

# National Electricity Rules Version 23

## Status Information

This is a draft consolidation based on the latest electronically available version of the National Electricity Rules as at 20 November 2008.

This draft consolidated version of the National Electricity Rules includes the following draft amendment:

National Electricity Amendment (Clarification of Market Information Requirements for Market Ancillary Services) Rule 2008 No. 13

This version of the National Electricity Rules only contains the Chapters of the National Electricity Rules that are amended by the Rule.

This version of the National Electricity Rules is provided for information purposes only. The Australian Energy Market Commission does not guarantee the accuracy, reliability or completeness of this draft consolidated version. The National Electricity Amendment (Clarification of Market Information Requirements for Market Ancillary Services) Rule 2008 No. 13 is published separately on the website of the Australian Energy Market Commission.

## TABLE OF CONTENTS

<b>3.</b>	<b>Market Rules</b>	<b>9</b>
	<b>3.1 Introduction to Market Rules</b>	<b>9</b>
	3.1.1 Purpose	9
	3.1.2 [Deleted]	9
	3.1.3 [Deleted]	9
	3.1.4 Market design principles	9
	3.1.5 Time for undertaking action	11
	<b>3.2 NEMMCO's Market Responsibilities</b>	<b>12</b>
	3.2.1 Market functions of NEMMCO	12
	3.2.2 Spot market	12
	3.2.3 Power system operations	13
	3.2.4 Ancillary services function	13
	3.2.5 [Deleted]	13
	3.2.6 Settlements	13
	<b>3.3 Prudential Requirements</b>	<b>13</b>
	3.3.1 Market Participant criteria	13
	3.3.2 Credit support	13
	3.3.3 Acceptable credit criteria	14
	3.3.4 Acceptable credit rating	14
	3.3.5 Amount of credit support	15
	3.3.6 Changes to credit support	15
	3.3.7 Drawings on credit support	16
	3.3.8 Maximum credit limit and prudential margin	16
	3.3.8A Security Deposits	17
	3.3.9 Outstandings	17
	3.3.10 Trading limit	18
	3.3.11 Call notices	18
	3.3.12 Typical accrual	19
	3.3.13 Response to Call Notices	19
	3.3.13A Application of monies in the security deposit fund	20
	3.3.14 Potential value of a transaction	22
	3.3.15 Trading margin	22
	3.3.16 Limitation on entry of transactions	22
	3.3.17 Scheduled prices	22
	3.3.18 Additional credit support	23
	3.3.19 Consideration of other Market Participant transactions	23
	<b>3.4 Spot Market</b>	<b>23</b>
	3.4.1 Establishment of spot market	23
	3.4.2 Trading day and trading interval	24
	3.4.3 Spot market operations timetable	24
	<b>3.5 Regions</b>	<b>24</b>
	3.5.1 [Deleted]	24
	3.5.2 [Deleted]	24

3.5.3	[Deleted]	24
3.5.4	[Deleted]	24
3.5.5	[Deleted]	24
3.5.6	Abolition of Snowy region	25
<b>3.6</b>	<b>Network Losses and Constraints</b>	<b>25</b>
3.6.1	Inter-regional losses	25
3.6.2	Intra-regional losses	27
3.6.2A	Load and generation data used to determine inter-regional loss factor equations and intra-regional loss factors	31
3.6.3	Distribution losses	32
3.6.4	Network constraints	37
3.6.5	Settlements residue due to network losses and constraints	37
<b>3.7</b>	<b>Projected Assessment of System Adequacy</b>	<b>39</b>
3.7.1	Administration of PASA	39
3.7.2	Medium term PASA	40
3.7.3	Short term PASA	42
<b>3.7A</b>	<b>Market Information on planned network outages</b>	<b>45</b>
<b>3.7C</b>	<b>Energy Adequacy Assessment Projection</b>	<b>47</b>
<b>3.8</b>	<b>Central Dispatch and Spot Market Operation</b>	<b>50</b>
3.8.1	Central Dispatch	50
3.8.2	Participation in central dispatch	52
3.8.3	Bid and offer aggregation guidelines	53
3.8.4	Notification of scheduled capacity	54
3.8.5	Submission timing	55
3.8.6	Generating unit offers for dispatch	55
3.8.6A	Scheduled network service offers for dispatch	57
3.8.7	Bids for scheduled load	59
3.8.7A	Market ancillary services offers	60
3.8.8	Validation of dispatch bids and offers	61
3.8.9	Default offers and bids	62
3.8.10	Network constraints	63
3.8.11	Ancillary services constraints	63
3.8.12	System scheduled reserve constraints	63
3.8.13	Notification of constraints	64
3.8.14	Dispatch under conditions of supply scarcity	64
3.8.15	[Deleted]	65
3.8.16	Equal priced dispatch bids and dispatch offers	65
3.8.17	Self-commitment	65
3.8.18	Self-decommitment	65
3.8.19	Dispatch inflexibilities	66
3.8.20	Pre-dispatch schedule	67
3.8.21	On-line dispatch process	69
3.8.22	Rebidding	70
3.8.22A	Variation of offer, bid or rebid	72

3.8.23	Failure to conform to dispatch instructions	72
3.8.24	Scheduling errors	74
<b>3.9</b>	<b>Price Determination</b>	<b>74</b>
3.9.1	Principles applicable to spot price determination	74
3.9.2	Determination of spot prices	76
3.9.2A	Determination of ancillary services prices	77
3.9.2B	Pricing where NEMMCO determines a manifestly incorrect input	78
3.9.3	Pricing in the event of intervention by NEMMCO	80
3.9.4	VoLL	81
3.9.5	Application of VoLL	83
3.9.6	Market Floor Price	83
3.9.6A	Application of the Market Floor Price	84
3.9.7	Pricing for constrained-on scheduled generating units	84
<b>3.10</b>	<b>[Deleted]</b>	<b>85</b>
<b>3.11</b>	<b>Ancillary Services</b>	<b>85</b>
3.11.1	Introduction	85
3.11.2	Market ancillary services	85
3.11.3	Acquisition of non-market ancillary services	86
3.11.4	Procedure for determining quantities of network control ancillary services	87
3.11.4A	Guidelines and objectives for acquisition of system restart ancillary services	88
3.11.4B	Determination of electrical sub-network boundaries	89
3.11.5	Tender process for non-market ancillary services	89
3.11.6	Procedures for the dispatch of non-market ancillary services by NEMMCO	93
3.11.7	Performance and testing	93
<b>3.12</b>	<b>Market Intervention by NEMMCO</b>	<b>94</b>
3.12.1	Intervention settlement timetable	94
3.12.2	Affected Participants and Market Customers entitlements to compensation in relation to NEMMCO intervention	94
3.12.3	Role of the Independent Expert in calculating payments in relation to intervention by NEMMCO	99
<b>3.12A</b>	<b>Mandatory restrictions</b>	<b>102</b>
3.12A.1	Restriction offers	102
3.12A.2	Mandatory restrictions schedule	103
3.12A.3	Acquisition of capacity	104
3.12A.4	Rebid of capacity under restriction offers	104
3.12A.5	Dispatch of restriction offers	105
3.12A.6	Pricing during a restriction price trading interval	105
3.12A.7	Determination of funding restriction shortfalls	105
3.12A.8	Cancellation of a mandatory restriction period	111
3.12A.9	Review by AEMC	111
<b>3.13</b>	<b>Market Information</b>	<b>112</b>
3.13.1	Provision of information	112

3.13.2	Systems and procedures	112
3.13.3	Standing data	113
3.13.4	Spot market	117
3.13.4A	Market ancillary services	121
3.13.5	Ancillary services contracting by NEMMCO	122
3.13.5A	Settlement residue auctions	122
3.13.6	[Deleted]	123
3.13.6A	Report by NEMMCO	123
3.13.7	Monitoring of significant variation between forecast and actual prices by AER	124
3.13.8	Public information	125
3.13.9	[Deleted]	126
3.13.10	Market auditor	126
3.13.11	[Deleted]	126
3.13.12	NMI Standing Data	127
3.13.13	Inter-network tests	130
<b>3.14</b>	<b>Administered Price Cap and Market Suspension</b>	<b>131</b>
3.14.1	Cumulative Price Threshold and Administered Price Cap	131
3.14.2	Application of Administered Price Cap	131
3.14.3	Conditions for suspension of the spot market	133
3.14.4	Declaration of market suspension	134
3.14.5	Pricing during market suspension	135
3.14.6	Compensation due to the application of an administered price, VoLL or market floor price	138
<b>3.15</b>	<b>Settlements</b>	<b>140</b>
3.15.1	Settlements management by NEMMCO	140
3.15.2	Electronic funds transfer	140
3.15.3	Connection point and virtual transmission node responsibility	140
3.15.4	Adjusted energy amounts - connection points	141
3.15.5	Adjusted energy - transmission network connection points	141
3.15.5A	Adjusted energy – virtual transmission nodes	142
3.15.6	Spot market transactions	142
3.15.6A	Ancillary service transactions	143
3.15.7	Payment to Directed Participants	150
3.15.7A	Payment to Directed Participants for services other than energy and market ancillary services	152
3.15.7B	Claim for additional compensation by Directed Participants	154
3.15.8	Funding of Compensation for directions	157
3.15.9	Reserve settlements	159
3.15.10	Administered price, VoLL or market floor price compensation payments	161
3.15.10A	Goods and services tax	162
3.15.10B	Restriction contract amounts	163
3.15.10C	Intervention Settlements	165
3.15.11	Reallocation transactions	168

3.15.11A	Reallocation procedures	170
3.15.12	Settlement amount	170
3.15.13	Payment of settlement amount	171
3.15.14	Preliminary statements	171
3.15.15	Final statements	172
3.15.15A	Use of estimated settlement amounts by NEMMCO	172
3.15.16	Payment by market participants	172
3.15.17	Payment to market participants	173
3.15.18	Disputes	173
3.15.19	Revised Statements and Adjustments	173
3.15.20	Payment of adjustments	176
3.15.21	Default procedure	176
3.15.22	Maximum total payment in respect of a billing period	179
3.15.23	Maximum total payment in respect of a financial year	181
3.15.24	Compensation for reductions under clause 3.15.23	182
3.15.25	Interest on overdue amounts	182
3.16	Participant compensation fund	183
3.16.1	Establishment of Participant compensation fund	183
3.16.2	Dispute resolution panel to determine compensation	183
<b>3.17</b>	<b>NEMMCO Software</b>	<b>185</b>
3.17.1	Acceptance of software	185
3.17.2	No liability	185
<b>3.18</b>	<b>Settlement Residue Auctions</b>	<b>185</b>
3.18.1	Settlement residue concepts	185
3.18.2	Auctions and eligible persons	186
3.18.3	Auction rules	188
3.18.4	Proceeds and fees	189
3.18.5	Settlement residue committee	190
<b>3.19</b>	<b>Market Management Systems Access Procedures</b>	<b>191</b>
<b>3.20</b>	<b>Reliability and Emergency Reserve Trader</b>	<b>192</b>
3.20.1	Expiry of reserve and emergency reliability trader	192
3.20.2	Reliability and emergency reserve trader	192
3.20.3	Reserve contracts	193
3.20.4	Dispatch pricing methodology for unscheduled reserve contracts	194
3.20.5	NEMMCO's risk management and accounts relating to the reliability safety net	195
3.20.6	Reporting on RERT by NEMMCO	195
3.20.7	NEMMCO's exercise of the RERT	196
3.20.8	RERT Guidelines	197
3.20.9	Review of reserve and emergency reliability trader	198
<b>Schedule 3.1</b>	<b>Registered Bid and Offer Data</b>	<b>199</b>
	Scheduled Generating Unit Data:	199
	Semi-Scheduled Generating Unit Data:	200
	Scheduled Load Data:	200

Scheduled Network Service Data:	200
Dispatch Inflexibility Profile:	201
Aggregation Data:	201
<b>Schedule 3.2 - [Deleted]</b>	<b>202</b>
<b>Schedule 3.3 - Principles for Determination of Maximum Credit Limits &amp; Prudential Margins</b>	<b>202</b>
S3.3.1 Principles for determining maximum credit limits	202
S3.3.2 Principles for determining prudential margins	203

**CHAPTER 3**





## **3. Market Rules**

### **3.1 Introduction to Market Rules**

#### **3.1.1 Purpose**

This Chapter sets out the procedures which govern the operation of the *market* relating to the wholesale trading of electricity and the provision of *ancillary services* and includes provisions relating to:

- (a) *prudential requirements* to be met for participation in the *market*;
- (b) the operation of the *spot market*;
- (c) bidding and *dispatch*;
- (d) *spot price* determination;
- (d1) the determination of *ancillary service prices*;
- (e) *NEMMCO* clearing house and trading functions;
- (f) *market* information requirements and obligations;
- (g) the conditions and procedures for *market suspension*; and
- (h) *settlements*.

#### **3.1.2 [Deleted]**

#### **3.1.3 [Deleted]**

#### **3.1.4 Market design principles**

- (a) This Chapter is intended to give effect to the following market design principles:
  - (1) minimisation of *NEMMCO* decision-making to allow *Market Participants* the greatest amount of commercial freedom to decide how they will operate in the *market*;
  - (2) maximum level of *market* transparency in the interests of achieving a very high degree of *market* efficiency;
  - (3) avoidance of any special treatment in respect of different technologies used by *Market Participants*;
  - (4) consistency between *central dispatch* and pricing;

- 
- (5) equal access to the market for existing and prospective *Market Participants*;
  - (6) *ancillary services* should, to the extent that it is efficient, be acquired through competitive market arrangements and as far as practicable determined on a dynamic basis. Where dynamic determination is not practicable, competitive commercial contracts between *NEMMCO* and service providers should be used in preference to bilaterally negotiated arrangements;
  - (7) the power of direction to provide *ancillary services* as a last resort to ensure system security should not be affected by the competitive market arrangements;
  - (8) where arrangements require participants to pay a proportion of *NEMMCO* costs for *ancillary services*, charges should where possible be allocated to provide incentives to lower overall costs of the national electricity market. Costs unable to be reasonably allocated this way should be apportioned as broadly as possible whilst minimising distortions to production, consumption and investment decisions; and
  - (9) where arrangements provide for *NEMMCO* to *dispatch* or procure an *ancillary service*, *NEMMCO* should be responsible for settlement of the service.
- (a1) *NEMMCO* must review, prepare and publish a report on:
- (1) **[Deleted]**
  - (2) the operation and effectiveness of the *spot market* for *market ancillary services* within the overall *central dispatch* and any recommendations for their improvement, including:
    - (i) simplification of the arrangements for the provision of *market ancillary services*; and
    - (ii) improving the determination of *market ancillary services* requirements;
  - (3) the potential future implementation of a usage market for *market ancillary services* whilst retaining an enabling market to assist *NEMMCO* with its obligations with respect to system security; and
  - (4) the provision of *network control ancillary services* including:
    - (i) a review of the responsibilities of *NEMMCO* and *Transmission Network Service Providers* for the provision of *reactive power support*;

- (ii) a review of the formulation of those generic *network constraints* within *central dispatch* that are dependant on the provision of *network control ancillary services*; and
  - (iii) a program to assess the potential implementation of market mechanisms for the recruitment and *dispatch* of *NCAS*.
- (a2) In conducting the reviews under clause 3.1.4(a1), *NEMMCO* must:
- (1) seek and take account of the opinion of the *Reliability Panel* on matters to be considered in, and the draft conclusions of, the review set out in clause 3.1.4(a1)(1);
  - (2) **[Deleted]**
  - (3) *publish* a program for the conduct of the reviews within three months of the *market ancillary services commencement date*;
  - (4) take into account when setting the program of the reviews the need to balance the benefit of utilising the results of other reviews or *market* experience and the need to progress *market* development;
  - (5) use the *Rules consultation procedures* in conducting each review;
  - (6) *publish* a review outline and indicative timelines at the commencement of each review;
  - (7) complete each review and deliver to the *AEMC* a report of the findings and recommendations of the review within 12 months of the commencement of the review; and
  - (8) deliver to the *AEMC* within 3 months of the conclusion of each review any proposed *Rule* changes required to implement the recommendations of the review.
- (b) This Chapter is not intended to regulate anti-competitive behaviour by *Market Participants* which, as in all other markets, is subject to the relevant provisions of the Trade Practices Act, 1974 and the Competition Codes of *participating jurisdictions*.

### 3.1.5 Time for undertaking action

The provisions of clause 1.7.1(l) do not apply to this Chapter and, under the provisions of this Chapter, an event which is required to occur on or by a stipulated *day* must occur on or by that *day* whether or not a *business day*.

## 3.2 NEMMCO's Market Responsibilities

### 3.2.1 Market functions of NEMMCO

- (a) *NEMMCO* must operate and administer the *market* in accordance with this Chapter.
- (b) *NEMMCO* must establish, maintain and *publish* a register of all current *Market Participants*.
- (c) *NEMMCO* must:
  - (1) establish procedures for consultation with *Registered Participants* in respect of the manner in which *NEMMCO* fulfils its functions and obligations under the *Rules*; and
  - (2) *publish* annually performance indicators to monitor *NEMMCO's* performance in respect of its *market* management functions.

### 3.2.2 Spot market

*NEMMCO* must do all things necessary to operate and administer a *spot market* for the sale and purchase of electricity and *market ancillary services* in accordance with this Chapter including:

- (a) the provision of facilities for the receipt and processing of *dispatch bids*, *dispatch offers* and *market ancillary service offers* for the *spot market*;
- (b) the management of a centralised national *dispatch* process, including the publication of *pre-dispatch schedules* and *spot price forecasts*;
- (c) the determination and publication of *spot prices* at each *regional reference node* for each *trading interval*;
- (c1) the determination and publication of *ancillary service prices* at each *regional reference node* for each *dispatch interval*;
- (d) the compilation and publication of *spot market* trading statistics;
- (e) the identification of *regions* and *regional reference nodes* for *spot price* and *ancillary service price* determination;
- (f) the determination and publication of *inter-regional loss factors* and *intra-regional loss factors*;
- (g) the suspension of the *spot market* under conditions prescribed in rule 3.14; and
- (h) the collection and dissemination of information necessary to enable the *market* to operate efficiently.

### 3.2.3 Power system operations

- (a) Subject to Chapter 4, *NEMMCO* must manage the day to day operation of the *power system*, using its reasonable endeavours to maintain *power system security* in accordance with this Chapter.
- (b) *NEMMCO* must perform *projected assessment of system adequacy processes* ("PASA") in accordance with rule 3.7, *publish* the details of these assessments in accordance with rule 3.13 and implement an escalating series of *market* interventions in accordance with this Chapter to maintain *power system security*.

### 3.2.4 Ancillary services function

- (a) *NEMMCO* must determine the *market's* requirements for *non-market ancillary services* in accordance with rule 3.11.
- (b) *NEMMCO* must use reasonable endeavours to ensure adequate *non-market ancillary services* are available in accordance with rule 3.11.

### 3.2.5 [Deleted]

### 3.2.6 Settlements

*NEMMCO* must provide a financial *settlements* service in accordance with rule 3.15, including billing and clearance for all *market* trading.

## 3.3 Prudential Requirements

### 3.3.1 Market Participant criteria

Each *Market Participant* must whilst participating in the *market*:

- (a) be resident in, or have a permanent establishment in, Australia;
- (b) not be under external administration (as defined in the Corporations Act) or under a similar form of administration under any laws applicable to it in any jurisdiction;
- (c) not be immune from suit in respect of the obligations of the *Market Participant* under the *Rules*; and
- (d) be capable of being sued in its own name in a court of Australia.

### 3.3.2 Credit support

Where at any time a *Market Participant* does not meet the *acceptable credit criteria*, the *Market Participant* must procure that *NEMMCO* holds the benefit of

*credit support* in respect of that *Market Participant*. A *credit support* is an obligation in writing which:

- (a) is from an entity (the "*Credit Support Provider*") which meets the *acceptable credit criteria* and which is not itself a *Market Participant*;
- (b) is a guarantee or bank letter of credit in a form prescribed by *NEMMCO*;
- (c) is duly executed by the *Credit Support Provider* and delivered unconditionally to *NEMMCO*;
- (d) constitutes valid and binding unsubordinated obligations of the *Credit Support Provider* to pay to *NEMMCO* amounts in accordance with its terms which relate to obligations of the relevant *Market Participant* under the *Rules*; and
- (e) permits drawings or claims by *NEMMCO* to a stated certain amount.

### 3.3.3 Acceptable credit criteria

Where the *Rules* require that an entity meet the *acceptable credit criteria*, this means that the entity must:

- (a) be either:
  - (1) any entity under the prudential supervision of the Australian Prudential Regulation Authority; or
  - (2) a central borrowing authority of an Australian State or Territory which has been established by an Act of Parliament of that State or Territory;
- (b) be resident in, or have a permanent establishment in, Australia;
- (c) not be an externally administered body corporate (as defined in the Corporations Act) or under a similar form of administration under any laws applicable to it in any jurisdiction;
- (d) not be immune from suit;
- (e) be capable of being sued in its own name in a court of Australia; and
- (f) have an *acceptable credit rating*.

### 3.3.4 Acceptable credit rating

- (a) *NEMMCO* may from time to time, after complying with the *Rules consultation procedures*, determine what constitutes an *acceptable credit rating* for the purposes of the *Rules*, including (without limitation) determining which organisations publishing ratings will be used for this

purpose, which of the type of ratings issued will be used for this purpose, and which level of rating is to be acceptable.

- (b) Until varied by determination of *NEMMCO*, an *acceptable credit rating* is either:
  - (1) a rating of A-1 or higher for short term unsecured counterparty obligations of the entity, as rated by Standard and Poor's (Australia) Pty. Limited; or
  - (2) a rating of P-1 or higher for short term unsecured counterparty obligations of the entity, as rated by Moodys Investor Service Pty. Limited.
- (c) Any determination of *NEMMCO* which varies what constitutes an *acceptable credit rating* will take effect from such date (not being earlier than 30 *business days* after the date of notification of the determination to *Market Participants*) as *NEMMCO* specifies by notice to the *Market Participants*.

### 3.3.5 Amount of credit support

A *Market Participant* which does not meet the *acceptable credit criteria* must procure that at all times the aggregate undrawn or unclaimed amounts of then current and valid *credit support* held by *NEMMCO* in respect of the *Market Participant* is not less than the current *maximum credit limit* for that *Market Participant*.

### 3.3.6 Changes to credit support

- (a) If:
  - (1) a *credit support* provided to *NEMMCO* by a *Market Participant* under this rule 3.3 (called the "*existing credit support*"), is due to expire or terminate; and
  - (2) after that *credit support* expires or terminates the total *credit support* held by *NEMMCO* in respect of that *Market Participant* will be less than the *Market Participant's maximum credit limit*,

then at least 10 *business days* prior to the time at which the existing *credit support* is due to expire or terminate the *Market Participant* must procure a replacement *credit support* which will become effective upon expiry of the existing *credit support* such that it complies with the requirements of this rule 3.3.

- (b) Where a *credit support* otherwise ceases to be current or valid, whether by reason of the *Credit Support Provider* ceasing to meet the *acceptable credit criteria* or any other reason, the *Market Participant* must procure the

replacement of that *credit support* so as to comply with its obligation to maintain aggregate undrawn current and valid *credit support* of not less than the current *maximum credit limit* for that *Market Participant*. The *Market Participant* must procure that the replacement *credit support* is issued to NEMMCO within 24 hours after the *Market Participant* first becomes aware that the *credit support* has ceased to be current or valid (whether by reason of the *Market Participant's* own knowledge or a notification by NEMMCO).

### 3.3.7 Drawings on credit support

- (a) If NEMMCO exercises its rights under a *credit support* provided by a *Market Participant* under this rule 3.3 in accordance with clause 3.15.21(b)(2), then NEMMCO must notify the *Market Participant*.
- (b) If, as a result of NEMMCO exercising its rights under a *credit support* provided by a *Market Participant* under this rule 3.3 in accordance with clause 3.15.21(b)(2), the remaining *credit support* held by NEMMCO in respect of that *Market Participant* is less than the *Market Participant's maximum credit limit* then, within 24 hours of receiving a notice under clause 3.3.7(a), the *Market Participant* must procure for NEMMCO additional *credit support* complying with the requirements of this rule 3.3, such that the aggregate undrawn and valid *credit support* held by NEMMCO in respect of the *Market Participant* is not less than the amount of *credit support* which that *Market Participant* is required to provide under this rule 3.3.

### 3.3.8 Maximum credit limit and prudential margin

- (a) NEMMCO must determine for each *Market Participant* a *maximum credit limit* and *prudential margin*.
- (b) The *maximum credit limit* for a *Market Participant* is a dollar amount determined by NEMMCO applying the principles set out in schedule 3.3, being an amount determined by NEMMCO on the basis of a *reasonable worst case* estimate of the aggregate payments for *trading amounts* (after *reallocation*) to be made by the *Market Participant* to NEMMCO over a period of up to the *credit period* applicable to that *Market Participant*.
- (c) The *prudential margin* for a *Market Participant* is a dollar amount to be determined by NEMMCO applying the principles set out in schedule 3.3, being an amount determined by NEMMCO on the basis of a *reasonable worst case* estimate of the aggregate of the expected *trading amount* and the *reallocation amount* owing by the *Market Participant* to NEMMCO in respect of the *reaction period*.
- (d) NEMMCO must *publish* details of the methodology used in determining *maximum credit limits* and *prudential margins*.



- (e) *NEMMCO* shall review the *maximum credit limit* and *prudential margin* of each *Market Participant* not less than once each year.
- (f) *NEMMCO* may change either or both of the *maximum credit limit* or *prudential margin* for a *Market Participant* at any time (whether by reason of an annual review or otherwise), provided that any change to the *maximum credit limit* or *prudential margin* will apply with effect from such time (not being earlier than the time of notification of the changed *maximum credit limit* or *prudential margin*, as the case may be, to the *Market Participant*) as *NEMMCO* specifies.
- (g) *NEMMCO* must notify the *Market Participant* of any determination or change under this clause 3.3.8 of that *Market Participant's maximum credit limit* or *prudential margin* (as the case may be) and, on request from that *Market Participant*, provide details of the basis for that determination or change, including the trading, price, volatility and *prospective reallocation* assumptions and the average *spot prices* and *ancillary service prices* and average *trading amounts*.

### 3.3.8A Security Deposits

At any time, a *Market Participant* may provide a security deposit to *NEMMCO* to secure payment of any amount which may become payable in respect of a *billing period*.

### 3.3.9 Outstandings

At any time the *outstandings* of a *Market Participant* is the dollar amount determined by the formula:

$$OS = - (A + B + SDA)$$

where:

OS is the amount of the *outstandings* of the *Market Participant*;

A is the aggregate of the net *settlement amounts* payable in respect of *billing periods* prior to the current *billing period* which remain unpaid by, or to, the *Market Participant* whether or not the *payment date* has yet been reached;

B is the net *settlement amount* payable by, or to, the *Market Participant* in respect of *transactions* for *trading intervals* that have already occurred in the current *billing period*; and

SDA is the balance (if any) of the *Market Participant* in the security deposit fund, in which case a credit balance will be a positive amount and a debit balance will be a negative amount.

The amounts to be used in this calculation will be the actual *settlement amounts* for *billing periods* where *final statements* have been issued by NEMMCO or NEMMCO's reasonable estimate of the *settlement amounts* for *billing periods* (where *final statements* have not been issued by NEMMCO).

**Note:** Where the value of *outstandings* of a *Market Participant* is a negative amount the absolute value of the *outstandings* amount will, for the purposes of rule 3.3, be treated as if it were an amount payable by NEMMCO to the *Market Participant*.

### 3.3.10 Trading limit

The trading limit for a *Market Participant* is the dollar amount determined by NEMMCO on the basis of a *reasonable worst case* estimate by NEMMCO applying the principles in schedule 3.3 and determined using the following formula:

$$TL = CS - PM$$

where:

TL is the *trading limit*;

CS is the *credit support* provided by the *Market Participant*; and

PM is the *prudential margin* determined in accordance with clause 3.3.8(c).

**Note:** If the *prudential margin* exceeds the *credit support* the *trading limit* will have a negative value.

### 3.3.11 Call notices

(a) If at any time the *outstandings* of a *Market Participant* is greater than the *trading limit* for that *Market Participant*, NEMMCO may do either or both of the following:

- (1) give the *Market Participant* an “*interim statement*” covering any *transactions* for *trading intervals* not already the subject of issued *preliminary* or *final statements* or another *interim statement*, notwithstanding that the usual time for the issue of a *preliminary* or *final statement* for those *trading intervals* has not been reached; and
- (2) give the *Market Participant* a notice (a “*call notice*”) that specifies an *invoiced amount*, the current *maximum credit limit* for the *Market Participant*, the current *trading limit* for the *Market Participant*, and the *call amount*, where:

$$\text{Call Amount} = OS - \text{TypA}$$

except where the formula produces a negative result, in which case the *call amount* is zero,

where:

OS is the *outstandings* for the *Market Participant* as at the date of the issue of the *call notice*; and

TypA is the *typical accrual* for the *Market Participant* as at the date of the issue of the *call notice*.

**Note:** If the value of *outstandings* of a *Market Participant* has a negative value and the *trading limit* also has a negative value, the *outstandings* will be greater than the *trading limit* if the absolute value of the *trading limit* is greater than the absolute value of the *outstandings*, in which case NEMMCO may exercise its powers under either or both of clauses 3.3.11(a)(1) or 3.3.11(a)(2).

- (b) NEMMCO may, in its absolute discretion, cancel a *call notice* or *interim statement* issued under this clause at any time. The cancellation of a *call notice* or *interim statement* does not affect NEMMCO's rights to issue a further *call notice* or *interim statement* on the same grounds that gave rise to NEMMCO issuing the cancelled *call notice* or *interim statement*.

### 3.3.12 Typical accrual

- (a) The *typical accrual* for a *Market Participant* at any time is the amount which NEMMCO determines would have been the *outstandings* of the *Market Participant* at that time had the *spot prices* and *ancillary service prices* and the *trading amounts* of the *Market Participant* been at the level of the average *spot price* and *ancillary service prices* and average *trading amounts* of the *Market Participant* used by NEMMCO for the purposes of the most recent determination of the *maximum credit limit* of the *Market Participant*.

**Note:** The value of the *typical accrual* of a *Market Participant* will be a negative amount if the average *settlement amount* of the *Market Participant* is a positive amount.

- (b) NEMMCO must, on request from a *Market Participant*, provide that *Market Participant* with details of any *typical accrual* for that *Market Participant*.

### 3.3.13 Response to Call Notices

- (a) Subject to clause 3.3.13(b), where NEMMCO has given a *call notice* to a *Market Participant*, the *Market Participant* must before 11.00 am (Sydney time) on the next *business day* following the issue of the *call notice* either:
  - (1) agree with NEMMCO to an increase in the *Market Participant's maximum credit limit* by an amount not less than the *call amount*, and provide to NEMMCO additional *credit support* where, by virtue of the increase in the *maximum credit limit*, the *Market Participant* no longer complies with its obligations under clause 3.3.5;

- (2) (where clause 3.3.13(a)(1) is not satisfied) pay to *NEMMCO* in cleared funds a security deposit of an amount not less than the *call amount*;
  - (3) lodge a *reallocation request* of an amount which is not less than the *call amount* and which is accepted by *NEMMCO*; or
  - (4) provide to *NEMMCO* any combination of clauses 3.3.13(a)(1), (2) and (3) such that the aggregate of the amount which can be drawn under the additional *credit support* provided and the amount of the security deposit paid and the amount of the *reallocation request* accepted by *NEMMCO* is not less than the *call amount*.
- (b) If *NEMMCO* gives a *call notice* to a *Market Participant* after noon (*Sydney time*), then *NEMMCO* is deemed to have given that *call notice* on the next *business day* for the purposes of this clause.

### **3.3.13A Application of monies in the security deposit fund**

- (a) Subject to clauses 3.3.13A(b) and (e), *NEMMCO* may apply money from the security deposit fund recorded as a credit balance in the name of a *Market Participant* in payment of monies owing by that *Market Participant* to *NEMMCO*:
- (1) in respect of any *final statement* previously given to that *Market Participant* which has not been fully paid by the appointed time on the due date and remains unpaid; or
  - (2) at the time of issuing any *final statement*,
- in which case *NEMMCO* may set off all, or part of, any amount by which a *Market Participant* is in credit in the security deposit fund at that time against any amounts owing to *NEMMCO* under the *final statement*.
- (b) Subject to clause 3.3.13A(c):
- (1) a *Market Participant* may, by giving notice at least one *business day* prior to the due time for the issue of a *final statement*, seek agreement with *NEMMCO* on the arrangements to apply to the application of security deposits paid by that *Market Participant* under clause 3.3.8A against amounts owing to *NEMMCO* under a particular *final statement* or *final statements*; and
  - (2) *NEMMCO* must apply the security deposits in accordance with an agreement reached under clause 3.3.13A(b)(1).

If agreement is not reached between *NEMMCO* and the *Market Participant* under this clause, then *NEMMCO* has a discretion to apply the security deposit funds of that *Market Participant* in payment of moneys that the

---

*Market Participant* owes NEMMCO as set out in clauses 3.3.13A(a)(1) and (2).

- (c) Despite any agreement under clause 3.3.13A(b), if a *default event* occurs in relation to a *Market Participant*, then NEMMCO has a discretion as to which amounts owing to NEMMCO under *final statements* it applies or partially applies security deposits paid by that *Market Participant* under clause 3.3.8A.
- (d) In the case of security deposits paid by a *Market Participant* in the security deposit fund under clause 3.3.13, NEMMCO has a discretion as to which *final statements* it applies or partially applies those monies against.
- (e) However, in exercising its discretion in clauses 3.3.13A(b), (c) or (d), if a *Market Participant* pays NEMMCO a security deposit, then NEMMCO must apply any remaining portion of the security deposit (taking into account deductions for any liabilities or expenses of the security deposit fund) against the longest outstanding amounts owing to NEMMCO under *final statements* issued not later than the *final statement* for the *billing period* in which the security deposit was paid to NEMMCO. If, for any reason, NEMMCO has not fully applied such security deposit within this time, then NEMMCO must apply the remainder to amounts owing to NEMMCO under the next *final statement* or *statements* until it has been fully applied.
- (f) If:
  - (1) a *Market Participant* has a credit balance in the security deposit fund and ceases, or intends to cease, being a *Market Participant*; and
  - (2) that *Market Participant* has paid all money owing to NEMMCO and NEMMCO reasonably considers that the *Market Participant* will not owe any money to NEMMCO in the future arising from that person's activities as a *Market Participant*,

then NEMMCO must return any credit balance for that *Market Participant* in the security deposit fund to that *Market Participant* (subject to deduction for any liabilities and expenses of the security deposit fund).

- (g) If, for any reason, there is a debit balance in the security deposit fund for a *Market Participant*, then the *Market Participant* must pay that amount to NEMMCO. For this purpose, NEMMCO may:
  - (1) include that amount in the next *final statement*; or
  - (2) issue an account to that *Market Participant* for payment of that debit balance and the *Market Participant* must pay that amount within 2 *business days*.

### 3.3.14 Potential value of a transaction

At any time, the *potential value* of a *transaction*, or of any bid or offer by a *Market Participant* to effect a *transaction*, under which the *trading amount* payable to *NEMMCO* is determined by reference to one or more specified *regional reference prices* or *ancillary service prices*, is the dollar amount determined by this procedure:

- (a) the *transaction* is first tested to determine the *trading amount* which would result for the *Market Participant* if the *regional reference price* or *ancillary service price* applicable to the *transaction* was equal to the *scheduled high price*;
- (b) the *transaction* is then tested to determine the *trading amount* which would result for the *Market Participant* if the *regional reference price* or *ancillary service price* applicable to the *transaction* was equal to the *scheduled low price*;
- (c) if the *trading amount* resulting for both tests is a positive amount or zero, then the *potential value* of the *transaction* is zero;
- (d) if the *trading amount* resulting for either test is a negative amount, then the *potential value* of the *transaction* is the absolute value of the negative amount (or, where both tests produce a negative amount, the *potential value* of the *transaction* is the absolute value of the most negative amount).

### 3.3.15 Trading margin

At any time, the *trading margin* for a *Market Participant* is a dollar amount equal to the amount by which its *trading limit* exceeds its current *outstandings* due to *NEMMCO* and if the *outstandings* are equal to or exceed the *trading limit*, the *trading margin* is zero.

### 3.3.16 Limitation on entry of transactions

- (a) A *Market Participant* must not submit any bid or offer to effect any *transaction* with *NEMMCO* where the *potential value* of that *transaction*, plus the *potential value* of all other *uncompleted transactions*, exceeds the *trading margin* for the *Market Participant*.
- (b) A *transaction* is an *uncompleted transaction* if some or all of the *trading intervals* to which that *transaction* relates have not yet occurred.

### 3.3.17 Scheduled prices

- (a) The *scheduled high price* and the *scheduled low price* are amounts determined by *NEMMCO* in its absolute discretion from time to time as a basis upon which to determine the *potential value* of a *transaction* in accordance with clause 3.3.14.

- (b) *NEMMCO* may determine different *scheduled high prices* and *scheduled low prices* for each *region*.
- (c) The *scheduled high price* for *energy* and *market ancillary services* cannot be greater than *VoLL* and the *scheduled low price* for:
  - (i) *energy*, cannot be less than the *market floor price*; and
  - (ii) *market ancillary services*, cannot be less than zero.
- (d) *NEMMCO* must notify all *Market Participants* without delay of any determination of *scheduled high prices* and *scheduled low prices*.
- (e) For *Market Participants* who do not trade in the *spot market*, the *scheduled high price* shall be *VoLL* and the *scheduled low price* shall be zero.

### **3.3.18 Additional credit support**

- (a) Where at any time the aggregate *potential value* of a *Market Participant's uncompleted transactions* exceeds the *trading margin* for the *Market Participant* (including without limitation where this is a result of a redetermination of *scheduled high prices* or *scheduled low prices*) the *Market Participant* must provide to *NEMMCO* additional *credit support* satisfying the criteria in clause 3.3.2 for an amount not less than the amount by which the *trading margin* is exceeded. The *Market Participant* must procure that the additional *credit support* is provided to *NEMMCO* within 24 hours after *NEMMCO* has notified the *Market Participant* that additional *credit support* is required.
- (b) *Credit support* required pursuant to this clause 3.3.18 is in addition to and not inclusive of the *credit support* which a *Market Participant* is required to procure pursuant to other provisions of the *Rules*.

### **3.3.19 Consideration of other Market Participant transactions**

- (a) For the purposes of determining the *prudential requirements* to be satisfied by *Market Participants* in accordance with this rule 3.3, *NEMMCO* must consult with *Market Participants* and any other person *NEMMCO* considers appropriate.
- (b) *NEMMCO* is not required to meet its obligations under clause 3.3.19(a) in any way which increases *NEMMCO's* risks in the collection of moneys owed to it in accordance with any of the provisions of the *Rules*.

## **3.4 Spot Market**

### **3.4.1 Establishment of spot market**

- (a) *NEMMCO* must establish and operate a *spot market* as a mechanism for:

- (1) balancing electricity *supply* and demand;
  - (2) acquiring *market ancillary services*; and
  - (3) setting a *spot price* for electricity at each *regional reference node* and *market connection point* for each *trading interval* and *ancillary service prices* at each *regional reference node* for each *dispatch interval*.
- (b) *NEMMCO* must determine and *publish* in accordance with rule 3.9:
- (1) a *spot price* for energy to apply at each *regional reference node* in each *trading interval*; and
  - (2) *ancillary service prices* to apply at each *regional reference node* for each *dispatch interval*.

### **3.4.2 Trading day and trading interval**

- (a) A *trading interval* is a 30 minute period ending on the hour or on the half hour.
- (b) A *trading interval* is identified by the *time* at which it ends.
- (c) The *trading day* in the *spot market* will be the 24 hour period commencing at 4.00 am Eastern Standard Time.

### **3.4.3 Spot market operations timetable**

- (a) *NEMMCO* must operate the *spot market* according to the *timetable* which must be approved by the *AEMC* and *published* by *NEMMCO* following compliance with the *Rules consultation procedures*.
- (b) If *NEMMCO* wishes to change the *timetable* at any time, it may do so following compliance with the *Rules consultation procedures*.

## **3.5 Regions**

### **3.5.1 [Deleted]**

### **3.5.2 [Deleted]**

### **3.5.3 [Deleted]**

### **3.5.4 [Deleted]**

### **3.5.5 [Deleted]**



### 3.5.6 Abolition of Snowy region

- (a) In this clause 3.5.6:

**current *Regions Publication*** means the document published by *NEMMCO* entitled “List of Regional Boundaries and Marginal Loss Factors for the 2007/08 Financial Year”.

