13 February 2026

Daniel Westerman
Chief Executive Officer
Australian Energy Market Operator (AEMO)

Submitted via email: ISP@aemo.com.au

Dear Mr Westerman,

AEMO'S DRAFT 2026 INTEGRATED SYSTEM PLAN (ISP)

Origin Energy Limited (Origin) welcomes the opportunity to provide feedback on AEMO's Draft 2026 ISP. Origin welcomes a number of enhancements in the Draft 2026 ISP, including improved integration of demand-side resources, clearer treatment of gas in system planning, and the broader consideration of key risks to the energy transition through a constrained delivery sensitivity. These developments strengthen the ISP's role as a central, whole-of-system planning tool for the energy transition.

Our submission focuses on a small number of areas where further refinement to the modelling, assumptions and supporting information would improve the transparency, interpretability and usefulness of the ISP for stakeholders:

- ISP and state planning alignment: Where differences between the ISP and state planning documents arise, greater clarity on the underlying drivers would assist stakeholders in reconciling these plans. This includes transparency on differences in key inputs such as technology-specific build limits, modelling assumptions and Renewable Energy Zone (REZ) development trajectories, as well as clearer explanation where outcomes diverge despite broadly aligned inputs. Providing this clarity would improve stakeholders' ability to interpret planning outcomes across jurisdictions.

- Additional information and analysis: Further analysis and clearer explanation of key modelling inputs, assumptions and outcomes would improve stakeholders' understanding and usability of the ISP. In particular, greater transparency on demand forecasts — including sectoral drivers, data centre electricity consumption and underlying load shape assumptions — together with additional explanation of changes in forecast solar and wind generation capacity, consumer and utility-scale storage outcomes, and network curtailment impacts, would assist stakeholders in understanding the drivers of supply and demand outcomes.

- Risks to the Optimal Development Path (ODP) and the energy transition: The Draft ISP appropriately identifies key challenges to the energy transition, including project delivery constraints and uncertainty in demand-side drivers, through sensitivity analysis. This sensitivity analysis could be further strengthened by also considering a pace of development and increase in project costs that more closely align with that observed in recent years. In addition, incorporating these sensitivities within a standalone scenario where appropriate could improve understanding of the cumulative impacts of key risks on the delivery of the Optimal Development Path and support more informed consideration of potential policy responses.

Further detail on these points is provided in Attachment 1. If you wish to discuss any aspect of this submission further, please contact Megan Findlay at Megan.Findlay@originenergy.com.au.

Yours sincerely,

Sarah-Jane Derby
Group Manager, Regulatory Policy

ISP and state plans

Origin supports the inclusion of committed jurisdictional energy policies in the ISP, as this is essential to achieving coordinated, whole-of-system planning. However, we note that in some cases the Draft 2026 ISP outcomes differ from those reflected in state-based planning documents.

Differences between state-level targets, assumptions or delivery trajectories and those adopted in the ISP are not always clearly explained. For example, technology-specific build limits and Renewable Energy Zone (REZ) development targets differ between the Draft 2026 ISP and planning undertaken for the NSW Roadmap in the 2025 Infrastructure Investment Objectives (IIO) Report, without clear articulation of the drivers of these differences. This can result in materially different planning outcomes — including the wind and solar capacity forecasts for NSW shown in Figure 1 — which may create confusion for stakeholders and diminish the effectiveness of the broader planning framework.

Similarly, stakeholders would benefit from greater explanation where planning outcomes diverge despite broadly aligned inputs and assumptions. For example, while the Victorian Transmission Plan (VTP) appears to adopt inputs and assumptions that are largely consistent with the ISP, generation capacity outcomes differ, particularly for wind generation in the short term (see Figure 2). Greater transparency on how state-based information is translated into ISP inputs and modelling outcomes would assist stakeholders in understanding and reconciling these differences across jurisdictions.

Providing clearer explanation of where and why assumptions or outcomes diverge would improve confidence in the ISP as an integrated planning framework and reduce confusion arising from the coexistence of multiple planning documents across the energy sector.

