


Dr J Tamblyn
Chair
Australian Energy Market Commission
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Dear Dr Tamblyn 

National Electricity Rules – Rule Change Request Reform of Regional Boundaries

In accordance with s.91 of the *National Electricity Law* (NEL), the Ministerial Council on Energy (MCE) requests the Australian Energy Market Commission (AEMC) to make a Rule change to implement the revised regional boundary structure and change criteria.

In its report to the Council of Australian Governments (COAG) of December 2003 the MCE agreed to a package of transmission reforms, including a new and more transparent process for the assessment of regional boundary changes for the wholesale market. The expectation is that these reforms would facilitate investment in and more efficient operation of the National Electricity Market (NEM).

In addition to setting out the MCE's views on Regional Boundaries, the 20 May 2005 Statement on NEM Electricity Transmission noted that the MCE initiated Rule change on Regional boundaries would establish:

- the frequency of, and process for regional boundary changes, including the thresholds which will trigger a review; and
- the boundary change criteria as forward looking and economically based, with consistency between the criteria for regional boundaries and transmission investment assessment.

Further to the guidance provided in the MCE report to COAG, the MCE Statement on Electricity Transmission and the Charles river Associates (CRA) Regional Structures Report, a description of the proposed rule, statement of the issues concerning the existing rules, and how the proposed rule addresses those issues consistent with the NEM objective is at **Attachment A**. A draft of the proposed rule is at **Attachment B**.

The MCE would be pleased if you could have these matters considered by the AEMC. For further details, please do not hesitate to contact Loretta Boman on (07) 3225 8207.

Yours sincerely

A handwritten signature in black ink, appearing to read "Ian Macfarlane". The signature is fluid and cursive, with a long horizontal stroke at the end.

Ian Macfarlane

Rule change request on Reform of Regional Boundaries

Role of Regional Boundaries in the Rules

Clause 3.5 of the Rules divides the NEM into regions. The purpose of this division is to allow market prices to reflect the effect of significant “pinch-points” that lead to congestion in the transmission network. Congestion arises when parts of the network become fully loaded. Regional boundaries facilitate the price rationing of transmission resources where generation and demand patterns require more capacity than is available from the transmission system.

Background to Policy Position

The boundary change process contained in the existing National Electricity Rules (the Rules) is technical and arbitrary, and does not necessarily provide the optimal boundary solution on an economic basis. The current boundary change process also provides inadequate guidance on the weighting of each criteria. There is therefore the potential for a region to be formed that would result in a negative net economic benefit for the NEM. The initial boundary change process also allowed boundaries to be reviewed and changed on a regular basis. This created unnecessary risk and uncertainty for industry resulting in an increased cost to business and reduced efficiency for the industry as a whole.

As an interim measure to provide market certainty, NEM Ministers placed a moratorium on making boundary changes in the NEM until a revised boundary change process and criteria was developed.

In December 2003 the MCE agreed that a new and more transparent process, managed by the AEMC, was required to enable assessment of regional boundary changes for the wholesale market, while maintaining jurisdictional boundaries for retail customer pricing, to facilitate investment and more efficient operation of the NEM.

In 2004 the MCE commissioned an independent economic study by Charles River Associates (CRA) to develop the criteria and process for boundary changes and initial boundary change options. The report provided by CRA is publicly available on the MCE website. On 20 May 2005 the MCE issued a statement on electricity transmission setting out its views on regional boundaries, based on the findings by CRA, as follows.

- The MCE agreed that the regional structure for the wholesale market should be stable, based on current boundaries and with robust economic criteria to support incremental change as required.
- The MCE accepted CRA’s advice that no material efficiency benefits would be gained from a nodal pricing approach at this stage of market development.
- The MCE supports giving advanced notice of a boundary change to allow registered participants the opportunity to adjust their contract trading positions and minimise their commercial risk.
- The MCE notes the relationship between regional boundary review/change processes and the regulatory test, congestion management and the Last Resort Planning Power.

Statement of issues concerning the existing Rules and how the proposed Rule addresses this issue.

Frequency of Regional Boundary Reviews

The existing process includes annual boundary reviews. Regional boundary reviews can create uncertainty for market participants entering into financial contracts within and across regional boundaries. This is because the basis upon which contract terms are agreed between parties can be affected by changes to pricing boundaries along the transmission network. In this respect the threat of a regional boundary review may have an impact on potential investors and investment financiers.