**New South Wales *region*** comprises the *region* as identified in the current *Regions Publication*.

**Snowy *region*** comprises the *region* as identified in the current *Regions Publication*.

**Victoria *region*** comprises the *region* as identified in the current *Regions Publication*.

- (b) Despite any other provision of the *Rules*, at 00:00 hours *EST* on 1 July 2008:

- (1) the Snowy *region* is abolished;
- (2) the *regional reference node* known as the Murray 330kV node is abolished;
- (3) the New South Wales *region* and the Victoria *region* are modified by the allocation of the *loads* and *generators* to each *region* as set out in clause 11.13.8; and
- (4) the location of the *region* boundary between the New South Wales *region* and the Victoria *region* is as set out in clause 11.13.9.

- (c) For the avoidance of doubt:

- (1) the *regional reference node* (known as the Sydney West 330kV node) for the New South Wales *region*; and
- (2) the *regional reference node* (known as the Thomastown 66kV node) for the Victoria *region*,

are not affected by the abolition of the *regional reference node* known as the Murray 330kV node for the Snowy *region*.

## 3.6 Network Losses and Constraints

### 3.6.1 Inter-regional losses

- (a) *Inter-regional losses* are *electrical energy losses* due to a notional transfer of electricity through *regulated interconnectors* from the *regional reference node* in one *region* to the *regional reference node* in an adjacent *region*.

- 
- (b) *Inter-regional loss factors*:
- (1) describe the *marginal electrical energy losses* for electricity transmitted through *regulated interconnectors* from a *regional reference node* in one *region* to the *regional reference node* in an adjacent *region* for a particular time period and a defined range of operating conditions;
  - (2) to apply between each pair of adjacent *regional reference nodes* are to be determined as part of the *central dispatch* process using *inter-regional loss factor* equations derived in accordance with the methodology determined by *NEMMCO* pursuant to clause 3.6.1(c); and
  - (3) are to be used in the *central dispatch* process as a notional adjustment to relate the prices of electricity at *regional reference nodes* in adjacent *regions* so as to reflect the cost of *inter-regional losses*.
- (c) *NEMMCO* must determine, *publish* and maintain, in accordance with the *Rules consultation procedures*, a methodology for the determination of *inter-regional loss factor* equations for a *financial year*, describing *inter-regional loss factors* between each pair of adjacent *regional reference nodes* in terms of significant variables.
- (d) In preparing the methodology for the determination of *inter-regional loss factor* equations referred to in clause 3.6.1(c), *NEMMCO* must implement the following principles:
- (1) *Inter-regional loss factor* equations are to apply for a *financial year*.
  - (2) *Inter-regional loss factor* equations must be suitable for use in *central dispatch*.
  - (3) *Inter-regional loss factors* are determined as part of the *central dispatch* process using *inter-regional loss factor* equations. The *inter-regional loss factors* must:
    - (i) as closely as is reasonably practicable, describe the *marginal electrical energy losses* for electricity transmitted through the relevant *regulated interconnector* between the 2 relevant *regional reference nodes* in adjacent *regions* for each *trading interval* of the *financial year* in respect of which the relevant *inter-regional loss factor* equations apply; and
    - (ii) aim to minimise the impact on the *central dispatch* process of *generation* and *scheduled load* as compared to the *dispatch* of *generation* and *scheduled load* which would result from a fully optimised dispatch process taking into account the effect of losses.

- (4) *Inter-regional loss factor* equations are determined using forecast *load* and *generation* data and, if required, modelled *load* and *generation* data for the *financial year* in which the *inter-regional loss factor* equations are to apply. The forecast *load* and *generation* data and modelled *load* and *generation* data, if any, used must be that *load* and *generation* data prepared by NEMMCO pursuant to clause 3.6.2A.
- (5) *Inter-regional loss factor* equations are determined by applying regression analysis to the *load* and *generation* data referred to in clause 3.6.1(d)(4) to determine:
  - (i) the variables which have a significant effect on the *marginal electrical energy losses* for electricity transmitted through each *regulated interconnector* for both directions of flow on those *regulated interconnectors*; and
  - (ii) the parameters that represent the relationship between each of those variables and the *marginal electrical energy losses*.
- (e) NEMMCO must determine the *inter-regional loss factor* equations used to calculate *inter-regional loss factors* in each *financial year* in accordance with the methodology prepared and *published* by NEMMCO under clause 3.6.1(c).
- (f) NEMMCO must *publish* the *inter-regional loss factor* equations determined under clause 3.6.1(e) by 1 April prior to the *financial year* in which they are to apply.

### 3.6.2 Intra-regional losses

- (a) *Intra-regional losses* are *electrical energy losses* that occur due to the transfer of electricity between a *regional reference node* and *transmission network connection points* in the same *region*.
- (b) *Intra-regional loss factors*:
  - (1) notionally describe the *marginal electrical energy losses* for electricity transmitted between a *regional reference node* and a *transmission network connection point* in the same *region* for a defined time period and associated set of operating conditions;
  - (2) will be a single static *intra-regional loss factor* that applies for a *financial year* derived in accordance with the methodology determined by NEMMCO pursuant to clause 3.6.2(d) for each *transmission network connection point*; and
  - (3) may, with the agreement of the AER, be averaged over an adjacent group of *transmission network connection points* within a single

*region*. If averaging is used, the relevant *transmission network connection points* will be collectively defined as a *virtual transmission node* with a *loss factor* calculated as the volume weighted average of the *transmission loss factors* of the constituent *transmission network connection points*.

- (c) An *intra-regional loss factor* is to be used as a price multiplier that can be applied to the *regional reference price* to determine the *local spot price* at each *transmission network connection point* and *virtual transmission node*.
- (d) NEMMCO must determine, *publish* and maintain, in accordance with *Rules consultation procedures*, a methodology for the determination of *intra-regional loss factors* to apply for a *financial year* for each *transmission network connection point*.
- (e) In preparing the methodology referred to in clause 3.6.2(d), NEMMCO must implement the following principles:
  - (1) *Intra-regional loss factors* are to apply for a *financial year*.
  - (2) An *intra-regional loss factor* must, as closely as is reasonably practicable, describe the average of the *marginal electrical energy losses* for electricity transmitted between a *transmission network connection point* and the *regional reference node* in the same *region* for each *trading interval* of the *financial year* in which the *intra-regional loss factor* applies.
  - (2A) *Intra-regional loss factors* must aim to minimise the impact on the *central dispatch* process of *generation* and *scheduled load* compared to that which would result from a fully optimised dispatch process taking into account the effect of losses.
  - (3) Forecast *load* and *generation* data for the *financial year* for which the *intra-regional loss factor* is to apply must be used. The forecast *load* and *generation* data used must be that *load* and *generation* data prepared by NEMMCO pursuant to clause 3.6.2A.
  - (4) The *load* and *generation* data referred to in clause 3.6.2(e)(3) must be used to determine *marginal loss factors* for each *transmission network connection point* for each *trading interval* in the *financial year* to which the *load* and *generation* data relates.
  - (5) The *intra-regional loss factor* for each *transmission network connection point* is determined using a volume weighted average of the *marginal loss factors* for the *transmission network connection point*.
  - (6) In determining the *intra-regional loss factor* for a *transmission network connection point*, flows in *network elements* that solely or

principally provide *market network services* will be treated as invariant, as the methodology is not seeking to calculate the *marginal losses* within such *network elements*.

- (f) *NEMMCO* must calculate *intra-regional loss factors* for each *transmission network connection point* for each *financial year* in accordance with the methodology prepared and published by *NEMMCO* under clause 3.6.2(d).
- (f1) By 1 April in each year, *NEMMCO* must *publish* the *intra-regional loss factors* revised under clause 3.6.2(f) and to apply for the next *financial year*.
- (g) *NEMMCO* must, in accordance with the *Rules consultation procedures*, determine, *publish* and maintain the methodology which is to apply to the calculation of average *transmission loss factors*, determined in accordance with clause 3.6.2(b)(3), for each *virtual transmission node* proposed by a *Distribution Network Service Provider*.
- (h) As soon as practicable after the *publication* of the methodology referred to in clause 3.6.2(g), and thereafter by 1 April in each year, *NEMMCO* must calculate and *publish* the *transmission loss factors* for each *virtual transmission node*, determined in accordance with clause 3.6.2(b)(3), that are to apply for the next *financial year*.
- (i) Notwithstanding clauses 3.6.2(a) to (f1), *NEMMCO* must:
  - (1) determine an *intra-regional loss factor* in the *financial year* in which the *intra-regional loss factor* is to apply for a *transmission network connection point* which is established in that *financial year* in accordance with the procedure for establishing *connection* set out in rule 5.3, provided that *NEMMCO* did not determine an *intra-regional loss factor* for the *transmission network connection point* pursuant to clause 3.6.2(f1) in the *financial year* preceding that in which the *connection point* is established; or
  - (2) revise an *intra-regional loss factor* in the *financial year* in which the *intra-regional loss factor* is to apply for a *transmission network connection point* which is modified in that *financial year* in accordance with the procedure for modifying *connection* set out in rule 5.3, provided that, in *NEMMCO*'s reasonable opinion, the modification to that *connection point* results in a material change in the capacity of the *connection point*.
- (j) *NEMMCO* must, where required to determine the *intra-regional loss factor* for an established or modified *transmission network connection point* under clause 3.6.2(i), do so as far as practicable in accordance with the methodology *published* by *NEMMCO* pursuant to clause 3.6.2(d).

- (k) For the purposes of clause 3.6.2(j), the forecast *load* and *generation* data used to calculate the *intra-regional loss factor* for the *transmission network connection point* must be determined using the forecast *load* and *generation* data determined by NEMMCO under clause 3.6.2A for other *transmission network connection points* in the same *region* for that *financial year* adjusted to take into account the effect of the established or modified *connection point*. Notwithstanding this clause 3.6.2(k), *Registered Participants* must comply with their obligations with respect to the provision of information to NEMMCO, for the purpose of determining new or revised *intra-regional loss factors* for *connection points* that are established or modified during the *financial year* in which the *intra-regional loss factors* are to apply, specified by the methodology developed and *published* by NEMMCO under clause 3.6.2A.
- (l) In the case of a *connection point* that is established in the *financial year* in which the *intra-regional loss factor* is to apply:
- (1) the *intra-regional loss factor* determined by NEMMCO in accordance with clause 3.6.2(i) will apply from the time the *intra-regional loss factor* is determined and *published* by NEMMCO; and
  - (2) NEMMCO must use reasonable endeavours to determine and *publish* the *intra-regional loss factor* at least 45 *business days* prior to the commencement of operation of the established *connection point*, where the relevant *Registered Participants* comply with any applicable requirements and deadlines for the provision of information to NEMMCO specified by the methodology *published* by NEMMCO under clause 3.6.2A.
- (m) In the case of a *connection point* that is modified in the *financial year* in which the *intra-regional loss factor* is to apply:
- (1) the *intra-regional loss factor* determined by NEMMCO in accordance with clause 3.6.2(i) will apply from the date when the modification to the *connection point* takes effect; and
  - (2) NEMMCO must use reasonable endeavours to *publish* the *intra-regional loss factor* at least 45 *business days* prior to the date when the modification to the *connection point* takes effect, where the relevant *Registered Participants* comply with any applicable requirements and deadlines for the provision of information to NEMMCO specified by the methodology *published* by NEMMCO under clause 3.6.2A.
- (n) For the avoidance of doubt, where NEMMCO determines an *intra-regional loss factor* for a *transmission network connection point* under clause 3.6.2(i), which is to apply in the *financial year* in which the *transmission network connection point* is established or modified, the *intra-regional loss factors* for all other *transmission network connection points* for that

*financial year*, determined in accordance with clauses 3.6.2(a) to (g), must remain unchanged.

### **3.6.2A Load and generation data used to determine inter-regional loss factor equations and intra-regional loss factors**

- (a) *NEMMCO* must prepare *load* and *generation* data for each *financial year* to be used in both the determination of *inter-regional loss factor* equations under clause 3.6.1 and *intra-regional loss factors* under clause 3.6.2 in accordance with the methodology determined, *published* and maintained by *NEMMCO* for this purpose, under clause 3.6.2A(b).
- (b) *NEMMCO* must determine, *publish* and maintain, in accordance with the *Rules consultation procedures*, a methodology for:
  - (1) forecasting the *load* and *generation* data to be used in both the determination of *inter-regional loss factor* equations and *intra-regional loss factors*, including new or revised *intra-regional loss factors* for *connection points* that are established or modified, respectively, during the *financial year* in which the *intra-regional loss factors* are to apply;
  - (2) modelling additional *load* and *generation* data, where required, to be used in determining *inter-regional loss factor* equations; and
  - (3) the collection of relevant data from *Registered Participants*, including without limitation deadlines for the provision of that data by *Registered Participants*.
- (c) The methodology developed and *published* by *NEMMCO* under clause 3.6.2A(b) must specify information reasonably required by *NEMMCO* to fulfil its obligations under clause 3.6.2A, including without limitation historic *load* and *generation* data, forecast *energy* and *maximum demand* data for a *connection point* and forecast data for any new *loads*. In particular, the methodology must specify information to be provided by *Registered Participants* that is in addition to the information provided by those *Registered Participants* under other provisions of the *Rules*.
- (d) In preparing the methodology for forecasting and modelling *load* and *generation* data under clause 3.6.2A(b), *NEMMCO* must implement the following principles:
  - (1) The forecast *load* and *generation* data must be representative of expected *load* and *generation* in the *financial year* in which the *inter-regional loss factor* equations or *intra-regional loss factors* are to apply having regard to:

- (i) actual *load* and *generation* data available for a 12 month period defined by the methodology with the objective to use the most recent *load* and *generation* data practicable;
  - (ii) projected *load* growth between each calendar month to which the actual *load* and *generation* data referred to in clause 3.6.2A(d)(1)(i) relates and the same calendar month in the *financial year* for which the forecast *load* and *generation* data is determined; and
  - (iii) the projected *network* configuration and projected *network* performance for the *financial year* in which the *inter-regional loss factor* equation or *intra-regional loss factor*, as the case may be, is to apply.
- (2) Additional modelled *load* and *generation* data sets must only be used:
- (i) in the determination of *inter-regional loss factor* equations under clause 3.6.1; and
  - (ii) where the range of forecast *load* and *generation* data is not sufficient to derive *inter-regional loss factor* equations to apply over the full range of transfer capability of the *regulated interconnector*.
- (e) *Registered Participants* must comply with the obligations to provide information set out in the methodology developed and *published* by *NEMMCO* under this clause 3.6.2A, including the deadlines for the provision of that information and any other obligations with respect to the provision of that information set out in the methodology.

### 3.6.3 Distribution losses

- (a) *Distribution losses* are *electrical energy losses* incurred in the conveyance of electricity over a *distribution network*.
- (b) *Distribution loss factors*:
  - (1) notionally describe the *average electrical energy losses* for electricity transmitted on a *distribution network* between a *distribution network connection point* and a *transmission network connection point* or *virtual transmission node* for the financial year in which they apply;
  - (2) will be either:
    - (i) a site specific *distribution loss factor* derived in accordance with the methodology determined by the *AER* or the *Distribution Network Service Provider* pursuant to clause



3.6.3(h), for each *distribution network connection point* of the following types:

- (A) a *connection point* for an *embedded generating unit* with actual *generation* of more than 10MW, based on the most recent data available for a consecutive 12 month period at the time of determining the *distribution loss factor*. Where relevant data is not available for a consecutive 12 month period as a *distribution network connection point* is newly established or has been modified, a *Network Service Provider* may determine whether an *embedded generating unit* has *generation* of more than 10MW, based on its best projection of *generation* in the *financial year* in which the *distribution loss factor* is to apply, taking into account the terms of the relevant *connection agreement*;
  - (B) a *connection point* for an end-user with actual or forecast *load* of more than 40GWh or an electrical demand of more than 10MW, based on the most recent data available for a consecutive 12 month period at the time of determining the *distribution loss factor*. Where relevant data is not available for a consecutive 12 month period as a *distribution network connection point* is newly established or has been modified, a *Network Service Provider* may determine whether an end-user has *load* of more than 40GWh or forecast *peak load* of more than 10MW, based on its best projection of *load* in the *financial year* in which the *distribution loss factor* is to apply, taking into account the terms of the relevant *connection agreement*;
  - (C) a *connection point* for a *market network service provider*;  
and
  - (D) a *connection point* between two or more *distribution networks*; or
- (ii) derived, in accordance with the methodology determined by the *AER* or the *Distribution Network Service Provider* pursuant to clause 3.6.3(h), using the volume weighted average of the *average electrical energy loss* between the *transmission network connection point* or *virtual transmission node* to which it is assigned and each *distribution network connection point* in the relevant *voltage* class (determined in accordance with clause 3.6.3(d)(2)) assigned to that *transmission network connection point* or *virtual transmission node*, for all *connection points* on a *distribution network* not of a type described in clause 3.6.3(b)(2)(i);

- 
- (3) are to be used in the settlement process as a notional adjustment to the electrical *energy*, expressed in MWh, flowing at a *distribution network connection point* in a *trading interval* to determine the *adjusted gross energy* amount for that *connection point* in that *trading interval*, in accordance with clause 3.15.4.
- (b1) Where a *Generator* meets the reasonable cost of the *Distribution Network Service Provider* in performing the necessary calculation in respect of a *generating unit* of up to 10MW or 40GWh per annum capacity, the *Distribution Network Service Provider* must calculate a site specific *distribution loss factor* that, notwithstanding any other provision of the *Rules* to the contrary, for the purposes of the *Rules* is to apply in respect of that *generating unit* on the same basis as applies for a *generating unit* of more than 10MW or 40GWh per annum capacity as though the *generating unit* were a unit of more than 10MW or 40GWh per annum capacity.
- (c) Each *Distribution Network Service Provider* must assign each *connection point* on its *distribution network*, of a type described in clause 3.6.3(b)(2)(i), to a single *transmission network connection point* taking into account normal *network* configurations and predominant *load* flows.
- (d) Each *Distribution Network Service Provider* must assign each *connection point* on its *distribution network*, not of a type described in clause 3.6.3(b)(2)(i):
- (1) where practicable, to a single *transmission network connection point* or otherwise, to a *virtual transmission node*, taking into account normal *network* configurations and predominant *load* flows; and
  - (2) to a class of *distribution network connection points* based on the location of, *voltage* of and pattern of electrical *energy* flows at the *distribution network connection point*.
- (e) So far as practicable, the assignment of *connection points* on the *distribution network* to:
- (1) *transmission network connection points* under clause 3.6.3(c); or
  - (2) *transmission network connection points* or *virtual transmission nodes* and a class of *distribution network connection points* under clause 3.6.3(d),
- must be consistent with the geographic boundaries of the *pricing zones* for use in *distribution service* pricing, and the *voltage* levels incorporated within those *pricing zones*.
- (f) The assignment of *connection points* on a *distribution network*:
- (1) to a single *transmission network connection point* under clause 3.6.3(c); or

- (2) to a *transmission network connection point* or *virtual transmission node* and a class of *distribution network connection points* under clause 3.6.3(d),

is subject to the approval of the *AER* and the *Distribution Network Service Provider* must inform *NEMMCO* of such approved assignments.

- (g) *Distribution loss factors* must be determined by a *Distribution Network Service Provider* for all *connection points* on its *distribution network* either individually, for all *connection points* assigned to a single *transmission network connection point* under clause 3.6.3(c), or collectively, for all *connection points* assigned to a *transmission network connection point* or a *virtual transmission node* and a particular *distribution network connection point* class under clause 3.6.3(d), in accordance with:
  - (1) the methodology developed, *published* and maintained by the *AER* for the determination of *distribution loss factors*; or
  - (2) where the *AER* has not *published* a methodology under clause 3.6.3(g)(1), the methodology developed, *published* and maintained by the *Distribution Network Service Provider* for the determination of *distribution loss factors*.
- (h) The methodology for the determination of *distribution loss factors* referred to in clause 3.6.3(g) must be developed having regard to the following principles:
  - (1) The aggregate of the *adjusted gross energy* amounts for a *distribution network*, determined in accordance with clause 3.15.4 using the *distribution loss factors* for the *financial year* in which the *distribution loss factors* are to apply should equal, as closely as is reasonably practicable, the sum of:
    - A. the amount of electrical *energy*, expressed in MWh, flowing at all *connection points* in the *distribution network* in the *financial year* in which the *distribution loss factors* are to apply; and
    - B. the total *electrical energy losses* incurred on the *distribution network* in the *financial year* in which the *distribution loss factors* are to apply.
  - (2) The methodology used to determine *distribution loss factors* for a *financial year* should incorporate provisions requiring a *Distribution Network Service Provider* to undertake a reconciliation between the aggregate of the *adjusted gross energy* amounts for its *distribution network* for the previous *financial year* determined in accordance with clause 3.15.4 using the *distribution loss factors* that applied for

- 
- connection points* in that *distribution network* in the previous *financial year* and the sum of:
- (i) the amount of electrical *energy*, expressed in MWh flowing, at all *connection points* in its *distribution network* in the previous *financial year*; and
  - (ii) the total *electrical energy losses* incurred on its *distribution network* in the previous *financial year*.
- (3) The *distribution loss factor* for a *distribution network connection point*, other than those described in clause 3.6.3(b)(2)(i), is determined using a volume weighted average of the *average electrical energy loss* between the *transmission network connection point* or *virtual transmission node* to which it is assigned and each *distribution network connection point* in the relevant class of *distribution network connection points* assigned to that *transmission network connection point* or *virtual transmission node* for the *financial year* in which the *distribution loss factor* is to apply.
- (4) The *distribution loss factor* for a *distribution network connection point* described in clause 3.6.3(b)(2)(i) is determined using the *average electrical energy loss* between the *distribution network connection point* and the *transmission network connection point* to which it is assigned in the *financial year* in which the *distribution loss factor* is to apply.
- (5) In determining the *average electrical energy losses* referred to in clauses 3.6.3(h)(3) and (4), the *Distribution Network Service Provider* must use the most recent actual *load* and *generation* data available for a consecutive 12 month period but may adjust this *load* and *generation* data to take into account projected *load* and / or *generation* growth in the *financial year* in which the *distribution loss factors* are to apply.
- (6) In determining *distribution loss factors*, flows in *network elements* that solely or principally provide *market network services* will be treated as invariant, as the methodology is not seeking to calculate the *marginal losses* within such *network elements*.
- (i) Each year the *Distribution Network Service Provider* must determine the *distribution loss factors* to apply in the next *financial year* in accordance with clause 3.6.3(g) and provide these to NEMMCO for *publication* by 1 April. Before providing the *distribution loss factors* to NEMMCO for *publication*, the *Distribution Network Service Provider* must obtain the approval of the AER for the *distribution loss factors* it has determined for the next *financial year*.

### 3.6.4 Network constraints

- (a) Conveyance of electricity between *regions* through a *regulated interconnector* is *constrained* when for operational reasons it is not acceptable for the *regulated interconnector* to transfer the level of electricity between *regions* that would be transferred if the limitation was removed and the condition impacts on the *dispatch* of other *regulated interconnectors, generation, scheduled network services* or *loads*.
- (a1) Conveyance of electricity between *regions* by means of a *scheduled network service* is *constrained* when the *dispatch* of the relevant *scheduled network service* is limited by the notified available capacity or *ramp rate* and the limitation impacts on the *dispatch* of *generation, regulated interconnectors, other scheduled network services* or *loads*.
- (b) Conveyance of electricity within a *region* is *constrained* when for operational reasons it is not acceptable for a *network* to transfer the level of electricity between different parts of the *region* that would be transferred if the limitation was removed and the condition impacts on the *dispatch* of *generation, scheduled network services* or *loads*.
- (c) For every *trading interval* NEMMCO must record any *constraints* including a description and the duration of the *constraint*.
- (d) Any *constraints* which occur within a *region* or between *regions* must be taken into account in the *dispatch* process under clause 3.8.10.

### 3.6.5 Settlements residue due to network losses and constraints

- (a) *Settlements residue* will be allocated, and distributed or recovered by NEMMCO in accordance with the following principles:
  - (1) full effect is to be given to the *jurisdictional derogations* contained in Chapter 9 relating to *settlements residue*;
  - (2) the portion of the *settlements residue* attributable to *regulated interconnectors* (as adjusted to take into account the effect of any applicable *jurisdictional derogations* referred to in clause 3.6.5(a)(1)) will be distributed or recovered in accordance with rule 3.18;
  - (3) the remaining *settlements residue*, including the portion of *settlements residue* due to *intra-regional loss factors*, will be distributed to or recovered from the appropriate *Transmission Network Service Providers* (which will not include *Market Network Service Providers*);
  - (4) subject to clause 3.6.5(c), if the *settlements residue* arising in respect of a *trading interval*, after taking into account any adjustment in accordance with clauses 5.7.7(aa)(3) or (ab), is a negative amount, then the amount may be recovered:

- (i) to the extent to which the *settlements residue* would have been distributed in accordance with clause 3.6.5(a)(2), from *eligible persons* participating in the *auctions* conducted under rule 3.18 either from positive *settlements residue* amounts arising in the same *billing period* or otherwise as part of future *auction expense fees*; and
  - (ii) from the *Network Service Provider* to which the *settlements residue* would have been distributed had it been a positive amount; and
- (4A) subject to clause 3.6.5(c), if the *settlements residue* arising in respect of a *trading interval*, after taking into account any adjustment in accordance with clause 5.7.7(aa)(3) or (ab), is a negative amount, then:
- (i) the whole or any part of the amount may be recovered from positive *settlements residue* amounts arising in the *billing period* in which the negative *settlements residue* arose; and
  - (ii) if the whole or a part of the amount is not recoverable under clause 3.6.5(a)(4A)(i), the unrecovered amount may be recovered from the proceeds of the first *auction* after that *billing period*; and
  - (iii) if the whole or a part of the amount is recoverable under neither clause 3.6.5(a)(4A)(i) nor clause 3.6.5(a)(4A)(ii), the unrecovered amount may be recovered from the proceeds of successive *auctions* until the negative amount is recovered.
- (4B) subject to clause 3.6.5(a)(4A), interest costs incurred by *NEMMCO* in relation to any unrecovered negative *settlements residue* amounts referred to in clause 3.6.5(a)(4A) may be recovered:
- (i) from proceeds of the first *auction* after the *billing period* in which the interest costs arose; and
  - (ii) if the whole or a part of the interest costs are not recoverable under clause 3.6.5(a)(4B)(i), unrecovered interest costs may be recovered from the proceeds of successive *auctions* until all the interest costs are recovered.
- (5) for the purposes of the distribution or recovery of *settlements residue* that is attributable to *regulated interconnectors*:
- (i) all of the *settlements residue* relating to electricity that is transferred from one *region* (the “exporting region”) to another *region* (the “importing region”) must be allocated to *Network Service Providers* in respect of a *network* located in the

- importing region (or part of a *network* located in the importing region);
- (ii) the importing region must, in respect of the period from *market commencement* until the expiry date referred to in subparagraph (iv), pay a charge to the exporting region reflecting the extent of the use of a *network* located in the exporting region (or part of a *network* located in the exporting region) to transfer the electricity from the exporting region to the importing region;
  - (iii) the amount of the charge described in subparagraph (ii) must not exceed the amount of the *settlements residue* referred to in subparagraph (i), and must be agreed between the *participating jurisdictions* in which the importing region and the exporting region are located; and
  - (iv) the expiry date referred to in subparagraph (ii), means 1 July 2009 or the date of commencement of rules which make alternative provision in the *Rules* for inter-regional *settlements*, whichever is the earlier date; and
- (6) any portion of *settlements residue* distributed to a *Network Service Provider* or amount paid on that portion under clause 3.15.10A (if any), or rule 3.18 to a *Network Service Provider*, including any such payments as adjusted by a *routine revised statement* or *special revised statement* issued under rule 3.15, net of any portion of *settlements residue* recovered from the *Network Service Provider* in accordance with clause 3.6.5(a)(4), will be used to offset *network service* charges.
- (b) A *Transmission Network Service Provider* or its jurisdictional delegate is a *Market Participant* for the purposes of clause 3.3.1 and rule 3.15 (excluding clause 3.15.1(b)) but not otherwise.
  - (c) Subject to clauses 11.1.1 and 11.1.2:
    - (i) clause 3.6.5(a)(4) does not have effect during the period commencing on 1 July 2006 and ending at the last moment of 30 June 2009 but comes into effect again at the end of that period; and
    - (ii) clauses 3.6.5(a)(4A) and (4B) expire at the end of that period.

## **3.7 Projected Assessment of System Adequacy**

### **3.7.1 Administration of PASA**

- (a) *NEMMCO* must administer medium term and short term *projected assessment of system adequacy processes* to be known as *PASA*.

- (b) The *PASA* is a comprehensive program of information collection, analysis, and disclosure of medium term and short term *power system security* prospects so that *Scheduled Generators* and *Market Participants* are properly informed to enable them to make decisions about *supply*, demand and *outages of transmission networks* in respect of periods up to 2 years in advance.
- (c) On a weekly basis *NEMMCO* must:
  - (1) collect and analyse information from all *Scheduled Generators*, *Market Customers*, *Transmission Network Service Providers* and *Market Network Service Providers* about their intentions for:
    - (i) *generation, transmission* and *Market Network Service maintenance scheduling*;
    - (ii) *intended plant availabilities*;
    - (iii) *energy constraints*;
    - (iv) other *plant* conditions which could materially impact upon *power system security*; and
    - (v) significant changes to *load* forecasts previously notified to *NEMMCO*,  
for the following 24 months; and
  - (2) following analysis and assessment, *publish* information that will:
    - (i) assist *Scheduled Generators* and *Market Participants* to plan any scheduled work on *plant*; and
    - (ii) inform the *market* of possible *power system security* problems.
- (d) *NEMMCO* must use its reasonable endeavours to ensure that it provides to *Scheduled Generators* and *Market Participants* sufficient information to allow *Scheduled Generators* and *Market Participants* to undertake maintenance and *outage* planning without violating *power system security* and to allow the *market* to operate effectively with a minimal amount of intervention by *NEMMCO*.

### 3.7.2 Medium term PASA

- (a) The *medium term PASA* covers the 24 month period commencing from the *day 8 days* after the *day* of publication with a daily resolution, and must be reviewed and issued every week by *NEMMCO* in accordance with the *timetable*.



- 
- (b) *NEMMCO* may publish additional updated versions of the *medium term PASA* in the event of *changes* which, in the judgment of *NEMMCO*, are materially significant and should be communicated to *Scheduled Generators* and *Market Participants*.
- (c) The following *PASA* inputs are to be prepared by *NEMMCO*:
- (1) forecast *load* which is:
    - (i) to indicate for each *region* the most probable *peak load*, time of the peak, and daily *energy* on the basis of past trends, day type and special events including all anticipated *scheduled load* and other *load* except pumped storage *loads*;
    - (ii) subsequently to be adjusted by an amount anticipated in the forecast as *scheduled load* by *load* bidders;
    - (iii) an indicative half hourly *load* profile for each day type for each *region* for each month of the year;
  - (2) reserve requirements of each *region* determined in accordance with the *medium term capacity reserve standards* set out in the *power system security and reliability standards*; and
  - (3) forecast *inter-regional network constraints* and *intra-regional network constraints* known to *NEMMCO* at the time.
- (d) The following *medium term PASA* inputs must be submitted by each relevant *Scheduled Generator* or *Market Participant* in accordance with the *timetable*:
- (1) *PASA availability* of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *day*; and
  - (2) weekly *energy constraints* applying to each *generating unit* or *scheduled load*.
- (e) *Network Service Providers* must provide to *NEMMCO* an outline of planned *network outages* in accordance with the *timetable* and provide to *NEMMCO* any other information on planned *network outages* that is reasonably requested by *NEMMCO* to assist *NEMMCO* to meet its obligations under clause 3.7.2(f)(4).
- (f) *NEMMCO* must prepare and *publish* the following information in respect of each day covered by the *medium term PASA* in accordance with clause 3.13.4:
- (1) forecasts of the most probable peak *power system load* plus required *scheduled reserve*, adjusted to make allowance for *scheduled load*, for each *region* and for the total *power system*;

- (1A) the aggregated MW allowance (if any) made by *NEMMCO* for *generation from non-scheduled generating systems* in each forecast of the most probable peak *power system load* referred to in clause 3.7.2(f)(1);
- (1B) in respect of each forecast of the most probable peak *power system load* referred to in clause 3.7.2(f)(1), a value that is the sum of that forecast and the relevant aggregated MW allowance referred to in clause 3.7.2(f)(1A);
- (2) forecasts of the most probable *energy* consumption for each *region* and for the total *power system*;
- (3) aggregate *generating unit PASA availability* for each *region*, calculated by adding the following two categories:
  - (i) the capacity of *generating units* which are able to operate at full capacity on a continuous basis to meet forecast *load*; and
  - (ii) an allocation of *generation* which cannot be *generated* continuously at the nominated capacity of the *generating unit* for the period covered due to specified *energy constraints*;
- (4) identification and quantification of:
  - (i) any projected *violations* of *power system security*;
  - (ii) any *days* on which *low reserve* or *lack of reserve* conditions are forecast to apply;
  - (iii) where a projected *supply* deficit in one *region* can be supplemented by a surplus in another *region* (dependent on forecast *interconnector* transfer capabilities);
  - (iv) forecast *interconnector* transfer capabilities and the discrepancy between forecast *interconnector* transfer capabilities and the forecast capacity of the relevant *interconnector* in the absence of *outages* on the relevant *interconnector* only; and
  - (v) when and where *network constraints* may become binding on the *dispatch* of *generation* or *load*.
- (g) *NEMMCO* must document the procedure it uses for preparation of the *medium term PASA* and make it available to all *Scheduled Generators* and *Market Participants* on a cost recovery basis.

### 3.7.3 Short term PASA

- (a) The *short term PASA* must be issued at least daily by *NEMMCO* in accordance with the *timetable*.

- 
- (b) The *short term PASA* covers the period of six *trading days* starting from the end of the *trading day* covered by the most recently *published pre-dispatch schedule* with a half hourly resolution.
- (c) *NEMMCO* may *publish* additional updated versions of the *short term PASA* in the event of *changes* which, in the judgement of *NEMMCO*, are materially significant and should be communicated to *Scheduled Generators* and *Market Participants*.
- (d) The following *short term PASA inputs* are to be prepared by *NEMMCO*:
- (1) forecast *load* which is to include:
    - (i) the most probable half hourly *profile* on the basis of past trends, day type, and special events; and
    - (ii) all *scheduled load* and other *load* except for pumped storage loads,  
  
which must subsequently be adjusted in accordance with *dispatch offers* for *scheduled load*;
  - (2) *scheduled reserve* requirements for each *region* determined in accordance with the *short term capacity reserve standards*; and
  - (3) anticipated *inter-regional network constraints* and *intra-regional network constraints* known to *NEMMCO* at the time.
- (e) The following *short term PASA inputs* must be submitted by each relevant *Scheduled Generator* and *Market Participant* in accordance with the *timetable* and must represent the *Scheduled Generator's* or *Market Participant's* current intentions and best estimates:
- (1) availability of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *trading interval* under expected market conditions;
  - (1A) *PASA availability* of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *trading interval*;
  - (2) *generating unit synchronisation/de-synchronisation* times for *slow start generating units*;
  - (3) projected daily *energy* availability for *energy constrained scheduled generating units* and *loads*; and
  - (4) anticipated *self-dispatch level* for each *scheduled generating unit* or *scheduled load* for each *trading interval*.

- (f) If *NEMMCO* considers it reasonably necessary for adequate *power system* operation and the maintenance of *power system security*, *Registered Participants* who may otherwise be exempted from providing inputs for the *PASA* process must do so to the extent specified by *NEMMCO*.
- (g) *Network Service Providers* must provide to *NEMMCO* an outline of planned *network outages* in accordance with the *timetable* and provide to *NEMMCO* any other information on planned *network outages* that is reasonably requested by *NEMMCO* to assist *NEMMCO* to meet its obligations under clause 3.7.3(h)(5).
- (h) *NEMMCO* must prepare and *publish* the following information as *short term PASA* outputs for each *trading interval* in the period covered in accordance with clause 3.13.4(c):
  - (1) forecasts of the most probable *power system load* plus required *scheduled reserve* adjusted to make allowance for *scheduled load*, for each *region* and for the total *power system*;
  - (2) forecasts of *power system load* for each *region* with 10% and 90% probability of exceedence;
  - (3) forecasts of the most probable *energy* consumption for each *region* and for the total *power system*;
  - (4) aggregate *generating unit* availability for each *region* calculated by adding the following two categories:
    - (i) the capacity of *generating units* which are able to operate at full capacity on a continuous basis to meet forecast *power system load*; and
    - (ii) an allocation of *generation* which cannot be *generated* continuously at the offered capacity of the *generating unit* for the period covered due to specified *energy constraints*;
  - (4A) aggregate *generating unit PASA availability* for each region;
  - (4B) the aggregated MW allowance (if any) made by *NEMMCO* for generation from *non-scheduled generating systems* in each forecast:
    - (i) of the most probable peak *power system load* referred to in clause 3.7.3(h)(1); and
    - (ii) referred to in clauses 3.7.3(h)(2), (3), (4) and (4A);
  - (4C) in respect of each forecast:
    - (i) of the most probable peak *power system load* referred to in clause 3.7.3(h)(1);

- (ii) referred to in clauses 3.7.3(h)(2), (3), (4) and (4A),  
a value that is the sum of that forecast and the relevant aggregated MW allowance (if any) referred to in clause 3.7.3(4B); and
- (5) identification and quantification of:
  - (i) any projected *violations of power system security*;
  - (ii) any *trading intervals* for which *low reserve* or *lack of reserve* conditions are forecast to apply;
  - (iii) where a projected *supply* deficit in one *region* can be supplemented by a surplus in another *region* (dependent on forecast *interconnector* transfer capabilities);
  - (iv) forecast *interconnector* transfer capabilities and the discrepancy between forecast *interconnector* transfer capabilities and the forecast capacity of the relevant *interconnector* in the absence of outages on the relevant *interconnector* only; and
  - (v) when and where *network constraints* may become binding on the *dispatch* of *generation* or *load*.
- (i) In the event that in performing the *short-term PASA NEMMCO* identifies any projected *low reserve* or *lack of reserve* conditions in respect of a *participating jurisdiction*, then *NEMMCO* must use its reasonable endeavours to advise the *Jurisdictional Co-ordinator* for that *participating jurisdiction* of any potential requirements during such conditions to shed *sensitive loads*.
- (j) *NEMMCO* must document the procedure it uses for preparation of the *short term PASA* and make it available to all *Scheduled Generators* and *Market Participants* on a cost recovery basis.

### 3.7A Market Information on planned network outages

- (a) The objective of this rule 3.7A is to provide *Market Participants* with the information on planned *network outages* required so that *Market Participants* are properly informed to enable them to make projections of *market* outcomes, including projections of *settlement residue auction* outcomes, and decisions with respect to *hedge contracts* and other financial risk management tools. Information on planned *network outages* made available to *Market Participants* by *NEMMCO* and *Transmission Network Service Providers* under this rule 3.7A, however, represents a *Transmission Network Service Provider's* current intentions and best estimates regarding planned *network outages* at the time the information is made available. Further, a *Transmission Network Service Provider* may not be bound to comply with an advised *outage* program. A planned *outage* program may

be subject to change due to unforeseen circumstances outside the control of the *Transmission Network Service Provider*. Accordingly, information on planned *network outages* may be subject to change.

- (b) In addition to the obligations imposed on *Transmission Network Service Providers* and *NEMMCO* by rule 3.7 to provide information on planned *network outages* for the purpose of *PASA*, *Transmission Network Service Providers* must provide to *NEMMCO* and *publish*, and *NEMMCO* must determine and *publish*, the information required under this rule 3.7A with respect to planned *network outages*.
- (c) Each month, in accordance with the *timetable* for the provision of information to *medium term PASA*, each *Transmission Network Service Provider* must provide to *NEMMCO* and *publish*:
  - (1) details of the forecast timing and the factors affecting the timing of planned *network outages* and the likelihood that the planned timing will vary;
  - (2) details of the reason for the planned *network outage*, including the nature and extent of works required, if any; and
  - (3) any other information with respect to planned *network outages* that is reasonably requested by *NEMMCO* with a view to achieving the objective set out in rule 3.7A(a),

for those *network outages* planned for the following thirteen months that, in the reasonable opinion of the *Transmission Network Service Provider*, will have or are likely to have a material effect on transfer capabilities.

