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Australian Energy Market Operator
Level 22, 530 Collins Street
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Submitted via VNIWestRITT@aemo.com.au

RE: Victoria to New South Wales Interconnector West (VNI West) – Regulatory Investment Test for Transmission (RIT-T) Project Specification Consultation Report (PSCR)

ERM Power Limited (ERM Power) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) consultation of the VNI West RIT-T PSCR, which seeks to investigate longer-term investment options to strengthen bi-directional interconnection between Victoria and New South Wales (NSW).

About ERM Power

ERM Power (ERM) is a subsidiary of Shell Energy Australia Pty Ltd (Shell Energy). ERM is one of Australia's leading commercial and industrial electricity retailers, providing large businesses with end to end energy management, from electricity retailing to integrated solutions that improve energy productivity. Market-leading customer satisfaction has fuelled ERM Power's growth, and today the Company is the second largest electricity provider to commercial businesses and industrials in Australia by load¹. ERM also operates 662 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland, supporting the industry's transition to renewables.

<http://www.ermpower.com.au>

<https://www.shell.com.au/business-customers/shell-energy-australia.html>

General comments

The National Electricity Market (NEM) is continuing to evolve from a conventional system to a distributed, renewable-dominated network. This on-going shift is rapid, and there is a significant level of uncertainty around the potential future outcomes of the NEM. The current rate of transition is highlighting the critical need for comprehensive and viable planning scenarios for the future NEM. There may be a need for development of the transmission network where it is clearly demonstrated to deliver benefits to consumers.

A key driver of this need is the maintenance of power system services, which are critical for the continuing secure operation of the NEM. Under a future system model, it is also essential that consumer costs are minimised, reliability is maintained and emissions standards are met. To achieve these objectives, the market has seen a significant central planning focus on the development of transmission network project proposals and fast-tracking of regulatory approvals for their construction. There has been the removal of some regulatory processes which are designed to ensure that regulated transmission investment delivers benefit for consumers. We believe it must be noted that high-cost, long-lived transmission assets also increase risk and costs for consumers if underutilised by the market.

¹ Based on ERM Power analysis of latest published information.



As such, ERM Power believe it is critical that all transmission investment decisions are made based on ensuring the delivery of reliable energy at the lowest delivered cost to consumers. The PSCR investigates the viability of the VNI West project to meet future system needs. ERM Power have assessed the proposed project and recommend that further consideration be given to the viability of the project, prior to any regulatory approvals.

In summary, we see risks in the proposed VNI West project, as:

- Regulatory and investment focus has recently preferred large, regulated return transmission network options where the investment risk is place on consumers. This is in preference to comprehensively investigating lower cost, non-network options which may achieve comparable preferred outcomes at lower risk to consumers
- Stakeholder engagement to date on the VNI West project has been limited due to inadequate data availability and presentation of analysis
- Minimising costs to the consumer attributed to large transmission project approvals has not been prioritised as the key risk to be managed through the VNI West project
- The fast-tracking of the RIT-T process may have compromised the integrity and rigor of the modelling process required to ensure proposed project benefits are valid
- The consumption and demand scenario modelling underpinning the identified need for the VNI West project requires additional refinement to ensure reasonable accuracy

We also provide feedback on the specific option presented in the PSCR. Please find additional comment below.

Preference for large regulated return transmission projects

There is arguably a potential need for cost efficient investment and development of the transmission network. Cost efficient network investment is one mechanism to ensure that resilience of the power system is maintained during the transition away from conventional generation resources and a one-sided market. To this end, the 2018 Integrated System Plan (ISP) recommended increasing transfer capability between Victoria and NSW through long-term regulated transmission network investment options. Subsequent development of the VNI West base development pathway incorporated additional bi-directional interconnector capacity between NSW and Victoria. ERM Power supports the inclusion of bi-directional flows in the base VNI West development proposal.

However, we are concerned that regulated transmission network projects that place all costs and risks on consumers are being rapidly progressed in preference to alternative non-regulated options. Regulated transmission infrastructure projects of the type set out in the Draft 2020 ISP and the PSCR are significant in scale and costly. ERM Power believe that regulated transmission network investment options are being pursued and fast-tracked to meet a projected future need based on selected assumptions, without comprehensive consideration of the most cost-effective options from a perspective of consumer risk.