Figure 1: NSW capacity outcomes – wind and solar[1,2]

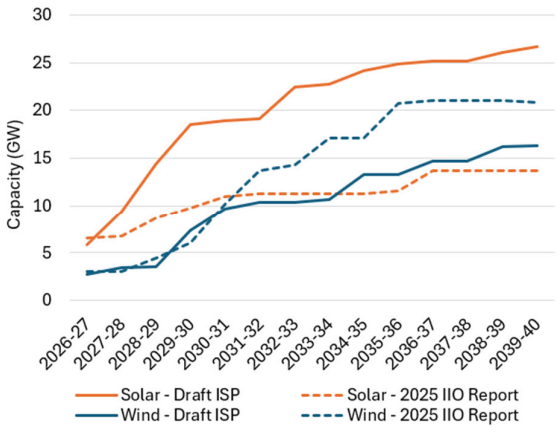
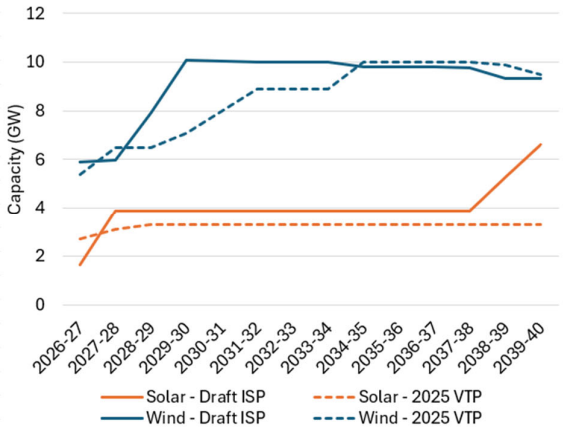


Figure 2: Victorian capacity outcomes – wind and solar[3,4]



Additional information and analysis

Origin considers that providing more detailed analysis and explanations of the following inputs, modelling methodologies and outcomes would materially improve stakeholder understanding of the ISP.

[1] Draft 2026 ISP chart data, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/draft-2026/draft-2026-isp-chart-data.xlsx?rev=d6634eda91e64f2ca1ef8d73c05b4955&sc_lang=en
[2] 2025 IIO report chart data, ASL, https://asl.org.au/-/media/services/files/publications/iio-report/2025/2025-iio-report-chart-data.xlsx?rev=312b247aa09f4fa697f07528a819bb46&sc_lang=en
[3] Draft 2026 ISP chart data, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/draft-2026/draft-2026-isp-chart-data.xlsx?rev=d6634eda91e64f2ca1ef8d73c05b4955&sc_lang=en
[4] 2025 Victorian Transmission Plan, VicGrid, https://www.vicgrid.com.au/__data/assets/pdf_file/0032/761396/2025-victorian-transmission-plan.pdf

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Demand forecasts and traces

Origin considers that additional data transparency and explanatory material would materially improve stakeholders' ability to understand and reconcile the demand forecasts presented in the Draft 2026 ISP.

In particular, access to disaggregated demand forecasts across all sectors would assist stakeholders in understanding the drivers underpinning aggregate demand outcomes. This includes visibility of sector-level forecasts, behind-the-meter storage assumptions, and half-hourly storage profiles. We note that such data has been made available in previous publications and consider that continued publication would support transparency and constructive engagement.

To further enhance the usability of the ISP, it would also be beneficial for draft ISP data to be incorporated into the Electricity Forecasting Data Portal, enabling stakeholders to access inputs and forecasts and compare them with previous publications.

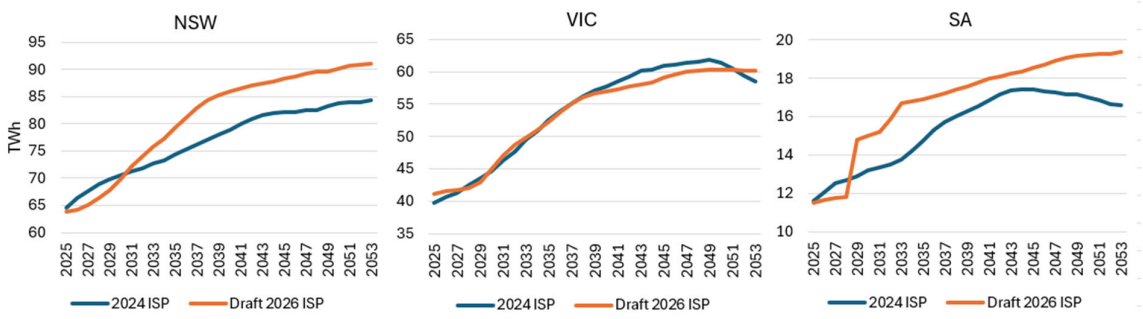
More specifically in relation to the demand forecasts presented in the Draft 2026 ISP:

- South Australia's annual consumption increases materially from around 2030, driven by forecast growth in large industrial load (see Figure 3). Additional explanation of the assumptions underpinning this increase would assist stakeholders in interpreting the outlook.

