AEMC

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Our ref: REL0022 / 08-36005

15 February 2008

Dr John Tambyn
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Dr Tambyn,

National Electricity Rules – Request for Rule
NEM Reliability Settings: Information, Safety Net and Directions

The Reliability Panel (Panel) requests the Australian Energy Market Commission (AEMC) to consider making the enclosed proposed Rule under section 91 of the National Electricity Law (NEL). This Rule change proposal is the first of three such packages that were foreshadowed in the final report of the Panel's Comprehensive Reliability Review (CRR), which was published in December 2007.

This Rule change proposal is intended to implement the following recommendations from the CRR:

- the introduction of an information mechanism, the Energy Adequacy Assessment Projection (EAAP), which is a two year projection of energy adequacy;
- the replacement of the existing "reserve trader" arrangement (which expires on 1 July 2008) with the Reliability and Emergency Reserve Trader (RERT), which is an enhanced reserve trader with a four year sunset;
- the extension of the power in the Rules that allows NEMMCO to issue Reliability Directions, without a sunset (as there is an expiry date of 1 July 2008 related to this power); and
- a requirement for NEMMCO to report to the Panel on the accuracy of the SOO Load Forecasts.

The recommendations contained in the Rule change proposal were initially suggested by the Panel in its Second Interim Report for the CRR, which was published on 30 August 2007. The Panel also included an Exposure Draft of the Rule changes proposed to implement those recommendations. The Panel consulted widely on the Second Interim Report and the Exposure Draft, including a stakeholder forum. While stakeholders raised a number of issues of detail on the Exposure Draft (which have been addressed in the final CRR report and this Proposal), there was substantial overall support for proceeding with these initiatives.

The Panel's recommendations in this Rule change proposal were also considered following a separate request from the Ministerial Council on Energy (MCE) to the AEMC in June 2007 requesting that the Panel review and provide advice on the effectiveness of current market arrangements in managing generation input constraints.

The Panel also requests that the AEMC reviews this Rule change proposal; under section 96A of the recently amended NEL. Under this section the AEMC has the power to fast track this proposal as the entity making the request is an electricity market regulating body (which includes the Reliability Panel) that has undertaken a public consultation when developing the proposal, or the proposal is contained in a MCE review.

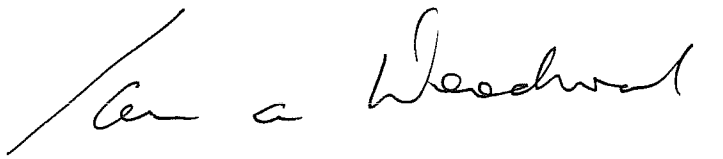
The enclosed Rule making request contains:

- a statement of the issues being addressed by this proposed Rule;
- a description of the proposed Rule;
- a description of how the Panel considers that the proposed Rule is likely to advance the national electricity objective;
- the Panel's explanation of the benefits and costs of the proposed change and the potential impacts of the change on those likely to be affected;
- a description of how the proposed Rule addresses the issues raised by stakeholders in response to the Panel's Exposure Draft;
- a description of Panel's consultation process on the Exposure Draft, and hence why the Panel considers that the AEMC should fast track the proposed Rule under section 96A of the NEL; and
- a draft of the proposed Rule.

The Panel may also provide further supplementary material related to the proposal if, through the Panel's work program, any relevant and related matters emerge.

Please do not hesitate to contact Rory Campbell should there be any questions pertaining to this matter.

Yours sincerely,



Ian C Woodward
Chairman, Reliability Panel
Commissioner, AEMC

Australian Energy Market Commission

AEMC Reliability Panel

Package One

NEM Reliability Settings: Information, Safety Net and Directions

Rule Change Proposal

February 2008

Inquiries

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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.

About the AEMC Reliability Panel

The Panel is a specialist body within the AEMC and comprises industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on the safety, security and reliability of the national electricity system and advising the AEMC in respect of such matters. The Panel's responsibilities are specified in section 38 of the NEL.

Disclaimer

The views and recommendations set out in this document are those of the Reliability Panel and are not necessarily those of the Australian Energy Market Commission.

Reliability Panel Members

Chairman

Ian C Woodward, Commissioner, Australian Energy Market Commission

Other AEMC Reliability Panel Members

Kerry Connors, Executive Officer, Consumer Utilities Advocacy Centre

Jeff Dimery, General Manager, Merchant Power, AGL Energy

Mark Grenning, Chief Advisor Energy, Rio Tinto

Les Hosking, Managing Director and CEO, NEMMCO

Gordon Jardine, Chief Executive, Powerlink

George Maltabarow, Managing Director, EnergyAustralia

Stephen Orr, Commercial Director, International Power Australia

Geoff Willis, former CEO, Hydro Tasmania

Contents

Abbreviations and Glossary

AEMC	Australian Energy Market Commission
Amended NEL	The National Electricity (South Australia) (National Electricity Law—Miscellaneous Amendments) Amendment Act 2007, which takes effect on 1 January 2008.
Amended Regulations	The National Electricity (South Australia) Variation Regulation 2007, which takes effect on 1 January 2008.
ANTS	Annual National Transmission Statement
CRR	Comprehensive Reliability Review
DSR	Demand Side Response
EAAP	Energy Adequacy Assessment Projection
GELF	Generator Energy Limitation Framework
Interim Report	The first Interim Report of the Reliability Panel's Comprehensive Reliability Review, published in April 2007.
IRPC	Inter-Regional Planning Committee, defined in clause 5.6.3 of the Rules.
Jurisdictional Planning Bodies (JPB)	The entity that has been nominated by the relevant Minister of a participating jurisdiction as having transmission system planning responsibility in that participating jurisdiction. The JPBs are members of the IRPC.
MCE	Ministerial Council on Energy
MPL	Market Price Limit, previously known as Value of Lost Load (VoLL)
MRL	Minimum reserve level
MTPASA	Medium Term Projected Assessment of System Adequacy
MW	Megawatt
MWh	Megawatt hour
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NGF	National Generators Forum
OCGT	Open-cycle gas turbine
Panel	The Reliability Panel
PASA	Projected Assessment of System Adequacy
POE	Probability of Exceedence
Regulations	National Electricity Regulations
RERM	Reliability and Emergency Reserve Mechanism, which was renamed to the RERT.
RERT	Reliability and Emergency Reserve Trader
Rules	National Electricity Rules
Second Interim Report	The Second Interim Report of the Reliability Panel's Comprehensive Reliability Review, published in September 2007.
SCO	Standing Committee of Officials of the MCE
SOO	Statement Of Opportunities
timetable	The timetable published by NEMMCO under clause 3.4.3 for the operation of the spot market and the provision of market information.
TNSP	Transmission Network Service Provider
USE	Unserved Energy

Summary

In December 2007 the Reliability Panel (Panel) published the final report of its Comprehensive Reliability Review (CRR). The Panel in the CRR made recommendations related to the reliability settings in the National Electricity Market (NEM) including:

- the NEM reliability standard;
- the Value of Lost Load (VoLL), market floor price and cumulative price threshold (CPT);
- whether the reliability safety net ("reserve trader") should be allowed to expire (the subject of a recent Rule change assessment by the AEMC) or alternative arrangements put in place; and
- improvements in market information related to reliability.

Amongst the CRR recommendations, the Panel foreshadowed a number of Rule change proposals that it would submit to the AEMC in 2008. This Rule change proposal is the first of three such rule change packages.

This Rule change proposal is intended to implement the following recommendations:

- the introduction of an information mechanism, the Energy Adequacy Assessment Projection (EAAP), which is a two year projection of energy adequacy;
- the replacement of the existing "reserve trader" arrangement (which expires on 1 July 2008) with the Reliability and Emergency Reserve Trader (RERT), which is an enhanced reserve trader with a four year sunset;
- the extension of the power in the Rules that allows NEMMCO to issue Reliability Directions, without a sunset (as there is an expiry date of 1 July 2008 related to this power); and
- a requirement for NEMMCO to report to the Panel on the accuracy of the SOO Load Forecasts.

The recommendations contained in the Rule change proposal were suggested by the Panel in its Second Interim Report for the CRR, which was published on 30 August 2007. The Panel also included an Exposure Draft of the Rule changes proposed to implement those recommendations. The Panel consulted on the Second Interim Report and the Exposure Draft, including a stakeholder forum. While stakeholders raised a number of issues of detail on the Exposure Draft (which have been addressed in the final CRR report and this Proposal), there was substantial overall support for proceeding with these initiatives.

The Panel's recommendations in this Rule change proposal were also considered following a separate request from the Ministerial Council on Energy (MCE) to the AEMC in June 2007 requesting that the Panel review and provide advice on the effectiveness of current market arrangements in managing generation input constraints. This request was concerned with the information available to the market in the context of energy shortfalls being forecast by NEMMCO, in its first drought impact report[1], if the prevailing drought conditions remained. The MCE also requested the Panel to consider what, if any, improvements can be made to arrangements, including Reserve Trader, to strengthen the market's ability to manage input constraints.

[1] NEMMCO published "Potential Drought Impact on Electricity Supplies in the NEM" on 25 May 2007. NEMMCO subsequently updated this report, publishing "Drought Scenarios Investigation August 2007 Update" on 15 August 2007 and "Drought Scenarios Investigation November 2007 Update" on 10 December 2007.

The two main mechanisms proposed by the Panel in this Rule change proposal are the EAPP and the RERT.

The EAAP is a quarterly projection of the adequacy of the NEM generation to meet the demand in the presence of generator input energy constraints and would operate in a similar manner to the capacity projection assessments of Medium Term Projected Assessment of System Adequacy (MTPASA). The Panel anticipates that periods of projected energy shortage would be expected to coincide with high energy prices and this should encourage market responses, such as reallocation of energy to periods of projected shortage or the releasing of additional energy or water allocations. The Panel considers that the EAAP would therefore assist stakeholders to manage possible future energy limitations.

The RERT is an enhanced form of the current reserve trader with a four year sunset period. The Panel considers that, while reserve trading is a distortion to the operation of the market, on balance it is prudent to retain an ability for NEMMCO to contract for reserves while there are risks that the market is not able deliver the sufficient reserves.

The Panel has included a statement of the issues being addressed by this Rule change proposal in chapter 1 of this proposal and a description of the proposed Rule in chapter 3.

Chapter 4 of this proposal includes a detailed description of the proposed Rule and addresses the issues raised by stakeholders in submissions and presentations in response to the Panel's Second Interim Report and the Exposure Draft.

The AEMC Reliability Panel is the proponent of this Rule change proposal and is requesting that the AEMC make this proposed Rule in accordance with section 91 of the NEL. The Panel considers that it is able to make this request as section 91(4) allows the Panel to make requests in relation to its functions under the NEL and the Rules. In particular, the Panel can make recommendations on market changes or changes to the Rules on overall power system reliability matters. The proponents address is:

AEMC Reliability Panel, PO Box A2449, South Sydney, NSW 1235

The Panel also considers that the proposed Rule is in regard to the subject matters that the AEMC may make Rules, as set out in section 34 of the NEL and, more specifically, in Schedule 1 of the NEL.

The Panel is requesting that the AEMC reviews this Rule change proposal under section 96A of the newly amended NEL. Under this section the proposal may be fast tracked if the entity making the request is an electricity market regulating body (which includes the Reliability Panel) that has undertaken a public consultation when developing the proposal, or the proposal is contained in a MCE review.

The Panel considers that the proposed Rule is likely to advance the national electricity objective in that the Panel anticipates that:

- the improved information provision of the EAAP is likely to lead to market responses that, in turn, are expected to improve the utilisation of constrained generator input energy and hence promote the long term interest of consumers of electricity through lower prices for energy and improved reliability of supply to consumers;

- improvements to the SOO demand forecasts would be likely to promote the long term interests of consumers through lower prices, due to more efficient investment in transmission and

generation services through better forecasts of the needs of the national electricity system, and improved reliability of supply;

- the provision of additional reserves under the RERT is likely to promote the long term interest of consumers of electricity through improved reliability of supply; and

- ensuring that the power for NEMMCO to continue to issue reliability directions is an important element in managing reliability in the NEM and is likely to lead to improved utilization of electricity services and will therefore promote the long term interest of consumers of electricity through improved reliability of supply to consumers.

In addition to the Panel's assessment of the proposal against the national electricity objective the Panel has provided an explanation of the expected benefits and costs of the proposed change and the potential impacts of the change on those likely to be affected.

1 Statement of Issues

This Rule change proposal was developed by the Panel as part of its CRR. In its CRR the Panel considered a range of issues related to the current reliability mechanisms in the NEM including:

- what, if any, improvements can be made to NEM arrangements to strengthen the market's ability to manage generator input constraints; and
- the mechanisms available in the NEM to manage power system reliability.

Further information on the CRR is available in section 2.2 of this proposal and on the AEMC website[2].

1.1 Energy Adequacy Assessment Projection (EAAP)

1.1.1 Generator energy constraints

Since early in 2007 there has been growing concern that the drought in south eastern Australia is having an increasing impact on energy availability in the NEM. Energy constraints, other than the short term gas constraints experienced in South Australia, have not been experienced on the Australian mainland since the start of the NEM. The NEM design is predicated upon the key factor for long-term reliability being capacity of the bulk supply system, so the impact of energy constraints is new.

NEMMCO studied the impact of the drought and on 25 May 2007 published a report "Potential Drought Impact on Electricity Supplies in the NEM". In June 2007 the MCE requested that the Panel provide advice on the effectiveness of current market arrangements in managing generation input constraints, and that this advice be developed as part of its CRR.

The Panel considers that the risks of generator energy constraints, particularly the risks associated with the drought, are material and its response needs to be timely. Therefore, as it is uncertain how well the market will operate in the presence of this new phenomenon of relatively widespread potential energy constraints, the Panel is proposing the following three strategies to assist in managing these risks, including the impact of the drought:

- improving the information available to the market participants and stakeholders to facilitate a better understanding of when and where energy constraints could potentially impact reliability;
- allowing the market participants and other stakeholders to respond to this additional information; and
- examining the future of the present reliability safety net (discussed in 1.3).

1.1.2 Panel's proposal

The Panel is proposing, in this Rule change proposal, that the NEM market information systems be enhanced to better manage the potential impacts of energy constraints on reliability in the NEM by NEMMCO publishing a two year outlook of the impact of generation input constraints on reliability at least every quarter. These proposed Rules, while precipitated by the current drought conditions, are not limited to just water availability but also apply to other energy constraints.

[2] Information on the Reliability Panel's Comprehensive Reliability Review is available on the AEMC website at http://www.aemc.gov.au/electricity.php?r=20051215.142656 .

These quarterly energy limitation outlooks, known as the EAAP, would supplement the existing two year capacity-based MTPASA.

The EAAP would be expected to operate in a similar manner to the projections of capacity produced by the two year outlook projected assessment of system adequacy (MTPASA). That is, periods of projected energy shortage would be expected to coincide with high energy prices which should encourage market responses. Such responses could include a market participant that indicates that it intends to reallocate energy from periods of projected excess energy capability to periods of shortage, or the releasing of additional energy or water allocations, possibly in consultation with a jurisdiction. The EAAP would be expected to facilitate changes to the behaviour of existing generators such as the allocations of existing water and fuel resources. The aim of this increased information availability is to provide the opportunity for market responses to develop within the NEM.

The process and methodology proposed by the Panel for gathering and disseminating the information is briefly described as follows:

- the Panel will develop EAAP guidelines containing the parameters for scenarios which will guide the input data to be provided by participants, with the specific details of the scenarios being determined by NEMMCO following the principles in the guidelines;

- the EAAP guidelines would, as a matter of principle, minimise the intrusion and additional costs of input requirements from participants and limit the exposure of the commercial positions of the participants to those essential to inform the market of the generic energy constraints projected;

- the timeframes for MT PASA and EAAP inputs would be aligned by NEMMCO revising the spot market timetable[3];

- each Scheduled Generator, or group of Scheduled Generators with a common input energy constraint, would be required to lodge with NEMMCO a 'Generator Energy Limitation Framework' (GELF) that describes its associated generator input energy limitations and can be used by NEMMCO in its assessments of energy adequacy;

- the nature of GELFs could be tailored by the participant to suit the technology and circumstances of the generating plant, and the types of agreements the generator has with its fuel suppliers, jurisdictional water authorities, and other relevant factors;

- once the GELF is defined for a particular generating plant, the Generator will be obliged to provide, for each scenario and for 24 future months from the start of the next modelling period, input parameters with the exact combination of inputs determined by the tailored GELF,

- the input data for the GELF will be confidential;

- examples of GELF input data may include: maximum annual energy; forecast monthly energy; minimum and maximum monthly energies; dependencies between months; pumping strategies for energy storage; and anything else appropriate for each generator circumstance;

- NEMMCO would then publish monthly energy shortfalls for each region for each scenario based on 10% and 50% POE demand forecasts;

[3] The timetable published by NEMMCO under clause 3.4.3 for the operation of the spot market and the provision of market information.

- projected shortfalls would be published using each participant's preferred energy usage pattern and also when monthly energy allocations are optimised by NEMMCO, with the difference between the two outputs representing the 'gap' between current participants' preferences and the minimum USE outcome possible;

- NEMMCO may publish an update to the most recent EAAP if there is a material change in circumstances in the market; and

- the EAAP will not be used to trigger any intervention process.

The Panel considers that a monthly resolution for the EAPP, rather than the daily resolution that applies in MTPASA, is appropriate because energy consumption is inherently less volatile than the demand.

1.2 Accuracy of the Maximum Demand Projections in the SOO

The operationalisation of the reliability standard depends on accurate projections of the maximum demand. If the projections are too high, NEMMCO will tend to intervene with its Reserve Trader or reliability directions powers too often. If the projections are too low, there is an increased risk of USE due to inaction by NEMMCO to avoid untimely generator maintenance.

The Panel notes the concern of many stakeholders that maximum demand projections have been systematically too conservative (too high), particularly at the 10% POE demand levels that underpin Reserve Trader intervention, and that consequently NEMMCO may have intervened too often using the Reserve Trader at a greater cost to consumers. For example, in the summers of 2004/05 and 2005/06, NEMMCO contracted for reserves but ultimately did not need to dispatch them[4]. The combined cost of these interventions was $5.4m, which was passed on to consumers, although the Panel notes this amount is small compared to the overall value of the trade in the NEM.

The Panel notes that in late 2004 NEMMCO engaged KEMA Consulting to independently review its process for preparing the demand projections in the SOO and that NEMMCO is evaluating KEMA's recommendations[5] as part of its continual improvement processes.

The Panel acknowledges NEMMCO's continuous improvement processes for the preparation of the demand projections and, including the improvements in the demand forecasts for 2007, is proposing that NEMMCO report to the Panel in November each year on:

- the accuracy of the most recent SOO demand forecasts; and

- any improvements that have been incorporated into the process used to prepare the SOO forecasts.