- (d) Each month, in accordance with the *timetable* for the provision of information to *medium term PASA*, *NEMMCO* must determine and *publish*:
  - (1) an assessment of the projected impact on *intra-regional power transfer capabilities*, the accuracy of which must be appropriate to meet the objective in rule 3.7A(a) in a cost effective manner;
  - (2) an assessment of the projected impact on *inter-regional power transfer capabilities*, the accuracy of which must be appropriate to meet the objective in rule 3.7A(a) in a cost effective manner; and
  - (3) any other information with respect to planned *network outages* that, in *NEMMCO's* opinion, would assist in achieving the objective set out in rule 3.7A(a),

for those planned *network outages* in respect of which a *Transmission Network Service Provider* has provided information to *NEMMCO* under rule 3.7A(c).

### 3.7C Energy Adequacy Assessment Projection

#### Purpose of EAAP

- (a) The purpose of the *energy adequacy assessment projection* (or *EAAP*) is to make available to *Market Participants* and other interested persons an analysis that quantifies the impact of *energy constraints* on *energy availability* over a 24 month period under a range of scenarios.

#### EAAP principles

- (b) The *EAAP* must:
- (1) cover a 24 month period, commencing on the day the *EAAP* is *published* under this rule 3.7C;
  - (2) be *published* every three months;
  - (3) provide a probabilistic assessment of projected *energy availability* for each *region*;
  - (4) provide projected *unserved energy* levels for each *region* with a monthly resolution;
  - (5) provide aggregated information on the adequacy of *energy availability* for each scenario that *NEMMCO* defines for the purposes of the *EAAP*, based on information received from *Registered Participants* and on anticipated *power system constraints*;
  - (6) take into account:
    - (A) where relevant, the information and *medium term PASA* inputs referred to in clauses 3.7.1 and 3.7.2;
    - (B) where relevant, the matters *NEMMCO* considers in, and for the purposes of, clause 5.6.5(c) in carrying out the *ANTS review*;
    - (C) *Generator Energy Limitation Frameworks* provided in accordance with paragraph (g), including *GELFs* that apply to more than one *scheduled generating unit* under clause 3.7C(k)(6) where those *GELFs* adequately represent the relevant *generating units*; and
    - (D) *GELF parameters* for each *GELF* which are provided in accordance with the *EAAP guidelines* and are updated in accordance with the *timetable*.
- (c) *NEMMCO* must comply with the *EAAP principles* in preparing the *EAAP*.

#### Administration of EAAP

- (d) *NEMMCO* must *publish* the *EAAP* every three months in accordance with the *timetable* and the first *EAAP* must be published by 31 March 2010.
- (e) For the purposes of preparing the *EAAP*, a *Scheduled Generator* must provide *NEMMCO* with the following information in accordance with the *timetable*:
  - (1) updated *GELF parameters* for each *GELF* provided by it in accordance with paragraph (g); and
  - (2) other information that supplements the data provided under subparagraph (1) that is reasonably required by *NEMMCO* to study the scenarios defined in the *EAAP guidelines*.
- (f) In considering whether information referred to in subparagraph (e)(2) is reasonably required, *NEMMCO* must have regard to the likely costs that may be incurred by the *Scheduled Generator* in preparing and providing that information compared to the likely benefits from the use of that information for the purposes of the *EAAP*.

#### **Generator Energy Limitation Framework**

- (g) A *Scheduled Generator* must prepare and submit to *NEMMCO*, in accordance with the *EAAP guidelines* and for the purposes of the *EAAP*, a description of the *energy constraints* that affect the ability of each of its *scheduled generating units* to generate electricity ('*GELF*' or '*Generator Energy Limitation Framework*'). The *GELF* 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 defined in the *EAAP guidelines*, and those parameters must be updated every three months in accordance with the *timetable*.
- (i) Where a *Scheduled Generator* has submitted a *GELF* under paragraph (g) and there has been a material *change* to any of its *scheduled generating units* which has an impact on the *energy constraints* associated with that *GELF*, the *Scheduled Generator* must revise and re-submit the *GELF* in accordance with that paragraph.
- (j) 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**

- (k) *NEMMCO* must develop and *publish* guidelines (the '*EAAP guidelines*') that:



- 
- (1) define scenarios that *NEMMCO* must study in preparing the *EAAP*;
  - (2) define modelling assumptions for the *EAAP*;
  - (3) define the components of a *GELF* that a *Scheduled Generator* must include in a *GELF* submitted under paragraph (g);
  - (4) provide detail on the forms of the *GELF* sufficient for a *Scheduled Generator* to meet the requirements of paragraph (g);
  - (5) define 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, but are not limited to, parameters in relation to:
    - (i) hydro storage including pump storage;
    - (ii) thermal generation fuel;
    - (iii) cooling water availability; and
    - (iv) gas supply limitations;
  - (6) define circumstances where a *GELF* submitted under paragraph (g) can apply to a collection of *scheduled generating units* that face common *energy constraints* due to their geographic location, access to fuel source or another similar reason;
  - (7) define the form of information to be submitted by each *Scheduled Generator* in accordance with paragraph (e); and
  - (8) define arrangements for managing the confidentiality of information submitted to *NEMMCO* under this rule 3.7C.
- (l) The scenarios that are defined for the purposes of subparagraph (k)(1) may include, but are not limited to:
- (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 *NEMMCO* reasonably considers will have a material impact on the *EAAP*.
- (m) *NEMMCO* must comply with the *EAAP principles* in preparing the *EAAP guidelines*.
- (n) *NEMMCO* must comply with the *EAAP guidelines* in preparing the *EAAP*.

- (o) *NEMMCO* must develop and *publish* the *EAAP guidelines* in accordance with the *Rules consultation procedures*.
- (p) *NEMMCO* must develop and *publish* the first *EAAP guidelines* by 30 June 2009 and there must be a set of *EAAP guidelines* available at all times after that date.
- (q) *NEMMCO* may from time to time in accordance with the *Rules consultation procedures* amend or replace the *EAAP guidelines*.

#### **Provision of information to Scheduled Generators**

- (r) *NEMMCO* must provide to each *Scheduled Generator*, based on the relevant *GELF*, an estimate of the total *energy* production of the *scheduled generating units* of that *Scheduled Generator* for the period of the *EAAP*.

#### **Review**

- (s) The *Reliability Panel* must conduct a review of the operation of this rule 3.7C by no later than the end of the third year after the *publication* of the first *EAAP*.

### **3.8 Central Dispatch and Spot Market Operation**

#### **3.8.1 Central Dispatch**

- (a) *NEMMCO* must operate a *central dispatch* process to *dispatch scheduled generating units, scheduled loads, scheduled network services* and *market ancillary services* in order to balance *power system supply* and demand, using its reasonable endeavours to maintain *power system security* in accordance with Chapter 4 and to maximise the value of *spot market* trading on the basis of *dispatch offers* and *dispatch bids*.
- (b) The *central dispatch* process should aim to maximise the value of *spot market* trading i.e. to maximise the value of *dispatched load* based on *dispatch bids* less the combined cost of *dispatched generation* based on *generation dispatch offers, dispatched network services* based on *network dispatch offers*, and *dispatched market ancillary services* based on *market ancillary service offers* subject to:
  - (1) *dispatch offers, dispatch bids* and *market ancillary service offers*;
  - (2) *constraints* due to availability and *commitment*;
  - (3) *non-scheduled load* requirements in each *region*;
  - (4) *power system security* requirements determined as described in Chapter 4 and the *power system security and reliability standards*;
  - (5) *intra-regional network constraints* and *intra-regional losses*;

- 
- (6) *inter-regional network constraints and inter-regional losses;*
  - (7) *constraints consistent with registered bid and offer data;*
  - (8) *current levels of dispatched generation, load and market network services;*
  - (9) *constraints imposed by ancillary services requirements;*
  - (10) *arrangements designed to ensure pro-rata loading of tied registered bid and offer data; and*
  - (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.*
- (c) *NEMMCO must establish procedures to allow relaxation of power system constraints listed in clause 3.8.1(b) in order to resolve infeasible dispatch solutions, subject to the following principles:*
- (1) *the procedures are developed in consultation with Registered Participants to achieve a reasonable dispatch outcome while maintaining consistency with NEMMCO's obligations to maintain power system security and the pricing principles listed in clause 3.9.1; and*
  - (2) *NEMMCO must report to Registered Participants any events requiring the relaxation of these constraints.*
- (d) *NEMMCO must develop and publish a dispatch algorithm to be used by NEMMCO for the purpose of central dispatch and pricing in accordance with rules 3.8 and 3.9.*
- (e) *NEMMCO must use the dispatch algorithm to determine the loading level in MW for each scheduled generating unit, scheduled network service or scheduled load in each dispatch interval in accordance with the principles set out in clause 3.8.1(b).*
- (e1) *NEMMCO must use the dispatch algorithm to determine the quantity of each market ancillary service which will be enabled for each ancillary service generating unit or ancillary service load.*
  - (e2) *When NEMMCO determines the quantity of each market ancillary service which will be enabled, NEMMCO must determine:*

- (1) the required quantity of each *market ancillary service* that may be sourced from any *region* (referred to as the “*global market ancillary service requirement*”); and
  - (2) any required quantity of such *market ancillary service* which must only be sourced from one or more nominated *regions* (referred to as a “*local market ancillary service requirement*”).
- (f) *NEMMCO* may investigate from time to time:
- (1) the scope for further development of the *dispatch algorithm* beyond the minimum requirements specified in clause 3.8.1(b); and
  - (2) the sufficiency of the *dispatch algorithm* in meeting the minimum requirements specified in clause 3.8.1(b),
- and following compliance with the *Rules consultation procedures*, publish a report setting out its recommendations.

### 3.8.2 Participation in central dispatch

- (a) A *Scheduled Generator* must submit *generation dispatch offers* in respect of each of its *scheduled generating units* for each *trading day* in accordance with clause 3.8.6.
- (b) *Generation dispatch offers* for a *scheduled generating unit* must include a specified *self-dispatch level* and may include prices and MW quantities for increased or decreased levels of *generation* above or below this *self-dispatch level*.
- (b1) A *Scheduled Network Service Provider* must submit *network dispatch offers* in respect of each of its *scheduled network services* for each *trading day* in accordance with clause 3.8.6A.
- (c) Subject to clause 3.8.2(d), *dispatch bids* may be submitted by *Market Participants* in respect of *scheduled loads*, in accordance with clause 3.8.7, and may specify prices and MW quantities for any *trading interval* either for reductions or increases in *load*.
- (c1) *Market ancillary service offers* may be submitted by *Ancillary Service Providers* in respect of *market ancillary services* in accordance with clause 3.8.7A.
- (d) *Dispatch bids* and *market ancillary service offers* will only be included in the *central dispatch* process by *NEMMCO* if it is satisfied that adequate communication and/or telemetry is available to support the issuing of *dispatch instructions* and the audit of responses.
- (e) If *NEMMCO* considers it reasonably necessary for adequate system operation and the maintenance of *power system security*, *Registered*

*Participants* who may otherwise be exempted from participating in the *central dispatch* process must do so to the extent and in the capacity specified by *NEMMCO*.

### 3.8.3 Bid and offer aggregation guidelines

- (a) *Scheduled Generators* or *Market Participants* who wish to aggregate their *scheduled generating units*, *scheduled network services* or *scheduled loads* for the purpose of *central dispatch* and *settlements* must apply to *NEMMCO* to do so.
- (b) *NEMMCO* must approve applications for aggregation if the following conditions are fulfilled by the *Scheduled Generator* or *Market Participant*:
  - (1) aggregated *generating units* or *loads* must be *connected* at a single site with the same *intra-regional loss factor* and be operated by a single *Scheduled Generator* or *Market Participant*;
  - (1a) aggregated *scheduled network services* must be *connected* at the same two sites, have the same *intra-regional loss factors*, have the same *distribution loss factors* where applicable and be operated by the same *Scheduled Generator* or *Market Participant*;
  - (2) *power system security* must not be materially affected by the proposed aggregation;
  - (3) *control systems* such as *automatic generation control systems* must satisfy the *Rules* after aggregation;
  - (4) communication protocols for operational control between *NEMMCO* and the aggregated *generating units*, *scheduled network services* or *loads* must satisfy the *Rules* after aggregation; and
  - (5) *metering systems* for *settlements* purposes must satisfy the *Rules* after aggregation.
- (c) Notwithstanding that one or more of the conditions set out in clause 3.8.3(b) may not have been fulfilled by the *Scheduled Generator* or *Market Participant*, *NEMMCO* may approve an application for aggregation provided that such aggregation would not materially distort *central dispatch*.
- (d) All requirements in the *Rules* applying to *generating units*, *scheduled network services* and *scheduled loads* are to apply equally to aggregated *generating units*, aggregated *scheduled network services* and aggregated *scheduled loads*.
- (e) *NEMMCO* must evaluate applications for aggregation and reply within 20 *business days* of receipt of the application setting out whether the

application is to be approved and the conditions that apply to the proposed approval.

- (f) *Scheduled Generators* and *Market Participants* that have been granted aggregated status must, if required by *NEMMCO*, declare individual *generating unit*, *scheduled network service* or *scheduled load* availability and operating status to *NEMMCO* in the *PASA* process under rule 3.7 to allow *power system security* to be effectively monitored.
- (g) *NEMMCO* must provide reasons to a *Scheduled Generator* or *Market Participant* whose application for aggregation is denied by *NEMMCO*.
- (h) **[Deleted]**
- (i) *NEMMCO* must notify *Scheduled Generators* and *Market Participants* of newly approved aggregations.
- (j) *NEMMCO* must maintain a database of aggregated *scheduled generating units*, *scheduled network services* and *scheduled loads* and their components.

#### **3.8.4 Notification of scheduled capacity**

All *Scheduled Generators* and *Market Participants* with *scheduled generating units*, *scheduled network services* and/or *scheduled loads* must inform *NEMMCO* of their available capacity as follows in accordance with the *timetable*:

- (a) *Scheduled Generators* and *Market Participants* must notify *NEMMCO* of the available capacity of each *scheduled generating unit*, *scheduled network service* and/or *scheduled load* for each *trading interval* of the *trading day*;
- (b) subsequent *changes* may only be made to the information provided under clause 3.8.4(c), (d) and (e) in accordance with clause 3.8.22;
- (c) for *Scheduled Generators*, two *days* ahead of each *trading day*:
  - (1) a MW capacity profile that specifies the MW available for each of the 48 *trading intervals* in the *trading day*;
  - (2) estimated *commitment* or *decommitment* times;
  - (3) daily *energy* availability for *energy constrained generating units*; and
  - (4) *ramp rate constraints*;
- (d) for *scheduled loads*, two *days* ahead of each *trading day*:
  - (1) a MW capacity profile that specifies the MW available for *dispatch* for each of the 48 *trading intervals* in the *trading day*;

- (2) daily *energy* availability for *energy constrained scheduled load*; and
- (3) *ramp rate constraints*;
- (e) for *scheduled network services*, two *days* ahead of each *trading day*:
  - (1) a MW capacity profile that specifies the *power transfer capability* in each direction available for each of the 48 *trading intervals* in the *trading day*; and
  - (2) *ramp rate constraints*.

### 3.8.5 Submission timing

- (a) To be valid for inclusion in the *central dispatch* process, a *dispatch bid* or *dispatch offer* or *market ancillary service offer* must be submitted according to the *timetable*.
- (b) Subject to clause 3.8.22, changes to the:
  - (1) MW quantities in the *dispatch bids*;
  - (2) MW quantities and *off-loading prices* in the *generation dispatch offers*; and
  - (3) MW quantities in the *network dispatch offers*,may be made after the relevant deadline in the *timetable*.
- (c) The submission of *dispatch bids*, *dispatch offers* and *market ancillary service offers* to NEMMCO must be made using the *electronic communication system* unless otherwise approved by NEMMCO.

### 3.8.6 Generating unit offers for dispatch

The following requirements apply to all *dispatch offers* for *scheduled generating units*:

- (a) *dispatch offers* must contain the *Scheduled Generator's* intended *self-dispatch level* for each *trading interval*, and may contain up to 10 *price bands* which may be either for possible *dispatch* above the intended *self-dispatch level* or for possible *off-loading* below the intended *self-dispatch level* by *dispatch instruction*;
- (b) the *dispatch offer* must specify for each of the 48 *trading intervals* in the *trading day*:
  - (1) a MW capacity for the intended *self-dispatch level*;

- (2) an incremental MW amount for each *price band* specified in the *dispatch offer*; and
- (3) a MW/min *ramp rate* capability;
- (c) the MW quantities specified are to apply at the terminals of the *scheduled generating unit* or, with *NEMMCO*'s agreement, at any other point in the *Scheduled Generator's* electrical installation or on the *network*;
- (d) a *dispatch offer* which specifies a *self-dispatch level* of more than zero must specify at least one *price band* for *off-loading* below the intended *self-dispatch level* and the total MW quantity in *price bands* specified for *off-loading* in each *trading interval* must equal the MW quantity of the *self-dispatch level* for that *trading interval* to enable possible *off-loading* to a zero *dispatch* level;
- (e) the *dispatch offer* must specify a *loading price* or an *off-loading price* for each *price band* specified in the *dispatch offer*, in dollars and whole cents per MWh, and this price is to apply to the *price band* throughout the *trading day*;
- (f) prices specified for each *price band* specified in the *dispatch offer* must increase monotonically with an increase in available MWs;
- (g) prices specified are to apply at the *scheduled generating unit's connection point* and for the purposes of *central dispatch* shall be referred to the *regional reference node* to which that *connection point* is assigned as follows:

$$RP = DOP \div LF$$

where

RP is the price specified in the *dispatch offer* when referred to the appropriate *regional reference node*;

DOP is the price as specified in the *dispatch offer*; and

LF where the *scheduled generating unit's connection point* is a *transmission network connection point*, is the *intra-regional loss factor* at that *connection point*, or where the *scheduled generating unit'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 network connection point* to which it is assigned;

- (h) *loading prices* offered must be equal to or greater than \$0/MWh and may not exceed the product of *VoLL* multiplied by the *intra-regional loss factor* at the *Scheduled Generator's transmission network connection point* for the *generating unit*;



- (i) *off-loading prices* must be less than \$0/MWh, i.e. negative in sign and may not be less than the product of the *market floor price* multiplied by the *intra-regional loss factor* at the *Scheduled Generator's transmission network connection point* for the *generating unit*;
- (j) a *loading price* specified for a *price band* is to be interpreted as the minimum price at which up to the specified MW increment is to be loaded in the *central dispatch* process;
- (k) **[Deleted]**
- (l) an *off-loading price* specified for a *price band* is to be interpreted as the maximum price payable to NEMMCO by the *Scheduled Generator* in respect of the *generating unit's sent out generation* with the *generating unit's* output reduced below its specified *self-dispatch level* in the *central dispatch* process by an amount less than the specified MW increment;
- (m) the MW quantity specified in each *price band* in each *trading interval* must be specified in whole MW; and
- (n) the *dispatch offer* may specify the daily *energy* available for *energy constrained generating units*.

### 3.8.6A Scheduled network service offers for dispatch

The following requirements apply to a *network dispatch offer* to provide *scheduled network services*:

- (a) the *network dispatch offer* may contain up to a maximum of ten *price bands* for each direction of power flow for the *scheduled network service*;
- (b) the *network dispatch offer* must specify for each of the 48 *trading intervals* in the *trading day*:
  - (1) an incremental power delivery range for each *price band* specified in the *network dispatch offer*; and
  - (2) a MW/min *ramp rate* capability;
- (c) the *network dispatch offer* must specify a price for each *price band* in dollars and whole cents per MWh and this price is to apply to the *price band* throughout the *trading day*;
- (d) within the set of *price bands* applying to a particular direction of power flow, prices specified for each *price band* specified in the *network dispatch offer* must increase monotonically with an increase in available MWs;
- (e) if negative prices are employed, the absolute value of the most negative price in one direction cannot exceed the price for the first *price band* in the opposite direction, after adjustment for losses;

- (f) the price specified in a *price band* for power transfer from the *scheduled network service's connection point A* to *connection point B* is to be interpreted in the *central dispatch* process as meaning that the *Scheduled Network Service Provider* is willing to deliver an increment of power to *connection point B*, within the power delivery range of the power band, provided that the net revenue which is expected to be derived from that increment per MWh delivered to *connection point B* is not less than the specified price;
- (g) for the purposes of this clause 3.8.6A, the net revenue that a *Scheduled Network Service Provider* expects to receive for energy delivered by the *scheduled network service* to *connection point B* is to be determined as follows:

$$\text{net revenue} = \text{PB} \times \text{FB} - \text{PA} \times \text{FA}$$

where

PA and PB are the prices at the *scheduled network service's connection points A* and *B*, which are assumed not to change as a result of the incremental transfer;

FA and FB are the energy transfers scheduled by *central dispatch* for receipt by the *scheduled network service* at *connection point A* and delivery at *connection point B* respectively; and

FA and FB are deemed to be related by the loss vs flow relationship notified in accordance with schedule 3.1;

- (h) for the purposes of this clause 3.8.6A, the price at a *connection point* will be deemed to be related as follows to the price at the *regional reference node* to which that *connection point* is assigned:

$$P = \text{RP} \times \text{LF}$$

where

P is the price at the *connection point*;

RP is the price at the appropriate *regional reference node*; and

LF where the *scheduled network service's connection point* is a *transmission network connection point*, is the *intra-regional loss factor* at that *connection point*, or where the *scheduled network service'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 network connection point* to which it is assigned;

- (i) prices specified in the *network dispatch offer* must not exceed *VoLL*; and
- (j) the power delivery range specified in each *price band* in each *trading interval* must be specified in whole MW.

### 3.8.7 Bids for scheduled load

The following requirements apply to a *dispatch bid* for *scheduled loads*:

- (a) the *dispatch bid* must specify whether the *scheduled load* is to be considered as *normally on* or *normally off*;
- (b) the *dispatch bid* may contain up to a maximum of ten *price bands*;
- (c) the *dispatch bid* must specify for each of the 48 *trading intervals* in the *trading day*:
  - (1) an incremental MW amount for each *price band* specified in the *dispatch bid*; and
  - (2) a MW/min *ramp rate* capability;
- (d) the *dispatch bid* must specify a price for each *price band* in dollars and whole cents per MWh and this price is to apply to the *price band* throughout the *trading day*;
- (e) prices specified for each *price band* specified in the *dispatch bid* must increase monotonically with an increase in available MWs;
- (f) prices specified are to apply at the *scheduled load's connection point* and for the purposes of *central dispatch* shall be referred to the *regional reference node* to which that *connection point* is assigned as follows:

$$RP = DOP \div LF$$

where

RP is the price specified in the *dispatch bid* when referred to the appropriate *regional reference node*;

DOP is the price as specified in the *dispatch bid*; and

LF where the *scheduled load's connection point* is a *transmission network 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 network connection point* to which it is assigned;

- (g) MW quantities specified for a *price band* are to apply at the *scheduled load's connection point* or at any other point in the *Market Participant's* electrical installation or on the *network* as agreed to by *NEMMCO*;
- (h) prices specified must be:
  - (1) more than the product of the *market floor price* multiplied by the *intra-regional loss factor* at the *scheduled load's transmission network connection point*; and
  - (2) less than the product of *VoLL* multiplied by the *intra-regional loss factor* at the *scheduled load's transmission network connection point*;
- (i) for a *scheduled load* specified in the *dispatch bid* as being *normally on*, the price specified for a *price band* is to be interpreted in the *central dispatch* process as the price at or above which the *scheduled load* will reduce electricity consumed by up to the MW increment specified in that *price band*;
- (j) for a *scheduled load* specified in the *dispatch bid* as being *normally off*, the price specified for a *price band* is to be interpreted in the *central dispatch* process as the price at or below which the *scheduled load* will increase electricity consumed by up to the MW increment specified in that *price band*;
- (k) the MW capacity quantity specified in each *price band* in each *trading interval* must be specified in whole MW;
- (l) the sum of the MW quantities specified in each *price band* in any *trading interval* must not exceed the maximum capacity of the *scheduled load*; and
- (m) the *dispatch bid* may specify the daily *energy* available for *energy constrained scheduled loads*.

### 3.8.7A Market ancillary services offers

The following requirements apply to all *market ancillary service offers* for each type of *market ancillary service*:

- (a) the *market ancillary service offer* may contain up to 10 *price bands*;
- (b) the *market ancillary service offer* must specify for each of the 48 *trading intervals* in the *trading day* an incremental MW amount for each *price band* specified in the *market ancillary service offer*;
- (c) the MW quantities specified are to apply at the nominated *connection point* of the *Market Participant* or, with *NEMMCO's* agreement, at any other point in the *Market Participant's* electrical installation or on the *network*;

- (d) the *ancillary service offer* must specify a price for each *price band* specified in the *market ancillary service offer*, in dollars and whole cents per MW per hour (an '*enabling price*'), and this price is to apply to the *price band* throughout the *trading day*;
- (e) *enabling prices* for each *price band* specified in the *market ancillary service offer* must increase monotonically with an increase in available MWs;
- (f) *enabling prices* are to apply at the nominated *connection point* of the *Market Participant* or, with *NEMMCO's* agreement, at any other point in the *Market Participant's* electrical installation or on the *network*;
- (g) *enabling prices* offered must be equal to or greater than \$0 per MW per hour and may not exceed *VoLL*;
- (h) the *enabling price* for a *price band* is to be interpreted as the minimum price at which up to the specified MW response is to be enabled in the *central dispatch* process;
- (i) the MW quantity in each *price band* in each *trading interval* must be specified in whole MW;
- (j) the *market ancillary service offer* must include the following values:
  - (1) the *response breakpoint*;
  - (2) the upper and lower *enablement limits*; and
  - (3) the *response capability*; and
- (k) an *Ancillary Service Provider* that submits a *market ancillary service offer* must ensure that the *ancillary service generating unit* or *ancillary service load*, as the case may be, is at all times capable of responding in the manner contemplated by the *market ancillary service specification*.

### 3.8.8 Validation of dispatch bids and offers

- (a) If a *dispatch offer*, *dispatch bid* or *market ancillary service offer* is made in accordance with clauses 3.8.6, 3.8.6A, 3.8.7 or 3.8.7A (whichever is applicable), *NEMMCO* must make available to the *Scheduled Generator* or *Market Participant* who submitted the *dispatch offer*, *dispatch bid* or *market ancillary service offer* the following information without delay:
  - (1) acknowledgement of receipt of a valid *dispatch offer*, *dispatch bid* or *market ancillary service offer*; and
  - (2) the data contained in the *dispatch offer*, *dispatch bid* or *market ancillary service offer* as it will be used by *NEMMCO* in the *central dispatch* process.

- (b) It is the responsibility of each *Scheduled Generator* and *Market Participant* to check that the data contained in its *dispatch offer*, *dispatch bid* or *market ancillary service offer* as received and to be used by *NEMMCO* in the *central dispatch* process is correct.
- (c) If a *dispatch offer*, *dispatch bid* or *market ancillary service offer* is not made in accordance with clauses 3.8.6, 3.8.6A, 3.8.7 or 3.8.7A (whichever is applicable), *NEMMCO* must not include that *dispatch offer*, *dispatch bid* or *market ancillary service offer* in the *central dispatch* process and must without delay notify the *Scheduled Generator* or *Market Participant* submitting the *dispatch offer*, *dispatch bid* or *market ancillary service offer* of its invalidity and provide to that *Scheduled Generator* or *Market Participant* details of the invalid data.
- (d) If any details contained within a *dispatch offer*, *dispatch bid* or *market ancillary service offer* are inconsistent with the *registered bid and offer data* provided by the relevant *Scheduled Generator* or *Market Participant* then *NEMMCO* has the right to treat that *dispatch offer*, *dispatch bid* or *market ancillary service offer* as invalid and if it does so must notify the *Scheduled Generator* or *Market Participant* without delay.

### 3.8.9 Default offers and bids

- (a) *Scheduled Generators* and *Market Participants* may, at any time, submit a *dispatch offer*, a *dispatch bid* or a *market ancillary service offer* in respect of a *scheduled generating unit*, *scheduled load*, *scheduled network service*, *ancillary service generating unit* or *ancillary service load* to apply from a specified future *trading day*.
- (b) A *Scheduled Generator* or *Market Participant* may vary or withdraw a *default dispatch bid*, *default dispatch offer* or *market ancillary service offer* at any time prior to the deadline for submissions of *dispatch offers*, *dispatch bids* and *market ancillary service offers* for a *trading day* in accordance with the *timetable*.
- (c) Subject to any procedures *published* in accordance with clause 3.8.9(d), *default dispatch offer*, *default dispatch bid* or *market ancillary service offer* applicable to a *trading day* must be included by *NEMMCO* in the *central dispatch* process when the deadline for submission of *dispatch offers*, *dispatch bids* and *market ancillary service offers* for that *trading day* arrives in accordance with the *timetable* if, and only if, no later valid *dispatch offer*, *dispatch bid* or *market ancillary service offer* has been submitted pursuant to clauses 3.8.6, 3.8.6A, 3.8.7, 3.8.7A or 3.8.9(b).
- (d) *NEMMCO*, in consultation with *Scheduled Generators* and *Market Participants* in accordance with the *Rules consultation procedures*, must develop and *publish* procedures to determine the circumstances when *NEMMCO* may use a prior *dispatch offer* or *dispatch bid* lodged by a

*Scheduled Generator or Market Participant as a substitute for a default dispatch offer or default dispatch bid.*

- (e) *NEMMCO may disregard a default dispatch offer or a default dispatch bid and substitute a prior dispatch offer or dispatch bid or market ancillary service offer lodged by a Scheduled Generator or a Market Participant determined in accordance with a procedure developed under clause 3.8.9(d) as input to PASA, pre-dispatch and central dispatch.*

### **3.8.10 Network constraints**

- (a) *In accordance with the NEMMCO power system security responsibilities and any other standards set out in Chapter 4, NEMMCO must determine any constraints on the dispatch of scheduled generating units, scheduled network services, scheduled loads, ancillary service generating units or ancillary service loads which may result from planned network outages.*
- (b) *NEMMCO must represent intra-regional network constraints and inter-regional network constraints as inputs to the dispatch process in a form that can be reviewed after the trading interval in which they occurred.*
- (c) *The process used by NEMMCO to derive the network constraints must be clearly documented and made available to Scheduled Generators and Market Participants.*

### **3.8.11 Ancillary services constraints**

- (a) *NEMMCO must determine the quantity and nature of ancillary services which:*
  - (1) *have been provided or procured in accordance with the NEMMCO power system security responsibilities set out in clause 4.3.1 or are otherwise available;*
  - (2) *are required to be managed in conjunction with dispatch; and*
  - (3) *may impose constraints on central dispatch.*
- (a1) *For each dispatch interval NEMMCO must impose constraints upon the dispatch algorithm to determine the quantity of each global market ancillary service requirement and any local market ancillary service requirements.*

### **3.8.12 System scheduled reserve constraints**

*NEMMCO must use its reasonable endeavours to ensure that the dispatch process meets all requirements for scheduled reserves as described in Chapter 4.*

### 3.8.13 Notification of constraints

*NEMMCO* must *publish* the parameters used in the *dispatch algorithm* for the modelling of *network constraints, regulating capability constraints, power system reserve constraints* and *ancillary services*.

### 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 *plant* operating restrictions 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 *plant* operating restrictions associated with a *relevant NEMMCO intervention event*,

after all valid *dispatch bids* and *dispatch offers* referred to in paragraph (a) have been exhausted, exercise the *reliability and emergency reserve trader* in accordance with rule 3.20 by:

- (3) *dispatching scheduled generating units, scheduled network services* or *scheduled loads* in accordance with any *scheduled reserve contract*; or
- (4) *activating loads* or *generating units* under any *unscheduled reserve contract*; and

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



**3.8.15 [Deleted]**

**3.8.16 Equal priced dispatch bids and dispatch offers**

If there are *scheduled generating units* or *scheduled loads*, in the same *region*, for which the prices submitted in *dispatch bids* or *dispatch offers* for a particular *trading interval* result in identical prices at their *regional reference node*, then the MW quantities specified in the relevant *price bands* of those *dispatch bids* or *dispatch offers* must be *dispatched* on a pro-rata basis, where this can be achieved without imposing undue costs on any party, or violating other constraints.

**3.8.17 Self-commitment**

- (a) *Slow start generating units* are *generating units* which are unable to *synchronise* and increase *generation* within 30 minutes of receiving an instruction from *NEMMCO*.
- (b) *Slow start generating units* must *self-commit* to be eligible for *dispatch*.
- (c) A *Generator* may only *self-commit* a *scheduled generating unit* in accordance with this clause.
- (d) A *Scheduled Generator* has a right to *synchronise* its *generating unit* to the *power system* and have *NEMMCO dispatch* that *generating unit* subject to the *dispatch* procedures as set out in this rule 3.8.
- (e) A *Scheduled Generator* must advise *NEMMCO* of its intention to *synchronise* a *generating unit* in the *PASA* process. The *Scheduled Generator* advises this intention by submitting a capacity profile of the *generating unit* into the *market information bulletin board*.
- (f) The exact time of *synchronisation* will be subject to directions from *NEMMCO* in accordance with Chapter 4.
- (g) *Scheduled Generators* and *Market Participants* must notify *NEMMCO* of any changes to *self-commitment* decisions without delay.
- (h) *NEMMCO* must notify all *Scheduled Generators* and *Market Participants* of any changes to *commitment* decisions without delay.

**3.8.18 Self-decommitment**

- (a) A *Generator* may only *self-decommit* a *scheduled generating unit* in accordance with this clause.
- (b) *Scheduled Generators* must notify *NEMMCO* of their planned *self-decommitment* decisions in relation to *slow start generating units* at least 2 *days* in advance of *dispatch*.

- (c) *Scheduled Generators* and *Market Participants* must notify *NEMMCO* as soon as practicable of any changes in their *self-decommitment* decisions.
- (d) *NEMMCO* must notify all *Scheduled Generators* and *Market Participants* of any changes to *de-commitment* decisions as soon as practicable.

### 3.8.19 Dispatch inflexibilities

- (a) If a *Scheduled Generator* or *Market Participant* reasonably expects one or more of its *scheduled generating units*, *scheduled network services* or *scheduled loads* to be unable to operate in accordance with *dispatch instructions* in any *trading interval*, due to abnormal *plant* conditions or other abnormal operating requirements in respect of that *scheduled generating unit*, *scheduled network service* or *scheduled load*, it must advise *NEMMCO* through the *PASA* process or in its *dispatch offer* or *dispatch bid* in respect of that *scheduled generating unit*, *scheduled network service* or *scheduled load*, as appropriate under this Chapter, that the *scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible* in that *trading interval* and must specify a fixed *loading level* at which the *scheduled generating unit*, *scheduled network service* or *scheduled load* is to be operated in that *trading interval*.
- (b) Where a *Scheduled Generator* or *Market Participant* advises *NEMMCO* that a *scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible* in accordance with clause 3.8.19(a) the *Scheduled Generator* or *Market Participant* must:
  - (1) provide *NEMMCO* with a brief, verifiable and specific reason why the *scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible* at the same time as it advises *NEMMCO* of the *inflexibility*; and
  - (2) provide to the *AER*, upon written request, in accordance with the guidelines issued by the *AER* from time to time in accordance with the *Rules consultation procedures* such additional information to substantiate and verify the reason for such *inflexibility* as the *AER* may require from time to time. The *AER* must provide information provided to it in accordance with this clause 3.8.19(b)(2) to any *Market Participant* that requests such information, except to the extent that the information can be reasonably claimed to be *confidential information*.
- (c) Other than in *trading intervals* for which it has been specified by a *Scheduled Generator* or *Market Participant* in the relevant *dispatch offer* or *dispatch bid* for a *scheduled generating unit*, *scheduled network service* or *scheduled load* that the *scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible*, then *NEMMCO* will *dispatch* the *scheduled generating unit*, *scheduled network service* or *scheduled load* in

accordance with the prices and *price bands* specified in the relevant *dispatch offer* or *dispatch bid*.

- (d) In respect of *scheduled loads* or *scheduled generating units* which are not *slow start generating units*, *Scheduled Generators* and *Market Participants* may provide *NEMMCO*, as part of the *registered bid and offer data* in respect of those *scheduled loads* or *generating units*, with a *dispatch inflexibility profile*.
- (e) A *dispatch inflexibility profile* for a *generating unit* must contain the following parameters to indicate its MW capacity and time related *inflexibilities*:
  - (1) The time, T1, in minutes, following the issue of a *dispatch instruction* by *NEMMCO* to increase its loading from 0 MW, which is required for the *plant* to begin to vary its *dispatch* level from 0 MW in accordance with the instruction;
  - (2) The time, T2, in minutes, that the *plant* requires after T1 (as specified in clause 3.8.19(e)(1)) to reach a specified minimum MW *loading level*;
  - (3) The time, T3, in minutes, that the *plant* requires to be operated at or above its minimum *loading level* before it can be reduced below that level;
  - (4) The time, T4, in minutes, following the issue of a *dispatch instruction* by *NEMMCO* to reduce loading from the minimum *loading level* (specified under clause 3.8.19(e)(2)) to zero, that the *plant* requires to completely comply with that instruction.
  - (5) T1, T2, T3 and T4 must all be equal to or greater than zero.
  - (6) The sum (T1 + T2) must be less than or equal to 30 minutes.
  - (7) The sum (T1 + T2 + T3 + T4) must be less than 60 minutes.
- (e1) A *dispatch inflexibility profile* for a *scheduled load* must contain parameters to indicate its MW capacity and time related *inflexibilities*.
- (f) *NEMMCO* must use reasonable endeavours not to issue a *dispatch instruction* which is inconsistent with a *Scheduled Generator's* or *Market Participant's dispatch inflexibility profile*.

### 3.8.20 Pre-dispatch schedule

- (a) Each *day*, in accordance with the *timetable*, *NEMMCO* must prepare and *publish* a *pre-dispatch schedule* covering each *trading interval* of the period commencing from the next *trading interval* after the current *trading interval* up to and including the final *trading interval* of the last *trading day*

for which all valid *dispatch bids* and *dispatch offers* have been received in accordance with the *timetable* and applied by the *pre-dispatch* process.

- (b) The *pre-dispatch* process is to have a resolution of one *trading interval* and no analysis will be made of operations within the *trading interval*, other than to ensure that *contingency capacity reserves* are adequate as set out in Chapter 4.
- (c) *NEMMCO* must determine the *pre-dispatch schedule* for each *trading interval* on the basis of *dispatch bids*, *dispatch offers* and *market ancillary service offers* submitted for that *trading interval* and *NEMMCO's* forecast *power system load* for each *region* for that *trading interval*, and by using a process consistent with the principles for *central dispatch* as set out in clause 3.8.1.
- (d) In determining the *pre-dispatch schedule* *NEMMCO* shall not take account of any *dispatch inflexibility profile* submitted in accordance with clause 3.8.19.
- (e) Any inputs made to the *pre-dispatch* process by *NEMMCO* for the purpose of achieving a physically realisable schedule or to satisfy *power system security* requirements must be made prior to release of the *pre-dispatch schedule* and recorded by *NEMMCO* in a manner suitable for audit.
- (f) The *pre-dispatch schedule* must include the details set out in clause 3.13.4(f).
- (g) Each *Scheduled Generator*, *Scheduled Network Service Provider* and *Market Customer* which has classified a *scheduled load* and *Market Participant* (which has classified an *ancillary service generating unit* or *ancillary service load*) must ensure that it is able to *dispatch* its plant as required under the *pre-dispatch schedule* and is responsible for changing inputs to the *central dispatch* process, if necessary to achieve this, via the rebidding provisions under clause 3.8.22.
- (h) The *pre-dispatch schedule* must be re-calculated and the results re-published by *NEMMCO* regularly in accordance with the *timetable*, or more often if a change in circumstances is deemed by *NEMMCO* to be likely to have a significant effect on the operation of the *market*.
- (i) *NEMMCO* must fully document the operation of the *pre-dispatch* process, including the principles adopted in making calculations required to be included and all such documentation must be made available to *Scheduled Generators* and *Market Participants* at a fee to be set by *NEMMCO* to cover its costs of supplying such documentation.
- (j) The following *pre-dispatch* outputs relating specifically to a *generating unit*, *scheduled network service*, *scheduled load* or *ancillary service load* operated by a *Scheduled Generator* or *Market Participant* must be made

available electronically to that *Scheduled Generator* or *Market Participant* on a confidential basis:

- (1) the scheduled times of *commitment* and *de-commitment* of individual *slow start generating units*;
  - (2) scheduled half hourly *loading* for each scheduled entity;
  - (3) scheduled provision of *ancillary services*;
  - (4) scheduled *constraints* for the provision of *ancillary services*; and
  - (5) scheduled *constraints* due to *network* limitations.
- (k) Where the *pre-dispatch schedule* may have failed to maximise the joint value of *energy* and *ancillary services pre-dispatch* outputs of a *scheduled generating unit*, due to the *scheduled generating unit* operating outside its *enablement limit*, NEMMCO must notify the *Scheduled Generator* or *Market Participant* operating the *scheduled generating unit*, electronically on a confidential basis.

