



Australian Energy Market Commission

Rule Determination

**National Electricity Amendment
(Reclassification of Contingency Events) Rule
2008**

Rule Proponent:
Australian Energy Regulator

2 October 2008

Signed: 

John Tamblyn
Chairman
For and on behalf of
Australian Energy Market Commission

Commissioners
Tamblyn
Ryan
Woodward

Inquiries

The Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

E: aemc@aemc.gov.au

T: (02) 8296 7800

F: (02) 8296 7899

Citation

AEMC 2008, *Reclassification of Contingency Events*, Rule Determination, 2 October 2008, Sydney

About the AEMC

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

This work is copyright. The Copyright Act 1968 permits fair dealing for study, research, news reporting, criticism and review. Selected passages, tables or diagrams may be reproduced for such purposes provided acknowledgement of the source is included.

Contents

Contents	iii
Abbreviations	iv
Summary	v
1 The AER's Rule proposal	1
1.1 Summary of the AER's Rule proposal	1
1.2 Background	2
1.3 First round consultation	3
1.4 Second Round Consultation	4
2 The Commission's Final Rule Determination	5
2.1 The Commission's power to make the Rule	5
2.2 Relevant MCE statements of policy principles	5
2.3 The Rule making test	6
2.4 The Commission's assessment of the AER's proposed Rule change against the National Electricity Objective	6
2.5 Changes to the AER's proposed Rule	7
2.6 Differences between the draft Rule and the Rule to be Made	9
2.7 Rule Commencement	9
A Analysis and Changes to the AER's Proposal	A.1
A.1 Clarifying the meaning of the term "credible contingency event" (clause 4.2.3(a))	A.1
A.2 Deleting the term "single credible contingency event" from the Rules (clause 4.2.3(c))	A.2
A.3 Deleting the term "critical single credible contingency event" from the Rules (clause 4.2.3(d))	A.3
A.4 Positive obligation on NEMMCO to seek information on abnormal conditions (proposed clause 4.2.3A(b))	A.4
A.5 Requirement on NEMMCO to obtain "all information" from "all available sources" (proposed clause 4.2.3A(b)(1))	A.5
A.6 Requirement on NEMMCO to obtain information "on an ongoing basis" (proposed clause 4.2.3A(b)(1))	A.6
A.7 Use of the terms "all the facts and circumstances" (proposed clause 4.2.3A(e))	A.6
A.8 Binding NEMMCO to reclassify contingency events (proposed Clause 4.2.3(g))	A.7
A.9 Use of terms "relevant stakeholders" and "emergency services" (proposed clauses 4.2.3B(a)(1), 4.2.3B(b), and 4.2.3B(c))	A.8
A.10 Requirement to review criteria (proposed Clause 4.2.3B(b))	A.8
A.11 Definition of "involuntary load shedding" (clause 4.8.4(c))	A.9
B Submissions	B.10
C Current process for reclassifying contingency events	C.12

Abbreviations

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
Commission	see AEMC
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
Rules	National Electricity Rules

Summary

Summary of the Rule change proposal

On 17 March 2008, the Australian Energy Regulator (AER) submitted a Rule change proposal relating to proposed changes to the obligations on NEMMCO for reclassifying non-credible contingency events as credible contingency events during abnormal conditions. The proposal was precipitated by an investigation of the load shedding event in Victoria on 16 January 2007 in which the AER identified deficiencies in NEMMCO's processes for reclassifying contingency events.

The Rule change proposal consists of four core elements, that would require NEMMCO to:

1. develop and apply criteria for assessing whether abnormal conditions necessitate the reclassification of contingency events;
2. source information on abnormal conditions and to reclassify a non-credible contingency event as credible when NEMMCO considers that abnormal conditions make that contingency event reasonably possible;
3. inform Market Participants when it is considering whether abnormal conditions necessitate the reclassification of a contingency event; and
4. publish a report twice a year on the reclassification decisions that have been made.

Consultation

Four submissions and one supplementary submission were received to the first round of consultation. All submissions generally supported the intent of the proposal, but suggested improvements to the drafting of the proposed Rule.

No submissions were received to the second round of consultation.

The Commission's decision

The Australian Energy Market Commission (Commission) makes this Rule and Rule determination on the AER's 'Reclassification of Contingency Events' Rule change proposal, in accordance with sections 102 and 103 of the National Electricity Law (NEL).

The Commission considers the Rule is likely to contribute to the promotion of the National Electricity Objective (NEO). The Rule would improve the transparency, consistency and rigour of the process for re-classifying contingency events. This would improve the reliability and security of the national power system, and improve the efficiency of the NEM. For these reasons, the Commission considers that the Rule making test under section 88 of the NEL is satisfied.

This Rule is largely consistent with the AER's proposed Rule, and implements the four core elements of the proposed Rule as set out above. The Commission made some drafting changes to the AER's proposed Rule where it considered these changes would further promote the NEO.

This Rule is also largely consistent with the draft Rule. The Commission made a number of non-material changes to the draft Rule to improve the clarity and consistency of the Rule.

Rule Commencement

This Rule is scheduled to commence on 23 October 2008.