The Panel is also proposing that an obligation is placed on the members of the Inter-Regional Planning Committee (IRPC) to assist NEMMCO in meeting its obligation to report to the Panel each year. The Panel considers that this obligation should be placed on the IRPC in its capacity of assisting NEMMCO in the preparation of the SOO under clause 5.6.3(a) and as the IRPC members have responsibility for preparing these demand projections for their respective Annual Planning Reports under clause 5.6.2A.

[4] NEMMCO did not need to dispatch the contracted reserves partly because the respective summers were milder than the one in ten year 10% POE forecasts.
[5] Reference to the KEMA report on the NEMMCO website at http://www.nemmco.com.au/nemgeneral/kema.htm .

1.3 Reliability and Emergency Reserve Trader (RERT)

1.3.1 Current Reliability Safety Net Provisions

The present reliability safety net provisions in clause 3.12.1 of the Rules allow NEMMCO to contract for capacity reserves (the Reserve Trader) when a shortfall of reserve is projected. These reserves can be dispatched by NEMMCO when customer loads would otherwise be shed. Under guidelines prepared by the Panel in accordance with the Rules, distortion to the market is minimised by only allowing NEMMCO to enter into Reserve Trader contracts within six months of a project shortfall. This current power for NEMMCO to contract for reserves under clause 3.12.1 of the Rules expires on 1 July 2008.

1.3.2 The Continued Need for a Form of Reliability Safety Net

The Panel considers that, although the Reserve Trader provisions are a market distortion which would not be necessary under ideal conditions, on balance the prevailing market conditions are such that a revised form of the reliability safety net provisions needs to be maintained for a defined period of time. The Panel also considers that ideally, in the longer-term, the market should be able to operate without the need for a distortionary intervention mechanism[6].

The Panel considered the need for a form of reliability safety net as part of its CRR. The Panel received submissions on the need for, and form of, the reliability safety net in response to its CRR Issues Paper and Interim Reports.

As reported in the Final Report of the CRR, the Panel observes that the NEM's reliability performance has, historically, been bolstered by generation capacity overhang in some regions. This has perhaps made the reliability standard of 0.002% USE an easier benchmark to perform against than would otherwise have been the case in a system starting with a tighter supply-demand balance. The performance of the market in the tighter supply-demand conditions that is likely to be experienced over the next few years has never been tested. Therefore, the Panel considers that the removal of a key safety net provision such as the Reserve Trader may not be prudent at this stage.

Nevertheless, the Panel acknowledges, and agrees with, the views of several market participants (for example International Power Australia and Loy Yang Marketing Management Company Limited) that the enablement of the Reserve Trader should be viewed as a failure of the market to deliver reliability and is detrimental for the following reasons:[7]

- "by the very virtue of the existence of the Reserve Trader, participant behaviours and actions are likely to be altered;
- it impedes the demand side response;
- it provides incentives to withhold capacity in order to receive additional revenue; and
- capacity sought is in excess of what the market customers are willing to contract."

[6] This view is consistent with the Panel's recommendations in its Second Interim Report and Final Report on its Comprehensive Reliability Review. These reports are available on the AEMC website.
[7] IPRA-LYMMCo submission in response to the Interim Report, available on the AEMC website.

However, the Panel further notes, and on balance agrees with, the support of some market participants and stakeholders for retaining the Reserve Trader including the South Australian Government who state that:

> "Given the (SA) Planning Council's modelling and the fact that Reserve Trader has had to be implemented over the last two summers in Victoria and South Australia due to forecast shortfalls in reserve margins, the State Government considers there is a strong case for its retention, albeit with enhancements designed to promote broader capacity options than just demand side responses."

and the Major Energy Users who state that:

> "The $2.7m [average of the two years] contracted by NEMMCO each year of 04/05 and 05/06 to secure adequate supplies needs to be considered in light of the $6.7bn traded through the NEM spot market for power supplies in 2006."

On balance the Panel considers that, although it is a market distortion, the costs are minimal when compared to the costs in the market overall and that if better specified, the mechanism could be less of a distortion.

1.3.3 Proposed RERT

The Panel is proposing to replace the current Reserve Trader with a redesigned Reserve Trader, the Reliability Emergency Reserve Mechanism Trader (RERT). The proposed RERT incorporates incremental improvements in the design of the existing Reserve Trader and has been designed to impose minimal distortion on the operation of the NEM while increasing NEMMCO's flexibility when contracting for reserves.

Contracting in advance of projected shortfall

Under the current Reserve Trader arrangements, NEMMCO is only able to contract for capacity reserves up to six months in advance of a projected shortfall. The consequence of this short lead time is that there are only a limited number of potential sources of reserve capacity available. The Panel anticipates that extending this timeframe will increase the range of entities willing to offer reserve contracts, increasing competition and hence reducing the procurement cost, although the Panel is mindful that allowing NEMMCO to procure reserves too far in advance of the projected shortfall may distort investment in new generating plant.

Therefore, on balance, the Panel is proposing that under the proposed RERT NEMMCO would be able to contract for reserves for up to nine months in advance of a period where the reserves are projected to be insufficient to meet the reliability standards.

Multiple rounds of tendering

NEMMCO currently only has one opportunity to tender and enter into contracts under the Reserve Trader. This rigid tendering and contracting timetable may mean that NEMMCO is restricted from entering into the most efficient reserve contracts.

Under the proposed RERT, NEMMCO would be able to contract further in advance of a projected reserve shortfall and it would therefore be desirable to allow NEMMCO to undertake multiple rounds of tendering and contracting when selecting the optimal portfolio of reserve contracts to cover a projected shortfall. Such a rolling tendering process would also allow NEMMCO's reserve contracting to be informed by the updated quarterly projections of the impact of generation input constraints, and the associated market responses.

NEMMCO will also be able to negotiate with a previous tenderer if a projected shortfall arises at short notice. This would be more efficient than relying on directions later.

Operating on a regional basis

Like the current Reserve Trader, the proposed RERT would operate on a regional basis. That is, NEMMCO would only contract for reserves in the region, or group of regions, projected to be in a reserve shortfall. In addition, NEMMCO would continue to be required to consult with the Jurisdictions from the affected regions before entering into reserve contracts.

Also under the proposed RERT NEMMCO would recover its costs from Market Customers in the affected regions on a basis that is agreed with the associated Jurisdictions.

Four year sunset period

Under the proposed Rule:

- the RERT would have a sunset in four years, and that prior to this date, the Panel be required to review the operation of the RERT, including whether the RERT should be retained beyond its sunset;
- the Panel would complete this review within three years of the operation of the RERT as part of a future reliability standards and settings review; and
- the RERT could be removed prior to the four year sunset if this is recommended in the future reliability standards and settings review.

Panel RERT Guidelines

Under the proposed RERT the Panel would be required to prepare a set of guidelines for NEMMCO's operation of the RERT.

The Panel published an indicative set of RERT Guidelines as part of its Exposure Draft in an Appendix of the Second Interim Report.

1.4 Reliability Directions

The other consideration the Panel has had to address as part of its analysis of mechanisms to maintain power system reliability is the power of NEMMCO to issue reliability directions under clause 4.8.9(a) of the Rules.

Under clause 4.8.9(h) NEMMCO's obligations and powers to issue a direction or clause 4.8.9 instruction to maintain or re-establish the power system in a reliable operating state cease when NEMMCO's right to enter into contracts for the provision of reserves in accordance with rule 3.12 ceases.

It is the view of the Panel that directions issued by NEMMCO to maintain or re-establish the power system in a reliable operating state are an important mechanism to manage the reliability of the NEM. Therefore, for the reasons above that it proposes that the RERT allow NEMMCO to continue to operate a reliability safety net, the Panel considers that NEMMCO should continue to have the power to issue directions for reliability.

The Panel also notes that under clause 4.8.9 NEMMCO can issue directions for both security and reliability reasons. However, the Panel is concerned that it is not always possible to differentiate directions for reliability and security reasons at the time the directions are given. Consequently, it

is important that NEMMCO be able to continue to issue directions without the confusion of needing to determine, at the time, if the direction is for reliability or security reasons.

For these reasons under the proposed Rule, the power for NEMMCO to issue reliability directions under clause 4.8.9 has been extended indefinitely.

2 Development of the Proposal

This chapter outlines the process that the Panel undertook in developing this Rule change proposal.

2.1 Reliability Panel

The Panel is a specialist body within the Australian Energy Market Commission (the AEMC) and comprises industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on the safety, security and reliability of the national electricity system and advising the AEMC in respect of such matters. The Panel's responsibilities are specified in section 38 of the National Electricity Law (NEL) and Rule 8.8 of the National Electricity Rules (Rules).

2.2 The Comprehensive Reliability Review

In December 2005 the AEMC directed the Panel to undertake a comprehensive and integrated review of the key mechanisms, standards and parameters (collectively, the 'reliability settings') for achieving reliability of supply in the National Electricity Market (NEM).

The Panel's Comprehensive Reliability Review (CRR) began with the publication of an Issues Paper in May 2006. Stakeholders responded with written submissions, as well as in-person presentations to the Panel at a forum held in July 2006. The Panel then analysed the issues identified in the Issues Paper and by stakeholders. The Panel published the first Interim Report in March 2007 which presented the results of that work with a view to further stakeholder consultation before aiming to complete the Final Report and recommendations in July 2007.

However, in June 2007 the Ministerial Council on Energy (MCE) wrote to the AEMC requesting the Panel "review and provide advice on the effectiveness of current market arrangements in managing generation input constraints" in the context of energy shortfalls being forecast by NEMMCO if the prevailing drought conditions remained. The letter also noted "that the current terms of reference [of the CRR] may need to be broadened from its current focus on reliability to consider what, if any, improvements can be made to arrangements, including Reserve Trader, to strengthen the market's ability to manage input constraints."

The AEMC then amended the Panel's Terms of Reference to require the Panel to:

- provide advice to the AEMC for the MCE by mid-July 2007 on what, if any, improvements can be made to arrangements, including Reserve Trader, to strengthen the market's ability to manage generator input constraints.

- extend the timetable of the CRR to include the Second Interim Report which will seek feedback from stakeholders on the matters raised in that advice before its final report is issued later in 2007.

The Panel provided the requested advice to the MCE and published the Second Interim Report on 3 September 2007 to seek feedback from stakeholders on issues arising from that advice as well as on a number of matters from the broader CRR.

Stakeholders responded with written submissions, as well as in-person presentations to the Panel at a forum held in September 2007. The Panel published its Final Report for the CRR in December 2007. In parallel with the preparation of this report, the Panel amended its Exposure Draft to reflect further analysis and to incorporate stakeholder views.

2.3 Exposure draft Rule

In parallel with the preparation of the Second Interim Report the Panel developed an Exposure Draft of the Rule changes that would be indicative of those necessary to implement the proposed arrangements that were developed by the Panel. This Exposure Draft, including an explanation of the policy and a description of the Rule, was published as Appendix C of the Panel's Second Interim Report.

This Exposure Draft was issued in conjunction with the Second Interim Report of the Comprehensive Reliability Review and was designed to form the basis of a future Rule change proposal that will be submitted to the Australian Energy Market Commission (AEMC) by the Reliability Panel (the Panel).

This Exposure Draft incorporated the recommendations made in the Second Interim Report. While the National Electricity Rules (Rules) require the Panel to recommend whether the existing provisions in relation to the reliability safety net should be removed from the Rules prior to 1 July 2008, it does not expressly require the Panel to consider alternative arrangements to the reliability safety net as contemplated by this Exposure Draft.

However, clause 8.8.3(l) of the Rules allows the Panel to make recommendations in a review or determination on changes to the Rules that relate to the reliability of the power system. More generally, clause 8.8.1(a)(5) of the Rules which provides for the purpose of the Panel includes that the Panel may make recommendations on market changes to the Rules and any other matters which the Panel considers necessary.

It is on the basis of the above clauses that the Panel put forward this Exposure Draft, with modifications that address issues raised in submission and presentations in response to the Panel's Second Interim Report, to the AEMC as a Rule change proposal.

The Exposure Draft was divided into three main components:

1. the introduction of the "energy adequacy assessment projection" to be known as the "EAAP" which is designed to provide information on energy constraints;
2. the introduction of the reliability and emergency reserve mechanism to be known as the Reliability and Emergency Reserve Mechanism (RERM[8]) which will replace the reliability safety net but address the same matters with some enhancements and modifications including an expiry date; and
3. clarifying that NEMMCO powers in relation to reliability directions are not expiring with either the reliability safety net or the RERM.

2.4 Consultation on the Exposure Draft

The Panel's proposed Rule was prepared as part of the CRR, which included a robust consultation process. The issues that were included in this proposed Rule were published for consultation in an Exposure Draft that formed part of the Panel 's Second Interim Report.

[8] The Panel subsequently renamed the RERM to the Reliability and Emergency Reserve Trader (RERT).

2.4.1 CRR Consultation Process

The key dates for the Panel's CRR consultation process where:

- Panel published Issues Paper 11 May 2006
- Submissions on Issues Paper closed 30 June 2006
- First Stakeholder Forum (Gold Coast) 27 July 2006
- Panel published Interim Report 2 April 2007
- Submissions on Interim Report closed 17 May 2007
- Terms of reference modified in response to MCE request 21 June 2007
- Panel published Second Interim Report (including Exposure Draft) 30 August 2007
- Second Stakeholder Forum (Melbourne) 13 September 2007
- Submissions on Second Interim Report closed 28 September 2007
- Panel published Final Report 21 December 2007

The issues contained in this Rule change proposal, including the Exposure Draft, were published in the Panel's Second Interim Report. This gave stakeholders the opportunity to provide the Panel with specific comments on the Exposure Draft at the Stakeholder Forum on 13 September 2007 and weeks to prepare submissions, due on 13 September 2007.

2.4.2 CRR Submissions

Appendix A contains a list of submissions, supplementary submissions and presentations made to the Panel as stakeholder feedback after the release of the Issues Paper, the Interim Report and the Second Interim Report (including the Exposure Draft Rule).

3 Proposed Rule

This chapter provides a description of the proposed Rule developed by the Panel, the power for the Panel to submit this proposed Rule change to the AEMC, power that the Panel considers that the AEMC has to consider this proposed Rule change, and the Panel's request that the Rule be fast tracked under section 96A of the NEL.

The Panel has attached a copy of the Proposed Rule with this Rule change proposal.

3.1 Description of the Proposed Rule

The Reliability Panel, in its review of the reliability safety net and in the context of generation input constraints, has recommended changes to the Rules to ensure reliability of supply. These changes can be broadly identified as:

(a) the introduction of an information mechanism, the Energy Adequacy Assessment Projection (EAAP), which is a two year projection of energy adequacy;

(b) the replacement of the existing "reserve trader" arrangement[9] with the Reliability and Emergency Reserve Trader (RERT), which is an enhanced reserve trader with a four year sunset;

(c) the extension of the power in the Rules that allows NEMMCO to issue Reliability Directions, without a sunset (as there is an expiry date of 1 July 2008 related to this power); and

(d) a requirement for NEMMCO to report to the Panel on the accuracy of the SOO Load Forecasts.

3.1.1 Schedule 1

Schedule 1 of the proposed Rule contains proposed amendments to the National Electricity Rules to incorporate the energy information publication which has been called the Energy Adequacy Assessment Projection (EAAP). The EAAP will cover a 24 month period, published quarterly and provide information on a monthly basis. It will be prepared by NEMMCO with the inputs being, in addition to the inputs to the PASA processes, specific information in relation to scheduled generating units.

Each Scheduled Generator will be required to submit a Generator Energy Limitation Framework (GELF) to NEMMCO which will assist NEMMCO in forecasting energy constraints. A new definition of "energy constraints" has been included in Chapter 10 of the Rules to avoid confusion with the definitions of "energy" and "constraint". Scheduled Generators will have to update the parameters to the model on a quarterly basis to update NEMMCO's inputs for the purposes of the quarterly publication of the EAAP.

NEMMCO is to prepare guidelines to assist Scheduled Generators in the submission of the GELF and associated information to ensure that NEMMCO obtains all relevant information for the EAAP. These guidelines are referred to as the GELF guidelines.

The Reliability Panel is also required to prepare guidelines for the EAAP. These guidelines are referred to as the EAAP guidelines and are aimed at covering the necessary scenarios that NEMMCO should study in relation to energy input constraints. The purpose of the EAAP guidelines is to direct NEMMCO to take into account particular energy input constraints such as the drought or fuel shortages when preparing the EAAP. The Reliability Panel is to prepare the

[9] The current reserve trader arrangement under clause 3.12.1 of the Rules expires on 1 July 2008.

guidelines in accordance with the Reliability Panel consultation procedures in Chapter 8 of the Rules.

In conjunction with the EAAP, the Reliability Panel has proposed extending the scope of the Statement of Opportunities (SOO) to require NEMMCO to provide the Reliability Panel with a report each year on any improvements made to the energy forecasts in the SOO.

3.1.2 Schedule 2

Schedule 2 of the proposed Rule contains the key clauses relating to the Reliability and Emergency Reserve Trader known as the RERT which will replace the reliability safety net provisions in the Rules and also the Part 7 derogation in Chapter 8A. The RERT has been drafted to be a stand-alone section of the Rules to the extent that this is possible. The reason behind this structure is to minimise amendments to the Rules when it expires. Currently, the reliability safety net provisions are scattered throughout Chapters 3 and 4 of the Rules and amended by the Part 7 derogation (which largely incorporates non-scheduled reserves). This scattering of provisions is both confusing and misleading, and creates difficulties in identifying the relevant provisions to the reliability safety net. The current structure lacks transparency as to the implications to the market of reserve contracting. The new structure is designed to ensure that all relevant clauses of the RERT are in a central location. The drafting largely reflects the wording in the Part 7 derogation.

The RERT is substantially similar to the reliability safety net with some modifications and incremental improvements namely:

- it gives NEMMCO the power to enter into contracts for reserves and non-scheduled reserves up to nine months prior to the projected capacity shortfall arising;
- it places a requirement on NEMMCO to ensure the reserve contract or non-scheduled reserve contract includes a provision that ensures the contracting party has not and will not offer the reserve or non-scheduled reserve in the market except in accordance with the contract;
- it provides for NEMMCO to manage a portfolio of reserve and non-scheduled reserve contracts to provide for a rolling tender process;
- it provides for the matters that the Reliability Panel may make guidelines about; and
- it contains an expiry date with an option for the Reliability Panel to conduct a review to recommend to the AEMC for the RERT to expire earlier.