### 3.8.21 On-line dispatch process

- (a) *Dispatch bids* and *dispatch offers* must be *centrally dispatched* by NEMMCO using the *dispatch algorithm*.
  - (a1) A *dispatch interval* is to be five minutes in duration.
  - (b) The *dispatch algorithm* is to be run by NEMMCO for each *dispatch interval*. If the *dispatch algorithm* is not successfully run for any *dispatch interval* then the values of the last successful run of the *dispatch algorithm* must be used for that *dispatch interval*.
  - (c) *Central dispatch* results in the setting of *dispatch prices* and *ancillary services prices* for each *dispatch interval* and *spot prices* for each *trading interval* in accordance with rule 3.9.
  - (d) Where possible, *dispatch instructions* will be issued electronically via the *automatic generation control system* or via an electronic display in the *Scheduled Generator's* or *Market Participant's plant* control room. NEMMCO may issue *dispatch instructions* in some other form if in its reasonable opinion the methods described in this clause 3.8.21(d) are not possible.
  - (e) A *Scheduled Generator* or *Market Participant* must ensure it has facilities to receive *dispatch instructions* in the manner described in this clause.
  - (f) *Dispatch instructions* that are issued via the *automatic generation control system* are to be issued progressively at intervals of no more than 5 minutes

following re-evaluation of *central dispatch* to achieve a prompt and smooth implementation of the outcomes of each *central dispatch* update.

- (g) With the exception of instructions issued by telephone, all *dispatch instructions* and the times at which they are issued are to be logged automatically and *dispatch instructions* that are issued by telephone must be recorded by *NEMMCO*.
- (h) *NEMMCO* may modify or override the *dispatch algorithm* outcome in accordance with the requirements of clause 4.8.9 or due to *plant* not conforming to *dispatch instructions* and in such circumstances *NEMMCO* must record the details of the event and the reasons for its action for audit purposes.
- (i) **[Deleted]**
- (j) If a *scheduled load* or *scheduled generating unit*, in respect of which a *dispatch inflexibility profile* has been notified to *NEMMCO* in accordance with clause 3.8.19, is *dispatched* from 0 MW in any *dispatch interval* by the *central dispatch* process, then the specified *dispatch inflexibility profile* must be used by *NEMMCO* as a *constraint* on the *dispatch* of that *plant* for the relevant subsequent *dispatch intervals*.
- (k) A *scheduled load* or *generating unit* whose *dispatch* is *constrained* in any *dispatch interval* due to a *dispatch inflexibility profile* submitted under clause 3.8.19 cannot be used as the basis for setting the *dispatch price* in that *dispatch interval* at any location.
- (l) *NEMMCO* must fully document the operation of the process described in this clause 3.8.21, including the software, algorithms, and the principles adopted in making judgments where they are required in the process and all such documentation must be made available to *Scheduled Generators* and *Market Participants* at a price reflective of costs incurred by *NEMMCO* in providing such documentation.
- (m) Where the *central dispatch* process may have failed to *dispatch a scheduled generating unit* to maximise the joint value of *energy* and *ancillary services* due to the *scheduled generating unit* operating outside its *enablement limit*, *NEMMCO* must notify the *Scheduled Generator* or *Market Participant* operating the *scheduled generating unit* on a confidential basis.

### 3.8.22 Rebidding

- (a) Prices for each *price band* that are specified in *dispatch bids*, *dispatch offers* and *market ancillary service offers* are firm and no changes to the price for any *price band* are to be accepted under any circumstances.
- (b) Subject to clauses 3.8.22(c) and 3.8.22A, a *Scheduled Generator* or *Market Participant* may vary its available capacity, daily *energy constraints*,

---

*dispatch inflexibilities and ramp rates of generating units, scheduled network services and scheduled loads, and the response breakpoints, enablement limits and response limits of market ancillary services.*

- (c) A *Scheduled Generator* or *Market Participant* must provide:
- (1) all *rebids* to *NEMMCO* electronically unless otherwise approved by *NEMMCO*;
  - (2) to *NEMMCO*, at the same time as the *rebid* is made:
    - (i) a brief, verifiable and specific reason for the *rebid*; and
    - (ii) the time at which the event(s) or other occurrence(s) adduced by the *Scheduled Generator* or *Market Participant* as the reason for the *rebid* occurred;
  - (3) to the *AER*, upon written request, in accordance with guidelines published by the *AER* from time to time under this clause 3.8.22 in accordance with the *Rules consultation procedures* such additional information to substantiate and verify the reason for a *rebid* as the *AER* may require from time to time. The *AER* must provide information provided to it in accordance with this clause 3.8.22(c)(3) to any *Scheduled Generator* or *Market Participant* that requests such information, except to the extent that the information can be reasonably claimed to be *confidential information*. The guidelines developed by the *AER* under this clause 3.8.22(c)(3) must include:
    - (i) the amount of detail to be included in the information provided to *NEMMCO* under clause 3.8.22(c)(2); and
    - (ii) procedures for handling claims by *Scheduled Generators* or *Market Participants* in accordance with clause 3.8.22(c)(3) or 3.8.19(b)(2) that information provided to the *AER* by such *Scheduled Generators* or *Market Participants* under those clauses is *confidential information*.
- The *AER* must publish the guidelines developed under this clause 3.8.22 and may amend such guidelines from time to time.
- (d) *NEMMCO* must:
- (1) subject to the *Scheduled Generator* or *Market Participant* complying with clause 3.8.22(c)(1) and (c)(2)(i) and (ii), accept the *rebid*; and
  - (2) *publish*, in accordance with clause 3.13.4(p), the time the *rebid* was made and the reason provided by the *Scheduled Generator* or *Market Participant* under clause 3.8.22(c)(2)(i).

### 3.8.22A Variation of offer, bid or rebid

- (a) *Scheduled Generators* and *Market Participants* must make *dispatch offers*, *dispatch bids* and *rebids* in good faith.
- (b) In clause 3.8.22A(a) a *dispatch offer*, *dispatch bid* or *rebid* is taken to be made in good faith if, at the time of making such an offer, bid or *rebid*, a *Scheduled Generator* or *Market Participant* has a genuine intention to honour that offer, bid or *rebid*, if the material conditions and circumstances upon which the offer, bid or *rebid* were based remain unchanged until the relevant *dispatch interval*.
- (c) A *Scheduled Generator* or *Market Participant* may be taken to have contravened clause 3.8.22A(a) notwithstanding that, after all the evidence has been considered, the intention of the *Scheduled Generator* or *Market Participant* is ascertainable only by inference from the conduct of the *Scheduled Generator* or *Market Participant*, or of any other person, or from relevant circumstances.

### 3.8.23 Failure to conform to dispatch instructions

- (a) If a *scheduled generating unit*, *scheduled network service* or *scheduled load* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *NEMMCO's* reasonable opinion), then:
  - (1) the *scheduled generating unit*, *scheduled network service* or *scheduled load* (as the case may be) is to be declared and identified as non-conforming; and
  - (2) the *scheduled generating unit*, *scheduled network service* or *scheduled load* (as the case may be) cannot be used as the basis for setting *spot prices*.
  - (3) **[Deleted]**
- (b) If a *scheduled generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming under clause 3.8.23(a):
  - (1) *NEMMCO* must advise the *Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* that the *generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming, and request a reason for the non-compliance with the *dispatch instruction*, which reason is to be logged;
  - (2) if in *NEMMCO's* opinion modification of *plant* parameters is necessary or desirable, *NEMMCO* must request the *Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* to submit modified *plant* parameters to satisfy *NEMMCO* that a realistic real time *dispatch* schedule can be carried out;



- (3) should a *Scheduled Generator* fail to meet the requests set out in clauses 3.8.23(b)(1) and (2) or if *NEMMCO* is not satisfied that the *generating unit* will respond to future *dispatch instructions* as required, *NEMMCO* must direct the *generating unit's* output to follow, as far as is practicable, a specified output profile to be determined at its discretion by *NEMMCO*;
  - (4) should a *Scheduled Network Service Provider* fail to meet the requests set out in clauses 3.8.23(b)(1) and (2) or if *NEMMCO* is not satisfied that the *scheduled network service* will respond to future *dispatch instructions* as required, *NEMMCO* must direct the *scheduled network service* to follow, as far as is practicable, a specified transfer profile to be determined at its discretion by *NEMMCO*; and
  - (5) should a *Market Customer* not meet the requests set out in clauses 3.8.23(b)(1) and (2) within a reasonable time of the request, or if *NEMMCO* is not satisfied that the *scheduled load* will respond to future *dispatch instructions* as required, *NEMMCO* acting reasonably may invoke a *default dispatch bid* lodged by the relevant *Market Customer* or apply *constraints* as it deems appropriate.
- (c) Until a *Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* satisfactorily responds to the requests under clauses 3.8.23(b)(1) and (2) and *NEMMCO* is satisfied that the *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) will respond to future *dispatch instructions* as required, the *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) continues to be non-conforming.
  - (d) If a *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) continues to be non-conforming after a reasonable period of time, *NEMMCO* must prepare a report setting out the details of the non-conformance and forward a copy of the report to the *Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* (as the case may be) and the *AER*.
  - (e) The direction referred to in clauses 3.8.23(b)(3) and (4) must remain in place until the *Scheduled Generator* or *Scheduled Network Service Provider* (whichever is relevant) satisfies *NEMMCO* of rectification of the cause of the non-conformance.
  - (f) If an *ancillary service generating unit* or *ancillary service load* is enabled to provide a *market ancillary service* and fails to respond in the manner contemplated by the *market ancillary service specification* (as determined in *NEMMCO's* reasonable opinion), then:
    - (1) the *ancillary service generating unit* or *ancillary service load* is to be declared and identified as non-conforming;

- (2) *NEMMCO* must advise the relevant *Market Participant* that the *ancillary service generating unit* or *ancillary service load* is identified as non-conforming, and request a reason for the non-conformance. The relevant *Market Participant* must promptly provide a reason if requested to do so, and the reason is to be logged; and
- (3) *NEMMCO* may set a fixed level for the relevant *ancillary service* (in this clause 3.8.23 called the ‘fixed constraint’) for the *ancillary service generating unit* or *ancillary service load* and the relevant *Market Participant* must ensure that the *ancillary service generating unit* or *ancillary service load* complies with the fixed constraint set by *NEMMCO*.
- (g) *NEMMCO* must lift the fixed constraint in respect of an *ancillary service generating unit* or *ancillary service load* when *NEMMCO* is reasonably satisfied (as a result of a test or otherwise) that the *ancillary service generating unit* or *ancillary service load* is capable of responding in the manner contemplated by the *market ancillary service specification*.
- (h) In assessing a report of non-conformance with a *dispatch instruction* by a *scheduled load*, the *AER* shall have regard to whether a *default dispatch bid* had been lodged with *NEMMCO* and was, or could have reasonably been, applied in the circumstances applicable to that *scheduled load*.

### **3.8.24 Scheduling errors**

- (a) A *scheduling error* is any one of the following circumstances:
  - (1) the *dispute resolution panel* determines under rule 8.2 that *NEMMCO* has failed to follow the *central dispatch* process set out in this rule 3.8; or
  - (2) *NEMMCO* declares that it failed to follow the *central dispatch* process set out in this rule 3.8; or
  - (3) *NEMMCO* determines under clause 3.9.2B(d) that a *dispatch interval* contained a manifestly incorrect input.
- (b) *Spot prices* and *market ancillary service* prices will not be adjusted due to the occurrence of a *scheduling error* except where the *scheduling error* arises through the application of clause 3.9.2B.

## **3.9 Price Determination**

### **3.9.1 Principles applicable to spot price determination**

- (a) The principles applying to the determination of prices in the *spot market* are as follows:

- (1) a *dispatch price* at a *regional reference node* is determined by the *central dispatch* process for each *dispatch interval*;
- (2) a *spot price* at a *regional reference node* is the time-weighted average of the *dispatch prices* at that *regional reference node* in a *trading interval*;
- (2A) the *central dispatch* process must determine an *ancillary service price* for each *market ancillary service* at each *regional reference node* for every *dispatch interval*;
- (3) *dispatch prices* determine *dispatch* such that a *generating unit* or *load* whose *dispatch bid* or *dispatch offer* at a location is below the *spot price* at that location will normally be *dispatched*;
- (3A) *generating units*, *scheduled network services* or *scheduled loads* which operate in accordance with a *direction*, are to be taken into account in the *central dispatch* process, but the *dispatch offer*, in the case of a *generating unit* or *scheduled network service*, which operates in accordance with a *direction*, or the *dispatch bid*, in the case of a *scheduled load* which operates in accordance with a *direction*, will not be used in the calculation of the *dispatch price* in the relevant *dispatch interval*;
- (3B) *ancillary service generating units* and *ancillary service loads* the subject of a fixed constraint (within the meaning of clause 3.8.23(f)) are to be taken into account in the *central dispatch* process, but the price in a *market ancillary service offer* which operates in accordance with a fixed constraint will not be used in the calculation of the *ancillary service price* for that *market ancillary service* in the relevant *dispatch interval*;
- (3C) *generating units* or *loads* which operate in accordance with a *direction* to provide an *ancillary service* are to be taken into account in the *central dispatch* process, but the price in a *market ancillary service offer* which operates in accordance with a *direction*, will not be used in the calculation of the *ancillary service price* for that *market ancillary service* in the relevant *dispatch interval*;
- (4) *network losses*, *network constraints*, the availability of *scheduled network services* and *network dispatch offers* are taken into account in the determination of *dispatch* and consequently affect *dispatch prices*, *spot prices* and (apart from *network losses*) *ancillary services prices*;
- (5) where the *energy* output of a *Registered Participant* is limited above or below the level at which it would otherwise have been *dispatched* by NEMMCO on the basis of its *dispatch offer* or *dispatch bid* due to an *ancillary services direction*, the *Registered Participant's dispatch offer* or *dispatch bid* is taken into account in the determination of

*dispatch* but the *dispatch offer* or *dispatch bid* will not be used in the calculation of the *dispatch price* for energy in the relevant *dispatch interval*;

- (5A) *market ancillary service offers*, in other *ancillary services markets*, due to an *ancillary services direction* are taken into account in the determination of *dispatch* and consequently affect *ancillary service prices* in those other *ancillary services markets*;
  - (6) when the *spot price* is determined, it applies to both sales and purchases of electricity at a particular location and time;
  - (6A) when an *ancillary service price* is determined for an *ancillary service*, it applies to purchases of that *ancillary service*;
  - (7) *spot prices* and *dispatch prices* provide *Market Participants* with signals as to the value of providing or cost of consuming electricity at a particular location at a particular time; and
  - (7A) *ancillary service prices* provide *Ancillary Service Providers* with signals as to the value of providing the relevant *market ancillary service* within a particular *region* at a particular time.
- (b) A single *regional reference price* which is the *spot price* at the *regional reference node* provides a reference from which the *spot prices* are determined within each *region*.
  - (c) The *local spot price* at each *transmission network connection point* is the *spot price* at the *regional reference node* for the *region* to which the *connection point* is assigned multiplied by the *intra-regional loss factor* applicable to that *connection point*.

### 3.9.2 Determination of spot prices

- (a) [Deleted]
- (b) [Deleted]
- (c) Each time the *dispatch algorithm* is run by *NEMMCO*, it must determine a *dispatch price* for each *regional reference node* for a *dispatch interval* in accordance with clause 3.8.21(b), provided that if *NEMMCO* fails to run the *dispatch algorithm* to determine *dispatch prices* for any *dispatch interval* then the *dispatch price* for that *dispatch interval* is the last *dispatch price* determined by the *dispatch algorithm* prior to the relevant *dispatch interval*.
- (d) The *dispatch price* at a *regional reference node* represents the marginal value of *supply* at that location and time, this being determined as the price of meeting an incremental change in *load* at that location and time in accordance with clause 3.8.1(b).

- (e) Notwithstanding clauses 3.9.2(c) or (d), for any *dispatch interval* if:
- (1) the *dispatch price* for that *dispatch interval* has not already been set by the *central dispatch* process and NEMMCO reasonably determines that the *central dispatch* process may determine that all *load* in a *region* could not otherwise be supplied and NEMMCO issues instructions that are current for that *dispatch interval* to *Network Service Providers* or *Market Participants* to shed *load*, then NEMMCO must set the *dispatch price* at that *region's regional reference node* to equal *VoLL*;
  - (2) NEMMCO has declared a *dispatch interval* to be an *intervention price dispatch interval* under clause 3.9.3(a), then subject to clauses 3.9.3(c) and 3.9.3(d) NEMMCO must set the *dispatch price* in accordance with clause 3.9.3; and
  - (3) **[Deleted]**
  - (4) an *administered price period* in accordance with rule 3.14 applies, then NEMMCO must limit the *dispatch price* in accordance with clause 3.14.2(d1).
- (f) **[Deleted]**
- (g) **[Deleted]**
- (h) The *spot price* at a *regional reference node* for a *trading interval* equals the time weighted average of the *dispatch prices* at the *regional reference node* for each of the *dispatch intervals* in the *trading interval*, provided that if NEMMCO has made a declaration that the *market* is suspended under clause 3.14.3, then the *spot price* in any *trading interval* during the period during which the *spot market* is suspended must be determined in accordance with clause 3.14.5.
- (i) **[Deleted]**
- (j) **[Deleted]**
- (k) If a test is being conducted on a *generating unit* or *scheduled load* in accordance with clause 3.11.7 and for the purpose of conducting that test, the *generating unit* or *scheduled load* is excluded from *central dispatch*, then that *generating unit* or *scheduled load* cannot be used to set the *dispatch price* for *energy* in the relevant *dispatch interval*.

### 3.9.2A Determination of ancillary services prices

- (a) Each time the *dispatch algorithm* is run by NEMMCO, it must determine an *ancillary service price* for each *market ancillary service* for each *regional reference node* which is to apply until the next time the *dispatch algorithm*

is run, provided that if *NEMMCO* fails to run the *dispatch algorithm* to determine *ancillary service prices* for any *dispatch interval* then the *ancillary service price* for that *dispatch interval* is the last *ancillary service price* determined by the *dispatch algorithm* prior to the relevant *dispatch interval*.

- (b) For each *market ancillary service*, other than the *regulating raise service* and the *regulating lower service*, each time the *dispatch algorithm* is run by *NEMMCO* where a local *ancillary services* constraint has been applied, *NEMMCO* must:
  - (1) calculate the marginal price of meeting any *global market ancillary service requirement* for that service;
  - (2) calculate the marginal price of meeting each *local market ancillary service requirement* for that service and;
  - (3) identify for each *local market ancillary service requirement* the *regions* requiring the service.
- (b1) An *ancillary service price* for a *region* is the sum of:
  - (1) the marginal price of meeting any *global market ancillary service requirement* for that service; and
  - (2) the marginal price of meeting each *local market ancillary service requirement* for that service in that *region*.
- (c) If an *ancillary service price* determined using the *dispatch algorithm* under clause 3.9.2A(a):
  - (1) is less than zero, then the *ancillary service price* is reset to zero; and
  - (2) is greater than *VoLL*, then the *ancillary service price* is reset to *VoLL*.
- (c1) If a marginal price calculated pursuant to clause 3.9.2A(b) is greater than *VoLL*, then that marginal price is reset to *VoLL*.
- (d) If a test is being conducted on a *generating unit* or *scheduled load* in accordance with clause 3.11.7 and for the purpose of conducting that test, the *generating unit* or *scheduled load* is excluded from *central dispatch*, then that *generating unit* or *scheduled load* cannot be used to set *market ancillary service prices*.

### **3.9.2B Pricing where NEMMCO determines a manifestly incorrect input**

- (a) For the purposes of this clause:

“Input” means any value that is used by the *dispatch algorithm* including measurements of *power system* status, five minute demand forecast values,

*constraint* equations entered by *NEMMCO*, or software setup but not including *dispatch bids* and *dispatch offers* submitted by *Registered Participants*.

“Last correct *dispatch interval*” means the most recent *dispatch interval* preceding the affected *dispatch interval* that is not itself an affected *dispatch interval*.

- (b) *NEMMCO* may apply the automated procedures developed in accordance with clause 3.9.2B(h), to identify a *dispatch interval* as subject to review (“a *dispatch interval* subject to review”).
- (c) *NEMMCO* may also determine that a *dispatch interval* is subject to review if *NEMMCO* considers that it is likely to be subject to a manifestly incorrect input, but only where the *dispatch interval* immediately preceding it was a *dispatch interval* subject to review.
- (d) *NEMMCO* must determine whether a *dispatch interval* subject to review contained a manifestly incorrect input to the *dispatch algorithm* (“an affected *dispatch interval*”).
- (e) Where *NEMMCO* determines an affected *dispatch interval*, *NEMMCO* must:
  - (1) replace all *dispatch prices* and *market ancillary services* prices with the corresponding prices for the last correct *dispatch interval*; and
  - (2) recalculate, in accordance with clause 3.9.2(h), and adjust all *spot prices* relevant to each affected *dispatch interval*.
- (f) *NEMMCO* may only carry out the action described in clause 3.9.2B(e) if no more than 30 minutes have elapsed since the publication of the *dispatch prices* for the *dispatch interval* subject to review.
- (g) As soon as reasonably practicable after the action as described in clause 3.9.2B(e), *NEMMCO* must *publish* a report outlining:
  - (1) The reasons for the determination under clause 3.9.2B(d);
  - (2) Whether that determination was correct;
  - (3) What action will be taken to minimise the risk of a similar event in future.
- (h) *NEMMCO* must, in consultation with *Registered Participants*, develop procedures for the automatic identification of *dispatch intervals* subject to review under clause 3.9.2B (b) (the “automated procedures”).

- (i) The purpose of the automated procedures is to detect instances where manifestly incorrect inputs may have resulted in material differences in pricing outcomes.
- (j) The automated procedures must be designed to a performance standard, so that at least the majority of *dispatch intervals* subject to review are found either to:
  - (1) have had manifestly incorrect inputs; or
  - (2) be the result of the *dispatch algorithm* being run with correct inputs immediately after being run with manifestly incorrect inputs.
- (k) At least once each calendar year, *NEMMCO* must review the effectiveness of the automated procedures having regard to the performance standard referred to in clause 3.9.2B(j).
- (l) *NEMMCO* must report on the findings of the review under clause 3.9.2B(k) and must include in that report details of all *dispatch intervals* subject to review that were not affected *dispatch intervals* and an analysis of why such intervals were identified as subject to review.
- (m) If the report demonstrates that the automated procedures have not achieved the performance standards under clause 3.9.2B(j), then *NEMMCO* must carry out a review of the automated procedures, in consultation with *Registered Participants*, and where appropriate, amend the automated procedures.

### 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 the *NEMMCO intervention event* occurred; or



- (2) if applicable, the second *dispatch interval* after the restoration of the *power system* to a *secure operating state* after any *direction* which constitutes the *NEMMCO intervention event* 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 any *direction* which constitutes the *NEMMCO intervention event* to be issued.
- (e) Subject to paragraph (g), *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 3.9.1;
  - (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.
- (g) *NEMMCO* may make minor and administrative amendments to the methodology developed under paragraph (e) without complying with the *Rules consultation procedures*.

#### **3.9.4 VoLL**

- (a) *VoLL* is a price cap which is to be applied to *dispatch prices*.
- (b) The value of *VoLL* is \$10,000/MWh.
- (c) By 30 April each year the *Reliability Panel* must conduct a review in accordance with the *Rules consultation procedures* and publish a report on the value of *VoLL* that it recommends should apply from 1 July in the year commencing 2 years after the year in which the review is conducted. In conducting a review in accordance with this clause 3.9.4(c) the *Reliability Panel* must have regard, in addition to any other *Rules* obligations, to the potential impact of any proposed increase in *VoLL* on:

- 
- (1) *spot prices*;
  - (2) investment in the national electricity market; and
  - (3) the reliability of the *power system*.
- (c1) The value of *VoLL* recommended by the *Reliability Panel* must be a level which the *Reliability Panel* considers will:
- (1) allow the standard for reliability established by the *Reliability Panel* as part of the *power system security and reliability standards* to be satisfied without use of *NEMMCO's* powers to intervene under clauses 3.20.7(a) and 4.8.9(a);
  - (2) in conjunction with other provisions of the *Rules*, not create risks which threaten the overall integrity of the *market*; and
  - (3) take into account any other matters the *Reliability Panel* considers relevant.
- (c2) The *Reliability Panel's* report must set out the conclusions of its review and the recommendation in relation to the level of *VoLL* along with supporting information including:
- (1) details of all relevant *market* conditions and circumstances on which the recommendation is based; and
  - (2) an assessment of whether the level of *VoLL* together with the operation of the *cumulative price threshold* has achieved the objectives set out in clauses 3.9.4(c1)(1) and (2).
- (d) As part of the review conducted pursuant to clause 3.9.4(c), the *Reliability Panel* may review the value of *VoLL* for the year commencing on 1 July in the year following the year in which the current review is conducted. The *Reliability Panel* may only recommend a change to the level of *VoLL* for the year commencing on 1 July in the year following the year in which the review is being conducted where:
- (1) in the *Reliability Panel's* opinion, it is highly probable that the relevant *market* conditions and circumstances on which the recommendation for that year were based as stated in the report from the Panel under clause 3.9.4(c) will not eventuate; and
  - (2) the *Reliability Panel* has given due consideration to the impact of the change to the value of *VoLL* on *Market Participants* and in the event of a decrease in the level of *VoLL*, any alternative arrangements considered necessary to ensure that the reliability standard set out in the *power system security and reliability standards* is maintained.

### 3.9.5 Application of VoLL

- (a) *Dispatch prices at regional reference nodes must not exceed VoLL.*
- (b) If *central dispatch* and determination of *dispatch prices* in accordance with rule 3.8, and clauses 3.9.2 and 3.9.3 would otherwise result in a *dispatch price* greater than *VoLL* at any *regional reference node*, then subject to clause 3.9.5(c), the *dispatch price* at that *regional reference node* must be set to *VoLL*.
- (c) If the *dispatch price* at any *regional reference node* is set to *VoLL* under clause 3.9.2 or clause 3.9.5 then *dispatch prices* at all other *regional reference nodes* connected by a *regulated interconnector* or *regulated interconnectors* that have an *energy flow* towards that *regional reference node* must not exceed the product of *VoLL* multiplied by the average *loss factor* for that *dispatch interval* between that *regional reference node* and the *regional reference node* at which *dispatch prices* have been set to *VoLL* determined in accordance with clause 3.9.5(d).
- (d) *NEMMCO* must determine the average *loss factors* applicable to clause 3.9.5(c) by reference to the *inter-regional loss factor* equations relating to the relevant *regulated interconnector*.

### 3.9.6 Market Floor Price

- (a) The *market floor price* is a price floor which is to be applied to *dispatch prices*.
- (b) The value of the *market floor price* is \$-1,000/MWh.
- (c) By 30 April each year the *Reliability Panel* must, as part of its review of *VoLL* under clause 3.9.4(c), conduct a review in accordance with the *Rules consultation procedures* and publish a report on the value of the *market floor price* that it recommends should apply from 1 July in the year commencing after the year in which the review is conducted.
- (d) The value of the *market floor price* recommended by the *Reliability Panel* must be a level which the *Reliability Panel* considers will:
  - (1) allow the *market* to clear in most circumstances;
  - (2) not create substantial risks which threaten the overall stability and integrity of the *market*; and
  - (3) take into account any other matters the *Reliability Panel* considers relevant.
- (e) The *Reliability Panel's* report must set out the conclusions of its review and the recommendation in relation to the level of the *market floor price*,

including details of all relevant *market* conditions and circumstances on which the recommendation is based.

### 3.9.6A Application of the Market Floor Price

- (a) *Dispatch prices at regional reference nodes* must not be less than the *market floor price*.
- (b) If *central dispatch* and determination of *dispatch prices* in accordance with rule 3.8, and clauses 3.9.2 and 3.9.3 would otherwise result in a *dispatch price* less than the *market floor price* at any *regional reference node*, then subject to clause 3.9.6A(c), the *dispatch price* at that *regional reference node* must be set to the *market floor price*.
- (c) If the *dispatch price* at any *regional reference node* is set to the *market floor price* under clause 3.9.6A then *dispatch prices* at all other *regional reference nodes* connected by a *regulated interconnector* or *regulated interconnectors* that have an *energy flow* towards that *regional reference node* must be equal to or greater than the product of *market floor price* multiplied by the average *loss factor* for that *dispatch interval* between that *regional reference node* and the *regional reference node* at which *dispatch prices* have been set to the *market floor price* in accordance with clause 3.9.6A.
- (d) NEMMCO must determine the average *loss factors* applicable to clause 3.9.6A(c) by reference to the *inter-regional loss factor* equations relating to the relevant *regulated interconnector*.

### 3.9.7 Pricing for constrained-on scheduled generating units

- (a) In the event that an *intra-regional network constraint* causes a *scheduled generating unit* to be *constrained-on* in any *dispatch interval*, that *scheduled generating unit* must comply with *dispatch instructions* from NEMMCO in accordance with its availability as specified in its *dispatch offer* but may not be taken into account in the determination of the *dispatch price* in that *dispatch interval*.
- (b) A *Scheduled Generator* that is *constrained-on* in accordance with clause 3.9.7(a) is not entitled to receive from NEMMCO any compensation due to its *dispatch price* being less than its *dispatch offer price*.

**3.10 [Deleted]**

**3.11 Ancillary Services**

**3.11.1 Introduction**

- (a) *Ancillary services* are services that are essential to the management of *power system security*, facilitate orderly trading in electricity and ensure that electricity supplies are of acceptable quality.
- (b) *Market ancillary services* are *ancillary services* which are acquired by NEMMCO as part of the *spot market* in accordance with this Chapter 3. The prices for *market ancillary services* are determined using the *dispatch algorithm*.
- (c) *Non-market ancillary services* are *ancillary services* which are not acquired by NEMMCO as part of the *spot market*, but under agreements which are entered into following a call for offers in accordance with this rule 3.11. The prices for *non-market ancillary services* are determined in accordance with the relevant *ancillary services agreements*.

**3.11.2 Market ancillary services**

- (a) The *market ancillary services* are:
  - (1) the *fast raise service*;
  - (2) the *fast lower service*;
  - (3) the *slow raise service*;
  - (4) the *slow lower service*;
  - (5) the *regulating raise service*;
  - (6) the *regulating lower service*;
  - (7) the *delayed raise service*; and
  - (8) the *delayed lower service*.
- (b) NEMMCO must make and *publish* a *market ancillary service specification* containing:
  - (1) a detailed description of each kind of *market ancillary service*; and
  - (2) the performance parameters and requirements which must be satisfied in order for a service to qualify as the relevant *market ancillary service* and also when a *Market Participant* provides the relevant kind of *market ancillary service*.

- (c) *NEMMCO* may amend the *market ancillary service specification*, from time to time.
- (d) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the *market ancillary service specification*.
- (e) An amendment to the *market ancillary service specification* must not take effect until at least 30 days after the amendment has been *published*.

### 3.11.3 Acquisition of non-market ancillary services

- (a) *NEMMCO* must use reasonable endeavours to acquire *non-market ancillary services* in accordance with the remaining relevant provisions of rule 3.11.
- (b) The requirement for *NEMMCO* to acquire *non-market ancillary services* referred to in clause 3.11.3(a) must be met in the following ways:
  - (1) by *NEMMCO* setting minimum standards which are to be dealt with in *Registered Participants' connection agreements* for the technical performance of the service; or
  - (2) by *NEMMCO* acquiring *ancillary services* in accordance with this rule 3.11 or giving a *direction* in accordance with clause 4.8.9.
- (c) *NEMMCO* must make and *publish* a set of *minimum technical ancillary service standards* that must be met by all *Registered Participants* who have entered into a *connection agreement*.
- (d) *NEMMCO* may amend the *minimum technical ancillary service standards* from time to time.
- (e) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the *minimum technical ancillary service standards*.
- (f) In setting or amending *minimum technical ancillary service standards*, *NEMMCO* must:
  - (1) take into account the provisions of *connection agreements* existing at the time of setting or amending such standards;
  - (2) ensure that proposed *minimum technical ancillary service standards* do not impose more onerous material obligations on parties to existing *connection agreements*, as a whole, than are imposed by such existing *connection agreements*;
  - (3) take into account and minimise the additional costs overall that may arise from proposed *minimum technical ancillary service standards* for parties to existing *connection agreements* generally; and

- (4) take into account the obligations imposed on parties to *connection agreements* by Chapter 5 of the *Rules* and any applicable *derogation*.
- (g) The *minimum technical ancillary service standards* are not intended to, nor are to be read or construed as having the effect of:
  - (1) altering any term of a *connection agreement*;
  - (2) altering the contractual rights or obligations of any of the parties under a *connection agreement* as between those parties; or
  - (3) relieving the parties under any such *connection agreement* of their contractual obligations under such agreement or obligations under Chapter 5 of the *Rules*.
- (h) An amendment to the *minimum technical ancillary service standards* must not take effect until at least 30 days after the *publication* of the report required under the *Rules consultation procedures*.
- (i) *NEMMCO* is not responsible for payment to a *Registered Participant* for services provided by that *Registered Participant* under a *connection agreement* or under clause 4.9.2(b).
- (j) A *Network Service Provider* must advise *NEMMCO* of all *ancillary services* or similar services to be provided by a *Registered Participant* under a *connection agreement* to which that *Network Service Provider* is a party.
- (k) *NEMMCO* may instruct a *Registered Participant* to provide a *non-market ancillary service* agreed to be provided under a *connection agreement* and any *Registered Participant* so instructed must use reasonable endeavours to comply with any such instruction.

#### **3.11.4 Procedure for determining quantities of network control ancillary services**

- (a) *NEMMCO* must develop and *publish* a detailed description of each *network control ancillary service*.
- (b) *NEMMCO* must develop and *publish* a procedure for determining the quantities of each kind of *network control ancillary service* required for *NEMMCO*:
  - (1) to achieve the *power system security and reliability standards*; and
  - (2) where practicable to enhance *network* transfer capability whilst still maintaining a *secure operating state* when, in *NEMMCO*'s reasonable opinion, the resultant expected increase in *network control ancillary service* costs will not exceed the resultant expected increase in benefits of trade from the *spot market*.

- (c) *NEMMCO* may amend the description developed under clause 3.11.4(a) and the procedure referred to in clause 3.11.4(b).
- (d) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending descriptions or procedures under clause 3.11.4.

#### **3.11.4A Guidelines and objectives for acquisition of system restart ancillary services**

- (a) The objective for *system restart ancillary services* is to minimise the expected economic costs to the *market* in the long term and in the short term, of a *major supply disruption*, taking into account the cost of supplying *system restart ancillary services*, consistent with the *national electricity objective* (the **SRAS objective**).
- (b) *NEMMCO* must use reasonable endeavours to acquire *system restart ancillary services* in accordance with the relevant provisions of clause 3.11.4A.
- (c) Each of the guidelines and *SRAS* description which *NEMMCO* is required to develop and *publish* in accordance with clause 3.11.4A must be:
  - (1) consistent with the *SRAS* objective;
  - (2) designed to ensure the *system restart standard* is met; and
  - (3) designed to ensure that the need for *system restart ancillary services* in each *electrical sub-network* is met, to the extent that it is practicable and reasonable to do so, by *NEMMCO* entering into *ancillary services agreements* for the provision of *primary restart services*.(referred to collectively as the **SRAS procurement objectives**).
- (d) *NEMMCO* must develop and *publish* a detailed description of each type of *system restart ancillary service* in accordance with the guidelines determined by the *Reliability Panel* under clause 8.8.3(aa)(4), which description must identify:
  - (1) whether the *system restart ancillary service* is a *primary restart service* or a *secondary restart service*;
  - (2) the technical and availability requirements of each type of *system restart ancillary service*; and
  - (3) any other matter considered relevant by *NEMMCO*,(the **SRAS description**).



- (e) In order to demonstrate that there is a reasonable degree of certainty that a *facility* is capable of delivering the relevant *system restart ancillary service* if required to do so, *NEMMCO* must develop and *publish* guidelines for undertaking:
  - (1) modelling and assessment of the technical capabilities of *system restart ancillary services* proposed to be submitted as part of a *SRAS* expression of interest or in response to a *NMAS* invitation to tender;
  - (2) physical testing of *system restart ancillary services* as required by the *NMAS* tender guidelines under clause 3.11.5(b)(2); and
  - (3) any other analysis which *NEMMCO* considers appropriate,(the ***SRAS assessment guidelines***).
- (f) *NEMMCO* must develop and *publish* the procedure for determining the number, type and location of *system restart ancillary services* required to be procured for each *electrical sub-network* consistent with the *system restart standard* determined by the *Reliability Panel* (the ***SRAS quantity guidelines***).
- (g) *NEMMCO* may amend the *SRAS* assessment guidelines, the *SRAS* quantity guidelines and the *SRAS* description.
- (h) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the *SRAS* assessment guidelines, the *SRAS* quantity guidelines and the *SRAS* description.

#### **3.11.4B Determination of electrical sub-network boundaries**

- (a) For the purpose of acquiring *system restart ancillary services* and determining and implementing the *system restart plan*, the *power system* is to be divided into *electrical sub-networks*.
- (b) *NEMMCO* must determine the boundaries of the *electrical sub-networks* in accordance with the guidelines determined by the *Reliability Panel* under clause 8.8.3(aa)(5).
- (c) *NEMMCO* must comply with the *Rules consultation procedures* in determining the boundaries of the *electrical sub-networks*.

#### **3.11.5 Tender process for non-market ancillary services**

- (a) Except as provided in clause 4.8.9, if *NEMMCO* proposes to acquire a *non-market ancillary service*, *NEMMCO* must call for offers in accordance with the *NMAS* tender guidelines from persons who are in a position to provide the *non-market ancillary service* so as to have the required effect at a *connection to a transmission network*.

- (b) *NEMMCO* must determine and *publish* the *NMAS* tender guidelines. Separate *NMAS* tender guidelines may be prepared in respect of *network control ancillary services* and *system restart ancillary services*. The *NMAS* tender guidelines must contain the following:
- (1) a requirement for *NEMMCO* to call for *NMAS* expressions of interest before issuing an *NMAS* invitation to tender in relation to any required *non-market ancillary services*;
  - (2) a requirement that a person who is required to provide *SRAS* under an *ancillary services agreement* has the *facility* tested in accordance with:
    - (i) the *SRAS* assessment guidelines referred to in clause 3.11.4A(e); and
    - (ii) the timeframes for physical testing referred to in subparagraph (5);
  - (3) a requirement that a person who is to provide *network control ancillary services* under an *ancillary services agreement* has the *facility* tested in accordance with the *NMAS* tender guidelines;
  - (4) a requirement for a *Network Service Provider* or other *Registered Participant* to assist a prospective tenderer in identifying and, if possible, resolving issues that would prevent the delivery of effective *system restart ancillary services* proposed by a prospective tenderer;
  - (5) the timeframes over which *NEMMCO*'s assessment of *NMAS* tenders and physical testing of selected *non-market ancillary services* will occur;
  - (6) the period for which each *non-market ancillary service* may be contracted;
  - (7) a requirement for a tenderer to provide data, models and parameters of relevant *plant*, sufficient to facilitate a thorough assessment of the *network* impacts and *power station* impacts of the use of the relevant *non-market ancillary service*;
  - (8) the minimum terms and conditions of the *ancillary services agreement* that a successful tenderer would be expected to enter into with *NEMMCO*;
  - (9) the principles *NEMMCO* must adopt in assessing *NMAS* tenders; and
  - (10) any other matter considered appropriate by *NEMMCO*.

