

13 February 2026

Daniel Westerman, CEO
Australian Energy Market Operator (AEMO)
Via email: ISP@aemo.com.au

RE: Draft 2026 Integrated System Plan (ISP)

Dear Sir/Madam,

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

Squadron Energy (SQE) is Australia's leading renewable energy company that develops, operates and owns renewable energy assets in Australia. We currently have 2 gigawatts (GW) of renewable energy generation in operation or under construction and our ambition is to be the single biggest contributor to helping Australia meet its renewable energy and decarbonisation targets. Our development pipeline includes projects at varying stages across wind, solar and firming technologies, including batteries and gas peaking plants with dual fuel capability.

To address forecast gas shortfalls and energy security risks in Australia's east coast gas market, SQE has repurposed the former Port Kembla coal terminal into a liquefied natural gas regassification facility, the Port Kembla Energy Terminal (PKET). PKET is constructed, approved and operationally capable with all onshore infrastructure installed, supported by a floating storage and regasification unit (FSRU) that we have secured under a long-term charter.

In this submission we would like to raise several general points for consideration in the development of the final ISP:

- The ISP can be enhanced by reflecting more clearly the key constraints on the buildout rather than an ideal optimisation
- Opportunities for grid enhancements should be explored beyond existing ISP and REZ programs
- AEMO's enhanced consideration of the changing nature of gas use and Implications for the electricity system is welcome

The ISP can be enhanced to better reflect the nature and reality of the challenges facing the transition

We welcome the acknowledgement in the Draft 2026 ISP to make clear that the challenges to a timely transition are less about identifying a least cost options and are more about delivery. While we recognise that the underlying premise of the ISP is to optimise based on least cost options, we are cognisant that this is not always an accurate reflection of the operational or practical realities of investing in and delivering renewable infrastructure.

To this end, we are supportive of the sensitivity analysis undertaken to test the robustness of candidate development pathways (CDPs) against uncertainty or understand the impact of potentially significant changes. The focus of these sensitivities was on delays to the optimal delivery path (ODP), the cadence of coal retirements, and alternative gas development projections. We consider that AEMO's analysis could be further enhanced by several other considerations, for example, how outcomes may change in the case of changes to costs, delivery constraints or financing limitations.

For example, in the example of onshore wind capital costs we consider it is beneficial for AEMO to revise assumptions and consider alternative cost trajectories as a sensitivity. While the CSIRO GenCost framework assumes that onshore wind capital costs (capex) will gradually fall back toward a more typical trajectory by 2035, current market conditions suggest that costs are more likely to remain broadly flat over this period. The factors that have driven wind capex higher in recent years include sustained increases in land acquisition costs, higher grid connection and development expenses, constraints in construction labour, and persistent installation cost inflation. These pressures show no clear signs of easing. GenCost itself notes that after 2035, global equipment cost reductions are largely offset by rising local installation and land costs, which results in only modest projected declines. If these offsetting forces are already expected to limit cost reductions after 2035, it is reasonable to expect them to continue to suppress any meaningful declines before 2035 as well. In practical terms, the drivers affecting Australian wind development appear structural rather than temporary, which supports the assumption that real capital costs will remain flat rather than return to a declining trend over the next decade. Adjusting capital costs for onshore wind to reflect a potentially higher structural cost will have important implications for how onshore wind is treated as a proportion of the overall generation mix. It is therefore critical that offshore wind costs and value to the system as a whole is effectively captured in CDPs and the ODP.

Beyond modelling additional sensitivities to stress test CDPs, there is a need for a framework to better bridge the gaps between the modelled optimisations of the ISP and the operational and practical reality of the delivering projects in the NEM. Without this genuine delivery framework, supported by accountability, coordination across jurisdictions and a shared commitment to removing barriers to investment, the outcomes modelled in the ISP remain a plan for a plan.

Opportunities for grid enhancements should be explored beyond existing ISP and REZ programs

The major risk to delivery of the ODP and to the energy transition is likely to be delays to the delivery of new transmission capacity given both engineering and social licence challenges. It is therefore important that AEMO and jurisdictional governments consider alternative forms of infrastructure to those identified under the ODP, notably the potential for smaller augmentations that enable greater use/unlock grid capacity and relatedly the role of energy storage as a form of virtual transmission. An approach that looks at further opportunities for grid enhancement should be explored to safeguard against delays in REZ programs.

Sydney Ring South timing should be brought forward

We urge AEMO to bring forward the timing of 2037-38 for Sydney Ring South 500 kV option for the following reasons:

- **NSW 500 kV Backbone:** This project is critical to the state's 500 kV "backbone." It is essential for the full utilisation of upstream infrastructure and provides headroom for further generation hosting.
- **Managing Uncertainty:** The project offers greater resilience against delivery uncertainties compared to several currently actionable projects:
 - potentially reduced complexity given it does not require direct co-commitment with generation developers.
 - while load growth magnitude remains uncertain, demand is highly likely to be concentrated within the Sydney-Newcastle-Wollongong corridor.

- **Early commencement is essential:** Given its location, the Sydney Ring South will also require detailed and considered planning and development. We consider it prudent to commence work on this project sooner rather than later in light of previous and likely future delays to existing transmission projects.

Central-West Orana REZ (N3) expansion options

SQE welcomes the options to expand the CWO REZ. The committed transmission augmentation between Merotherie and Barigan Creek comprises two 500 kV double-circuit lines using Quad Orange conductor. The N-1 transfer capability between Merotherie 500 kV and Barigan Creek 500 kV substations is 6,453 MVA. The committed Merotherie 500 kV substation includes four 1,500 MVA 330/500 kV transformers. Accordingly, the N-1 transformer capacity is 4,500 MVA, which aligns with the existing effective export capability of the CWO REZ.