3.1.3 Schedule 3

Schedule 3 of the proposed Rule contains the other clauses in the Rules that affect the RERT. They are contained in a separate schedule in this proposed Rule for ease of understanding. These clauses primarily relate to various mechanisms contained in the Rules for the overall operation of the market that require modifications as a result of the RERT (or previously the operation of the reliability safety net).

The key amendment in this section is the introduction of the term "NEMMCO intervention event". The purpose of the term is to capture the situation where clauses refer to both the issuing of directions and the dispatch of reserve contracts or activation of non-scheduled reserve contracts. The term NEMMCO intervention event is an attempt to encapsulate the different market intervention mechanisms with the view that if the RERT expired, instead of references to the reserve contracts and non-scheduled reserve contracts in the Rules, the reference would be to NEMMCO intervention event. The difference being that, after the expiry of the RERT, a NEMMCO intervention event would only refer to directions.

The other noticeable difference in the proposed Rule is the renumbering of rule 3.12. As a result of removing the reliability safety net provisions (now the RERT provisions) into a separate clause, the relevant clauses in that section have been renumbered to clean up the structure of rule 3.12.

Lastly, the Rule fund referred to in rule 1.11 has been redrafted so that it does not specifically refer to the reserve trading fund. It now refers to a trading fund in the generic sense with a cross reference in the RERT clauses to deal with the requirement on NEMMCO to administer a fund in its books in relation to the RERT. It will also make it administratively easier to include other funds in this Rule.

3.1.4 Schedule 4

Schedule 4 identifies savings and transitional provisions that will be required to ensure the appropriate guidelines are in place when the Rule commences operation. The extent of these provisions will depend on when the Rule and the relevant guidelines commence operation. The proposed Rule has been drafted on the basis that the guidelines will commence operation after the Rule commences operation.

3.2 Power of the Panel to Submit this Proposal

The Panel is requesting that the AEMC make this proposed Rule in accordance with section 91 of the NEL.

Section 91(1) of the NEL specifies that the AEMC may make a Rule at the request of any person, the MCE or the Reliability Panel, however section 91(4) does restrict the Reliability Panel to requesting the AEMC to make a Rule that relates to its functions. Section 38(2)(c) of the NEL states that the functions of the Reliability Panel includes any functions and powers conferred on it under this Law and the Rules.

Clause 8.8.1(a) of the Rules lists the functions of the Reliability Panel under the Rules and subparagraph (5) states that one of these functions includes:

> "report to the *AEMC* and *participating jurisdictions* on overall *power system reliability* matters concerning the *power system* and on the matters referred to in clauses 8.8.1(a)(2) and (3), and make recommendations on *market* changes or changes to the *Rules* and any other matters which the *Reliability Panel* considers necessary".

As discussed in Chapter 2 of this document, the Reliability Panel's proposed Rule change relates to improving the overall power system reliability through:

- improved provisions for providing information to stakeholders in relation to the impact of generator energy limits through the implementation of the new Energy Adequacy Assessment Projection (EAAP, an information gathering and dissemination mechanism);
- requiring NEMMCO to report to the Reliability Panel each November on the accuracy of the most recent Statement of Opportunities (SOO) demand forecasts and on improvements in the forecasting process that will be used to prepare the subsequent SOO;
- replacing the existing 'reserve trader' arrangements with the redesigned Reliability and Emergency Reserve Trader (RERT) mechanism, with a four year sunset period; and
- confirming NEMMCO's ongoing power to issue Reliability Directions.

The Reliability Panel considers that each aspect of this proposal relates to the overall reliability of the power system and, therefore, within the power of the Reliability Panel to recommend changes to the Rules.

3.3 Power of the AEMC to Make the Proposed Rule

The subject matters about which the AEMC may make Rules are set out in section 34 of the NEL and, more specifically, in Schedule 1 to the NEL.

The Panel considers that the proposed Rule falls within the subject matters that the AEMC may make Rules about, as it relates to:

- the operation of the national electricity market (as it involves the rules for procurement and dispatching of contracted reserves and non-scheduled reserves);
- the operation of the national electricity system for the purposes of the safety, security, and reliability of that system (as this matter involves the ability to maintain reliability in the presence of generator energy limitations and capacity shortfalls); and
- the activities of persons (including registered participants) participating in the national electricity market or involved in the operation of the national electricity system (as this matter involves the procurement and dispatching of contracted reserves and non-scheduled reserves, the provision of market related information by registered generators to NEMMCO and the provision of market related information by NEMMCO to registered participants).

The Panel is of the view that the proposed Rule is a matter about which the Commission may make a Rule.

Specifically, the proposed Rule is also within matters set out in Schedule 1 to the NEL as it relates to:

- the disconnection of generating systems, transmission systems, distribution systems or other facilities or loads, in that the proposed Rule relates to NEMMCO's power of direction (Clause 10 of Schedule 1 to the NEL);
- the operation of generating systems, transmission systems, distribution systems or other facilities, in that the proposed Rule relates to NEMMCO's power of direction, the procurement and dispatching of contracted reserves and non-scheduled reserves, and the provision of information by registered participants to allow NEMMCO to operate the EAAP (Clause 11 of Schedule 1 to the NEL);
- reviews by or on behalf of the Reliability Panel (Clause 33(b) of Schedule 1 of the NEL); and
- confidential information held by Registered participants, the AER, the AEMC, NEMMCO and other persons or bodies conferred a function, or exercising a power or right, or on whom an obligation is imposed, under the Rules, and the manner and circumstances in which that information may be disclosed (Clause 35 of Schedule 1 to the NEL) in that the proposed Rule relates to provision of information for the EAAP.

3.4 Request for the Proposal to Fast Tracked

3.4.1 Requirements of the NEL

The Reliability Panel is requesting that the AEMC reviews this Rule change proposal under section 96A of the amended NEL[10].

Section 96A applies if either:

(a) the request is made by an electricity market regulatory body that has consulted with the public on the nature and content of the request before making that request; or

(b) the request is made on the basis of a recommendation for the making of a Rule contained in a MCE directed review.

The Panel considers that section 96A applies to its Rule change proposal in both cases as:

(a) under section 87(2) of the amended NEL, the Reliability Panel is considered to be an electricity market regulatory body; and

(b) the Rule change proposal is a direct result of a request from the MCE[11] for the Reliability Panel to provide advice on the effectiveness of market arrangements to manage generation input constraints and on reserve trader arrangements.

3.4.2 Requirements of the Regulations

Clause 8(f) of the amended Regulations[12] requires that, where an electricity market regulatory body requests that a Rule change proposal is fast tracked, the proposal must contain a summary of:

- the consultation conducted by the electricity market regulatory body; and
- include information about the extent of the consultation and about the issues raised during the consultation and the electricity market regulatory body's response to those issues.

The Panel believes that this Rule change proposal meets these two requirements in that:

- chapter 2 contains a description of the consultation process that the Panel conducted; and
- chapter 4 contains a description of the issues raised by stakeholders and the Panel's response to these issues.

[10] The National Electricity (South Australia) (National Electricity Law—Miscellaneous Amendments) Amendment Act 2007, which took effect on 1 January 2008.
[11] The letter from the Standing Committee of Officials (SCO) to the AEMC, on behalf of the MCE, requesting that the Reliability Panel to perform this review is available on the AEMC website at http://www.aemc.gov.au/pdfs/reviews/Comprehensive%20Reliability%20Review/reliability%20panel%20docs/000Letter%20from%20the%20SCO.pdf .
[12] The National Electricity (South Australia) Variation Regulation 2007, which took effect on 1 January 2008.

4 Analysis of the Issues Addressed in the Proposed Rule

This chapter provides an overview of the proposed Rule changes and an analysis of the associated issues, including the views provided by stakeholders, in submissions and at the Stakeholder Forum in September 2007, in response to the Panel's Second Interim Report and the associated Exposure Draft.

The Chapter includes:

- section 4.1 – the EAAP (a two year projection of energy adequacy);
- section 4.2 – the Accuracy of the SOO Load Forecasts;
- section 4.3 – the RERT, renamed from the RERM in the Exposure Draft; and
- section 4.4 – Reliability Directions.

4.1 Energy Adequacy Assessment Projection (EAAP)

4.1.1 Overview of the EAAP

The proposed two year outlook of the impact of generation energy input constraints on reliability has been designated as the Energy Adequacy Assessment Projection, known as the EAAP.

The EAAP is a probabilistic assessment of the projected energy availability in the presence of generator energy constraints, as measured by the regional projected unserved energy (USE). The EAAP:

- covers the next 24 months from the commencement of the next quarter;
- is published at least quarterly (that is every quarter but more often if NEMMCO considers that a material change in the input data or assumptions has occurred); and
- provides the projected USE for each region using a monthly resolution.

In its submission in response to the Draft Rule, NEMMCO suggested that the timing of the publication of the EAAP should not be fixed in the Rules but should be specified through consultations with the market.

Under the Panel's proposed Rule, NEMMCO would be required to consult on the market timetable, in accordance with clause 3.4.3, to determine the quarterly EAAP publication cycle.

4.1.2 How the EAAP relates to MT PASA

The proposed EAAP is similar to the existing MT PASA in that:

- it is a form of projection of the adequacy of the power system over the next two years;
- it takes offers from the generators and other anticipated power system conditions and provides aggregated information on the power system adequacy to participants (and other stakeholders);
- it carries out a security constrained assessment of the power system reliability; and

- it is intended to prompt a response from the market based on the published aggregated information.

However, in other respects the proposed EAAP is quite different to the other forms of PASA, including:

- the EAAP is a probabilistic assessment of adequacy while the PASA is deterministic in nature; and

- the EAAP requires a greater detail of generator modelling information potentially including Forced Outage Rates and a description of the energy constraints (see the GELF below).

The proposed EAAP is primarily concerned with reliability of supply over the period of interest. In contrast, Clause 3.7.1(b) of the Rules states that PASA is a "…disclosure of medium term and short term power system security prospects …". In practice, however, there is no real distinction between "reliability" for the EAAP and "security" for PASA. The MT PASA and ST PASA considers the projected system conditions to determine whether there is sufficient reserve to meet the projected regional demand while keeping the power system secure. Where an insecure state is projected this is in effect signalling, in the absence of any other corrective actions, load shedding is required which effectively makes it a reliability issue.

The Panel has separated the proposed EAAP from the other forms of PASA by placing it into clause 3.7B. Also, naming it the EAAP, rather than say energy PASA, also enforces this distinction and reduces the potential for confusion.

4.1.3 EAAP input requirements

For NEMMCO to perform the studies specified for the EAAP it will require a range of data similar to what it currently uses for the Monte Carlo simulations in the Annual National Transmission Statement (ANTS[13]) and the Minimum Reserve Level calculations. This data is significantly more detailed than the data required for MT PASA[14].

The input data required for the proposed EAAP would take into account:

- the input data for MT PASA as specified in clause 3.7.2(c), including expected future generator availability expressed as a daily capacity and network constraints;

- the input data needed for the ANTS and the calculation of the Minimum Reserve Levels, where relevant, including generator forced outage rates is assumed to also be available to the EAAP[15];

- NEMMCO's forecast estimate of the load profiles for each region[16]; and

- generator energy limitation frameworks (GELFs) specified by each Scheduled Generator to describe the energy constraints associated with its generating units, including quarterly updated parameter values.

[13] NEMMCO prepares the ANTS in accordance with clause 5.6.5 of the Rules.
[14] NEMMCO performs the MRL calculations to operationalise the Reliability Standard that is specified by the Reliability Panel http://www.nemmco.com.au/powersystemops/240-0020.htm .
[15] NEMMCO already collects the generator FOR values for the MRL and ANTS. Therefore, the Rules do not need to explicitly mention the FOR values.
[16] NEMMCO's estimate of the load profiles for each region would generally be based on the SOO forecasts and historical load traces but NEMMCO may vary from this for some scenarios and it may adopt another approach to synthesise appropriate load traces.

4.1.4 Generator energy limitation frameworks (GELFs)

Overview

The GELF[17] for each Scheduled Generator provides a description of the constraints on the ability of a generating unit, generating system or group of generating units to generate electricity. The nature of each GELF should be tailored by the participant to suit its technology and fuel source, and be suitable for the purposes of the EAAP.

The GELF for a Scheduled Generator is likely to be in the form of either:

- energy generation limitations over a defined period (such as MWh for a given month or quarter); or
- a model that represents the physical characteristics of the energy constraints such as fuel storage capacity and fuel inflow rate.

Each GELF specification must include definitions for each of the parameters of the model, including parameters such as the energy generation limitations or the physical characteristics of the associated generating facilities.

The GELF will need to be in a form that appropriately represents the energy limitations of the plant. It needs to be consistent with the GELF guidelines and be agreed with NEMMCO.

Aggregation of units for the purposes of a GELF

It is proposed that in many cases a single GELF specification may apply to a collection of generating units that face a common set of energy constraints due to their geographic location, access to a fuel source or other similar reason.

The Panel notes that the degree of aggregation in the GELF is likely to be significantly greater than the aggregation that occurs currently for dispatch and settlements under clause 3.8.3 of the Rules. Aggregation under clause 3.8.3 is generally only allowed where the generating units being aggregated are connected at the same connection point (or electrically very close connection points) so that the impact on system security is minimal.

However, the aggregation of generating units in a GELF may cover a large geographic area if the generating units are affected by a single set of energy constraints. For example, the hydro generators in a geographic area may be subject to the same hydrological restrictions. Similarly, the gas generators in a region may be supplied by the same pipelines and would therefore experience common fuel restrictions.

In its submission in response to the Second Interim Report, NEMMCO suggested that a GELF should apply to as many generating units as is practical while maintaining the accuracy of the EAAP studies. The Panel has, therefore, included this as a principle in clause 3.7B(i)(3) of its proposed Rule.

Quarterly updating of each GELF

The GELF parameters will require regular updating with the changing circumstances surrounding the energy constraints of the associated generating units.

It is proposed that for each quarter the Scheduled Generators must also provide NEMMCO with the status of each of the energy constraints of its generating units. This would be achieved by

[17] The GELF was referred to as the generator energy model (GEM) in the Exposure Draft but was renamed to reflect that it was not just a model of the energy constraints but includes a framework for updated input data.

providing NEMMCO with the most recent values for each of the GELF parameters. For example, the GELF for a hydro generating unit might include:

- the availability of the generating unit (as specified in MTPASA);
- the capacity of the storage reservoir;
- the storage level of the reservoir; and
- the projected in flow by month (for each scenario being considered under the EAAP guidelines).

The Scheduled Generators' anticipated energy generation by month or quarter is required to determine whether the aggregate generator energy availability is sufficient to reliably meet the anticipated loads in each region of the NEM.

Each quarter the Scheduled Generators must, in addition to the updated parameter values, provide NEMMCO with its anticipated (or preferred) energy generation by month or quarter over the 24 month assessment period.

GELF guidelines

NEMMCO is required to prepare GELF guidelines to assist Scheduled Generators prepare a GELF in a form that is suitable for inclusion in the EAAP modelling process. The GELF guidelines prepared by NEMMCO should identify:

- the components of a GELF that a scheduled generator must take into account when submitting a GELF to NEMMCO;
- the range of parameters that can be used in a GELF, taking into account NEMMCO's intended approach to modelling, potentially including hydro storage, thermal generation fuel constraints, cooling water availability and gas supply limitations;
- guidelines as to the presentation of the GELF, to facilitate its usage in the EAAP model;
- the extent to which a single GELF can be used to represent a group of generating units that face a common set of energy constraints; and
- the arrangements for managing the confidentiality of information submitted to NEMMCO.

The GELF guidelines should be prepared by NEMMCO in accordance with the Rules consultation process. NEMMCO should have the power to amend the GELF guidelines from time to time as the need arises. Once prepared, a set of GELF guidelines should be available at all times after that date.

GELF confidentiality

The GELF may contain information that is commercially sensitive, particularly the updated GELF parameters and the associated future generation profile. Therefore, the confidentiality of this sensitive information should be maintained to ensure that good quality GELF information is provided to NEMMCO.

NEMMCO would be required to treat the information it receives from the scheduled generator as confidential and only disclose this information on the basis of the arrangements in the GELF

Guidelines and to the extent that it does already under other parts of the Rules[18]. This requirement would apply to:

- the GELF provided to NEMMCO, including any amendments to that GELF;
- the variable parameters that are updated quarterly; and
- the anticipated generation.

The GELF and information relevant to the GELF are to be treated as "confidential information". This phrase is defined in Chapter 10 of the Rules. It includes any information that is derived from the confidential information as well. There are some exceptions to the "confidentiality" of this information which are found in rule 8.6. In particular, this rule deals with the management of confidential information by Registered Participants which includes NEMMCO. The relevant exceptions to the requirement to keep the information confidential for the purpose of the GELF are:

- if the information is at the time generally and publicly available other than as a result of a breach of confidence (clause 8.6.2(a));
- consent is obtained for the disclosure of the information (clause 8.6.2(c));
- the information is reasonably required for potential investment (clause 8.6.2(h)); and
- disclosure is in aggregate sum (clause 8.6.2(k)).

On the basis of the above exceptions, information that is already publicly available through other NEMMCO documents would be an exception to the requirement to keep the information confidential.

4.1.5 EAAP scenarios

The proposed EAAP is a forecast of the possible impact of generator energy constraints over the two year period of projection and, consequently, the results will depend significantly on the assumptions made about the energy limits. Therefore, to provide more value to stakeholders, NEMMCO should study several scenarios. The Panel notes that studying a large number of scenarios would provide diminishing value to stakeholders and place a significant burden on NEMMCO and, therefore, the total number of scenarios to be studied is expected to be limited to about three.

In their submissions in response to the Second Interim Report, the NGF, TRUenergy and ESIPC considered that the EAAP should be limited to drought scenarios and exclude fossil fuels as their availability is not stochastic in nature. ESIPC considered that the gas pipeline arrangements are also complicated and difficult to represent in the EAPP. The Panel disagrees with these submissions and considers that all energy constraints should be considered as it is difficult to foresee future impacts in other fuel markets. The Panel also considers that gas pipeline issues should be represented in the EAAP to the extent that is practical with a view to examining long-term reliability, rather than short-term operational issues.

[18] NEMMCO currently publishes some information on the energy constraints for some generators in the document "2007 ANTS Consultation Issues Paper".

Under the proposed Rule NEMMCO would consider a number of scenarios. Examples could include:

- normal rainfall and drought conditions;
- gas shortage conditions (e.g. an outage of a major pipeline); or
- other limits on a fuel source for a major portion of Generators.

The scenarios considered by NEMMCO would be specified in the EAAP Guidelines.

One-off studies

In its submission in response to the Exposure Draft, EnergyAustralia suggested that the EAAP guidelines should allow for one-off studies to cater for usual and unforeseen circumstances.

