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Management Company Ltd

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Chairman
Australian Energy Market Commission
PO Box A2449
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By email: submissions@aemc.gov.au

AEMC project ref.: ERC0076

Dear John

NEMMCO Submission on Rule Change Draft Determination – Arrangements for Managing Risks associated with Transmission Network Congestion

Thank you for the opportunity to comment on the AEMC's draft determination relating to Arrangements for Managing Risks associated with Transmission Network Congestion. NEMMCO has provided comments on the following pages.

NEMMCO appreciates your consideration of this submission. If you wish to discuss any of the matters identified please do not hesitate to contact John Wormald on (02) 9239 9107.

Yours sincerely

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NEMMCO

1. Fully Co-optimised Constraint Formulation

Section 4.2.1 of the draft determination discusses formalising the formulation of constraint equations into two types. The fully co-optimised formulation is the standard, but alternative constraint formulations are permissible in exceptional circumstances, provided they have been set out in the Constraint Formulation Guidelines. Both types are to be defined as glossary items in the Rules.

NEMMCO is concerned that the 'fully co-optimised network constraint formulation' is defined in a way that creates an expectation that all controllable variables should always be placed on the left hand side of all constraint equations. However, in practice, there are limitations on the degree to which this can be fully implemented. For example, if a generator or interconnector variable with a very small coefficient appears on the left hand side, it can be dispatched with large changes to its target for very small changes in measured flows across the critical element or cutset being protected by the constraint equation. If a strict interpretation of the current definition was implemented so that variables with extremely small coefficients were required to be controlled, then some of the resulting large plant movements could have a net detriment to security of the main system, to an extent that negates the modest benefits from the improvement achieved for the critical element or cutset.

In 2005, NEMMCO developed a network and FCAS constraint formulation document[1] that set out its approach to implementation of the MCE's view that network constraints should be fully co-optimised.[2] As that document is publicly available, we have not repeated its contents here, but we refer the AEMC to it on NEMMCO's website. The document starts with the over-arching policy to control all relevant variables to maintain power system security but recognises and sets out a number of practical limitations on the implementation of the policy. As noted above, there are important reasons for continuing this practice of recognising practical limitations, which has now been in place for a number of years, and NEMMCO requests that the definition of 'fully co-optimised network constraint formulation' be modified to allow for them.

It is suggested that the modification to the definition recognise that there is a practical limitation on the minimum size of coefficients for variables that should be controlled in the interests of enhancing power system security. Constraint equations with variables excluded due to their coefficients being extremely small should fall within the scope of the definition. The threshold for exclusion would be an important part of the Constraint Formulation Guidelines to which NEMMCO would be bound under the new Rule and which would be subject to consultation regarding changes.

[1] See: http://www.nemmco.com.au/powersystemops/170-0040.html.
[2] See p. 5 of MCE statement on NEM Electricity Transmission at: http://www.ret.gov.au/Documents/mce/emr/elec_trans/default.html.

Accordingly, the following definition is recommended:

> A *network constraint* equation formulation that allows NEMMCO, through direct physical representation, to control all the variables that can be determined through the *central dispatch* process. Some variables, due to the small size of their coefficients, may be excepted where control of these variables would not be practical or enhance the security of the power system.

2. Intra and Inter-Regional Constraints

The distinction between inter-regional and intra-regional network constraints has been generally removed under the draft determination and NEMMCO supports this. Draft clause 3.13.4(o) relates to the impact of a scheduled generating unit being constrained in dispatch by a network constraint within its own region. NEMMCO has interpreted this to mean a network constraint which does not have any interconnector terms on the LHS, i.e. an intra-regional constraint.

The adoption of the co-optimised formulation of network constraints has led to a situation where the large majority of network constraint equations have at least one interconnector term on the LHS. Accordingly, the information provided under this draft clause applies to a minority of generators (typically those that are electrically remote from regional boundaries) and is provided with respect to a limited number of nearby network constraints.

As a further consideration, the mis-pricing reports will provide a more generic, relevant and accessible source of information than that currently provided (or intended to be provided) under clause 3.13.4(o). Accordingly, NEMMCO requests that clause 3.13.4(o) be deleted.

3. Appropriate TNSP Identification

The appropriate TNSP for the payment of negative settlement residues to NEMMCO is required to be identified by the AER under the draft clause 3.6.5(a)(4B). However this does not address the reference in the existing clause 3.6.5(a)(3), which refers to appropriate TNSPs as being the recipients of distributions of both positive and negative settlement residue. NEMMCO requests that the application of clause 3.6.5(a)(4B) be specifically extended to clause 3.6.5(3) for clarity as to the identity of the appropriate TNSPs referred to in that clause.

