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22nd March 2006

Dr. John Tamblyn
Chairman
Australian Energy Market Commission
PO Box H166
Australia Square NSW 1215

Dear John,

Review of Snowy Regional Boundary by Snowy Hydro
Review of Snowy Regional Boundary by Macquarie Generation

I refer to the proposed NEM Rule changes for the Snowy Region Boundary lodged separately by Snowy Hydro and by Macquarie Generation. Eraring Energy considers that these two proposals need to be considered at the same time and is pleased to offer comments of these alternative proposals in a comparative manner. In addition it is considered that the previous derogation proposed on recovery of negative residues (Vic to Snowy) and the current Snowy Trial are also relevant to this review.

An important component of this review should be the determination a robust process for assessing the relative merits of such alternative proposals for changes to a regional boundary. Eraring Energy would suggest that the following criteria should be met:

- A transmission constraint must exist that has been previously identified as a 'national transmission flow path' in the annual NEMMCO Statement of Opportunities ('SOO').
- The congestion caused by the transmission constraint must be 'significant and persistent'[1] and not be able to be resolved by the building of additional transmission equipment that is justifiable under the regulatory test.
- The creation of a new region or changes to existing regional boundaries must facilitate the explicit pricing of the constraint in market dispatch in a clear and predictable manner.
- The creation of a new region or changes to existing regional boundaries must give a net financial benefit to the market that exceeds a minimum threshold.
- The changes to regional boundaries must not introduce major 'basis risk' for market participants that cannot be managed by recontracting or by use of inter-regional hedging

[1] Charles River Associates ('CRA') Report to Ministerial Council on Energy ('MCE') dated September 2004.

products including SRA units. In addition there must be adequate forward notice so that such contracting changes can be implemented in time.

National Transmission Flow Path

The NEMMCO SOO defines a national transmission flow path as a flow path that:

- *"join major generation or load centres*
- *be expected to experience significant congestion across the 10 years studied for the ANTS; and*
- *be capable of being modelled"*

In the 2005 NEMMCO SOO, the ANTS section identifies 23 such flow paths including the current Snowy to NSW and Snowy to VIC interconnector cross sections but interestingly the ANTS does not include the flow path between the Murray/Wodonga/Redcliffs busbars and the Upper Tumut/Lower Tumut/Jindera/Buronga busbars even though this flow path is to be converted to an interconnector under both of the Snowy Hydro and Macquarie Generation proposals.

Transmission Constraints within Current Snowy Region

Given that the current Snowy Trial, the negative residues problem (VIC-Snowy) and the current two Rule change proposals all refer to this point of congestion as being a major problem it can only be concluded that the ANTS is remiss in identifying this particular constraint. Certainly Eraring Energy's view is that this transmission cross-section is indeed a point of congestion that needs explicit pricing in dispatch and settlements of the market.

As such Eraring Energy supports both the Snowy Hydro and Macquarie Generation proposal for this cross section to be converted to an interconnector. The issue then becomes 'between which regional nodes' should this new interconnector be dispatched?

The Snowy Hydro proposal is for the Snowy Region to be removed with the Tumut power stations being part of the NSW Region and the Murray power stations being part of the Victorian Region. By contrast the Macquarie Generation proposal is for the Tumut power stations to be part of a new region in southern NSW and for the Murray power stations to be part of a new region in northern Victoria.

Eraring Energy is opposed to both of these proposals because the existing flow paths from Snowy (effectively from Tumut) to NSW and from Snowy (effectively from Murray) to VIC are changed from existing interconnector status to intra-regional status. Precisely the converse to their proposals in regard to the Murray to Tumut constraint. In other words fix one problem and create two new problems.

Eraring Energy would propose that the existing interconnectors should be retained and the transmission constraint within Snowy should form a new interconnector. As such one possible solution is for the Snowy Region to be broken into two regions viz a Murray Region and a Tumut Region. The attached diagram, figure 1, shows how this could be organised.

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Snowy Trial and the CRA CSP/CSC Approach

The current Snowy trial involves the use of the constraint system pricing ('CSP') and constraint system contracts ('CSC') as originally developed by CRA in their September 2004 report to the MCE.

The Snowy Trial has a number of problems:

- complicated
- Snowy was allocated all of the CSC contract rights
- Snowy Hydro has direct indication of flows and can directly influence the flows and the market financial outcomes
- the trial has no criteria for success/failure.

Similarly the generalised CSP/CSC proposal has similar problems:

- complicated with no transparency
- no defined means of allocation of CSC rights

Conceptually the CSP/CSC approach avoids the need for additional regional boundaries by effectively introducing localised nodal pricing in a dynamic way when flows reach limits and explicit pricing of constraints becomes necessary. Whilst this approach can be seen as quite eloquent it is complicated to understand and implement, has no clear allocation method and it ends up with additional dynamic pricing nodes all supposedly necessary for the purported avoidance of new regions. Eraring Energy would suggest that the creation of additional pricing nodes in the first instance is much more transparent to the market because it explicitly prices the constraint.

As such Eraring Energy suggests that the current Snowy Trial should be terminated as soon as possible and that the CSP/CSC approach not be used for congestion management.

Regional Load Considerations

Both the Snowy Hydro and Macquarie Generation proposals give consideration to the CRA recommendation that '*no region shall have a maximum demand of less than 200MW* ' and indeed the regions so proposed do meet the CRA recommendation.