- (c) *NEMMCO* may amend the *NMAS* tender guidelines and must comply with the *Rules consultation procedures* when making or amending the *NMAS* tender guidelines.
- (d) A *Registered Participant* is not under any obligation to submit an *NMAS* tender in response to an *NMAS* invitation to tender.
- (e) *NEMMCO* is not under any obligation to accept the lowest priced *NMAS* tender or any *NMAS* tender in response to an *NMAS* invitation to tender.
- (f) A *Network Service Provider* must:
  - (1) negotiate in good faith with a prospective tenderer in respect of issues the *NMAS* tender guidelines require a prospective tenderer to discuss and, if possible, resolve with a *Network Service Provider*; and
  - (2) participate in, or facilitate, testing of a *system restart ancillary service* required by the *NMAS* tender guidelines where it is reasonable and practicable to do so, and when participating in or facilitating such activities, the *Network Service Provider* will be entitled to recover from the relevant *Registered Participant* all reasonable costs incurred by the *Network Service Provider* and for such purposes the activities of the *Network Service Provider* will be treated as *negotiable services*.
- (g) Where a *Registered Participant* submits a *NMAS* tender in response to a *NMAS* invitation to tender and *NEMMCO* wishes to negotiate an aspect of that *NMAS* tender, *NEMMCO* and the *Registered Participant* must negotiate in good faith concerning that aspect.
- (h) Where the tender is for *network control ancillary services*, in assessing any offers submitted in response to a call for offers under this clause 3.11.5, *NEMMCO* must seek to acquire the quantity of the relevant kind of *network control ancillary services* determined in accordance with clause 3.11.4 by competitive tender and in accordance with this clause 3.11.5(h). A tender will be deemed to be a competitive tender for a particular *network control ancillary service* if the required quantity of that service determined in accordance with clause 3.11.4 can be supplied from the conforming offers received by *NEMMCO* with any one conforming offer discarded or all conforming offers from any one party discarded. If a tender process is not deemed to be a competitive tender for a particular *network control ancillary service*, then *NEMMCO* and those *Registered Participants* that submitted conforming and non-conforming tenders selected by *NEMMCO*, must negotiate in good faith to agree reasonable terms and conditions for the supply of the relevant kind of *network control ancillary service*, taking into account the need to:
  - (1) subject to clause 3.11.5(h)(2), so far as practicable minimise the overall cost of supply of that service; and

- 
- (2) appropriately remunerate the providers of the relevant *network control ancillary service* for that service.
- (i) If *NEMMCO* and the *Registered Participants* selected by *NEMMCO* cannot agree on the terms and conditions for the supply of a *network control ancillary service* after 21 *business days* from delivery to the *Registered Participant* of a written notice to negotiate, then either *NEMMCO* or the *Registered Participant* may refer the matter to an *Adviser* for the determination of a dispute as to those terms and conditions in accordance with rule 8.2.
- (j) Subject to clause 3.11.5(k), *NEMMCO* must not acquire *non-market ancillary services* from any person who is not a *Registered Participant*.
- (k) *NEMMCO* may enter into an agreement to acquire *non-market ancillary services* with a person who is not a *Registered Participant* if that agreement includes a condition for the benefit of *NEMMCO* that no *ancillary services* will be provided under the agreement until that person becomes a *Registered Participant*.
- (l) If *NEMMCO* calls for offers under clause 3.11.5(a) in respect of a type of *non-market ancillary service*, *NEMMCO* must give notice to *Registered Participants* when it believes that it has available, under *ancillary services agreements*, a sufficient quantity of that type of *non-market ancillary service* (as determined by applying the procedure developed under clause 3.11.4(b) or clause 3.11.4A(f), whichever is relevant).
- (m) Within 5 *business days* of *NEMMCO* giving a notice under clause 3.11.5(l), *NEMMCO* must *publish* the total quantity of each kind of *network control ancillary service* acquired by *NEMMCO* under *ancillary services agreements* under clause 3.11.5.
- (n) Within 5 *business days* of *NEMMCO* giving a notice under clause 3.11.5(l), *NEMMCO* must *publish*:
- (1) the total estimated annual cost for the provision of *system restart ancillary services*, broken down to charges for availability and use, or other factors that *NEMMCO* considers appropriate for each *electrical sub-network*; and
  - (2) the number of those services procured for each *electrical sub-network*.
- (o) A *Registered Participant* must comply with an *ancillary services agreement* between the *Registered Participant* and *NEMMCO* under which the *Registered Participant* provides one or more *non-market ancillary services*.

- (p) A dispute concerning any aspect, (other than the aspect of price), of a *system restart ancillary services* agreement or a tender conducted by NEMMCO for the acquisition of *system restart ancillary services*, must be dealt with in accordance with rule 8.2.

### **3.11.6 Procedures for the dispatch of non-market ancillary services by NEMMCO**

- (a) NEMMCO must develop procedures for:
  - (1) dispatching each kind of *non-market ancillary service* NEMMCO requires in order to maintain the *power system* in a *secure operating state*; and
  - (2) reporting to *Registered Participants*, on a periodic basis, on the effectiveness of the *dispatch* of *non-market ancillary services* using criteria related to the performance of the *power system* specified in the procedures developed pursuant to clause 3.11.6(a)(1).
- (b) NEMMCO must make the procedures developed under this clause 3.11.6 available to the *Registered Participants*.
- (c) NEMMCO may amend a procedure developed under this clause 3.11.6, from time to time.
- (d) NEMMCO must comply with the *Rules consultation procedures* when making or amending procedures pursuant to clause 3.11.6.

### **3.11.7 Performance and testing**

- (a) In addition to the requirements under rule 4.15, a *Market Participant* which has classified a *generating unit* as an *ancillary service generating unit* or a *market load* as an *ancillary service load* must install and maintain in accordance with the standards referred to in clause 3.11.7(b) monitoring equipment to monitor and record the response of the *ancillary service generating unit* or *ancillary service load* to changes in the *frequency* of the *power system*.
- (b) NEMMCO must develop, and may amend from time to time, standards which must be met by *Market Participants* in installing and maintaining the equipment referred to in clause 3.11.7(a).
- (c) NEMMCO may request a *Market Participant* with an *ancillary service generating unit* or an *ancillary service load* to provide to NEMMCO a report detailing how the relevant facility responded to a particular change or particular changes in the *frequency* of the *power system*. A *Market Participant* must provide a report requested under this clause 3.11.7(c) promptly but, in any event, in no more than 20 *business days* after notice to do so.

- (d) *NEMMCO* may from time to time require a *Registered Participant* which provides a *market ancillary service* under the *Rules* or a *non-market ancillary service* under an *ancillary services agreement* to demonstrate the relevant *plant's* capability to provide the *ancillary service* to the satisfaction of *NEMMCO* according to standard test procedures. A *Registered Participant* must promptly comply with a request by *NEMMCO* under this clause.

## **3.12 Market Intervention by NEMMCO**

### **3.12.1 Intervention settlement timetable**

- (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.
- (b) Subject to clause 3.12.1(a), *NEMMCO* must *publish* a timetable that sets a date for each of *NEMMCO's* and the independent expert's obligations pursuant to clauses 3.12.2, 3.12.3, 3.15.7, 3.15.7A, 3.15.7B, 3.15.8 and 3.15.10C, where required (the "*intervention settlement timetable*").
- (c) *NEMMCO* must at least once a month revise and *publish* the *intervention settlement timetable* to reflect any changes to the *intervention settlement timetable*.

### **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 any *direction* that constituted the *NEMMCO intervention event*, is entitled, in respect of one or more of its *scheduled loads*, to receive an amount calculated by applying the following formula:

$$DC = ((RRP \times LF) - BidP) \times QD$$

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, in *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(a)(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.

### **3.12.3 Role of the Independent Expert in calculating payments in relation to intervention by NEMMCO**

- (a) Subject to clause 3.12.3(a1), if a matter is to be referred to an independent expert pursuant to clauses 3.12.2(l), 3.12.2(m) or 3.15.7B, *NEMMCO* must in accordance with the *intervention settlement timetable* publish a notice of its proposed nominee as independent expert and appoint such nominee.
- (a1) If within 3 *business days* of *publication* of *NEMMCO's* nominee pursuant to clause 3.12.3(a) more than 25% of the *Referred Affected Participants*, *Referred Market Customers* and *Referred Directed Participants* in relation to that *direction* object in writing to *NEMMCO's* nominee *NEMMCO* must, as soon as reasonably practicable thereafter, request the *AEMC* to nominate an independent expert.
- (a2) If a valid objection pursuant to clause 3.12.3(a1) is made, the *AEMC* must, within 3 *business days* of a written request from *NEMMCO*, nominate an independent expert to be appointed by *NEMMCO* for the purposes of this clause 3.12.3.
- (b) *NEMMCO* must provide to the independent expert a copy of all written submissions made by *Referred Affected Participants*, *Referred Market Customers* or *Referred Directed Participants* under clause 3.12.2(f) or 3.15.7B (a).
- (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.
- (c) *NEMMCO* must include as part of the independent expert's terms of appointment the following requirements:

- (1) In accordance with the *intervention settlement timetable* the independent expert must:
  - (i) determine and *publish* a draft report setting out:
    - (A) as appropriate, the total compensation payable by, or receivable by, *Referred Affected Participants* and *Referred Market Customers* under clause 3.12.2(a) pursuant to claims referred to the independent expert pursuant to clauses 3.12.2(l) and 3.12.2(m) in respect of the *intervention price trading interval*;
    - (B) the total amount of compensation payable to *Referred Directed Participants* pursuant to clause 3.15.7B; and
    - (C) the methodology and assumptions, if any, used by the independent expert in making the determination in clauses 3.12.3(c)(1)(ii) and 3.12.3(c)(1)(iii);
  - (ii) notify individual assessments by delivery to each *Referred Affected Participant* and *Referred Market Customer* and to *NEMMCO* of a draft assessment detailing the amount payable or receivable by that party, as the case may be, pursuant to clause 3.12.2(a); and
  - (iii) deliver to each *Referred Directed Participant* and to *NEMMCO* a draft assessment detailing the calculation of the amount of compensation receivable by that party pursuant to 3.15.7B.
- (2) The independent expert must call for submissions from all relevant *Referred Affected Participants*, *Referred Market Customers* and *Referred Directed Participants* after *publishing* the draft report and delivering the draft assessment under clause 3.12.3(c)(1).
- (3) Before the *publication* of the final report and delivery of the final assessment pursuant to clause 3.12.3(c)(4), the independent expert must:
  - (i) if requested to do so by a *Referred Affected Participant*, *Referred Market Customer* or *Referred Directed Participant*, within 15 *business days* of the *publication* of the draft report and draft assessment, meet with *representatives* of the *Referred Affected Participant*, *Referred Market Customer*, or *Directed Participant* to discuss any queries it has in relation to the draft report or draft assessment as appropriate; and
  - (ii) take into consideration, any further written submissions made by a *Referred Affected Participant*, *Referred Market Customer* or *Referred Directed Participant* in relation to the draft report

- or draft assessment, as the case may be, if the independent expert receives those submissions within 15 *business days* of the *publication* of the draft report and draft assessment.
- (4) The independent expert must in accordance with the *intervention settlement timetable*:
- (i) prepare and *publish* a final report;
  - (ii) prepare and deliver his or her final assessment of the amounts payable or receivable by the relevant party pursuant to clause 3.12.2(a) or 3.15.7B, as the case may be; and
  - (iii) deliver to *NEMMCO* a final tax invoice for the services rendered by the independent expert and a copy of all final assessments issued pursuant to clause 3.12.3(c)(ii).
- (5) A report prepared under clauses 3.12.3(c)(1)(i) and 3.12.3(c)(4)(i) must not disclose *confidential information*.
- (6) If the independent expert requires further information than that contained in a written submission made by the *Referred Affected Participant*, *Referred Market Customer* or *Referred Directed Participant* under clause 3.12.2(f) or 3.15.7B(a), the independent expert may advise the relevant party in writing of the information required.
- (7) If the relevant party has not provided that information to the independent expert within 10 *business days* of the date of the request for further information, then the independent expert, acting reasonably, is entitled to make such assumptions concerning that information as he or she thinks appropriate.
- (8) The independent expert must enter into, and deliver, a confidentiality deed for the benefit of each *Referred Affected Participant*, *Referred Market Customer* and *Referred Directed Participant* in a form developed by *NEMMCO* pursuant to clause 3.12.3(e).
- (d) A final report and a final assessment of an independent expert prepared in accordance with clause 3.12.3(c)(4) is final and binding.
- (e) *NEMMCO* must in accordance with the *Rules consultation procedures* prepare and *publish* a confidentiality deed for the purposes of this clause 3.12.3.

## 3.12A Mandatory restrictions

### 3.12A.1 Restriction offers

- (a) *NEMMCO* must develop, and may vary from time to time, in accordance with the *Rules consultation procedures* a *mandatory restrictions* trading system. The trading system must include:
  - (1) procedures for the acquisition by *NEMMCO* of capacity the subject of *restriction offers*;
  - (2) the standard terms and conditions upon which *NEMMCO* shall accept a *restriction offer*;
  - (3) the criteria to be applied by *NEMMCO* in the appointment of an appropriately qualified independent expert for the purposes of clause 3.12A.7(g)(ii); and
  - (4) procedures for the rebidding and *dispatch* of capacity the subject of an *accepted restriction offer*.
- (b) The *restriction offer procedures* must take into account the following principles:
  - (1) *NEMMCO* may accept a *restriction offer* for all or part of the capacity of a *scheduled generating unit* or *scheduled network service*, as recorded in the *registered bid and offer data* for that *scheduled generating unit* or *scheduled network service*.
  - (2) *NEMMCO* must use its reasonable endeavours to acquire capacity from valid *restriction offers* or to terminate in whole or part an *accepted restriction offer* in a manner that minimises the estimated *restriction shortfall amount*.
  - (3) *NEMMCO* may at any time terminate an *accepted restriction offer* in whole or in part by providing 4 hours notice to the relevant *Scheduled Generator* or *Scheduled Network Service Provider* that an *accepted restriction offer* is so terminated.
  - (4) The submission of *restriction offers* must be made in the form and by the means set out in procedures developed and *published* by *NEMMCO* for the purpose of the submission of *restriction offers*.
  - (5) If a *restriction offer* is made in accordance with the *restriction offer procedures*, *NEMMCO* must make available to the parties who submitted the *restriction offer* the following information without delay:
    - (i) acknowledgment of receipt of a valid *restriction offer*; and

- (ii) notification detailing why a *restriction offer* is invalid, if appropriate.
  - (6) If any details contained within a *restriction offer* are inconsistent with the *registered bid and offer data* provided by the relevant party then *NEMMCO* has the right to reject that *restriction offer* as invalid.
  - (7) A valid *restriction offer* must set out for each *trading interval* of a *trading day*:
    - (i) the price offered in \$/MWh or as otherwise permitted by the *restriction offer procedures*; and
    - (ii) MW amount for that *trading interval* being offered.
  - (8) *NEMMCO* must only accept *restriction offers* from *Scheduled Generators* and *Scheduled Network Service Providers* with a *connection point* located in the *region* in which *mandatory restrictions* apply or are proposed to apply.
- (c) The standard terms and conditions developed by *NEMMCO* pursuant to clause 3.12A.1(a)(2) must take into account the following principles:
- (1) All capacity the subject of the *restriction offer* must be available for immediate *dispatch* in the *central dispatch* process at all times.
  - (2) An *accepted restriction offer* is binding and may only be revoked or varied if the *Scheduled Generator* or *Scheduled Network Service Provider* notifies *NEMMCO* in accordance with the *restriction offer procedures* of a revocation or variation. Immediately upon receipt of such notification *NEMMCO* must amend the *accepted restriction offer* to reduce the capacity of the *accepted restriction offer* by the notified capacity. Such capacity must not be *dispatched* by *NEMMCO* pursuant to a *dispatch offer* for such capacity during the remainder of the *trading day* in which the *accepted restriction offer* was revoked or varied in accordance with this clause 3.12.A.1(c) provided that such capacity may be re-offered as a *restriction offer*.
  - (3) A *restriction offer* may be amended or revoked in accordance with the *restriction offer procedures* at any time prior to it becoming an *accepted restriction offer*.

### 3.12A.2 Mandatory restrictions schedule

- (a) *NEMMCO* must, within 4 hours of receipt of a formal written notice from a *Jurisdictional Co-ordinator* advising that the relevant *participating jurisdiction* proposes to invoke *mandatory restrictions*:

- (1) in consultation with such *participating jurisdiction*, and in accordance with any procedures developed with that *participating jurisdiction*, estimate the effect in MW of the *mandatory restrictions* on the *region's* demand for each *trading interval* of the next *trading day* of the proposed *mandatory restriction period*; and
  - (2) prepare and deliver to the *Jurisdictional Co-ordinator* a schedule of capacity for each *trading interval* of the next *trading day* of the proposed *mandatory restriction period* which is approximately equal to the estimated reduction in *regional* demand due to the *mandatory restrictions* net of all *scheduled loads* in that *region*.
- (b) *NEMMCO* must regularly in conjunction with the relevant *Jurisdictional Co-ordinator* review the current *mandatory restriction schedule* and when appropriate prepare and deliver to the *Jurisdictional Co-ordinator* a revised schedule of capacity for each *trading interval* of that *trading day* which is approximately equal to the revised estimated reduction in *regional* demand due to the *mandatory restrictions* net of all *scheduled loads* in that *region*.
- (c) *NEMMCO* may only *publish* a *mandatory restriction schedule* and an amended *mandatory restriction schedule* upon receipt of a formal written notice approving the *mandatory restriction schedule* from the relevant *Jurisdictional Co-ordinator*.

### 3.12A.3 Acquisition of capacity

- (a) *NEMMCO* must immediately upon *publication* of a *mandatory restriction schedule* or an amended *mandatory restriction schedule* use its reasonable endeavours to acquire, in accordance with the *restriction offer procedures*, capacity to meet the *mandatory restriction schedule* or amended *mandatory restriction schedule* as the case may be.
- (b) *NEMMCO* must terminate in accordance with the *restriction offer procedures* such number of *accepted restriction offers*, in whole or in part, so that the total capacity of existing *accepted restriction offers* as far as practicable equals the amended *mandatory restriction schedule*.

### 3.12A.4 Rebid of capacity under restriction offers

In each *dispatch interval* when *mandatory restrictions* apply, each *scheduled generating unit* or *scheduled network service* the subject of an *accepted restriction offer* with respect to that *dispatch interval* must rebid the total capacity the subject of such *restriction offer* by varying the respective *dispatch offers* or *network dispatch offers* in accordance with the procedures developed pursuant to clause 3.12A.1(a)(4).



### 3.12A.5 Dispatch of restriction offers

- (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 loads*, *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 are or 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*.
- (b) Notwithstanding the provisions of this clause 3.12A.5, at no time is NEMMCO required to *dispatch* the capacity of a *Scheduled Generator* or *Scheduled Network Service Provider* the subject of an *accepted restriction offer* if such *dispatch* would prevent NEMMCO from meeting its obligations for system security.

### 3.12A.6 Pricing during a restriction price trading interval

During a *mandatory restriction period*, *dispatch prices* must be determined by the *central dispatch* process based on *dispatch offers*, *dispatch bids* and *network dispatch offers* in accordance with clause 3.9.2, provided that NEMMCO must calculate the *dispatch price* as if the *dispatch offer price* for all capacity the subject of an *accepted restriction offer* was the maximum price permitted by clause 3.8.6(h) and 3.8.6A(i) notwithstanding any other provision of the *Rules*.

### 3.12A.7 Determination of funding restriction shortfalls

- (a) NEMMCO is entitled to the *trading amount* received by *Scheduled Generators* and *Scheduled Network Service Providers* from the *dispatch* of capacity the subject of an *accepted restriction offer* in accordance with 3.15.10B.
- (b) NEMMCO must, as soon as reasonably practicable following the end of a *mandatory restriction period*, calculate:

- (i) the aggregate amount payable to *NEMMCO* pursuant to clause 3.12A.7(a) from all *accepted restriction offers* in that *mandatory restriction period*;
  - (ii) the aggregate amount payable by *NEMMCO* pursuant to all *accepted restriction offers* in that *mandatory restriction period*; and
  - (iii) the sum of the amount determined under clause 3.12A.7(b)(i) less the amount determined under clause 3.12A.7(b)(ii) (the '*restriction shortfall amount*').
- (b1) The maximum amount payable to a *Scheduled Generator* or *Market Participant* for any *accepted restriction offer* of that *Scheduled Generator* or *Market Participant* during a *mandatory restriction period* is the aggregate of the maximum possible *spot price* for each *trading interval* within the *mandatory restriction period*, being *VoLL* or an *administered price cap* as the case may be, multiplied by the capacity of the *accepted restriction offer* in MWh for each corresponding *trading interval*.
- (c) Notwithstanding any other provisions of the *Rules*, the absolute value of the *restriction shortfall amount* must not exceed the sum of the maximum possible *spot price* for a *trading interval*, being *VoLL* or an *administered price cap* as the case may be, multiplied by the aggregate of the capacity of all *accepted restriction offers* in MWh for that *trading interval* for all *trading intervals* in the *mandatory restriction period*.
- (d) Notwithstanding any other provision of the *Rules*, if the *restriction shortfall amount* is capped pursuant to clause 3.12A.7(c) and the *restriction shortfall amount* calculated pursuant to clause 3.12A.7 is a negative number, then the amount payable by *NEMMCO* pursuant to each *accepted restriction offer* is to be reduced pro-rata until clause 3.12A.7(c) is satisfied.
- (e) If the *restriction shortfall amount* is a negative number, *Market Customers* in the relevant *region* must pay to *NEMMCO* an amount determined in accordance with clause 3.12A.7(f) or 3.12A.7(g).
- (f) If the *restriction shortfall amount* is between minus \$100,000 and \$0, then each *Market Customer* in the relevant *region* must pay to *NEMMCO* an amount determined in accordance with the following formula:

$$MCP = RSA \quad \times \quad \frac{(AGE)}{(AAGE)}$$

Where:

MCP is the amount payable by a *Market Customer* in accordance with this clause 3.12A.7(f).

RSA is the *restriction shortfall amount*.

AGE is the *adjusted gross energy* of a *Market Customer* in that *region* for the *mandatory restriction period* expressed in MWh.

AAGE is the aggregate of the *adjusted gross energy* of all *Market Customers* in that *region* for the *mandatory restriction period* expressed in MWh.

(g) If the *restriction shortfall amount* is less than minus \$100,000:

(i) each *Market Customer* in the relevant *region* must pay to *NEMMCO* an amount determined in accordance with the following formula:

$$RCP = (RSA + IE) \times (RD/TRD)$$

Where

RCP is the amount payable to *NEMMCO* by a *Market Customer* in that *region* following the cessation of the *mandatory restriction period*.

RSA is the *restriction shortfall amount* incurred by *NEMMCO* upon the cessation of the *mandatory electricity restriction period*.

RD is the *Market Customer's restriction demand reduction*.

TRD is the sum of RD for all *Market Customers* in the relevant *region*.

IE is the amount of the independent expert's final tax invoice delivered to *NEMMCO* in accordance with clause 3.12A.7(i)(11) plus any amounts payable by *NEMMCO* on behalf of the independent expert as determined by the *dispute resolution panel* established in accordance with clause 3.12A.7(m); and

(ii) *NEMMCO* must within 10 days of the end of a *mandatory restriction period* appoint an appropriately qualified independent expert as *NEMMCO's* agent to determine the *restriction demand reduction* claimed by each *Market Customer* in a *region* for the purposes of clause 3.12A.7(g).

(h) If the *restriction shortfall amount* is a positive number then *NEMMCO* must pay to *Market Customers* in the relevant *region* an amount equal to:

$$RCRP = RSA \quad \times \quad \frac{(AGE)}{\quad}$$

---

(AAGE)

Where:

RCRP is the payment to be made by *NEMMCO* to *Market Customers* pursuant to this clause 3.12A.7.

RSA is the *restriction shortfall amount*.

AGE is the *adjusted gross energy* of a *Market Customer* in that *region* for the *mandatory restriction period* expressed in MWh.

AAGE is the aggregate of the *adjusted gross energy* of all *Market Customers* in that *region* for the *mandatory restriction period* expressed in MWh.

- (i) When appointing the independent expert under clause 3.12A.7(g), *NEMMCO* must include as part of the independent expert's terms of appointment the following requirements:
- (1) The independent expert must prepare a statement of the principles which the independent expert believes should be followed in determining the *restriction demand reduction* of *Market Customers*.
  - (2) Within 5 *business days* of his or her appointment, the independent expert must provide *NEMMCO* with details of his or her estimated fees and costs.
  - (3) Within 5 *business days* of his or her appointment, the independent expert must provide the statement prepared under clause 3.12A.7(i)(1) to all *Market Customers* in the relevant *region* and request that each *Market Customer* in the relevant *region* provide him or her with details of the *restriction demand reduction* claimed by that *Market Customer* and such additional information specified by the independent expert to fulfil its obligations.
  - (4) The independent expert must offer to meet with and consult each *Market Customer* who may be liable to make a payment to *NEMMCO* pursuant to clause 3.12A.7(g).
  - (5) The independent expert must within 30 *business days* of his or her appointment or such later date as approved by *NEMMCO* in its sole discretion:
    - (i) *publish* a draft report; and
    - (ii) provide each *Market Customer* in the relevant *region* with a draft statement.

- (6) The draft report must contain:
- (i) the *restriction shortfall amount* based upon the independent expert's estimated fees and costs; and
  - (ii) the methodology used by the independent expert in determining the *restriction demand reduction* of each *Market Customer* in a *region*.

The draft report must not contain details pertaining to individual *Market Customers*.

- (7) A draft statement provided to a *Market Customer* must contain:
- (i) the *Market Customer's restriction demand reduction* as determined by the independent expert;
  - (ii) the estimated amount payable by that *Market Customer* under clause 3.12A.7(g), based upon the independent experts estimated fees and costs; and
  - (iii) information showing how the estimated amount referred to in clause 3.12A.7(i)(7)(ii) was calculated.
- (8) The independent expert must within 50 *business days* of his or her appointment or such later date as approved by *NEMMCO* in its sole discretion make any necessary amendments to his or her draft report and draft statements following consultation with *Market Customers*, and:
- (i) *publish* his or her final report; and
  - (ii) provide each *Market Customer* in the relevant *region* with a final statement.
- (9) The independent expert's final report must contain the information set out in clause 3.12A.7(i)(6).
- (10) A final statement provided to a *Market Customer* by the independent expert must contain the information set out in clause 3.12A.7(i)(7).
- (11) The independent expert must provide *NEMMCO* with his or her final tax invoice for services rendered at the time of publication of the final report.
- (i1) Each *Market Customer* must within 10 *business days* of the independent expert requesting information in accordance with clause 3.12A.7(i)(3) deliver to the independent expert all such information.

- 
- (i2) The independent expert may request a *Market Customer* to provide further information that he or she requires to prepare either the draft or final report or a draft or final statement within 5 *business days* of the request being made.
  - (j) A *Market Customer* must not unreasonably withhold information sought by the independent expert and must use its reasonable endeavours to provide the independent expert with the information required within the relevant timeframe specified in this clause 3.12A.7.
  - (k) If a *Market Customer* has not provided the independent expert with information required under this clause 3.12A.7 within the specified time period, then the independent expert is entitled to make such assumptions concerning that information as he or she thinks appropriate.
  - (l) Subject to the review process specified in clause 3.12A.7(m), a determination made by an independent expert appointed under clause 3.12A.7(g) binds all *Market Customers*.
  - (m) Following the publication of the independent expert's final report, a *Market Customer* may request the *Adviser* to establish a *dispute resolution panel* to redetermine that *Market Customer's restriction demand reduction* only if the *Market Customer* reasonably believes that the independent expert's determination:
    - (1) has incorrectly assessed the *restriction demand reduction* of that *Market Customer* by more than 10%; or
    - (2) was made negligently or in bad faith.
  - (n) The determination of a *dispute resolution panel* established under clause 3.12A.7(m):
    - (1) binds all *Market Customers* and each *Market Customer* must comply with a determination of the *dispute resolution panel*; and
    - (2) may only order reimbursement of the reasonable fees and expenses incurred by a *Market Customer* in disputing the independent expert's determination and no other amounts.
  - (o) Any amounts determined by the *dispute resolution panel* as payable by *NEMMCO* on behalf of the independent expert for the reasonable fees and expenses incurred by a *Market Customer* in disputing the independent expert's determination must be included on the next statement provided under clauses 3.15.14 and 3.15.15.

### 3.12A.8 Cancellation of a mandatory restriction period

- (a) At the cessation time designated in the *mandatory restriction schedule*, *NEMMCO* must:
  - (1) immediately terminate all current *restriction offers*; and
  - (2) *publish* a notice detailing the termination of all current *restriction offers* following the cancellation of the relevant *mandatory restriction period*.

### 3.12A.9 Review by AEMC

- (a) The *AEMC* must, in accordance with clause 3.12A.9(b), conduct a review of the operation of the provisions applicable to *mandatory restrictions* including:
  - (1) the integration of *restriction offers* and *mandatory restrictions* into the *market*; and
  - (2) any other matters which the *AEMC* reasonably believes are relevant to the operation of clauses 3.12A.1 to 3.12A.8 and clause 3.15.10B.
- (b) The review conducted by the *AEMC* in accordance with clause 3.12A.9(a) must:
  - (1) include an analysis of:
    - (i) the accuracy of the forecast demand reduction due to restrictions and the impact any error had on the resulting *spot price*;
    - (ii) whether the impact on the *spot price* resulting from an error in the forecast demand reduction due to restrictions adversely affects one group of *Scheduled Generators* or *Market Participants* over another group;
    - (iii) the *restriction offer* prices for contracts accepted by *NEMMCO* in meeting the *mandatory restriction schedule* including a comparison with the expected revenue the capacity subject to the *restriction offer* would have earned in the *spot market* taking into account the circumstances in which *restriction offers* were made;
  - (2) be conducted in accordance with the *Rules consultation procedures*; and
  - (3) commence following the first application of the *mandatory restrictions* where the estimated effect in MW of *mandatory*

*restrictions* on a *region's* demand met or exceeded 10% of that *region's* estimated demand for the same period.

### 3.13 Market Information

#### 3.13.1 Provision of information

- (a) In addition to any specific obligation or power of *NEMMCO* under the *Rules* to provide information, *NEMMCO* must make available to *Scheduled Generators* and *Market Participants* on request any information concerning the operation of the *market* not defined by the *AEMC* or the *Rules* as confidential or commercially sensitive and may charge a fee reflecting the cost of providing any information under this clause 3.13.1(a).
- (b) *NEMMCO* must make information available to the public on request in respect of the *regional reference price* at any *regional reference node* and, where requested and available, reasons for any significant movements in prices.

#### 3.13.2 Systems and procedures

- (a) Information must be provided to *NEMMCO* and by *NEMMCO* on the *electronic communication system* unless otherwise approved by *NEMMCO*. In circumstances where the *electronic communication system* is partially or wholly unavailable then information will, to the extent of that unavailability, be provided to *NEMMCO* and by *NEMMCO* by means of the backup procedures specified by *NEMMCO* from time to time.
- (b) Information must be provided by using the templates supplied in the *electronic communication system* unless otherwise approved by *NEMMCO*.
- (c) Where approved by *NEMMCO*, information may be transmitted to and from *NEMMCO* and the *Scheduled Generator* or *Market Participant* concerned in any agreed format.
- (d) If possible, information provided to *NEMMCO* must be *time stamped* by *NEMMCO* on receipt by *NEMMCO* of the information by the *electronic communication system* and, if stamped, is deemed to be provided at the time indicated by the *time stamp*.
- (e) Information that is *published* by *NEMMCO* is deemed to be *published* when the information is placed on the *market information bulletin board*.
- (f) The *market information bulletin board* must be accessible by *Scheduled Generators* and *Market Participants* via the *electronic communication system* subject to applicable security requirements.
- (g) Information *published* or notified to a *Scheduled Generator* or *Market Participant* must be capable of being reviewed by that *Scheduled Generator*



or *Market Participant* and be capable of being downloaded from the *market information bulletin board* to the *Scheduled Generator* or *Market Participant* via the *electronic communication system*.

- (h) All *Scheduled Generators* and *Market Participants* must notify *NEMMCO* of, and *NEMMCO* must *publish*, any *changes* to submitted information within the times prescribed in the *timetable*.
- (i) *NEMMCO* must make a copy of all *changes* to the data available to each *Scheduled Generator* and *Market Participant* for verification and resubmission by the *Scheduled Generator* or *Market Participant* as necessary.
- (j) All revisions must be provided on the *electronic communication system* and in the same format as the original information.
- (k) A *Scheduled Generator* or *Market Participant* may withhold information from *NEMMCO* which must otherwise be provided under the *Rules* if:
  - (1) the information is of a confidential or commercially-sensitive nature and is not information of a kind that, in the reasonable opinion of the *AEMC*, is fundamental to the efficient operation of the *market*; or
  - (2) disclosure of the information would have the likely effect of causing detriment to the person required to provide it unless, in the reasonable opinion of the *AEMC*, the public benefit resulting from the provision of the information outweighs that detriment.
- (l) **[Deleted]**
- (m) Nothing in clause 3.13.2(k) allows a *Scheduled Generator* or *Market Participant* to avoid providing information to *NEMMCO* under the *Rules* where that information is generally available.

### 3.13.3 Standing data

- (a) *NEMMCO* must establish, maintain, update and *publish*:
  - (1) a list of all of the *Scheduled Generators* and *Market Participants* and a list of all applications to become a *Scheduled Generator* or *Market Participant*, including the *Scheduled Generator* and *Market Participant* information as set out in schedule 3.1;
  - (2) a list of all of the *Scheduled Generators* and *Market Participants* who will cease to be *Scheduled Generators* or *Market Participants* and the time that each listed *Scheduled Generator* or *Market Participant* will cease to be a *Scheduled Generator* or *Market Participant*;
  - (3) a list of all of the *Scheduled Generators* and *Market Participants* who are or are going to be suspended and the time at which each listed

---

*Scheduled Generator or Market Participant* was suspended or will be suspended.

- (b) All *Scheduled Generators* and *Market Participants* must provide *NEMMCO* with the *registered bid and offer data* relevant to their *scheduled loads, scheduled network services* and *generating units* in accordance with schedule 3.1.
- (c) All *Scheduled Generators* and *Market Participants* will be required to provide *NEMMCO* with information as set out below:
  - (1) forecasts for *connection points* as prescribed in clause 5.6.1; and
  - (2) *metering* information for *settlements* purposes as prescribed in Chapter 7.
- (d) *Network Service Providers* are to maintain a register of data provided by *Scheduled Generators* and *Market Participants* for planning and design purposes in accordance with schedule 5.7 of Chapter 5 and are to provide a copy of this register of data to *NEMMCO* on request and in a form specified by *NEMMCO*.
- (e) *Network Service Providers* must, without delay, notify and provide *NEMMCO* with details of any additions or *changes* to the register of data described in clause 3.13.3(d).
- (f) Each year, by a date to be specified by *NEMMCO*, *Network Service Providers* must provide *NEMMCO* with the following information:
  - (1) expected *network capability* under normal, *outage* and emergency conditions;
  - (2) electrical data sufficient to allow *power system* modelling under steady state and dynamic conditions, this data to be made available in hard copy and an acceptable industry standard electronic format approved by *NEMMCO*; and
  - (3) operating procedures and practices for *network* operation and maintenance.
- (g) *Network Service Providers* must notify *NEMMCO* of any *changes* to the information provided under clause 3.13.3(f) as soon as practicable.
- (h) *Scheduled Generators* and *Market Participants* must notify *NEMMCO* of any *changes* to *registered bid and offer data* one month prior to the implementation of planned *changes* and without unreasonable delay in the event of unplanned *changes*.
- (i) *Network Service Providers* must notify *NEMMCO* of any *changes* or additions to technical data one month prior to the implementation of

- planned *changes* and without unreasonable delay in the event of unplanned *changes*.
- (j) *NEMMCO* must conduct an annual review of *Scheduled Generator* and *Market Participant registered bid and offer data* in consultation with *Scheduled Generators* and *Market Participants* and *Scheduled Generators* and *Market Participants* must advise *NEMMCO* of any required *changes* to the data.
  - (k) Subject to the requirements relating to disclosure of information under clause 5.3.8(a), a *Registered Participant* may request from *NEMMCO*:
    - (1) *registered bid and offer data*;
    - (2) information that is reasonably required by the *Registered Participant* to carry out *power system* studies (including load flow and dynamic simulations) for planning and operational purposes including:
      - (i) historical information relating to the operating conditions of the *power system* that is not *confidential information*;
      - (ii) information and data provided to *NEMMCO* under paragraphs (f)(1), (f)(3) and (g); and
      - (iii) details of the shared *transmission* and *distribution network* impedance data and other technical data as listed in schedules 5.5.3 and 5.5.4; and
    - (3) operation and maintenance procedures and practices for *transmission network* or *distribution network* operation, developed for the purposes of schedule 5.1 sufficient to enable the *Registered Participant* to carry out *power system* modelling under normal, *outage* and emergency conditions.
  - (l) Where *NEMMCO* holds information requested under paragraph (k), it must be provided to the *Registered Participant* as soon as practicable.
  - (m) Where special approvals or exemptions have been granted by *NEMMCO*, including approval to aggregate *generating units*, *market network services*, *loads* for *central dispatch*, or exemptions from *central dispatch*, details of such special arrangements must be *published* by *NEMMCO*.
  - (n) *NEMMCO* must determine and *publish intra-regional loss factors* in accordance with clause 3.6.2 by 1 April each year and whenever changes occur.
  - (o) *Network Service Providers* must advise *NEMMCO* of their *distribution loss factors*, duly authorised by the *AER*, and *NEMMCO* must *publish* such *distribution loss factors* in accordance with clause 3.6.3(i).

- (p) *NEMMCO* must *publish* on a quarterly basis details of:
- (1) *interconnector* transfer capability; and
  - (2) the discrepancy between *interconnector* transfer capability and the capacity of the relevant *interconnector* in the absence of *outages* on the relevant *interconnector* only,

for each day of the preceding quarter for all *interconnectors*.

### **Statement of opportunities**

- (q) By 31 October in each year, *NEMMCO* must prepare and *publish* at a reasonable charge to cover the cost of production, a *statement of opportunities*, including at least the following information for the subsequent 10 year period:
- (1) projections of aggregate MW demand and *energy* requirements for each *region*;
  - (2) generating capabilities of existing *generating units* and *generating units* for which formal commitments have been made for construction or installation;
  - (3) planned *plant* retirements;
  - (4) a summary of *network capabilities* and *constraints* based upon *Annual Planning Reports*; and
  - (5) operational and economic information about the *market* to assist planning by:
    - (i) *Scheduled Generators* and *Market Participants*; and
    - (ii) potential *Scheduled Generators* and *Market Participants*.
- (r) If after the publication of the most recent *statement of opportunities*, significant new information becomes available to *NEMMCO* relating to:
- (1) the matters covered by paragraphs (q)(1),(2) and (3); or
  - (2) the matters covered by clause 5.6.5(c)(8) and (9),

*NEMMCO* must, as soon as practicable, *publish* that information in a descriptive form that is consistent with the *statement of opportunities*.

- (s) In preparing a *statement of opportunities* *NEMMCO* may seek the assistance of the *Inter-regional Planning Committee*.

- (t) As soon as practicable after a *Scheduled Generator, Market Participant* or *Network Service Provider* becomes aware of any information required for *publication* by NEMMCO under paragraph (q), that information must be provided to NEMMCO by that *Scheduled Generator, Market Participant* or *Network Service Provider*.
- (u) By 1 November each year, NEMMCO must prepare and provide a report to the *Reliability Panel* 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*.
- (v) The *Reliability Panel* must *publish* each report provided to it under paragraph (u) within ten *business days* after being provided with that report.

