

11 October 2019

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Via electronic lodgement

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VNI Upgrade RIT-T PADR Feedback

AusNet Services welcomes the opportunity to make a submission in response to the Project Assessment Draft Report (PADR) for the VNI Upgrade Regulatory Investment Test for Transmission (RIT-T).

The RIT-T considers augmentation in both Victoria and New South Wales (NSW) to increase flow capacity to NSW on the Victoria to New South Wales Interconnector (VNI). The preferred option identified in the PADR is to implement the following augmentations by 2022-23:

- Install a second 500/330 kilovolt (kV) transformer at South Morang Terminal Station.
- Re-tension the 330 kV South Morang – Dederang transmission lines, as well as associated works (including uprating of series capacitors), to allow operation at thermal rating.
- Install modular power flow controllers on the 330 kV Upper Tumut – Canberra and Upper Tumut – Yass lines to balance power flows and increase transfer capability.

AusNet Services agrees that the proposed solution addresses the identified need and delivers the greatest net market benefit across the range of scenarios and sensitivities tested.

AusNet Services would like to highlight the stability limitations identified in the VNI Upgrade Project Specification Consultation Report (PSCR) and the 2018 Integrated System Plan (ISP). Both of these reports included the need for a “braking resistor” to manage and improve system stability. The preferred solution for the VNI Upgrade PADR does not include a “braking resistor” or equivalent solution. AEMO explained (at the Public Forum on 4 October 2019) that the combined impact of ElectraNet’s EnergyConnect SA-NSW interconnector project, the Western Victoria Renewables Integration RITT solution and the addition of the new 500/330kV transformer as part of the VNI Upgrade RITT will resolve stability issues and therefore the braking resistor is not required.

Network modelling and understanding of stability issues is constantly being developed and improved. Significant stability issues have recently been identified as a result of improved modelling of the North West Victorian network and significant constraints have been imposed on a number of generators. Stability issues are expected to increase as the generation mix transitions to a greater proportion of power electronic connected generation and synchronous generators contribute less even though they have not retired. This future outlook requires close consideration of the current and emerging network stability issues.

AusNet Services would like to see a clear and transparent analysis of the system stability issues identified in the 2018 ISP and PSCR and a clear explanation of how these issues are expected to be resolved by the combination of projects currently in development. The maturing analysis of these stability issues as well as any changes to solutions for related projects must be closely monitored to ensure that this RITT does not complete without addressing system stability needs.

The PSCR considered three alternative stability options including installation of a synchronous condenser with inertia support, a static VAR compensator and batteries with fast response inverters. Timeframes to deliver these options vary from short to medium term. Each has the possibility to provide additional services above the system stability needs identified in the PSCR. In a system that is changing rapidly and where existing models and forecasts of both immediate and future system needs are still maturing, the availability of network assets and/or services that have flexibility to manage identified needs as well as emerging system needs will provide efficient and timely outcomes for customers.

AusNet Services continues to offer our assistance to progress this RIT-T and would be pleased to discuss any of the comments in this response. Please contact Jacqui Bridge, our Manager Transmission Network Planning and Development, if we can assist with any queries in relation to this submission.

Yours sincerely,



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