Australian Energy Market Commission

Rule Determination

National Electricity Amendment (Abolition of Snowy Region) Rule 2007

Rule Proponent
Snowy Hydro Limited

30 August 2007

Signed: .....

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For and on behalf of
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AEMC 2007, *Abolition of Snowy Region*, Rule Determination, 30 August 2007, Sydney.

About the AEMC

The Council of Australian Governments, through its Ministerial Council on energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for national energy markets. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market. It is a statutory authority. Our key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

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Executive summary

This document is the final Rule determination on a Rule change proposed by Snowy Hydro Limited to abolish the current Snowy region of the National Electricity Market (NEM), by extending the boundaries of the existing New South Wales (NSW) and Victorian NEM regions (the Abolition proposal).

The NEM is a regional market. A price for wholesale electricity is calculated for each thirty minute trading interval for each of the six current regions: Queensland, NSW, Snowy, Victoria, Tasmania and South Australia. In general terms, all generators in a region are paid the regional reference price for the electricity they produce, and all loads in a region pay the regional reference price for the electricity they consume. Price differences between the NEM regions play an important role over time in providing locational signals for future investment in generation and transmission and signalling variations in the cost of supplying customers in different locations.

To achieve these locational signals and pricing effects generally speaking regional boundaries should be located at points of material and enduring network congestion. However, this is not the case in relation to the Snowy region. The network limitations between Murray and Tumut within the existing Snowy region give rise to a material and enduring constraint. This constraint provides Snowy Hydro with incentives to behave in ways that can result in inefficient market outcomes. A number of temporary ad hoc measures have been proposed and implemented in the Snowy region over recent years with the aim of addressing the issues raised by this congestion. For example, there is a trial currently in place, which adjusts the price received by Snowy Hydro's Tumut generator when the network is congested between Murray and Tumut (the Trial). Investment to relieve this transmission constraint is unlikely in the foreseeable future, meaning a permanent National Electricity Rule (Rule) or region boundary change is required to address the material and enduring congestion in the Snowy region.

The Abolition proposal represents one of three competing Rule change proposals considered by the Australian Energy Market Commission (the Commission), which seek to address the legacy congestion issue in the Snowy region. The other proposals are: a proposal submitted by Macquarie Generation Limited to split the current Snowy region into two regions (the Split Snowy Region proposal); and a proposal by the Southern Generators[a] to make permanent the congestion pricing arrangements currently being trialled in the Snowy region (the Southern Generators' Congestion Pricing proposal).

Since the three Rule change proposals are alternatives to address the same congestion problem, the Commission can only accept one of them. It has therefore jointly

[a] The group of generators known as the "Southern Generators" includes: Loy Yang Marketing Management Company, AGL Hydro, International Power, TRUenergy, Flinders Power, and Hydro Tasmania.

assessed the three alternative Rule change proposals. The Commission has today also published its draft Rule determination on the Split Snowy Region and Southern Generators' Congestion Pricing proposals.[b]

The Commission's assessment of these Rule change proposals has taken place against a background of a number of related reviews and Rule change proposals directed at ensuring an efficient, reliable, and secure power system in the NEM. The Commission will soon publish its draft Rule determination on the Ministerial Council on Energy's proposed process for region change, and its Draft Report following its review of congestion management in the NEM. The Commission has been careful to consider all its work on congestion in a holistic manner. This final Rule determination in respect of the Snowy region is an important step in addressing legacy congestion issues, establishing a robust starting point to which the congestion management regime can apply in the future.

The Commission has assessed the Abolition, Split Snowy Region and Southern Generators' Congestion Pricing Rule change proposals against the National Electricity Market Objective (NEM Objective) using the same set of criteria, and with reference to a common base case (the current regional boundary structure, without the current Trial).

All three Rule change proposals represent significant improvements on the base case. There is, therefore, a strong case for change. This finding accords with the generally held view that congestion in the Snowy region is a material legacy issue that warrants an enduring change to the Rules.

The Commission has decided that the Abolition proposal best promotes the NEM Objective, when compared to the alternative Rule change proposals and the base case.

When considered against the economic criteria, the Abolition proposal is superior to the alternatives. The Abolition proposal creates the strongest incentives for generators to bid in a more competitive way, in Snowy Hydro's case increasing it output at "super-peak" times. This behaviour reflects the change in the price risk faced by Snowy Hydro from trading across fewer region boundaries. The more competitive generator bidding improves dispatch efficiency and results in more cost-reflective spot prices. The Commission expects that the shorter term competitive benefits under the Abolition proposal will impact positively on contract markets, and provide clearer signals for efficient investment and consumption in the longer term, benefiting end-use customers.

In addition to the efficiency improvements resulting from the stronger competitive environment the Commission considers there are other benefits to implementing the Abolition proposal relative to the alternatives. A key consideration in this regard is

[b] AEMC 2007, *Split Snowy Region and Congestion Pricing and Negative Residue Management Arrangements for the Snowy Region*, Draft Rule Determination, 30 August 2007, Sydney.

the extent to which the Commission considers the Abolition proposal to represent the most proportionate and stable solution, relative to the alternatives. A proportionate response to the issues arising from the congestion in the Snowy region would address this major legacy congestion issue, without pre-empting possible responses to future congestion problems in the NEM. The Commission considers that the Split Snowy Region proposal adds complexity in the market arrangements (over and above the Abolition proposal) with no discernable additional benefits. The Commission considers that the Southern Generators' Congestion Pricing proposal, by extending the interim arrangements and effectively deferring consideration of region boundary change as a permanent long term solution, creates unnecessary uncertainty as to the long term development of the market. In the Commission's view, the situation of material and enduring congestion in the Snowy region is a clear example of when region boundary change in an appropriate regulatory response – and not acting accordingly could increase perceptions of regulatory risk.

The Commission has therefore decided to implement change to the Rules to give effect to the Abolition proposal. The amended region boundary configuration will take effect on 1 July 2008.

This final Rule determination is structured in two parts.

The first part presents the Commission's decision and summarises its assessment and reasoning in coming to that decision. Section 1 presents the Abolition Rule change proposal and Snowy Hydro's explanation as to how its proposal addresses the material and enduring problem of congestion in the Snowy region. Section 2 sets out the Commission's decision making framework and Section 3 sets out its consultation process. Section 4 presents the Commission's key findings and reasoning that informed its final decision on this Rule change proposal. Section 5 assesses the proposal against the NEM Rule making test and the NEM Objective. Section 6 discusses implementation issues and includes a description of the Rule to be made.

The second part consists of a series of appendices that present the Commission's detailed assessment of the three Rule change proposals and quantitative modelling analysis, summaries of submissions received on the three Rule change proposals, and provide background on the congestion issues in the Snowy region.

The Rule to be made is available on the Commission's website: www.aemc.gov.au.

1 The Rule change proposal

This Section describes the National Electricity Rule (Rule) change proposal received from Snowy Hydro Limited (Snowy Hydro) regarding the abolition of the Snowy region of the National Electricity Market (NEM). It presents the proponent's reasoning and analysis of the problem the proposal is addressing, the way in which the proposal addresses that problem, and how the proposed change advances the National Electricity Market Objective (NEM Objective).

1.1 Abolition of Snowy Region from Snowy Hydro Limited

On 11 November 2005, the Commission received a Rule proposal from Snowy Hydro regarding a change to the existing Victorian and New South Wales (NSW) region boundaries, which would effectively abolish the Snowy region of the NEM (Abolition proposal). Snowy Hydro submitted a revised Rule drafting on 22 December 2005. This revised Rule drafting replaced the original proposed Rule drafting included in Snowy Hydro's proposal of 11 November 2005.

The Abolition proposal is for a one-off change to the Snowy region boundary. The proposed new region structure would effectively abolish the Snowy region by altering the NSW and Victorian region boundaries, relocating Snowy Hydro's Upper and Lower Tumut generation to the NSW region and its Murray generation facility to the Victorian region. This proposed change to the region boundary would eliminate the current notional interconnectors between the Victoria and Snowy regions and the Snowy and NSW regions, replacing them with a single notional interconnector between Victoria and NSW.

Snowy Hydro stated that its proposal would address some of the detrimental impacts caused by the persistent and significant intra-regional congestion occurring within the Snowy region. In its proposal, Snowy Hydro stated that the Murray-to-Tumut transmission flow is the most problematic intra-regional constraint in the NEM. It noted that since 2002, the Murray–Tumut constraint has bound (i.e. the line flow reached its capacity limit) for a significant number of hours.[1]

Snowy Hydro argued that under the existing region structure, with the Tumut Constraint Support Pricing/Constraint Support Contract mechanism (Tumut CSP/CSC Trial) in place[2], the treatment of this Murray-Tumut constraint has led to economically inefficient outcomes. This is because generators based in the NSW region are encouraged to bid below their costs in order to be dispatched and receive the relatively high NSW price. On the other hand, Snowy Hydro's generation at Tumut cannot compete with these generators because Tumut's bids affect the price it receives under the Tumut CSP/CSC Trial.

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[1] Snowy Hydro Limited, Rule Change Proposal for the Snowy Region: Revision of Transmission Connection Nodes, Rule change proposal, 11 November 2005, p.3.

[2] Part 8 of Chapter 8A of the National Electricity Rules, clauses (e1) to (m).

In addition, Snowy Hydro faces incentives to limit the available capacity of its Tumut generation in order to gain access to (relatively high) NSW prices. Snowy Hydro stated that this has the effect of limiting available generation for the Victorian and South Australian regions, thereby increasing prices in these regions above what they would be otherwise. Snowy Hydro also argued that masking price signals leads to inefficient longer term generation and transmission investment decisions.[3]

Snowy Hydro recognised that the current derogation for the Tumut CSP/CSC Trial helped to restore efficient incentives for generation located at Tumut in the presence of network constraints between Murray and Tumut. However, Snowy Hydro noted that not only was the Trial set to expire on 31 July 2007, but that it did not address the issues associated with generation located at Murray,[4] nor the issue of intra-regional constraints deeper in the NSW network that affected the incentives of Tumut and the NSW generators.

Snowy Hydro considered that a region boundary change was the most appropriate long term solution to address these inefficiencies. Snowy Hydro also noted that because the Murray-Tumut constraint is located in the Kosciusko National Park, there was limited prospect of transmission investment (to increase the Murray to Tumut flow capacity) in order to alleviate the congestion.