1 The AER's Rule proposal

1.1 Summary of the AER's Rule proposal

On 17 March 2008, the Australian Energy Regulator (AER) submitted a Rule change proposal relating to proposed changes to the obligations on NEMMCO for reclassifying non-credible contingency events as credible contingency events during abnormal conditions¹.

The proposal was precipitated by an investigation of the load shedding event in Victoria on 16 January 2007 when bushfires caused transmission lines in Victoria to fail resulting in the separation of the National Electricity Market (NEM) into three electrical islands and the loss of load in Victoria².

The AER's investigation³ found, amongst other things, that NEMMCO's processes for reclassifying non-credible contingency events as credible contingency events during abnormal conditions was non-transparent, unduly relied upon advice from network owners, and was applied inconsistently.

The AER contended that their Rule change proposal would improve NEMMCO's processes for reclassifying contingency events through the following four amendments that would require NEMMCO to:

- 1. Develop and apply criteria for assessing whether abnormal conditions necessitate the reclassification of contingency events.** This criteria would be established in accordance with a new framework to be incorporated into the Rules. The criteria would guide NEMMCO in deciding whether to reclassify contingency events, and would also assist other relevant stakeholders such as emergency services and network service providers in their provision of information to NEMMCO. The AER contended that this measure would enhance the consistency and rigor of NEMMCO's processes for reclassifying contingency events.
- 2. Source information on abnormal conditions and reclassify a non-credible contingency event as credible when NEMMCO considers that abnormal conditions make that contingency event reasonably possible.** The AER considered this would require NEMMCO to take direct responsibility for the decision to reclassify, whereas the Rules currently provide NEMMCO with broad discretion that effectively allows NEMMCO to delegate the reclassification decision by relying solely upon information provided by others.
- 3. Inform Market Participants when it is considering whether abnormal conditions necessitate the reclassification of a contingency event.** The Rules currently only require NEMMCO to notify Market Participants when the decision is to reclassify. The AER contended that by providing all relevant information in

¹ Refer to Appendix C for an explanation of the current reclassification process.

² Discussed further in Section 1.2.

³ The report for this investigation is located on the AER's website:
www.aer.gov.au/content/index.phtml/itemId/714828

advance of a reclassification decision, Market Participants would be better able to adjust their operations to manage exposure to the abnormal conditions.

4. Publish a report twice a year on the reclassification decisions that have been made. The report would explain the abnormal conditions involved and how NEMMCO applied the assessment criteria. The AER considered this would make the reclassification process more transparent.

1.2 Background

On 16 January 2007, bushfires in Victoria caused both 330 kV transmission lines between Dederang and South Morang to concurrently trip. This led to several other transmission lines in Victoria overloading and tripping, including the Vic-Snowy and Vic-SA interconnectors which resulted in the NEM separating into three electrical islands. Consequently 2200 MW of load was lost in Victoria due to the loss of supply from South Australia and New South Wales.

The AER investigated this event and found several short-comings in NEMMCO's management of the power system on this day including:

1. An inconsistent and non-transparent approach to reclassifying contingency events;
2. Poor load restoration process;
3. Setting the dispatch price to VoLL before required to under the Rules; and
4. Failing to apply intervention pricing following the direction of generators.

This Rule change proposal addresses NEMMCO's processes for reclassifying contingency events. The AER submitted a separate Rule change proposal addressing the Rule requirement to set the dispatch price to VoLL following load shedding.

Under normal conditions, the concurrent loss of both 330 kV transmission lines between Dederang and South Morang is considered a non-credible contingency event. This is because the probability of concurrently losing both transmission lines is low. However under abnormal conditions this probability can be considerably higher.

On 16 January 2007, bushfires were burning in the vicinity of the transmissions lines. Flames, smoke and airborne debris from bushfires can cause faults on transmission lines, and thus the probability of concurrently losing both 330 kV transmission lines increased.

Despite these risks, NEMMCO decided not to reclassify the concurrent loss of both 330 kV transmission lines as a credible contingency event. This decision was based on information provided by the network owner SP AusNet, information which was updated regularly throughout the day.

If NEMMCO had reclassified the contingency event as credible, the Commission understands that the power system would have been reconfigured to better withstand the concurrent loss of both 330 kV transmission lines. NEMMCO's Power

System Incident Report⁴ for the event stated that electrical separation of the network would have most likely been avoided had reclassification of the lines in question occurred.

The AER's investigation identified the following issues relevant to this Rule change proposal:

1. The information provided to NEMMCO by SP AusNet was inconclusive and at times contradictory. This made NEMMCO's task of deciding whether to reclassify more difficult.
2. The concurrent loss of both 330 kV lines between Dederang and South Morang had been reclassified as credible contingency events on both 11 December 2006 and 14 December 2006 due to bushfires around the easement. The decision not to reclassify on 16 January 2007 would appear inconsistent with the decisions to reclassify on 11 and 14 December 2006. The reclassification process was not sufficiently transparent.
3. NEMMCO did not alert the market of the risk posed to those lines in advance of them tripping on 16 January 2008, thus making it difficult for participants to manage their exposure to that risk.
4. The Rules currently do not oblige NEMMCO to reclassify contingency events when abnormal conditions arise. Rather the Rules state that NEMMCO "may, in its reasonable opinion" determine a non-critical contingency event to be critical under such circumstances. The AER considered this language allows NEMMCO to overly rely on information and advice from network owners rather than taking responsibility for sourcing and analysing its own information.