Two options have been canvassed by the MCE: periodic reviews coinciding with the transmission regulatory revenue reset period (5 yearly); or boundary review by application.

Both options have potential advantages and drawbacks. A primary consideration under the 'application' route is the potential for market participants to use a review by application as a gaming mechanism. Participants may submit an application for regional boundary review in order to maintain commercial advantage by creating uncertainty for potential network or generation investors.

A periodic review may enable identification of regional boundary changes that fulfil the economic criteria but have not been the subject of an application. A periodic review would mitigate the potential for industry gaming by removing the capacity for applications based on self interest. However periodic reviews impose a recurrent cost (which may be unnecessary if a change is not justified) and create cyclical uncertainty for industry.

The MCE considers that regional boundary reviews should be conducted on application. There will be no distinction between NEMMCO and other parties in bringing forward an application for review. The issue of gaming would be mitigated by the extent to which boundary review processes link to other mechanisms including the Last Resort Planning Power, the Regulatory Test, the ANTS and the arrangements for congestion management.

The AEMC would have the power to reject an application for review where:

- the economic criteria for a regional boundary change are unlikely to be met;
- a committed investment proposal has been shown to address the constraint;
- the ANTS has not identified the constraint as material and enduring;
- the congestion management regime has not identified the constraint as commercially material and enduring, [and/or];
- an application of the Last Resort Planning Power (LRPP) has identified a project as passing the regulatory test and that project is committed.

Where the AEMC has not received an application involving an identified material and enduring [5 years] congestion point the AEMC may initiate a review provided the rejection conditions set out above are not breached.

Process for regional boundary change

It is the view of the MCE that the regional structure for the wholesale market should be stable, with robust economic criteria to support incremental change as required. The MCE accepts the advice of CRA that no material efficiency benefits would be gained from a nodal pricing approach at this stage of market development.

Regional boundary changes themselves create uncertainty for market participants and investors. As a result it is envisaged that regional boundary changes should only occur where material congestion is enduring and investment solutions have not been forthcoming.

The AEMC should consider the role of a congestion management regime to manage material congestion until investment, a change in market conditions or a regional boundary change addresses that congestion. To this end the AEMC should clarify the procedural order of regional boundary reviews within the broader investment framework, including the relationship between regional boundary arrangements, the regulatory test, congestion management and the LRPP.

The following process is envisaged:

1. A congestion management regime is applied where material congestion emerges. The regime would facilitate efficient asset utilisation and investment decisions to mitigate rather than contribute to network congestion.
2. Where network congestion is commercially material (ie priced by a congestion management regime) and enduring (ie has been flagged in the latest two ANTS publications), and has not been addressed by investment, it may be appropriate in this instance that the AEMC invoke its LRPP.
3. Where the AEMC has applied its LRPP and no investment proposal addressing the congestion has been committed for completion within [2] years, a regional boundary review may follow (this does not involve a determination of a *region change* by the AEMC but a review to determine whether a *region change* meets the criteria in 3.5.2(c)).

A congestion management regime would signal the commercial impact of congestion not priced by a regional boundary. Where those commercial signals are material and enduring, the AEMC should factor these signals into any assessment against the economic criteria for a regional boundary change.

The boundary change process should include sufficient lead times to address commercial and economic considerations emerging from a change to the regional boundary. Compared to the dynamic approach envisaged in the current Rule provisions, a more stable regional boundary review and change process, supported by a congestion management regime, would provide market participants with a higher level of certainty and would allow participants and intending participants to better manage commercial risk.

The MCE considers it important that the AEMC, in conducting any boundary review, explore all boundary change options and variations to determine the configuration which best delivers the market objective, including maximising the net economic benefits required under the regional boundary change criteria.

Change Criteria

The MCE considers that the criteria to amend boundaries should be forward looking and economically based. A net improvement to the efficiency of dispatch is considered a reasonable basis for the revised criteria. There should be consistency in the economic criteria used for assessing regional boundary changes and for assessing transmission investment.