In considering the VNI West project, we believe it is critical that the proponent consider staging options that achieves the near term requirements for increased transmission network transfer between the Victorian and NSW regions and incorporates options to add additional capability at a later date, if clearly demonstrated as required. This ensures that if future NEM development fails to align with the central planner's current views and modelling input assumptions, costs to consumers over the long term are minimised. We also believe that the route selection for the VNI West project must not be influenced in seeking to minimise the costs of potential future Renewable Energy Zone connection. We do not support the provision of REZ connection assets via regulated transmission network investment paid for by consumers.

Overall, we are concerned that there is a perceived bias towards large and costly regulated transmission network projects to meet central planner objectives which will result in increasing costs and risks to consumers based on an unpredictable future benefit potential.



Efficacy of stakeholder engagement and data availability

The integrity of the electricity system forecasting and planning processes are dependent on thorough analysis based on all-available data and market participant feedback. Without consideration of the full range of all possible projection pathways and planning options, inefficient options may be progressed for development, accruing higher costs than necessary. Detailed feedback and information provision from market participants is essential, as project benefits are only realised if the projects are developed in accordance with project modelling input assumptions. We believe clear reasoning and stakeholder engagement on the weighting to apply to the various scenarios should form a critical basis for the Project Assessment Draft Report (PADR).

ERM Power believes that the VNI West PSCR presents insufficient analysis on the preferred options to stakeholders to allow for adequately informed stakeholder engagement. Currently, all credible options considered through the development of the PSCR are not transparent to stakeholders. The PSCR outlines options 5 to 8, exclusively. We recommend that all credible options considered by the proponent should be outlined and detailed in the VNI West PSCR. Stakeholders would benefit from detail and discussion on each credible option considered, outlining why specific options were excluded from further consideration. For instance, it is not clear to stakeholders whether low-cost options in the 220 kV network were considered. This is necessary as the identified needs outlined in the proposal for the VNI West development are not clearly quantified in the PSCR. We are concerned that such a development may act to as a barrier to other non-regulated options.

Transparent availability of data and analysis assists stakeholders to identify improved methods of project selection. Cost estimates are a critical determinant of preferred options. Current cost estimates have been made with an accuracy band of +/- 50%. Considering the importance of estimating costs with reasonable accuracy to ensure future consumer costs are transparent and minimised, we recommend that a maximum +/- 20% accuracy band apply to base cost estimates used in the PADR assessment. This would assist in avoiding development of projects which obtain approval with marginal benefits delivered to the consumer.

ERM Power believe stakeholders would benefit from receiving further information on route selection in the PADR. The PSCR states that the key market benefit of route diversity is unlocking geographically diverse generation. We question the assumption that VRE output has a large geographical diversity between regions which will support the assumed high level of inter-regional flows required to justify the preferred large inter-regional network developments. We are also concerned about the cost impact of pursuing long circuitous routes. We seek clarification on how the benefits of route diversity have been modelled, in terms of system resilience.

Consideration of priorities

Power system planning requires the consideration of various needs and priorities. We understand that AEMO must consider security, reliability, emissions and system resilience when planning for the needs of the future power system. ERM Power agrees that it is appropriate and necessary to consider all these requirements when identifying preferred options for regulated transmission network and non-network developments.

However, consumer costs are at historic highs and must be a key priority to be addressed for the future. ERM Power believes that consumer costs should be allocated first priority when considering regulated transmission network investment options, as it is consumers who bear the costs and risks for such investment.

Integrity of the RIT-T process

The planning processes which regulate transmission project development are integral to ensuring the identified investments meet the NEO and are in the best interests of consumers. The RIT-T is the most significant regulatory test which acts to ensure regulated transmission network project proposals are appropriately modelled and costed prior to allocating costs to consumers. However, we believe there is risk that the rigor of the RIT-T process is being compromised and regulatory oversight is being removed in order to fast-track project development.