NEMMCO's own investigations into the 16 January 2007 event identified many of the same issues with its reclassification processes as the AER. NEMMCO has reported that it has since addressed many of these issues⁵.

1.3 First round consultation

On 10 April 2008, under section 94 of the National Electricity Law (NEL), the Commission decided to commence initial consultation on the AER Rule change proposal by publishing a notice under section 95 of the NEL.

The Rule change proposal was open for public consultation for four weeks. Submissions closed on 12 May 2008.

⁴ This report is located on NEMMCO's website: www.nemmco.com.au/opreports/232-0052.pdf

⁵ A report on NEMMCO progress on implementing the recommendations from its investigations into the 16 January 2007 event is located on NEMMCO's website: www.nemmco.com.au/opreports/232-0076.htm

The Commission received four submissions and one supplementary submission on the Rule change proposal at the first round of consultation, which are available on the AEMC website⁶.

The Commission received submissions from:

- NEMMCO;
- Grid Australia;
- National Generators Forum; and
- International Power .

The supplementary submission was received from NEMMCO.

Energy Australia also commented on this Rule change proposal in their submission to the “Setting VoLL Following the Shedding of Interruptible Load” Rule change proposal.

First round submissions are summarised at **Appendix B**.

Submissions generally supported the proposed Rule change, with suggested amendments limited to the drafting of the proposed Rule change rather than the core elements or intent of the Rule change proposal. The Commission’s response to comments raised in submissions is set out at **Appendix A**.

1.4 Second Round Consultation

On 17 July 2008, the Commission gave notice under section 99 of the NEL of the making of the draft Rule determination and draft Rule.

The draft Rule and draft Rule determination were open for public consultation for six weeks. Submissions closed on 28 August 2008.

No submissions were received to this round of consultation.

⁶ Submissions are located at www.aemc.gov.au/electricity.php?r=20080407.133712

2 The Commission's Final Rule Determination

The Commission has determined in accordance with sections 102 and 103 of the NEL to make this Rule.

This final Rule determination sets out the Commission's reasons for making the Rule. The Commission has taken into account:

- The Commission's powers under the NEL to make the Rule;
- Any relevant Ministerial Council on Energy (MCE) statements of policy principles;
- First round stakeholder submissions; and
- The Commission's analysis as to the ways in which the Rule will or is likely to contribute to the achievement of the National Electricity Objective (NEO) so that it satisfies the statutory Rule making test.

2.1 The Commission's power to make the Rule

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

The proposed Rule falls within the subject matters that the AEMC may make Rules about as it relates to the regulation of:

- The NEM (as it relates to the Rules for how NEMMCO manages contingency events in central dispatch);
- The operation of the national electricity system for the purposes of the safety, security and reliability of that system (as it relates to how NEMMCO considers abnormal conditions and contingency events when operating the power system in a secure state); and
- The activities of persons participating in the NEM or involved in the operation of the national electricity system (as it involves the provision of information on abnormal system conditions from NEMMCO to registered participants).

The Commission is satisfied that the AER's proposed Rule change is a matter about which the Commission may make a Rule.

2.2 Relevant MCE statements of policy principles

The NEL requires the Commission to have regard to any MCE statements of policy principles in applying the Rule making test. The Commission notes that currently there are no MCE statements of policy principles that relate to the issues contained in the AER's Rule change proposal.

2.3 The Rule making test

The NEO is the basis of assessment under the Rule making test and is set out in Section 7 of the NEL:

“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.”

The Rule making test states:

“(1) The AEMC may only make a Rule if it is satisfied that the Rule will or is likely to contribute to the achievement of the national electricity objective;

(2) For the purposes of subsection (1), the AEMC may give such weight to any aspect of the national electricity objective as it considers appropriate in all circumstances having regard to any relevant MCE statement of policy principles”⁷

Under Section 91A of the NEL, the Commission is also able to make a “more preferable Rule”, if the Commission is satisfied that, having regard to the issue or issues raised by the proposed Rule, the more preferable Rule will or is likely to better contribute to the achievement of the NEO. The Commission’s power to make a “more preferable Rule” commenced operation on 1 January 2008, following amendments to the NEL.

This section presents the Commission’s assessment of the extent to which the Rule promotes the NEO and satisfies the Rule making test.

2.4 The Commission’s assessment of the AER’s proposed Rule change against the National Electricity Objective

This section of the final Rule determination sets out the Commission’s assessment of each element of the AER’s Rule change proposal against the NEO.

1. **Requiring NEMMCO to develop and apply criteria for assessing whether abnormal conditions necessitate the reclassification of contingency events** would promote more robust and reliable reclassification decisions that better reflect the risk posed to the power system and the NEM. This requirement would also improve the consistency of NEMMCO’s reclassification decisions enabling Market Participants to more reliably predict and plan for when NEMMCO will reclassify a contingency event. The requirement to consult on the development of the criteria would improve the transparency of NEMMCO’s reclassification processes, and would help to create robust criteria.

⁷ Section 88 of the National Electricity Law.