- In New South Wales, forecast demand declines in the near term relative to the 2024 ISP, while Victorian demand remains broadly unchanged (see Figure 3), despite the forecast increase in data centre development in and around Sydney and Melbourne.

Greater explanation and insight into how individual demand sectors contribute to these aggregate outcomes would assist stakeholders in reconciling demand forecasts across ISP iterations and strengthen confidence in the planning framework.

Figure 3: Annual consumption forecasts – Step Change scenario[5]



Origin also notes a material change in forecast load shapes across the middle of the day, particularly in Queensland and New South Wales (see Figures 4 and 5). Further discussion of the drivers of these changes would be beneficial, particularly in light of the Cheaper Home Batteries Program and the anticipated increase in consumer battery uptake and associated daytime solar absorption.

[5] ISP demand trace data, AEMO, https://www.aemo.com.au/consultations/current-and-closed-consultations/draft-2026-isp-consultation

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Figure 4: QLD – Q3 2025 load shape [6]

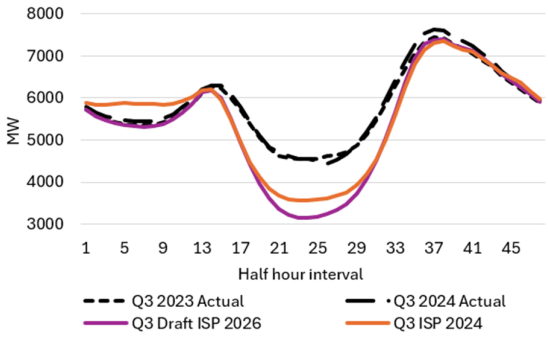
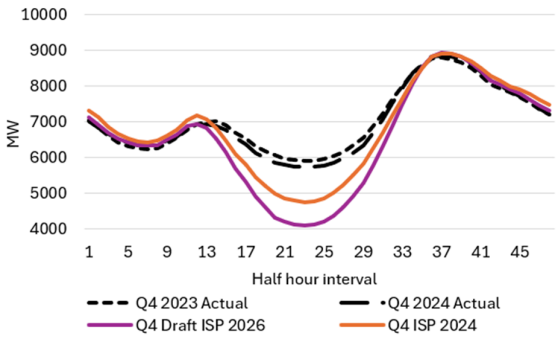


Figure 5: NSW – Q4 2025 load shape[7]

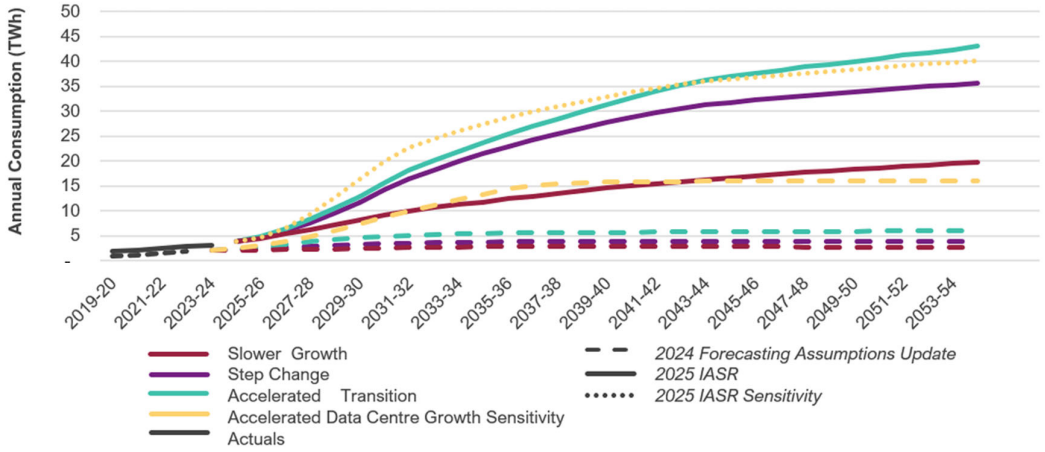


Clarifying how behind-the-meter assumptions are reflected in these load shapes — including through the release of supporting data and modelling inputs — would assist stakeholders in understanding the interaction between distributed energy resources and operational demand.