The Panel considers that the proposed Rule should not preclude one-off studies and the guidelines should make it possible. However, the Panel considers that generators should not be obliged to provide additional information over and above that required by the consulted on list of scenarios.

4.1.6 EAAP Guidelines

While the power necessary for NEMMCO to operate the EAAP is in the proposed Rules, the Panel will be required to prepare EAAP Guidelines to provide more detailed direction to NEMMCO. These guidelines will specify scenarios that NEMMCO should study and give direction as to how the output results should be presented. When preparing these guidelines, the Panel will consult with NEMMCO and other stakeholders.

Under the proposed Rule the Panel will be required to develop EAAP guidelines, in consultation with NEMMCO and using the consultation procedures in clause 8.8.3 of the Rules, that specify the scenarios that NEMMCO should study when preparing the EAAP results for publication.

It is also proposed that the EAAP Guidelines will also include specific instructions to NEMMCO on the manner that the results should be presented. In particular, the results would include estimates of the regional USE by month over the two year assessment period that are based on both:

- the Generators' anticipated (or preferred) generation by month over the two year assessment period, that is, based on the energy generation profile that the generators are currently planning; and
- the Generators' generation capability as defined by the GELF and the most recent updated parameters, that is, based on a modified energy generation profile that the generators could make available within their physical limitations, but that minimises projected USE levels.

In its submission in response to the Second Interim Report, NEMMCO considered that there may be value in NEMMCO providing generators with confidential estimates of their monthly energy production. These estimates would be in the form of monthly utilisation factors and be derived from the output of EAAP simulations.

The Panel agrees that NEMMCO should be able to provide individual generators with its estimates of the generators projected output. The generators may, in some cases, be encouraged to provide a market response when they compare NEMMCO's projections of their utilisation factors with their own production plans. However, NEMMCO's projections would be only for information and not represent an obligation on the generators.

4.1.7 Publishing the EAAP more than Quarterly

Under the Exposure Draft Rule NEMMCO was required to publish the EAAP quarterly but may publish the EAAP more often.

In its submission in response to the Exposure Draft NEMMCO suggested that if it is able to publish the EAAP more than quarterly then it should have the power to gather the necessary input data from stakeholders.

The Panel considers that placing a requirement on generators to supply updated GELF data more than quarterly, particularly if the number of updates is not capped, would be too arduous. Therefore, if NEMMCO does receive updated input information then it can update the most recent EAAP using this information, but only using the data that is available to it.

The Panel notes that, in the case where it publishes an additional EAAP, NEMMCO will only have a complete set of input data for the two year period considered by the most recent EAAP. Consequently, NEMMCO would essentially be restricted to updating the most recent EAAP, rather than publishing an EAAP for the next two years.

Therefore, under the Panel's proposed Rule:

- NEMMCO can publish additional EAAPs if it receives updated EAAP input information;
- generators do not need to provide information more often than quarterly, in accordance with the timetable (but may provide updated data if they wish); and
- where NEMMCO publishes an additional EAAP then it need only update the most recent EAAP.

4.1.8 Drafting issues

Definition of USE

The definition of USE in the Exposure Draft explicitly referred to reliability due to generator and bulk transmission reliability. In its submission in response to the Second Interim Report, NEMMCO suggested that the definition of USE be more general but linked to the Panel's reliability standard[19].

The Panel agreed with NEMMCO's suggested and included a more general USE definition in the proposed Rule.

Use of a gas pipeline outage as an EAAP example

Clause 3.7B(p)(3) of the Exposure Draft includes a number of examples of possible EAAP scenarios. In its submission in response to the Second Interim Report, NEMMCO suggested that this clause should not use a gas pipeline outage as an example because it expects that MT-PASA would largely cover the effect of a gas pipeline.

The Panel agrees that a gas pipeline outage would generally be covered by MT-PASA and has removed this example from its proposed Rule. The Panel notes that, at least theoretically, it is possible that a gas pipeline outage may affect the results of the EAAP.

[19] The Reliability Panel revised its reliability standard as part of its Comprehensive Reliability Review.

4.1.9 Ten Year Projection of Energy Adequacy

In addition to the two year projection in the EAAP, the Panel's Exposure Draft Rule included a requirement that the NEMMCO Statement of Opportunities includes a projection, over 10 years, of generation energy constraints and projected reliability of supply. This was implemented by amending the requirements for the preparation of the NEMMCO SOO in clause 3.13.3(q) to include a requirement to report on generation input constraints and the projected reliability of supply.

Submissions and presentations on the Exposure Draft have persuaded the Panel that such a requirement is superfluous as generation input constraints can already be managed within the current SOO/ANTS process. The Panel has also concluded that a 10-year forward assessment is likely to be meaningless, since prediction of energy capability, particularly that affected by weather and water inflows, on a 10 year forward basis is unrealistic.

Therefore, the Panel is not proposing a requirement on NEMMCO to prepare a 10 year generator energy limitation projection in the Rules and has removed the proposed amendment to clause 3.13.3(q) from the proposed Rule.

4.2 Standing Data – Accuracy of the Load Forecasts

As discussed in section 1.2 of this proposal, the accuracy of the load forecasts is very important to the management of reliability in the NEM. Therefore, the Panel included in its Exposure Draft a requirement on NEMMCO to report to the Panel in September each year on:

- the accuracy of the most recent SOO demand forecasts; and
- any improvements that have been incorporated into the process used to prepare the SOO forecasts.

This requirement received general support from submission, including NEMMCO. However, NEMMCO made two the following observations:

- that reporting to the Panel in November, instead of September, each year would fit better in the SOO preparation and review cycle; and
- there should be an obligation on the Jurisdictional Planning Bodies to assist NEMMCO to prepare the report for the Panel.

The Panel accepted both NEMMCO's arguments and included the following amendments in the proposed Rule:

- that reporting to the Panel be in November, instead of September; and
- clause 5.6.3(a) was amended to include an additional function for the IRPC of assisting NEMMCO prepare the report on the accuracy of the SOO forecasts for the Panel.

4.3 The Reliability and Emergency Reserve Trader (RERT)

As discussed in its Second Interim Report, the Panel proposed to replace the current Reserve Trader with a Reliability and Emergency Reserve mechanism (RERM). The proposed RERM incorporated incremental improvements in the design of the existing Reserve Trader and has been designed to impose minimal distortion on the operation of the NEM while increasing NEMMCO's flexibility when contracting for reserves.

The NGF considered that the mechanism should still be referred to as the 'Reserve Trader' as it still is a form of reserve trading. The Panel decided to rename the mechanism to the Reliability and Emergency Reserve Trader (RERT) in this proposed Rule to reflect that, while it represents an enhancement to the existing arrangements, it is still a form of reserve trading.

4.3.1 RERT Tendering and Contracting

RERT maximum contract period

Under the current Reserve Trader arrangements, NEMMCO is only able to contract for capacity reserves for up to six months in advance of a projected shortfall. The consequence of this short lead time is that there are only a limited number of potential sources of reserve capacity that are available. The Panel anticipates that extending this timeframe will increase the range of entities willing to offer reserves contracts, increasing competition and hence reducing the procurement cost, although the Panel is mindful that allowing NEMMCO to procure reserves too far in advance of the projected shortfall may distort investment in new generating plants.

Therefore, on balance, the Panel is recommending that under the proposed RERT, NEMMCO would be able to contract for reserves for up to nine months in advance of a period where the reserves are projected to be insufficient to meet the reliability standards.

RERT rolling tendering process

NEMMCO currently only has one opportunity to tender and enter into contracts under the Reserve Trader. This rigid tendering and contracting timetable may mean that NEMMCO is restricted from entering into the most efficient reserve contracts.

Under the proposed RERT, NEMMCO would be able to contract further in advance of a projected reserve shortfall and it would therefore be necessary to allow NEMMCO to undertake multiple rounds of tendering and contracting when selecting the optimal portfolio of reserve contracts to cover a projected shortfall. Such a rolling tendering process would also allow NEMMCO's reserve contracting to be informed by the updated quarterly EAAP projections of the impact of generation input constraints, and the associated market responses.

Many submissions and presentation on the Panel's Second Interim Report also agreed that NEMMCO should be able to have more flexible contracting arrangements.

Therefore, the Panel is proposing that, in addition to any contracts it has already entered into, NEMMCO would be able to:

- enter into reserve contracts or non-scheduled reserve contracts; or
- renegotiate existing reserve contracts or existing non-scheduled reserve contracts, subject to the terms of the reserve contacts and where the need for reserves changes.

Regional basis for the operation of the RERT

The RERT needs to operate on a regional basis because the RERT is a mechanism to address reliability and the reliability standard is expressed on a regional basis. Similarly, the need to operate the RERT is driven by capacity shortages which are also calculated in PASA and pre-Dispatch on a regional basis.

The Panel proposes that, where there is a joint shortfall in reserves between adjacent regions, NEMMCO would be required to:

- choose the combination of contracted reserves in the affected regions that minimizes the costs; and

- ensure that there are sufficient reserves so that the reliability standard is met in all the affected regions.

4.3.2 RERT principles

The Panel considers that NEMMCO should have principles to guide the operation of the RERT. To provide more certainty for stakeholders, it would be desirable to include very high level principles in the Rules but allow the Panel to develop guidelines, through a consultation process, to refine the detailed approach.

Under the Panel's proposed Rule, the RERT Rule would include the following principles:

- actions taken by NEMMCO should be those that are expected to have the least distortionary effect on the operation of the market; and

- actions taken should aim to maximise the effectiveness of reserve and non-scheduled reserve contracts at the least cost to end use consumers of electricity.

Minimising distortion to the operation of the market

The NEM is an energy only market where entry is driven by periods of anticipated high prices. However, intervening in the market by contracting for either reserves (scheduled or non-scheduled) may potentially affect some long-run investment decisions in peaking generation and demand side options by introducing the possibility of gaming through an alternative funding mechanism. Similarly, dispatching contracted reserves or enabling contracted non-scheduled reserves can affect the spot price due to inflexibilities in the associated contracting arrangements.

The Panel considers that, when contracting for or dispatching reserves, NEMMCO should consider the possible distortion to the spot price and long-run operation of the NEM when considering alternative sources of scheduled and non-scheduled reserves.

The Panel also considers that where the operation of the RERT encourages new capacity to enter the market earlier than it otherwise would, this is not a significant distortion to the operation of the market as such capacity would become available in any case.

Maximising the effectiveness at the least cost

When maximising the cost effectiveness of operating the RERT, NEMMCO will need to consider a number of issues including:

- the fixed and variable costs for each contract, and hence the likely total cost of contracting with a particular source of reserves;

- the terms for early termination of a contract;

- any inflexibilities associated with the reserve contract such as minimum, maximum or fixed periods of operation of the reserves; and

- whether, in consultation with the jurisdiction, NEMMCO considers that the incremental cost of additional reserves exceeds the likely benefit to the market.

4.3.3 Dispatch of contracted reserves

In the Exposure Draft, NEMMCO would be required not to dispatch the contracted reserves unless all existing sources of capacity in the NEM have been dispatched, including any capacity offered at the market price limit, or VoLL.

In its submission in response to the Exposure Draft, the Major Energy Users (MEU) argued NEMMCO should be able to dispatch reserves that have been contracted under the RERT at the contracted energy price, even if this is less than VoLL. It argued that this would give a more efficient dispatch of resources, given that the RERT contract costs are sunk.

In considering this matter, as part of the CRR, the Panel did not support dispatch under this scenario because this would:

- undermine the VoLL price signal designed to elicit capacity when the market is distressed;
- provide a long term disincentive to generation investors as they may in the future be subject to subsidised competition from contracted reserves under the RERT;
- distort the operation of the spot market by offering a different risk profile to reserves receiving a form of 'capacity payment', and tend to reinforce the need for the RERT (the Panel notes that if the capacity contracted under the RERT arrangements wishes to participate in the spot market, it is able to do so under the normal market mechanisms, facing the same risks and rewards as other participants); and
- be a disincentive to future generator investment that may lead to higher energy prices in the long term through a reduction in competition.

Therefore, under the Panel's proposed Rule, NEMMCO would be required not to dispatch the contracted reserves unless all existing sources of capacity in the NEM have been dispatched, including any capacity offered at VoLL.

4.3.4 Settlements of contracted reserves

In its submission on the Exposure Draft, IPRA-LYMMCo considered that supply and demand side sources of reserves are not treated equitably in the manner in which they are settled. That is, when a demand side option is dispatched ,it receives an enablement payment from NEMMCO plus it does not pay for the energy it would have used and this would probably be valued at VoLL. However, a supply side option would receive incremental costs (fuel etc) but is not eligible to receive the pool revenue, which is retained by NEMMCO.

The Panel has not reached a final view on the potential for differences between supply and demand side treatment raised by IPRA-LYMMCo. However, the Panel notes that in the case of contracted reserves, participants from both demand and supply sides have the ability to price their tenders in the full knowledge of the prevailing market rules, including any benefits that might be delivered through spot price avoidance. Whereas, a demand side offer would be expected to be cheaper up front, when NEMMCO is comparing demand side and supply side offers in the tendering process it will take into account the expected (likely) revenue that it will make from the pool when it is dispatched.

In the its proposed Rule the Panel is not suggesting a change to this aspect of the current arrangements, and has referred the broader issue raised by the IPRA-LYMMCo submission to the

AEMC for further consideration in the context of the Commission's review of Demand Side Participation in the National Electricity Market.[20]

4.3.5 Recovering the costs for operating the RERT

Proposed approach for recovering the RERT operating costs

Under the current arrangements, the Reserve Trader's operating costs are recovered from Market Customers (in affected regions) at the end of the reserve contract period.

Some submissions in response to the Second Interim Report suggested that the costs of operating the RERT should be recovered from the market as a whole, rather than just from the regions in shortfall. For examples, ESIPC stated that: [21]

> " … one of the main objectives of the RERM [RERT] and the Reserve Trader is to procure reserves at the lowest possible cost. However, the specification that these tools only operate regionally will significantly compromise the cost minimisation objective and reduce the overall market efficiency. Offers from outside a region must be considered in the analysis providing the network can deliver those reserves to the region. The cost allocation of the services should be considered separately. Having purchased the necessary levels of reserve, those reserves should be recognised as supplying a shared service, within the constraints of the network, to the market nationally".

As discussed above, the Panel agrees that the cost of operating the RERT should be minimised by NEMMCO contracting for reserves in the least cost combination so that each region has access to sufficient reserves to meet the reliability standard. However, the Panel notes that, where a group of regions face a joint shortfall of reserves, there is little benefit in NEMMCO contracting for reserves in any regions other than those facing the joint shortfall, with the unaffected regions being on the other side of network congestion at the time of projected shortfall. Therefore, under the Panel's proposal the costs of contracting would only be recovered from the regions affected by the joint shortfall of reserves as these are the regions that would materially benefit from the additional reserves, through improved reliability. Conversely, the Panel considers that the unaffected regions would not materially benefit from the additional reserves and hence it would be unfair to expect those regions to share the cost.

Therefore, under the Rule proposed by the Panel, the costs of operating the RERT would be recovered from Market Participants on a regional basis and in proportion to the energy settled for each Market Customer in the affected regions, in consultation with the Jurisdictions from the affected regions.

Alternative approach for recovering the RERT operating costs

In response to concerns from stakeholders, in particular Market Customers, the Panel also proposed an alternative approach for recovering the RERT operating costs. This was discussed in the Second Interim Report and examined in the Panel's Exposure Draft. Under this alternative mechanism NEMMCO would administer a series of administered funds to spread the cost of operating the RERT across a number of years.

The stakeholder submissions and presentation to the Panel did not strongly support the concept of an administered fund. In particular, the stakeholders considered that it would be problematic to

[20] Further information on this review is available on the AEMC website at http://www.aemc.gov.au/electricity.php?r=20071025.174223.
[21] ESIPC submission in response to the Second Interim Report, available on the AEMC website.

operate an administered fund for a mechanism that had a sunset. Stakeholders also considered that an administered fund introduces inter-temporal inequities.

Therefore, the Panel did not include the alternative mechanism in this proposed Rule.

4.3.6 Panel review of the expiry date for the RERT

While the Panel considers that, on balance, the proposed RERT would be beneficial to the market overall, it can be considered to be a distortion to the operation of the market. Therefore, in the Exposure Draft the Panel proposed a sunset of four years, but within three years the Panel would be required to complete a review of the performance of the RERT and its ongoing need. Following this review, the Panel could recommend that the RERT expires on the set date, is terminated early or is extended for a further period.

In its submission in response to the Second Interim Report, the MEU suggested that it made little sense for the RERT to have an expiry date if its operation was being reviewed.

The Panel disagrees with the MEU on this point because it wants to give a clear signal that the RERT is a distortion to the operation of the NEM and ideally should be removed after the review. The outcome of this future review will depend on the Panel's assessment, following consultation with the market, of the conditions that apply in the NEM at that time. The Panel is not foreshadowing the results of its review by having a sunset date for the RERT.

Therefore, under the proposed Rule the RERT would operate for four years but within three years the Panel would be required to complete a review of the performance of the RERT and its ongoing need.

4.3.7 RERT Guidelines

Under the proposed RERT Rules, the Panel would be required to prepare a set of guidelines in accordance with the consultation procedures in clause 8.8.3(d)-(l). The guidelines would consider the following:

- the information NEMMCO must take into account when deciding whether to exercise the RERT;
- the relevance of the RERT principles to the exercise of the RERT;
- the actions that NEMMCO may take to be satisfied that the reserve or non-scheduled reserve, which is to be the subject of a contract, is not available to the market through any other arrangement;
- the process NEMMCO should undertake in contracting for reserves and non-scheduled reserves, including the process for tendering for contracts for such reserves;
- any specific or additional assumptions about key parameters that NEMMCO must take into account when assessing the cost effectiveness of exercising the RERT;
- matters relevant to NEMMCO managing a portfolio of reserve contracts and non-scheduled reserve contracts; and
- additional forecasts that NEMMCO should take into account prior to exercising the RERT.

The Panel published a set of RERT guidelines as part of the Exposure Draft, referred to at the time as the RERM guidelines. The Panel will need to finalise these guidelines taking into account the issues raised in the submissions in response the Second Interim Report.

4.3.8 Jurisdictional consultation

The decision to enter into reserve contracts and non-scheduled reserve contracts requires NEMMCO to make a number of economic tradeoffs. These economic tradeoffs impact Market Customers and indirectly consumers of electricity.

Therefore under the proposed RERT Rule, when it is considering entering into reserve contracts, NEMMCO would be required to consult with the Participating Jurisdictions that are associated with the affected regions. In addition, when more than one region is affected by the RERT then the costs allocated to each region should be determined in consultation with the associated Jurisdictions.