However, Eraring Energy would suggest that this recommendation by CRA is in fact quite baseless with their report providing neither elaboration nor justification.

The NEM consists of many generating stations and many load centres spread over its length and breadth. There will be many views as to what minimum generation levels and load levels there should be in a region and of course their relative relationship.

The only issue for the consideration of a regional boundary should be does such boundary allow the explicit pricing of a transmission constraint? Questions of generation and load size are secondary factors related to contracting 'basis risk'.

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The Snowy Hydro Proposal

The Snowy Hydro Rule change proposal involves the removal of the Snowy Region and the placement of the Tumut power stations in the NSW Region and the Murray power stations in Victorian Region. As such the Snowy Hydro proposal:

- Creates a new interconnector that explicitly prices the Murray to Tumut constraint.
- Removes two existing interconnectors thus removing explicit pricing of existing constraints in current dispatch yet introducing new congestion that will require indirect pricing such as Option 4 combined with CSP/CSC.
- Does not introduce 'basis risk' for market participants and thus could have a shorter time frame for implementation.
- Appears to resolve the negative residue issues problems for VIC to Snowy flows.
- Would require termination of existing Snowy to/from NSW and Snowy to/from VIC SRAs and creation of new VIC to/from NSW (each have bi-directional components).

Eraring Energy does not support the Snowy Hydro proposal primarily because it removes two existing interconnectors thus removing explicit pricing of existing transmission constraints.

The Macquarie Generation Proposal

The Macquarie Generation proposal involves the removal of the Snowy Region and the placement of the Tumut power stations in a new region in southern NSW and the placement of the Murray power stations in a new region in northern Victoria. As such the Macquarie Generation proposal:

- Creates a new interconnector that explicitly prices the Murray to Tumut constraint.
- Removes the existing Snowy-VIC interconnector thus removing explicit pricing of existing constraints in current dispatch yet introducing new congestion that will require indirect pricing such as Option 4 combined with CSP/CSC.
- Modifies the existing Snowy-NSW interconnector by moving the cut-set to a position north of Wagga and Buronga (viz flow north becomes 01,02,03,07 lines to Yass/Canberra only and excludes 051,0X1 lines to Wagga/Buronga).
- Creates a new interconnector south of Dederang/Eildon/Bendigo and Horsham.
- Creates a new loop flow between regions. The inclusion of Redcliffs into the north Vic Region creates a loop between Regions viz: NorthVic to SA, SA to VIC and VIC to NorthVic.
- Introduces a substantial 'basis risk' for market participants for the load area in southern NSW (~10% of NSW load including Wagga, Jindera, Riverina and Broken Hill) and for the load area in northern VIC (~15% of VIC load including Wodonga, Shepparton, Bendigo, Horsham and Redcliffs). In addition it creates 'basis risk' for Snowy Hydro and Southern Hydro generation. As such this proposal would need a longer time frame for implementation than the Snowy Hydro proposal.
- Appears to resolve the negative residue issues problems for VIC to Snowy flows.

- Would require termination of existing Snowy to/from NSW and Snowy to/from VIC SRAs and creation of new VIC to/from North VIC, North VIC to/from Southwest NSW, Southwest NSW to/from central NSW (each have bi-directional components).

Eraring Energy does not support the Macquarie Generation proposal because it removes one existing interconnector thus removing explicit pricing of an existing transmission constraint and because of the contract 'basis risk' that it introduces.

The Eraring Energy Proposal

Whilst Eraring Energy does not have a Rule change proposal lodged, the proposal shown in the attached Figure 1 and discussed in part above can be compared to the two proposals being reviewed. The Eraring Energy proposal involves the removal of the Snowy Region and the placement of the Tumut power stations in a new Tumut Region and the Murray power stations in a new Murray Region. As such the Eraring Energy proposal:

- Creates a new interconnector that explicitly prices the Murray to Tumut constraint.
- Retains the two existing interconnectors thus retaining explicit pricing of existing constraints in current dispatch.
- Does not introduce 'basis risk' for market participants and thus could have a shorter time frame for implementation.
- Resolves the negative residue issues problems for VIC to Snowy flows.
- Would only require creation of new Murray to/from Tumut SRAs (each have bi-directional components). Existing Snowy to/from NSW would simply be renamed to become Tumut to/from NSW and existing Snowy to/from VIC would simply be renamed to become Murray to/from VIC.
- Can be implemented much quicker than the other two proposals.

Conclusion

1. Both the Snowy Hydro and the Macquarie Generation proposals create a new interconnector that allows explicit pricing of the Murray to Tumut transmission constraints.

2. However, the Macquarie Generation proposal introduces a number of other problems and cannot be supported (viz removes and modifies existing interconnectors, creates loop flows and creates substantial contract basis risk for participants).

3. Similarly, the Snowy Hydro proposal also introduces a number of other problems and cannot be considered the optimum solution (viz removes two existing interconnectors with potential CSP/CSC arising there from).

4. The alternative Eraring Energy proposal would appear to resolve the issues created by the two other proposals, leading to a more robust, practical and less distortionary solution.

If you have any questions in relation to this submission then please contact Mr R Burns on tel (02) 8268 4237.

Yours faithfully,

Gerry Grove-White
Managing Director

Figure 1 – Splitting of Snowy into a Tumut and a Murray Region: