



**Submission to the Australian Energy Market
Commission
Congestion Management Review**

Response to Directions Paper

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Energy Users Association of Australia

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Background

The Energy Users Association of Australia (EUAA) endorses the decision by the Ministerial Council on Energy (MCE) to direct that the Australian Energy Market Commission (AEMC) review congestion management. The EUAA appreciates the opportunity to provide a response to the AEMC's Directions Paper and understands that the terms of reference for the broader Congestion Management Review requires the AEMC to:

- Identify and develop improved arrangements for managing financial and physical trading risks associated with material network congestion; and clearly articulate the relationship between a constraint management regime and other matters impacting on congestion, including TNSP incentive arrangements, Last Resort Planning Power and the Regulatory Test.

This document provides a response to the Australian Energy Market Commission's invitation for submissions to the issues proposed to be analysed further by the Commission, as outlined in its Directions Paper dated March 2007, as it develops a draft Congestion Management Review report.

EUAA Interest in Congestion Management

The EUAA is a non-profit organisation focused entirely on energy issues on behalf of large business end users of gas and electricity. The EUAA currently has over 85 members and its position as the national association of larger energy users means that membership ranges across many sectors of the economy, including mining, manufacturing, construction, commercial, property and service sectors. Many EUAA members operate across States.

The issue of congestion management is important to energy end users because the volatility of wholesale prices in the spot market is exacerbated by congestion in the transmission system, within States and also between them. The inefficient dispatch of electricity may also undermine the ability of the National Electricity Market Management Company (NEMMCO) to manage system security and in the long term, distort the optimal generator location decisions. In the absence of the required transmission capacity, electricity cannot be supplied from the cheapest source. Further, a strongly interconnected transmission system lessens the ability of generators to use strategic gaming in the wholesale market to raise prices above efficient levels.

Scope of the EUAA's Submission

The EUAA understands that Directions Paper released in March 2007, provides an update on the AEMC's progress since the release of the Issues Paper in March 2006 and intended areas of focus as it finalises the Draft Report. Although the Directions Paper outlines a number of key options for change to existing congestion management arrangements, a significant outcome of the AEMC's Directions Paper is that it is unclear whether or not congestion has been, is, or will be, a material problem. The Directions Paper therefore outlines the analytical framework for the Review and provides information on the AEMC's forward work program for assessing the materiality of congestion. As such, this submission by the EUAA focuses on

the way in which the AEMC has taken various issues into account in assessing the materiality of congestion, and its proposed process going forward, given that this is fundamental to the conduct of the Review and the recommendations arising from it. The EUAA will develop a more extensive submission focusing on the options for managing congestion in its response to the AEMC's Draft Report.

The EUAA also notes the time taken by the AEMC to reach this point in the review and its limited conclusions to date. Whilst we are aware of the complexity of this review and the financial and resource constraints faced by the AEMC, it is a concern that the AEMC has taken this length of time to reach a limited point in the review.

Our Understanding of the AEMC’s Methodology

The AEMC has:

- reviewed previous studies on the materiality of congestion in the NEM and commissioned analysis on the incidence of congestion, as well as its implications for economic efficiency;
- provided its initial view of the empirical analysis undertaken to date, concluding that it is unclear whether or not congestion has been, is, or will be, a material problem in the NEM; and
- outlined its intended forward work plan for better understanding the materiality of congestion in the NEM.

The AEMC is of the view that:

- analysis to date (Stage 1 analysis) fails to provide clear and compelling evidence that congestion has been, is, or will be, a material problem in the NEM; and
- while a number of alternative approaches to managing congestion will be investigated, whether any recommendations to implement a specific approach or approaches are made will depend on the AEMC’s assessment of whether congestion can be considered to be significant and persistent.

Therefore, whether any alternative approach to the management of congestion is justifiable depends on a comparison of the costs and benefits of the option against the *status quo* counterfactual – that is, the materiality of pre-existing congestion.

The AEMC intends to focus its forward work program (Stage 2 analysis) for measuring the impact of congestion in the NEM and its materiality on:

- ***The quantification of congestion (i.e. magnitude)***. This will occur in part through a closer examination of specific events identified by the AER in the course of its analysis of historical dispatch costs in order to obtain a better understanding of the impact of congestion on economic resource costs (i.e. those events which significantly contributed to a high percentage of the total constraint cost).
- ***The causes of mis-pricing and its extent***. This will occur through an extension of the analysis of mis-pricing undertaken by Darryl Biggar and NEMMCO to determine the factors influencing the extent of mis-pricing observed in the data. In particular, the AEMC will examine whether much of the mis-pricing is being driven by outages, rather than occurring during system normal conditions.

Our Initial Comments and Concerns

The EUAA has a range of concerns related to the AEMC’s proposed forward work plan for better understanding the materiality of congestion in the NEM. These are set out below.