#### 3.13.4 Spot market

- (a) Each week, in accordance with the *timetable*, NEMMCO must *publish* details of the outcome of the *medium term PASA*.
- (b) The details to be *published* by NEMMCO under clause 3.13.4(a) must include the information specified in clause 3.7.2(f).
- (c) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* details of the outcome of the *short term PASA* for each *trading interval* covered.
- (d) The details of the *short term PASA published each day* by NEMMCO under clause 3.13.4(c) must include the information specified in clause 3.7.3(h).
- (e) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* a half hourly *pre-dispatch schedule* for the period described in clause 3.8.20(a).
- (f) Details of the *pre-dispatch schedule* to be *published* must include the following for each *trading interval* in the period covered:
  - (1) forecasts of the most probable peak *power system load* plus required *scheduled reserve* for each *region* and for the total *power system*;
  - (2) forecasts of the most probable *energy consumption* for each *region* and for the total *power system*;
  - (3) forecast *inter-regional loss factors*;
  - (4) aggregate *generating plant* availability for each *region* and aggregate availability of each type of *market ancillary service* for each *region*;

- 
- (5) projected *supply* surpluses and deficits for each *region*, including shortages of *scheduled reserve* and projected *market ancillary service* surpluses and deficits for each *region*;
- (5A) the aggregated MW allowance (if any) made by *NEMMCO* for generation from *non-scheduled generating systems* in each forecast:
- (i) of the most probable peak *power system load* referred to in clause 3.13.4(f)(1);
  - (ii) referred to in clause 3.13.4(f)(2);
  - (iii) of aggregate *generating plant* availability referred to in clause 3.13.4(f)(4); and
  - (iv) of projected *supply* surpluses and deficits referred to in clause 3.13.4(f)(5) but not including shortages of *scheduled reserve* or projected *market ancillary service* surpluses and deficits for each *region*.
- (5B) in respect of each forecast:
- (i) of the most probable peak *power system load* referred to in clause 3.13.4(f)(1);
  - (ii) referred to in clause 3.13.4(f)(2);
  - (iii) of aggregate *generating plant* availability referred to in clause 3.13.4(f)(4); and
  - (iv) of projected *supply* surpluses and deficits referred to in clause 3.13.4(f)(5) but not including shortages of *scheduled reserve* or projected *market ancillary service* surpluses and deficits for each *region*,
- a value that is the sum of that forecast and the relevant aggregated MW allowance (if any) referred to in clause 3.13.4(f)(5A); and
- (6) identification and quantification of:
- (i) when and where the projected conditions are found to be inadequate;
  - (ii) any *trading intervals* for which *low reserve* or *lack of reserve* conditions are forecast to apply;
  - (iii) where a projected *supply* deficit in one *region* can be supplemented by a surplus in a neighbouring *region* (dependent on forecast *interconnector* capacities) and the expected *interconnector flow*;

- (iv) forecast *interconnector* transfer capabilities and the projected impact of any *inter-network tests* on those transfer capabilities; and
  - (v) when and where *network constraints* may become binding on the *dispatch* of generation or load.
- (g) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* forecasts of *spot prices* and *ancillary service prices* at each *regional reference node* for each *trading interval* or *dispatch interval* (as applicable) of the period described in clause 3.8.20(a), with such forecasts being based on the *pre-dispatch schedule* information.
- (h) Together with its forecast *spot prices*, NEMMCO must *publish* details of the expected sensitivity of the forecast *spot prices* to changes in the forecast *load* or *generating unit* availability.
- (i) In accordance with the *timetable* or more often if there is a *change* in circumstances which in the opinion of NEMMCO results in a significant *change* in forecast *spot price*, or in any event no more than 3 hours after the previous such publication, NEMMCO must prepare and *publish* updated *pre-dispatch schedules* and *spot price forecasts*, including the details specified in clause 3.13.4(f).
- (j) If NEMMCO considers there to be a significant change in a forecast *spot price*, NEMMCO must identify and *publish* the cause of such a change in terms of the aggregate *supply* and demand situation and any *network constraints* in or between the affected *region(s)*.
- (k) NEMMCO must specify and *publish* its criteria for a significant change in forecast *spot price* for the purposes of activating an update in the *published* forecasts.
- (l) Within 5 minutes of each time NEMMCO runs the *dispatch algorithm*, NEMMCO must *publish* the *dispatch price* for each *regional reference node* calculated in accordance with clause 3.9.2 and the *ancillary service price* for each *market ancillary service* for each *regional reference node* calculated in accordance with clause 3.9.2A.
- (m) Within 5 minutes of the conclusion of each *trading interval*, NEMMCO must *publish* the *regional reference prices* for each *region* for that *trading interval*.
- (n) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* the actual *regional reference prices*, *ancillary service prices*, *regional* and total *interconnected system loads* and *energies*, *inter-regional* flows, *inter-regional loss factors* and details of any *network constraints* for each *trading interval* in the previous *trading day*.

- (o) Within 2 *business days* of an event whereby a *scheduled generating unit* has been *constrained off* or *constrained on* in the *central dispatch* by a *network constraint* within its own *region*, NEMMCO must advise the *Scheduled Generator* and *Network Service Provider*, with whom the relevant *Scheduled Generator* has a *connection agreement* in respect of that *scheduled generating unit*, of the following information:
  - (1) the *dispatch intervals* in which the *constraint* applied; and
  - (2) NEMMCO's reasonable estimate of the MW quantities at which the *scheduled generating unit* would otherwise have been *dispatched* in each relevant *trading interval* in accordance with its *dispatch offer* and in the absence of the *network constraint*.
- (p) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* details of final *dispatch offers*, *dispatch bids* and *market ancillary service offers* received and actual availabilities of *generating units*, *scheduled network services*, *scheduled loads* and *market ancillary services* for the previous *trading day*, including:
  - (1) the number and times at which *rebids* were made, and the reason provided by the *Scheduled Generator* or *Market Participant* for each *rebid* under clause 3.8.22(c)(2).
  - (2) identification of the *Scheduled Generator* or *Market Participant* submitting the *dispatch bid*, *dispatch offer* or *market ancillary offer*;
  - (3) the *dispatch bid* or *dispatch offer prices*;
  - (4) quantities for each *trading interval*;
  - (5) the *ramp rate* of each *generating unit*, *scheduled load* and *scheduled network service* as measured by NEMMCO's telemetry system; and
  - (6) identification of *trading intervals* for which the *plant* was specified as being *inflexible* in accordance with clause 3.8.19 and the reasons provided by the *Scheduled Generator* or *Market Participant* in accordance with clause 3.8.19(b)(1)
- (q) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* details of actual *generation*, *dispatched generation*, *dispatched network service* or *dispatched load* for each *scheduled generating unit*, *scheduled network service* and *scheduled load*, respectively, in each *trading interval* for the previous *trading day*.
- (r) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* details of actual *generation* for each *non-scheduled generating unit* or *non-scheduled generating system*, in each *trading interval* for the previous *trading day*.



- (s) Where *NEMMCO publishes* details as referred to in clause 3.13.4(r), the requirement to *publish* applies only to data available to *NEMMCO*.
- (t) *NEMMCO* may, in *publishing* the details referred to in clause 3.13.4(s), *publish* aggregated information of actual *generation* for *non-scheduled generating units* or *non-scheduled generating systems* that have a *nameplate rating* that is less than 30 MW.
- (u) Each time *NEMMCO* runs the *dispatch algorithm* it must, within 5 minutes, *publish* for the relevant *dispatch interval*:
  - (1) details of any MW allowance made by *NEMMCO* for *generation* from *non-scheduled generating systems* in its forecast regional demand;
  - (2) for each *regional reference node* the sum of the actual *generation* for each *non-scheduled generating unit* or *non-scheduled generating system*; and
  - (3) for each *regional reference node*, a value that is the sum of the *regional demand* value used by *NEMMCO* in its *dispatch algorithm* to calculate the *dispatch price* referred to in clause 3.13.4(1) and the sum of the actual *generation* referred to in clause 3.13.4(u)(2).
- (v) Where *NEMMCO publishes* the information referred to in clause 3.13.4(u), the requirement for *NEMMCO* to *publish* applies only to data available to *NEMMCO*.
- (w) Each *day*, in accordance with the *timetable*, *NEMMCO* must *publish* details of any operational irregularities arising on the previous *trading day* including, for example, any circumstances in which there was *prima facie* evidence of a failure to follow *dispatch instructions*.
- (x) Each *trading interval*, *NEMMCO* must, for each *regional reference node*, *publish* the demand for that *trading interval*, both inclusive and exclusive of the aggregate actual *generation* from *non-scheduled generating systems*.

#### 3.13.4A Market ancillary services

(a) *NEMMCO* must each *day*, in accordance with the *timetable*, *publish* a forecast of the requirements for each type of *market ancillary service* for each *region* for each *trading interval* during the period described in clause 3.8.20(a).

(b) *NEMMCO* must *publish* information describing the key factors which determine the requirement for each type of *market ancillary service* and how they impact on forecast requirements.

**Deleted:** (a) *NEMMCO* must each week, in accordance with the *timetable*, *publish* a forecast of the requirements for each type of *market ancillary service* for each *region* for the following week.

- (c) *NEMMCO* must *publish* information detailing any significant changes to the forecast requirement for any *market ancillary service* previously *published* under clause 3.13.4A(a), as soon as reasonably practicable after becoming aware of that information.

### **3.13.5 Ancillary services contracting by NEMMCO**

- (a) *NEMMCO* must *publish* annually the costs of all of its operations associated with the acquisition of *market ancillary services* and *non-market ancillary services*.
- (b) *NEMMCO* must *publish* annually the quantities and categories of *non-market ancillary services* covered under existing *ancillary services agreements* and the additional quantities of *non-market ancillary services* for which *NEMMCO* expects to enter into *ancillary services agreements* within the ensuing 12 months.
- (c) Information published under clauses 3.13.5(a) or (b) must include:
  - (1) the costs and quantities associated with each category of *ancillary service* purchased or to be purchased; and
  - (2) where possible, the *regions* in respect of which costs were or are expected to be incurred and *ancillary services* were or are expected to be provided.

#### **3.13.5A Settlement residue auctions**

- (a) If *NEMMCO* conducts an *auction* under rule 3.18, *NEMMCO* must, as soon as practicable thereafter, make available to all *Registered Participants* a report outlining:
  - (1) the *auction* clearing prices;
  - (2) all bids (but not the name of any bidder); and
  - (3) the proceeds of each such *auction*.
- (b) *NEMMCO* must, as soon as practicable after the *final statements* for a *billing period* have been given to *Market Participants* under clause 3.15.15, make available to all *Registered Participants* a report setting out:
  - (1) the total *settlements residue*;
  - (2) the amount of *settlements residue* attributable to each *directional interconnector* (including the amount paid pursuant to the *jurisdictional derogations* in Chapter 9); and
  - (3) the amount of *settlement residue* attributable to *intra-regional loss factors* for each *region*, for that *billing period*.

- (c) *NEMMCO* may provide copies of its reports under clauses 3.13.5A(a) and (b) to persons other than *Registered Participants*, and may charge a fee for doing so to cover an appropriate share of the costs of preparing the report.

### 3.13.6 [Deleted]

#### 3.13.6A Report by NEMMCO

- (a) *NEMMCO* must, as soon as reasonably practicable after issuing a *direction*, *publish* a report outlining:
  - (1) the circumstances giving rise to the need for the *direction*;
  - (2) the basis on which it determined the latest time for that *direction* and on what basis that it determined that a *market* response would not have avoided the need for the *direction*;
  - (3) details of the changes in *dispatch* outcomes due to the *direction*;
  - (4) the processes implemented by *NEMMCO* to issue the *direction*;
  - (5) if applicable, the basis upon which *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 issuance of the *direction*;
  - (6) if applicable, the basis upon which *NEMMCO* considered it impractical to set *spot prices* and *ancillary service prices* in accordance with clause 3.9.3(b);
  - (7) details of the adequacy and effectiveness of responses to inquiries made by *NEMMCO* under clause 4.8.5A(d); and
  - (8) information regarding any notification by a *Registered Participant* that it will not be able to comply with a *direction* under clause 4.8.9(d).
- (b) As soon as reasonably practicable after *NEMMCO* has, in accordance with clause 3.15.10C, included the amounts arising from a *direction* in a settlement statement provided under clause 3.15.15, *NEMMCO* must *publish* details of:
  - (1) the *compensation recovery amount* arising from the *direction* as calculated under clause 3.15.8(a) for the period of the *direction*;
  - (2) details of the calculation of the regional benefit determined under clause 3.15.8(b1); and
  - (3) a breakdown of the *compensation recovery amount* by each category of *Registered Participant*, as determined by *NEMMCO*, in each *region*.

### 3.13.7 Monitoring of significant variation between forecast and actual prices by AER

- (a) The *AER* must, after consulting with the *AEMC*, specify and make available to *Registered Participants* and the public, criteria which the *AER* will use to determine whether there is a significant variation between the *spot price forecast published by NEMMCO* in accordance with clause 3.13.4 and the actual *spot price* in any *trading interval*. The *AER* must, in accordance with these criteria, monitor in each *trading interval* whether any such significant variation has occurred.
- (b) The *AER* must prepare and *publish* a report in respect of each three month period commencing on 1 January, 1 April, 1 July and 1 October in each year. The report must:
  - (1) be *published* no later than 4 weeks after the end of each three month period;
  - (2) identify and review each occasion when, in accordance with the criteria specified under clause 3.13.7(a), the *AER* considers that a significant price variation has occurred;
  - (3) state why the *AER* considers that the significant price variation occurred;
  - (4) be available to members of the public on request; and
  - (5) be provided to the *AEMC*.
- (c) The *ACCC* or the *AEMC* may request the *AER* to report to it on a particular *market outcome*. If the *ACCC* or the *AEMC* makes a request of this type, the *AER* may provide a report on that *market outcome*. The report must review the *market outcome* raised by the *ACCC* or the *AEMC* (as the case may be) and state why the *AER* considers that the *market outcome* occurred.
- (d) The *AER* must, within 20 *business days* of the end of a week in which the *spot price* exceeded \$5,000/MWh in a *trading interval* or *trading intervals*, prepare and *publish* a report which must for each *trading interval* in which the *spot price* exceeded \$5,000/MWh in that week:
  - (1) describe the significant factors that contributed to the *spot price* exceeding \$5,000/MWh, including the withdrawal of *generation capacity* and *network availability*;
  - (2) assess whether *rebidding* pursuant to clause 3.8.22 contributed to the *spot price* exceeding \$5,000/MWh; and
  - (3) identify the marginal *scheduled generating units* for the *dispatch intervals* in the relevant *trading interval* and all *scheduled generating*

*units for which any dispatch offer for the trading interval was equal to or greater than \$5,000/MWh and compare these dispatch offers to relevant dispatch offers in previous trading intervals.*

- (e) Where
- (1) prices at a *regional reference node* for a *market ancillary service* over a period significantly exceed the relevant *spot price for energy*; and
  - (2) prices for that *market ancillary service* exceed \$5,000 for a number of *trading intervals* within that period,

the *AER* must prepare and *publish* a report which:

- (3) describes the significant factors that contributed to the *market ancillary service* prices exceeding \$5,000/MWh;
- (4) identifies any linkages between *spot prices* in the *energy market* and *market ancillary service* prices contributing to the occurrence; and
- (5) assesses whether *rebidding* pursuant to clause 3.8.22 contributed to prices exceeding \$5,000/MWh.

### 3.13.8 Public information

- (a) *NEMMCO* must *publish* on a daily basis the following information for the previous *trading day*:
- (1) *regional reference price by trading interval*;
  - (2) *power system load* for each *region* referred to the *regional reference node by trading interval*;
  - (3) *regional* electricity consumption in MWh by *trading interval*;
  - (4) *inter-regional* power flows by *trading interval*; and
  - (5) *inter-regional* and *intra-regional network constraints* by *trading interval*.
- (b) All *market information* that *NEMMCO* is required to *publish* in accordance with the *Rules* shall also be made available by *NEMMCO* to persons other than *Registered Participants* using the *electronic communications system* on the fee basis described in clause 8.7.6. *NEMMCO* may make the *market information* available to persons other than *Registered Participants* using a mechanism other than the *market information bulletin board* on the fee basis described in clause 8.7.6, so long as that information is also available on the *market information bulletin board*.

- (c) *NEMMCO* must make available for purchase by any party the *statement of opportunities* from the date of *publication* of such statement.
- (d) *NEMMCO* must retain all information provided to it under the *Rules* for at least 6 years in whatever form it deems appropriate for reasonably easy access.

**3.13.9 [Deleted]**

**3.13.10 Market auditor**

- (a) *NEMMCO* must appoint one or more *market auditors* to carry out *reviews* of such matters as *NEMMCO* considers appropriate which must include (but need not be limited to) a *review* of:
  - (1) the calculations and allocations performed by the *metering system* and *settlements* system;
  - (2) the billing and information systems;
  - (3) the scheduling and *dispatch* processes;
  - (4) the processes for software management;
  - (5) the *NEMMCO* procedures and their compliance with the *Rules*.
- (b) *NEMMCO* must ensure that the *market auditor* carries out the *reviews* to be carried out under clause 3.13.10(a) no less than annually.
- (c) A *market auditor* shall be an *independent person*.
- (d) A *market auditor* must report in writing to *NEMMCO*. *NEMMCO* must, after receiving the report, either:
  - (1) approve the report, and any recommendations made in it, by noting such approval on the report or in a paper attached to the report; or
  - (2) prepare a separate report setting out the matters dealt with in the report which *NEMMCO* approves and those matters which *NEMMCO* does not approve and setting out *NEMMCO's* reasons for that view.
- (e) *NEMMCO* must *publish* any report received from the *market auditor* together with the material mentioned in clause 3.13.10(d).

**3.13.11 [Deleted]**

### 3.13.12 NMI Standing Data

- (a) The authority responsible for administering the *jurisdictional electricity legislation* in for each *participating jurisdiction* may provide *NEMMCO* with a *Jurisdictional NMI Standing Data schedule* setting out the categories of *NMI Standing Data* which:
- (1) *Registered Participants* are required by the *participating jurisdiction's* legislation or licensing requirements to provide to *NEMMCO* in relation to *connection points* in that *participating jurisdiction*; and
  - (2) *NEMMCO* must make available to *Market Customers*, or a class of *Market Customers*, on request pursuant to its disclosure obligations under clauses 3.13.12(d) and (e).

Any such schedule must contain the matters set out in clause 3.13.12(c).

- (b) A responsible authority may from time to time amend the *Jurisdictional NMI Standing Data schedule* in respect of the relevant *participating jurisdiction*, which amendments must be consistent with the matters set out in clause 3.13.12(c), and must promptly provide the amended schedule to *NEMMCO*.
- (c) A valid *Jurisdictional NMI Standing Data schedule* must contain the following items:
- (1) a specification of the categories of *NMI Standing Data* which *NEMMCO* must provide to *Market Customers*, or a specified class of *Market Customers*, on request, pursuant to its disclosure obligations under clauses 3.13.12(d) and (e), in respect of *connection points* in the relevant *participating jurisdiction*;
  - (2) details of the *Jurisdictional NMI Standing Data suppliers*, including which *Registered Participants* are required to provide that data in respect of particular *connection points* within that *participating jurisdiction*;
  - (3) the timetable which the relevant *participating jurisdiction* will implement to ensure *Jurisdictional NMI Standing Data suppliers* supply *NMI Standing Data* in respect of *connection points* in that *participating jurisdiction* to *NEMMCO*;
  - (4) the criteria which *NEMMCO* must use to identify whether *NEMMCO* must disclose *NMI Standing Data* for *connection points* in that *participating jurisdiction* to particular *Market Customers*, pursuant to its disclosure obligations under clauses 3.13.12(d) and (e);

- 
- (5) the purposes connected with the facilitation of the wholesale electricity market for which the *Market Customer* may use *NMI Standing Data*;
- (6) any additional information or criteria as may be determined by the authority responsible for administering the *jurisdictional electricity legislation* as necessary or appropriate in relation to the obligations of *Jurisdictional NMI Standing Data suppliers* and the release by *NEMMCO* of *NMI Standing Data* for *connection points* in that *participating jurisdiction*.
- (d) *NEMMCO* must:
- (1) *publish* the *Jurisdictional NMI Standing Data schedules* and any amendments to those schedules provided to it by the responsible authorities under clauses 3.13.12(a) and (b); and
- (2) subject to clause 3.13.12(e), make available to *Market Customers* on request *NMI Standing Data* within the relevant categories in respect of *connection points* in a *participating jurisdiction* described in the *Jurisdictional NMI Standing Data schedule* for that *participating jurisdiction*.
- (e) *NEMMCO* must only provide *NMI Standing Data* under this clause 3.13.12 to a *Market Customer*:
- (1) that is a *Market Customer* or a member of a class of *Market Customers* fitting the criteria stated in the relevant *Jurisdictional NMI Standing Data schedule* as being entitled to receive that data;
- (2) in accordance with the relevant valid *Jurisdictional NMI Standing Data schedule*; and
- (3) for the purposes described in clause 3.13.12(g).
- (f) Each *Registered Participant* which is a *Jurisdictional NMI Standing Data supplier* must provide the *NMI Standing Data* to *NEMMCO* which it is required to provide in accordance with the relevant *Jurisdictional NMI Standing Data schedule*, if any such *Jurisdictional NMI Standing Data schedule* has been provided to *NEMMCO* under clause 3.13.12(a):
- (1) at no charge and in the format reasonably required by *NEMMCO*; and
- (2) after having first done whatever may be required or otherwise necessary under any applicable privacy legislation (including if appropriate making relevant disclosures or obtaining relevant consents from end-use customers) taking into account that *NEMMCO* will use and disclose the *NMI Standing Data* in accordance with the *Rules*.



- 
- (g) *Market Customers* must only use *NMI Standing Data* provided to it by *NEMMCO* under this clause 3.13.12 for the purposes permitted by the relevant *Jurisdictional NMI Standing Data schedule*.
- (h) Where a responsible authority has provided *NEMMCO* with a *Jurisdictional NMI Standing Data schedule* for the relevant *participating jurisdiction* and a *Registered Participant* which is a *Jurisdictional NMI Standing Data supplier* fails to provide *NEMMCO* with *NMI Standing Data* in accordance with clause 3.13.12(f) and *NEMMCO* becomes aware of that failure, then:
- (1) *NEMMCO* must advise the *Registered Participant* that, in its opinion, the *Registered Participant* is failing to comply with clause 3.13.12(f);
  - (2) if the *Registered Participant* fails to provide *NEMMCO* with the *NMI Standing Data* within 5 *business days* of the notice provided under clause 3.13.12(h)(1), *NEMMCO* must notify the *AER* and the relevant responsible authority of the failure and the failure by the *Registered Participant* to provide the *NMI Standing Data* is to be dealt with by the responsible authority under the relevant *participating jurisdiction's* legislation or licensing requirements unless the responsible authority notifies *NEMMCO* otherwise in accordance with clause 3.13.12(h)(3); and
  - (3) if, after receiving a notice from *NEMMCO* under clause 3.13.12(h)(2), the responsible authority notifies *NEMMCO* that the relevant *participating jurisdiction's* legislation or licensing requirements do not contain a regime which empowers the responsible authority to compel the *Registered Participant* to provide the *NMI Standing Data* to *NEMMCO*, *NEMMCO* must notify the *AER* of the failure by the *Registered Participant* to provide the *NMI Standing Data* under clause 3.13.12(f).
- (i) Where a responsible authority has provided *NEMMCO* with a *Jurisdictional NMI Standing Data schedule* for the relevant *participating jurisdiction* and a *Market Customer*, that has been provided with *NMI Standing Data* by *NEMMCO* under clause 3.13.12(d) in accordance with that schedule, fails to use that *NMI Standing Data* in accordance with clause 3.13.12(g), and *NEMMCO* becomes aware of that failure, then:
- (1) *NEMMCO* must advise the *Market Customer* that, in its opinion, the *Market Customer* is failing to comply with clause 3.13.12(g);
  - (2) if the *Market Customer* does not remedy the failure within 5 *business days* of the notice provided under clause 3.13.12(i)(1), *NEMMCO* must notify the relevant responsible authority of the failure and the failure by the *Market Customer* to use the *NMI Standing Data* in accordance with this clause 3.13.12 is to be dealt with by the responsible authority under the relevant *participating jurisdiction's*

- legislation or licensing requirements unless the responsible authority notifies *NEMMCO* otherwise in accordance with clause 3.13.12(i)(3); and
- (3) if, after receiving a notice from *NEMMCO* under clause 3.13.12(i)(2), the responsible authority notifies *NEMMCO* that the relevant *participating jurisdiction's* legislation or licensing requirements do not contain a regime which empowers the responsible authority to regulate the use of the *NMI Standing Data* by a *Market Customer*, *NEMMCO* must notify the *AER* of the failure by the *Market Customer* to use the *NMI Standing Data* in accordance with clause 3.13.12(g).
- (j) *NEMMCO* must if requested by a responsible authority:
- (1) develop a regime for monitoring and reporting to the responsible authority on requests received by *NEMMCO* to provide *NMI Standing Data* to *Market Customers* for *connections points* in the relevant *participating jurisdiction*, in consultation with the responsible authority; and
- (2) provide information to the responsible authority in accordance with the monitoring and reporting regime developed under this clause 3.13.12(j).
- (k) Nothing in this clause 3.13.12:
- (1) requires *NEMMCO* to make available *NMI Standing Data* if that *NMI Standing Data* has not been provided to *NEMMCO*;
- (2) requires *NEMMCO* to make available *NMI Standing Data* where the collection, use or disclosure of that information by *NEMMCO* would breach applicable privacy laws;
- (3) precludes *NEMMCO* from providing *NMI Standing Data* to a *Registered Participant* where the provision of that information is required to give effect to other provisions of the *Rules*;
- (4) precludes *NEMMCO* from disclosing the information in the circumstances described in clause 8.6.2; and
- (5) requires *NEMMCO* to provide information which its software systems cannot provide without modification.

### 3.13.13 Inter-network tests

- (a) *NEMMCO* must *publish* the *test program* for an *inter-network test* as soon as practicable after determining it under clause 5.7.7(r).
- (b) If *NEMMCO* amends the *test program* for an *inter-network test* it must *publish* details of the amendment.

- (c) If *NEMMCO* proposes to conduct an *inter-network test* it must *publish* the approximate time of the test, giving as much notice as is reasonably practicable.
- (d) If the time of an *inter-network test* is changed, *NEMMCO* must *publish* details of the change.

### 3.14 Administered Price Cap and Market Suspension

#### 3.14.1 Cumulative Price Threshold and Administered Price Cap

- (a) In conjunction with each *participating jurisdiction*, and after consulting *Market Participants* in accordance with the *Rules consultation procedures*, the *AEMC* must develop, authorise and *publish* and may vary from time to time a schedule to specify an *administered price cap* for each *region* to apply to *spot prices* and *market ancillary service prices* and to be used as described in this rule 3.14.
- (b) The *administered floor price* for each *region* to apply to *spot prices* and to be used as described in clause 3.14.2 will be the negative of the value of the *administered price cap*.
- (c) The *cumulative price threshold* is \$150,000/MWh.

#### 3.14.2 Application of Administered Price Cap

- (a) **[Deleted]**
- (b) *NEMMCO* must immediately notify all *Market Participants* of the commencement and closing of an *administered price period* under rule 3.14.
- (c) A *trading interval* is to be an *administered price period* if in a *region*:
  - (1) the sum of the *spot price* in the previous 336 *trading intervals*, calculated as if this clause did not apply, exceeds the *cumulative price threshold*;
  - (1A) the sum of the *ancillary service price* for a *market ancillary service* in the previous 2016 *dispatch intervals*, calculated as if this clause did not apply, exceeds 6 times the *cumulative price threshold*;
  - (2) the *trading interval* occurs in a *trading day* in which a prior *trading interval* is an *administered price period* under this clause 3.14.2; or
  - (3) the previous *trading interval* was an *administered price period* and in *NEMMCO*'s opinion one or more *trading intervals* in the next *business day* will be an *administered price period* and *NEMMCO*

deems, with the consent of the *AER*, the *trading interval* to be an *administered price period*.

- (d) During an *administered price period* the procedures for *PASA*, *dispatch*, *spot price* and *ancillary service price* determination are to continue in accordance with the provisions of the *Rules*.
- (d1) If, within an *administered price period* triggered because of clauses 3.14.2(c)(1), (2) or (3) in relation to *energy*, the *dispatch price* for the *region* identified in clause 3.14.2(c) calculated as if this clause 3.14.2(d1) did not apply:
  - (1) exceeds the *administered price cap*, then *NEMMCO* must set the *dispatch price* to the *administered price cap*; or
  - (2) is less than the *administered floor price*, *NEMMCO* must set the *dispatch price* to the *administered floor price*.
- (d2) If within an *administered price period* an *ancillary service price* for a *market ancillary service* for the *region* identified in clause 3.14.2(c) calculated as if this clause 3.14.2(d2) did not apply exceeds the *administered price cap*, then *NEMMCO* must set that *ancillary service price* to the *administered price cap*.
- (e) If during an *administered price period* the *dispatch price*:
  - (1) **[Deleted]**
  - (2) at any *regional reference node* is set to the *administered price cap* under clause 3.14.2, the *dispatch prices* at all other *regional reference nodes connected by a regulated interconnector or regulated interconnectors* that have an *energy flow* towards that *regional reference node* must not exceed the product of the *administered price cap* multiplied by the average *loss factor* for that *dispatch interval* between that *regional reference node* and the *regional reference node* at which *dispatch prices* have been set to the *administered price cap* determined in accordance with clause 3.14.2(e)(5).
  - (3) **[Deleted]**
  - (4) at any *regional reference node* is set to the *administered floor price* under clause 3.14.2, then *dispatch prices* at all other *regional reference nodes connected by a regulated interconnector or regulated interconnectors* that have an *energy flow* towards that *regional reference node* must be equal to or greater than the product of the *administered floor price* multiplied by the average *loss factor* for that *dispatch interval* between that *regional reference node* and the *regional reference node* at which *dispatch prices* have been set to the

*administered floor price* determined in accordance with clause 3.14.2(e)(5).

- (5) *NEMMCO* must determine the average *loss factors* applicable to clause 3.14.2(e)(2) and 3.14.2(e)(4) by reference to the *inter-regional loss factor* equations relating to the relevant *regulated interconnector*.

### 3.14.3 Conditions for suspension of the spot market

- (a) Subject to clause 3.14.3(b), *NEMMCO* may declare the *spot market* to be suspended in a *region* when in respect of that *region*:
- (1) the *power system* has collapsed to a *black system*;
  - (2) *NEMMCO* has been directed by a *participating jurisdiction* to suspend the *market* or operate all or part of the *power system* in a manner contrary to the provisions of the *Rules* following the formal declaration by that *participating jurisdiction* of a state of emergency under its emergency services or equivalent legislation; or
  - (3) *NEMMCO* determines that it is necessary to suspend the *spot market* in a *region* because it has become impossible to operate the *spot market* in accordance with the provisions of the *Rules*.
- (a1) If *NEMMCO* declares the *spot market* to be suspended in a *region*, then all *spot prices* and *ancillary service prices* are set in accordance with clause 3.14.5 for that *region*.
- (b) *NEMMCO* must not suspend the *spot market* solely because:
- (1) *spot prices* have reached *VoLL*;
  - (1A) *spot prices* have reached the *market floor price*;
  - (2) *NEMMCO* has issued a *direction*; or
  - (3) *NEMMCO* has otherwise intervened in the market under rule 3.12.
- (c) *NEMMCO* must conduct reviews of each occasion when it suspended the *spot market* in order to assess the adequacy of the provision and response of *facilities* or services, and the appropriateness of actions taken to restore or maintain *power system security*.
- (d) The report of the review carried out in accordance with clause 3.14.3(c) must be made available to *Registered Participants* and the public.
- (e) A *Registered Participant* must co-operate in any such review conducted by *NEMMCO* (including making available relevant records and information).

- (f) A *Registered Participant* must provide to *NEMMCO* such information relating to the performance of its equipment during and after a suspension of the *spot market* as *NEMMCO* reasonably requires for the purposes of analysing or reporting on that suspension.
- (g) *NEMMCO* must provide to a *Registered Participant* such information or reports relating to the performance of that *Registered Participant's* equipment during a suspension of the *spot market* as that *Registered Participant* reasonably requests and in relation to which *NEMMCO* is required to conduct a review under this clause 3.14.3.

#### **3.14.4 Declaration of market suspension**

- (a) The *spot market* can only be suspended by a declaration by *NEMMCO* under clause 3.14.3(a) and if the *spot market* is suspended, *NEMMCO* must notify all *Registered Participants* without delay.
- (b) *NEMMCO* must not declare the *spot market* to be suspended retrospectively.
- (c) The *spot market* is to be deemed to be suspended at the start of the *trading interval* in which *NEMMCO* makes a declaration that the *spot market* is suspended.
- (d) Following a declaration by *NEMMCO* under clause 3.14.3(a), the *spot market* is to remain suspended until *NEMMCO* declares and informs all *Registered Participants*:
  - (1) that *spot market* operation is to resume in accordance with this Chapter 3; and
  - (2) of the *time* at which the *spot market* is to resume.
- (e) If *NEMMCO* declares that the *spot market* is suspended:
  - (1) *NEMMCO* may then issue *directions* to *Registered Participants* in accordance with clause 4.8.9; and
  - (2) *spot prices* and *ancillary service prices* are to be set by *NEMMCO* in accordance with clause 3.14.5.
- (f) *NEMMCO* must within 10 *business days* following the day on which, in accordance with the notice given by *NEMMCO* under clause 3.14.4(d), the *spot market* resumed, commence an investigation of that *spot market* suspension.
- (g) The investigation must examine and report on the reason for the suspension and the effect that the suspension had on the operation of the *spot market*. *NEMMCO* must make a copy of the report available to *Registered Participants* and the public as soon as it is practicable to do so.

### 3.14.5 Pricing during market suspension

- (a) If *NEMMCO* declares that the *spot market* is suspended then, as far as *NEMMCO* considers it practically and reasonably possible, it must follow the procedures in the *Rules* for *PASA*, *dispatch* and *spot price* and *ancillary service price*, subject to the application of clause 3.14.5.
- (b) The *spot price* and the *ancillary service price* during a *trading interval* for which *NEMMCO* has declared the *spot market* to be suspended is to be determined by *NEMMCO* in accordance with clause 3.14.5.
- (c) Subject to clauses 3.14.5(d), (g) and (j), if the *spot market* is suspended in a *region* then *dispatch* and the determination of *spot prices* and *ancillary service prices* in the *region* where the *spot market* is suspended are to continue in accordance with rules 3.8 and 3.9.
- (d) If at any time on or during suspension of the *spot market* in a *region*:
  - (1) in *NEMMCO*'s reasonable opinion it is not possible to continue *dispatch* and the determination of *spot prices* in the *suspended region* in accordance with rules 3.8 and 3.9;
  - (2) the *suspended region* is *connected* by an *unconstrained interconnector* to another *region*;
  - (3) the *dispatch* and determination of *spot prices* and *ancillary service prices* in the other *region* is continuing in accordance with rules 3.8 and 3.9; and
  - (4) *local market ancillary service requirements* do not apply in the *suspended region*,

*NEMMCO* must:

  - (5) determine the *spot price* in the *suspended region* in accordance with clause 3.14.5(e); and
  - (6) continue to determine *ancillary service prices* in the *suspended region* in accordance with rules 3.8 and 3.9.
- (e) In the circumstances described in clause 3.14.5(d) the *spot price* is to be determined by application of an appropriate *inter-regional loss factor* to the *spot price* in the adjacent *region* referred to in clause 3.14.5(d)(2), such *inter-regional loss factor* being determined by *NEMMCO* in accordance with the methodology in clause 3.6.2A and the actual flows on the relevant *unconstrained interconnectors*.
- (f) If the *spot price* in the *suspended region* is being determined in accordance with clause 3.15.4(e), the *spot price* must continue to be determined in accordance with that clause until the earlier of:

- (1) the time that the *spot market* is no longer suspended in the *region*; and
  - (2) the time that the spot price in the region is required to be determined in accordance with either clause 3.14.5(g) or clause 3.14.5(j).
- (g) If at any time during suspension of the *spot market* in a *region*:
- (1) either:
    - (A) *dispatch* and the determination of *spot prices* and *ancillary service prices* is being effected in accordance with rules 3.8 and 3.9; or
    - (B) the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with clause 3.14.5(e); and
  - (2) in *NEMMCO's* reasonable opinion it is no longer practical to continue *dispatch* and the determination of *spot prices* and *ancillary service prices* in the *suspended region* in accordance with the clauses under which *dispatch*, *spot prices* and *ancillary service prices* are currently being determined; and
  - (3) in *NEMMCO's* reasonable opinion a current *pre-dispatch schedule* exists in respect of the *suspended region*,
- then *NEMMCO* must determine the *spot prices* and *ancillary service prices* in the *suspended region* in accordance with clause 3.14.5(h).
- (h) In the circumstances described in clause 3.14.5(g), the *spot prices* and *ancillary service prices* in the *suspended region* are set at *NEMMCO's* forecast *regional reference price* and *ancillary service prices* determined in accordance with the most recently *published pre-dispatch schedule* if it is still current.
- (i) If the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with clause 3.15.4(h), they must continue to be determined in accordance with that clause until the earlier of:
- (1) the time that the *spot market* is no longer suspended in the relevant *region*; and
  - (2) the time that the *spot prices* or the *ancillary service prices* (as the case may be) in the *suspended region* are determined in accordance with clause 3.14.5(j).
- (j) If at any time on or during suspension of the *spot market* in a *region*:
- (1) either:



- (A) *dispatch* and the determination of *spot prices* and *ancillary service prices* is being effected in accordance with rules 3.8 and 3.9; or
  - (B) the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with either clause 3.14.5(e) or clause 3.14.5(h); and
- (2) in *NEMMCO's* reasonable opinion it is no longer practical to set the *spot prices* and *ancillary service prices* in the *suspended region* in accordance with either clauses rules 3.8, 3.9, clause 3.14.5(e) or clause 3.14.5(h) (as the case may be),

then *NEMMCO* must set the *spot prices* and *ancillary service prices* in the *suspended region* at the prices set out in the relevant market suspension pricing schedule developed and published in accordance with clause 3.14.5(l).

- (k) If the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with clause 3.15.4(j), they must continue to be determined in accordance with that clause until the *spot market* is no longer suspended in that *region*.
- (l) *NEMMCO* must:
  - (1) develop in accordance with the *Rules consultation procedures* a methodology to be used by *NEMMCO* (**estimated price methodology**) to prepare and update schedules containing reasonable estimates of typical *market* prices during the periods to which the schedules relate (**estimated price schedules**);
  - (2) develop and update estimated price schedules in accordance with the estimated price methodology and that set out *NEMMCO's* reasonable estimate of typical *market* prices during periods in which the *spot market* is suspended; and
  - (3) *publish* the estimated price methodology promptly after it has been developed and *publish* the estimated price schedule at least 14 days prior to the first day to which the schedule relates.
- (m) If a *spot price* is set in accordance with clause 3.14.5(g) or clause 3.14.5(j) at a *regional reference node* (**suspension node**), *spot prices* at all other *regional reference nodes* connected by an *interconnector* that has an actual flow towards the suspension node must not exceed the *spot price* in the *suspended region* multiplied by the average *loss factor* between that *regional reference node* and the *suspension node* for that *trading interval*.
- (n) *NEMMCO* must use reasonable endeavours to ensure that any adjustments required to *regional reference prices* so that they do not exceed the limits

set by clause 3.14.5(m) are finalised as soon as practicable but in any event by no later than one *business day* following the day on which the *spot market* in the *region* ceased to be suspended.

- (o) *NEMMCO* must calculate the average *loss factor* applicable to clause 3.14.5(m) by reference to the *inter-regional loss factor* equations relating to the relevant *regulated interconnector*.

### **3.14.6 Compensation due to the application of an administered price, VoLL or market floor price**

- (a) *Scheduled Generators* may claim compensation from *NEMMCO* in respect of *generating units* if, due to the application of an *administered price cap* during either an *administered price period* or *market suspension*, the resultant *spot price* payable to *dispatched generating units* in any *trading interval* is less than the price specified in their *dispatch offer* for that *trading interval*.
- (a1) A *Scheduled Network Service Provider* may claim compensation from *NEMMCO* in respect of a *scheduled network service* if, due to the application of an *administered price cap*, *VoLL*, the *market floor price* or an *administered floor price*, the resultant revenue receivable in respect of *dispatched network services* in any *trading interval* is less than the minimum requirement specified by its *network dispatch offer* for that *trading interval*.
- (a2) A *Market Participant* which submitted a *dispatch bid* may claim compensation from *NEMMCO* in respect of a *scheduled load* if, due to the application of an *administered floor price* during either an *administered price period* or *market suspension*, the resultant *spot price* in any *trading interval* is greater than the price specified in the *dispatch bid* for that *trading interval*.
- (a3) In respect of an *ancillary service generating unit* or an *ancillary service load*, a *Market Participant* may claim compensation from *NEMMCO* if, due to the application of an *administered price cap*, the resultant *ancillary service price* for that *ancillary service generating unit* or *ancillary service load* in any *dispatch interval* is less than the price specified in the relevant *market ancillary service offer*.
- (b) Notification of an intent to make a claim under clause 3.14.6(a), 3.14.6(a1), 3.14.6(a2) or 3.14.6(a3) must be submitted to both *NEMMCO* and the *AEMC* within 2 *business days* of the *trading interval* in which *dispatch prices* were adjusted in accordance with clause 3.9.5 or notification by *NEMMCO* that an *administered price period* or period of *market suspension* has ended.

- (c) The *AEMC* must determine whether it is appropriate in all the circumstances for compensation to be payable by *NEMMCO* and, if so, the *AEMC* must determine an appropriate amount of compensation.
- (d) Before making a determination, the *AEMC* must request the *Adviser* to establish a three member panel from the group of persons referred to in clause 8.2.2(e) to make recommendations on the matters to be determined by the *AEMC*.
- (e) The panel must conduct itself on the same basis as a *DRP* under clauses 8.2.6A to 8.2.6D and make its recommendations within the period specified for the making of a determination under clause 8.2.6D(b). The panel must base its recommendations on its assessment of a fair and reasonable amount of compensation taking into account:
  - (1) all the surrounding circumstances;
  - (2) the actions of any relevant *Registered Participants* and *NEMMCO*;
  - (3) in the case of a claim by a *Scheduled Generator*, the difference between the *spot price* applicable due to the application of the *administered price cap* and the price specified by the *Scheduled Generator* in its *dispatch offer*;
  - (4) in the case of a claim by a *Scheduled Network Service Provider*, the difference between the revenue receivable by the *Scheduled Network Service Provider* for the *dispatched network services* as the result of the application of the *administered price cap*, *VoLL* or an *administered floor price* and the minimum revenue requirement specified in its *network dispatch offer*;
  - (5) in the case of a *Market Participant* which submitted a *dispatch bid*, the difference between the *spot price* applicable due to the application of the *administered floor price* and the price specified by the *Market Participant* in its *dispatch bid*;
  - (6) in the case of a claim in respect of an *ancillary service generating unit*, the difference between the *ancillary service price* applicable due to the application of the *administered price cap* and the price specified by the *ancillary service generating unit* in its *market ancillary service offer*; and
  - (7) in the case of a claim in respect of an *ancillary service generating unit*, the difference between the *ancillary service price* applicable due to the application of the *administered floor price* and the price specified by the *ancillary service load* in its *market ancillary service offer*.