Snowy Hydro acknowledged the Ministerial Council on Energy (MCE) Rule change proposal for revising the existing region boundary structure and change criteria. The MCE proposes a staged process to region boundary change involving transitional constraint management mechanisms and investigation of investment options prior to region boundary changes being considered. However, Snowy Hydro argued that the delay associated with this staged approach, which would mean that a region boundary change could not be implemented until 2010,[5] would mean that the inefficiencies created by the current regional topography would persist for an unnecessarily long period. Snowy Hydro considered that its Rule change proposal was complementary to the MCE's and that "the implementation of [its] Rule change [would] provide a sound basis of regional boundaries for future implementation of the MCE Rule change request".[6]

In its proposal, Snowy Hydro stated that it had also considered two alternative boundary changes.[7] These were either to either:

- split the current Snowy region by creating a new Tumut region with Murray remaining in the Snowy region (similar to the Split Snowy Region Rule change proposal as proposed by Macquarie Generation[8]); or

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3 Abolition proposal, Appendix B.

4 These issues are currently addressed by the derogation implementing the Southern Generators Rule, Part 8 of Chapter 8A of the Rules, clauses (n) to (p) inclusive.

5 Abolition proposal, p.1.

6 Abolition proposal, p.1.

7 Abolition proposal, p.4.

8 Macquarie Generation, "Rule change proposal to Establish New Snowy Regions", Rule change proposal, 5 March 2007.

- to create two new regions (Western NSW[9] and Northern Victoria[10]).

Snowy Hydro noted that a Tumut region would not meet the MCE's proposed criteria for regional boundaries as it would not contain any material load, and stated that the other option of two new regions was not viable in the short to medium term due to the profound market disruptions to most market participants. Snowy Hydro concluded that its proposal was the most viable configuration option because the disruption to hedging contracts would be minimised and Snowy Hydro will be the sole market participant directly affected by the change.

Snowy Hydro considered that its Rule change proposal would contribute to the NEM Objective by:

- reducing cost to customers by improving the incentives on Tumut to increase available generation and allowing Tumut generation to compete on a equal footing with the NSW "western ring"[11] generators;

- promoting efficient investment in transmission and generation by creating more transparent price signals, through aligning the regional boundaries with significant points of congestion; and

- contributing to the efficient pricing of electricity through improved congestion management and handling of loop flow.

Snowy Hydro proposed that the Rule change commence on 1 August 2007, coinciding with the end of the Tumut CSP/CSC Trial, and should follow a one-year implementation period to allow for the National Energy Market Management Company (NEMMCO) loss factor adjustment and system changes.

[9] The Western NSW region would include: Tumut generation; load centres at Wagga, Canberra, and Yass; and generation centres at Mt. Piper, Wallerawang, Bayswater, and Liddell.

[10] The Northern Victoria region would include Murray and Dederang connected generation and loads in northern Victoria.

[11] The western ring generators are those located around western NSW and include Mt Piper, Wallerawang, Bayswater, and Liddell.

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2 Commission's decision making framework

This Section describes the Commission's general approach for examining the Abolition proposal. It sets out the policy context for the Commission's considerations. It then outlines the Commission's considerations under the NEM Objective and the statutory Rule making test,[12] before providing the Commission's assessment framework for evaluating the Abolition proposal against the NEM Objective. Finally, this Section describes the alternatives considered by the Commission in its assessment of the Abolition proposal.

2.1 Policy context for decision making

The Commission's final Rule determination to accept the Abolition proposal has been made against a background of a number of reviews and Rule change proposals directed at ensuring an efficient, reliable, and secure power system in the NEM. The Commission has been conducting an extensive work program involving changes that will affect the efficiency of the market, transmission investment decisions, supply reliability and security of the power system, and relate to the reform of region boundaries and the management of congestion within the NEM. The program includes consideration of the:

- MCE's Rule change proposal on process for region change;
- Congestion Management Review reference from the MCE;
- National Transmission Planner reference from the MCE;
- Review of economic regulation of electricity transmission revenue and pricing Rules (the Chapter 6 Rule proposal);
- MCE's Rule change proposal on Last Report Planning Power;
- MCE's Rule change proposal on the Review of Regulatory Test principles; and
- Comprehensive Reliability Review.[13]

Furthermore, the Commission has issued determinations on a number of Rule changes relating to issues associated with the Snowy region. These include the making the Rule determination on the management of negative residues in the Snowy region (the "Southern Generators Rule")[14] and final Rule determination on the management of negative residues by re-orientation.[15] In addition, the

[12] Section 88 of the National Electricity Law (NEL).

[13] Appendix H provides a summary of these related reforms.

[14] AEMC 2006, Management of negative settlement residues in the Snowy region, Final Rule Determination, 14 September 2006, Sydney. Available on AEMC website.

[15] AEMC 2006, Management of negative settlement residues by re-orientation, Final Rule Determination, 9 November 2006, Sydney. Available on AEMC website.

Commission also made a Rule on the Recovery of Negative Inter-regional Settlements Residue.[16]

The Commission considers that the above reviews and Rule changes are inter-related and complementary. The Commission recognises the importance of ensuring work in these areas is co-ordinated and ensuring the development of a coherent set of arrangements for the NEM. In its "Congestion Management Program – Statement of Approach – December 2006"[17] the Commission set out its integrated approach for considering these related reforms.[18]

The Commission also noted in its December 2006 Statement of Approach that the NEM is characterised by a small number of "legacy" congestion issues. The congestion issues arising from transmission network limits within the Snowy Region, where the building out of transmission constraints is unlikely in the foreseeable future, are an example of these legacy issues.[19] The Statement of Approach indicated that the Commission would address these issues as a matter of priority, while recognising that any legacy issues must be resolved within an overarching and coherent framework for managing congestion in the NEM.

The Commission has received three Rule change proposals concerned with addressing the legacy congestion issues in the Snowy region. In addition to the Abolition proposal, the Commission received two alternative Rule change proposals: the Macquarie Generation "Split Snowy Region" proposal and the Southern Generators[20] "Congestion Pricing and Negative Residue Management Arrangements for the Snowy Region" proposal. These alternative proposals are described in more detail in Section 2.4.

Having three alternative proposals for addressing congestion issues in the Snowy region has implications for the way the Commission considers these proposals against the NEM Objective and how it applies the Rule making test, as discussed in Section 2.2. This final Rule determination presents the Commission's decision on the most appropriate response to address the Snowy region legacy issues.

2.2 Role of NEM Objective and Rule making test

The Rule making test is set out in s.88 of the NEL. In applying the Rule making test, the Commission is only able to make Rules if:

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16 AEMC 2006, Recovery of Negative Inter-regional Settlements Residue, Final Rule Determination, 30 March 2006, Sydney. Available on AEMC website.

17 AEMC 2006, "Congestion Management Review – Statement of Approach – December 2006", 7 December 2006, Sydney. Available on AEMC website.

18 The December 2006 Statement of Approach superseded the Commission's previously released "Congestion Management Program - Statement of Approach – June 2006".

19 Background on congestion issues in the Snowy region is presented in Appendix D.

20 The group of generators known as the "Southern Generators" includes: Loy Yang Marketing Management Company, AGL Hydro, International Power, TRUenergy, Flinders Power, and Hydro Tasmania.

"(1) It is satisfied that the Rule will or is likely to contribute to the achievement of the national electricity market objective.

(2) For the purposes of subsection (1), the AEMC may give such weight to any aspect of the national electricity market objective as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles."

The NEM Objective, as set out in s.7 of the NEL, is to:

"Promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system."

In applying the Rule making test and considering the achievement of the NEM Objective, the Commission may give weight to any such aspect of the NEM Objective as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles.[21]

The likely economic efficiency effects of a proposal on the market are an important element of promoting the NEM Objective. Economic efficiency is commonly defined as having three elements:

- Productive efficiency – meaning the electricity system is operated on a "least cost" basis given the existing and likely network and other infrastructure. For example, generators should be dispatched in a manner that minimises the total system costs of meeting consumers' demands;
- Allocative efficiency – meaning electricity production and consumption decisions are based on prices that reflect the opportunity cost of the available resources; and
- Dynamic efficiency – meaning maximising ongoing productive and allocative efficiency over time, and is commonly linked to the promotion of efficient longer term investment decisions.

The Commission has taken the view that the NEM Objective is not solely focussed on an economic approach to the promotion of efficiency. Rather, the NEM Objective has implications for the means by which regulatory arrangements are designed and operate as well as their intended ends. This means that the Commission also seeks to promote stability and predictability of the regulatory framework. This, in turn, means that the Commission will seek to:

- Promote transparency and predictability in the operation of the NEM – to the extent that intervention in the market is required, it should be based on, and applied according to, transparent criteria;

[21] Section 88(2) of the NEL.

- Promote a proportionate response to the problem identified – a proportionate response should seek to address the most material and enduring problem but should not try to address smaller less-material problems, possibly pre-empting other market-based responses; and

- Promote changes that are likely to be robust over the longer term – other things being equal, the Rules for the dispatch and pricing of the market should be sufficiently stable and predictable to enable participants to plan and make both short and long term decisions.

These requirements are founded on the principles of good regulatory design and practice, which the Commission believes is central to its task in furthering the NEM Objective.

The NEM Objective requires the Commission to consider the likely effect of a Rule proposal on the quality, security, and reliability of the national electricity system. The Commission will carefully consider Rule proposals that may have implications for these important factors.

The Commission notes that proposed Rule changes may have distributional impacts. The Commission considers that the NEM Objective is primarily concerned with efficiency and good regulatory practice. These qualities will help ensure that the arrangements will benefit consumers in the long term. Rather than seeing distributional outcomes as a distinct limb of component of the NEM Objective, the Commission has taken the view that distributional outcomes have relevance only in so far as they may negatively influence the stability and integrity of the market arrangements. Basing fundamental decisions on the operation of the market primarily on distributional criteria rather than efficiency and good regulatory practice is likely to be counter-productive to the interests of consumers in the long term.

As described above, the Abolition proposal is one of three alternatives to address the same congestion problem in the Snowy region. Since the proposals are alternatives, the Commission can only accept one of them. In deciding to make the Abolition of Snowy Region Rule instead of either of the alternative proposals, the Commission is satisfied that the Abolition proposal not only contributes to the NEM Objective, but that it contributes to the NEM Objective better than either of the two competing proposals.