Value of trend data

The AEMC recognises that the analysis to date, while providing useful information on the trend of mis-pricing and the cost of constraints in the NEM, is not conclusive. For its Stage 2 analysis, the AEMC suggests that aspects of this trend data can be used to identify specific events that may be materially contributing to the occurrence of congestion and are therefore worthy of detailed investigation. While historic indicators such as those provided by the AER may represent useful ‘trend’ data, there is a risk that a focus on the ‘headline numbers’ (i.e. those incidents where the total cost of constraints is relatively large) will result in flawed conclusions. For example, concentrating on:

- the total cost of constraints as a percentage of wholesale market sales – may mask the magnitude of the disconnect between dispatch costs and offers; and
- the proportion of the total cost of constraints attributable to a small number of incidents, may not disclose the impact of constraints that are of less significance on an individual cost basis but which are repeated and sustained, adversely impacting the efficiency of dispatch (e.g. through strategic bidding or a transient exercise of market power).

Changes in Generator Bidding Behaviour

The AEMC recognises that the behaviour of generators in response to constraints can harm the economic efficiency of dispatch, for example, by leading to the dispatch of plant with higher resource costs than would be the case if the distorted bids did not occur and by potentially encouraging new generators to locate in inappropriate areas.

The Stage 1 analysis, however, holds generator bidding behaviour constant. In particular, the AER indicators are limited by the underlying assumption that bids would be unchanged if constraints were removed. That is, bidding is held constant in both the constrained and unconstrained scenarios, ignoring changes in bidding if constraints are removed (or the prospect of their removal is perceived).

Neither the Biggar analysis, nor the NEMMCO analysis, calculates the economic dispatch cost of mis-pricing. That is, there is no assessment of how generators may have bid had they faced the correct locational price.

While the AEMC recognises that this is a limitation in the analysis undertaken, there does not appear to be any clear means by which this limitation will be addressed in the Stage 2 analysis. This creates a risk that the AEMC will focus its attention on the drivers for mis-pricing identified by NEMMCO (e.g. the introduction of fully optimized constraints and network outages) without the economic dispatch cost of mis-pricing ever being assessed.

Basis Risk

The AEMC’s explicit recognition in the Directions Paper that a reduction in dispatch risk could result in an increase in basis risk is supported. The existence of effective risk management products as an important pre-condition to options for the management of

congestion (including through boundary changes), It is also recognised in the Biggar analysis.

When the AEMC is considering options for a reduction in basis risk or improvements in the protections provided by risk management tools in the second stage of its analysis, it is important to ensure that explicit consideration is given to the delivered outcomes for end users. For example:

- Will the reduction or improved management of basis risk translate into more competitive prices for end-users, and can they be applied in a flexible manner to meet the needs of retailers and customers when contracting (i.e. to secure an appropriate combination of contract term and price).
- Will the instruments be used by participants to actively manage basis risk or be traded on a largely speculative basis (i.e. as the IRSR is anecdotally understood to have been used by many participants).

Other Issues

The assumptions underlying the analysis to date contain a number of express exclusions, some of which may be worthy of inclusion or explicit recognition in the Stage 2 analysis, such as:

- Other distortions on generator bidding behaviour – for example, whether specific recognition is required of jurisdictionally imposed environmental or energy purchasing schemes (e.g. ETEF and/ LEP) and whether these introduce a real or perceived risk to the management of inter-regional price differentials.
- Constraints associated with the implementation of network support agreements – the suggestion has been made that these should be ignored for the purposes of congestion analysis, primarily on the basis that network support is an efficient response to network congestion under the Regulatory Test. While supportive of network support arrangements as a means of addressing security and reliability issues, the question remains as to whether allocative efficiency is increased, given that network support is effectively displacing out of merit order generation (constraining on). The non-transparent nature of network support arrangements means that end-users can only assume that these arrangements (and the underlying operation of the generation and network assets) are being optimised. Further analysis may be required to ensure that these arrangements are indeed offsetting the inefficient outcomes of ‘mis-pricing’ and we would encourage the AEMC to examine this as network support arrangements can have unpredictable timing, length, their costs are not fully transparent nor is their use sufficiently competitively based.

Key Points for Consideration and Action

- The AEMC’s approach of justifying change against the NEM Objective through a comparison of the costs and benefits of each option against the *status quo* is

reasonable. That is, congestion should be material in order to justify a change to the NEM arrangements.

- The analysis to date is limited, however, by the failure to incorporate the impacts of changes to generator bidding behaviour under the various scenarios assessed (i.e. by holding generator bidding behaviour constant).
- This lack of analysis may adversely impact both the accuracy of the AEMC's assessment of the costs and benefits of the options for change, as well as establishment of the congestion counterfactual (i.e. the *status quo*) against which it will be compared.
- There is a risk that, in its Stage 2 analysis, the AEMC will focus its attention on the drivers for mis-pricing identified by NEMMCO (e.g. the introduction of fully optimized constraints and network outages) without the economic dispatch cost of mis-pricing ever being assessed.
- This may result in the pursuit of options for change (incremental or fundamental) that are ineffective at addressing physical and financial risks associated with congestion.
- The extent to which generator behaviour is distorted in response to constraints should be tested by the AEMC in its Stage 2 analysis and, to the extent possible, be quantified.
- The recognition that a reduction in dispatch risk could result in an increase in basis risk is supported. Effective risk management products are an important pre-condition to any change in the management of congestion.
- When determining whether the risk management tools/products are 'effective', consideration should be given to the delivered outcomes for end-users.

It is important to consider these matters as end users are unlikely to benefit from changes to the arrangements for managing congestion on the basis of some 'indicators', which affects the credibility of the review and may merely result in another review of the issue some time in the future.