The MCE considers that the economic criteria and thresholds identified in the CRA report should be adopted by the AEMC as a starting point for consultation. The criteria should ensure that any net increase in economic efficiency is material and enduring. The MCE considers an appropriate efficiency benefit would be in the order of [\$xxxx] or [x%] of gross value of energy traded in the market, as determined by the AEMC for inclusion in the Rules. The AEMC should be guided by the outcome of the consultation process when setting definitive thresholds. Therefore such appropriate variations are within the scope of this Rule change request.

Description of proposed Rule

The proposed rule will keep the essential features of what a region does, replicating the essential features of current clauses 3.5.1(a), 3.5.1(c) and 3.5.1(d) with the exception that regional boundary changes are no longer recommended by NEMMCO. To clarify what the existing boundaries are the rule would also use a list published by NEMMCO in the List of Regional Boundaries and Marginal Loss Factors for the 2005/06 Financial Year.

Instead of the process set out in 3.5.1(b) a new process for the change of regional boundaries will be created to achieve the policy objectives defined above (the region change process). After a region change has taken place the rule will also set out a process to review whether that change was successful (the review process).

The Region Change Process

The region change process will involve:

1. A Registered Participant or NEMMCO applying to the AEMC for a *region change*;
2. That application should contain a detail description of the change, detailed reasons for making the rule change, technical details and the name of the applicant;
3. An application could be rejected by the AEMC where it lacked detail or was misconceived or lacking in substance (including where it is designed to discourage investment proposals). Applicants would be informed of this in writing.
4. The AEMC would notify a compliant application to the public, calling for submissions within 40 days and invite registered participants or interested parties to call a hearing within 7 days of the notice.
5. The AEMC would issue a draft determination considering any submissions and alternative boundary configurations. This would also invite a further round of submissions within 40 days.
6. The AEMC would then make a final determination setting out its reasons and findings.
7. The region change would come into effect 3 years after the final determination.

However, unless the AEMC's considers material change(s) have occurred since a previous application, an application may not be made within 5 years after an unsuccessful application seeking the same or a substantially similar region change.

The test for whether the region change will be made will depend on whether the region change is likely to result in a material and enduring net economic benefit to all those who produce, consume, and transport electricity. The AEMC would also have regard to the transparent and consistent application of the process across the market and the extent to which the benefits could better be achieved by alternative mechanisms provided for in the Rules or a similar region change. The NEL requires the AEMC to have regard to the National Electricity Market Objective in making this decision.

Submissions on the published application may suggest similar and/or alternative boundary changes that might better meet the test for making a boundary change. The AEMC will be empowered to make that change if it better meets the region change criteria.

The AEMC will be empowered to consider and report on possible boundary changes where:

- a constraint has been identified on a national transmission flowpath in an ANTS which the AEMC considers is material and enduring;
- the AEMC considers that it is unlikely an investment proposal will relieve that constraint within [2] years; and
- the constraint has not been considered as part of a *region change* under this clause in the previous [5] years.

Customer Pricing

In December 2003 the MCE agreed that jurisdictional boundaries should be maintained for retail customer pricing.

The proposed Rules are silent on the determination of customer price as the wider considerations of the different approaches to managing retail customer pricing and implications of each should be considered by the AEMC.

While not a Statutory requirement, the AEMC in exercising regulatory best practice should consult with the relevant jurisdiction(s) on managing retail customer pricing implications if the AEMC contemplates making a region boundary change that creates more than one region within a jurisdiction before making a final determination on the boundary.

The above provisions are core MCE policy and meet the MCE's objectives in revising the region boundary change process and criteria. A draft of the proposed Rules to be made is contained in **Attachment B**. These Rules contain considerably more detail than outlined in this paper and is provided to the AEMC as a basis for comment during consultation.

The proposed Rule should contain such other necessary consequential changes that the AEMC deems necessary in order to achieve the proposed reforms.

While the MCE has set down indicative timeframes in this Rule change request, the AEMC should be guided by the outcome of the consultation process when determining definitive timeframes in the final rule. Therefore such appropriate variations are within the scope of this Rule change request.

