



Hydro Tasmania
the renewable energy business

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Dr John Tamblyn
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By email: submissions@aemc.gov.au

Dear Dr Tamblyn

Draft National Electricity Amendment (Split Snowy Region) Rule 2007

Please accept the attached submission from Hydro Tasmania on the Draft National Electricity Amendment (Split Snowy Region) Rule 2007.

Many of the comments and suggestions made in this submission were made previously, in our submission to the Draft National Electricity Amendment (Abolition of Snowy Region) Rule 2007. However, we are conscious that the Commission may not necessarily believe that it can consider suggestions made to that consultation process, in the context of this consultation. To remove all doubt, we wish the Commission to consider the suggestions and comments below in the context of the consultation on Macquarie Generation's proposal to split the Snowy Region, [the Draft National Electricity Amendment (Split Snowy Region) Rule 2007].

Hydro Tasmania's first preference is for the retention of the existing arrangements¹ until a revised process for region definition and congestion management is in place. Given the existence of the current arrangements in the Snowy Region, we are of the view that a hasty change in the NEM boundaries:-

- Is not necessary to manage system security,
- Is not in conformance with the process for boundary change in Chapter 3 of the Rules,
- Does not conform to the spirit of the MCE's 2005 rule change request, in relation to NEM regional boundaries.

Split Snowy Region

In the spirit of constructive engagement, we offer the following comments on the Macquarie Generation proposal for a Split Snowy Region, which we believe to be superior to the alternative of abolishing the Snowy region:-

- Implementation timeframe,
- Inter-regional trading risk,
- Modelling of options,
- Murray region regional reference node and
- Management of counter-price flows.

Implementation Timeframe

We support the views expressed by Macquarie Generation in relation to a possible implementation of NEM boundary change before July 2008. However, we note that the MCE has called for a three year delay after publishing of a final determination by the AEMC, before a regional boundary change takes effect, [MCE proposed clause 3.5.2 (p)]. This conflicts with the inclination of some to implement change in the Snowy Region at an early date.

The Commission should perhaps seek clarification from the MCE on the conflict between the requirement to comply with the spirit of draft 3.5.2 (p) and the validity of the perception that there is a **current** need for urgency in relation to Snowy region congestion². In balancing these drivers, it seems reasonable to us that current arrangements for managing congestion and counter-price flows should be taken into consideration.

Inter-regional trading risk

There appears to be a concern that if there are three inter-regional interconnectors instead of just one, then inter-regional trading risk will be increased. Taken to its logical

¹ Including those now prescribed in Chapter 8 of the Rules.

² It being recognised that prior to the present arrangements in Chapter 8, there was an urgent need to do something in relation to congestion, inefficient dispatch and NEMMCO intervention in the Snowy region.

conclusion, this would mean that inter-regional trading would be enhanced if there were just a single NEM region. Clearly price risk would disappear but dispatch volume risk would be much more evident.

The trading risk will always be linked to the physical limitations of the network. Consequently, calling residues 'firm' whilst ignoring physical system limits misrepresents trading-floor realities. In practice, participants are able to purchase linked residues, to achieve the desired access for wheeling energy through multiple regions, if required. It is much more important to know the extent to which the value of these risk management products can be influenced by gatekeeper behaviour and the extent to which their value is reduced by physical plant limitations, including planned outages.

If, as is contended by some, there is no need for a regional boundary either between the Murray node and Dederang or between Tumut and Yass/Canberra, then clearly the additional inter-regional trading risk, arising from the split-region boundary configuration is minimal.

Modelling of Options

Hydro Tasmania agrees with Macquarie Generation that the modelling done to date has not weighted the periods of peak demand appropriately. We would go further and say that ignoring the very significant market responses to both the occurrence and the risk of planned and unplanned network outages, understates the market impact of the selected regional structure and occurrence of a disconnect between offers and settlement, when it matters most.

Murray Region Regional Reference Node

By using the Dederang node as the regional reference node for the proposed new Murray region, the proposed 'split region' option deliberately mis-prices Murray generation and leads to a dispatch outcome that is less optimal than in the current case which provides appropriate incentives for Murray generation.

As pointed out by Snowy Hydro, the proposed configuration also leads to a strange outcome for customers in the Victorian jurisdiction at Wodonga, where they would be physically unconnected with the Victorian NEM region.

Hydro Tasmania has previously suggested³ for consideration a development of the split region option, which preserves the correct pricing of Murray and Tumut generation, as well as the optimal market dispatch. That is, it allows counter-price flows to occur, where these arise from the loop configuration, as an outcome of efficient dispatch⁴.