2.3 Commission's approach and assessment framework

To assess proposals against the NEM Objective, the Commission adopts a rigorous approach in evaluating Rule change proposals involving the following steps:

- Clearly describes the problem(s) to be addressed to ensure the Commission has a clear understanding of what problem(s) the proposal is trying to address in order to develop an appropriate assessment framework;

- Assesses the materiality of these problems to ensure that the uncertainty that inevitably follows a Rule change process is justified because of the severity of the problem;

- Identifies any competing formal Rule change proposals that intend to address the same problem(s), so that they can be concurrently assessed against the NEM Objective, if appropriate;

- Applies well-developed and accepted economic analysis to evaluate the effects of the proposal, supported by empirical modelling where appropriate; and

- Seeks stakeholder views on the Commission's characterisation of the problem, assessment of materiality, approach for analysing the merit of the Rule change proposal, and ultimately, the Commission's assessment of the merits of the proposal as evaluated against the NEM Objective.

In particular, to assess the Abolition proposal and the two alternative proposals against the NEM Objective, the Commission has informed its decision by considering the following:

- The likely effect of the proposal on the economic efficiency of market dispatch;

- The likely effect of the proposal on inter-regional trading and risk management – which may affect the competitiveness of the market and allocative and dynamic efficiency in the future;

- The likely pricing outcomes and participant responses – in that pricing outcomes may have implications for allocative and dynamic efficiency in the future;

- The likely effects of the proposal on power system security, supply reliability, and technical issues;

- Whether the proposal is consistent with principles of good regulatory practice;

- The likely long term implications of the proposal and its consistency with public policy settings, particularly any MCE policy statements; and

- The likely timing and cost of the proposal and any other implementation issues.

This final Rule determination sets out the Commission's analysis and conclusions on Snowy Hydro's Abolition Rule change proposal and the two alternatives, based on the decision criteria set out above. In Appendix A, the Commission sets out its more extensive assessment and reasoning on these three proposals.

2.4 Proposals assessed

As noted above, while considering the Abolition proposal, the Commission concurrently assessed and compared two alternative Rule change proposals intended to address constraints in the Snowy region, one from Macquarie Generation and the other from the Southern Generators. The Commission took this approach to enable it to identify which alternative better meets the NEM Objective in all circumstances. The Commission's draft decision on the two alternative proposals is presented in a

single draft Rule determination also published on 30 August 2007.[22] To provide a common reference point for the Abolition proposal and the two alternative proposals, the Commission assessed all the proposals against the same base case. A description of the base case and the alternative proposals is provided below.[23]

2.4.1 Base case

The purpose of the base case scenario is to provide a reference point to assess the potential effect that implementation of the Abolition proposal may have on the NEM. In particular, the comparison between the base case and the Abolition proposal should reveal if generator incentives change as a result of a region boundary change, and if so, the effect that may have on the market.

The base case is common across the Commission's assessment of the Abolition proposal and the two alternatives. This provides a common reference point to not only assess each proposal against the NEM Objective, but also a common reference point for comparison of the proposals against each other.

The base case chosen reflects the market under a "do nothing" approach. It retains the existing Snowy region boundaries and the Snowy regional reference node (RRN) at Murray. It allows the expiry of the interim arrangements currently managing congestion in the Snowy region, i.e. the Tumut CSP/CSC Trial and the Southern Generators Rule. It reinstates NEMMCO's intervention power to manage negative settlement residues on the Victoria-to-Snowy and Snowy-to-NSW interconnectors through "clamping" flows or "re-orientation".[24]

2.4.2 Macquarie Generation "Split Snowy Region" Rule change proposal

On 5 March 2007, Macquarie Generation requested that the Commission formally consider a Rule change proposal to split the existing Snowy region into a southern Murray region and a northern Tumut region ("Split Snowy Region proposal").

Macquarie Generation stated that the basic problem in the Snowy Region was caused by the transmission system between Tumut and Murray generation. It identified that the intra-regional congestion in and around the Snowy region created incentives for Snowy Hydro to "bid its generation into the market below cost, resulting in inefficient dispatch and reduced levels of inter-regional trade."[25] This, Macquarie Generation stated, also led to counter-price flows between regions and calls for short term measures to manage negative residues.

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[22] AEMC 2007, *Split Snowy Region and Congestion Pricing and Negative Residue Management Arrangements*, Draft Rule Determination, 30 August 2007 Sydney.

[23] For a more detailed description of these alternative proposals, see AEMC 2007, *Split Snowy Region and Congestion Pricing and Negative Residue Management Arrangements*, Draft Rule Determination, 30 August 2007 Sydney.

[24] NEMMCO's power to manage the accumulation of negative settlement residues is set out in clause (c) of Part 8 of Chapter 8A of the National Electricity Rules (Rules). NEMMCO's procedure for managing negative residues is set out in its "Operating Procedures – Dispatch: SO_OP3705".

[25] Split Snowy Region proposal, p.1.

To address this problem, the Split Snowy Region proposal prices congestion across the Murray-Tumut cutset using a region boundary. It retains, however, the existing region boundaries north of Tumut and south of Murray. This splits the existing Snowy region into two new regions — a Tumut region, with Lower Tumut as the RRN and a Murray region, with Dederang as the RRN. The Split Snowy Region proposal creates a new Murray-Tumut interconnector, with the existing Victoria-Snowy and Snowy-NSW interconnectors renamed the Victoria-Murray and Tumut-NSW interconnectors. Congestion across the Murray-Tumut cutset is now reflected in the price differences between the Murray and Tumut regions.

Lower Tumut was chosen at the Tumut RRN as it was the node with the largest generation capacity. Dederang was relocated from the existing Victorian region into the new Murray region so it could be used at the RRN. This was to address the problem of counter-price flows between the Victorian and Murray regions when the new Murray-Tumut interconnector bound.

2.4.3 Southern Generators' "Congestion Pricing and Negative Residue Management Arrangements for the Snowy Region" Rule change proposal

On 15 March 2007, the Southern Generators submitted a Rule change proposal to the Commission, formally proposing a continuation of the current Tumut CSP/CSC Trial and the Southern Generators Rule ("Southern Generators' Congestion Pricing proposal"). On 13 April 2007, the Commission received a further submission from the Southern Generators containing the results of the modelling that supplemented their Rule change proposal.

The Southern Generators proposed to incorporate into the body of Chapter 3 of the Rules the current CSP/CSC trial at Tumut and the Southern Generators Rule (to manage negative settlement residues in the Snowy Region) rather than have them operate as a temporary arrangement under the derogation in Part 8 of Chapter 8A of the Rules, which must have an expiry date. By making these components of the Part 8 derogation a permanent part of the Chapter 3 Rules, the proposal seeks to replace the existing sunset provision with a conditional clause enabling these components to fall away should a region boundary change render them unnecessary.

This proposal reflects the arrangements currently in place. It retains the existing region boundary structure and the current Snowy RRN. It uses a congestion pricing mechanism to price the congestion between Murray and Tumut when the Murray-Tumut constraint binds, the Tumut CSP/CSC Trial. Under the Trial, when the constraint binds Tumut generation is settled at the Tumut node, rather than the Snowy RRN, through an adjustment payment intended to reflect the impact of congestion on the value of electricity produced at different points in the network. When the constraint is not binding, Snowy Hydro's Tumut generation is settled at the Snowy RRN.

The Southern Generators Rule component of this proposal replaces NEMMCO's "clamping" intervention to manage the accumulation of negative residues between the Victorian and Snowy regions with an alternative funding mechanism.

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3 Consultation process

This Section describes the consultation process for considering the Abolition proposal. It begins by considering statutory consultation periods, before outlining the additional consultation undertaken in the Commission's assessment of the proposal.

3.1 Summary of statutory consultation periods

Table 3.1 below presents the Commission's statutory decisions in relation to the Abolition proposal. Reasons for the extensions are presented in Table 3.2.

All submissions relating to this proposal are available on the Commission's website (www.aemc.gov.au). A summary of all submissions received is provided in Appendix C.

Table 3.1: Abolition of Snowy Region - consultation dates

Stage of consultation	Notice type	Date of notice	Submissions close/ Publication date
First round consultation	s.95	12 January 2006	10 March 2006
Extension first round consultation	s.107	16 February 2006	24 March 2006
Extension publication Draft Rule Determination	s.107	18 May 2006	11 August 2006
Extension publication Draft Rule Determination	s.107	10 August 2006	15 December 2006
Extension publication Draft Rule Determination	s.107	14 December 2006	25 January 2007
Publication of Draft Rule Determination – second round consultation	s.99	25 January 2007	9 March 2007
Notice of Consultation Forum on Draft Rule Determination		1 February 2007	N/A
Extension second round consultation	s.107	8 March 2007	30 April 2007
Extension publication Final Rule Determination	s.107	10 May 2007	30 August 2007
Publication Final Rule Determination	s.102	30 August 2007	N/A
Making and commencement of National Electricity Amendment (Abolition of Snowy Region) Rule 2007	s.103	30 August 2007	N/A

Table 3.2: Abolition of Snowy Region - reasons for timeframe extensions

Date of notice	Reasoning
16 February 2006	This extension allowed concurrent consideration of the Abolition proposal and the alternative Macquarie Generation proposal, as first round consultation on the latter proposal commenced on the 16 February 2006. Aligning the consultation periods enabled the co-ordination of submissions on both proposals.
18 May 2006	This extended timeframe to publish the Draft Rule Determination allowed the Commission adequate time to carry out the modelling and analysis necessary to make its Draft Rule Determination.
10 August 2006	This further extension enabled the Commission to align its consideration of the proposal with components of the Congestion Management Review in order to deliver a comprehensive "Congestion Management Regime".
14 December 2006	The Commission decided to release separate draft Rule determinations on the Abolition and alternative Macquarie Generation proposals because the Commission's analysis of the Abolition proposal was well advanced and could be ready for decision earlier than the more analytically complex alternative Macquarie Generation proposal. The Commission considered it would be beneficial to undertake early consultation on the Abolition matter, pending release of the alternative Macquarie Generation Draft Rule Determination.
8 March 2007	The Commission decided to extend consultation on the Draft Rule Determination and Draft Rule on the Abolition of Snowy Region proposal because it would provide stakeholders: additional time to consider the complex and technical content contained in the Draft Rule Determination and draft Rule; and the opportunity to consider all the alternatives before the Commission, including the new Macquarie Generation proposal related to the Snowy Region.
10 May 2007	The Commission decided this extension to the publication date of the Final Rule Determination was in the best interests of consumers as it would provide interested parties with an opportunity to consider the interrelated issues associated with the Congestion Management Review, the MCE regional boundaries Rule change proposal and the various Rule change proposals in relation to the Snowy region boundary in an integrated manner.

3.2 Additional consultation

3.2.1 Proponent presentation

On 10 February 2006, Snowy Hydro gave a presentation to the Commission on its proposal. A copy of the presentation is available on the Commission's website (www.aemc.gov.au).