### 3.15 Settlements

#### 3.15.1 Settlements management by NEMMCO

- (a) *NEMMCO* must facilitate the billing and settlement of payments due in respect of *transactions* under this Chapter 3, including:
  - (1) *spot market transactions*;
  - (2) *reallocation transactions*; and
  - (3) ancillary services transactions under clause 3.15.6A.
- (b) *NEMMCO* must determine the *Participant fees* and the *Market Participants* must pay them to *NEMMCO* in accordance with the provisions of rule 2.11.

#### 3.15.2 Electronic funds transfer

- (a) *NEMMCO* must ensure that an electronic funds transfer (EFT) facility is provided and made available for all *Market Participants* for the purposes of *settlements* and the collection and payment of all *market fees*.
- (b) Unless otherwise authorised by *NEMMCO*, all *Market Participants* must use the EFT facility provided by *NEMMCO* under clause 3.15.2(a) for the payment and receipt of amounts due in respect of *transactions* and the payment of *market fees*.
- (c) In establishing the EFT facility in accordance with clause 3.15.2(a) *NEMMCO* must use its reasonable endeavours to ensure that the use of that facility does not impose unnecessary restrictions on the normal banking arrangements of *Market Participants*.

#### 3.15.3 Connection point and virtual transmission node responsibility

- (a) For each *market connection point* there is one person that is *financially responsible* for that *connection point*. The person that is *financially responsible* for such a *connection point* is:
  - (1) the *Market Participant* which has classified the *connection point* as a *market load*;
  - (2) the *Market Participant* which has classified the *generating unit connected* at that *connection point* as a *market generating unit*; or
  - (3) the *Market Participant* which has classified the *network service connected* at that *connection point* as a *market network service*.
- (b) For each *virtual transmission node* there is one person that is *financially responsible* for that *virtual transmission node*. The person that is *financially responsible* for such a *virtual transmission node* is the *Market*

---

*Participant which is the Local Retailer for all of the market connection points assigned to that virtual transmission node.*

### 3.15.4 Adjusted energy amounts - connection points

Where a *connection point* is not a *transmission network connection point*, the *adjusted gross energy* amount for that *connection point* for a *trading interval* is calculated by the following formula:

$$\text{AGE} = \text{ME} \times \text{DLF}$$

where:

AGE is the *adjusted gross energy* amount to be determined;

ME is the amount of electrical *energy*, expressed in MWh, flowing at the *connection point* in the *trading interval*, as recorded in the *metering data* in respect of that *connection point* and that *trading interval* (expressed as a positive value where the flow is towards the *transmission network connection point* to which the *connection point* is assigned and negative value where the flow is in the other direction); and

DLF is the *distribution loss factor* applicable at that *connection point*.

### 3.15.5 Adjusted energy - transmission network connection points

Where a *connection point* is a *transmission network connection point*, the *adjusted gross energy* amount for that *connection point* for a *trading interval* is calculated by the following formula:

$$\text{AGE} = \text{ME} - \text{AAGE}$$

where:

AGE is the *adjusted gross energy* amount to be determined;

ME is the amount of electrical *energy*, expressed in MWh, flowing at the *connection point* in the *trading interval*, as recorded in the *metering data* in respect of that *connection point* and that *trading interval* (expressed as a positive value where the flow is towards the *transmission network*, and negative value where the flow is in the other direction); and

AAGE is the aggregate of the *adjusted gross energy* amounts for that *trading interval* for each *connection point* assigned to that *transmission network connection point*, for which a *Market Participant* (other than a suspended *Market Participant*) is *financially responsible* (and in that aggregation positive and negative *adjusted gross energy* amounts are netted out to give a positive or negative aggregate amount).

### 3.15.5A Adjusted energy – virtual transmission nodes

For each *virtual transmission node*, the *adjusted gross energy* amount for that *virtual transmission node* for a *trading interval* is calculated by the following formula:

$$AGE = - AAGE$$

where:

AGE is the *adjusted gross energy* amount to be determined; and

AAGE is the aggregate of the *adjusted gross energy* amounts for that *trading interval* for each *connection point* assigned to that *virtual transmission node* for which a *Market Participant* (other than a suspended *Market Participant*) is *financially responsible* (and in that aggregation positive and negative *adjusted gross energy* amounts are netted out to give a positive or negative aggregate amount).

### 3.15.6 Spot market transactions

- (a) In each *trading interval*, in relation to each *connection point* and to each *virtual transmission node* for which a *Market Participant* is *financially responsible*, a *spot market transaction* occurs, which results in a *trading amount* for that *Market Participant* determined in accordance with the formula:

$$TA = AGE \times TLF \times RRP$$

where

TA is the *trading amount* to be determined (which will be a positive or negative dollar amount for each *trading interval*);

AGE is the *adjusted gross energy* for that *connection point* or *virtual transmission node* for that *trading interval*, expressed in MWh;

TLF for a *transmission network connection point* or *virtual transmission node*, is the *intra-regional loss factor* at that *connection point* or *virtual transmission node* respectively, and for any other *connection point*, is the *intra-regional loss factor* at the *transmission network connection point* or *virtual transmission node* to which it is assigned in accordance with clause 3.6.3(a); and

RRP is the *regional reference price* for the *regional reference node* to which the *connection point* or *virtual transmission node* is assigned, expressed in dollars per MWh.

- (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.

### 3.15.6A Ancillary service transactions

- (a) In each *trading interval*, in relation to each *enabled ancillary service generating unit* or *enabled ancillary service load*, an ancillary services transaction occurs, which results in a *trading amount* for the relevant *Market Participant* determined in accordance with the following formula:

$$TA = \text{the aggregate of } \frac{EA \times ASP}{(12)} \text{ for each } \textit{dispatch interval} \text{ in a } \textit{trading interval}$$

where:

- TA (in \$) = the *trading amount* to be determined (which is a positive number);
- EA (in MW) = the amount of the relevant *market ancillary service* which the *ancillary service generating unit* or *ancillary service load* has been *enabled* to provide in the *dispatch interval*; and
- ASP (in \$ per MW per hour) = the *ancillary service price* for the *market ancillary service* for the *dispatch interval* for the *region* in which the *ancillary service generating unit* or *ancillary service load* has been *enabled*.

- (b) In each *trading interval*, in relation to each *Market Participant* which provides *non-market ancillary services* under an *ancillary services agreement*, an ancillary services transaction occurs, which results in a *trading amount* for the relevant *Market Participant* determined in accordance with that agreement.
- (c) In each *trading interval*, in relation to each *Market Customer*, an ancillary services transaction occurs, which results in a *trading amount* for the *Market Customer* determined in accordance with the following formula:

$$TA = TNCASP \times \frac{TCE}{ATCE} \times -1$$

where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
TNCASP (in \$)	=	all amounts payable by <i>NEMMCO</i> in respect of the <i>trading interval</i> under <i>ancillary services agreements</i> in respect of the provision of <i>NCAS</i> ;
TCE (in MWh)	=	the <i>customer energy</i> for the <i>Market Customer</i> for the <i>trading interval</i> ; and
ATCE (in MWh)	=	the aggregate <i>customer energy</i> figures for all <i>Market Customers</i> for the <i>trading interval</i> .

- (d) In each *trading interval*, in relation to each *Market Generator*, an ancillary services transaction occurs, which results in a *trading amount* for the *Market Generator* determined in accordance with the following formula:

$$TA = \frac{TSRP}{2} \times \frac{TGE}{ATGE} \times -1$$

where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
TSRP (in \$)	=	the total of all amounts payable by <i>NEMMCO</i> in respect of the <i>trading interval</i> under <i>ancillary services agreements</i> in respect of the provision of <i>system restart ancillary services</i> ;
TGE (in MWh)	=	the <i>generator energy</i> for the <i>Market Generator</i> for the <i>trading interval</i> ; and
ATGE (in MWh)	=	the aggregate of the <i>generator energy</i> figures for all <i>Market Generators</i> for the <i>trading interval</i> .

- (e) In each *trading interval*, in relation to each *Market Customer*, an ancillary services transaction occurs, which results in a *trading amount* determined in accordance with the following formula:

$$TA = \frac{TSRP}{2} \times \frac{TCE}{ATCE} \times -1$$

where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
TSRP (in \$)	=	has the meaning given in clause 3.15.6A(d);
TCE (in MWh)	=	the <i>customer energy</i> for the <i>Market Customer</i> for the <i>trading interval</i> ; and



ATCE (in MWh) = the aggregate of the *customer energy* figures for all *Market Customers* for the *trading interval*.

- (f) The total amount calculated by *NEMMCO* under clause 3.15.6A(a) for each of the *fast raise service*, *slow raise service* or *delayed raise service* in respect of each *dispatch interval* which falls within the *trading interval* must be allocated to each *region* in accordance with the following procedure and the information provided under clause 3.9.2A(b). *NEMMCO* must:
- (1) allocate for each *region* and for each *dispatch interval* within the relevant *trading interval* the proportion of the total amount calculated by *NEMMCO* under clause 3.15.6A(a) for each of the *fast raise service*, *slow raise service* or *delayed raise service* between *global market ancillary services requirements* and *local requirements* pro-rata to the respective marginal prices for each such service;
  - (2) calculate for each relevant *dispatch interval* the sum of the costs of acquiring the *global market ancillary service requirements* for all *regions* and the sum of the costs of acquiring each *local ancillary service requirement* for all *regions*, as determined pursuant to clause 3.15.6A(f)(1); and
  - (3) allocate for each relevant *dispatch interval* the sum of the costs of the *global market ancillary service requirement* and each *local ancillary service requirement* calculated in clause 3.15.6A(f)(2) to each *region* as relevant to that requirement pro-rata to the aggregate of the *generator energy* for the *Market Generators* in each *region* during the *trading interval*.

For the purpose of this clause 3.15.6A(f) *RTCRSP* is the sum of:

- (i) the *global market ancillary service requirement* cost for that *region*, for all *dispatch intervals* in the relevant *trading interval*, as determined pursuant to clause 3.15.6A(f)(3); and
- (ii) all *local market ancillary service requirement* costs for that *region*, for all *dispatch intervals* in the relevant *trading interval*, as determined pursuant to clause 3.15.6A(f)(3).

In each *trading interval*, in relation to each *Market Generator* in a given *region*, an ancillary services transaction occurs, which results in a *trading amount* for that *Market Generator* determined in accordance with the following formula:

$$TA = RTCRSP \times \frac{TGE}{RATGE} \times -1$$

where:

- TA (in \$) = the *trading amount* to be determined (which is a negative number);
- RTCRSP (in \$) = the total of all amounts calculated by *NEMMCO* as appropriate to recover from the given *region* as calculated in this clause 3.15.6A(f) for the *fast raise service*, *slow raise service* or *delayed raise service* in respect of *dispatch intervals* which fall in the *trading interval*;
- TGE (in MWh) = the *generator energy* figures for the *Market Generator* in that *region* for the *trading interval*; and
- RATGE (in MWh) = the aggregate of the *generator energy* figures for all *Market Generators* in that *region* for the *trading interval*.

- (g) The total amount calculated by *NEMMCO* under clause 3.15.6A(a) for each of the *fast lower service*, *slow lower service* or *delayed lower service* in respect of each *dispatch interval* which falls within the *trading interval* must be allocated to each *region* in accordance with the following procedure and the information provided under clause 3.9.2A(b). *NEMMCO* must:
- (1) allocate for each *region* and for each *dispatch interval* within the relevant *trading interval* the proportion of the total amount calculated by *NEMMCO* under clause 3.15.6A(a) for each of the *fast lower service*, *slow lower service* or *delayed lower service* between *global market ancillary service requirements* and *local requirements* pro rata to the respective marginal prices of each such service;
  - (2) calculate for each relevant *dispatch interval* the sum of the costs of acquiring the *global market ancillary service requirements* for all *regions* and the sum of the costs of acquiring each *local ancillary service requirement* for all *regions*, as determined pursuant to clause 3.15.6A(g)(1); and
  - (3) allocate for each relevant *dispatch interval* the sum of the costs of the *global market ancillary service requirement* and each *local ancillary service requirement* calculated in clause 3.15.6A(g)(2) to each *region* as relevant to that requirement pro-rata to the aggregate of the *customer energy* figures for all *Market Customers* in each *region* during the *trading interval*.

For the purpose of this clause 3.15.6A(g) *RTCLSP* is the sum of:

- (i) the *global market ancillary service requirement* cost for that *region*, for all *dispatch intervals* in the relevant *trading interval*, as determined pursuant to clause 3.15.6A(g)(3); and
- (ii) all *local market ancillary service requirement* costs for that *region*, for all *dispatch intervals* in the relevant *trading interval*, as determined pursuant to clause 3.15.6A(g)(3).

In each *trading interval*, in relation to each *Market Customer* in a given *region*, an ancillary services transaction occurs, which results in a *trading amount* for that *Market Customer* determined in accordance with the following formula:

$$TA = RTCLSP \times \frac{TCE}{RATCE} \times -1$$

where:

- TA (in \$) = the *trading amount* to be determined (which is a negative number);
- RTCLSP (in \$) = the total of all amounts calculated by *NEMMCO* as appropriate to recover from the given *region* as calculated in this clause 3.15.6A(g) for the *fast lower service*, *slow lower service* or *delayed lower service* in respect of *dispatch intervals* which fall in the *trading interval*;
- TCE (in MWh) = the *customer energy* for the *Market Customer* in that *region* for the *trading interval*; and
- RATCE (in MWh) = the aggregate of the *customer energy* figures for all *Market Customers* in that *region* for the *trading interval*.

- (h) In each *trading interval*, in relation to each *Market Generator* or *Market Customer* which has *metering* to allow their individual contribution to the aggregate deviation in *frequency* of the *power system* to be assessed, an ancillary services transaction occurs, which results in a *trading amount* for that *Market Generator* or *Market Customer* determined in accordance with the following formula:

$$TA = PTA \times -1$$

and

$$PTA = \text{the aggregate of } \left( TSFCAS \times \frac{MPF}{AMPF} \right) \text{ for each}$$

*dispatch interval in the trading interval*

where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
TSFCAS (in \$)	=	the total of all amounts calculated by <i>NEMMCO</i> under clause 3.15.6A(a) for the <i>regulating raise service</i> or the <i>regulating lower service</i> in respect of a <i>dispatch interval</i> ;
MPF (a number)	=	the factor last set by <i>NEMMCO</i> for the <i>Market Generator</i> or <i>Market Customer</i> , as the case may be, under clause 3.15.6A(j); and
AMPF (a number)	=	the aggregate of the MPF figures for all <i>Market Participants</i> for the <i>dispatch interval</i> .

- (i) In each *trading interval*, in relation to each *Market Customer* for whom the *trading amount* is not calculated in accordance with the formula in clause 3.15.6A(h), an ancillary services transaction occurs, which results in a *trading amount* for that *Market Customer* determined in accordance with the following formula:

$$TA = PTA \times \frac{TCE}{ATCE} \times -1$$

and

$$PTA = \text{the aggregate of } \left( TSFCAS \times \frac{MPF}{AMPF} \right) \text{ for each}$$

*dispatch interval in the trading interval*

where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
TSFCAS (in \$)	=	has the meaning given in clause 3.15.6A(h);
MPF (a number)	=	the aggregate of the factor set by <i>NEMMCO</i> under clause 3.15.6A(j) for <i>Market Customers</i> , for whom the <i>trading amount</i> is not calculated in accordance with the formula in clause 3.15.6A(h);
AMPF (a number)	=	the aggregate of the MPF figures for all <i>Market Participants</i> for the <i>dispatch interval</i> ;
TCE (in MWh)	=	the <i>customer energy</i> for the <i>Market Customer</i> for

- the *trading interval*; and
- ATCE (in MWh) = the aggregate of the *customer energy* figures for all *Market Customers*, for whom the *trading amount* is not calculated in accordance with the formula in clause 3.15.6A(h), for the *trading interval*.
- (j) *NEMMCO* must determine a factor for each *Market Participant* for the purposes of clauses 3.15.6A(h) and (i) in accordance with the procedure contemplated by clause 3.15.6A(k).
- (k) *NEMMCO* must prepare a procedure for determining contribution factors for use in clause 3.15.6A(j) taking into account the following principles:
- (1) the contribution factor for a *Market Participant* should reflect the extent to which the *Market Participant* contributed to the need for *regulation services*;
  - (2) the contribution factor for all *Market Customers* that do not have *metering* to allow their individual contribution to the aggregate need for *regulation services* to be assessed must be equal;
  - (3) the individual *Market Participant's* contribution to the aggregate need for *regulation services* will be determined over a period of time to be determined by *NEMMCO*; and
  - (4) a *Registered Participant* which has classified a *scheduled generating unit*, *scheduled load*, *ancillary service generating unit* or *ancillary service load* (called a 'Scheduled Participant') will not be assessed as contributing to the deviation in the *frequency* of the *power system* if within a *dispatch interval*:
    - (a) the Scheduled Participant achieves its *dispatch* target at a uniform rate;
    - (b) the Scheduled Participant is *enabled* to provide a *market ancillary service* and responds to a control signal from *NEMMCO* to *NEMMCO's* satisfaction; or
    - (c) the Scheduled Participant is not enabled to provide a *market ancillary service*, but responds to a need for *regulation services* in a way which tends to reduce the aggregate deviation.
- (l) *NEMMCO* may amend the procedure referred to in clause 3.15.6A(j) from time to time.
- (m) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the procedure referred to in clause 3.15.6A(k).

- (n) *NEMMCO* must *publish*, in accordance with the *timetable*, the historical data used in determining a factor for each *Market Participant* for the purposes of clauses 3.15.6A(h) and (i) in accordance with the procedure contemplated by clause 3.15.6A(k).
- (na) Notwithstanding any other provisions of the *Rules*, *NEMMCO* must *publish* the factors determined in accordance with clause 3.15.6A(j) at least 10 *business days* prior to the application of those factors in accordance with clauses 3.15.6A(h) and 3.15.6A(i).
- (o) In this clause 3.15.6A:
  - (1) ‘*generator energy*’ in respect of a *Market Generator* for a *trading interval* means the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Generator’s applicable connection points*, provided that, if the sum of those figures is negative, then the *Market Generator’s generator energy* for that *trading interval* is zero;
  - (2) a *connection point* is an *applicable connection point* of a *Market Generator* if:
    - (A) the *Market Generator* is *financially responsible* for the *connection point*; and
    - (B) the *connection point* connects a *market generating unit* to the *national grid*;
  - (3) ‘*customer energy*’ in respect of a *Market Customer* for a *trading interval* means the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Customer’s relevant connection points*; and
  - (4) a *connection point* is a *relevant connection point* of a *Market Customer* if:
    - (A) the *Market Customer* is *financially responsible* for the *connection point*; and
    - (B) the *load* at that *connection point* has been classified (or is deemed to be classified) as a *market load*.

### 3.15.7 Payment to Directed Participants

- (a) Subject to clause 3.15.7(b), *NEMMCO* must pay compensation to *Directed Participants* calculated in accordance with clauses 3.15.7, 3.15.7A and 3.15.7B, as the case may be, for any service which the *Directed Participant* was required to provide in order to comply with the *direction*.

- (b) For the purpose of clause 3.15.8 and 3.15.10C the amount of compensation due to a *Directed Participant* pursuant to clause 3.15.7(a) must include interest on the sum of that amount less any payment made in accordance with clause 3.15.10C(a), computed at the average *bank bill rate* for the period beginning on the day 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 *direction* was issued and ending on the day on which payment is required to be made pursuant to clause 3.15.10C.
- (c) Subject to clause 3.15.17(d) and clause 3.15.7B, the compensation payable to each *Directed Participant* for the provision of *energy* or *market ancillary services* pursuant to a *direction* is to be determined in accordance with the formula set out below:

$$\text{DCP} = \text{AMP} \times \text{DQ}$$

where:

- DCP = the amount of compensation the *Directed Participant* is entitled to receive;
- AMP = the price below which are 90% of the *spot prices* or *market ancillary service prices* (as the case may be) for the relevant service provided by *Scheduled Generators*, *Scheduled Network Service Providers* or *Market Customers* in the *region* to which the *direction* relates, for the 12 months immediately preceding the *trading day* in which the *direction* was issued; and
- DQ = is either:
- (A) the difference between the total *adjusted gross energy* delivered or consumed by the *Directed Participant* and the total *adjusted gross energy* that would have been delivered or consumed by the *Directed Participant* had the *direction* not been issued; or
  - (B) the amount of the relevant *market ancillary service* which the *Directed Participant* has been *enabled* to provide in response to the *direction*.
- (d) If at the time *NEMMCO* issues a *direction*, the *Directed Participant* had submitted a valid *dispatch bid*, *dispatch offer* or *rebid* for *dispatch* of the service that is to be *dispatched* in accordance with the *direction*, the *Directed Participant* is entitled to receive compensation for the provision of that service at a price equal to the *price* in that *dispatch bid*, *dispatch offer* or *rebid* as appropriate.
- (e) *NEMMCO* must, in accordance with the *intervention settlement timetable*, advise each *Directed Participant* in writing of the amount the *Directed Participant* is entitled to receive pursuant to clause 3.15.7(c) or clause 3.15.7(d).

### **3.15.7A Payment to Directed Participants for services other than energy and market ancillary services**

- (a) Subject to clause 3.15.7(d) and clause 3.15.7B, *NEMMCO* must compensate each *Directed Participant* for the provision of services pursuant to a *direction* other than *energy* and *market ancillary services*, at the fair payment price of the services determined in accordance with this clause 3.15.7A.
- (b) Subject to clause 3.15.7A(e) and clause 3.15.7A(e1), *NEMMCO* must, in accordance with the *intervention settlement timetable* and any guidelines developed by *NEMMCO* in accordance with the *Rules consultation procedures*, determine if in *NEMMCO*'s reasonable opinion, an independent expert could reasonably be expected to determine a fair payment price for the services provided pursuant to the *direction* within a reasonable time period.
- (b1) If *NEMMCO* determines pursuant to clause 3.15.7A(b) that an independent expert could reasonably be expected to determine a fair payment price for the services provided pursuant to the *direction* within a reasonable time period it must as soon as reasonably practicable after making such determination *publish* its determination and, subject to clause 3.15.7A(e1), appoint an independent expert, in accordance with the *intervention settlement timetable*, to determine the fair payment price for the services provided pursuant to the *direction*.
- (c) *NEMMCO* must include as part of the terms of appointment of an independent expert the following requirements:
  - (1) that the independent expert must, in determining the fair payment price of the relevant service for the purposes of clause 3.15.7A, take into account:
    - (i) other relevant pricing methodologies in Australia and overseas, including but not limited to:
      - (A) other electricity markets;
      - (B) other markets in which the relevant service may be utilised; and
      - (C) relevant contractual arrangements which specify a price for the relevant service;
    - (ii) the following principles:
      - (A) the disinclination of *Scheduled Generators*, *Market Generators*, *Scheduled Network Service Providers* or *Market Customers* to provide the service the subject of the *direction* must be disregarded;



- (B) the urgency of the need for the service the subject of the *direction* must be disregarded;
  - (C) the *Directed Participant* is to be treated as willing to supply at the market price that would otherwise prevail for the directed services the subject of the *direction* in similar demand and supply conditions; and
  - (D) the fair payment price is the market price for the directed services the subject of the *direction* that would otherwise prevail in similar demand and supply conditions;
- (2) that the independent expert must determine and *publish* a draft report, in accordance with the *intervention settlement timetable*, setting out:
- (i) a description of the services provided in response to the *direction*;
  - (ii) the independent expert's draft determination of each fair payment price for the services provided;
  - (iii) the methodology and assumptions used by the independent expert in making the draft determination of the fair payment price; and
  - (iv) a request for submissions from interested parties on the matters set out in the draft report;
- (3) that the independent expert must, in accordance with the *intervention settlement timetable*, determine the fair payment price for the services provided, taking into account the submissions received, and must prepare and *publish* a final report setting out:
- (i) the description of the services provided in response to the *direction*;
  - (ii) the independent expert's determination of the fair payment price for the services provided;
  - (iii) the methodology and assumptions used by the independent expert in making the determination of each fair payment price; and
  - (iv) summaries of the submissions made by interested parties;
- (4) that the independent expert must deliver to *NEMMCO* a final tax invoice for the services rendered at the time he or she *publishes* the final report; and

- (5) that a report *published* by the independent expert pursuant to clause 3.15.7A(c) must not disclose *confidential information* or the identity of a *Directed Participant*.
- (d) In accordance with the *intervention settlement timetable*, NEMMCO must calculate the compensation payable to the *Directed Participant* using the fair payment price *published* by the independent expert under clause 3.15.7A(c)(3).
- (e) The fair payment price determined in accordance with clause 3.15.7A(c)(3) is to be the fair payment price for that service to be applied in all future occurrences where there is a *direction* for that service at any time within a period of 12 calendar months from the date on which the determination of that price was published.
- (e1) NEMMCO must not appoint an independent expert under clause 3.15.7A(b1) in respect of a *direction* for a service in respect of which:
  - (1) there is a determination of an independent expert in place in accordance with clause 3.15.7A(e) in relation to that service; or
  - (2) NEMMCO has appointed an independent expert to determine the fair payment price for that service under clause 3.15.7A and the independent expert has not yet made a determination of the fair payment price.

In these circumstances, NEMMCO must apply to the subsequent *direction* the fair payment price for that service determined, or to be determined, by the independent expert.

- (f) Within 1 *business day* of calculating the compensation payable pursuant to clause 3.15.7A(a) by application of clause 3.15.7A(e) or pursuant to clause 3.15.7A(d), NEMMCO must advise the relevant *Directed Participant* in writing of the amount of compensation.
- (g) The determination of a fair payment price pursuant to clause 3.15.7A(c)(1) and the calculation of compensation payable to *Directed Participants* pursuant to clause 3.15.7A(d) is final and binding.

### **3.15.7B Claim for additional compensation by Directed Participants**

- (a) Subject to clauses 3.15.7B(a1) and 3.15.7B(a4), a *Directed Participant* entitled to compensation pursuant to clause 3.15.7 or clause 3.15.7A may, in accordance with the *intervention settlement timetable*, make a written submission to NEMMCO claiming an amount equal to the sum of:
  - (1) the aggregate of the loss of revenue and additional net direct costs incurred by the *Directed Participant* in respect of a *scheduled*

- generating unit* or *scheduled network services*, as the case may be, as a result of the provision of the service under *direction*; less
- (2) the amount notified to that *Directed Participant* pursuant to clause 3.15.7(c) or clause 3.15.7A(f); less
  - (3) the aggregate amount the *Directed Participant* is entitled to receive in accordance with clause 3.15.6(c) for the provision of a service rendered as a result of the *direction*.
- (a1) Subject to clause 3.15.7B(a4), if *NEMMCO* determines pursuant to clause 3.15.7A(a) that an independent expert could not reasonably be expected to determine within a reasonable period of time the relevant fair payment price, a *Directed Participant* may, in accordance with the *intervention settlement timetable*, make a written submission to *NEMMCO* claiming compensation from *NEMMCO* for the provision of services under the *direction* equal to:
- (1) loss of revenue and additional net direct costs which the *Directed Participant* incurred as a result of the provision of services under the *direction*; and
  - (2) a reasonable rate of return on the capital employed in the provision of the service determined by reference as far as reasonably practicable to rates of return for the provision of similar services by similar providers of such services.
- (a2) Subject to clause 3.15.7B(a4), if a *Directed Participant* entitled to compensation pursuant to clause 3.15.7(d) considers that the amount notified pursuant to clauses 3.15.7(e) is less than the amount it is entitled to receive pursuant to that clause, the *Directed Participant* may, in accordance with the *intervention settlement timetable*, make a written submission to *NEMMCO* requesting compensation from *NEMMCO* for that difference.
- (a3) For the purposes of the calculation of additional net direct costs pursuant to clause 3.15.7B(a)(1) and clause 3.15.7B(a1)(1), the additional net direct costs incurred by the *Directed Participant* in respect of that *scheduled generating unit* or *scheduled network services*, as the case may be, includes without limitation:
- (1) fuel costs in connection with the *scheduled generating unit* or *scheduled network services*;
  - (2) incremental maintenance costs in connection with the *scheduled generating unit* or *scheduled network services*;
  - (3) incremental manning costs in connection with the *scheduled generating unit* or *scheduled network services*;

- 
- (4) acceleration costs of maintenance work in connection with the *scheduled generating unit*, where such acceleration costs are incurred to enable the *scheduled generating unit* or *scheduled network services* to comply with the *direction*;
  - (5) delay costs for maintenance work in connection with the *scheduled generating unit* or *scheduled network service*, where such delay costs are incurred to enable the *scheduled generating unit* or *scheduled network service* to comply with the *direction*;
  - (6) other costs incurred in connection with the *scheduled generating unit* or *scheduled network services*, where such costs are incurred to enable the *scheduled generating unit* or *scheduled network service* to comply with the *direction*; and
  - (7) any compensation which the *Directed Participant* receives or could have obtained by taking reasonable steps in connection with the *scheduled generating unit* or *scheduled network services* being available.
- (a4) In respect of a single *intervention price trading interval*, a *Directed Participant* may only make a claim pursuant to clauses 3.15.7B(a), 3.15.7B(a1) or 3.15.7B(a2) if the amount of the claim in respect of that *intervention price trading interval* is greater than \$5,000.
- (b) The submissions pursuant to clauses 3.15.7B(a), 3.15.7B(a1) and 3.15.7B(a2) must:
- (1) itemise each component of a claim;
  - (2) contain sufficient data and information to substantiate each component of a claim for loss of revenue and additional direct costs incurred and the reasonable rate of return, as the case may be; and
  - (3) be signed by an authorised officer of the applicant certifying that the written submission is true and correct.
- (c) *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 if all other claims by a *Directed Participant* in respect of that *direction* pursuant to clauses 3.15.7B(a), 3.15.7B(a1) and 3.15.7B(a2) are reasonable and if so pay the amount claimed in accordance with clause 3.15.10C.

- (d) If *NEMMCO* considers that a claim by a *Directed Participant* under clause 3.15.7B(a) or 3.15.7B(a1) or 3.15.7B(a2) is unreasonable, it must, in accordance with the *intervention settlement timetable*:
- (1) advise the *Directed Participant* of its determination in writing, setting out its reasons; and
  - (2) refer the matter to an independent expert to determine the claim for compensation in accordance with clause 3.12.3.

### 3.15.8 Funding of Compensation for directions

- (a) *NEMMCO* must, in accordance with the *intervention settlement timetable*, calculate the “*compensation recovery amount*” being:
- (1) the sum of:
    - (i) the total of the compensation payable to *NEMMCO* by *Affected Participants* and *Market Customers* under clause 3.12.2 in respect of a *direction* for the provision of *energy*; plus
    - (ii) the total of the amounts retained by *NEMMCO* pursuant to clause 3.15.6(b) in respect of a *direction* for the provision of *energy*;
  - (2) less the sum of:
    - (i) the total of the compensation payable by *NEMMCO* to *Affected Participants* and *Market Customers* pursuant to clause 3.12.2 in respect of a *direction* for the provision of *energy*; plus
    - (ii) the total of the compensation payable by *NEMMCO* to *Directed Participants* pursuant to clause 3.15.7(a) in respect of a *direction* for the provision of *energy*; plus
    - (iii) the total amount payable by *NEMMCO* to the independent expert pursuant to clause 3.12.3(c).
- (b) *NEMMCO* must, in accordance with the *intervention settlement timetable*, calculate a figure for each *Market Customer* in each *region* applying the following formula:

$$MCP = \frac{E}{\Sigma E} \times \frac{RB}{\Sigma RB} \times CRA$$

where

MCP is the amount payable or receivable by a *Market Customer* pursuant to this clause 3.15.8(b);

E is the sum of the *Market Customer's adjusted gross energy* amounts at each *connection point* for which the *Market Customer* is *financially responsible* in a *region*, determined in accordance with clauses 3.15.4 and 3.15.5 in respect of the relevant *intervention price trading intervals* excluding any *loads* in respect of which the *Market Customer* submitted a *dispatch bid* for the relevant *intervention price trading interval* in that *region*; and

RB is the regional benefit determined by *NEMMCO* pursuant to clause 3.15.8(b1) at the time of issuing the *direction*.

CRA is the *compensation recovery amount*.

- (b1) *NEMMCO* must, as soon as practicable following the issuance of a *direction*, determine the relative benefit each *region* received from the issuance of a *direction* in accordance with the *regional benefit directions procedures*.
- (b2) *NEMMCO* must develop in accordance with the *Rules consultation procedures* a procedure to determine the relative benefit each *region* receives from the issuance of a *direction* (the "*regional benefit directions procedures*"). Such procedures must take into account, where applicable to the reason the *direction* was given, the *load* at risk of not being supplied if the *direction* were not issued or the extent of improvement in available *energy reserve* in the *region*, capability to control *voltage* in the *region*, and capability to control *power system frequency* within the *region* and any other relevant matters.
- (c) If the figure calculated for a *Market Customer* under clause 3.15.8(b) is negative, the absolute value of that amount is the amount payable by the *Market Customer* to *NEMMCO* pursuant to clause 3.15.8(b).
- (d) Subject to clause 3.15.22, if the figure calculated for a *Market Customer* under clause 3.15.8(b) is positive, such amount is the amount receivable by the *Market Customer* from *NEMMCO* pursuant to clause 3.15.8(b), subject to the provisions of clause 3.15.22.
- (e) *NEMMCO* must, in accordance with the *intervention settlement timetable*, calculate for each *ancillary service* the subject of a *direction*, the "*ancillary service compensation recovery amount*" being:
  - (1) the sum of:
    - (i) the total of the compensation payable to *NEMMCO* by *Affected Participants* and *Market Customers* under clause 3.12.2 in respect of a *direction* for the provision of that *ancillary service*; plus

- (ii) the total of the amounts retained by *NEMMCO* pursuant to clause 3.15.6(b) in respect of a *direction* for the provision of that *ancillary service*;
- (2) less the sum of:
  - (i) the total of the compensation payable by *NEMMCO* to *Affected Participants* and *Market Customers* pursuant to clause 3.12.2 in respect of a *direction* for the provision of that *ancillary service*; plus
  - (ii) the total of the compensation payable by *NEMMCO* to *Directed Participants* pursuant to clause 3.15.7(a) in respect of a *direction* for the provision of that *ancillary service*; plus
  - (iii) the total amount payable by *NEMMCO* to the independent expert pursuant to clause 3.12.3(c), if the *direction* the subject of the independent expert's determination was with respect to that *ancillary service*.
- (f) The *trading amount* must be calculated as follows:
  - (1) subject to clause 3.15.8(f)(2) and (3) *NEMMCO* must use the appropriate formula set out in clause 3.15.6A(c), (d), (e), (f), (g), (h) or (i) depending on which *ancillary service* was the subject of the *direction*;
  - (2) TNCASP, TSRP, TCRSP, TCLSP or TSFCAS (as applicable) in the relevant formula is equal to the *ancillary service compensation recovery amount* for the relevant *ancillary service* in respect of the *direction*; and
  - (3) if TCE, TGE, ATCE or ATGE is used in the relevant formula, then the words 'the *trading interval*' in the definitions of those terms in the formula are to be read as 'all of the *trading intervals* during which the *direction* applied'.
- (g) Any compensation payable by *NEMMCO* pursuant to clauses 3.12.2 and 3.15.7 not recovered pursuant to clauses 3.15.8(b) and 3.15.8(e) must be recovered from *Registered Participants* in the same proportion as the largest single fixed component of *Participants fees*.

### 3.15.9 Reserve settlements

- (a) *NEMMCO's* costs incurred in contracting for the provision of *reserves* are to be met by fees imposed on *Market Customers* in accordance with this clause 3.15.9.

- 
- (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* 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 generating unit*, *scheduled network service* or *scheduled load* under a *scheduled reserve contract* being *dispatched* or *generating units* or *loads* under an *unscheduled 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* during the relevant *billing period*.
- (c) Separate statements must be provided under paragraph (b):
- (1) for *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* 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* 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* 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:



$$MCP = \frac{E \times RRC}{\Sigma E}$$

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 occurs between 0800 hours and 2000 hours (EST) 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* which relate to the *relevant region* in the *billing period* as agreed under clause 3.20.3(f); and

ΣE 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* 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 clause 3.15.19, 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*.

### 3.15.10 Administered price, VoLL or market floor price compensation payments

- (a) In the event that the AEMC awards compensation to a *Scheduled Generator*, *Market Participant* which submitted a *dispatch bid* or *Scheduled Network Service Provider* in accordance with clause 3.14.6, then NEMMCO must determine an amount which shall be payable by all *Market Customers* who purchased electricity from the *spot market* in a *region* in which the *regional reference price* was affected by the imposition of an *administered price* or *VoLL*, or *market floor price* in the *trading interval* or *trading intervals* in respect of which such compensation has been awarded.

- (b) *NEMMCO* shall determine the amounts payable for each relevant *trading interval* by each of the affected *Market Customers* under clause 3.15.10(a) as follows:

$$\frac{APC \times E_i}{\Sigma E_i}$$

where

APC is the total amount of any compensation payments awarded by the *AEMC* to *Scheduled Generators*, *Market Participants* which submitted *dispatch bids* or *Scheduled Network Service Providers* in respect of that *trading interval* in accordance with clause 3.14.6.

$E_i$  is the sum of all of the *Market Customer's adjusted gross energy* amounts, determined in accordance with clauses 3.15.4 and 3.15.5, in respect of each *trading interval* in the *billing period* and each *connection point* for which the *Market Customer* is *financially responsible* in any *region* or *regions* affected by the imposition of an *administered price* or *VoLL* or *market floor price*.

$\Sigma E_i$  is the sum of all amounts determined as " $E_i$ " in accordance with this clause 3.15.10 for all *Market Customers* in all *regions* affected by the imposition of an *administered price* or *VoLL* or *market floor price* in that *trading interval*.

- (c) Within 15 *business days* of being notified by the *AEMC* that compensation is to be paid to a *Scheduled Generator*, *Market Participant* which submitted a *dispatch bid* or *Scheduled Network Service Providers* in accordance with clause 3.14.6, *NEMMCO* shall include in statements provided under clauses 3.15.14 and 3.15.15 separate details of any amounts payable by or to *Market Participants* as determined in accordance with this clause 3.15.10.

### 3.15.10A Goods and services tax

- (a) In this clause 3.15.10A:

“**GST**” has the meaning given in the *GST Act*; and

“**GST Act**” means the *A New Tax System (Goods and Services Tax) Act 1999 (C'th)*;

“**supply**” and “**taxable supply**” each have the meaning given in the *GST Act*,

and the definition of “*supply*” in Chapter 10 does not apply.

- (b) Despite anything else in the *Rules*, *Participant fees*, *spot prices*, adjustments for *directions*, *reserve settlements*, *administered price cap*

compensation payments, system security *direction settlements*, *re-allocation transactions*, compensation, interest, *settlements residues*, *ancillary services settlements*, *settlements residue* distributions (including *auction* proceeds), *auction expense fees* and other prices, fees, charges and amounts payable to or by *NEMMCO*, the *AER* or the *AEMC* in respect of supplies under the *Rules* exclude GST. Accordingly:

- (1) where a *Registered Participant* makes a taxable supply to *NEMMCO*, the *AER* or the *AEMC* under or in connection with the *Rules* on or after 1 July 2000, *NEMMCO*, the *AER* or the *AEMC* (as applicable) must also pay the *Registered Participant* making the supply an additional amount equal to the consideration payable for the supply multiplied by the applicable GST rate;
  - (2) where *NEMMCO*, the *AER* or the *AEMC* makes a taxable supply to a *Registered Participant* under the *Rules* on or after 1 July 2000, the *Registered Participant* must also pay *NEMMCO*, the *AER* or the *AEMC* (as applicable) an additional amount equal to the consideration payable for the supply multiplied by the applicable GST rate; and
  - (3) *NEMMCO* must include in *preliminary statements*, *final statements*, *routine revised statements*, *special revised statements*, statements and invoices issued under the *Rules* the additional amounts contemplated by clauses 3.15.10A(b)(1) and (2).
- (c) However, if the additional amount paid or payable to a *Registered participant*, *NEMMCO*, the *AER* or the *AEMC* under clause 3.15.10A(b) in respect of a taxable supply differs from the actual amount of GST payable by or to the *Registered Participant*, *NEMMCO*, the *AER* or the *AEMC* (as applicable) under the GST Act in respect of the relevant supply, then adjustments must be made in accordance with clause 3.15.19 so as to ensure the additional amount paid under this clause in respect of the supply is equal to the actual amount of GST payable under the GST Act in respect of the supply.

