



16 February 2023

Andrew Turley
Group Manager, Forecasting
Australian Energy Market Operator (AEMO)

Submitted via email: forecasting.planning@aemo.com.au

Dear Mr Turley,

AEMO'S DRAFT 2023 INPUTS, ASSUMPTIONS AND SCENARIOS REPORT (IASR)

Origin Energy Limited (Origin) welcomes the opportunity to comment on the draft IASR. Origin considers AEMO should only model one step change scenario while the other could be included as a sensitivity. We also suggest the inclusion of additional sensitivities to capture the risks inherent in the transition, such as transmission delays, and consider that more information should be provided on several inputs and assumptions.

Scenarios

AEMO proposes to model four scenarios in the 2024 Integrated System Plan (ISP), including two step change scenarios. Origin understands that the primary difference between the two step change scenarios relates to how the decarbonisation objective is achieved.

It is not clear that the two scenarios would have materially different effects on the optimal development path, i.e., the recommended transmission build, given that they have the same objectives (action targeted at limiting temperature rises to 1.8°C), and most of the scenario settings are the same. Origin considers that it would be appropriate to retain one step change scenario only, while the other could be modelled as a sensitivity to test alternative ways of achieving similar outcomes.

Sensitivities

Additional sensitivities

Origin considers that the scenarios are broadly plausible. However, they do not capture some of the key risks currently facing the sector. It is critical that transmission planning, including the ISP, reflects these realities to support a smooth transition. AEMO should model sensitivities that capture key decarbonisation risks, such as:

- Supply chain issues, including the challenges associated with global competition and demand for raw materials and skilled labour; and
- Delays in transmission build and generation commissioning due to the above supply chain issues as well as other challenges such as social licence.

AEMO should also clearly communicate, based on the modelling results, what these risks mean for the demand/supply balance, recommended transmission build and generation outcomes, including the impact on curtailment and on the mix of replacement capacity needed.

Smoothed infrastructure sensitivity

Origin is not clear on the usefulness of this sensitivity, which is intended to explore the costs and benefits of reducing the volatility of employment demand. A more practical sensitivity might be to test a broader range of volatile factors, such as supply chain issues as noted above.

Offshore wind sensitivity

AEMO proposes to model the development of investment to meet the Victorian Government's offshore wind targets as a sensitivity as it is subject to legislative changes. However, in the draft IASR, some proposals that are also subject to legislative changes are included in the scenarios (e.g., the Victorian energy storage targets) while offshore wind targets are not. Origin would welcome clarity on the rationale for including offshore wind as a sensitivity rather than incorporated into the scenarios given that it is currently government policy.

Inputs and assumptions

Origin seeks the following clarifications or additional information on some of the inputs and assumptions in the draft IASR:

- Consistency with jurisdictional policies: The draft IASR's renewable energy zone (REZ) augmentation options for Queensland appear to be different from the Government's three announced QREZ options. To the extent that augmentation options in the IASR differ from announced jurisdictional policies, AEMO should clearly identify these disparities and set out its rationale for the deviations.
- REZ timing: Origin would welcome more information on AEMO's timing assumptions for REZs, including in the context of announced jurisdictional plans for the zones.
- Regional cost zones: The draft IASR classifies REZs into low-, medium- or high-cost zones. Origin would welcome more clarity on how these costs are derived, including whether they incorporate any Government funding where this has been provided, for example, for early works. This would support stakeholders' understanding of the costs associated with each REZ.
- REZ build limits: The draft IASR sets out the potential capacity for new generation and storage in REZs ("build limits"). However, it is not clear if these build limits include existing and committed/anticipated generation capacity, or if they are based on existing or planned network capacity. AEMO should clearly set out how many MWs relate to existing projects and how much additional generation capacity is possible within current transmission limits and through planned and future augmentation. This should also clearly set out where the build limits differ from announced jurisdictional REZs. Clarity on these inclusions would help investors better understand potential bottlenecks when making investment decisions.
- Maintenance rates: The draft IASR assumes a 0.27% maintenance rate for pumped hydro storage, which appears to be low based on existing planned outages. AEMO should consider a higher rate. More information on how the rate was derived would also be helpful.

Should you have any questions or wish to discuss this submission further, please contact me at Sarah-Jane.Derby@originenergy.com.au or by phone, on (02) 8345 5101.

Yours sincerely,



Sarah-Jane Derby
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