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Australian Energy Market Operator (AEMO)

Via email: ***ISP@aemo.com.au***

Draft 2026 Integrated System Plan

Alinta Energy welcomes the opportunity to provide feedback on the Draft 2026 Integrated System Plan (ISP).

Key points:

- **The ISP should include a constrained sensitivity to highlight where additional focus may be required.**
- **The ISP should include further detail on how price outcomes are considered in developing the ODP.**
- **Non-REZ transmission connection costs appear overly optimistic.**
- **The ISP may overemphasise the need for development within REZ.**
- **Development projections for grid-scale wind and solar appear optimistic.**
- **We recommend enhanced transparency and further refinement of demand-side and CER projections.**
- **While the Draft ISP highlights a role for gas as a back-up to renewables, we question the adequacy of incentives for gas peaker investment.**
- **The value and investment needed in pumped hydro should be highlighted, and the Oven Mountain Pumped Hydro project included in AEMO's modelling.**

The ISP should include a constrained sensitivity to highlight where additional focus may be required.

Defined by AEMO as the "roadmap for the NEM's transition"[1], the ISP "outlines an 'optimal development path' (ODP) for generation, storage and network investments to meet both consumer needs and government policies, at least cost, for at least the next 20 years"[2].

[1] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.5.
[2] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.5.

Having adopted the Step Change scenario in this iteration, the Draft 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"[3].

AEMO CEO Daniel Westerman has stated, "The ISP is not a tool to evaluate government policy. It's a tool to say what needs to be delivered for that government policy to succeed"[4]. As such, the ISP serves an important role as the blueprint for this delivery mandate.

As a major energy investor in the Australian market, Alinta Energy strongly supports an orderly transition. While we endorse the Draft ISP's stated pathway and its consistency with prior ISPs, system planners and governments must acknowledge the substantial challenges in delivering this outcome.

We recommend that the ISP should also play an important role in clearly identifying where attention is required, through contrasting the optimal development path with scenarios that reflect likely outcomes based on the status quo and does not assume development will occur to meet emissions targets.

Without this, there is a risk that the ODP is interpreted as the most probable trajectory rather than an aspirational pathway contingent on overcoming material delivery challenges. We recommend that a sensitivity grounded in current investment conditions, characterised by cost pressures, social-licence constraints, and realistic delays would make clear the gaps between today's environment and the policy-aligned future so that they can be targeted. This would strengthen the ISP's value as both a blueprint for the optimal pathway and a practical risk-management tool, signalling where targeted policy, regulatory focus or investment support may be required.

As noted in the Draft ISP, "AEMO is aware that the rate of infrastructure build in the ODP is faster through to 2030 than has been achieved to date". Industry continues to experience cost escalations, regulatory and approval delays, and uncertain returns, despite an underlying appetite to invest in the transition. This underscores the inherent benefit of including analysis that reflects historical costs, delays, macro trends and discontinuing policies or subsidies as a counterbalance to the ODP. By doing this, the ISP would provide a stronger signal to the market of what gaps exist and where to invest.

We propose the development of a constrained delivery scenario against the ODP across all relevant inputs, assumptions and scenarios. This could be incorporated as an addendum to the Final ISP and would be most beneficial if presented as a side-by-side comparison to the Step Change scenario.

The ISP should include further detail on how price outcomes are considered in developing the ODP.

The ISP provides a least-cost path for consumers, and considers the lower total investment cost modelled per the ODP to be correlated with lower energy prices, all else being equal in an efficient market. AEMO qualifies this with the statement that this is not necessarily an indication of future retail electricity prices, as there are many other factors that ultimately determine those prices".

[3] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.5.
[4] 'Eraring extension exposes Bowen's credibility gap on renewables', Aidan Morrison – AFR, 20 Jan 2026.

The 2025 *Inputs, Assumptions and Scenarios Report* (IASR)[5] includes an overview of retail price forecasts across scenarios using the Retail Price Index as the benchmark for assessment. The 2025 IASR Report forms the view that prices will gradually increase in the 2030s as coal is replaced by renewables and storage, with modest increases seen in the 2040s driven by network investment cost and gas-powered generation (GPG). We note that between the 2024 ISP and the 2026 Draft ISP, the NEM residential retail price forecasts have noticeable variation[6].

We consider AEMO should publish further detail behind the 'bottom-up projections' that inform the retail price inputs, including the 'blend' of ASX Futures, 2024 ISP *Step Change* scenario inputs and wholesale price trends[7] relied upon. In doing so, this would address a gap evidenced in the Draft ISP of how the derivatives market will play a role both in supporting investment, and in contributing to the wholesale component of prices. This is echoed by the NEM Review's Final Report, which underscores the importance of the derivatives market in playing a continued part in supporting investment in the NEM[8].