2. **Placing a positive obligation on NEMMCO to make reclassification decisions** would require NEMMCO to take direct responsibility for reclassification decisions. To comply with this Rule obligation, the Commission would expect NEMMCO to apply more rigour in the collection and analysis of information about abnormal conditions, and would be more accountable for the reclassification decisions it makes. More rigorous and accountable decision making would produce better reclassification decisions.
3. **Requiring NEMMCO to notify the market when it is considering whether abnormal conditions necessitate the reclassification of contingency events** would give Market Participants more information on which to respond to abnormal conditions. This would enable Market Participants to make more informed decisions in response to the possibility of a contingency event occurring or the possibility of new constraints being invoked in dispatch. Market Participants would be able to manage their risk exposure more effectively thus advancing the efficient operation of the NEM. Market Participants could also be better placed to respond physically to a contingency event, thus reducing the impact of the contingency event and enhancing the reliability and security of the national power system.
4. **Requiring NEMMCO to report every 6 months on all reclassification decisions** would assist Market Participants to understand NEMMCO's decisions, place greater discipline on NEMMCO's decision making process, and would open NEMMCO's decisions to public debate and constructive criticism. This would promote transparency and confidence in NEMMCO's reclassification decisions, and would promote ongoing improvement in the reclassification process.

There would be some costs for NEMMCO to implement this Rule change proposal. However the Commission understands that NEMMCO is already implementing many of measures in this proposal followings its own investigation of the 16 January 2007 event.

The Commission made some drafting changes to the AER's proposed Rule change where it considered these changes would further promote the NEO. The Commission considers these changes to be second order, and do not alter the four core elements of the proposed Rule as discussed above. These changes are set out in Section 2.5.

On balance, the Commission considers the Rule is likely to contribute to the promotion of the NEO. The Rule would improve the transparency, consistency and rigour of the process for re-classifying contingency events. This would improve the reliability and security of the national power system, and improve the efficiency of the NEM. For these reasons, the Commission considers that the Rule making test under section 88 is satisfied.

2.5 Changes to the AER's proposed Rule

First round submissions proposed a number of improvements to the text of the AER's proposed Rule change. The Commission accepted these changes, or made its own changes, where it was shown to further promote the NEO. These changes are

listed below. Detailed reasoning and the Commission's response to submissions are set out at **Appendix A**.

1. The definition of "contingency event" has been amended to clarify that the concurrent disconnection of more than one transmission element and/or generating unit can be included as a contingency event. This aligns this definition with accepted practice.
2. The terms "single credible contingency event" and "critical single credible contingency event" have been deleted because they are considered unnecessary and confusing.
3. Specific reference to the information sources from which NEMMCO must seek information on abnormal conditions has been deleted. This will give NEMMCO discretion to source information in a more efficient manner.
4. The requirement on NEMMCO to respond to abnormal conditions has been amended so that NEMMCO is now only required to respond when it is aware of those conditions. It is not reasonable to expect NEMMCO to respond to conditions that it is not aware of, which could result in NEMMCO unknowingly breaching the Rules. Consequently, a new obligation has been placed on NEMMCO to actively seek to be made aware of abnormal conditions to maximise the timeliness and appropriateness of information collection.
5. The requirement for NEMMCO to seek information on abnormal conditions on an "ongoing basis" has been replaced with "regular basis". This will allow NEMMCO to seek information periodically at a frequency appropriate for the abnormal conditions, rather than continuously which would be burdensome and inefficient.
6. The "facts and circumstances" that NEMMCO must have regard to when considering whether the occurrence of a contingency event is reasonably possible have been qualified to provide NEMMCO clearer guidance.
7. The term "emergency services" has been changed to "relevant emergency services" to avoid this term being misinterpreted to include non-relevant emergency services such as the ambulance service.
8. The period for reviewing the criteria has been changed from 1 to 2 years. Due to the infrequent occurrence of abnormal conditions, a decision to amend the criteria could be based on insufficient supporting information if the criteria review period is too short.
9. The definition of "involuntary load shedding" has been expanded to include automatic underfrequency load shedding. This will align clause 4.8.4(c), the only clause that uses the term "involuntary load shedding", with accepted practice.

A number of minor corrections and drafting changes to improve readability have also been made to the text of the AER's proposed Rule change.

2.6 Differences between the draft Rule and the Rule to be Made

The Commission made the following changes to the draft Rule.

- Clause 4.2.3A(c)(4) requires NEMMCO to provide Market Participants with any information in its possession that is relevant to its consideration of whether to reclassify a non-credible contingency event.

In considering whether to reclassify a non-credible contingency event, NEMMCO may take into account information provided to it on a confidential basis. The Commission has decided to clarify in this clause that NEMMCO is not required to release information provided to it on a confidential basis.

- Clauses 4.2.3B(b)(1) and 4.2.3B(c) require NEMMCO to consult with “relevant emergency services”. The Commission has clarified in these clauses that it is the agencies of those emergency services that NEMMCO must consult.
- The last sentence of clause 4.2.3B(d) (this clause was number 4.2.3B(c) in the draft Rule) stated that “consultation under clause 4.2.3B will suffice for the purposes of this clause”. The Commission has deleted this statement because it considers the parameters of consultation are set by the previous sentence.
- Clauses 4.8.4(b) and (c) contained consequential changes due to the removal of the defined term “Critical Single Credible Contingency Constraint”. The Commission has made further minor amendments to this clause to clarify that the removal of the term “Critical Single Credible Contingency Constraint” has not altered the policy intent of this clause.

The Commission also made a number of non-material changes to the draft Rule to improve the clarity and consistency of the Rule.

2.7 Rule Commencement

This Rule is scheduled to commence on 23 October 2008.

This page has been intentionally left blank

A Analysis and Changes to the AER’s Proposal

This appendix provides the Commission response to comments made in submissions, and the Commission’s reasoning for any changes made to the text of the AER’s proposed Rule amendments.

A.1 Clarifying the meaning of the term “credible contingency event” (clause 4.2.3(a))

A.1.1 Submissions

International Power (IPRA) believed that the term “credible contingency event” is defined under clause 4.2.3(b) in a way that leaves unclear whether it includes the disconnection of more than one item of plant. NEMMCO supported this view in its supplementary submission.

A.1.2 The Commission’s consideration and reasoning

The examples of credible contingency events provided under clauses 4.2.3(b)(1)&(2) explicitly include only one generating unit or one item of transmission plant. The definition for “contingency event” under clause 4.2.3 also uses the terms generating unit or transmission plant in their singular form. The Commission agrees that these clauses could be misinterpreted as meaning a credible contingency event can only include the disconnection of one item of plant.

The accepted practice is that a credible contingency event can include more than one item of plant. The event that triggered this Rule change proposal is an example of this, where the concurrent tripping of the two separate transmission lines between Dederang and South Morang was considered for reclassification as a credible contingency event. Also consider the scenario where a generator is connected to the grid by a single transmission line. In this case it is not possible for the transmission line to trip without the generator also tripping so the concurrent disconnection of the transmission line and the generator would logically be considered as the contingency event.

The Commission considers that the definition for “contingency event” should be amended to clarify that a contingency event can include the disconnection of one or more items of plant. As a subset of the term “contingency event”, it follows that both credible contingency events and non-credible contingency events can also include the failure of more than one item of plant.

This amendment would clarify the interpretation of the Rules and better align this particular clause with accepted practice. As this change is a clarification only, the Commission understands that it would not affect the way NEMMCO currently determines contingency events.

This amendment was not proposed in the AER’s Rule change proposal and is not strictly necessary. However as the AER’s Rule change proposal makes changes to

clause 4.2.3, and the amendment would clarify the policy and operation of the Rules, the Commission considers the amendment to be consistent with the NEO.

The Commission did not use IPRA's proposed wording because this places explicit limitations on when a credible contingency event may include more than one item of plant. The current Rules have been interpreted in practice as allowing a contingency event to include more than one item of plant. As such, placing limitations on when a contingency event may include more than one item of plant would represent a policy shift from status quo. The Commission considers such a policy change has not been fully explored or justified by IPRA.

The Commission has decided to clarify in the Rules that a "contingency event" can include the disconnection of more than one transmission element and/or generating unit.

A.2 Deleting the term "single credible contingency event" from the Rules (clause 4.2.3(c))

A.2.1 Submissions

IPRA stated that the term "single credible contingency event" has no clear meaning, is redundant, and should be deleted. NEMMCO supported this view in its supplementary submission.

A.2.2 The Commission's consideration and reasoning

The need for this specific term in the Rules is unclear. The term is used in five current Rule clauses – 4.2.3(c), 4.2.4(a)(2), 4.2.5(c)(4), 4.5.1(b), and 9.37.21(a)(2)⁸. In each of these clauses, the term is taken to mean the occurrence of just one credible contingency event, as appose to the concurrent occurrence of two or more credible contingency events (a multiple credible contingency event). This is provided for in the definition of the term by the words "an individual credible contingency event".

IPRA considers that each occurrence of the term "single credible contingency event" in the above mentioned clauses could be replaced with "any credible contingency event", with "credible contingency event" being the defined term. For example, clause 4.2.4(a)(2) would be amended as follows:

"the power system will return to a satisfactory operating state following the occurrence of ~~any a single~~ credible contingency event in accordance with the power system security and reliability standards."

This removes the need for the separately defined term "single credible contingency event", and provides appropriate alignment with currently accepted practice where NEMMCO operates the power system to withstand the occurrence of any one of a large number of credible contingency events.

⁸ This clause is redundant as a result of changes made to S2.5.5.13(a) as part of a previous Rule change.

The definition of the term also attempts to clarify that a Registered Participant affected by a credible contingency event should not experience disruption to power system security. The Commission considers this inappropriate. The definition should only describe what a contingency event is. The relevant clauses listed above already outline NEMMCO's responsibilities with regards to managing credible contingency events.

The Commission considers the term "single credible contingency event" unnecessary and could lead to confusion or misunderstanding. Deleting the term would promote clarity in the Rules.

This amendment was not proposed in the AER's Rule change proposal and is not strictly necessary. However as the AER's Rule change proposal relates to contingency events, and the amendment would clarify the policy and operation of the Rules, the Commission considers the amendment to be consistent with the NEO.

The Commission has decided to delete the term "single credible contingency event" from the Rules, and replace each occurrence of "single credible contingency event" with "any credible contingency event".