3.2.2 Information Disclosure Statement – 15 June 2006

The Commission recognised early that a thorough assessment of the Abolition proposal required modelling analysis. The Commission understood that modelling analysis to assess Rule change proposals is likely to generate interest amongst stakeholders in respect of both the type of quantitative modelling and the assumptions that underpin it. This is particularly the case in relation to complex

modelling exercises such as those designed to assess the impact of Rule change proposals on the technical efficiency of dispatch in the NEM.

On 15 June 2006 the Commission published an Information Disclosure Statement seeking comment on the modelling inputs and approach being adopted for the Snowy region boundary Rule change proposals. Submissions on this public consultation closed on 23 June 2006.

3.2.3 Consultation on implementation

The Commission wrote to NEMMCO on 12 July 2006 requesting advice and clarification on understanding what process must be undertaken in order to implement a region boundary change and how long that process would take. NEMMCO responded on 25 August 2006. The Commission asked for stakeholder comments on NEMMCO's response by 13 October 2006.

3.2.4 Information Disclosure Statement – 28 November 2006

On 28 November 2006, the Commission published an Information Disclosure Statement confirming it would not publish a draft Rule determination on the Abolition proposal on or before the 15 December 2006. This Statement was in response to an inquiry from NEMMCO regarding a potential clash in the timing of its Settlement Residue Auction on 15 December 2006 and the current publication date of the draft Rule determination on this Rule change proposal.

3.2.5 Consultation on draft Rule determination and Draft Rule – Consultation Forum

On 30 January 2007, the Commission announced its decision to hold a public Consultation Forum on its draft Rule determination and Draft Rule on the Abolition of Snowy Region. The Commission published a formal notice informing participants of the Consultation Forum on 1 February 2007. At the Consultation Forum, the Commission discussed its reasoning for the decision and elaborated on its modelling results. A copy of the Agenda and formal transcript of the proceedings is available on the Commission's website (www.aemc.gov.au).

3.2.6 Request for pre-determination hearing on draft Rule determination and Draft Rule

On 2 February 2007, the Southern Generators formally requested a pre-determination hearing on the draft Rule determination and Draft Rule on the Abolition of Snowy Region. The Commission considered the request and decided not to hold a hearing under the provisions of s.101 of the NEL. The reason for this decision was that the Commission had already decided on and announced the holding of a Consultation Forum on 22 February 2007. The Commission considered that the Consultation Forum provided the same stakeholder participation opportunities as a pre-determination hearing, and therefore, an additional hearing was not necessary. The Southern Generators' request and Commission's response are available on the Commission's website (www.aemc.gov.au).

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4 Summary of Commission's key findings and reasoning

This Section sets out the Commission's key findings and reasoning on the three Rule change proposals against the assessment criteria identified in Section 2. It begins by discussing the impacts of congestion on generator incentives and market outcomes, before outlining the case for change, and then considering the Rule change proposals against each of the assessment criteria in turn. More detail on the Commission's assessment and reasoning of the three Rule change proposals is presented in detail in Appendix A. Evidence and analysis informing the Commission's assessment is included in Appendices B to I.

4.1 The impacts of congestion

The three Rule change proposals all seek to address the congestion in the Snowy region by pricing its effect on the market. The different approaches each have implications for the extent and nature of the price and volume risks faced by participants. Before assessing the three Rule change proposals, this Section sets out how congestion affects pricing and volume risks.

The regional pricing structure of the NEM prices the congestion that arises between RRNs through differences in the regional references prices (RRP) at those RRNs. This regional pricing structure does not enable the explicit pricing of congestion within a region, however.

The NEM dispatch engine (NEMDE) dispatches generators based on a comparison between a generator's offer price and its hypothetical (or shadow) nodal price, which reflects the local demand and supply conditions. Congestion between a generator's location and its RRN can result in a divergence between the local shadow price and the RRP, the price at which the generator's output is settled. When the shadow nodal price and RRP diverge, this "mis-pricing" creates dispatch (volume) risk for generators because it can leave a generator exposed to:

- being dispatched and being settled at prices that do not meet its incremental costs (i.e. constrained-on); or
- missing out on being dispatched even though its offer price is below the RRP (i.e. constrained-off).

Mis-pricing resulting from intra-regional congestion can distort participant decision-making in both the short and long run. In the short run, mis-pricing can provide an incentive for generators to engage in non-cost-reflective "disorderly" bidding, such as bidding -$1,000/MWh or $10,000/MWh to avoid being constrained-off or -on, respectively, increasing the underlying resource costs of supply. In the long run, mis-pricing may distort investment technology, location and timing decisions for both supply and load.

In the NEM, participants can also face financial risks when congestion arises between regions. Participants contracting and trading between regions are exposed to "basis risk", that is the risk of price divergence between the price a participant is settled (its RRP) and the price its contract is referenced (the other region's RRP). Access to

mechanisms to manage this basis are important in promoting inter-regional trade, and therefore greater competition for contracts at RRNs. This is particularly relevant if greater pricing granularity is introduced as a means of more accurately pricing congestion.

One instrument for hedging the basis risk of inter-regional price separation in the NEM is the inter-regional settlement residue (IRSR) unit. IRSR units provide the unit holder access to a share in the positive settlement residues that accrue when electricity flows from lower-priced regions to higher-priced regions. However, IRSR units do not provide their holders with a "firm" hedge, in that the units may not yield a return that compensates holders for the full price difference between RRNs. This non-firmness may arise for several reasons, such as transmission outages (which reduce potential flows between regions), or because constraints elsewhere in the network lead to either counter-price flows on interconnectors or intervention by NEMMCO for non-system security reasons.

The degree of congestion pricing in the NEM can also have implications for emergence and exercise of transient market power. As more congestion is priced, generators will be settled at prices that more closely reflect their shadow nodal price. This can influence the competitive dynamics of how participants behave and affect dispatch and settlement prices. More granular pricing may reduce the effect that the exercise of transient market power has on prices faced by market participants in other locations. On the other hand, generators facing a local nodal price may find it profitable to withhold production (or maintain "headroom") in order manage their basis risk by preventing constraints from binding that might otherwise reduce their own settlement price. To the extent withholding occurs, it may diminish or reverse the productive and dynamic efficiency benefits of greater pricing granularity.

This analytical background sets the context for the Commission's assessment of these three Rule change proposals. The more congestion is accurately reflected in prices, the less mis-pricing and, therefore, dispatch risk for participants, reducing the perverse incentives for disorderly bidding. However, this can increase the level of basis risk for market participants to manage. On the other hand, less granular pricing can reduce basis risk for participants, but can increase dispatch risk. Given that price granularity is a distinguishing feature between the three Rule change proposals, the way in which participants respond to these different pricing and volume risks, and the implications for the competitiveness of the market, is of particular interest to the Commission. The Commission's assessment of the three Rule change proposals considers these trade-offs in reasoning which proposal is most likely to promote the achievement of the NEM Objective.

4.2 Case for a change

The Commission evaluated the Abolition proposal, the Split Snowy Region proposal, and the Southern Generators' Congestion Pricing proposal against a base case. This base case reflects the market under a "do nothing" approach. The Commission's assessment of the Abolition proposal and alternatives suggests that the "do nothing" base case is the worst outcome for the NEM.

First, it leaves a point of material and enduring congestion across the cutset between Murray and Tumut in the Snowy region unmanaged. As explained further in Appendix D, investment is unlikely to address this congestion in either the short or medium term. Network augmentation is unlikely due to the high market cost that would result from taking the lines out of service in order to upgrade them and the environmental issues associated with development in the national parks across which the Snowy region lays. Generation or load investment is equally unlikely due to the restrictions on developing such investments in the national parks.

Second, the bidding incentives generators face under the base case are likely to result in less efficient dispatch, more basis risk for particular participants, and less cost-reflective pricing, when compared to the market outcomes under the Abolition proposal or either of the two alternatives. Under the base case, Snowy Hydro has incentives to bid in a non-cost reflective manner, which may trigger market intervention by NEMMCO for non-power system security reasons (discussed in more detail below). Each of the three Rule change proposals alters the pricing and settlement arrangements for generators, and in particular Snowy Hydro, with the effect of changing their bidding incentives. Conceptual and quantitative analysis demonstrates that under each of the three Rule change proposals, generators face incentives to bid in a more cost-reflective manner, with consequential improvements in dispatch efficiency. This more competitive bidding also results in more cost reflective pricing, and a reduction in basis risk for particular participants, relative to the base case.

The non-power system security intervention by NEMMCO to manage the financial consequences of negative settlement residues is a third reason the base case is sub-optimal. As discussed in Appendix D, the network in the Snowy region contains a loop. When congestion arises on the lines between Murray and Tumut, the pricing at the various points (or nodes) around the loop reflects the pressure generation injected at each of those points places on the congested lines between Murray and Tumut. For northward flows, the price is lowest at the Murray node, which is also RRN for the Snowy region, because generation at Murray places the greatest pressure on the Murray-Tumut constraint. Under these conditions, the price in Victoria is higher than the price in Snowy. This results in counter-price flows, that is flows across the interconnector from a higher-priced region to a lower-priced region. While this outcome may result from economically efficient dispatch, the Rules provide NEMMCO with the power to intervene in market dispatch to prevent these counter-price flows and associated negative settlement residues. Similar issues can arise at times of congestion for southward flows. This intervention, which in turn has incentives for participant bidding, can result in less efficient dispatch outcomes when compared to the outcomes under the Abolition proposal and alternatives.

No submission promoted the base case as the preferred market structure going forward. In addition, participants at the Commission's Senior Industry Leaders Strategy Forum on 17 October 2006 strongly agreed that that network congestion in

the Snowy region was material and significant, and needed to be addressed immediately.[26]

For these reasons, the Commission considers there is a strong case to "do something" to address the material and enduring congestion in the Snowy region. The question then becomes whether any or all of the three alternative Rule change proposals currently before the Commission represent an improvement on the base case and if so, which is likely to better contribute to the achievement of the NEM Objective. The Commission's evaluation of the Abolition proposal and the alternatives under following assessment criteria informs the Commission's decision to accept the Abolition proposal over the two alternatives.

4.3 Economic efficiency of dispatch

Proposals that promote more cost-reflective bidding are likely to result in more economically efficient dispatch compared to proposals that do not support such incentives. All three Rule change proposals reduce the incentives for Snowy Hydro to bid in a way that results in NEMMCO intervention to manage negative settlement residues, resulting in an improvement in dispatch efficiency relative to the base case. However, the bidding incentives for Snowy Hydro's Murray and Tumut generators are different under the Abolition proposal compared to the Split Snowy Region and Southern Generators' Congestion Pricing proposals.

