable and secure energy supply to consumers. ElectraNet’s analysis of this value and its inclusion for the development will be presented in the NTx Project Assessment Draft Report.

Three Key Elements Required to Model South Australia Properly

For the ISP process to account for the specific nature of the South Australian electricity system, produce accurate modelling results and draw valid conclusions, there are three key areas requiring uplift:

1. The network must be represented using a five node model
2. Demand forecasts must reflect the likely growth referred to above
3. The South Australian Renewable Electricity Target must be updated

Network Representation

The Draft 2026 ISP collapses the South Australian transmission network into three nodes. This change was intended to improve the network representation and AEMO has found that better spatial representation has revealed a more accurate prediction of congestion and hence efficient projects to alleviate congestion.⁴

While abstraction is necessary for a NEM-wide model, the present level of spatial aggregation masks the constraints that would shape South Australian outcomes and, in doing so, understates the benefits of relieving those constraints. The most material issue is the representation of flows between the Mid North and the Adelaide load centre, including the way in which Project Energy Connect (PEC), Murraylink and the Riverland Renewable Energy Zone are reflected in the constraint equations. The current formulation, which was modified from the 2024 ISP representation: overstates transfer capability into Greater Adelaide; underrepresents the interaction of parallel 132 kV and 275 kV paths, and, when combined with generous assumptions about battery placements in metropolitan Adelaide, allows the model to deliver outcomes that while theoretically possible may not be lowest long run cost. Further, and as discussed above, recent generation investment trends shifting from the Adelaide region to the mid-north do not align with the Draft 2026 ISP forecast.

A realistic network representation should, at minimum, adopt a five-node structure for the South Australian network. This would distinguish Greater Adelaide, the Mid North/Bundey-Robertstown spine, the Davenport load centre, the Southeast, and the Eyre Peninsula. ElectraNet will continue to work with AEMO in formulating enhanced network representation for the Final 2026 ISP.

Demand Forecasting

The Draft 2026 ISP's treatment of prospective large industrial loads in South Australia remains too conservative for planning purposes. The *Slow Growth* scenario reflects a net loss of load within South Australia. The South Australian and Federal governments are advanced in plans to ensure that the future for South Australia is one of economic growth, associated with increasing electricity demand. For this reason, the Slower Growth scenario should not be a feature in the assessment of the current nor future ISPs.

The State's load growth is not an abstract scenario risk; it is being driven by visible, policy-aligned projects across multiple sectors that have already begun detailed engagement on transmission connections. Interest in connecting to the ElectraNet network is at an historically

⁴ Draft 2026 ISP Appendix A6 Cost-Benefit analysis, p84, AEMO

unprecedented high by both count and size. Connections activity includes more than 75 individual projects across 41 customers amounting to multiples of current SA average demand in new connections by 2035. Across these projects there are range of industries, locations, reliability requirements and flexibility assumptions.

For example, loads such as hydrogen production are assumed to follow renewable generation profiles, as a key input to the industry, whereas data centre requirements are strict and largely indifferent to generation through time. This diversity of characteristics must be accounted for in transmission planning and demand forecasting activities, such that needs across the network can be appropriately identified and catered for.

It is reasonable to expect that not all proposals will proceed; nevertheless, a prudent plan must reflect the asymmetry of risk for South Australia. Even a handful of large connections can materially alter maximum demand and power flows. A planning forecast that excludes credible, policy-aligned prospects until they are effectively committed will create an unnecessary lag in the delivery of transmission and higher whole-of-system costs. While AEMO's 2025 ESOO methodology is a step forward, it remains too conservative for planning purposes when assessed against the breadth and maturity of the current pipeline.

ElectraNet has adopted a probabilistic approach that starts with NEM-consistent scenario trajectories and then overlays a South Australia-specific pipeline of large industrial load prospects, using transparent criteria related to policy alignment, connection progress, siting maturity, technology readiness and financial strength.⁵ This approach shows a plausible pathway in which statewide energy consumption increases from around 12 TWh in 2025 to the order of 30 TWh by 2040 under central growth conditions, around 40% higher than AEMO's *Step Change* scenario. This results in a corresponding uplift in peak demand that requires transmission capacity and firming to be aligned with load development timeframes. A realistic demand outlook, grounded in the observed pipeline, is therefore integral to assessing transmission augmentation needs in SA, including NTx. Without it, modelling risks selecting inefficient solutions that cannot, in practice, service the quantum, location and variability of emerging loads.