Data centre consumption forecasts

The data centre consumption forecasts incorporated into the Draft 2026 ISP differ materially from previous forecasts from 2024 (see Figure 6) and from preliminary forecasts presented by Oxford Economics at the Forecasting Reference Group (FRG) meeting on 30 April 2025 (see Figure 7).[8]

Figure 6: 2025 Inputs, Assumption and Scenario Report (IASR) NEM data centre electricity consumption forecast [9]



Note: Several sites were identified as data centres for the 2025 forecasts, lifting the historical data compared to the 2024 forecasts. *Slower Growth* and *Accelerated Transition* in the *2025 IASR* are compared with *Progressive Change* and *Green Energy Exports* respectively in the *2024 Forecasting Assumptions Update*.

[6] ISP demand trace data, AEMO, https://www.aemo.com.au/consultations/current-and-closed-consultations/draft-2026-isp-consultation
[7] Ibid.
[8] Data Centre Energy Demand FRG Presentation, April 2025, Oxford Economics, https://www.aemo.com.au/-/media/files/stakeholder_consultation/working_groups/other_meetings/frg/2025/frg-meeting-pack-1-__.zip?rev=e7ab0b4e6b4b4b8281529098a4a88b5d&sc_lang=en
[9] 2025 Inputs, Assumptions and Scenarios Report, p.111, 2025, AEMO, https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2025-iasr-scenarios/final-docs/2025-inputs-assumptions-and-scenarios-report.pdf?rev=63268acd3f044adb9f5f3a32b6880c27&sc_lang=en

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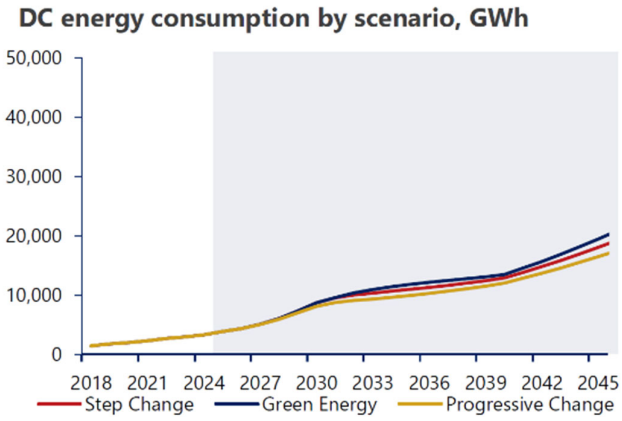
Given the growing influence of data centre demand on system planning outcomes, Origin considers it important that the Final ISP clearly articulate the drivers underpinning these updated forecasts.

Figure 7: Oxford Economics preliminary forecast data centre consumption from the 30 April 2025 FRG meeting



The Draft 2026 ISP relies on a revised methodology developed by Oxford Economics, combining survey-based forecasts with techno-economic modelling. Greater transparency on how these divergent approaches have been integrated to produce the final consumption outlook would assist stakeholders in understanding the demand trajectory represented in the ISP. In particular, further explanation of the relative weighting applied to survey-based and techno-economic inputs over time, and how differences in underlying assumptions have been reconciled, would improve interpretability.

Origin acknowledges the consultation undertaken by AEMO and Oxford Economics during the development of the updated data centre forecasts for the 2025 IASR, including engagement through FRG meetings and AEMO's response to the AER's Transparency Review[10] in the Addendum to the 2025 IASR.[11] Notwithstanding this, further explanation within the Final 2026 ISP of how these forecasts have been derived and applied would strengthen transparency, particularly given that this is the first time data centres have been presented as a separate demand segment within the ISP framework.

To improve the transparency and usefulness of the ISP, Origin recommends that AEMO provide additional detail on the assumptions and methodology used to derive data centre consumption forecasts, including:

- the assumed mix and proportions of data centre types and use cases (for example, AI training, enterprise and co-location facilities);
- load factors and utilisation assumptions applied to different data centre categories;
- assumed demand shapes and temporal profiles, including the extent to which demand is modelled as flat or variable over time;
- the assumed ramp profiles for new data centre capacity, including the timing and rate at which additional load is expected to materialise; and
- the treatment of on-site generation, including co-located solar, and how this is reflected in net operational demand outcomes.