SQE's view is that the Merotherie transformer capacity is the binding bottleneck for CWO REZ transfer capability, rather than the Merotherie–Barigan Creek transmission line. Adding one additional 1,500 MVA transformer at the existing Merotherie 500 kV substation would increase the current transmission bottleneck by ~1,500 MVA. The existing transmission line between Elong Elong and Merotherie is 2 x 500 kV DCST (operated at 330 kV) Quad Orange to Merotherie within the CWO REZ design. At this voltage, the corridor already provides an N-1 transfer capacity of 4259 MVA, and Elong Elong offers substantial hosting capacity even without an upgrade.

Therefore, this option — adding one additional 1,500 MVA transformer — avoids the need to upgrade the Elong Elong hub to 500 kV or construct a new switching station at Merotherie with three 1,500 MVA transformers, making it a significantly more cost- and schedule-efficient solution. In the event that the CWO REZ expansion proceeds by upgrading the existing Elong Elong hub to a 500 kV hub, SQE strongly recommends installing four 1,500 MVA transformers rather than three.

With only three 1,500 MVA transformers, the N-1 transformer capacity would be limited to 3,000 MVA. This is lower than the existing 330 kV network transfer capability at the Elong Elong hub (~4,259 MVA as calculated above) and would therefore introduce a new bottleneck in the 330 kV transmission pathway at the Elong Elong hub for projects connecting to the 330 kV bus.

The South-West REZ (N5) continues to be underestimated

We believe the potential of onshore wind in the NSW South-West REZ continues to be underestimated in the ISP assumptions. First, we acknowledge that the assumed capacity factors have been updated since the previous ISP to 37%. However, our extensive wind monitoring and yield assessments throughout the region result in capacity factors over 40%.

Second, civil construction costs and timelines are expected to be much lower in the South-West REZ. The flat terrain reduces earthworks volumes and delivery complexity. This results in a material LCOE advantage and should be reflected in the assumed build costs.

Third, Project EnergyConnect is under-utilised relative to the proposed downstream network of VNI West and Humelink. SIPS or other grid enhancements are low cost and low disturbance options to increase transfer capacity from 800 MW up to 1600 MW. We urge the further consideration of these options to fulfil

the potential of the South-West REZ. (Refer to submissions from Squadron and others to the Draft 2025 Electricity Network Options Report for further details).

The changing nature of gas use in the energy system necessitates a focus on gas infrastructure options that provide the flexibility and reserve capacity needed for GPG

We welcome the ISP enhanced consideration of gas availability and its influence on electricity investment needs, and risks, when attempting to assess optimal power system investment needs. It has the potential to provide important insights into the availability and deliverability of gas fuel for GPG as well as transport and storage constraints in the East Coast Gas Market (ECGM). This is particularly important as the demand-supply balance in the ECGM continues to tighten, and the market is more exposed to reliability and supply adequacy risks, notably in short periods of high demand (be it direct gas use or GPG).

Levels of future gas use vary widely dependant on the transition pathway taken by the electricity market (e.g. rate of closure of coal generators and rate of build of renewables). It is important to recognise that gas will underpin a greater volume of GPG generation in the near term to support the renewables transition with a decreasing share over time. Put differently, we will see a significant increase in daily gas capacity required - and a concurrent increase in idle capacity during non-peak days - with an overall declining gas requirement with the passage of time. This will place additional strain particularly on the gas transmission system to deliver affordable gas to where it is needed, and therefore has important implications for how AEMO and governments should think about and plan for gas infrastructure options to support the transition of the electricity system.

The changing nature of gas use in the energy system necessitates a focus on infrastructure options that provide the flexibility and reserve capacity that the market needs to manage peak demand - the ability to ramp up as required and then withdraw when the need is no longer present.

For example, LNG regassification terminals, such as the PKET, offer this flexibility and mean that domestic supply is not solely reliant on limited interstate pipeline capacity or domestic production. Its Floating Storage and Regasification Unit (FSRU)-based model allows for scalable supply adjustments, unlike pipeline projects that lock in infrastructure and consumer costs for decades and require commensurate investment in long term gas production infrastructure. If market conditions shift, PKET's floating infrastructure can be ramped to meet demand or redeployed/repurposed, reducing the risk of stranded assets or ongoing perverse impacts on market outcomes.

By contrast, pipeline expansions lock in infrastructure and consumer costs for decades and require commensurate long term production investment, increasing the risk of inefficient outcomes. This is not to suggest that pipeline capacity should not be expanded where there is a clear and durable need, supported by committed upstream supply and a demonstrated long-term consumer benefit. However, in circumstances where demand is increasingly peaky, supply is uncertain, and flexibility is at a premium, solutions that lock in irreversible capital costs warrant a higher threshold of scrutiny.

Equally, like storage infrastructure, PKET is operationally well suited to provide the types of services capable of meeting peak daily and seasonal gas demand requirements (shape) of gas-fired generation close to demand centres. In this context, we encourage AEMO and governments to consider more fully the importance of and embedded value of flexible capacity and time-limited gas supply arrangements - particularly considering their ability to minimise costs faced by customers across the life of a gas infrastructure option.

We look forward to the opportunity to continue to engage in work to support the rapid uptake of renewable generation in NSW. If you would like to discuss this submission, please contact Rupert Doney – Director, Policy at rdoney@squadronenergy.com

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Walter Schutte', is written over a horizontal line.

Walter Schutte

EGM Customer and Energy Markets

For and behalf of Squadron Renewables Pty Ltd (ACN 127 205 645)