Why the proposed rule meets the national electricity market objective

This request for a rule change would better meet the NEM objective than the current Rules by:

Promotion of efficient investment

By their very nature, regional boundary changes impact on the commercial conditions for investment in transmission, demand and generation infrastructure. A stable regional structure is envisaged in which a regional boundary change is justified by the lack of an investment response to material and ongoing congestion. Regional boundary review applications should not provide an opportunity for disaffected parties to introduce risk to potential new investors. It is important that the AEMC therefore clarify the procedural order and trigger requirements for regional boundary reviews.

Promotion of efficient use of electricity services

Pricing the congestion creates commercial incentives for generators and loads to make efficient decisions about the location of their production and investment activities. If these decisions are appropriately coordinated with decisions about regulated network investment the overall delivered cost of electricity will be more competitive.

Long term interests of consumers

The long term interests of consumers will be enhanced through the promotion of efficient investment and operation of electricity infrastructure, including in generation, load and network services.

The draft rule procedurally allows consumers to ensure their long term interests are protected by involving them in the consultation process over regional boundary changes. An open and transparent process with the opportunity for submissions, public hearings and a reasoned decision will better reflect the structured and open decision making processes in the NEL.

The draft Rule focuses on the need for regional boundaries to maximise the net economic benefit to all those who produce, consume, and transport electricity.

Power to make the Rule

The AEMC has the power to make the requested rule under s 34(1)(a) of the NEL. It also falls clearly within the head of power in clause 9 of Schedule 1 of the NEL relating to the division of the national electricity market into regions for the purpose of the operation of the wholesale exchange operated and administered by NEMMCO which is given effect by s. 34(2) of the NEL.

Amendment to the National Electricity Rules

Reform of Region Boundaries

Replacement clause 3.5

Draft dated 3 August 2005

Delete the existing clause 3.5 and replace it with the following:

Regional Structure

3.5 Determination of regions and regional reference nodes

- (a) For the purpose of conducting the *spot market*, the *market* is to be divided into regions approved by the AEMC in accordance with clause 3.5 and as published by the AEMC in the South Australian Government Gazette.
- (b) The initial regions for the purposes of this clause 3.5 will be the regions published by NEMMCO in the List of Regional Boundaries and Marginal Loss Factors for the 2005/06 Financial Year.
- (c) Each *region* must have a single *regional reference node* which is to be deemed by NEMMCO to be a notional *busbar* at:
 - (1) a nominated major *transmission substation* located at or close to the largest *load centre* within the *region*; or
 - (2) where a *region* has no major *load centre* or there is some other reasonable cause for not defining a *regional reference node* at a particular major *load centre*, a nominated major *transmission substation* located at the largest *generation centre* within the *region*.
- (d) If NEMMCO, in its reasonable discretion, determines that the current location of a *regional reference node* materially fails to satisfy the objectives specified in clause 3.5.2(c) and is likely to continue to do so, NEMMCO may alter the location of a *regional reference node*:
 - (1) after consulting with *Market Participants* in accordance with the *Rules consultation procedures*; and
 - (2) with the approval of the AEMC.
- (e) Each *transmission network connection point* will be assigned by NEMMCO to a single *region* in a manner consistent with this clause 3.5.

3.5.2 Application for *region change*

- (a) A *Registered Participant* or NEMMCO may apply for a *region change* by following the process set out in this clause 3.5.2.
- (b) Unless, in the AEMC's reasonable opinion, material change(s) have occurred since the previous application, an application may not be made under this clause 3.5.2 within 5 years after an unsuccessful application seeking the same or a substantially similar *region change*.
- (c) The AEMC must make a determination to make a *region change* basing its determination on whether the *region change* is likely to result in a material and enduring net economic benefit to all those who produce, consume, and transport electricity. The AEMC must also have regard to:
 - (1) the transparent and consistent application of the process across the *market*; and
 - (2) the extent to which the benefits could better be achieved by alternative mechanisms provided for in the Rules or a similar *region change*.

Note: the AEMC must also have regard to the National Electricity Market Objective under section 32 of the National Electricity Law.

- (d) An applicant that proposes a *region change* must lodge an application with the AEMC. The application must contain the following information:
 - (1) a detailed description of:
 - (i) the proposed *region change*;
 - (ii) the reasons for proposing the *region change*;
 - (2) all relevant technical details concerning the proposed *region change*; and
 - (3) a detailed analysis of whether the *region change* is likely to result in a material and enduring net economic benefit to all those who produce, consume and transport electricity.
 - (4) the name of the applicant.
- (e) If the AEMC considers that an application for a *region change* under this clause 3.5.2 does not contain the information prescribed by clause 3.5.2(d), the AEMC:
 - (1) may refuse to further consider the application until the information prescribed by clause 3.5.2(d) is provided; and
 - (2) must inform the applicant in writing of that refusal.