4.3.9 Minor Amendments Associated with the RERT

This section identifies cases where the drafting for the proposed RERT deviates from the equivalent drafting in the current Rules and the Derogation in Chapter 8A - Part 7 Provision of Non-Scheduled Reserves by NEMMCO.

Central Dispatch: clause 3.8.1(b)(10)

In the Rules this clause is worded as "arrangements designed to ensure pro rata loading of tied registered bid and offer data" while the wording in the equivalent clause in the Derogation in Chapter 8A - Part 7 Provision of Non-Scheduled Reserves by NEMMCO is "constraints designed to ensure pro rata loading of tied registered bid and offer data".

The important part of this clause is "… designed to ensure pro rata loading of tied registered bid and offer data". How NEMMCO achieves this is less important.

Therefore, the wording for clause 3.8.1(b)(10) in the proposed Rule is as it appears in the main body of the Rules.

Dispatch under conditions of supply scarcity: clause 3.8.14

In the current Rules this clause is worded as "NEMMCO must ensure that, during times of supply scarcity, the actions set out below occur in the following sequence … " while the wording in the equivalent in the Derogation in Chapter 8A - Part 7 is "During times of projected supply scarcity, NEMMCO must use its reasonable endeavours to ensure that the actions set out below occur in the following sequence …".

There are two key differences between these wordings. Firstly, the clause imposes requirements on NEMMCO to take actions to meet the current conditions whereas the derogation requires NEMMCO to consider projected supply when considering the various actions. In practice NEMMCO will:

- use the results from MT PASA, ST PASA and pre dispatch to anticipate projected shortfalls and plan to take the actions described in clause 3.8.14; and
- ensure that the real time decisions made in the dispatch timeframe are those described in clause 3.8.14.

However, the key requirements are in the dispatch timeframe.

The second key difference between the Rule and the derogation is that the derogation introduces "reasonable endeavours". The need for "reasonable endeavours", as opposed to an absolute requirement, is necessary because the terms for dispatching of reserve contracts and the enabling of non-scheduled reserve contracts are subject to:

- inflexibilities in the terms in the contracts such as minimum, maximum and fixed length periods when dispatched or enabled[22] ; and
- uncertainty associated with forecast information as many contracts require advanced notice of being dispatched or enabled[23] .

Therefore, the Panel is proposing that the wording for clause 3.8.14 should be "NEMMCO must use its reasonable endeavours to ensure that, during times of supply scarcity, the actions set out below occur in the following sequence: …".

NEMMCO Notice under clause 3.20.4(g)

Clause 3.20.4(g), at present clause 3.12.1(e) in the derogation of the current Rules, states that:

> "If, at any time NEMMCO deems it necessary to commence contract negotiations for the provision of:
>
> (1) *reserves* under *reserve contracts* or *non-scheduled reserve contracts*; or
>
> (2) *market network services* to make *reserves* available where required,
>
> *NEMMCO* must *publish* a notice of its intention to do so."

The specific ability to contract with market network services is not required as clause 3.20.4(a)(2) allows NEMMCO to enter into a reserve contract with a scheduled network service. In addition, the definition of reserve (short term and medium term capacity reserve) includes reserve made available via prescribed and scheduled network services.

Therefore, the Panel is proposing that the wording for clause 3.8.14 should be "If, at any time NEMMCO deems it necessary to commence contract negotiations for the provision of reserves under reserve contracts or non-scheduled reserve contracts NEMMCO must publish a notice of its intention to do so."

NEMMCO procedures for exercising the RERT: clause 3.20.9(h)

Under the proposed Rule NEMMCO would be required to develop and publish procedures for the exercise of the RERT. When developing these procedures, NEMMCO must:

- follow the Rules consultation procedures;
- consider the RERT Principles; and
- consider the RERT Guidelines developed by the Panel.

NEMMCO would be able to amend these procedures from time to time, in accordance with the Rules consultation procedures.

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[22] These inflexibilities would be common where the resource of the non scheduled reserve was a manufacturing process where the interruption of the load corresponds to a shift. Maximum interruption periods would be associated with processes such as smelting where the process needs to be kept above a minimum temperature.

[23] Advanced notice may be required to manage the staffing at a manufacturing process.

4.4 Reliability Directions

At present under clause 4.8.9 the Rules, NEMMCO has the power to issue directions under to maintain or re-establish the power system to a secure operating state, a satisfactory operating state, or a reliable operating state. However, under the current version of the Rules it is unclear whether NEMMCO's power to issue a direction to maintain or re-establish the power system to a reliable operating state (reliability direction) expires on 1 July 2008.[24]

In its submission in response to the Exposure Draft, the NGF considered that it is difficult to separate reliability and security incidents (in real time) and hence NEMMCO should be able to give directions both to maintain system security and reliability.

The Panel considers that NEMMCO's power to issue reliability directions should be retained because:

- whilst issuing a reliability direction is regarded by the Panel as a distortion to the operation of the NEM, the pricing arrangements associated with Reserve Trader intervention are designed to retain the price signal during scarcity, and therefore limit distortion to the investment signal;

- in practice it is not always clear at the time of a system incident whether a direction is a reliability direction or a direction to re-establish the power system to a secure operating state; and

- it is desirable to remove the ambiguity associated with the expiry date.

Therefore, under the Panel's proposed Rule, NEMMCO's power to issue reliability directions under clause 4.8.9 would be extended without a sunset.

In its submission, the MEU considered that generators that benefit from a NEMMCO direction should be required to refund their windfall gains, in a similar manner to adversely affected generators being compensated. The Panel considers that this is outside of the scope of its Comprehensive Reliability Review to the extent that it does not directly relate to reliability.

24 The operation of the expiry date in clause 4.8.9(h) appears to be overridden by NEMMCO's power in clause 4.8.9(a) that is provided notwithstanding any other provisions of clause 4.8.

5 How the Proposed Rule contributes to the National Electricity Objective and Impacts on Affected Parties

This chapter presents, in accordance with clauses 8(d) and 8(e) of the amended Regulations[25], the Reliability Panel's explanation of:

- how the proposed Rule will or is likely to contribute to the achievement of the national electricity objective; and
- the expected benefits and costs of the proposed change and the potential impacts of the change on those likely to be affected.

5.1 Expected Benefits and Costs of the Proposed Rule

This section presents the Reliability Panel's explanation of the expected benefits and costs of the proposed change and the potential impacts of the change on those likely to be affected.

5.1.1 Improved provision of information

The EAAP

The Panel anticipates that the proposed EAAP will lead to more efficient use of generating systems where their associated input energy resources are limited. This is likely to be achieved through projections of possible future energy shortfalls and allows for a market response due to the expectation of higher prices during these shortfalls. The result of a market response would be to reallocate the limited energy resources to the periods of projected shortfall, which would tend in the long term to:

- improve the reliability of the supply to consumers and to the national electricity system; and
- reduce average prices to consumers by smoothing out the very high prices at times of energy shortfall.

The Panel also anticipates that the proposed EAAP may lead to more efficient investment in generating systems through the more efficient use of the existing generation, leading to less high prices and improved reliability. The Panel expects that this may also lead to lower costs to consumers in the long term.

The Panel notes that the EAAP does impose some additional costs on NEMMCO and generators. NEMMCO would be required to prepare and publish the EAAP at least quarterly and generators need to provide information to NEMMCO quarterly. The Panel notes that NEMMCO has already prepared two reports on the drought[26] and the Panel expects that the costs for NEMMCO and the generators would reduce over time as the associated process becomes more streamlined.

The Panel also anticipates that generators and other energy traders in the NEM will generally benefit from the improved projections of the impact of energy limitations as it will tend to improve their ability to determine efficient contracting levels, subject to the relevance of the outcomes and the level of analysis performed by the participants.

[25] The National Electricity (South Australia) Variation Regulation 2007, which took effect on 1 January 2008.
[26] NEMMCO published "Potential Drought Impact on Electricity Supplies in the NEM" on 25 May 2007. NEMMCO subsequently updated this report, publishing "Drought Scenarios Investigation August 2007 Update" on 15 August 2007 and "Drought Scenarios Investigation November 2007 Update" on 10 December 2007.

Improvements to the SOO demand forecasts

The Panel considers that improvements to the accuracy of the demand forecasts would be beneficial to the market in that if the maximum demand forecasts are:

- too high – then this may lead to over investment in the capacity of the power system and possibly unnecessary use of the reliability safety net. In the short term the apparent need for capacity could result in additional expenditure in network capacity and/or possibly generation capacity if the high forecasts to an expectation that such generation investments would be economic. In the long term the cost of any unnecessary investment is likely to be passed onto consumers through higher network use of system charges. The costs of unnecessary use of the safety net would initially be borne by Market Customers but are likely to be mainly borne by consumers in the long term.

- too low – then it may result in insufficient investment and contracted reserves under the safety net. This will tend to result in higher levels of USE and possible breaches of the reliability standard.

Therefore, the Panel anticipates that improving the projections of the demands in the NEM, in particular the regional maximum demand values, will lead to either more efficient investment (where high forecasts are avoided) or improved reliability of supply (where low forecasts are avoided).

The Panel considers that the cost of this proposal to NEMMCO would be minimal as NEMMCO has demonstrated that it is in a process of continuous improvement of the demand forecasts and that additional burden of reporting to the Panel is not high compared to effort already expended on the preparation of the demand forecasts in the SOO.

The Panel also anticipates that generators and other energy traders in the NEM will generally benefit from the improved demand and energy forecasts in the SOO as it will tend to improve their ability to determine efficient contracting levels, subject to the relevance of the outcomes and the level of analysis performed by the participants. The Panel notes that generators and other energy traders also use other forecasts to those in the SOO.

5.1.2 Management of power system reliability

The RERT

The Panel considers that, instead of allow the existing reliability safety net to expire, that enhancing the arrangements for a sunset period of four years will have a number of impacts, including:

- increasing reliability of the supply to consumers, thus reducing involuntary load shedding, by providing a mechanism for NEMMCO to procure additional reserve capacity at times of projection shortfall;

- providing further market certainty to all market participants by providing continuity of the reserve trader arrangements, with enhancements, for a further four years while there is uncertainty regarding market issues such as greenhouse requirements;

- providing another mechanism for allowing consumers to negotiate demand side responses (DSR), other than directly contracting with a retailer, although some participants consider that the effect may be to detract from the market;

- imposing the costs of procuring the contracted reserves on Market Customers, including retailers, with possible regulatory uncertainty as to whether they can pass on these costs to consumers in the long term;

- imposing the costs of procuring the contracted reserves on consumers to the extent that retailers can pass on these costs;

- imposing additional administrative burden on NEMMCO through the possible need to administer the RERT; and

- reducing the need for NEMMCO to issues directions and instructions to restore the power system to a reliable operating state.

NEMMCO's power to issue reliability directions

The Panel considers that indefinitely extending NEMMCO's power to issue directions to maintain or re-establish a reliable operating state (reliability directions) will have a number of impacts, including:

- increasing reliability of the supply to consumers, thus reducing involuntary load shedding, by providing a mechanism for NEMMCO to restore the power system to a reliable operating state;

- providing further market certainty to all market participants by providing continuity of the current arrangements;

- requiring market participants to either pay or receive compensation payments, depending on how they are affected by the direction; and

- reducing the operational burden on NEMMCO through removing the need for NEMMCO to distinguish between reliability and security directions at the time the incident occurs.

5.2 Analysis of the Proposed Rule Against the National Electricity Objective

This section presents the Reliability Panel's explanation of how the proposed Rule will or is likely to contribute to the achievement of the national electricity objective. The analysis in this section builds on that in section 5.1.

5.2.1 The National Electricity Objective

The national electricity objective is the basis of assessment under the Rule making test and is set out in section 7 of the amended NEL[27]:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

27 The National Electricity (South Australia) (National Electricity Law—Miscellaneous Amendments) Amendment Act 2007, which took effect on 1 January 2008.

5.2.2 Advancement of the National Electricity Objective

The EAAP

The Panel considers that the EAAP promotes the efficient use of electricity services through the improvements in the information that NEMMCO is able to provide to market participants and affected stakeholders on the impact of generator energy constraints. The Panel anticipates that this information is likely to lead to market responses that, in turn, are expected to improve the utilisation of constrained generator input energy. The Panel considers that this is likely to promote the long term interest of consumers of electricity through lower prices for energy and improved reliability of supply to consumers. The Panel considers that the costs imposed on NEMMCO and affected market participants and affected stakeholders would be small compared to the potential improvements in reliability.

Improvements to the SOO demand forecasts

The Panel considers that improvements to the SOO demand forecasts would be likely to lead to more efficient investment in transmission and generation services through better forecasts of the needs of the national electricity system. The Panel anticipates that these efficiency improvements are likely to promote the long term interest of consumers of electricity through lower prices for energy and improved reliability of supply to consumers.

The RERT

The Panel considers that the RERT, with its enhancements, is likely to lead to more efficient utilisation of potential electricity services through providing an emergency mechanism that allows additional capacity reserves to be made available over and above those already in the NEM. The Panel anticipates that these efficiency improvements are likely to promote the long term interest of consumers of electricity through improved reliability of supply to consumers.

NEMMCO's power to issue reliability directions

The Panel considers that allowing NEMMCO to issue directions to return the national electricity system to a reliable operating state is likely to lead to more efficient utilisation of electricity services by allowing NEMMCO the emergency power to intervene to prevent involuntary load shedding. The Panel anticipates that these efficiency improvements are likely to promote the long term interest of consumers of electricity through improved reliability of supply to consumers

Appendix A Submissions, supplementary submissions and presentations

Listed below are all submissions, supplementary submissions and presentations made to the Panel as stakeholder feedback after the release of the Issues Paper, the Interim Report and the Second Interim Report (including the Exposure Draft Rule).

The presentations and submission in sections A.4 and A.5 below were in response to the Panel's Second Interim Report and the associated Exposure Draft, which addressed the issues contained in this Rule change proposal.

All these are available from the AEMC's website at www.aemc.gov.au.

A.1 SUBMISSIONS AND SUPPLEMENTARY SUBMISSIONS IN RESPONSE TO THE ISSUES PAPER

The Issues Paper was published by the Panel in May 2006. The Panel received the following submissions:

- AGL
- Country Energy
- Electricity Supply Industry Planning Council
- Energy Response
- Energy Retailers Association Of Australia
- EnergyAustralia
- Enertrade
- Hydro Tasmania
- International Power Australia and Loy Yang Marketing
- Macquarie Generation
- National Generators Forum
- NEMMCO
- NewGenPower
- Queensland Government
- TransGrid
- TRUenergy
- VENCorp
- Energy Users Association of Australia

- Major Energy Users
- Total Environment Centre
- Electricity Supply Industry Planning Council Supplementary Submission
- Energy Response Supplementary Submission
- Paul Simshauser Supplementary Submission
- Powerlink Supplementary Submission
- Major Energy Users Supplementary Submission
- Ian Macfarlane
- Joseph Tripodi
- SA Department of Transport Energy and Infrastructure
- TRUenergy Supplementary Submission
- Electricity Supply Industry Planning Council Second Supplementary Submission
- SA Department of Transport Energy and Infrastructure Supplementary Submission

A.2 STAKEHOLDER FORUM PRESENTATIONS (JULY 2006)

The Panel held a stakeholder forum on 27 July 2006 as part of the consultation on its Issues Paper. The Panel received presentations from the following:

- ESIPC
- EUAA and MMA
- NGF
- NewGenPower
- Energy Response
- Enertrade
- MEU
- LYMMCO

A.3 SUBMISSIONS IN RESPONSE TO THE INTERIM REPORT

The Interim Report was published by the Panel in April 2007. The Panel received the following submissions:

- Energy-Australia
- Institute of Public Affairs

- Australian Energy Regulator
- NEMMCO
- Energy Retailers Association of Australia
- Enertrade
- National Generators Forum
- Energy Users Association of Australia
- Energy Response
- IPA And Loy Yang
- Macquarie Generation
- Major Energy Users
- TRUenergy
- EEE Limited
- Government of South Australia

A.4 Stakeholder Forum Presentations (September 2007) in response to the Second Interim Report and the Exposure Draft

The Panel held a second stakeholder forum on 13 September 2007 as part of the consultation on its Second Interim Report and Exposure Draft. The Panel received presentations from the following:

- NEMMCO
- MEU
- Energy Action Group
- ESIPC
- ERAA
- NGF
- TRUenergy

A.5 Submissions in response to the Second Interim Report and the Exposure Draft

The Second Interim Report was published by the Panel in September 2007. The Panel received the following submissions:

- South Australian Jurisdiction
- Energy Response

- NEMMCO
- AER
- TRUenergy
- ERAA
- Origin
- ESIPC
- MEU
- International Power Australia and LYMMCo
- EnergyAustralia
- Macquarie Generation
- NGF
- Energy Response - Supplementary

Reliability Panel
Proposed National Electricity Amendment (Managing Generation Input Constraints and Replacement of Reserve Trader) Rule 2008

Schedule 1 contains proposed amendments to the National Electricity Rules to incorporate the energy information publication which has been called the Energy Adequacy Assessment Projection (EAAP).

Schedule 2 contains the key clauses relating to the Reliability and Emergency Reserve Trader known as the RERT which will replace the reliability safety net provisions in the Rules and also the Part 7 derogation in Chapter 8A.

Schedule 3 contains the other clauses in the Rules that affect the RERT.

Schedule 4 identifies savings and transitional provisions that will be required to ensure the appropriate guidelines are in place when the Rule commences operation.

Schedule 1 Energy Adequacy Assessment Projection

[1] New clause 3.7B Energy Adequacy Assessment Projection

After rule 3.7A, insert:

3.7B Energy Adequacy Assessment Projection

Administration of EAAP

(a) *NEMMCO* must administer an *energy adequacy assessment projection* in accordance with this rule 3.7B that covers a 24 month period commencing on the day *NEMMCO* publishes the projection and which is to be known as *EAAP*.

(b) *NEMMCO* must *publish* the outcome of the *EAAP* every three months in accordance with the *timetable* and the first *EAAP* must be published on [insert date].

(c) *NEMMCO* may *publish* additional updated versions of the *EAAP* in the event of *changes* which, in the judgment of *NEMMCO*, are materially significant and should be communicated to *Scheduled Generators*.

(d) Every three months for the purposes of publishing the *EAAP*, *NEMMCO* must obtain from each *Scheduled Generator* in accordance with the *timetable*:

(1) updated *GELF parameters* from each *Scheduled Generator*; and

(2) an estimate of anticipated *generation* from each *Scheduled Generator* for each month of the *EAAP* as identified in accordance with the *GELF guidelines*; and

(3) other information that supplements the data provided under subparagraphs (1) and (2) that is reasonably required by *NEMMCO* to study the scenarios specified in the *EAAP guidelines*.