The Alternative Split Region Option

In the Commission's Draft National Electricity Amendment (Abolition of Snowy Region) Rule 2007, the commission proposes the abolition of the snowy region, citing factors other than economic modelling as driving this decision. Economic modelling does have

³ In our submission to the Abolition of the Snowy Region consultation

⁴ In fact, clamping counter-price flows or re-orientation of constraints lead to deliberate sub-optimal market outcomes.

limitations and is sensitive to the weighting of the cases, and other inputs. Where the differences between modelled outcomes are small, we agree that modelling sensitivities and general principles should be considered.

A high level view of the modelling process leads to the conclusion that if no congestion ever occurred between the additional regions of a split region model, then no price differences would occur. That is, the split region model should never produce worse market outcomes than a model constructed from joining regions together.

If the Commission decides not to retain the existing market arrangements, at least until a revised process for region definition is in place, then Hydro Tasmania requests that an alternative 'split region' be considered, with the Murray node as the regional reference node for the new Murray region, and Dederang remaining in Victorian region. As a result, the mis-pricing at Tumut and Murray will no longer occur. This arrangement, (which was originally proposed by Eraring Energy) will potentially give rise to counter-price flows, with the associated funding issues for NEMMCO.

It has been noted that the existence of counter-price flows is not in this case an aberration, but rather an outcome of efficient dispatch. The problem is rather that of how to preserve the most efficient overall market dispatch whilst managing the settlement residue impacts. The objective of this proposal is to retain the correct pricing associated with the 'split region' option, without losing the value associated with efficient counter-price flows associated with the loop flow, ie dispatch to maximise the value of trade as required under the Rules.

It is suggested that the settlement impacts of counter-price flows could be managed in a similar way to the existing Southern Generators derogation, which allows any negative residue accumulation on the loop to be offset by the associated positive accumulation⁵.

If the Commission proposes a regional structure of the NEM with separate Murray and Tumut regions, then our new proposal is effectively an adaptation of the Southern Generators'-style Rule change, added onto the original Eraring proposal⁶. We therefore propose that the Murray node be the regional reference node of any new Murray region and further that the Dederang node remains within the Victorian NEM region.

Relative Implementation Costs

Hydro Tasmania is concerned that there has been no proper assessment of the implementation cost associated with the proposed snowy region boundary change.

⁵ In 2005, the Southern Generators recognised that, positive and negative settlement residues on the Snowy regions' interconnectors are a natural outcome of the accurate pricing of the Murray group in the presence of loop flows and that clamping or reorientation to limit negative settlement residues leads to inefficient market outcomes. The Rule change proposed by the Southern Generators allowed any negative residue accumulation on the loop to be offset by the associated positive accumulation.

⁶ Given that the sets of constraint equations for the proposed split region have not been finalised, it is premature to formulate a specific Rule proposal in the form used for the Southern Generators' Rule. A generic formulation could be made, for example that whenever a constraint equation which included more than one interconnector on the LHS was binding and one of those interconnectors had a negative residue, then this could be compensated by the positive residues from the interconnectors in the same constraint equation's LHS.

Clearly, the cost associated with maintaining the present arrangements, (known as the 'snowy trial') would be small.

The proposed abolition of the snowy region would require considerable work by NEMMCO. The cost of this has not yet been made public, but needs to be known before Market Participants can properly assess the cost/benefit ratio. One impact arising from significant changes to constraint equations, is the use of scarce expert resources within NEMMCO and the consequent unavailability of the same resources to deal with operational changes.


We anticipate that our proposed split region option would require much less work than abolition and slightly less than the Macquarie Generation proposal, but more than maintaining the current arrangements. This is because in our view, most of the current VIC-SNY constraints would become VIC-MUR and the SNY-NSW would become TUM-NSW. New MUR-TUM constraints would be required, with testing and other resource costs as indicated by NEMMCO in their recent letter. However, NEMMCO would be in a better position to assess the relative implementation costs of the different options.

Conclusion and Summary

- Hydro Tasmania's first preference is for the retention of the existing arrangements,
- We question the validity of the perception that there is a **current** need for urgency in relation to Snowy region congestion,
- If the Commission decides not to retain the existing market arrangements, at least until a revised process for region definition is in place, then Hydro Tasmania requests that an alternative 'split region' be considered, with the Murray node as the regional reference node for the new Murray region, and
- The settlement impacts of counter-price flows could be managed in a similar way to the existing Southern Generators derogation, which allows any negative residue accumulation on the loop to be offset by the associated positive accumulation.

Thank you again for receiving our comments and looking forward to working with you to achieve the best outcome for the Market.

Yours sincerely,



David Bowker
Manager Regulatory Affairs