4. TNSP Settlement Cycle

NEMMCO is concerned that the new provisions for an alternative settlement cycle for TNSPs in draft clause 3.6.5(a)(4A) conflicts with existing clause 3.15.16 which obliges TNSPs to pay NEMMCO the amount shown on the final statement

on the 20th business day after the billing period (or 2 business days after receiving the final statement. Note that clause 3.6.5(b) deems that TNSPs are Market Participants for the purposes of clause 3.15.16. Thus, the new Rule provides an alternative payment arrangement for TNSPs but does not release them from the current obligation to pay in accordance with the standard market settlement timetable. NEMMCO suggests that the drafting be modified to put it beyond doubt that clause 3.6.5(a)(4A) takes precedence.

5. Timing for Commencement of Negative Settlements Residue Amounts Rule

NEMMCO requests that the commencement date/time for the Negative Inter-Regional Settlements Residue Amounts Rule take place at midnight on a calendar quarter boundary. The rationale for this is that settlement residue distribution agreements relate to calendar quarters and the existing settlement software provisions for carrying forward negative settlement residues and the minimum $10/unit payment are calculated strictly on the quarterly results. The software already manages the calculation of negative settlement residues in a billing week that straddles the quarterly boundary.

There are two further issues that need to be taken into account in determining the date for the proposed Rule to take effect:

- The first is that based on the current drafting, NEMMCO would need the AER to determine the appropriate TNSPs responsible for payments, prior to implementing the new settlement arrangements. The drafting does not, however, appear to make any provision to ensure that the AER determination is made prior to NEMMCO's settlement obligations taking effect; and
- The second issue is that NEMMCO needs to determine the TNSP payment interval and method. We estimate that this will require approximately three months from the AEMC's final determination and one month from the AER's determination, whichever is later.

To address the above issues, it is requested that the AEMC modify the draft Rule to ensure that the new settlement obligations do not take effect until the appropriate TNSPs have been determined, and NEMMCO has had sufficient time to put the new settlement arrangements in place with those parties.

6. Timing for Consultations under Congestion Information Resource (CIR) Rule

Given the obligation to produce an interim CIR 6 months after the Rule is made, it would seem reasonable to draw on stakeholder experience and feedback on this interim CIR to develop the CIR Guidelines. This is not possible if the CIR Guidelines are also to be finalised within 6 months of the Rule being made, and publication of the CIR is required 6 months after that. This timeline would

require NEMMCO to commence consultation on the CIR Guidelines prior to publication of the interim CIR, providing no opportunity for the interim CIR to inform that consultation.

If the deadline for the CIR Guidelines was deferred by 6 months from the date proposed in the draft Rule, this would allow at least 2 months of operation under the interim CIR before consultation on the CIR Guidelines would need to commence. On this basis, NEMMCO suggests that [Date A] in clause 3.7A(l) be set at 12 months after the Rule is made rather than 6 months. If NEMMCO is able to implement the interim CIR earlier than this date, then additional time for experience with the interin CIR would be made available.

Implementation of the CIR is likely to involve publication of routine information that requires support of and changes to the Market Management System. The lead time for developing this support is 9 months due to the current practice of having 6 monthly releases for changes to the market systems. These timing constraints need to be considered when setting implementation timeframes in the Rules. On this basis, NEMMCO requests that the period between finalisation of the CIR Guidelines and implementation of the CIR should allow for 12 months implementation time. Accordingly, [date B] in clause 3.7A(h) would be 24 months after the Rule is made rather than 12 months.

7. Use of the term Mis-Pricing

The term mis-pricing may be taken to imply that the notional locational price variations that can be calculated when network constraints bind, represent an error or defect in market pricing outcomes. NEMMCO suggests that the term ‘mis-pricing’ be replaced by a more descriptive term such as ‘congestion pricing’ or ‘congestion price’ so that those unfamiliar with it are better able to understand the concept without the negative connotations that the term ‘mis-pricing’ may elicit.

8. Definition of the term Network Support Agreement (NSA)

The draft Rule definition limits an NSA to an agreement between a TNSP and a Market Participant. The draft determination discusses examples of network support service that include demand-side management, which may be provided by parties not registered in the NEM. Some TNSPs already have network support agreements with demand-side aggregators. The current Rule definition for network support payment refers to "any other person providing network support service". NEMMCO suggests that the new definition is unnecessarily restrictive and should be widened.