A.3 Deleting the term "critical single credible contingency event" from the Rules (clause 4.2.3(d))

A.3.1 Submissions

IPRA stated that the term "critical single credible contingency event" and its definition under clause 4.2.3(d) is meaningless in practice hence leading to confusion in the Rules. NEMMCO supported this view in its supplementary submission.

A.3.2 The Commission's consideration and reasoning

The term "critical single credible contingency event" is used to describe that credible contingency event that at a particular point in time would likely have the most significant impact on the power system if it occurred. The term is only used in clause 4.8.4 which describes the conditions for declaring lack of reserve. IPRA contended that the term is unnecessary and confusing, and should be replaced with "any credible contingency event". For example, clause 4.8.4(b) would be amended as follows:

"Lack of reserve level 1 (LOR1) - when NEMMCO considers that there is insufficient short term capacity reserves available to provide complete replacement of the contingency capacity reserve on the occurrence of a ~~critical single~~ any credible contingency event for the period nominated;"

This would require NEMMCO to consider the impact of any credible contingency event on reserves. But as the credible contingency event that would likely have the most significant impact on the power system would also be that which would be most likely to breach reserve levels, then NEMMCO would logically still consider what is currently referred to as the "critical single credible contingency event". Thus IPRA contended that deleting the term "critical single credible contingency event"

would not affect NEMMCO's operations, but would simplify and clarify the Rules.

The Commission does not believe the term "critical single credible contingency event" is necessary. Replacing the term in clause 4.8.4 with "any credible contingency event" would provide the same intent without the complexity of a specific term. Removing unnecessary terminology reduces complexity in the Rules and reduces the risk of misunderstanding.

This amendment was not proposed in the AER's Rule change proposal and is not strictly necessary. However as the AER's Rule change proposal relates to contingency events, and the amendment would clarify the policy and operation of the Rules, the Commission considers the amendment to be consistent with the NEO.

The Commission has decided to delete the term "critical single credible contingency event" from the Rules, and replace each occurrence of "critical single credible contingency event" with "any credible contingency event".

IPRA proposed a further change to clauses 4.8.4(a) and (b) that would limit the credible contingency events that can impact a lack of reserve declaration to those that would lead to the removal from operational service of a generating unit or interconnection between regions for the period nominated. IPRA contended that this would align the Rules with current NEMMCO practice.

The Commission has not supported this suggestion as it considers it to be beyond the scope of this Rule change. The changes made to clause 4.8.4 are consequential only and as such the Commission has redrafted this clause so that the intent of the clause has not changed.

A.4 Positive obligation on NEMMCO to seek information on abnormal conditions (proposed clause 4.2.3A(b))

A.4.1 Submissions

The NGF stated that the Rules should place a positive obligation on NEMMCO to seek prompt information on any abnormal conditions, and that the obligations on NEMMCO to act in response to abnormal conditions be dependent on it having knowledge of an abnormal event.

A.4.2 The Commission's consideration and reasoning

The Commission agrees with the NGF's suggestion. Abnormal conditions due to natural events may not be identified or the seriousness not fully realised for some period following that event. Under the proposed Rule, NEMMCO would be in breach of the Rules for not responding to those abnormal conditions. It is not reasonable to expect NEMMCO to respond to conditions it is not aware of.

But in relaxing this obligation, the Commission considers that there must be a corresponding positive obligation for NEMMCO actively seek to be made aware of abnormal conditions. Without such an obligation, NEMMCO would not be appropriately incentivised to respond to abnormal conditions consistently.

The Commission has decided to amend the proposed Rule so that NEMMCO is only required to respond to abnormal conditions when it is aware of those conditions, and to also place an obligation on NEMMCO to actively seek to be made aware of abnormal conditions.

A.5 Requirement on NEMMCO to obtain “all information” from “all available sources” (proposed clause 4.2.3A(b)(1))

A.5.1 Submissions

NEMMCO considered the requirement for it to make reasonable attempts to obtain “all information” from “all available sources” regarding abnormal conditions is too broad.

A.5.2 The Commission’s consideration and reasoning

The Commission agrees that the drafting of this proposed clause is too broad. The Commission believes that NEMMCO should have discretion to source relevant information in an efficient manner. As outlined in NEMMCO’s submission, a requirement to source information from “all available sources” could result in duplication as it could be interpreted that NEMMCO is required to source similar information from two or more sources when available. If NEMMCO is sourcing the appropriate information on which to assess whether abnormal conditions are likely to affect the probability of a contingency event occurring, then the Commission considers the number of sources to be unimportant.

In addition the Commission does not believe it is necessary to provide specific examples of possible information sources in the Rules. This risks implicitly placing greater importance on these information sources relative to other available information sources. NEMMCO should be given discretion to source information efficiently from the most appropriate sources.

The Commission has decided to remove specific reference “to information sources” from the proposed Rule.

The Commission does not support NEMMCO’s suggestion to replace “all information” with “relevant information”. This amendment would remove the obligation on NEMMCO to take all information into account when assessing whether abnormal conditions are likely to affect the probability of a contingency event occurring. This could increase the likelihood of poor decisions based on partial information. The Commission accepts that a requirement to source “all information” could be burdensome, especially at a time when NEMMCO’s operators could be otherwise busy managing the abnormal conditions. However the Commission considers the term “make reasonable attempts” gives NEMMCO sufficient discretion to the allocation of resources between this obligation and other power system management functions.