Under the Abolition proposal, when constraints bind between Snowy Hydro's generators and their new RRNs there will be mis-pricing, resulting in incentives for Snowy Hydro to engage in disorderly bidding (as discussed in Section 4.1). For example, when congestion arises between Murray and the Victorian RRN, the local value of output at Murray will be lower than the RRP. However, given Murray generation will be settled at the higher Victorian RRP, Snowy Hydro faces incentives to bid Murray generation into the market below cost in order to ensure it is dispatched and therefore earns the RRP. Similarly, when constraints bind between Tumut and the NSW RRN, Snowy Hydro faces incentives to offer its Tumut generation into the market below cost. The net effect of this mis-pricing, and the resulting disorderly bidding, on overall dispatch efficiency outcomes under the Abolition proposal is unclear from a conceptual analysis. This is an empirical question that has been informed by the Commission's quantitative modelling, discussed below.

The Split Snowy Region and Southern Generators' Congestion Pricing proposals both reduce Snowy Hydro's incentives to engage in disorderly bidding of Murray and Tumut generation by removing much of the risk of those plants being mis-priced. However, both these proposals introduce strong incentives for Snowy Hydro to maintain headroom, or prevent congestion, on all lines between its plant and the Victorian or NSW RRN, depending on the direction of flows. At times of northward flows if there are no constraints between Tumut and the NSW RRN, the price at the

[26] AEMC 2006, "Industry Leaders Strategy Forum – Summary of Discussion", Congestion Management Review, 17 October 2006. Available: www.aemc.gov.au.

Tumut RRN will be similar to the NSW RRP,[27] while if there is a constraint between Tumut and the NSW RRN, the price at the Tumut RRN will fall below the NSW RRP. Withholding output at Tumut at these times may reduce the risk of constraints binding between the Tumut RRN and NSW RRN during northward flows, increasing the likelihood of a relatively higher Tumut RRP.

Similar incentives for Snowy Hydro to bid in a way to prevent lines between its generation and the neighbouring RRN from constraining exist at times of southward flows, enabling Snowy Hydro to "import" the higher price from the neighbouring region. The incentives for Snowy Hydro to maintain headroom are driven by both the potential to maximise revenue across its generation output by accessing a relatively higher price, and the potential to manage basis risk by minimising inter-regional price separation (as discussed in Section 4.1 and 4.4). Once again, it is unclear from a conceptual analysis if these alternatives would lead to more efficient dispatch outcomes compared to the Abolition proposal. The Commission has undertaken quantitative modelling to inform its analysis.

The Commission's quantitative modelling, presented in Appendix B, demonstrates that while all the proposals result in dispatch efficiency improvements relative to the base case, the Abolition proposal produces the most efficient dispatch outcome. Compared to the base case and the alternatives, the Abolition proposal resulted in an increased level of competition, with sustainable bidding patterns involving participants offering almost all their capacity into the market, maximising dispatch efficiency. By pricing Murray and Tumut generation at the Victorian and NSW RRNs, respectively, the Abolition proposal promotes incentives for Snowy Hydro to maximise its production by bidding competitively. In contrast, Snowy Hydro faces incentives to withdraw capacity in order to maintain headroom at times under the Southern Generators' Congestion pricing and Split Snowy Region proposals, resulting in less efficient dispatch outcomes when compared to the outcomes under the Abolition proposal.

Submissions were divided on the likely effect of the alternative Rule change proposals on dispatch efficiency. Several submissions supported the conclusion that the Abolition proposal was likely to result in the greatest improvement in dispatch efficiency. However, some submissions submitted that the Split Snowy Region proposal was likely to result in greater efficiency improvements than the Abolition proposal by avoiding the creation of remote intra-regional generators. As discussed in more detail in Appendix A, the Commission does not believe that there is evidence to suggest the removal of existing regional boundaries under the Abolition proposal will result in substantial intra-regional constraints in the near term.

Having regard to conceptual and quantitative analysis and submissions, the Commission concludes that the economic efficiency of dispatch benefits resulting from the more competitive environment under the Abolition proposal are greater than those under the Split Snowy Region and Southern Generators' Congestion Pricing proposals.

[27] The difference between RRPs at these times will reflect dynamic inter-regional loss factors.

4.4 Inter-regional trading and risk management

As discussed in Section 4.1, pricing congestion by introducing greater pricing granularity may increase generator basis risk. However, this increase in basis risk may in turn be offset by an increase in the availability and firmness of the instruments to hedge basis risk.

The Abolition proposal minimises the basis risk for Snowy Hydro compared to the alternatives. Under the Abolition proposal, Snowy Hydro's Murray and Tumut generation are able to offer contracts at the Victorian and NSW RRNs, without the risk of price separation, reducing its basis risk compared to the alternatives. In contrast, the increase in pricing granularity under the Split Snowy Region and Southern Generators' Congestion Pricing proposals is likely to increase Snowy Hydro's basis risk.

The reduction in basis risk under the Abolition proposal is likely to improve Snowy Hydro's incentives to offer more competitively priced contracts at the NSW and Victorian RRNs compared to the alternatives. This, in turn, will increase pressure on other parties to be similarly competitive. Several submissions supported the conclusion that a reduction in Snowy Hydro's basis risk under the Abolition proposal would encourage Snowy Hydro to offer more competitive contracts, resulting in lower contract prices, with flow-on benefits for the liquidity in the contract market, inter-regional trade.

The effect of the three Rule change proposals on the firmness of IRSR units is less clear. The range of factors determining interconnector flows, including network limits, the output of various generators, and interventions like NEMMCO's clamping, makes it difficult to determine conceptually how a change in the pricing and settlement arrangements under the three Rule change proposals may affect the firmness of IRSRs between the Victoria and NSW RRNs. The Commission is therefore unable to conceptually identify which of the three Rule change proposals promotes IRSR firmness in a way that substantially enhances market participants' ability to manage basis risk between Victoria and NSW. The quantitative risk analysis comparing the ability of participants to manage the risk of trading inter-regionally between Victoria and NSW (in both directions) using only IRSR units was also inconclusive on this issue of firmness (see Appendix B).

That being said, market participants noted in interviews with the Commission that they did not rely solely on IRSRs for managing an inter-regional risk. Some used it as a speculative tool while others used it as part of their portfolio approach for managing inter-regional risk. To the extent participants can access other tools to supplement cover for their inter-regional basis risk, then the overall effect of IRSR firmness is not a strong differentiating factor between the proposals.

The Commission expects that the reduction in basis risk for Snowy Hydro under the Abolition proposal will promote incentives for Snowy Hydro to offer more competitively priced contracts at the NSW and Victorian RRNs, introducing greater competitive pressure in the contract markets at those RRNs, providing competitive benefit for the wider contract market. The Commission therefore concludes that the Abolition proposal will result in a material improvement in inter-regional trade and risk management compared to the alternatives.

4.5 Pricing outcomes and participant responses

Although favourable wholesale price impacts are not a distinct component of the Commission's considerations, a greater alignment between costs and prices has desirable efficiency implications. If a proposal promotes greater competition in a wholesale market, this may also increase competition in the contract market. To the extent effective retail competition ensures that end consumers see more cost-reflective prices, in the short term consumers are able to make more informed decisions about the timing and level of their consumption. Short term competition improvements can therefore have longer term implications, particularly relating to participant responses to those competitive improvements.

Wholesale market spot and contract prices provide signals for future generation, load, and network investment. They inform not only location decisions but also the timing of those decisions and best-fit technology. Future investors require a level of certainty prior to committing to an investment. Investment decisions rely on information on the competitive environment and likely trends in participant behaviour, which are in turn a function of the incentives for participants under the alternative Rule change proposals being assessed.

The Commission has considered which of the Abolition and alternative proposals is most likely to result in wholesale prices reflecting the efficient costs of production, promoting allocative efficiency in the short term, and dynamic efficiency in the long term by generating pricing signals to inform efficient decisions by existing and prospective generators, loads, and network providers.

The analysis of dispatch efficiency presented in Section 4.3 concluded that the Abolition proposal is most likely to result in efficient dispatch relative to the alternatives, because it encourages the most cost-reflective bidding by participants. More competitive bidding could in turn be expected to result in more cost reflective spot prices than the alternatives, with benefits for allocative efficiency in the short term and dynamic efficiency in the long term. Moreover, the Commission's analysis of risk indicated that it expected increased competitive pressure in the contract market under the Abolition proposal as a result of the reduction in Snowy Hydro's basis risk. Many submissions stated they believed the Abolition proposal would require generators in NSW and Victoria to adopt more competitive strategies, which would lead to more competitive spot, contract, and retail prices.

This conceptual analysis is supported by the Commission's quantitative modelling. All three Rule change proposals demonstrate a general trend of lower average annual prices in NSW, and to a lesser extent Victoria, over the three years modelled relative to the base case. However, the Abolition proposal results in more consistently lower spot prices than the alternatives. The Commission therefore considers the Abolition proposal most effectively promotes wholesale prices that reflect the efficient costs of production, and therefore allocative efficiency.

While the Commission's modelling only considers a three-year outlook, it indicates a positive trend in more cost-reflective pricing over time relative to the base case and alternatives. One submission noted that while that the productivity gains from a region boundary change were likely to be modest, the benefits from more efficient prices were likely to emerge in the longer term.

Greater price granularity can improve investment locational signals. The more prices in a market, the more information investors can obtain about potential network congestion points, which can in turn inform their investment decisions. As discussed above, however, investment is unlikely in or around the existing Snowy region due to the environmental restrictions of investing in a national park. Therefore, greater price granularity is unlikely to improve investment signals in that location of the NEM. This suggests that there is no additional benefit from the greater pricing granularity under the Split Snowy region compared to the Abolition proposal.

The Commission considers that because the Abolition proposal is more likely to promote cost-reflective pricing compared to the alternatives, it is therefore more likely to promote allocative efficiency in the short term and the signals for efficient investment in the longer term.

4.6 Power system security, supply reliability, and technical issues

The Commission considers a proposal that would detract from NEMMCO's ability to operate a secure and reliable network in the short or long term would be unlikely to promote the NEM Objective. The Commission sought advice from NEMMCO, as the power system operator, on stakeholder comments related to this criterion to NEMMCO.