(e) Each *Scheduled Generator* must provide *NEMMCO* with the information referred to in paragraph (d) in accordance with the *timetable*.

Inputs to EAAP

(f) In preparing the *EAAP*, *NEMMCO* must take into account:

(1) where relevant, the *medium term PASA* inputs referred to in clause 3.7.2(c);;

(2) where relevant, the matters *NEMMCO* considers in, and for the purposes of, clause 5.6.5(c) in carrying out the *ANTS review*;

(3) *Generator Energy Limitation Frameworks* provided in accordance with paragraph (g) where the number of *GELFs* should be limited to

those *GELFs* required to adequately represent the relevant *generating units*;

(4) updated *GELF parameters* where necessary for each *GELF* provided in accordance with the *timetable* and the *GELF guidelines*; and

(5) estimates of anticipated *generation* for each *Scheduled Generator* provided in accordance with the *timetable* and the *GELF guidelines*

Generator Energy Limitation Framework

(g) In accordance with the *GELF guidelines* developed under paragraph (i), a *Scheduled Generator* must submit to *NEMMCO* for the purposes of the *EAAP*, a description of the *energy constraints* that affect the ability of a *generating unit* to *generate* electricity ('*GELF*' or '*Generator Energy Limitation Framework'*) which must be in a form that adequately represents that *generating unit* sufficient for *NEMMCO* to include the *GELF* in the *EAAP*.

(h) A *GELF* submitted under paragraph (g) must be supplemented by *GELF parameters* for that *GELF* as identified in the *GELF guidelines* referred to in paragraph (i) and the parameters must be updated every three months in accordance with the *timetable*.

(i) For the purposes of paragraph (g), *NEMMCO* must *publish* (and amend from time to time) in accordance with the *Rules consultation procedures*, *GELF guidelines* that:

(1) identify the components of a *GELF* that a *Scheduled Generator* must include in a *GELF* submitted under paragraph (g);

(2) provide detail on the forms of the *GELF* sufficient for a *Scheduled Generator* to meet the requirements of paragraph (g);

(3) identify variable parameters specific to a *GELF* ('*GELF parameters*') that are likely to have a material impact on the *GELF* and therefore the *EAAP*, and which may include actual data in relation to:

(i) hydro storage including pump storage;

(ii) thermal *generation* fuel;

(iii) cooling water availability; and

(iv) gas supply limitations;

(4) identify circumstances where a *GELF* submitted under paragraph (g) can apply to a collection of *generating units* that face common *energy constraints* due to their geographic location, access to fuel source or another similar reason;

(5) identify the form of information to be submitted by each *Scheduled Generator* in accordance with paragraph (e); and

(5) identify arrangements for managing the confidentiality of information submitted to *NEMMCO* under this rule 3.7B.

(j) The first *GELF guidelines* must be published by [insert date] and there must be a set of *GELF guidelines* available at all times after that date.

(k) Where a *Scheduled Generator* has submitted a *GELF* under paragraph (g) and there has been a material change in circumstances to the *energy constraints* associated with that *GELF*, the *Generator* must revise and re-submit the *GELF* in accordance with that paragraph.

(l) Subject to paragraph (r), a *GELF* or information provided in relation to a *GELF* to *NEMMCO* must be treated by *NEMMCO* as *confidential information.*

EAAP Guidelines

(m) The *Reliability Panel* must develop, *publish* and may amend from time to time, in accordance with clauses 8.8.3(d) – (l), guidelines that *NEMMCO* must take into account in preparing the *EAAP* which identify:

(1) scenarios that *NEMMCO* must study in preparing the *EAAP*;

(2) modeling assumptions for the *EAAP*; and

(3) the form of output of the *EAAP*,

to be known as "*EAAP guidelines*".

(n) The *Reliability Panel* must consult *NEMMCO* when developing or amending the *EAAP guidelines* to ensure *NEMMCO* can implement in the *EAAP* any matters provided in the guidelines.

(o) The first *EAAP guidelines* must be *published* by [insert date] and there must be a set of *EAAP guidelines* available at all times after that date.

(p) The scenarios that the *Reliability Panel* may identify for the purposes of the *EAAP guidelines* referred to in paragraph (m) may include:

(1) water conditions such as normal rainfall and drought;

(2) material restrictions on the supply of a significant fuel source;

(3) other limits on a fuel source for a major form of *generation*; and

(4) any other scenario that the *Reliability Panel* reasonably considers will have a material impact on the *EAAP*.

Publication of EAAP

(q) *NEMMCO* must *publish* the outcome of the *EAAP* in accordance with the *EAAP guidelines* and incorporate in aggregate form the results of each scenario that *NEMMCO* is required to study in accordance with the *EAAP guidelines*.

(r) *NEMMCO* must provide to each *Scheduled Generator* based on the relevant *GELF*, an estimate of the likely utilisation of the *Generator* for the period of the *EAAP*.

[2] Clause 3.13.3 Standing data

After clause 3.13.3(t), insert:

(u) By 1 November each year, *NEMMCO* must provide a report to the *Reliability Panel* (who may *publish* the report at its discretion) on:

(1) the accuracy of the demand forecasts to date in the most recent *statement of opportunities*; and

(2) any improvements made by *NEMMCO* or other relevant parties to the forecasting process that will apply to the next *statement of opportunities*.

[3] Clause 3.13.4 Spot market

After clause 3.13.4(x), insert:

(y) Every three months in accordance with the *timetable*, *NEMMCO* must *publish* the details of the outcome of the *EAAP* in accordance with rule 3.7B.

[4] Clause 5.6.3 Inter-regional planning committee

In clause 5.6.3(a)(7), omit the word “and”.

[5] Clause 5.6.3

In clause 5.6.3(a)(8), omit the matter “.” and substitute:

; and

(9) provide such assistance as *NEMMCO* reasonably requests in connection with the preparation of the report prepared by *NEMMCO* for the *Reliability Panel* in accordance with clause 3.13.3(u)

[6] Chapter 10 New definitions

In Chapter 10, insert the following definition in alphabetical order:

EAAP guidelines

The guidelines prepared by the *Reliability Panel* in accordance with rule 3.7B(m) that *NEMMCO* must take into account in preparing the *EAAP*.

energy adequacy assessment projection ("EAAP")

A projection of *NEMMCO's* assessment of energy availability that accounts for *Generator energy constraints* for each month over a 24 month period which is prepared and published in accordance with rule 3.7B and measured as *unserved energy* in each *region*.

energy constraint

A limitation on the capability of a *generating unit* or group of *generating units* to generate electrical *active power* due to the restrictions in the availability of fuel or other necessary expendable resources such as, but not limited to, gas or coal, or water for operating turbines or for cooling.

Generator Energy Limitation Framework, GELF

A description of the *energy constraints* that affect the ability of a *generating unit* to *generate* electricity prepared in accordance with the *GELF guidelines*..

GELF guidelines

Guidelines developed by *NEMMCO* in accordance with rule 3.7B(i).

GELF parameters

Variable parameters to a specific *GELF* identified by *NEMMCO* in the *GELF guidelines* in accordance with rule 3.7B which supplement a *GELF* and are submitted by a *Scheduled Generator* and updated every three months in accordance with rule 3.7B for the purpose of the *EAAP*.

unserved energy

The amount of energy that is demanded but cannot be supplied which is defined in accordance with the *power system security and reliability standards* expressed as:

(a) GWh; or

(b) a percentage of the total energy demanded in a *region* over a specific period of time such as a year.

Schedule 2 Reliability and Emergency Reserve Trader

[1] New rule 3.20

After rule 3.19, insert:

3.20 Reliability and Emergency Reserve Trader

3.20.1 Definitions

In this rule 3.20:

activate, activated, activation means the operation of a *generating unit* (other than a *scheduled generating unit*) at an increased *loading level* or reduction in demand (other than a *scheduled load*) undertaken in response to a request by *NEMMCO* in accordance with a non-scheduled reserve contract.

non-scheduled reserve means the amount of surplus or unused capacity:

(a) of *generating units* (other than *scheduled generating units*); or

(b) arising out of the ability to reduce demand (other than a *scheduled load*).

non-scheduled reserve contract means a contract entered into by *NEMMCO* for the provision of non-scheduled reserve.

reliability and emergency reserve trader or RERT means the actions taken by *NEMMCO* referred to in clause 3.20.3 in accordance with this rule 3.20 to ensure *reliability* of *supply*.

reserve means *short term capacity reserve* and *medium term capacity reserve* as contracted by *NEMMCO* under this rule 3.20.

reserve contract means a contract for reserve entered into by *NEMMCO* in accordance with this rule 3.20.

3.20.2 Expiry of reserve and emergency reliability trader

This Rule 3.20 expires on the earlier of:

(a) 1 June 2012; or

(b) a date determined by the *AEMC* on the advice of the *Reliability Panel* in accordance with clause 3.20.12.

3.20.3 Reliability and emergency reserve trader

(a) *NEMMCO* must take all reasonable actions to ensure *reliability* of *supply* by negotiating and entering into contracts to secure the availability of reserves or non-scheduled reserves under reserve contracts or non-scheduled reserve contracts (‘**reliability and emergency reserve trader**’ or ‘**RERT**’) in accordance with:

(1) this rule 3.20;

(2) where relevant:

(i) clauses 1.11, 3.8.1, 3.8.14, 3.9.3, 3.12A.5, 3.13.3, 3.15.6, 4.8.5A; and 4.8.5B;

(ii) rule 3.12; and

(iii) any other provision of the *Rules* necessary to exercise the RERT;

(3) the RERT principles in paragraph (b); and

(4) the RERT guidelines developed and published in accordance with clause 3.20.10.

(b) *NEMMCO* must have regard to the following principles ('**RERT principles**') in exercising the RERT under paragraph (a):

(1) actions taken should be those which *NEMMCO* reasonably expects, acting reasonably, to have the least distortionary effect on the operation of the *market*; and

(2) actions taken should aim to maximise the effectiveness of reserve and non scheduled reserve contracts at the least cost to end use consumers of electricity.

(c) In having regard to the RERT principles referred to in paragraph (b), *NEMMCO* must have regard where relevant to the RERT guidelines developed by the *Reliability Panel* in accordance with clause 3.20.10.

3.20.4 Reserve contracts and non-scheduled reserve contracts

(a) *NEMMCO* may enter into one or more contracts with any person in relation to the capacity of:

(1) *scheduled generating units*, *scheduled network services* or *scheduled loads* (being reserve contracts); and

(2) non scheduled reserves (being non-scheduled reserve contracts).

(b) *NEMMCO* may determine to enter into reserve contracts or non-scheduled reserve contracts for the provision of reserve or non-scheduled reserve (as the case may be) to ensure that the *reliability* of *supply* in a *region* or *regions* meets the relevant *power system security and reliability standard* established by the *Reliability Panel* for the *region*.

(c) *NEMMCO* must consult with persons nominated by the relevant *participating jurisdictions* in relation to any determination to enter into contracts under paragraph (b).

(d) *NEMMCO* must not enter into, or renegotiate, reserve contracts or non-scheduled reserve contracts more than nine months prior to the date that *NEMMCO* reasonably expects that the reserves or non-scheduled reserves under those contracts may be required to ensure *reliability* of *supply*.

(e) Subject to paragraph (d), *NEMMCO* may :

(1) enter into reserve contracts or non-scheduled reserve contracts; or

(2) renegotiate existing reserve contracts or existing non-scheduled reserve contracts,

in addition to the contracts already entered into by *NEMMCO* under this rule 3.20.

(f) In entering into reserve contracts or non-scheduled reserve contracts under paragraph (b) *NEMMCO* must agree with the relevant nominated persons referred to in paragraph (c) cost-sharing arrangements between the *regions* for the purpose of clause 3.20.6.

(g) If, at any time *NEMMCO* determines that it is necessary to commence contract negotiations for the provision of reserves or non-scheduled reserves, *NEMMCO* must *publish* a notice of its intention to do so.

(h) When contracting for the provision of reserves under reserve contracts, *NEMMCO* must not enter contracts in relation to capacity of *generating units*, *scheduled network services* or *scheduled loads* for which *dispatch offers* or *dispatch bids* have been submitted or are considered by *NEMMCO* to be likely to be submitted or be otherwise available for *dispatch* in the *trading intervals* to which the contract relates.

Terms and conditions of a contract

(i) If *NEMMCO* requests a *Scheduled Generator* or *Market Participant* to enter into a reserve contract in relation to a *scheduled generating unit, scheduled network service,* or a *scheduled load*, then the *Scheduled Generator* or *Market Participant* must negotiate with *NEMMCO* in good faith as to the terms and conditions of that contract.

(j) If *NEMMCO* requests any other person to enter into a reserve contract in relation to a *scheduled generating unit*, *scheduled network service*, a *scheduled load* or non-scheduled reserve, *NEMMCO* must only enter into such a contract if:

(1) *NEMMCO* has used reasonable endeavours to be satisfied that the person is entering into the contract in good faith; and

(2) the contract contains a provision that the person has not and will not otherwise offer the reserve or non-scheduled reserve the subject of the contract in the *market* for the *trading intervals* to which the contract with *NEMMCO* relates except in accordance with the contract.

3.20.5 Dispatch pricing methodology for non-scheduled reserve contracts

(a) *NEMMCO* must develop in accordance with the *Rules consultation procedures* and *publish* details of the methodology it will use to request

that *generating units* or *loads* under non-scheduled reserve contracts be activated.

(b) In developing the methodology referred to in clause 3.9.3(e), *NEMMCO* must consult *Registered Participants* on measures to be adopted in order to reduce the possibility that *generating units* or *loads* likely to be activated under non-scheduled reserve contracts are otherwise engaged at the time the non-scheduled reserve contracts are entered into by *NEMMCO*.

(c) *NEMMCO* may develop and *publish* the methodology developed in accordance with this clause 3.20.5 as part of the methodology *NEMMCO* is required to develop under clause 3.9.3(e) for prices during a *NEMMCO intervention event*.

3.20.6 Reserve settlements

(a) *NEMMCO's* costs incurred in contracting for the provision of reserves and non-scheduled reserves are to be met by fees imposed on *Market Customers* in accordance with this clause 3.20.6.

(b) Included in the statements to be provided under clauses 3.15.14 and 3.15.15, *NEMMCO* must give each *Market Participant* a statement setting out:

(1) the aggregate of the amounts payable by *NEMMCO* under reserve contracts and non-scheduled reserve contracts in respect of the relevant *billing period*;

(2) any amounts determined as payable by *NEMMCO*:

(i) by the independent expert under clause 3.12.3; or

(ii) as a result of a *scheduled network service* or *plant* under a reserve contract being *dispatched* or *generating units* or *loads* under a non-scheduled reserve contract being activated,

in respect of the relevant *billing period*; and

(3) the aggregate of the amounts receivable by *NEMMCO* under the *Rules* in respect of reserve contracts and non-scheduled reserve contracts during the relevant *billing period*.

(c) Separate statements must be provided under paragraph (b):

(1) for reserve contracts and non-scheduled reserve contracts entered into by *NEMMCO* specifically in respect of the *Market Participant's region* in accordance with paragraph (d)*;* and

(2) for reserve contracts and non-scheduled reserve contracts other than those entered into for and allocated to a specific *region* or *regions*.

(d) Where either:

(1) without the intervention in the *market* of *NEMMCO* a *region* would otherwise, in *NEMMCO's* reasonable opinion, fail to meet the minimum *power system security and reliability standards*; or

(2) a *region* requires a level of *power system reliability* or reserves which, in *NEMMCO's* reasonable opinion, exceeds the level required to meet the minimum *power system security and reliability standards*,

then *NEMMCO* must recover its net liabilities, or distribute its net profits, under the terms of reserve contracts or non-scheduled reserve contracts entered into to meet these requirements, from or to the *Market Customers* in that *region* in accordance with paragraph (e).

(e) In respect of reserve contracts or non-scheduled reserve contracts entered into by *NEMMCO*, *NEMMCO* must calculate in relation to each *Market Customer* for each *region* in respect of each *billing period* a sum determined by applying the following formula:

$$MCP = \frac{E \text{ x } RRC}{\Sigma \text{ E}}$$

where:

MCP is the amount payable by a *Market Customer* for a *region* in respect of a *billing period;*

E is the sum of all that *Market Customer's adjusted gross energy amounts* in a *region* (the **"relevant *region*"**) in each *trading interval* which commences between 0800 hours and 1930 hours on a *business day* in the *billing period* excluding any loads in that *region* in respect of which the *Market Customer* submitted a *dispatch bid* for any such *trading interval;*

RRC is the total amount payable by *NEMMCO* under reserve contracts or non-scheduled reserve contracts which relate to the relevant *region* in the *billing period* as agreed under clause 3.12.1(d); and

$\sum$E is the sum of all amounts determined as "E" in accordance with this paragraph (e) in respect of that *region.*

(f) A *Market Customer* is liable to pay *NEMMCO* an amount equal to the sum calculated under paragraph (e) in respect of that *Market Customer*.

(g) Operational and administrative costs incurred by *NEMMCO* in arranging for the provision of reserves, other than its liabilities under the terms of the reserve contracts or non-scheduled reserve contracts into which it has entered, are to be recovered by *NEMMCO* from all *Market Participants* as part of the fees imposed in accordance with rule 2.11.

(h) For the purposes of this clause 3.20.6, a re-determination by a panel established under clause 3.12.2 is to be taken to be an agreement between *NEMMCO* and each of the *Market Participants* and *Scheduled Generators*.

3.20.7 NEMMCO's risk management and accounts relating to the reliability safety net

(a) *NEMMCO* may enter into insurance arrangements with an insurance provider with a view to minimising potential financial losses in respect of *NEMMCO's* RERT activities described in this rule 3.20.

(b) *NEMMCO* must ensure that it maintains in its books separate accounts relating to the RERT powers granted to *NEMMCO* under this rule 3.20 which is to be known as a trading fund for the purposes of rule 1.11.

3.20.8 Reporting on RERT by NEMMCO

(a) If a *scheduled network service* or *plant* under a reserve contract with *NEMMCO* is *dispatched* or *generating units* or *loads* are activated under a non-scheduled reserve contract, then *NEMMCO* must, as soon as practicable thereafter, *publish* a report outlining:

(1) the circumstances giving rise to the need for the *dispatch* of reserves or activation of non-scheduled reserves;

(2) the basis on which it determined the latest time for that *dispatch* of reserves or activation of non-scheduled reserves and on what basis it determined that a market response would not have avoided the need for the *dispatch* of reserves or the activation of non-scheduled reserves;

(3) details of the changes in *dispatch* outcomes due to the *dispatch of* reserves or activation of non-scheduled reserves; and

(4) the processes implemented by *NEMMCO* to *dispatch* the reserves or activate the non-scheduled reserves,

and if applicable:

(5) reasons why *NEMMCO* did not follow any or all of the processes set out in rule 4.8 either in whole or in part prior to the *dispatch* of reserves or the activation of non-scheduled reserves; or

(6) the basis upon which *NEMMCO* considered it impractical to set *spot prices* and *ancillary service prices* in accordance with clause 3.9.3(b).