The Commission has decided not to replace the words “all information” with the words “relevant information”.

A.6 Requirement on NEMMCO to obtain information “on an ongoing basis” (proposed clause 4.2.3A(b)(1))

A.6.1 Submissions

NEMMCO considered the requirement to obtain information “on an ongoing basis” implies this function must be undertaken continually. This would be impractical and burdensome.

A.6.2 The Commission’s consideration and reasoning

The Commission does not believe it is necessary for NEMMCO to be continuously seeking updated information on abnormal conditions. Depending on the nature of the abnormal conditions, there may be little change for long periods of times. NEMMCO should be required to regularly seek updated information, but the frequency at which NEMMCO updates information should be left to its discretion based on the nature of the abnormal conditions.

The Commission has decided to replace the words “on an ongoing basis” with the words “on a regular basis”. The Commission has made the same change in clause 4.2.3A(e).

A.7 Use of the terms “all the facts and circumstances” (proposed clause 4.2.3A(e))

A.7.1 Submissions

NEMMCO considered the words “all the facts and circumstances” provide too much scope under this proposed clause.

A.7.2 The Commission’s consideration and reasoning

The Commission agrees that the facts and circumstances which NEMMCO must have regard to under this proposed clause should be qualified by linking this clause to the clause obliging NEMMCO to obtain information relating to abnormal conditions (proposed clause 4.2.3A(b)(1)). This clarifies the facts and circumstances that NEMMCO must have regard to.

The Commission has decided to modify this requirement so that NEMMCO must have regard to the facts and circumstances identified in accordance with proposed clause 4.2.3A(b).

A.8 Binding NEMMCO to reclassify contingency events (proposed Clause 4.2.3(g))

A.8.1 Submissions

Grid Australia expressed concern that the proposed Rule would bind NEMMCO to re-classify a previously non-credible contingency event as credible, even if this resulted in the shedding of customer load prior to any contingency event occurring. Grid Australia recommended giving NEMMCO some guided discretion in making reclassification decisions.

A.8.2 The Commission's consideration and reasoning

The Commission acknowledges Grid Australia's concerns, but does not agree with Grid Australia's recommendation. One of the objectives of the AER's Rule change proposal was to reduce the breadth of discretion NEMMCO has in making reclassification decisions. The Commission believes Grid Australia's recommendation would re-introduce potentially problematic discretion.

Allowing NEMMCO discretion to decide not to reclassify contingency events because of the potential impact of the reclassification decision would reduce the transparency of NEMMCO's operations and could threaten the integrity of the Rule definition for "credible contingency event". If under abnormal conditions the occurrence of a contingency event becomes reasonably possible, then NEMMCO must reclassify that contingency event as credible so that the status of the contingency event is clearly understood. By limiting discretion, NEMMCO's reclassification decisions are able to be more readily judged, thus providing Market Participants improved confidence in this process.

Following a reclassification decision, NEMMCO would generally invoke new constraints in the dispatch process to redistribute network transfers. The Commission considers NEMMCO has discretion as to the constraints to invoke to manage a credible contingency event. This could enable NEMMCO to find an appropriate balance between the impact of managing the possibility of a credible contingency event occurring, and the probability and impact of a credible contingency event actually occurring. However in almost all cases the Commission would expect the importance of power system security to necessitate the management of a credible contingency event regardless of the impact of that management on load shedding.

The Commission has decided not to give NEMMCO discretion to choose not to reclassify a contingency event as credible when the impact of that reclassification decision is significant.

A.9 Use of terms “relevant stakeholders” and “emergency services” (proposed clauses 4.2.3B(a)(1), 4.2.3B(b), and 4.2.3B(c))

A.9.1 Submissions

NEMMCO considered the terms “relevant stakeholders” and “emergency services” could be interpreted too broadly.

A.9.2 The Commission’s consideration and reasoning

The proposal requires NEMMCO to consult with relevant stakeholders, and lists those stakeholders that NEMMCO should treat as relevant stakeholders, including emergency services.

The Commission believes further qualification risks creating inefficient rules about who NEMMCO should and should not consult with. While the Rules can provide high level guidance on stakeholders with which to consult, the Rules should provide sufficient discretion for NEMMCO to make its own assessment of stakeholder relevance at the time of consultation. This assessment is important because the relevance of stakeholders can change over time and some relevant stakeholders may not be captured by the Rules.

However the Commission agrees with NEMMCO that the term “emergency services” could be interpreted too broadly. As emergency services are included under the group of stakeholders that NEMMCO should treat as relevant, the proposed clause could be interpreted as requiring NEMMCO to consult with all emergency services. This would not only be inefficient, but is clearly not the policy intent.

The Commission has decided to modify the term “emergency services” to “relevant emergency services” to provide NEMMCO discretion to consult with only those emergency services impacted by the criteria.

A.10 Requirement to review criteria (proposed Clause 4.2.3B(b))

A.10.1 Submissions

NEMMCO considered a requirement to review the criteria for assessing abnormal conditions every 12 months is too frequent. As abnormal events generally occur infrequently, insufficient data may accrue over a 12 month period to effectively review the criteria. NEMMCO recommends changing the review period to 2 years.