NEMMCO advised the Commission that it did not consider either the Abolition or Split Snowy Region proposal would increase the risks to power system security. It also advised that it had not identified any circumstances where intervention to manage power system security had been necessary as a result of the operation of the Southern Generators Rule. NEMMCO concluded that, to this extent, power system security had not been compromised. NEMMCO's advice to the Commission comprehensively addressed the limited number of system security and supply reliability issues raised in submissions.

The Commission therefore considers that neither the Abolition proposal nor the alternatives will have significant direct impacts on system security, supply reliability, or the technical functioning of the NEM. The application of this criterion, therefore, does not provide a basis for distinguishing between the Abolition proposal and the Split Snowy Region and Southern Generators' Congestion Pricing proposals.

4.7 Good regulatory practice

As discussed in Section 2, the Commission considers that a Rule change proposal should promote principles of good regulatory practice. This includes promoting transparent and predictable market operations, and a proportionate response to an identified problem. A proportionate response to the issues arising from the congestion in the Snowy region would need to address the problem, therefore addressing a major legacy congestion issue, but without pre-empting possible market-based responses to future congestion problems in the NEM.

The Commission considers that the Abolition proposal and the alternatives would offer an improvement in terms of the transparency and predictability of market

operation when compared to the base case. These three proposals all price the material congestion between Murray and Tumut. They also reduce the likely incidence of NEMMCO's intervention to manage counter-price flows.

The Commission considers, however, that the Abolition proposal is the most appropriate proportionate response to the material and enduring congestion problem in the Snowy region. The Split Snowy Region proposal retains the region boundaries just north of Tumut and just south of Murray. The Commission's analysis of both historical and forward looking congestion does not suggest that those areas of the NEM are places of material and enduring congestion.[28] Retaining a region boundary across those cutsets pre-empts a possible future response to address any potential congestion that may arise. In this context, the Split Snowy Region proposal is not considered to be a proportionate response when compared to the Abolition proposal. The Abolition proposal provides the opportunity for future responses to address any congestion that may arise north or south of the modified Victoria-NSW region boundary, consistent with the future congestion management regime.

While the Southern Generators' Congestion Pricing proposal prices the Snowy region congestion, the Commission does not consider it to be as stable or permanent solution as regional boundary change.

The MCE's policy, as set out in the Congestion Management Review Terms of Reference, provides the guidance that material and enduring constraint issues should ultimately be "addressed through investment or regional boundary change."[29] As discussed earlier, the congestion in the Snowy region is unlikely to be addressed through investment. Implementing a region boundary change to address this material congestion is therefore consistent with the MCE's policy settings.

The Abolition proposal is, on balance, the most appropriate and proportionate response to the congestion problem in the Snowy region, providing a sensible starting point from which to apply the future congestion management regime.

4.8 Long term implications and consistency with public policy settings

At this stage of the NEM's development, radical changes to the market design and operation are unlikely to be either necessary or desirable in terms of promoting the NEM Objective. The Commission considers that most Rule change proposals submitted will focus on smaller incremental improvements compared to the overall costs of operating the power system. In its assessment of the three Rule change proposals, the Commission considers it is important that these incremental improvements are consistent with a stable and orderly evolution of the NEM, promoting the NEM Objective in the longer term. The Commission also considers it must have regard to the broader public policy settings, including the policy position

[28] See Appendix F, p.11-16 for historical data and Appendix B for forward looking data.

[29] Ministerial Council on Energy, "Terms of Reference for Australian Energy Market Commission – Congestion Management Review", 5 October 2005, p.4.

put forward by the MCE regarding the management of congestion and the long term options for addressing material and enduring congestion.

While the Commission considers the Abolition proposal and the alternatives are all likely to improve economic efficiency in the market it considers that, for the reasons discussed earlier, the Abolition proposal is likely to promote a more stable and transparent longer term environment compared to the two alternative proposals. As discussed in Section 4.5, the Commission expects that the increased competition under the Abolition proposal will promote allocative and dynamic efficiency in the NEM over the longer term. The Commission considers that consumers would be expected to gain from these efficiency improvements in the longer term, through the creation of a more stable and transparent environment for future investment decisions.

The Commission also considers that the region boundary change under the Abolition proposal is the most consistent with the policy settings as set out by the MCE when compared to the alternatives.

4.9 Implementation

A change to the existing Snowy region boundaries would be the first such change to region boundaries since the start of the NEM in 1998.[30] The Commission has sought advice from NEMMCO and input from market participants on the steps required to implement both the Abolition proposal and the alternative Split Snowy Region proposal.

The implementation issues surrounding the Abolition proposal and each of the alternatives are important considerations for the Commission. In particular, the benefits of making a change to the Rules should exceed the costs of that change. In reaching its decision, the Commission has considered the relative costs and benefits of implementing the proposals.

The Commission understands that the Southern Generators' Congestion Pricing proposal has minimal implementation costs. The only implementation step for the Southern Generators' Congestion Pricing proposal would be to incorporate into the body of Chapter 3 of the Rules the current Tumut CSP/CSC Trial and the Southern Generators Rule rather than have them operate from the derogation in Part 8 of Chapter 8A of the Rules.

Both the region boundary proposals have similar implementation processes, although the Abolition proposal could be implemented more quickly and at a lower cost than the Split Snowy Region proposal. Section A.7 in Appendix A steps through the common steps required to implement the Abolition and Split Snowy Region proposals. It appears to the Commission, from correspondence with NEMMCO and

[30] Excluding: a) the addition of Tasmania to the NEM in 2005, which did not require any change in region boundaries; but did involve the addition of a region previously electrically separated from the other parts of the NEM; and b) reassignment of load at the Terranora node from the Queensland region to the NSW region as part of the conversion of Directlink to a prescribed network service.

stakeholder submissions, that the Abolition proposal would be simpler to implement than the Split Snowy Region proposal because:

1. It involves the abolition of a region and one interconnector (in net terms); and

2. It is likely to involve smaller adjustments to the contract portfolios, IRSR unit holdings, and risk positions of a smaller number of market participants than the Split Snowy Region proposal.

The Commission notes that all three Rule change proposals are capable of being implemented in a reasonable timeframe and at relatively low cost. The Commission also notes the NEMMCO advice that the Abolition proposal could be implemented sooner than the Split Snowy Region proposal.

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5 Assessment of proposal – Rule making test and NEM Objective

This Section considers the Commission's power to make a Rule in this case. It presents the Commission's reasoning on how and why the Abolition proposal satisfies the NEM Objective and the statutory Rule making test, and accordingly, presents the Commission's determination.

5.1 Power to make a Rule

The Rule as made implements the Abolition proposal by directly abolishing the existing NEM Snowy region. The NSW and Victorian region boundaries will be altered to relocate Snowy Hydro's generation at Upper and Lower Tumut and Guthega into the NSW region and its generation at Murray and the pumping stations at Jindabyne into the Victorian region.

The subject matter of the Rule as made is for or with respect to the specific subject matters referred to in s.34(2) of the NEL, and set out in the following items of Schedule 1 of the NEL:

7 The settling of prices for electricity and services purchases through the wholesale exchange operated and administered by NEMMCO, including maximum and minimum prices;

8 The methodology and formulae to be applied in setting prices referred to in item 7;

9 The division of the national electricity market into regions for the purpose of the operation of the wholesale exchange operated and administered by NEMMCO; ...

27 The metering of electricity to record the production or consumption of electricity; ... [and]

36 Any other matter or thing that is the subject of, or is of a kind dealt with by, a provision of the National Electricity Code as in operation and effect immediately before the commencement of section 12 of the *National Electricity (South Australia) (New National Electricity Law) Amendment Act* 2005 of South Australia.

The Commission is satisfied that the Rule to be made to abolish the Snowy region is for or with respect to a matter that the Commission can make Rules under the NEL.

5.2 Assessment against the Rule making test and NEM Objective

The NEM Objective, as set out in s.7 of the NEL, is to:

> "Promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system."

Under s.88 of the NEL, the Commission is only able to make Rules if:

> "(1) It is satisfied that the Rule will or is likely to contribute to the achievement of the national electricity market objective.
>
> (2) For the purposes of subsection (1), the AEMC may give such weight to any aspect of the national electricity market objective as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles."

On the basis of its assessment on the information and analysis before it, the Commission is satisfied that the Rule to be made contributes to the achievement of the NEM Objective as it is likely to result in significant efficiency and related improvements compared to the circumstances that would exist in the longer run in absence of the proposal.

The Commission has also concluded that the alternative solutions set out in the Macquarie Generation Split Snowy Region proposal and the Southern Generators' Congestion Pricing proposal are both capable of contributing to the achievement of the NEM Objective, as they would also offer an improvement compared to the base case determined by the Commission in its analysis.

The Commission considers that because the three proposals are alternatives, which all contribute to the achievement of the NEM Objective, it must make a further comparative decision as to which of the three options relative to the base case will best contribute to the achievement of the NEM Objective. As stated above, section 88(2) of the NEL allows the Commission to exercise its discretion to "give such weight to any aspect of the national electricity market objective as it considers appropriate in all the circumstances." In its assessment of the proposals as presented in Appendix A and summarised in Section 4, the Commission has identified differences between the proposals in terms of how they contribute to achieving the NEM Objective.

The Commission considers that while the Abolition, Split Snowy Region, and Southern Generators' Congestion Pricing proposals are all improvements on the base case, on balance, when compared to the other two competing proposals, the Abolition proposal:

- Is more likely to promote economic efficient dispatch;
- Has the potential to promote a more competitive contract market;
- Is more likely to promote more cost-reflective pricing and therefore efficient short and long term pricing signals to inform decisions by existing and prospective generators, loads and network providers;
- Provides the most appropriate and proportionate response with respect to the principles of good regulatory practice; and

- Promotes a more stable and transparent longer term environment for future investment through a solution that is consistent with the policy settings as set out by the MCE.

Its implementation, while more disruptive and relatively costly compared to the Southern Generators' Congestion Pricing proposal, provides greater value of certainty to the market by providing a permanent solution to the legacy congestion problem in the Snowy region.

The Commission is satisfied that when assessed against the Split Snowy Region and Southern Generators' Congestion Pricing proposals, the Abolition proposal more effectively promotes improvements in competition and efficiency in the NEM, and therefore the long term interests of electricity consumers. It therefore better satisfies the Rule making test.

On the basis of its analysis and all relevant considerations, the Commission has determined to make the Rule to abolish the Snowy region as requested by Snowy Hydro's Abolition proposal and therefore makes the National Electricity Market Amendment (Abolition of Snowy Region) Rule 2007.