(b) As soon as practicable after *NEMMCO* has, in accordance with clause 3.20.6, included the amounts arising under a reserve contract or non-

scheduled reserve contract in a *final statement* provided under clause 3.15.15, *NEMMCO* must *publish* details of:

(1) the payments under the reserve contract or non-scheduled reserve contract for the relevant *billing periods*; and

(2) a breakdown of the recovery of those costs by each category of *Market Customer*, as determined by *NEMMCO*, in each *region*.

(c) Within 30 *days* of the end of each *financial year*, *NEMMCO* must *publish* a report detailing:

(1) each occasion on which it intervened to secure reserve availability;

(2) each occasion during the financial year when a *scheduled network service* or *plant* under a reserve contract was *dispatched* or *generating units* or *loads* under a non-scheduled reserve contract were activated; and

(3) its costs and finances in connection with its reserve trading activities according to appropriate accounting standards including profit and loss, balance sheet, sources and applications of funds.

3.20.9 NEMMCO's exercise of the RERT

(a) *NEMMCO* must make a determination in accordance with clause 4.8.5A as to the latest time for intervention by *dispatching* reserves or activating non-scheduled reserves under the relevant contracts.

(b) *NEMMCO* must provide notifications of the last time for intervention based on the determination referred to paragraph (a) in accordance with clause 4.8.5B.

(c) Notwithstanding clause 4.8.5A and paragraphs (a) and (b), if *NEMMCO* considers the latest time for exercising the RERT by:

(1) the *dispatch* of available reserves; or

(2) the activation of available non-scheduled reserves,

has arrived, *NEMMCO* may *dispatch* such reserves or activate such non-scheduled reserves.

(d) *NEMMCO* must follow the relevant procedures in this rule 3.20 prior to *dispatching plant* or a *scheduled network service* the subject of a reserve contract or activating *generating units* or *loads* the subject of a non-scheduled reserve contract unless it is not reasonably practicable to do so.

(e) Subject to paragraph (d), *NEMMCO* must only *dispatch plant* or a *scheduled network service* the subject of a reserve contract or activate *generating units* or *loads* the subject of a non-scheduled reserve contract in accordance with the procedures developed in accordance with paragraph (g).

(f) In order to effect the *dispatch* of *plant* or a *scheduled network service* the subject of a reserve contract or the activation of *generating units* or *loads* the subject of a non-scheduled reserve contract *NEMMCO* may:

(1) submit, update or vary *dispatch bids* or *dispatch offers* in relation to all or part of such a *scheduled generating unit*, *scheduled network service* or *scheduled load* which is the subject of a reserve contract; or

(2) change other inputs to the *dispatch process* to give effect to the *dispatch* of reserves or the activation of *generating units* or *loads* the subject of a non-scheduled reserve contract.

(g) *NEMMCO* must develop, *publish*, and may amend from time to time, in accordance with the *Rules consultation procedures*, procedures for the exercise of the RERT under this rule 3.20 that takes into account the RERT principles and RERT guidelines developed by the *Reliability Panel* in accordance with clause 3.20.10.

(h) When exercising the RERT under this rule 3.20, *NEMMCO* must take into account any guidelines relating to the exercise of the RERT published by the *Reliability Panel* in accordance with clause 3.12.10 ('**RERT guidelines**').

3.20.10 RERT Guidelines

(a) For the purposes of this rule 3.20, the *Reliability Panel* may develop and *publish* RERT guidelines for or with respect to:

(1) what information *NEMMCO* must take into account when deciding whether to exercise the RERT;

(2) the relevance of the RERT principles to the exercise of the RERT;

(3) the actions that *NEMMCO* may take to be satisfied that the reserve or non-scheduled reserve that is to be the subject of a reserve contract or non-scheduled reserve contract (as the case may be) is not available to the *market* through any other arrangement;

(4) the process *NEMMCO* should undertake in contracting for reserves and non-scheduled reserves including the process for tendering for contracts for such reserves;

(5) any specific or additional assumptions about key parameters that *NEMMCO* must take into account in assessing the cost effectiveness of exercising the RERT;

(6) matters relevant to NEMMCO managing a portfolio of reserve contracts and non-scheduled reserve contracts; and

(7) additional forecasts that *NEMMCO* should take into account prior to exercising the RERT.

(b) The *Reliability Panel* must develop, *publish* and amend from time to time, the RERT guidelines in accordance with clauses 8.8.3(d) – (l).

(c) The *Reliability Panel* must *publish* the first RERT guidelines by [insert date] and there must be such guidelines in place at all times after that date.

3.20.11 Review of reserve and emergency reliability trader

(a) The *Reliability Panel* must no later than one year prior to the date the RERT is due to expire under clause 3.20.2, complete a review of the RERT ('**RERT review**') to determine:

(1) whether the RERT should expire on the date specified in clause 3.20.2(a); or

(2) whether the RERT should expire prior to the date referred to in subparagraph (1) and if so, specify that date;

(b) The *Reliability Panel* must conduct the RERT review in accordance with clauses 8.8.3(d) – (l).

(c) The *Reliability Panel* may conduct the review referred to in paragraph (a) as part of the review conducted by the *Reliability Panel* under clause 8.8.3(b).

(d) On receipt of the written report from the RERT review in accordance with clause 8.8.3(j), the *AEMC* may, taking into account the report, make a determination that the RERT is to expire and specify the date of expiry.

(e) The *AEMC* must *publish* the determination referred to in paragraph (d).

[2] Chapter 8A, Part 7

Omit Part 7 of Chapter 8A.

Schedule 3 Amendments necessary to implement the reliability and emergency reserve trader

[1] Rule 1.11 NEMMCO Rule funds

Omit rule 1.11 and substitute:

1.11 NEMMCO Rule Funds

(a) *NEMMCO* must continue to maintain, in the books of the corporation:

(1) the registration and administration fund; and

(2) the security deposit fund,

(3) any fund which the *Rules* provide will be maintained in *NEMMCO's* books,

(each a *"Rule fund"*).

(b) *NEMMCO* must ensure that there is paid into each *Rule fund:*

(1) in the case of a fund referred to in paragraph (a)(3):

(i) all amounts which are received by *NEMMCO* in connection with carrying out its functions or powers in relation to that trading fund;

(ii) all amounts of *Participant fees* which are received or recovered by *NEMMCO* which relate to *NEMMCO's* actual or budgeted costs and expenses for carrying out its functions or powers in relation to that fund;

(2) in the case of the registration and administration fund, all amounts of *Participant fees* and *auction expense fees* and any other amounts payable under the *auction rules* or *SRD agreements* as *NEMMCO* considers necessary from time to time other than those which are to be paid into another *Rule fund;*

(3) in the case of the security deposit fund, amounts which are received by *NEMMCO* under clauses 3.3.8A, 3.3.13(a)(2) and 3.3.13(a)(3); and

(4) in the case of each *Rule fund*, income from investment of money in the *Rule fund.*

(c) In respect of the security deposit fund, *NEMMCO* must keep records, in respect of each individual *Market Participant*, of:

(1) security deposits made by that *Market Participant* and actual interest or other income earned on that *Market Participant's* payments to that fund which will be recorded as credits for that *Market Participant*;

(2) any application, or return to that *Market Participant*, of monies in the security deposit fund in accordance with clause 3.3.13A;

(3) deductions for liabilities and expenses of the security deposit fund referable, or allocated, to that *Market Participant* which will be recorded as debits to that *Market Participant*; and

(4) the credit or debit balance for that *Market Participant*.

(d) NEMMCO must ensure that money from each *Rule fund* is only applied in payment of:

(1) in the case of a fund referred to in paragraph (a)(3), costs and expenses of *NEMMCO* carrying out its functions or powers in relation to that fund;

(2) in the case of the registration and administration fund, costs and expenses of *NEMMCO* carrying out its functions or powers:

(i) in relation to a fund referred to paragraph (a)(3) to the extent that such costs and expenses cannot be met from the money contained in that fund*;* or

(ii) other than those functions and powers referred to in subparagraph (i);

(3) in the case of the security deposit fund, monies owing to *NEMMCO* by a *Market Participant* or the return of monies to a *Market Participant* in accordance with clause 3.3.13A;

(4) in the case of each *Rule fund*:

(i) other than the security deposit fund, reimbursement to a *Registered Participant* or another *Rule fund* to make any necessary adjustment for any excess amounts which are paid as *Participant fees* as a result of any of *NEMMCO's* actual costs and expenses being less than the budgeted costs and expenses or as a result of the payment of any interim *Participant fees;* and

(ii) liabilities or expenses of the *Rule fund.*

[2] Clause 3.2.5 Reserves

Omit clause 3.2.5 and substitute:

[Deleted]

[3] Clause 3.8.1 Central dispatch

Omit clause 3.8.1(b)(11) and substitute:

(11) ensuring that as far as reasonably practical, in relation to a *NEMMCO intervention event*:

(A) the number of *Affected Participants*; and

(B) the effect on *interconnector* flows,

is minimised.

[4] Clause 3.8.14 Dispatch under conditions of supply scarcity

Omit clause 3.8.14 and substitute:

3.8.14 Dispatch under conditions of supply scarcity

During times of *supply* scarcity, *NEMMCO* must use its reasonable endeavours to ensure that the actions set out below occur in the following sequence:

(a) subject to:

(1) any adjustments which may be necessary to implement action under paragraph (c); and

(2) any *inflexibilities* associated with a *relevant NEMMCO intervention event*,

all valid *dispatch bids* and *dispatch offers* submitted by *Scheduled Generators* or *Market Participants* are *dispatched*, including those priced at *VoLL*;

(b) subject to:

(1) any adjustments which may be necessary to implement action under paragraph (c); and

(2) any *inflexibilities* associated with a *relevant NEMMCO intervention event*,

after all valid *dispatch bids* and *dispatch offers* referred to in paragraph (a) have been exhausted, undertake any *relevant NEMMCO intervention events*;

(c) any further corrective actions required are implemented in accordance with clauses 4.8.5B and 4.8.9.

[5] Clause 3.9.3 Pricing in the event of intervention by NEMMCO

Omit clause 3.9.3 and substitute:

3.9.3 Pricing in the event of intervention by NEMMCO

(a) In respect of a *dispatch interval* where a *NEMMCO intervention event* occurs *NEMMCO* must declare that *dispatch interval* to be an *intervention price dispatch interval*.

(b) Subject to paragraphs (c) and (d), *NEMMCO* must in accordance with the methodology or assumptions *published* pursuant to paragraph (e) set the *dispatch price* and *ancillary service prices* for an *intervention price dispatch interval* at the value which *NEMMCO*, in its reasonable opinion, considers would have applied as the *dispatch price* and *ancillary service price* for that *dispatch interval* in the relevant *region* had the *NEMMCO intervention event* not occurred.

(c) *NEMMCO* may continue to set *dispatch prices* pursuant to clause 3.9.2 and *ancillary service prices* pursuant to clause 3.9.2A until the later of:

(1) the second *dispatch interval* after the first *dispatch interval* in which a *NEMMCO intervention event* has occurred; or

(2) if applicable, the second *dispatch interval* after the restoration of the *power system* to a *secure operating state* after the *direction* was issued,

provided that *NEMMCO* must use its reasonable endeavours to set *dispatch prices* and *ancillary service prices* pursuant to this clause 3.9.3 as soon as practicable following the *NEMMCO intervention event*.

(d) *NEMMCO* must continue to set *dispatch prices* pursuant to clause 3.9.2 and *ancillary service prices* pursuant to clause 3.9.2A if a *direction* given to a *Registered Participant* in respect of *plant* at the *regional reference node* would not in *NEMMCO's* reasonable opinion have avoided the need for the *direction* to be issued.

(e) *NEMMCO* must develop in accordance with the *Rules consultation procedures* and *publish* details of the methodology it will use, and any assumptions it may be required to make, to determine *dispatch prices* and *ancillary service prices* for the purposes of paragraph (b).

(f) The methodology developed by *NEMMCO* under paragraph (e) must wherever reasonably practicable:

(1) be consistent with the principles for *spot price* determination set out in clause 3.9.l;

(2) enable *NEMMCO* to determine and *publish* such prices in accordance with clause 3.13.4; and

(3) be consistent with the principles for *ancillary service price* determination set out in clauses 3.9.2 and 3.9.2A.

[6] Rule 3.12 Market intervention by NEMMCO

Omit clauses 3.12.1 – 3.12.9 and renumber clauses 3.12.10, 3.12.11 and 3.12.11A as clauses 3.12.1, 3.12.2 and 3.12.3 respectively.

[7] References to clauses 3.12.10, 3.12.11 and 3.12.11A

In the Rules, wherever the clause reference in column A occurs, substitute the clause reference in column B.

A (old clause number)	B (renumbered clause)
3.12.10	3.12.1
3.12.11	3.12.2
3.12.11A	3.12.3

[8] Clause 3.12.1 Intervention settlement timetable

Omit clause 3.12.1(a) (as renumbered by amendment [4]) and substitute:

(a) *NEMMCO* must use reasonable endeavours to complete and fulfil its obligations set out in clauses 3.12.2, 3.12.3, 3.15.7, 3.15.7A, 3.15.7B, 3.15.8 and 3.15.10C as soon as practicable and no later than:

(1) 100 *business days* after the end of the *NEMMCO intervention event* or the end of a series of related *NEMMCO intervention events* if *NEMMCO* is not required to appoint an independent expert pursuant to clause 3.15.7A; and

(2) 150 *business days* after the end of the *NEMMCO intervention event* or the end of a series of related *NEMMCO intervention events* if *NEMMCO* is required to appoint an independent expert pursuant to clause 3.15.7A.

[9] Clause 3.12.1 Intervention settlement timetable

In clause 3.12.1(b), omit the words “3.12.11, 3.12.11A” and substitute the words “3.12.2, 3.12.3”.

[10] Clause 3.12.2 Affected Participants and Market Customers entitlements to compensation in relation to directions and reserve contracts

Omit clause 3.12.2 and substitute:

3.12.2 Affected Participants and Market Customers entitlements to compensation in relation to NEMMCO intervention

(a) In respect of each *intervention price trading interval*:

(1) an *Affected Participant* is entitled to receive from *NEMMCO,* or must pay to *NEMMCO*, an amount as determined in accordance with this clause 3.12.2 that will put the *Affected Participant* in the position that the *Affected Participant* would have been in regarding the *scheduled generating unit* or *scheduled network service,* (as the case may be), had the *NEMMCO intervention event* not occurred, taking into account solely the items listed in paragraph (j);

(2) a *Market Customer*, other than a *Market Customer* which was the subject of that *NEMMCO intervention event*, in respect of one or more of its *scheduled loads*, is entitled to receive an amount calculated by applying the following formula:

DC = ((RRP X LF) - BidP) × QD

where:

DC (in dollars) is the amount the *Market Customer* is entitled to receive in respect of that *scheduled load* for the relevant *intervention price trading interval*;

RRP (in dollars per MWh) is the *regional reference price* in the relevant *intervention price trading interval* determined in accordance with clause 3.9.3;

LF where the *scheduled load's connection point* is a *transmission connection point*, is the *intra-regional loss factor* at that *connection point* or where the *scheduled load's connection point* is a *distribution network connection point*, is the product of the *distribution loss factor* at that *connection point* multiplied by the *intra-regional loss factor* at the *transmission connection point* to which it is assigned;

BidP (in dollars per MWh) is the price of the highest priced *price band* specified in a *dispatch offer* for the *scheduled load* in the relevant *intervention price trading interval;*

QD (in MWh) is the difference between the amount of electricity consumed by the *scheduled load* during the relevant *intervention price trading interval* determined from the *metering data* and the amount of electricity which *NEMMCO* reasonably determines would have been consumed by the *scheduled load* if the *NEMMCO intervention event* had not occurred,

provided that if DC is negative for the relevant *intervention price trading interval*, then the adjustment that the *Market Customer* is

entitled to claim in respect of that *scheduled load* for that *intervention price trading interval* is zero.

(b) In respect of a single *intervention price trading interval*, an *Affected Participant* or *Market Customer* is not entitled to receive from, or obliged to pay to, *NEMMCO* an amount pursuant to this clause 3.12.2 if such an amount is less than $5,000.

(c) In respect of each *intervention price trading interval*, *NEMMCO* must, in accordance with the *intervention settlement timetable*, notify, in writing:

(1) each *Affected Participant* (except *eligible persons*) of:

(i) the estimated level of *dispatch* in MW that its *scheduled network service* or *scheduled generating unit* would have been *dispatched* at had the *NEMMCO intervention event* not occurred; and

(ii) an amount equal to:

(A) the estimated *trading amount* that it would have received had the *NEMMCO intervention event* not occurred based on the level of *dispatch* in subparagraph (i), less:

(B) the *trading amount* for that *Affected Participant* (excluding from that *trading amount* the amount referred to in clause 3.15.10C(a)) as set out in its final statement provided pursuant to clause 3.15.14 for the *billing period* in which the *intervention price trading interval* occurs;

(2) each *eligible person* of:

(i) the estimated level of flow in MW of all relevant *directional interconnectors* that would have occurred had the *NEMMCO intervention event* not occurred; and

(ii) an amount equal to:

(A) the estimated amount that person would have been entitled to receive pursuant to clause 3.18.1(b) had the *NEMMCO intervention event* not occurred based upon the flows referred to in subparagraph (i); less

(B) the actual entitlement of that person under clause 3.18.1(b); and

(3) each *Market Customer*, the amount calculated by *NEMMCO* in accordance with paragraph (a)(2) for that *Market Customer.*

(d) *NEMMCO* must include in an *Affected Participant's* or *Market Customer's* final statement provided pursuant to clause 3.15.1 for a

billing period in which one or more *intervention price trading intervals* occurred:

(1) the amount notified by *NEMMCO* pursuant to paragraph (c) if the absolute value of such amount is greater than $5,000; and

(2) in all other cases no amount in relation to compensation pursuant to this clause 3.12.2.

(e) If the figure calculated in accordance with paragraph (c) is:

(1) negative, the absolute value of that amount is the amount payable to *NEMMCO* by the relevant person; and

(2) positive, the absolute value of that amount is the amount receivable from *NEMMCO* by the relevant person.

