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VNI West - Regulatory Investment Test for Transmission Project Specification Consultation Report (PSCR)

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EnergyAustralia is one of Australia's largest energy companies with around 2.5 million electricity and gas accounts across eastern Australia. We also own, operate and contract an energy generation portfolio across Australia, including coal, gas, battery storage, demand response, wind and solar assets, with control of over 4,500 MW of generation capacity.

We appreciate the opportunity to comment on AEMO and TransGrid's PSCR Report. The proposed VNI West is a large regulated investment with an estimated capital cost of \$815-1,855m \pm 50%. As this will be paid for by consumers, we value and appreciate a thorough and constructive consultation process with stakeholders and ensuring the quality and rigour of the business cases, power system, market and economic modelling is high and comprehensive.

The following points are matters we request to be considered and discussed at the onset of the economic evaluation stage as we progress through the consultative RIT-T process. The requested information and modelling changes will support stakeholders' understanding and interpretation of the modelling results and the implications for future market outcomes, and improve the robustness of the study.

Requested additional modelling

- **Option 5A to consider versions going to Maragle and being at 500kV**

We note Option 5A is limited to development to Murray, not Maragle, includes only a single circuit 330kV addition between Dederang to South Morang, and has no reactive plant considerations. We suggest an option with full double circuit 500kV from South Morang to Maragle, with reactive plant options, be included to test the efficacy and efficiency of potential investment across a wider range of plausible options.

- **Outline why double circuits are required at the onset**

For Options 6, 7 and 8 only double circuit options have been included from the onset. We request it be made clear if the costings allow for single circuit or double circuit towers, and to consider staged development of single circuit options to allow those to be progressively developed to double circuit options at a later time, with a clear discussion on the timing needs of the second circuit. This allows for consideration of staged implementation, and may reduce overall costs to consumers.

- **REZ expansion to Glenrowan included in Option 5A**

It appears the REZ extension to Glenrowan can be included in Option 5A, from Dederang; we suggest it is included for this option.

- **REZ expansion to Red Cliffs from Buronga**

Similarly, the REZ extension to Red Cliffs could be made from Buronga in options 5A and 6, so similarly request this to be included in those options as well.

- **Changes to ancillary service costs, particularly FCAS and NCAS**

We note AEMO and TransGrid assume there will no significant change to these costs, and therefore exclude this from the scope of the study. However, considering the proportional change away from dispatchable to non-dispatchable capacity because of project, we note this may lead to an increase in the need for FCAS and NCAS, and request this be included.

- **Value of route diversity to be estimated and quantified, as TransGrid has done for HumeLink**

As part of its HumeLink PADR, TransGrid estimated the economic benefits of improving the resiliency of the power system through route diversity, we encourage this study to do the same, as well as quantifying the benefits of unlocking diversity of renewable generation options.

- **Discuss the impact on the economic evaluation if large dispatchable generators (such as an OCGT) were committed**

It appears the capital cost of Snowy 2.0 is assumed as a sunk cost in the study, please outline the sensitivity of the results should a significant OCGT or similar plant be announced and committed in and around Newcastle, Sydney or Wollongong.

- **Scenario modelling and sensitivities to be broad and consistent with ISP**

We support AEMO and TransGrid adopting the 2019 forecasting and planning assumptions and five scenarios included in the 2020 ISP. However, we note that Snowy 2.0 exploratory works are not yet complete, and based on publicly available information we understand the project is not fully guaranteed to proceed to completion. We therefore request an economic evaluation to test sensitivities to timing of that project and whether it proceeds at all, including HumeLink.

Transparency of input assumptions

- **Assumptions and modelling for Hydro and PHES assets, and sensitivity to Snowy 2.0 timing**

We request specific deep dives into the market modelling assumptions and dispatch outcomes for hydro and PHES assets, including any investment made subsequent to Snowy 2.0. In particular, we request more information on assumptions around perfect foresight (relative to practical dispatch outcomes) and the materiality of the impact these assumptions have on the economic evaluation.

- **Assumed asset lives, WACC and operational expenditure assumptions when determining annualised values**

Please detail these to provide transparency around the annualised costs determination of the investment options, and whether sensitivity studies to changes in WACC also impact the calculation of the annualised network costs.

- **Clearly articulate costs of land and easement**

The allowances for land and easement acquisition costs have not been itemised in Appendix A1 and request this be done.

Transparency and understanding of future market outcomes

- **Impact of VNI West on supplying NSW and Victoria regional energy requirements**

We encourage AEMO and TransGrid to describe the proportion of annual regional energy that will be met locally, and that supplied by imports, in all the scenarios, and therefore how inter-regional transmission charges (also known as modified load export charges, MLEC) will influence who pays for the investment over time.

- **Impact of VNI West investment on supplying NSW and Victoria peak summer and winter demand**

Clearly articulate how the investment helps each region meet peak demand, under the full range of scenarios, considering the increased intermittent generation that is likely to occur. It is important to assess system capability to meet demand under average normal conditions and high impact peak demand periods.

- **Inter-regional loss factor equations and benefit of improved losses**

With the significant investment new transmission, could AEMO and TransGrid describe how inter-regional marginal loss factor equations will change, outline the assumptions underpinning the new equations, and explore whether there will, or should, be any material benefits (or costs) as a result of reduced (or increased) transmission losses.

- **Define what constraints are binding, after the augmentation, for each option—and how the augmented interconnector will be utilised**

We believe AEMO and TransGrid should clearly articulate what will cause power transfer limits in the future after investment is made, under all of the options considered. This is to ensure it will be clear what outages and limitations will likely impact market dispatch in the future. AEMO and TransGrid should also present interconnector utilisation duration curves (before and after investment) for all of the scenarios, to describe how the investment is expected to be used to support flows into NSW and into Victoria. This will inform assessment of how effective the investment will be and impacts on market outcomes.

- **Notional export/import increase in terms of supply to Sydney or Melbourne**

The PSCR describes (Table 9) the notional export/import volume changes between NSW and Victoria. We request further detail on flow limits, particularly into load centres, similar to the ISP 2020 input assumptions workbook, where flows into Sydney were described. This will provide further insight into how well the investment options provide support to meet peak summer and winter demand for the major load centres. i.e. Snowy to Sydney capacity of:

$$\begin{aligned} &VIC \text{ to NSW forward direction flow} + NSW \text{ to SA reverse direction flow} \\ &+ Upper/Lower Tumut generation + Snowy 2.0 generation < 5100. \end{aligned}$$

This submission is targeted at increasing the transparency and industry confidence in the significant transmission system investment business case to be undertaken by AEMO and TransGrid, which is ultimately being borne by our customers. We trust this submission is constructive in nature, and if you would like to discuss it further, please contact Georgina Snelling on 03 9976 8482 or Georgina.snelling@energyaustralia.com.au.

Regards

Georgina Snelling
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