[10] Transparency review of AEMO 2025 Inputs, Assumptions and Scenarios Report, 2025, AER, https://www.aer.gov.au/publications/reports/performance/transparency-review-aemo-2025-inputs-assumptions-and-scenarios-report

[11] Addendum to the 2025 Inputs, Assumptions and Scenarios Report, 2025, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/draft-2026/addendum-to-the-2025-inputs-assumptions-and-scenarios-report.pdf?rev=00798523a25e42078034d1878c337f19&sc_lang=en

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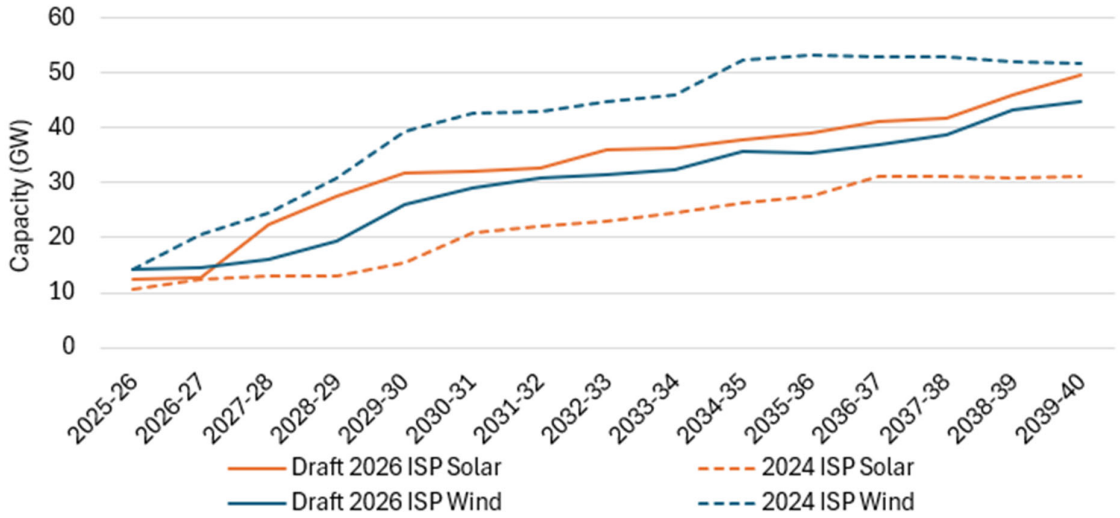
Providing this additional explanation would assist stakeholders in understanding how data centre demand has been represented in the ISP's modelling and would strengthen confidence in the treatment of this increasingly material load within system planning.

Generation capacity forecasts

The Draft 2026 ISP forecasts increased solar generation capacity and reduced wind generation capacity relative to the 2024 ISP (see Figure 8), alongside a reduction in forecast CER storage capacity and increase in utility-scale storage. The change in the forecast generation mix warrants further explanation.

Figure 8: ISP solar and wind generation capacity forecasts for the NEM – Step Change Scenario [12,13]



Providing additional analysis on the drivers of the shift toward greater solar capacity — particularly given that forecast annual consumption remains broadly similar to the 2024 ISP — would assist stakeholders in understanding the implications of these modelling outcomes. In particular, greater clarity on how reduced wind and CER storage capacity is offset in terms of energy contribution and system reliability would improve interpretability of the generation outlook.

Further transparency on generation trace assumptions and how these influence relative build outcomes would also support stakeholder understanding.

Storage capacity forecasts

Forecast distributed energy resource (DER) storage capacity decreases materially between the 2024 ISP and the Draft 2026 ISP, while forecast utility-scale storage capacity increases significantly, resulting in higher total forecast storage capacity overall (see Figure 9).

[12] Draft 2026 ISP chart data, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/draft-2026/draft-2026-isp-chart-data.xlsx?rev=d6634eda91e64f2ca1ef8d73c05b4955&sc_lang=en
[13] 2024 ISP chart data, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/2024/supporting-materials/2024-isp-chart-data.xlsx?rev=964771a839694a03aa8b2cab1f0d7f26&sc_lang=en