- (f) If the AEMC considers that an application for a *region change* under this clause 3.5.2 is misconceived or lacking in substance (including whether it is designed to discourage investment proposals) the AEMC:
 - (1) may refuse to further consider the application; and
 - (2) must inform the applicant in writing of that refusal.
- (g) If the AEMC receives an application for a *region change* under this clause 3.5.2 that in the opinion of the AEMC contains the information prescribed by clause 3.5.2(d), the AEMC must, as soon as is practicable after receiving the application, *publish* a notice of the application.
- (h) A notice *published* under clause 3.5.2(g) must:
 - (1) contain the information provided by the applicant under 3.5.2(g); and
 - (2) invite written submissions and comments by 40 *business days* after the date the notice is *published* on whether the *region change* should be made or whether a similar *region change* would better meet the criteria in clause 0; and
 - (3) invite written requests from any *Registered Participant* and any *interested party* within 7 days after the publication of the notice for the AEMC to hold a hearing in relation of the *region change* sought in an application.
- (i) The AEMC must hold a hearing if requested to do so under clause 3.5.2(h)(3) within 20 *business days* of receiving that request. The AEMC must *publish* notice of any hearing to be held under this clause 3.5.2(i) in a reasonable period of time prior to the hearing.
- (j) Before making a final determination under 3.5.2(c), but within 60 *business days* after the date specified in a notice under clause 3.5.2(h)(2), the AEMC must *publish* a draft determination in relation to the *region change* sought in the application considering any similar alternative *region change* raised in submissions under clause 3.5.2(h)(2).
- (k) A draft determination under clause 3.5.2(j) must contain the reasons of the AEMC as to whether it is satisfied the *region change* is likely to maximise the net economic benefit to all those who produce, consume, and transport electricity having regard to the objectives set out in clause 3.5.2(c);
- (l) A draft determination *published* under clause 3.5.2(j) must:
 - (1) invite written submissions and comments by the date specified in the draft determination, being a date that is not less than 40 *business days* after the date the draft determination is *published*; and
 - (2) include a statement to the effect that any *Registered Participant* or *interested party* may request, in writing within 5 *business*

days after the publication of the draft determination, the AEMC to hold a hearing.

- (m) The AEMC must hold a hearing if requested to do so under clause 3.5.2(l)(2) within 20 *business days* of receiving that request. The AEMC must *publish* notice of any hearing to be held under clause 3.5.2(l)(2) in a reasonable period of time prior to the hearing.
- (n) The AEMC must *publish* its final determination as to whether to make the *region change* sought in an application within 40 *business days* after the close of the period for written submissions in relation to the draft determination under clause 3.5.2(l)(1).
- (o) A final determination under clause 3.5.2(n) must contain the reasons of the AEMC as to whether it is satisfied the *region change* is likely to maximise the net economic benefit to all those who produce, consume and transport electricity having regard to the objectives set out in clause 3.5.2(c).
- (p) The *region change* will not take effect until three years after the date the AEMC *publishes* the final determination under clause 3.5.2(n).

Where:

- (1) a *constraint* has been identified on a *national transmission flowpath* in an ANTS which the AEMC considers as material and enduring; and
- (2) the AEMC considers that it is unlikely an investment proposal will relieve that *constraint* within two years; and
- (3) the *constraint* has not been considered as part of a *region change* under this clause in the previous 5 years;

the AEMC must consider whether a *region change* would be likely to meet the criteria in 3.5.2(c) and publish a report on its findings.

Chapter 10

Interested Party

In Chapter 3, a person including an end user or its *representative* who, in AEMC's opinion, has or identifies itself to AEMC as having an interest in relation to a *region change*.

region

An area determined by the AEMC in accordance with clause 3.5, being an area served by a particular part of the *transmission network* containing one or more major *load centres* or *generation centres* or both.

region change

The formation of a new *region* or regions, or the alteration of the boundaries of an existing *region* or *regions*.