South Australian Renewable Electricity Target

South Australia's enduring legislated target of net 100 per cent renewable electricity by 2027 is a key boundary condition for planning. Modelled outcomes must satisfy this constraint while preserving reliability and security; they should not rely on a level of imports that is inconsistent with plausible interstate policy delivery or achievable timelines for generation and storage deployment outside South Australia. Early joint planning exchanges acknowledged Draft outcomes that appear to fall short of the State's target, and revisions were noted as underway. The Final 2026 ISP should therefore enforce the State's net renewable requirement and should explicitly test sensitivities in which neighbouring jurisdictions deliver more slowly or at smaller scale than assumed via reduced import availability.

In addition, SA Government's Firm Energy Reliability Mechanism policy is seeking to maintain a minimum level of long-duration dispatchable capacity in South Australia. While the successful

⁵ ElectraNet, TAPR, 2025

projects are not yet known, various assumptions in the Input Assumptions Scenario Report appear to be driving the development of shorter-duration capacity sources at particular locations. These assumptions should be reviewed and tested via sensitivities to quantify the materiality of these assumptions. These include the assumption that BESS connections within the Greater Adelaide region are uncapped and cheaper than all other locations in South Australia.

Risks to South Australian Electricity Supply

The current modelling results and conclusions drawn from these in the Draft 2026 ISP exposes South Australian consumers and industry to a set of avoidable risks over this decade and next. In the absence of the above changes being adopted for the Final 2026 ISP, South Australia will be unduly exposed to a series of material risks.

Reliance on interjurisdictional projects

The Draft 2026 ISP's outcomes for South Australia are highly contingent on timely delivery of very large renewable and storage programs outside the State and on sustained net imports into South Australia during periods of low local renewable output. The Draft assumes South Australia absorbs around 5 TWh of surplus energy from Victoria and Tasmania, equivalent to about 40% of current South Australian demand. A level of import reliance can be prudent as part of a diversified portfolio, but it is inappropriate as a structural substitute for addressing binding constraints between the Mid North and Adelaide and for building transmission that can move energy to and from the Upper Spencer Gulf. If policy delivery elsewhere is delayed or falls short, South Australia will face higher wholesale prices, curtailment of local renewables, and tighter reliability margins unless local network capability is strengthened.

Industrial and regional development

The State's green reindustrialisation depends on credible, timely access to low-cost renewable energy at scale. If transmission capacity is not in place early, connection timeframes will be missed or narrowed, proponents will carry higher energy supply risk, and investment could be deferred or cancelled. Conversely, strengthening the Bunday-Adelaide corridor and the Bunday-Cultana/Whyalla link will support low-cost renewables for Adelaide and Upper Spencer Gulf industry while maintaining export capability. A network that connects the Mid North's wind resources to Adelaide and Whyalla and maintains strong export capability will lower delivered energy costs for industry, unlock investment, and increase the likelihood that South Australia realises the economic and employment potential of this transition.

Community, social licence and deliverability

A key component of the early works for NTx has focused on meaningful and personal engagement with community and stakeholders including landholders, Traditional Owners, councils and regional organisations. Early engagement is developing a foundation for timely approvals and construction. ElectraNet's program is grounded in clear principles of respectful engagement, protecting land and place, delivering shared benefits, transparent decision-making and value for money, that reflect the expectations of South Australian communities. The current program has effort directed across stakeholder engagement, land and easements, environmental impact assessment, cultural heritage, preliminary engineering, geographic information systems, and initial early contractor engagement. The project is continually building community trust in the process. Maintaining

actionability sustains that shared momentum and helps keep approvals and delivery on track. Rescinding would erode that momentum and make eventual delivery slower and more costly when the need reasserts itself, as it will under credible demand and renewable trajectories.

Treatment of Actionability for NTx

The ISP's ability to adapt as new information emerges is critical to ensuring it remains aligned with prevailing conditions. That said, additional arrangements are required to manage cases where the status of actionable ISP projects changes while those projects are already advancing through the RIT-T process at the time of an ISP update.