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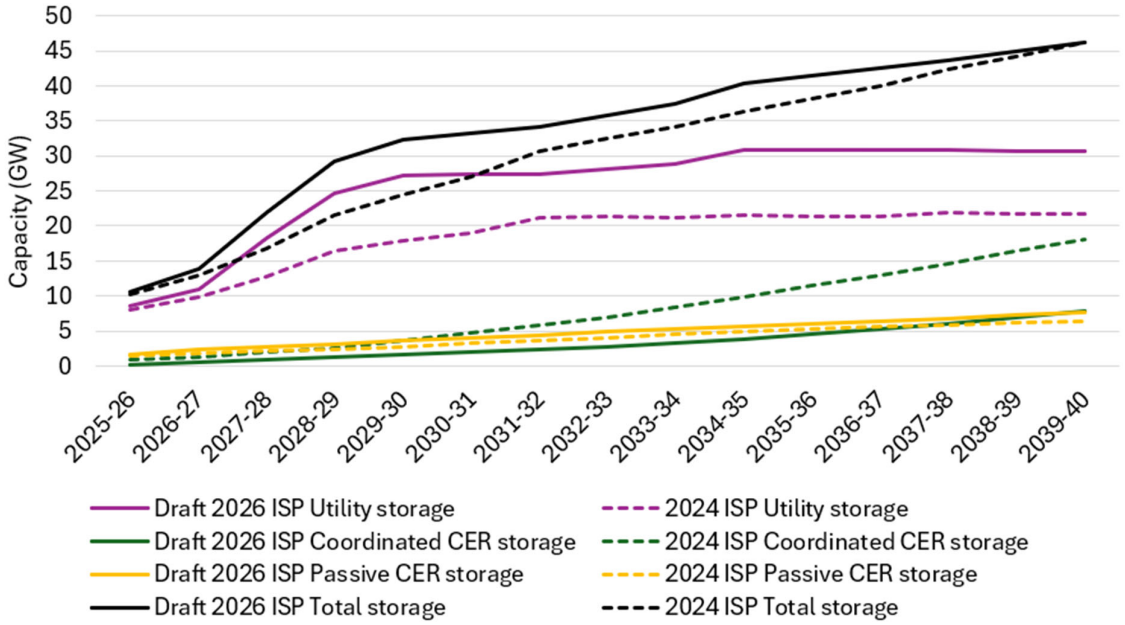
Figure 9: ISP storage capacity forecasts for the NEM – Step Change Scenario [14,15]



Additional explanation of the drivers of this shift between DER and utility-scale storage would assist stakeholders in understanding how firming requirements are being met within the modelling framework. In particular, clarification of the assumptions underpinning behind-the-meter storage, dispatch behaviour and coordination would improve confidence in the representation of distributed storage in the ISP.

Network constraints and curtailment outcomes

Origin considers that additional transparency on network constraint and curtailment outcomes would further enhance the utility of the ISP.

In particular, further data on the scale, location and duration of forecast curtailment under each scenario would assist stakeholders in understanding how network limitations influence generation and firming outcomes. Greater clarity on how individual network options alleviate these constraints, including their relative impact on congestion and curtailment, would also improve interpretability.

Providing this information would strengthen understanding of how network investment interacts with generation build and reliability outcomes, and support more informed engagement with the Optimal Development Path.

Risks to the Optimal Development Path (ODP) and the energy transition

The Draft 2026 ISP appropriately identifies key risks to the energy transition through sensitivity analysis, including project delivery constraints, cost escalation and uncertainty in demand-side drivers. Recognising and testing these risks is important to maintaining the credibility and robustness of the ISP.

Origin considers that further insight could be gained by extending this analysis to reflect a pace of development and cost pressures more closely aligned with recent project outcomes. Recent updates to

[14] Draft 2026 ISP chart data, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/draft-2026/draft-2026-isp-chart-data.xlsx?rev=d6634eda91e64f2ca1ef8d73c05b4955&sc_lang=en
[15] 2024 ISP chart data, AEMO, https://www.aemo.com.au/-/media/files/major-publications/isp/2024/supporting-materials/2024-isp-chart-data.xlsx?rev=964771a839694a03aa8b2cab1f0d7f26&sc_lang=en

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generation and transmission developments demonstrate that timing and cost assumptions can change materially overtime. Explicitly testing these parameters would provide stakeholders with a clearer understanding of the sensitivity of the ODP to more conservative delivery conditions.

In addition, incorporating sensitivities within a standalone “aggregated risk-adjusted’ scenario would enable clearer assessment of the cumulative impacts of interacting risks. While individual sensitivities are informative, a consolidated risk scenario would improve transparency around how combined constraints may affect the timing and delivery of the ODP and support more informed policy and planning responses.

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