The PSCR outlines several recently completed and progressing RIT-Ts which are expected to increase interconnector transfer capacity. We argue that this is only valid if the integrity of the RIT-T process is maintained. Currently, the fast-tracking of the RIT-T is posing a risk to the integrity of the RIT-T process which increases risks to consumers. ERM Power also recommends that the other RIT-Ts currently underway should be completed prior to their inclusion in the VNI West PADR modelling. It is not appropriate to include proposed benefits of incomplete RIT-Ts in the PADR modelling prior to their completion. We believe the inclusion of uncommitted benefits from incomplete RIT-Ts in the benefit assessment of the VNI West project results in overstating the market benefit delivered solely by the VNI West project. As such, ERM Power suggest that to determine a correct forecast market benefit for the proposed VNI West project, the VNI West PADR modelling should calculate the market benefit of the VNI project in isolation of other transmission projects currently under consideration.

We also believe that from a market benefits perspective, VNI West and HumeLink in NSW are co-dependent projects. This means that neither will deliver the forecast market benefits without the other. Therefore, we believe the VNI West PADR should model the forecast market benefit against the combined costs for both projects. In our view, it is this outcome that determines if a forecast net market benefit will occur. We also strongly recommend that the proponent calculate the consumer benefit for the preferred option, noting that consumer and market benefits are different.

The integrity of the RIT-T process is essential to provide consumers with confidence that any proposal for regulated transmission network investment is in their best interests. The currently presented PSCR is the first step in the RIT-T process and does not provide adequate detail on the preliminary modelling and initial decision making regarding proposed options in order to ensure that the RIT-T process is being properly conducted. It is essential that adequate and effective stakeholder consultation is provided, especially considering the recent revisions to forecast RIT-T benefits we have observed. We look forward to working with the proponent as it develops the PADR to ensure that adequate and effective consultation occurs, and consumers representatives remain well informed during this process.

Scenario modelling options, assumptions and sensitivities

The VNI network augmentation is being proposed based on consumption and demand forecasts. We are concerned that the level of energy consumption and maximum demand forecasts as set out in the 2020 ISP are optimistic, particularly regarding potential large industrial and commercial loads. We note that review of historical data demonstrates that actual consumption and maximum demand generally falls below AEMO's forecasts. Hastened action to construct long-lived network assets based on conservative estimates of forecast demand may result in unnecessarily high and long-lived costs to consumers. As such, we believe modelling of additional sensitivities under all 5 modelled scenarios is warranted, especially as the aluminum industry has publicly stated that ongoing operation of the smelters is not viable under the forecast VRE penetration scenarios due to forecast "firmed" wholesale energy costs.

Feedback on specific options

Regarding the options that the PSCR has presented, ERM Power provide the following feedback:

- Option 6 is preferred to option 7, as it presents lower costs for consumers but provides the same inter-regional transfer capacity.
- Option 6-V1 is preferred to option 6 and option 6-V2, due to its lower initial cost to consumers but with options for future augmentation.
- It is appropriate that the proposed double circuit towers are initially strung on one-side only, due to its lower initial cost to consumers but with options for future augmentation.
- For the stated transfer capacities in either direction, absent HumeLink, we question if the new Wagga 500/330 switchyard would need two 500/330 Transformers, rather than one.



- We also question the costs indicated for Option 5A. Option 5A is similarly costed to option 6-V1, despite a significant difference in line length between the two options and operating voltage. We are also concerned that the costs indicated in this PSCR are significantly higher than the costs indicated in the 2017 Victorian Transmission Network Annual Planning Report (TAPR). In the 2017 Victorian TAPR, the estimated costs of a new single circuit 330 kV between Murray, Dederang and South Morang was indicated as \$420M.² We also request that AEMO clarify the transfer capacity of the option. We have observed that a number of 330 kV circuits operate with a rated capacity close to 1,400 MW.

Please contact me if you would like to discuss this submission further.

Yours sincerely,

[signed]

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² Table A3 – Page 46 AEMO's 2017 Victorian Transmission Network Annual Planning Report