5.3 Commission's determination

The Commission has determined in accordance with s.102 of the NEL to publish this final Rule determination and in accordance with s.103 of the NEL, to make the National Electricity Amendment (Abolition of Snowy Region) Rule 2007 attached to this final Rule determination (see Rule as made). The Rule will commence on 30 August 2007. The new NEM region structure without the Snowy region will commence on 1 July 2008.

Section 6 explains the Rule as made and how the abolition of the Snowy region is to be implemented under the Rule.

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6 Implementation and description of Rule to be made

This Section describes how the Rule to be made implements the abolition of the Snowy region. It also identifies where there have been changes between the draft Rule and the Rule to be made. In preparing the Rule to be made, the Commission has considered advice from NEMMCO and stakeholder submissions, as discussed in Appendix A and Appendix C.

6.1 Abolition of the Snowy region

The new clause 3.5.6 (headed "Abolition of Snowy region") abolishes the existing Snowy region as of 00:00 hours *EST* on 1 July 2008. The provision seeks to clarify in more specific terms that the RRN for the Snowy region is abolished and that the NSW and Victoria regions are modified by the allocation of loads and generators as set out in clause 11.13.8 (Allocation of abolished Snowy region transmission connection points).

6.1.1 Revised start date for abolition of the Snowy region

The Commission decided to change the date to abolish the existing Snowy region from 4 November 2007, as proposed in the draft Rule, to 1 July 2008. The Commission came to this decision following advice from NEMMCO stating, contrary to earlier advice, NEMMCO would be unable to implement the abolition of the Snowy region by 4 November 2007 and proposing 1 July 2008 as a more realistic timeframe.[31] Appendix A provides more detail on NEMMCO's advice.

6.1.2 Clarification of transmission connection points for Guthega Power Station and Jindabyne Pumps

In the draft Rule determination, the Commission also sought comments from stakeholders on technical details regarding:

> "The merits or otherwise of having the Guthega Power Station located in NSW and the Jindabyne Pumps located in Victoria, even though both are normally linked to the Murray 300kV node, which will be located in Victoria."[32]

At the time of preparing the draft Rule determination, the Commission understood that both the Guthega Power Station and Jindabyne Pumps were normally connected to the Murray 330kV node, with the Jindabyne pumps fed by a 20km dedicated line from Guthega (see below).[33] The Commission also understood that the Guthega to

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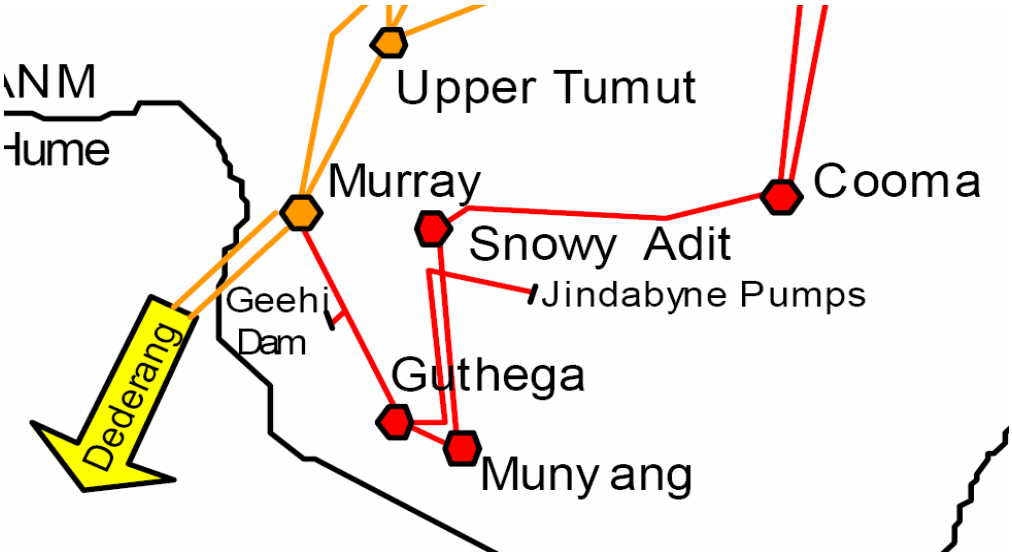
[31] NEMMCO, Letter on revised implementation, 5 March 2007, p.1-2.

[32] AEMC, *Abolition of Snowy Region*, Draft Rule Determination, 19 January 2007, Sydney, p.86.

[33] See NEMMCO 2006, Statement of Opportunities 2006, Appendix D, p.14-15; and TransGrid 2006, *Network Management Plan 2007-2011*, TransGrid, Sydney, p.99.

Munyang line was normally open, with both Guthega and the Jindabyne pumps being connected to Murray (which would be in new Victoria region) via the 97G line.[34] The existing region boundaries appeared to recognise this by having Munyang in NSW and Guthega and Jindabyne pumps in the Snowy region, even though Guthega could be switched to connect to either Victoria (via Murray) or NSW (via Munyang then Cooma).

Figure 6.1 Transmission network near Guthega and Jindabyne Pumps



Data source: TransGrid, *Annual Planning Review 2003*, p. 145

Snowy Hydro's proposal sought to have the Jindabyne pumps in the Victoria region and the Guthega Power Station in NSW, which appeared at odds with the usual switching of the network, at that time.

If implemented as proposed, the Guthega Power Station would be an islanded part of the NSW region that was not directly connected to any other part of the NSW region. That is, the NSW region would not be closed. This appeared at odds with Section 3.5.1(b)(2)(i) of the Rules, which requires regions to be closed. The Commission considered at that time, that there is merit in having the connection point for the Guthega Power Station allocated to the new Victoria region because it:

- Was consistent with the normal network topology of having the Guthega Power Station supplied from the Murray node; and
- Maintained the NSW region as a closed region, in accordance with Section 3.5.1(b)(2)(i) of the Rules.

As presented in Appendix C, four submissions on the draft Rule determination commented on this issue. Snowy Hydro submitted that the Jindabyne Pumps ought

[34] See TransGrid 2006, *Annual Planning Review 2006*, TransGrid, Sydney, p.63.

to be located in Victoria, since they are hydraulically coupled to Murray generation, while Guthega Power Station can only effectively supply NSW load and should therefore be located in NSW.[35] On the other hand, the other three submissions agreed with the Commission's draft Rule determination commentary that both Guthega Power Station and Jindabyne Pumps should be in the Victoria region.

Of particular interest were the submissions from TransGrid and NEMMCO. TransGrid noted that Snowy Hydro's suggested location would leave Guthega on the Victorian side of an open breaker – isolated from its region.[36] NEMMCO recommended that since both the Guthega power station and the Jindabyne pumping station are effectively connected to the Murray switching station, they should both be located in the new Victoria region.[37]

On 6 July 2007, the Commission received a letter from Snowy Hydro and NEMMCO on this issue. The letter referred to joint discussions between Snowy Hydro, TransGrid, and NEMMCO regarding the technical feasibility of the Snowy Hydro advocated position on this issue. In the letter, NEMMCO stated it was open to a region boundary location consistent with that proposed by Snowy Hydro on the understanding that TransGrid and Snowy Hydro are planning to change the normal switching arrangements for the Murray Switching Station (MSS)-Guthega-Munyang lines so that Guthega will normally generate power into the NSW region and Jindabyne Pumps are normally supplied with power from MSS.[38]

This arrangement addressed the Commission's (and NEMMCO's) concerns as presented above. Given this change in the normal switching arrangements for the MSS-Guthega-Munyang lines, the Commission determines that Jindabyne Pumps should remain located in the new Victorian region but that the Guthega Power Station should now be located in the new NSW region. This is reflected in clause 11.13.8 of the Rule to be made.

6.2 Savings and Transitional provisions

A new Savings and Transitional Rule (rule 11.13) puts in place an implementation regime specifically designed for the circumstances of abolishing the Snowy region. This rule effectively prevails over any other provision in the Rules during the implementation periods in order to enable NEMMCO to do what is necessary to implement the abolition of the Snowy region during the time period to 1 July 2008.

Clause 11.13.4 recognises that NEMMCO has committed resources toward implementation of region boundary change relating to the Snowy region prior to the

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[35] Snowy Hydro, joint s.99 Abolition; s.95 Southern Generators' Congestion Pricing; and s.95 Split Snowy Region submission, p.34-35.

[36] TransGrid, s.99 submission, Abolition of Snowy Region, Draft Rule Determination; s.95 submission, Congestion Pricing and Negative Residue Management Arrangements for the Snowy Region; s.95 submission, Split Snowy Region, p.2.

[37] NEMMCO, s.99 submission, Abolition of Snowy Region, Draft Rule Determination, p.2.

[38] Joint Snowy Hydro and NEMMCO, supplementary submission, Abolition of Snowy Region, 6 July 2007, p.1.

date of commencement of the Abolition of Snowy Region Rule. Decisions made or actions taken are therefore given continuing effect under this clause.

NEMMCO is to exercise implementation functions described generally in clause 11.13.6 and more specifically in clauses 11.13.7 to 11.13.14. As set out in clause 11.13.5, NEMMCO will be required, however, to publish an implementation plan by 14 September 2007 that identifies key implementation steps to be taken during the implementation period. When NEMMCO is exercising implementation functions, these must be referrable to the published implementation plan.

Specific implementation functions that allow NEMMCO to:

- Modify computer software for the operation of the market (clause 11.13.7). Clause 11.13.7(2) exempts NEMMCO from having to obtain AER authorisation even though it is making necessary changes to its computer software in order to implement the abolition of the Snowy region. This provision was included in the Draft Rule. No stakeholders commented on it in their submissions;

- Allocate transmission connection points as a result of abolition of the Snowy region, as discussed above in Section 6.1 (clause 11.13.8);

- Define the location of the region boundary between NSW and Victoria as a result of the abolition of the Snowy region (clause 11.13.9);

- Publish both the Regions Publication and the Loss Factors Publication for 2008/09 to incorporate the changes resulting from the abolition of the Snowy region (clause 11.13.10). Clause 11.13.10(b)(1) clarifies the circumstances which may result in changes to the published documents over time. For example, clause 11.13.10(b)(1)(ii) allows NEMMCO to make changes to these publications resulting from changes in the configuration of connection points as requested by Registered Participants for the purposes of participation in the NEM;

- Determine estimates of the minimum reserve levels to be applied to the modified regions (clause 11.13.11);

- Recalculate network constraints and use estimates where time constraints make provision of information by TNSPs not practicable (clause 11.13.12); and

- Manage the transition in relation to settlements residue auctions (clause 11.13.13).