This would enable both market participants and policy makers to have a more informed appreciation of how the derivatives market may be impacted by the forecast capacity mix. Such an understanding is a key component of ensuring the financial markets that underpin investment can adapt to the changing energy mix and avoid the need for subsidies to address gaps the market should fill.

Non-REZ transmission connection costs appear overly optimistic.

Whilst we recognise that higher transmission capital costs are a driver of the ODP's $128 billion revision upwards (compared to $122 billion in the 2024 ISP), we consider the non-REZ connection costs outlined in the IASR[9] may remain overly optimistic.

Our evaluation of the non-REZ connection costs suggests they are more reflective of simple connections to existing bays within a substation. This type of connection is not commonly available to current projects as most substations are already at or near capacity, meaning this type of connection is rarely available. Therefore, the IASR cost estimates reflect a lower benchmark than is typically observed and do not reflect the more complex and higher-cost connections typically required for current and future developments.

In practice, non-REZ projects face a much wider range of transmission connection pathways than the IASR assumes. These include creating more bays or a completely new substation. These examples represent the majority of real-world project experiences today and are materially more expensive than an 'existing bay' connection.

Underestimating non-REZ transmission connection costs has material implications for the ISP. It risks understating the true cost of developing projects outside designated REZs, which in turn may distort AEMO's assessment of the relative competitiveness of non-REZ locations. This can inadvertently bias the ODP toward REZ-based projects, even where non-REZ developments could provide valuable system diversity, firming benefits, or proximity to load.

We propose that AEMO further evaluate the underlying connection costs data and

[5] '2025 Inputs and Assumptions Workbook', AEMO, 28 August 2025, Elec. Retail Price Indices.
[6] '2025 Inputs, Assumptions, and Scenarios Report, AEMO, 28 August 2025, p.116.
[7] '2025 Inputs, Assumptions, and Scenarios Report, AEMO, 28 August 2025, p.115.
[8] 'National Electricity Market wholesale market settings review – Final Report', Tim Nelson, Paula Conboy, Ava Hancock, Phil Hirschhorn, December 2025, p.10.
[9] '2025 Inputs and Assumptions Workbook', AEMO, 28 August 2025, Connection cost forecasts.

incorporate a broader range of connection types and associated costs in the Final ISP.

The ISP may overemphasise the need for development within REZ.

The draft ISP states the 120 GW of grid-scale wind and solar by 2050 will be ideally focused in renewable energy zones (REZs). Several benefits to this approach are identified by governments responsible for REZ development, including:

- cost reductions;
- better addressing reliability and security;
- the ability to spread costs across multiple projects; and
- more coordinated and effective consultation.

The Draft ISP caveats that these benefits are predicated on REZ development being "well planned and supported by appropriate social licence"[10]. While we broadly agree with these benefits, we question whether these are unique to REZs or could equally be achieved through private project development outside of REZ boundaries.

Developers are well placed to manage the cost and technical requirements for project builds, with obtaining social licence embedded within planning and approval processes and company practices. Documenting a preference in the ODP for REZ developments serves to deprioritise non-REZ developments, creating uncertainty for project developers.

This may result in potential constraints on projects outside a REZ (e.g. competition with REZ projects for connection and potential curtailment) undermining in-train and future planned grid-scale wind and solar developments.

We propose that AEMO considers this risk in the drafting of the Final ISP, with a view to promoting both REZ and non-REZ developments in the ODP, ensuring system needs, investor confidence and geographical diversity are all maintained through the transition.

Development projections for grid-scale wind and solar appear optimistic.

AEMO notes that grid-scale wind and solar projects take, on average, four years from the connection application through to full output[11]. We consider that AEMO should delineate between wind and solar projects, with other reports[12] indicating that solar projects have shorter development cycles. Additionally, it would be beneficial for the Final ISP to outline the differences in development projections between states, noting that discrepancies are apparent[13].

Opportunities for offshore wind are stated as limited, with cost cited as the largest inhibiting factor[14]. Noting a one-year delay, the Victorian government announced in January that the first auction will occur in August 2026[15], with 2GW of capacity aimed for 2032 completion. We would welcome an updated view on the viability of offshore wind in the Draft ISP projections following this announcement.