(f) Subject to paragraphs (h) and (i), within 7 *business days* of receipt of the notice referred to in paragraph (c) an *Affected Participant* or *Market Customer* may make a written submission to *NEMMCO* in accordance with paragraph (g) claiming that the amount set out in the notice is greater than, less than, or equal to its entitlement pursuant to paragraph (a)(1) as an *Affected Participant* or paragraph (a)(2) as a *Market Customer*, as the case may be.

(g) A written submission made by an *Affected Participant* or *Market Customer* pursuant to paragraph (f) must:

(1) itemise each component of the claim;

(2) contain sufficient data and information to substantiate each component of the claim;

(3) if the *Affected Participant* claims that the amount calculated by *NEMMCO* pursuant to paragraphs (c)(1) or (c)(2) is less than the amount the *Affected Participant* is entitled to receive pursuant to paragraph (a)(1), specify the difference between such amounts (such difference being the "*affected participant's adjustment claim");*

(4) if the *Market Customer* claims that the amount calculated by *NEMMCO* pursuant to paragraph (c)(3) is less than the amount the *Market Customer* is entitled to receive pursuant to paragraph (a)(2), specify the difference between such amounts (such difference being the "*market customer's additional claim*"); and

(5) be signed by an authorised officer of the *Affected Participant* or *Market Customer* certifying that the written submission is true and correct.

(h) If an *Affected Participant* or *Market Customer* does not deliver to *NEMMCO* a written submission in accordance with paragraph (f) it shall cease to have an entitlement to compensation under this clause 3.12.2.

(i) In respect of a single *intervention price trading interval* an *Affected Participant* or *Market Customer* may only make a claim pursuant to paragraph (f) in respect of that *intervention price trading interval* if it claims that its entitlement or liability pursuant to this clause 3.12.2 is greater than $5,000.

(j) In determining the amount for the purposes of paragraph (a)(1), the following must, as appropriate, be taken into account:

(1) the direct costs incurred or avoided by the *Affected Participant* in respect of that *scheduled generating unit* or *scheduled network service*, as the case may be, as a result of the *NEMMCO intervention event* including:

(i) fuel costs in connection with the *scheduled generating unit* or *scheduled network service*;

(ii) incremental maintenance costs in connection with the *scheduled generating unit* or *scheduled network service*; and

(iii) incremental manning costs in connection with the *scheduled generating unit* or *scheduled network service*;

(2) any amounts which the *Affected Participant* is entitled to receive under clauses 3.15.6 and 3.15.6A; and

(3) the *regional reference price published* pursuant to clause 3.13.4(m).

(k) *NEMMCO* must in accordance with the *intervention settlement timetable* calculate the "*additional intervention claim*" being the total of:

(1) the sum of the *affected participant's adjustment claims* and *market customer's additional claims* in respect of a *NEMMCO intervention event*, or in respect of, *NEMMCO's* reasonable opinion, a series of related *NEMMCO intervention events*; plus

(2) the total claims by *Directed Participants* pursuant to clauses 3.15.7B(a), 3.15.7B(a1) and 3.15.7B(a2) in respect of that *NEMMCO intervention event*, or in respect of that series of related *NEMMCO intervention events*.

(l) *NEMMCO* must in accordance with the *intervention settlement timetable*:

(1) refer an *affected participant's adjustment claim* or *market customer's additional claim* to an independent expert to determine such claim in accordance with clause 3.12.3 if the claim is equal to or greater than $20,000 and the *additional intervention claim* that includes that claim is equal to or greater than $100,000; and

(2) determine in its sole discretion whether all other *affected participants' adjustment claims* and *market customers' additional claims* are reasonable and if so pay the amounts claimed in accordance with clause 3.15.10C.

(m) If *NEMMCO* determines pursuant to paragraph (l) that an *affected participant's adjustment claim* or *market customer's additional claim* in respect of a *NEMMCO intervention event* is unreasonable, it must in accordance with the *intervention settlement timetable:*

(1) advise the *Affected Participant* or *Market Customer*, as the case may be, in writing of its determination including its reasons for the determination; and

(2) refer the matter to an independent expert to determine the claim for compensation in accordance with clause 3.12.3.

(n) For the purposes of clauses 3.15.8 and 3.15.10C(b) any payment pursuant to paragraph (a) must include interest on the sum of that amount less the payment made in accordance with 3.15.10C(1), computed at the average *bank bill rate* for the period from the date on which payment was required to be made under clauses 3.15.16 and 3.15.17 in respect of the *final statement* for the *billing period* in which the *NEMMCO intervention event* occurred to the date on which payment is required to be made pursuant to clause 3.15.10C.

[11] Clause 3.12.3 Role of Independent Expert in calculating payments in relation to intervention by NEMMCO

In clause 3.12.3(a) (as renumbered by amendment [4]), omit the words "3.12.2(f), 3.12.2(g)" and substitute the words "3.12.2(l), 3.12.2(m)".

[12] Clause 3.12.3 Role of Independent Expert in calculating payments in relation to intervention by NEMMCO

In clause 3.12.3(b) (as renumbered by amendment [4]), omit the words "3.12.2(c)" and substitute the words "3.12.2(f)".

[13] Clause 3.12.3 Role of Independent Expert in calculating payments in relation to intervention by NEMMCO

Omit clause 3.12.3(b1) (as renumbered by amendment [4]) and substitute:

(b1) To the extent reasonably practicable, all claims arising out of a single *NEMMCO intervention event* or arising out of, in *NEMMCO's* reasonable opinion, a series of related *NEMMCO intervention events*, should be determined by the same independent expert as part of the same process.

[14] Clause 3.12.3 Role of Independent Expert in calculating payments in relation to intervention by NEMMCO

In clause 3.12.3(c)(1)(i) (as renumbered by amendment [4]), omit the words "3.12.2(f) and 3.12.2(g)" and substitute the words "3.12.2(l) and 3.12.2(m)".

[15] Clause 3.12.3 Role of Independent Expert in calculating payments in relation to intervention by NEMMCO

In clause 3.12.3(c)(1)(i) (as renumbered by amendment [4]), omit the words "3.12.2(c)" and substitute the words "3.12.2(f)".

[16] Clause 3.12A.5 Dispatch of restriction offers

Omit clause 3.12A.5(a) and substitute:

(a) In a *dispatch interval NEMMCO* may only *dispatch* the capacity of a *scheduled generating unit* or *scheduled network service* in accordance with the procedures for the *rebidding* and *dispatch* of capacity the subject of an *accepted restriction offer* developed by *NEMMCO* in consultation with *Registered Participants*. Such procedures must as far as reasonably practical incorporate the following principles:

(i) *dispatch* of *accepted restriction offers* only after all the capacity of *scheduled load*s, *scheduled generating units* and *scheduled network services* contained in valid *dispatch offers* and *dispatch bids* have been *dispatched*;

(ii) recognise any requirement for advance notice or action for generators to operate at minimum generation, provide advance notice to *loads* or obtain capacity of *market network services* that may become the subject of a *NEMMCO intervention event*;

(iii) be consistent with the price of *accepted restriction offers* in accordance with clause 3.12A.6; and

(iv) minimise the *restriction shortfall amount*.

[17] Clause 3.13.6 Reserve trading by NEMMCO

Omit clause 3.13.6 and substitute:

[Deleted]

[18] Clause 3.15.6 Spot market transactions

Omit clauses 3.15.6(b) and (c) and substitute:

(b) *NEMMCO* is entitled to the *trading amount* resulting from a *NEMMCO intervention event* and for the purposes of determining *settlement amounts*, any such *trading amount* is not a *trading amount* for the relevant *Market Participant*.

(c) A *Directed Participant* is entitled to the *trading amount* resulting from any service, other than the service the subject of the *NEMMCO intervention event* rendered as a consequence of that event.

[19] Clause 3.15.9 Reserve settlements

Omit clause 3.15.9 and substitute:

[Deleted]

[20] Clause 3.15.10C Intervention settlements

In clause 3.15.10C, omit the words "clause 3.12.2(b)" wherever occurring and substitute the words "clause 3.12.2(c)".

[21] Clause 4.3.1 Responsibility of NEMMCO for power system security

In clause 4.3.1(l), omit the words "initiate action in relation to the trading in *reserves* in accordance with Chapter 3" and substitute the words "initiate action in relation to a *relevant NEMMCO intervention event*".

[22] Clauses 4.8.5A – 4.8.6

Omit clauses 4.8.5A – 4.8.6 and substitute:

4.8.5A Determination of the latest time for NEMMCO intervention

(a) *NEMMCO* must immediately *publish* a notice of any foreseeable circumstances that may require *NEMMCO* to implement a *NEMMCO intervention event*.

(b) A notice referred to in paragraph (b) must include the forecast circumstances creating the need for the *NEMMCO intervention event*.

(c) *NEMMCO* must, as soon as reasonably practicable after the *publication* of a notice in accordance with paragraph (a), estimate and *publish* the latest time at which it would need to intervene through a *NEMMCO*

intervention event, should the response from the *market* not be such as to obviate the need for the *NEMMCO intervention event*.

(d) In order to estimate the time referred to in paragraph (c), *NEMMCO* may request information from a *Scheduled Network Service Provider, Scheduled Generator* or *Market Customer* and may specify the time within which that information is to be provided.

(e) The information that *NEMMCO* may request in accordance with paragraph (d) may include:

(1) *plant* status;

(2) any expected or planned *plant outages* and the MW capacity affected by the *outage*, proposed start date and time and expected end date and time associated with the *outage* and an indication of the possibility of deferring the *outage*;

(3) estimates of the relevant costs to be incurred by the *Scheduled Network Service Provider, Scheduled Generator* or *Market Customer* should it be the subject of a *direction*, but only if *NEMMCO* considers it reasonably likely that such *Scheduled Network Service Provider, Scheduled Generator* or *Market Customer* will be subject to a *direction*.

(f) A *Scheduled Network Service Provider, Scheduled Generator* or *Market Customer* must use reasonable endeavours:

(1) to comply with a request for information under paragraph (d); and

(2) to provide *NEMMCO* with the information required in the time specified by *NEMMCO*.

(g) *NEMMCO* must regularly review its estimate of the latest time at which it would need to intervene through a *NEMMCO intervention event*, and *publish* any revisions to the estimate.

(f) *NEMMCO* must treat any information provided in response to a request under paragraph (d) as *confidential information* and use it for the sole purpose of assessing to which *Scheduled Network Service Provider, Market Customer* or *Scheduled Generator* it should issue *directions*.

4.8.5B Notifications of last time of NEMMCO intervention

If the latest practicable time for a *NEMMCO intervention event*, as estimated by *NEMMCO* under clause 4.8.5A, is reached and, taking into account *relevant NEMMCO intervention events*, the circumstances described under clause 4.8.5A(a) has not been alleviated, *NEMMCO* must to the extent reasonably practicable immediately:

(1) *publish* a notice that *NEMMCO*:

(i) considers the time for making arrangements for *relevant NEMMCO intervention events*, has elapsed; and

(ii) intends to conduct a *NEMMCO intervention event*; and

(2) amend the *pre-dispatch schedule* to ensure that it is a physically realisable schedule for all periods in which *NEMMCO* intends to conduct a *NEMMCO intervention event*.

[23] Clause 4.8.9 Power to issue directions and clause 4.8.9 instructions

Omit clauses 4.8.9(g) – (m) and substitute:

(g) Any *Registered Participant* who is aware of a failure to comply with a *direction* or *clause 4.8.9 instruction* or who believes any such failure has taken place must notify *NEMMCO* and the *AER* in writing and as soon as practicable of that fact.

(h) If *NEMMCO* issues a *direction* or *clause 4.8.9 instruction, NEMMCO* may, to give effect to the *direction* or *clause 4.8.9 instruction*:

(1) submit, update or vary *dispatch bids*, *dispatch offers* or *rebids* in relation to the *plant* of *Directed Participants* and *Affected Participants*;

(2) change other inputs to the *dispatch process*; or

(3) select a *Market Participant* or *Market Participants* to become *Affected Participants* to implement clause 3.8.1(b)(11).

(i) When issuing *clause 4.8.9 instructions* to implement *load shedding* across *interconnected regions, NEMMCO* must use reasonable endeavours to implement *load shedding* in an equitable manner as specified in the *power system security and reliability standards*, taking into account the *power transfer capability* of the relevant *networks.*

(j) When issuing *clause 4.8.9 instructions* to implement *load shedding*, *NEMMCO* must comply with its obligations under clauses 4.3.2(e) to (l) and Part 8 of the *National Electricity Law*.

[24] Chapter 10 Substituted definitions

Omit the following definitions and substitute:

Affected Participant

(a) In respect of a particular *direction* in an *intervention price trading interval*:

(1) a *Scheduled Generator* or *Scheduled Network Service Provider*:

(i) which was not the subject of the *direction* that had its *dispatched* quantity affected by that *direction*; or

(ii) which was the subject of the *direction* or whose *plant* or *scheduled network service* was *dispatched* under the reserve contract, that had its *dispatched* quantity for other *generating units* or other services which were not the subject of that *direction* or which were not *dispatched* under that reserve contract affected by that *direction* or *dispatch* of *plant* or *scheduled network service* under that reserve contract, however, the *Scheduled Generating Unit* or *Scheduled Network Service Provider* is only an *Affected Participant* in respect of those *generating units* and services which were not the subject of that *direction* or were not *dispatched* under that reserve contract; or

(2) an *eligible person* entitled to receive an amount from *NEMMCO* pursuant to clause 3.18.1(b)(1) where there has been a change in flow of a *directional interconnector*, for which the *eligible person* holds units for the *intervention price trading interval* and as a result of the *direction*; and

(b) in relation to the exercise of the RERT under rule 3.20:

(1) a *Scheduled Generator* or *Scheduled Network Service Provider*:

(i) whose *plant* or *scheduled network service* was not *dispatched* under the reserve contract that had its *dispatched* quantity affected by the *dispatch* of *plant* or *scheduled network service* under that reserve contract; and

(ii) which was not the subject of activation under the non-scheduled reserve contract, that had its *dispatched* quantity affected by activation of *generating units* or *loads* under that non-scheduled reserve contract;

(2) a *Scheduled Generator* or *Scheduled Network Service Provider* whose plant was *dispatched* under the reserve contract, that had its *dispatched* quantity for other *generating units* or other services which were not *dispatched* under the reserve contract affected by that *dispatch* of *plant* under that reserve contract but only in respect of those *generating units* and services which were not *dispatched* under that reserve contract.

(3) an *eligible person* entitled to receive an amount from *NEMMCO* pursuant to clause 3.18.1(b)(1) where there has been a change in flow of a *directional interconnector*, for which the *eligible person* holds units, as a result of the *dispatch* of *plant* under the reserve contract or the activation of *generating units* or *loads* under a non-scheduled reserve contract.

dispatch

The act of initiating or enabling all or part of the response specified in a *dispatch bid*, *dispatch offer* or *market ancillary service offer* in respect of a *scheduled generating unit*, a *scheduled load*, a *scheduled network service*, an *ancillary service generating unit* or an *ancillary service load* in accordance with clause 3.8, or a *direction* or operation of capacity the subject of a reserve contract in acccordance with rule 3.20 as appropriate.

[25] Chapter 10 New definitions

In Chapter 10, insert the following definition in alphabetical order:

NEMMCO intervention event

An event where *NEMMCO* intervenes (as the case may be), in the *market* under the *Rules* by:

(a) issuing a *direction* in accordance with clause 4.8.9;

(b) exercising the reliability and emergency reserve trader in accordance with rule 3.20 by:

(1) *dispatching* a *scheduled network service* or *plant* in accordance with a reserve contract; or

(2) activating *loads* or *generating units* under a non-scheduled reserve contract.

relevant NEMMCO intervention event

A *NEMMCO intervention event* that involves the exercise of the reliability and emergency reserve trader in accordance with rule 3.20 and as referred to in paragraph (b) of the definition of *NEMMCO intervention event*.

[26] Chapter 10 Deleted definitions

In Chapter 10, omit the following definitions:

reliability safety net end date

A date which is the earlier of:

(a) a date determined by the *AEMC* and published in the South Australian Government Gazette, having regard to any recommendation of the *Reliability Panel* under clause 3.12.1(b); or

(b) 1 July 2008.

reserve contract

A contract between a *Registered Participant* and *NEMMCO* to provide any *reserve* and includes a contract between a *Market Network Service Provider* and *NEMMCO* to facilitate *reserves* in one *region* being made available in another *region.*

Schedule 4 Savings and Transitional Rules

After clause 11.18, insert:

11.X Rules consequent on making of National Electricity Amendment (Managing Generation Energy Constraints and Replacement of Reserve Trader) Rule 2008

11.X.1 Definitions

In this rule 11.X:

Amending Rule means the National Electricity Amendment (Managing Generation Energy Constraints and Replacement of Reserve Trader) Rule 2008

commencement date means the date the Amending Rule commences operation.

11.X.2 GELF guidelines

All actions taken by the *NEMMCO* prior to the commencement date in anticipation of the commencement date for the purposes of preparing and publishing the initial *GELF guidelines* as required by rule 3.7B(j) are taken to satisfy the equivalent actions required for *GELF guidelines* under rule 3.7B.

11.X.3 EAAP guidelines

All actions taken by the *Reliability Panel* prior to the commencement date in anticipation of the commencement date for the purposes of developing and publishing the initial *EAAP guidelines* as required by clause 3.7B(o) are taken to satisfy the equivalent actions required for *EAAP guidelines* under rule 3.7B.

11.X.4 NEMMCO procedures for exercising RERT

All actions taken by the *NEMMCO* prior to the commencement date in anticipation of the commencement date for the purposes of developing and publishing the procedures for the exercise of the *RERT* as required by clause 3.20.9(g) are taken to satisfy the equivalent actions required for the procedures under clause 3.20.9.

11.X.5 RERT guidelines

All actions taken by the *Reliability Panel* prior to the commencement date in anticipation of the commencement date for the purposes of developing and publishing the initial *RERT guidelines* as required by clause 3.20.10(c) are taken to satisfy the equivalent actions required for *EAAP guidelines* under clause 3.20.10.

11.X.6 Timetable

(a) *NEMMCO* must amend the *timetable* in accordance with clause 3.4.3(b) to take into account the Amending Rule and those amendments are to take effect from the commencement date.

(b) All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date to amend the *timetable* as required by paragraph (a) are taken to satisfy the equivalent action required under clause 3.4.3(b).

11.X.7 Methodology for dispatch prices and ancillary services prices

(a) *NEMMCO* may make minor and administrative amendments to the methodology for determining *dispatch prices* and *ancillary services prices* developed in accordance with clause 3.9.3(e).

(b) Minor or administrative amendments made by *NEMMCO* to the methodology for determining *dispatch prices* and *ancillary services prices* developed in accordance with clause 3.9.3(e) prior to the commencement date are taken to have been made under paragraph (a).