The Rule to be made also includes a number of minor related amendments as follows:

- The reinstatement of the power for NEMMCO to publish an annual Regions Publication (See new clause 3.5.5.). This provision was previously suspended by clause 3.5.4 when the initial National Electricity Rules commenced on 1 July 2005 as part of the MCE policy decision to place a "moratorium" on region boundary changes). The ongoing publication of regions will form part of the new "Process for Region boundary change" Rule put forward by the MCE and currently under consideration by the Commission.

- The current derogation in Chapter 8A (Part 8 Network Constraint Formulation) has been amended to:

  – Separate the general network constraint part of the derogation (paragraphs (a) to (e)) from the specific pricing arrangements for the Snowy region (paragraphs (e1) to (p)) and to apply different expiry dates to those two parts.

  – The general network constraint power will expire on the 31 October 2008 or as otherwise determined by the AEMC.

  – The specific Snowy region part of the derogation will cease to apply on 1 July 2008 at the same time as the Snowy region is abolished (see paragraph (q) of the derogation).

- The Rule to be made also makes consequential amendments to relevant definition in Chapter 10 of the Rules. In particular, definitional matters relating to time have been clarified and updated in accordance with most recent developments in this area.

6.3 Other differences between the draft Rule and Rule to be made

6.3.1 Chapter 8A (Part 8 Network Constraint Formulation)

The draft Rule proposed to separate the existing Part 8 derogation into two parts:

1. those clauses that relate to the general network constraint part of the derogation (paragraphs (a) to (e)); and

2. those clauses relating to the specific Snowy region part of the derogation (paragraphs (e1) to (p)).

The Commission considers that it is not now necessary to formally separate the Part 8 derogation into separate derogations and has accordingly determined to create two separate parts and expire each at different times.

The general network part of the Part 8 derogation provides NEMMCO with its powers to implement "co-optimised" constraint formulation and to manage negative residues. The Commission's reasoning to expire the general network constraint part of the Part 8 derogation on 31 October 2008 or as otherwise determined by the AEMC is set out in its 3 May 2007 determination and decision report on the "Expiry date for the participant derogation in Part 8 of Chapter 8A of the National Electricity Rules".[39] In that decision report, it considered this expiry date would maintain market certainty around NEMMCO's network constraint formulations and to NEMMCO's ability to manage counter price flows on interconnectors using

[39] AEMC 2007, "Determination by the AEMC on the expiry date of the participant derogation in Part 8 of Chapter 8A of the National Electricity Rules - Network Constraint Formulation", Decision Report, 3 May 2007, Sydney.

alternative constraint formulations while these issues were under consideration as part of the Commission's Congestion Management Review.

The Commission is of the view that continuing the specific Snowy region part of the derogation until the start of the new region structure (without the Snowy region) will help ensure a smooth transition to that new region structure. There is a significant benefit to maintaining the status quo until the new regional structure commences. To do otherwise would introduce unnecessary market disruption.

The Commission has therefore determined that continuing the current arrangements until the abolition of the Snowy region on 1 July 2008 is in the best interests of consumers.

6.3.2 Transitioning of pending market transactions

The draft Rule proposed (at clause 11.X.15 of the draft) that pending market transactions should be completed as if the new regions had not commenced. The intent of this provision was to ensure that part completed transactions were allowed to proceed to completion without being affected by the region change. The Commission specifically requested stakeholders to comment on this and any other transitional rules that may be needed to support a smooth transition from the old regions to the new regions. On this issue, the Commission did not receive any substantial comment from stakeholders. Because there is a general savings provision in the clause 33 Schedule 2 to the NEL, the Commission has decided to rely on that broad transitional power rather than create specific provisions, which may impliedly indicate a contrary intention that the more general power does not apply. Therefore, 11.X.15 has been omitted from the Rule to be made.

6.3.3 Settlement Residue Auction and Snowy Restricted Bidder provisions

Clause 3.18.2(h) of the National Electricity Rules (Rules) restricts Snowy Hydro's participation in the Settlement Residue Auction (SRA) with respect to obtaining inter-regional settlement residue (IRSR) units on the directional interconnectors into the Snowy region (i.e. Snowy inbound flows on NSW-Snowy and VIC-Snowy). If Snowy Hydro (the "Snowy Restricted Bidder") wishes to obtain units on those directional interconnectors, it must provide NEMMCO with an independent auditor's report that contains a certified statement that sets out the approximate total megawatts of settlement residues Snowy Hydro requires for the relevant period for:

- Its demonstrated pumping needs; and
- Its demonstrated contractual exposure.

The Rules also allow Snowy Hydro to request NEMMCO to prepare a report to the Australian Energy Regulator (AER) that would set out NEMMCO's opinion of the effectiveness of the provisions and propose redrafting, including a recommendation to remove, if appropriate. As of 2 July 2007, NEMMCO had not received such a request.

In the draft Rule determination, the Commission observed that:

- Snowy Hydro had the opportunity under the Rules (and previously the Code) to apply to the AER (ACCC) for removal of the restrictions at any time – to the Commission's knowledge, it has not done so;

- Snowy Hydro's proposal was silent on the future of the restrictions; no explicit case was put forward for their removal; and

- The Commission has not consulted stakeholders on the appropriate future treatment of those restrictions.

The Commission stated in the draft Rule determination that in the absence of a positive case for the removal of the IRSR restrictions, it may be appropriate for them to be replicated under a new boundary structure (with one interconnector between Victoria and NSW rather than two) and remain in force. The Commission sought views from stakeholders on this matter.

Three submissions commented on the current restrictions on Snowy Hydro's participation in SRAs. Eraring Energy agreed with the Commission's draft Rule determination view that the existing restrictions on Snowy Hydro would need to continue if the Abolition proposal were implemented. By contrast, Snowy Hydro stated that the restriction on it purchasing inward IRSRs should be abolished with the Snowy region. It suggested that such restrictions would no longer be required since its generation would no longer be located in a generation-only region. NEMMCO stated the restrictions should either be deleted or reflect the new interconnectors.

The Commission considers that the Snowy Restricted Bidder provisions under the current regional structure relate to Snowy Hydro's potential ability to directly affect the value of the "inbound" IRSR units by influencing the Snowy RRP. The Commission does not consider that similar risks exist for Snowy Hydro to potentially affect the value of Victoria-NSW IRSRs following the abolition of the Snowy region.

Following the abolition of the Snowy region, Snowy Hydro's Murray generation will be settled at the Victorian RRP while Tumut generation will be settled at the NSW RRP. Snowy Hydro's ability to set the NSW or Victorian RRP in the same way it currently sets the Snowy RRP is greatly diminished. In fact, because of Murray and Tumut's physical location, it is probable if a constraint does arise between them and their respective RRNs, they will both be on the side of the constraint opposite to the RRN, and therefore have limited influence over the RRP.

Snowy Hydro has significantly less ability to control the RRP of Victoria (and NSW) compared to its current ability to influence the Snowy RRP under the existing region structure. Therefore, the apparent risk of Snowy Hydro being able to control the price difference between Victoria and NSW in order to influence the value of the respective IRSRs is substantially reduced relative to the current region structure, and arguably similar to that of other NEM generators.

This region boundary change does not change the underlying physical network in the Snowy region. Snowy Hydro's Murray and Tumut generators remain "gatekeepers" for the new Victoria-NSW interconnector. Their generation may effect flow between those regions. The question is whether, as a speculative IRSR holder, Snowy Hydro would face incentives to control the flow across the interconnector.

IRSRs are determined by region price difference multiplied interconnector flows. The lower the flow across the interconnector, the lower the IRSRs distributed to unit holders. There is no apparent reason for Snowy Hydro to purposely control flows that would only reduce the IRSR distributions. In fact, the incentives for Snowy Hydro to generate at Tumut or Murray (depending on the direction of flows) are such that they would support interconnector flow across the interconnector at times of high demand. For example, high demand (and correspondingly high prices) in NSW place incentives for Tumut to generate, which provides interconnector support for flows from the southern states. The same holds for Murray generation when flows are southward.

Given this reasoning, the Commission considers that abolishing the Snowy region appears to remove the same risks or opportunities for Snowy Hydro to effect the value of Victoria-NSW IRSRs that it has to effect the value of the existing inbound Victoria-Snowy and NSW-Snowy IRSRs.

The Commission concludes there is no longer a reason to maintain in the Rules the existing Snowy Restricted Bidder provisions in clause 3.18.2(h) under implementation of the Abolition proposal. Accordingly, the Commission determines to delete clause 3.18.2(h) from the Rules.

7 Description of appendices

The Appendices to this final Rule determination present the Commission's comprehensive analysis, assessment, and reasoning in coming to its final decision on this Rule change proposal. The Appendices are as follows:

Appendix A – Assessment of related Rule change proposals: Appendix A presents the Commission's assessment and reasoning on this Rule change proposal. It briefly outlines the Commission's approach to assessing the proposal, before discussing the Commission's processes and procedures. It then presents the Commission's analysis against the selected assessment criteria.

Appendix B – Modelling: Appendix B describes the approach, assumptions, and data sources used in the revised modelling undertaken by the Commission's consultants (Frontier Economics) of the various Rule change proposals submitted by participants in relation to the Snowy region of the NEM.

Appendix C – Submission summary: Appendix C presents a summary of all submissions received in relation to the various Rule change proposals relating to managing congestion in the Snowy region.

Appendix D – Background on the Snowy region: Appendix D provides background to the proposals by explaining the background to the NEM region structure, the 1997 decision on the current Snowy region boundary, and describes some of the issues that are associated with the current Snowy region boundary. Appendices E and F contain additional background.

Appendix E – 1997 Determination on Region Boundaries: Appendix E outlines the location of existing transmission network and region boundaries and explains the historical reasons behind the choice of these boundaries.

Appendix F – Historical congestion between Victoria, Snowy and NSW regions: Appendix F assesses the historical frequency, type, and location of congestion between the Snowy region and the regional reference nodes for Victoria and NSW in the four year period from financial year 2003/04 to 2006/07.

Appendix G – Interaction between the Southern Generators Rule and the South Morang constraint: Appendix G assesses the comments presented by Snowy Hydro and the Southern Generators related to the interaction between the Southern Generators Rule and the incidence of binding of the South Morang constraint.

Appendix H – Summary of related reforms: Appendix H presents the policy reforms, Rule changes, and Reviews that relate to the issues being considered in this determination.

Appendix I – Review of ROAM Consulting report: Appendix I comments on the modelling report from ROAM Consulting, submitted by the Southern Generators to inform their Rule change proposal and associated submissions.

The Rule to be made: The Rule to be made is available on the Commission's website: www.aemc.gov.au.

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