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Expanding NSW-QLD Transmission Transfer Capacity RIT-T PSCR Feedback

PowerLink

Via Electronic Lodgement

NSW-QLD Transmission Transfer Capacity RIT-T PSCR

UPC Renewables welcomes the opportunity to make a submission for TransGrid and PowerLink's Project Specification Consultation Report (PSCR) on Expanding the NSW-QLD Transmission Transfer Capacity.

UPC wishes to highlight two issues to caution overinvestment on the NSW-QLD interconnector:

- The potential future requirements for firming generation in both NSW and Queensland, and
- The extent of development of renewables in NSW.

These two factors when considered together suggest that large expansion options of the NSW-QLD interconnection would place unnecessary risks on consumers.

The first issue is the amount of firm generation needed to support NSW and QLD during times of solar and wind "drought." Historical observations suggest that coincident solar and wind "droughts" of over 2 hours occur regularly enough across the eastern states to require large amounts of new firming generation capacity as coal retires. We agree with the PSCR that diversity between the regions will reduce fuel costs, however, we are concerned increased interconnector capacity will not relieve the need for firming capacity (or other non-network solutions such as battery energy storage) across both states for operational security purposes. We are also concerned that the RIT-T modelling approach may not capture these statistically significant events and request that detailed studies are included to ensure adequate firming capacity is provided across all options over the

timeframe of the studies. We note that AGL and Energy Australia have both flagged major OCGT developments and pumped hydro opportunities that would provide the firming services and the NSW Government Emerging Energy Program is looking to support large scale electricity and storage projects in NSW.

The second issue is that the sheer scale of renewable development in the planning system in NSW may have significant implications for the relative value to consumers associated with increasing interconnection capacity. According to the NSW Government's Transmission Infrastructure Strategy in October 2018 more than 20,000 megawatts of large-scale projects were progressing through the planning system¹. Even if many of these projects never proceed to construction and operations, there are already a number of utility scale developments either approved, advanced or ready to connect (or expand) within a feasible distance of the existing NSW 330kV and 500kV grid backbone which has capacity to support these connections. These large-scale developments will deliver significant market benefits independent of interconnector upgrade. We note the potential that post-May 2019 a future federal Labor government is likely to implement a policy that would encourage more renewable development in NSW that may reduce the export opportunities from Queensland and suppress the benefits associated with exporting renewables energy into NSW. Considering the potential for a change of policy after the NSW State election in March 2019, the NSW Labor announcement of a reverse auction approach for 7 GW by 2030 would underwrite an equivalent amount of capacity to that envisaged by the Queensland 50% renewable energy target².

Given the fact that there is abundant solar resource and land available across the eastern states, in particular in NSW and Queensland, having the benefit of exporting excess Queensland solar energy to NSW may be of low or limited value particularly given that the solar resource is similar between the regions. In such a case then solutions to assist in delivering the Queensland renewable energy target should be wider than an interconnector upgrade and may be more aligned to more storage in Queensland or a more diverse mix of renewable resources. Otherwise, the outcome may simply be an increase in the export of Queensland coal powered generation at times when wind and solar is not available in either Queensland or NSW, which would represent a increase in net greenhouse gas emissions if alternative firming capacity (pumped hydro, battery energy storage etc) is not built.

It is therefore suggested that any detailed analysis should either wait until the uncertainty is resolved (ie post a Federal election in May 2019) or explore these scenarios explicitly as part of the analysis.

In addition, with these points in mind we believe it would be prudent to consider an "alternative" option that fully explores the potential to support the development of REZ within each state

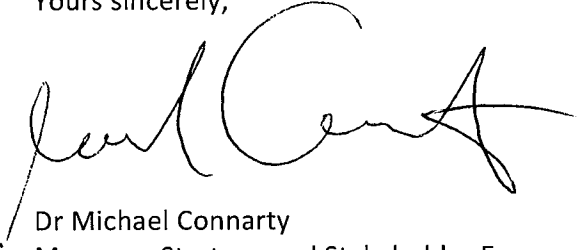
¹ NSW Transmission Infrastructure Strategy, NSW Government, Nov 2018 <https://energy.nsw.gov.au/media/1431/download>

² <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Inputs-Assumptions-and-Methodologies> - Queensland target is 22,200 GWh by 2029/30.

supported by least cost firming capacity to provide operational security, without major upgrades to the NSW-QLD interconnector.

We look forward to the opportunity to provide further input as the consultation progresses.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Michael Connarty', written in a cursive style.

Dr Michael Connarty
Manager, Strategy and Stakeholder Engagement
UPC/AC Renewables

