



Victoria to New South Wales  
Interconnector Upgrade

PADR Submission

October 2019

15 October 2019

Regulatory Consultation  
AEMO and TransGrid

Dear Nathan White and Andrew Kingsmill,

**Submission to AEMO and TransGrid's 'Victoria to New South Wales Interconnector Upgrade' Project Assessment Draft Report**

Smart Wires are pleased to make this submission in response to AEMO and TransGrid's 'Victoria to New South Wales Interconnector (VNI) Upgrade' project assessment draft report (PADR). As the leading provider of modular power flow control (MPFC) solutions, we believe we are in a position to provide a unique and valuable perspective on the practical integration of state of the art power flow control technology to maximise the capability and utilisation of the transmission network in the context of the proposed VNI Upgrade, and welcome the opportunity to contribute towards the development of an robust, effective and efficient solution to address the future electricity supply needs of NSW and the wider National Electricity Market (NEM) as a whole.

The preferred option described within the PADR provides the most cost-effective net market benefits of the four options evaluated and minimises outage disturbances to nearby generators, therefore Smart Wires are pleased to welcome the results outlined in the PADR.

Building on the recommendations made by AusNet Services, ERM Power, the MEU, and Snowy Hydro in their responses to the VNI PSCR, Smart Wires would also like to advocate for AEMO and TransGrid to broaden the scope of the VNI Upgrade RIT-T to include an examination of the benefits for expanding the interconnection between Victoria and New South Wales in the southward direction.

**Proposal to expand the scope of the VNI RIT-T to consider southward flows**

Series compensation of the western line route of the Victoria to New South Wales interconnection to improve its utilisation and increase interconnection capability has been a potential augmentation that has been considered in the past. With the renewable energy transition now becoming a reality, the improved security of supply and market benefits that would result from such a development have become increasingly relevant, as outlined in the AEMO Integrated System Plan.

Smart Wires would like to propose that consideration be given to the use of MPFC along the Lower Tumut – Wagga – Jindera line route in order to alleviate the Murray-Dederang thermal constraint and increase overall network transfer capability of the interconnection in the southward direction, from New South Wales into Victoria. Improvements to the New South Wales to Victoria export voltage stability constraint are expected increase the prominence of the thermal constraint in the future. Preliminary studies have been conducted since the release of the PADR which indicate net market benefits for this proposal.

In addition to providing an increase to the New South Wales to Victoria export capability, such a project also has potential to provide an improvement to the Victoria to New South Wales export capability, relieving thermal constraints on the Murray to Upper Tumut line that would become more prevalent after the constraints on the Upper Tumut to Canberra line have been relieved.

As AEMO and TransGrid have described in section 2.3 of the PADR, there is a significant existing short-term requirement to improve import capabilities into Victoria from New South Wales to support peak demand periods, and while the imperative of this need is expected to ease in the short term as new renewable generation is installed in Victoria, the fundamental need to have improved sharing of a geographical diverse renewable energy supply between regions will remain as further reliance on renewable energy resources continues into the future.

While a similar project to the one we describe is currently under development within the NCIPAP scheme, the funding caps under the NCIPAP scheme potentially limit the size, and therefore potential benefits that could be obtained by a further addition of MPFC on the Lower Tumut – Wagga – Jindera line route. We suggest that an evaluation of potential benefits that such a project could provide within the present RIT-T framework are worth considering.

The numerous technical benefits of MPFC have been described in our previous submission, however it is worth iterating the flexible nature of the technology and its ability to be readily scaled up or down to optimally address the rapidly changing needs of an evolving network, presenting a genuine no-regrets investment that can be adapted over time, or be relocated to address other needs as they arise, avoiding the risk of creating a future stranded asset.

We hope that this submission and the description of this application of our technology has provided an insight into the scope for a supplementary solution that could be considered as part of the VNI, to meet the network need as described in the ISP and PSCR. We look forward to collaborating with AEMO and TransGrid on VNI Upgrade RIT-T and to together exploring the solutions described in this submission.



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