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[10] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.64.
[11] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.96.
[12] 'Not all renewable projects are created equal: Why approval times vary dramatically across Australia', Alice Matthews - WattClarity,7 July 2025.
[13] 'Not all renewable projects are created equal: Why approval times vary dramatically across Australia', Alice Matthews - WattClarity,7 July 2025.
[14] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.62.
[15] 'Australia's first offshore wind auction set for August after nearly one year delay', Giles Parkinson – RenewEconomy, 27 January 2026.

Finally, we recommend that the ISP should incorporate the relative benefits of grid-scale solar plus battery projects compared with standalone solar projects. We would expect that the latter combination provides a better return on investment and should be factored into the Final ISP modelling of the energy mix.

We recommend enhanced transparency and further refinement of demand-side and CER projections.

In line with the AER's transparency reports, additional clarification from AEMO on key demand-side assumptions and CER forecasts would strengthen confidence in the modelling and ensure that market participants and policymakers have a clear understanding of the drivers behind projected outcomes. In particular, we recommend that AEMO provide:

- Clear explanation of how emerging AI-related load growth has been incorporated into data-centre projections, noting this is not explicitly addressed in the IASR.
- Further detail on the consumer incentives and behavioural assumptions underpinning flexible demand forecasts.
- Clarification on whether identified supply-chain pressures and development constraints are reflected in demand-side outlooks, including for data centres and hydrogen development.
- Additional substantiation of CER uptake assumptions, given that CER is expected to represent more than one-third of NEM capacity by 2050 and is highly sensitive to consumer behaviour and policy settings.
- Clear articulation of how both demand-side forecasts and CER investment pathways respond to wholesale price outcomes, noting price sensitivity is a key determinant of consumer adoption and technology deployment.

While the Draft ISP highlights a role for gas as a back-up to renewables, we question the adequacy of incentives for gas peaker investment.

The Draft ISP forecasts that approximately 14 GW of flexible GPG will remain in the NEM by 2050, operating primarily as a back-up resource during renewable lulls rather than as mid-merit or regular peaking capacity[16]. With utilisation rates projected to fall to approximately 7% of annual capacity by 2050, revenue sufficiency for gas peakers becomes increasingly dependent on infrequent dispatch events, ancillary services, or out-of-market support mechanisms.

While the ISP clearly identifies the role of gas in firming renewables and contributing to system security services, this projected operating profile raises important questions about the commercial viability of new gas peaker investment under current and prospective market and policy settings.

In this context, it is unclear whether existing incentive frameworks are adequate to support timely investment in new gas peaking capacity. We encourage AEMO to further consider the investment case more explicitly in the Final ISP, including the commercial conditions and regulatory settings necessary for gas peaker development to proceed in line with system needs.

[16] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.13.

The value and investment needed in pumped hydro should be highlighted, and the Oven Mountain Pumped Hydro project included in AEMO's modelling.

The value and investment needed in Pumped Hydro:

The Draft ISP identifies an important role for pumped hydro in seasonal firming and renewable energy lulls[17]. However, we consider that the Draft ISP does not adequately distinguish the enduring system value pumped hydro provides relative to batteries, as storage is mainly classified by duration rather than technology. Both technologies have a role, but they are not interchangeable. Pumped Hydro delivers long duration dispatchable storage, inertia, and system strength in a way that batteries cannot yet replicate. Further, pumped hydro projects have longer asset lives and economies of scale that can deliver lower cost outcomes.

Inclusion of Oven Mountain Pumped Hydro Energy Storage project:

We note that the Draft ISP does not reference the 900 MW Oven Mountain Pumped Hydro Energy Storage (OMPS) project, currently in an advanced development stage[18]. In October 2020, the project was declared critical State significant infrastructure (CSSI) by the NSW Minister for Planning and Public Spaces, recognising it as essential to the State for economic, environmental or social reasons. This designation underscores the strategic importance of OMPS, particularly given the value of pumped hydro and the critical deep-storage capability it will provide.

Given its strategic location, and in recognition of the value of pumped hydro and the critical deep storage capacity this project will contribute, we consider its inclusion in the ODP to be essential. As with many projects in the New England REZ, OMPS has been impacted by timing uncertainties associated with network upgrades. Incorporating OMPS into the Final ISP would help ensure AEMO's modelling reflects both the value of the project and the practical sequencing of transmission development needed to unlock it and other projects in that REZ.

Thank you for your consideration of Alinta Energy's submission. If you would like to discuss this further, please contact me at isidora.stefanovic@alintaenergy.com.au.

Yours sincerely,

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[17] 'Draft 2026 Integrated System Plan', AEMO, 10 December 2025, p.68.
[18] https://www.planningportal.nsw.gov.au/major-projects/projects/oven-mountain-pumped-hydro-energy-storage; https://ompshydro.com.au/.