A.10.2 The Commission’s consideration and reasoning

The Commission agrees with NEMMCO’s reasoning for changing the review period for the criteria to 2 years. The Commission notes that under proposed clause 4.2.3B(c) NEMMCO may amend the criteria at any time. The Commission would expect NEMMCO to amend the criteria under this provision if obvious deficiencies in the criteria are discovered between reviews.

The Commission has decided to change the review period for the criteria for assessing abnormal conditions from 1 to 2 years.

A.11 Definition of “involuntary load shedding” (clause 4.8.4(c))

A.11.1 Submissions

NEMMCO believed that the definition for “involuntary load shedding” should be expanded to include automatic underfrequency load shedding.

A.11.2 The Commission’s consideration and reasoning

Clause 4.8.4 requires NEMMCO to consider whether the occurrence of a credible contingency event would require involuntary load shedding. The definition for involuntary load shedding does not include automatic underfrequency load shedding. This clause is therefore inconsistent with NEMMCO’s practice which is to include automatic underfrequency load shedding when assessing lack of reserve conditions.

The Commission has decided to amend the definition of “involuntary load shedding” as recommended by NEMMCO. This amendment was not proposed in the AER’s Rule change proposal and is not strictly necessary. However as the draft Rule makes changes to clause 4.8.4, and the amendment would clarify the policy and operation of the Rules, the Commission considers the amendment to be consistent with the NEO.

The Commission has decided to amend the definition for “involuntary load shedding” to include automatic underfrequency load shedding.

This page has been intentionally left blank

B Submissions

B.1 Summary of submissions to first round consultation

- Grid Australia**
1. Supported standardised criteria
 2. NEMMCO should be given discretion not to reclassify contingency events when reclassification would result in load shedding.
- NGF**
1. Supported intentions behind Rule change.
 2. There should be a positive obligation on NEMMCO to ensure it has prompt information on abnormal conditions.
 3. Make the obligations on NEMMCO dependent on it having knowledge of an abnormal condition.
 4. Clause 4.2.3 currently contains drafting errors.
- NEMMCO**
1. Generally supported the proposed Rule change
 2. The requirement under proposed clause 4.2.3A(b)(1) requiring NEMMCO to obtain “all information” from “all available sources” is too broad.
 3. The requirement under proposed clauses 4.2.3A(b)(1) and 4.2.3A(e) to consider whether the occurrence of the non-credible contingency event is reasonably possible on “an ongoing basis” is impractical and onerous.
 4. The “facts and circumstances” referred to under proposed clause 4.2.3A(e) should be limited to those identified under 4.2.3A(b).
 5. The terms “relevant stakeholders” and “emergency services” in clause 4.2.3B(a)(1) should be qualified.
 6. The criteria for reclassifying contingency events should be reviewed every 2 years rather than every year.
- International Power**
1. Supported NGF submission.
 2. Clarify that a credible contingency event can include the disconnection of more than one item of plant.
 3. Delete the terms “single credible contingency event” and “critical credible contingency event”. These terms are incorrectly defined and are unnecessary.

**Energy
Australia⁹**

1. Supported the Rule change proposal.

**NEMMCO
Supplementary**

1. Supported International Power's recommendations.
2. Expand the definition of involuntary load shedding to include automatic underfrequency load shedding. This corrects a misalignment between use of the term under clause 4.8.4(c) and accepted practice.

B.2 Summary of submissions to 2nd round consultation

No second round submissions were received.

⁹ Contained in Energy Australia's submission to the "Setting of VoLL Following the Shedding of Interruptible Load" Rule change.

C Current process for reclassifying contingency events

Clause 4.2.3(a) of the Rules describes a contingency event as “... an event affecting the *power system* which NEMMCO expects would be likely to involve the failure or removal from operational service of a *generating unit* or *transmission element*.”

The Rules distinguish between credible and non-credible contingency events. A credible contingency event is an event that NEMMCO considers is reasonably possible under a given set of power system conditions, whereas a non-credible contingency event is an event that NEMMCO considers has a low probability of occurring under a given set of power system conditions. Clause 4.2.3 provides examples of credible contingency events including the unexpected loss of one generating unit or one item of transmission plant, and examples of non-credible contingency events including the loss of multiple generating units or double circuit transmission lines.

This distinction is important because the Rules require NEMMCO to operate the power system to withstand an individual credible contingency event without significant disruption to power system security¹⁰. This means that NEMMCO takes into account credible contingency events when dispatching generators, whereas non-credible contingency events, given their low probability, are not taken into account in the same way.

When abnormal conditions arise, the probability of a contingency event could rise. Clause 4.2.3(f) allows NEMMCO to reclassify a non-credible contingency event as credible when NEMMCO considers abnormal conditions have added risks to the power system. Such a reclassification would likely result in additional constraints being applied to the operation of the power system to ensure the security of the power system should the event occur. NEMMCO has broad discretion in deciding when to reclassify a contingency event.

For example, the concurrent loss of two parallel transmission lines is unlikely under normal operating conditions, and as such would be treated as a non-credible contingency. However if bush fires are heading in the direction of the transmission lines, the probability of losing both lines increases and NEMMCO may consider reclassifying this contingency event as credible.

¹⁰ Defined under rules 4.2 and 4.3