Via the ISP development process, including defining inputs and assumptions, and definition of the Optimal Development Path, AEMO has undertaken a suite of sensitivity testing. As such some of the potential uncertainties surrounding the chosen path are understood, such as the impact of slower coal retirement, but there are required inputs and assumptions to the defined outcome that have not been assessed for their impact. With AEMO having flexibility over how and how many sensitivities to test, with a focus on testing inputs common across all scenarios, and the consideration of both sides of transmission investment risk, there is scope to highlight risks to core assumptions. Sensitivity analysis can be used to determine the circumstances under which a material change will amend the status of a project ahead of concluding the RIT-Ts and early works. Also, under the Cost Benefit Analysis guidelines, AEMO must use its judgement to define sensitivities to guide the determination of the ODP, keeping projects on the ODP when sensitivities support this outcome.⁶ Such projects remain under the remit of AEMO and are required to pass the feedback loop before substantial costs are committed to.

In the face of uncertainty the sensitivity of the solution to shifting inputs, assumptions, introducing material uncertainty, a change in actionable status of a project should be withheld until that uncertainty can be fully understood. In the case of NTx, where a range of material inputs affect the modelling outcomes and conclusions drawn, discussed above, the actionable status should remain. AEMO can retain this status whilst acknowledging further work is required to fully understand the needs for and benefits of NTx under varying conditions. Such an approach could include stages for the major elements of the project lifecycle⁷, and utilising the RIT-T process, alongside the ISP feedback loop, to fully consider the detailed economic benefits of the project. This approach would manage the risk to South Australian energy consumers that is inherent in the Draft 2026 ISP.

Recommendations for the Final 2026 ISP

For the Final 2026 ISP to account for the circumstances of South Australia, the trends in economic activity and requirements of power system development, ElectraNet proposes the following refinements. Incorporating these changes will ensure the Final 2026 ISP provides a robust, least-regrets pathway for South Australia and the NEM.

⁶ AER CBA Guidelines, 5.22.5

⁷ NER 5.22.6(a)(6)(vi)

Treatment of actionability

Retain NTx as an actionable and staged project in the Final 2026 ISP, in an approach applied in previous ISPs for both Humelink and VNI West. The initial stage early works program, should remain actionable until conclusion of the RIT-T or until AEMO has tested the robustness of actionability and can describe the material changes in circumstances that would amend the projects inclusion in the Optimal Development Path. This recognises the persistent identified need, the structural nature of the Mid North-Adelaide constraint, industrial demand trajectories, and the progress made through early works and community engagement. Given long delivery lead times and the asymmetry of risk for South Australia, pausing actionability would be a higher cost approach for consumers.

Amendments to the network representation

AEMO should adopt a five-node South Australian network representation – this being the most effective way to represent the cut-set that limits flows from the mid-north into Adelaide. Adopting this approach would assist in determining the limitations on the cut-set via review of the network constraints that reflect actual Mid North-Adelaide transfer limits. The formulation should be published so that stakeholders can test and replicate results.

Demand forecasting approach

Demand forecasts should incorporate a probabilistic treatment of large industrial load prospects for South Australia across scenarios, drawing on jurisdiction-specific connection pipelines, policy alignment and maturity criteria. Provide a central case that includes credible, policy-aligned LILs at realistic probabilities, with sensitivity bands that reflect upside risk to 2035 and beyond. Coordinate with ElectraNet and SA Power Networks to ensure that distribution-level electrification is appropriately reflected in spatial forecasts.

Policy representation and sensitivities

Accurately model South Australia's legislated net 100 per cent renewable requirement to ensure that the ISP modelling results reflect the very high likelihood of achieving this target in 2027 and maintaining it into the future. Additionally, include explicit sensitivities where interstate renewable and storage project delivery falls short of assumptions, both in timing and scale, and where coal withdrawal and dispatchability assumptions vary from the central view. There should be specific consideration of a sensitivity that tests materially reduced import availability into South Australia to quantify the resilience benefits of NTx under adverse interregional conditions.

Transparency and collaboration

Continue and deepen joint planning iterations between AEMO and ElectraNet through to the Final 2026 ISP. Where AEMO proposes to rely on specific locational assumptions for storage or industrial loads that materially affect South Australian outcomes, publish those assumptions and the evidence base. Treat the Electricity Network Options Report as a living document that can be incrementally refined as joint planning progresses and updated constraint formulations are tested.