### 3.15.10B Restriction contract amounts

- (a) If clause 3.12A.7(g) applies then *NEMMCO* must include in the next statement provided under clauses 3.15.14 and 3.15.15 immediately after the end of the relevant *mandatory restriction period* separate details of amounts payable:
  - (1) by *Market Customers* in the relevant *region* in which the *mandatory restrictions* apply an amount equal to:

$$EMCP = RSA \quad \times \quad \frac{(AGE)}{(AAGE)}$$

Where:

EMCP is the payment to be made by *Market Customers* to NEMMCO.

RSA is the *restriction shortfall amount*.

AGE is the *adjusted gross energy* of a *Market Customer* in that *region* for the *mandatory restriction period* expressed in MWh.

AAGE is the aggregate of the *adjusted gross energy* of all *Market Customers* in that *region* for the *mandatory restriction period* expressed in MWh;

- (2) by *Scheduled Generators* and *Scheduled Network Service Providers* to NEMMCO in accordance with clause 3.12A.7(a); and
  - (3) the amounts payable by NEMMCO to the *Scheduled Generators* or *Scheduled Network Service Providers* pursuant to *accepted restriction offers*.
- (b) Immediately upon the later of the publication of the independent expert's final report in accordance with clause 3.12A.7(i)(8) and the determination of a *dispute resolution panel* pursuant to clause 3.12A.7(m), if any, NEMMCO must include in the next statements provided under clauses 3.15.14 and 3.15.15 separate details of any amounts payable:
- (i) by a *Market Customer* equal to the amount as determined in accordance with clause 3.12A.7(g)(i) less the amount determined in accordance with clause 3.15.10B(a)(1), if such number is positive together with interest on such amount calculated by applying the *bank bill rate* on the date of this statement for the period from the date of the statement referred to in clause 3.15.10B(a) to the date of this statement under clause 3.15.10B(b); and
  - (ii) to a *Market Customer* equal to the amount determined in accordance with clause 3.15.10B(a)(1) less the amount determined in accordance with clause 3.12A.7(g)(i), if such number is positive together with interest on such amount calculated by applying the *bank bill rate* on the date of this statement for the period from the date of the statement referred to in clause 3.15.10B(a) to the date of this statement under clause 3.15.10B(b).
- (c) If clauses 3.12A.7(f) or 3.12A.7(h) apply then NEMMCO must include in the next statement provided under clauses 3.15.14 and 3.15.15 immediately after the end of the relevant *mandatory restriction period* separate details of any amounts payable:
- (i) by or to *Market Customers* as determined in accordance with clauses 3.12A.7(e) or 3.12A.7(h) respectively;
  - (ii) by *Scheduled Generators* and *Scheduled Network Service Providers* to NEMMCO in accordance with clause 3.12A.7(a); and

- (iii) the amounts payable by *NEMMCO* to the *Scheduled Generators* or *Scheduled Network Service Providers* pursuant to all *accepted restriction offers*.

### 3.15.10C Intervention Settlements

- (a) *NEMMCO* must include in the final statement provided under clause 3.15.14 and 3.15.15 for a *billing period* in which a *direction* was issued:
  - (1) for each *Affected Participant* and *Market Customer* in relation to that *direction* the amount calculated pursuant to clause 3.12.2(c);
  - (2) for each *Directed Participant* in relation to that *direction* the amount calculated pursuant to clause 3.15.7(c) or clause 3.15.7A(a) by application of clause 3.15.7A(e), as the case may be;
  - (3) for each *Market Customer* in relation to that *direction* the amount calculated pursuant to clause 3.15.8(b) by application of clause 3.15.8 mutatis mutandis provided that the amount for the purposes of:
    - (i) clause 3.15.8(a)(1)(i) shall be the total amount payable to *NEMMCO* by *Affected Participants* and *Market Customers* calculated pursuant to clause 3.12.2(c);
    - (ii) clause 3.15.8(a)(1)(ii) shall be the amount calculated in accordance with that clause;
    - (iii) clause 3.15.8(a)(2)(i) shall be the total amount payable by *NEMMCO* to *Affected Participants* and *Market Customers* calculated pursuant to clause 3.12.2(c);
    - (iv) clause 3.15.8(a)(2)(ii) shall be the sum of the total amount payable by *NEMMCO* to *Directed Participants* calculated pursuant to clause 3.15.7(c) and 3.15.7A(a) by application of 3.15.7A(e); and
    - (v) clause 3.15.8(a)(2)(iii) shall be zero; and
  - (4) for each *Market Customer* and *Market Generator* in relation to that *direction* an amount calculated pursuant to clause 3.15.8(e) by application of clause 3.15.8 mutatis mutandis provided that for the purposes of clause 3.15.8(f)(2) TNCASP, TSRP, TCRSP, TCLSP and TSFCAS shall be the total compensation payable by *NEMMCO* for the relevant *ancillary service* calculated in accordance with clause 3.15.7(c) or clause 3.15.7A(a) by application of clause 3.15.7A(e), as the case may be.
- (b) *NEMMCO* must include in the first statement it provides under clauses 3.15.14 and 3.15.15 following a final determination of all total amounts

payable or receivable by it pursuant to clause 3.12.2, clause 3.15.7(a) and clause 3.15.8, separate details of the amount:

- (1) receivable by each *Directed Participant* pursuant to clause 3.15.7(a) less the amount, if any, paid to that *Directed Participant* pursuant to clause 3.15.10C(a)(2);
- (2) receivable by each *Affected Participant* or *Market Customer* pursuant to clause 3.12.2:
  - (i) less the amount paid to that *Affected Participant* or *Market Customer*, in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(1), if any; or
  - (ii) plus the amount paid by that *Affected Participant* or *Market Customer* in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(1), if any;
- (3) payable by each *Affected Participant* or *Market Customer* pursuant to 3.12.2:
  - (i) less the amount paid by that *Affected Participant* or *Market Customer*, in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(1), if any; or
  - (ii) plus the amount paid to that *Affected Participant* or *Market Customer* in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(1), if any;
- (4) receivable by each *Market Customer* pursuant to clause 3.15.8(b):
  - (i) less the amount paid to that *Market Customer* in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(3), if any; or
  - (ii) plus the amount paid by that *Market Customer* in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(3), if any;
- (5) payable by each *Market Customer* pursuant to clause 3.15.8(b):
  - (i) less the amount paid by that *Market Customer* in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(3), if any; or
  - (ii) plus the amount paid to that *Market Customer* in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(3), if any;

- 
- (6) if an *Affected Participant* or *Market Customer* is not entitled to any compensation pursuant to clause 3.12.2, the amount:
- (i) receivable by that person equal to the amount paid by that person pursuant to clause 3.15.10C(a); or
  - (ii) payable by that person equal to the amount paid to that person pursuant to clause 3.15.10C(a);
- (7) payable by each *Market Customer* and *Market Generator* equal to:
- (i) the amount payable by the *Market Customer* or *Market Generator*, as the case may be, pursuant to clause 3.15.8(e) by application of clause 3.15.8 mutatis mutandis provided that for the purposes of clause 3.15.8(f)(2) TNCASP, TSRP, TCRSP, TCLSP and TSFCAS shall be the total compensation payable by *NEMMCO* for the relevant *ancillary service* calculated in accordance with clause 3.15.7A(a); less
  - (ii) the amount paid by the *Market Customer* or *Market Generator*, as the case may be, in accordance with the statement issued to it pursuant to clause 3.15.10C(a)(4); and
- (8) payable by *Registered Participants* pursuant to clause 3.15.8(g).
- (c) If on application by the *AER* a court determines, in relation to a *direction*, that a *Directed Participant* has breached clause 4.8.9(c2) then:
- (1) the *Directed Participant* shall not be entitled to, and must repay, any compensation plus interest pursuant to clauses 3.15.7, 3.15.7A and 3.15.7B, in relation to that *direction*; and
  - (2) the *AER* must forward to *NEMMCO* a written notice of the court's determination.
  - (3) *NEMMCO* must include in the first relevant statement it provides under clauses 3.15.14 and 3.15.15 following receipt of the notice from the *AER* issued pursuant to clause 3.15.10C(c)(2) separate details of:
    - (i) an amount payable to *NEMMCO* by the *Directed Participant* equal to the total compensation received by that *Directed Participant* in accordance with clauses 3.15.7, 3.15.7A and 3.15.7B plus interest on that total compensation computed at the average *bank bill* rate for the period from the date of payment of such amount to the *Directed Participant* until the date of that first statement;

- (ii) an amount payable by *NEMMCO* to each relevant *Market Customer* calculated by applying clause 3.15.8(b) *mutatis mutandis* except that:
  - (A) MCP shall equal the amount receivable by the *Market Customer*; and
  - (B) CRA shall equal that part of the amount, including interest, calculated pursuant to clause 3.15.10C(c)(3)(i) attributable to the provision of *energy* by the *Directed Participant*; and
- (iii) an amount payable by *NEMMCO* to each relevant *Market Customer* and *Market Generator* calculated by applying clause 3.15.8(f)(2) *mutatis mutandis* except that:
  - (A) all *trading amounts* determined by this clause 3.15.10C(c)(3)(iii) shall be positive; and
  - (B) TNCASP, TSRP, TCRSP, TCLSP, and TSFCAS shall all be an amount equal to that part of the amount, including interest, calculated pursuant to clause 3.15.10C(c)(3)(i) attributable to the provision of the relevant *ancillary service*.

### 3.15.11 Reallocation transactions

- (a) A *reallocation transaction* is a *transaction* undertaken with the consent of two *Market Participants* and *NEMMCO*, under which *NEMMCO* credits one *Market Participant* with a positive *trading amount* in respect of a *trading interval*, in consideration of a matching negative *trading amount* debited to the other *Market Participant* in respect of the same *trading interval*.
- (b) *Reallocation transactions* may be of any type permitted in the *reallocation procedures*.
- (c) A *reallocation transaction* is initiated by a *reallocation request* lodged with *NEMMCO* by or on behalf of two *Market Participants*.
- (d) A *reallocation request* must:
  - (1) contain the information required by the *reallocation procedures*; and
  - (2) be lodged with *NEMMCO* in accordance with the *reallocation procedures* and the timetable for *reallocation requests* as published by *NEMMCO* from time to time (the **reallocation timetable**).
- (e) Upon receipt of a *reallocation request* *NEMMCO* must register the *reallocation request* within the time specified in the *reallocation*



---

*procedures* and the reallocation timetable and may impose conditions on that registration as contemplated by the *reallocation procedures*.

- (f) After a *reallocation request* has been registered in respect of two *Market Participants*, *NEMMCO* may deregister the *reallocation request* if:
  - (1) the *prudential requirements* are not satisfied by either of those *Market Participants*;
  - (2) either of the *Market Participants* fails to comply with any conditions imposed by *NEMMCO* in respect of the *reallocation request* at the time it was registered;
  - (3) both *Market Participants* notify *NEMMCO* in accordance with the *reallocation procedures* that they require the *reallocation request* to be terminated; or
  - (4) a *default event* occurs in respect of either of the *Market Participants* and *NEMMCO* exercises its powers under paragraph (1).
- (g) Deregistration of a *reallocation request* prevents *reallocation transactions* occurring in respect of all the *trading intervals* that occur after the time of deregistration.
- (h) *NEMMCO* must not deregister a *reallocation request* under paragraph (f) otherwise than in accordance with the *reallocation procedures*.
- (i) The *Market Participants* may agree to reverse the effect of a registered *reallocation request* by lodging a new *reallocation request* in accordance with the *reallocation procedures* and the reallocation timetable.
- (j) *NEMMCO* must include details of *reallocation transactions* in the *settlement statements* issued to all parties to those *reallocation transactions*.
- (k) Where there is a registration of a *reallocation request* in respect of a *trading interval* and that *trading interval* has occurred, a *reallocation transaction* occurs in accordance with that *reallocation request*.
- (l) If a *default event* occurs in relation to a party to a *reallocation request* when one or more of the *trading intervals* specified in the *reallocation request* has not occurred, *NEMMCO* may deregister the *reallocation request* by notice given at any time whilst the *default event* is subsisting.
- (m) The deregistration under paragraph (l) is effective immediately upon *NEMMCO* notifying both parties to a *reallocation request* of the deregistration and the deregistration:
  - (1) is effective for all *trading intervals* commencing after the time specified in the notice, and notwithstanding that the *default event* may be subsequently cured; and

- (2) prevents the completion of the requested *reallocation transactions* in the *trading intervals* that commence at or after the time specified in the deregistration notice.
- (n) In addition to any other right *NEMMCO* may exercise following a *default event*, upon deregistration of a *reallocation request* *NEMMCO* may redetermine the *maximum credit limit* and *trading limit* for either or both of the parties to the *reallocation request*, having regard to the deregistration that has occurred.

### 3.15.11A Reallocation procedures

- (a) *NEMMCO* must develop and *publish* procedures in accordance with the *Rules consultation procedures*, to enable *Market Participants* to create and record *reallocation requests* and *reallocation transactions* in accordance with clause 3.15.11 in respect of electricity trading transactions other than those conducted through the *market* and/or establish mutual indemnification arrangements with other operators of markets for electricity-based trading (the "*reallocation procedures*").
- (b) *NEMMCO* may, from time to time and in accordance with the *Rules consultation procedures*, amend or replace the *reallocation procedures*.
- (c) Paragraph (b) does not apply to amendments to the *reallocation procedures* that are of a minor or administrative nature and *NEMMCO* may make such amendments at any time.
- (d) *NEMMCO* must develop and *publish* the first *reallocation procedures* by 1 January 2008 and there must be such procedures available at all times after that date.
- (e) *NEMMCO* is not required to meet its obligations under paragraph (a) in any way which increases *NEMMCO's* risks in the collection of moneys owed to it in accordance with any provisions of the *Rules*.

### 3.15.12 Settlement amount

- (a) Subject to clause 3.15.12(b), for each *billing period* *NEMMCO* must calculate a net "*settlement amount*" for each *Market Participant* by aggregating the *trading amounts* resulting for each *Market Participant* from each *transaction* in respect of each *trading interval* occurring in that *billing period* together with *Participant fees* determined in accordance with rule 2.11 and any other amounts payable or receivable by the *Market Participants* in that *billing period* under this Chapter 3. The *settlement amount* will be a positive or negative dollar amount for each *Market Participant*.
- (b) *NEMMCO* may calculate an estimate of the net *settlement amount* for each *Market Participant* (the "*estimated settlement amount*") if, within the time

provided for the giving of *preliminary statements* in accordance with clause 3.15.14, *NEMMCO* is prevented from calculating the net *settlement amount* in accordance with clause 3.15.12(a) by factors which are beyond the control of *NEMMCO* and which deprive *NEMMCO* of the relevant data required to calculate the net *settlement amount* (the “*relevant data*”), including:

- (1) a failure of:
    - (i) metering data processing;
    - (ii) communications; or
    - (iii) the settlements processing system; and
  - (2) any other events or circumstances which prevent the calculation of the actual net *settlement amount* by *NEMMCO*.
- (c) *NEMMCO* must develop the principles and the process to be applied in calculating the *estimated settlement amount*, and make any necessary modifications to those principles and that process, in accordance with the *Rules consultation process*.

### **3.15.13 Payment of settlement amount**

Where the *settlement amount* for a *Market Participant* is negative the absolute value of the *settlement amount* is an amount payable by the *Market Participant* to *NEMMCO* pursuant to clause 3.15.15. Where the *settlement amount* for a *Market Participant* is positive the *settlement amount* is an amount receivable by the *Market Participant* from *NEMMCO* pursuant to clause 3.15.15, subject to the provisions of clause 3.15.22.

### **3.15.14 Preliminary statements**

- (a) Subject to clause 3.15.14(b), within 5 *business days* after the end of each *billing period*, *NEMMCO* must give each *Market Participant* a draft of the statement to be given to the *Market Participant* under clause 3.15.15 together with supporting data relating to the *transactions* in that *billing period* and the prices at which electricity was bought and sold by the *Market Participant*.
- (b) If *NEMMCO* calculates an *estimated settlement amount* in accordance with clause 3.15.12(b), *NEMMCO* must:
  - (1) when giving a *preliminary statement* in accordance with this clause 3.15.14, provide a detailed report to affected *Market Participants* setting out the basis and calculations used for its estimation; and

- (2) if requested to do so by affected *Market Participants*, consult with those *Market Participants* to ascertain whether or not any adjustments are required to the *estimated settlement amount* prior to the giving of a *final statement*.

### **3.15.15 Final statements**

- (a) No later than 18 *business days* after the end of each *billing period*, *NEMMCO* must give to each *Market Participant* a *final statement* stating the amounts payable by the *Market Participant* to *NEMMCO* or receivable by the *Market Participant* from *NEMMCO* (subject to clause 3.15.22) in respect of the relevant *billing period*.
- (b) Unless *NEMMCO* has used an *estimated settlement amount* in accordance with clause 3.15.12, the statements issued under this clause 3.15.15 must include supporting data for all amounts payable or receivable.

### **3.15.15A Use of estimated settlement amounts by NEMMCO**

- (a) Subject to clause 3.15.15A(b), if *NEMMCO* calculates an *estimated settlement amount* in accordance with clause 3.15.12(b), then clauses 3.15.13, 3.15.14 and 3.15.15 will have effect mutatis mutandis by applying the *estimated settlement amount* in place of a *settlement amount* for a *Market Participant* for the purposes of those clauses.
- (b) If *NEMMCO* receives *relevant data*:
  - (1) after it has given the *preliminary statement* in accordance with clause 3.15.14 but before giving a *final statement*, then it must adjust the *estimated settlement amount* accordingly for the purposes of preparing the *final statement*; or
  - (2) within 60 days after it has given a *final statement* to which the *relevant data* relates, then *NEMMCO* must adjust the relevant *estimated settlement amount* accordingly and issue a *revised statement* in accordance with clause 3.15.19(a).

### **3.15.16 Payment by market participants**

On the 20th *business day* after the end of a *billing period*, or 2 *business days* after receiving a statement under clause 3.15.15, whichever is the later, and in accordance with the *timetable* each *Market Participant* must pay to *NEMMCO* in cleared funds the net amount stated to be payable by that *Market Participant* in that statement whether or not the *Market Participant* continues to dispute the net amount payable.

### 3.15.17 Payment to market participants

Subject to clause 3.15.22 on the *day* on which *NEMMCO* is to be paid under clause 3.15.16, *NEMMCO* must pay to each *Market Participant* in cleared funds the net amount stated to be payable to that *Market Participant* in the relevant statement given to it under clause 3.15.15.

### 3.15.18 Disputes

- (a) In the event of a dispute between a *Market Participant* and *NEMMCO* concerning either the net amount (including any *estimated settlement amount*) stated in a *preliminary statement* provided under clause 3.15.14 to be payable by or to it or the supporting data, they must each use reasonable endeavours to resolve the dispute within 15 *business days* of the end of the relevant *billing period*.
- (b) Disputes in respect of *final statements* or the supporting data provided with them in accordance with clause 3.15.15 must be raised within 6 months of the relevant *billing period*.
- (c) Disputes raised under this clause 3.15.18:
  - (1) can only be raised by a *Market Participant* or *NEMMCO* issuing a written notice of dispute in the form prescribed by *NEMMCO*'s *DMS* and otherwise in accordance with rule 8.2;
  - (2) must be resolved by agreement or pursuant to rule 8.2; and
  - (3) are, for the purpose of this clause, deemed to have been raised on the day *NEMMCO* receives the written notice of dispute.
- (d) A *Market Participant* that may be materially affected by the outcome of a dispute under clause 3.15.18 may be joined to that dispute by the *Adviser* on request by that *Market Participant* or by *NEMMCO*.

### 3.15.19 Revised Statements and Adjustments

- (a) Where a dispute about a *final statement* has been either resolved by agreement between *NEMMCO* and the relevant *Market Participant* ("the Disputant") or determined under rule 8.2 and an adjustment to the *settlement amount* stated in the disputed *final statement* is required, or an adjustment is required under clause 3.15.10A, *NEMMCO* must:
  - (1) recalculate the *settlement amount* for that *Market Participant* and each other *Market Participant* who received a *final statement* for the relevant *billing period*:
    - (i) in accordance with the applicable procedures set out in the *Rules* and,

- 
- (ii) taking into account the adjustment;
  - (2) if the adjustment is required as a result of a dispute and the recalculated *settlement amount* for the Disputant is between 95% and 105% of the relevant *settlement amount*:
    - (i) calculate for each *Market Participant* the amount by which the relevant *settlement amount* must be adjusted to be equal to the recalculated *settlement amount* after taking into account any *routine* or *special revised statement*; and
    - (ii) for each *Market Participant* include that amount in the next *routine revised statement* given to those *Market Participants* for the relevant *billing period* practicable and if there is no *routine revised statement*, in accordance with clauses 3.15.19(a)(3)(ii) and (iii).
  - (3) if the adjustment is required under clause 3.15.10A, or the adjustment is required as a result of a dispute and the recalculated *settlement amount* for the Disputant is less than 95% or more than 105% of the relevant *settlement amount*:
    - (i) calculate for each *Market Participant* the amount by which the relevant *settlement amount* must be adjusted to be equal to the recalculated *settlement amount* after taking into account any *routine* or *special revised statement*;
    - (ii) give each *Market Participant* a *special revised statement* for the relevant *billing period* in addition to any *routine revised statement* given under clause 3.15.19(b); and
    - (iii) give each *Market Participant* a notice advising of the reason why a *settlement statement* was given by NEMMCO under clause 3.15.19(a)(3).
  - (b) For each *billing period* NEMMCO must give each *Market Participant* a *routine revised statement* approximately 20 weeks after the relevant *billing period* and approximately 30 weeks after the relevant *billing period*. Each *routine revised statement* must recalculate the *Market Participant's settlement amount* for that *billing period*:
    - (1) taking into account all amended *metering data*, amended *trading amounts*, amended *Participant fees* and any other amounts payable or receivable by *Market Participants* under this Chapter 3; and
    - (2) using the most recent version of NEMMCO's settlement calculation software applicable to that *billing period*.
  - (c) Each *special* and *routine revised statement* issued under this clause must:
-

- (1) state the revised *settlement amount* for the relevant *billing period*;
  - (2) be issued in accordance with the revised statement policy;
  - (3) be issued with revised supporting data for the *transactions* for the relevant *billing period* (except in the case of a *special revised statement* dealing with an adjustment required under clause 3.15.10A) and must include supporting data for all amounts payable or receivable.
- (d) If *NEMMCO* has issued a *routine revised statement* or *special revised statement* (the “revised statement”) to a *Market Participant* in respect of a *billing period* (the “original *billing period*”), *NEMMCO* must include in the next *final statement* to the *Market Participant* issued not less than 8 *business days* after the *revised statement* (the “next statement”):
- (1) the amount necessary to put the *Market Participant* in the position it would have been in at the time payment was made under clause 3.15.16 or 3.15.17 (as applicable) in respect of the *final statement* for the original *billing period*, if the original *revised statement* had been given as the *final statement* for the *billing period*, but taking into account any adjustments previously made under this clause 3.15.19 as a result of any other *routine revised statement* or *special revised statement* in relation to the original *billing period*; and
  - (2) interest on the amount referred to in clause 3.15.19(d)(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 original *billing period* to the date on which payment is required to be made under those clauses in respect of the next statement.
- (e) *NEMMCO* must develop and publish a policy for *routine* and *special revised statements*. *NEMMCO* may amend the policy at any time. *NEMMCO* must develop and amend the policy in accordance with the *Rules consultation procedures*. The policy must include:
- (1) a calendar setting out when *routine revised statements* will be issued by *NEMMCO*;
  - (2) the process by which the calendar can be amended or varied by *NEMMCO* and the process by which *Market Participants* are notified of any amendment and variation; and
  - (3) a transitional process by which *NEMMCO* will issue any outstanding *routine revised statement*.

### 3.15.20 Payment of adjustments

- (a) Adjustments made and interest calculated and included in a *final statement* under clause 3.15.19 must be paid as part of the *settlement amount* shown on that *final statement* in accordance with either clause 3.15.16 or 3.15.17.
- (b) Clause 3.15.22 does not apply to a *final statement* to the extent that the *final statement* incorporates an adjustment amount and interest pursuant to clause 3.15.19.
- (c) Disputes in respect of adjustment amounts and interest incorporated into a *final statement* pursuant to clause 3.15.19 must be:
  - (1) raised within 20 *business days* of the date of the *final statement* that they are incorporated into; and
  - (2) resolved by agreement or pursuant to the dispute resolution procedures set out in rule 8.2.

### 3.15.21 Default procedure

- (a) Each of the following is a *default event* in relation to a *Market Participant*:
  - (1) the *Market Participant* does not pay any money due for payment by it under the *Rules* by the appointed time on the due date;
  - (2) *NEMMCO* does not receive payment in full of any amount claimed by *NEMMCO* under any *credit support* in respect of a *Market Participant*, within 90 minutes after the due time for payment of that claim;
  - (3) the *Market Participant* fails to provide *credit support* required to be supplied under the *Rules* by the appointed time on the due date;
  - (4) it is unlawful for the *Market Participant* to comply with any of its obligations under the *Rules* or any other obligation owed to *NEMMCO* or it is claimed to be so by the *Market Participant*;
  - (5) it is unlawful for any *credit support provider* in relation to the *Market Participant* to comply with any of its obligations under the *Rules* or any other obligation owed to *NEMMCO* or it is claimed to be so by that *credit support provider*;
  - (6) an authorisation from a government body necessary to enable the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* to carry on their respective principal business or activities ceases to be in full force and effect;
  - (7) the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* ceases or



- threatens to cease to carry on its business or a substantial part of its business;
- (8) the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* enters into or takes any action to enter into an arrangement (including a scheme of arrangement), composition or compromise with, or assignment for the benefit of, all or any class of their respective creditors or members or a moratorium involving any of them;
  - (9) the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* states that it is unable to pay from its own money its debts when they fall due for payment;
  - (10) a receiver or receiver and manager is appointed in respect of any property of the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant*;
  - (11) an administrator, provisional liquidator, liquidator, trustee in bankruptcy or person having a similar or analogous function under the laws of any relevant jurisdiction is appointed in respect of the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant*, or any action is taken to appoint any such person;
  - (12) an application or order is made for the winding up or dissolution or a resolution is passed or any steps are taken to pass a resolution for the winding up or dissolution of the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant*;
  - (13) A notice under section 601AB(3) of the Corporations Act is given to the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* unless the registration of that *Market Participant* or *credit support provider* is reinstated under section 601AH of the Corporations Act;
  - (14) the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* dies or is dissolved unless such notice of dissolution is discharged;
  - (15) the *Market Participant* or a *credit support provider* which has provided *credit support* for that *Market Participant* is taken to be insolvent or unable to pay its debts under any applicable legislation.
- (b) Where a *default event* has occurred in relation to a *Market Participant*, *NEMMCO* may:

- (1) issue a "*default notice*" specifying the alleged default and requiring the *Market Participant* to remedy the default by 1.00 pm (*Sydney time*) the next day following the date of issue of the *default notice*; and/or
  - (2) if it has not already done so, make claim upon any *credit support* held in respect of the obligations of the *Market Participant* for such amount as *NEMMCO* determines represents the amount of any money actually or contingently owing by the *Market Participant* to *NEMMCO* pursuant to the *Rules*.
- (c) If the *default event* is not remedied by 1.00 pm (*Sydney time*) the next day following the date of issue of the *default notice* or any later deadline agreed to in writing by *NEMMCO*, or if *NEMMCO* receives notice from the *defaulting Market Participant* that it is not likely to remedy the default, then *NEMMCO* may issue a "*suspension notice*" under which *NEMMCO* notifies the *defaulting Market Participant* of the date and time from which it is suspended from trading, and the extent of that suspension.
- (d) At the time of issue of a *suspension notice*, or as immediately thereafter as is practicable, *NEMMCO* must forward a copy of the *suspension notice* to the *AER* and to each *Market Participant* which is *financially responsible* for a *transmission network connection point* to which is allocated a *connection point* for which the *defaulting Market Participant* is *financially responsible*.
- (e) *NEMMCO* must lift a *suspension notice* if the *default event* is remedied and there are no other circumstances in existence which would entitle *NEMMCO* to issue a *suspension notice*.
- (f) *NEMMCO* must issue a public announcement that the *Market Participant* has been suspended from the *market* including details of the extent of the suspension, simultaneously with, or at any time after, a *suspension notice* is issued. *NEMMCO* must issue a public notice promptly after a *suspension notice* is lifted.
- (g) From the time of suspension that *NEMMCO* stipulates in a *suspension notice* to a *Market Participant* the *Market Participant* is ineligible to trade or enter into any *transaction* in the *market* to the extent specified in the notice, until such time that *NEMMCO* notifies the *Market Participant* and all other *Market Participants* of the date and time that the suspension has been lifted.
- (h) The *defaulting Market Participant* must comply with a *suspension notice*.
- (i) Following the issue of a *suspension notice*, *NEMMCO* may do all or any of the following to give effect to the *suspension notice*:
- (1) reject any *dispatch bid* or *dispatch offer* submitted by the *defaulting Market Participant*;

- (2) withhold the payment of any amounts otherwise due to the *defaulting Market Participant* under the *Rules*; or
- (3) deregister or reject any *reallocation request* to which the *defaulting Market Participant* is a party.

The issue of a *suspension notice* which has not been lifted is a "relevant disconnection event" (ie. an event for which a *Registered Participant's market loads* may be *disconnected*) within the meaning of section 63(2) of the *National Electricity Law*.

- (j) Unless provided with instructions from the relevant *participating jurisdiction* or *participating jurisdictions* that a nominated third party is to assume financial responsibility for a suspended *Market Participant's* obligations under the *Rules* and that person does so, then, following the issue of a *suspension notice*, *NEMMCO* must request the *AER* to seek, and the *AER* must then seek, an order from a court to physically *disconnect market loads* for which the *defaulting Market Participant* is *financially responsible*.

### 3.15.22 Maximum total payment in respect of a billing period

- (a) For the purposes of this clause 3.15.22, the *maximum total payment* in respect of a *billing period* is equal to:
  - (1) the aggregate of the *energy trading amounts* as determined in accordance with clause 3.15.6 and *reallocation* amounts as determined in accordance with clause 3.15.11 received by *NEMMCO* from *Market Participants* in accordance with clause 3.15.16 in respect of that *billing period* in accordance with the *timetable* on the latest date for payment by *Market Participants* as described in clause 3.15.16 (called the *payment date*),  
  
plus
  - (2) if there is one or more *Market Participants* in default, the aggregate amount which *NEMMCO* is able to obtain from the *credit support* and apply from security deposits provided by the *Market Participants* in default under rule 3.3 on the *payment date* in accordance with the *timetable*,  
  
minus
  - (3) if there is one or more *Market Participants* in default, the aggregate of amounts payable to *NEMMCO* by those *Market Participants* in respect of that *billing period* in accordance with clause 3.15.16 but not received in accordance with the *timetable* on the latest date for payment as described in clause 3.15.16 (called the *payment date*),

plus

- (4) if there is one or more *Market Participants* in default, the aggregate of *energy trading amounts* and *reallocation amounts* payable to *NEMMCO* under clauses 3.15.6 and 3.15.11 by those *Market Participants* in respect of that *billing period* in accordance with clause 3.15.16 but not received in accordance with the *timetable* on the latest date for payment as described in clause 3.15.16 (called the *payment date*),

minus

- (5) *inter-regional* and *intra-regional settlements* surpluses as determined or allocated by *NEMMCO* in accordance with the procedure established under clause 3.6.5.
- (b) The maximum amount which *NEMMCO* is required to pay to *Market Participants* in respect of *spot market transactions* or *reallocation transactions* in respect of a *billing period* is equal to the *maximum total payment* in respect of that *billing period*.
- (c) If the *maximum total payment* in respect of a *billing period* is not sufficient to meet the aggregate of the net amounts payable by *NEMMCO* to each of the *Market Participants* to whom payments are to be made in relation to *spot market transactions* or *reallocation transactions* in respect of the *billing period* ("the *aggregate payment due*"), then the aggregate amount payable by *NEMMCO* to each relevant *Market Participant* for any of these *transactions* in respect of that *billing period* shall be reduced by applying the following formula:

$$AAP = SAP \quad \times \quad \frac{A}{B}$$

where:

AAP is the reduced amount actually payable by *NEMMCO* to the relevant *Market Participant* in respect of the relevant *billing period*;

SAP is the net amount that would have been payable to the relevant *Market Participant* in respect of *spot market transactions* or *reallocation transactions* in respect of the relevant *billing period* but for the application of this clause 3.15.22;

A is the *maximum total payment* in respect of the *billing period*; and

B is the *aggregate payment due* in respect of the *billing period*.

- (d) This clause 3.15.22 applies notwithstanding any other provision of this Chapter.

### 3.15.23 Maximum total payment in respect of a financial year

- (a) If in a *financial year* a *Market Participant* suffers a reduction in payment under clause 3.15.22 the provisions of this clause shall apply to adjust the payments made to each *Market Participant* in the *financial year*.
- (b) The ratio of the overall shortfall to the sum of the *aggregate payments due* for a financial year shall be determined by the following formula:

$$SS = \frac{A_1 + C}{B_1}$$

where:

SS is the ratio of the overall shortfall to the sum of the *aggregate payments due* for the *financial year*;

A<sub>1</sub> is the aggregate of the As referred to in clause 3.15.22, being the *maximum total payment* in respect of each *billing period* forming the *financial year*;

B<sub>1</sub> is the aggregate of the Bs referred to in clause 3.15.22, being the *aggregate payment due* in respect of each *billing period* forming the *financial year*; and

C is the aggregated late payments and *credit support* receipts in respect of *defaulting Market Participants* in the *financial year* plus interest received on such amounts under clause 3.15.25.

- (c) The shortfall for a *financial year* shall be applied pro rata to each *Market Participant* in the *financial year* by applying the following formula:

$$SS_1 = (SAP_1 \ SS) - AAP_1$$

where:

SS<sub>1</sub> is the shortfall or surplus payable by or due to the *Market Participant* in respect of the *financial year*;

SAP<sub>1</sub> is the aggregate of the SAPs referred to in clause 3.15.22 being the net amounts due to the *Market Participant* in respect of each *billing period* forming the *financial year*;

SS is determined in accordance with clause 3.15.23(b); and

AAP<sub>1</sub> is the aggregate of the AAPs referred to in clause 3.15.22, being the reduced amounts payable to the *Market Participant* in respect of each *billing period* forming the *financial year*.

- (d) *NEMMCO* must issue a statement stating the  $SS_1$  amount payable to or receivable by the *Market Participant* in respect of this clause 3.15.23. If  $SS_1$  is positive, such that an amount is payable by *NEMMCO* it will credit the sum to the *Market Participant's* account in the next *billing period*. If  $SS_1$  is negative, such that an amount is payable by a *Market Participant*, *NEMMCO* will at its discretion either debit the sum to the *Market Participant* in the next *billing period* or issue an invoice for immediate payment of the amount.

### 3.15.24 Compensation for reductions under clause 3.15.23

- (a) If:
- (1) a *Market Participant* suffers a reduction in payment under clause 3.15.23; and
  - (2) an amount is recovered by *NEMMCO* after the end of a *financial year* from the person whose default gave rise (in whole or in part) to the reduction, in respect of the default,

then, subject to clause 3.15.24(c), the *Market Participant* is entitled to be paid by *NEMMCO* out of the amount recovered the amount of the reduction suffered and interest for receiving the amount of the reduction later than it would otherwise have done.

- (b) The amount of the interest payable under clause 3.15.24(a) is to be determined in each case by *NEMMCO*.
- (c) If the amount recovered from the person whose default gave rise to the reduction is not sufficient to pay all *Market Participants* the amounts to which they are entitled under clause 3.15.23 then the amount recovered is to be distributed amongst them pro rata according to the reductions suffered. Such distribution to be made at any time following the end of a *financial year*.

### 3.15.25 Interest on overdue amounts

- (a) A *Market Participant* or *NEMMCO* must pay interest on any unpaid moneys due and payable by it under this Chapter.
- (b) The rate of interest payable under this clause 3.15.25 is the *bank bill rate* calculated as simple interest on a daily basis from the date payment was due, up to and including the date of payment, with interest compounding monthly on the last *day* of each month whilst the unpaid moneys remain outstanding.

### **3.16 Participant compensation fund**

#### **3.16.1 Establishment of Participant compensation fund**

- (a) *NEMMCO* must continue to maintain, in the books of the corporation, a fund called the *Participant compensation fund* for the purpose of paying compensation to *Scheduled Generators* and *Scheduled Network Service Providers* as determined by the *dispute resolution panel* for *scheduling errors* under this Chapter 3.
- (b) *NEMMCO* must pay to the *Participant compensation fund* that component of *Participant fees* under rule 2.11 attributable to the *Participant compensation fund*.
- (c) The funding requirement for the *Participant compensation fund* for each *financial year* is the lesser of:
  - (1) \$1,000,000; and
  - (2) \$5,000,000 minus the amount which *NEMMCO* reasonably estimates will be the balance of the *Participant compensation fund* at the end of the relevant *financial year*.
- (d) The *Participant compensation fund* is to be maintained by *NEMMCO* and is the property of *NEMMCO*.
- (e) Any interest paid on money held in the *Participant compensation fund* will accrue to and form part of the *Participant compensation fund*.
- (f) *NEMMCO* must pay from the *Participant compensation fund* all income tax on interest earned by the *Participant compensation fund* and must pay from the *Participant compensation fund* all bank account debit tax, financial institutions duty and bank fees in relation to the *Participant compensation fund*.
- (g) Upon ceasing to be a *Scheduled Generator*, a *Scheduled Generator* is not entitled to a refund of any contributions made to the *Participant compensation fund*.
- (h) Upon ceasing to be a *Scheduled Network Service Provider*, a *Scheduled Network Service Provider* is not entitled to a refund of any contributions made to the *Participant compensation fund*.

#### **3.16.2 Dispute resolution panel to determine compensation**

- (a) Where a *scheduling error* occurs, a *Market Participant* may apply to the *dispute resolution panel* for a determination as to compensation under this clause 3.16.2.

- (b) Where a *scheduling error* occurs, the *dispute resolution panel* may determine that compensation is payable to *Market Participants* and the amount of any such compensation payable from the *Participant compensation fund*.
- (c) A determination by the *dispute resolution panel* as to compensation must be consistent with this clause 3.16.2.
- (d) A *Scheduled Generator* who receives an instruction in respect of a *scheduled generating unit* to operate at a lower level than the level at which it would have been instructed to operate had the *scheduling error* not occurred, will be entitled to receive in compensation an amount determined by the *dispute resolution panel*.
- (e) A *Scheduled Network Service Provider* who receives an instruction in respect of its *scheduled network services* to transfer less *power* on the *scheduled network service* than it would have been instructed to transfer had the *scheduling error* not occurred, will be entitled to receive in compensation an amount determined by the *dispute resolution panel*.
- (f) A *Scheduled Generator* who receives a *dispatch instruction* in respect of a *scheduled generating unit* to operate at a level consistent with a *dispatch offer price* (with reference to the relevant *regional reference node*) which is higher than the *dispatch price*, due to the operation of clause 3.9.2B, is entitled to receive in compensation an amount determined by the *dispute resolution panel*.
- (g) A *Scheduled Network Service Provider* who receives an instruction in respect of its *scheduled network services* to transfer *power* on the *scheduled network service* consistent with a *network dispatch offer price* but receives less net revenue than would be expected under clause 3.8.6A(f) due to adjustment of the *spot price* for a trading interval under clause 3.9.2B, is entitled to receive in compensation an amount determined by the *dispute resolution panel*.
- (h) In determining the level of compensation to which *Market Participants* are entitled in relation to a *scheduling error*, the *dispute resolution panel* must:
  - (1) Where the entitlement to compensation arises under clause 3.16.2(f), determine compensation on the basis of the actual loading level and not the *dispatch instruction* applicable to the relevant *scheduled generating unit* for that *dispatch interval*;
  - (2) Where the entitlement to compensation arises under clause 3.16.2(g), determine compensation on the basis of the actual loading level and not the *dispatch instruction* applicable to the relevant *scheduled network service* for that *dispatch interval*;



- (3) Use the *spot price* as determined under rule 3.9, including any *spot prices* that have been adjusted in accordance with clause 3.9.2B;
  - (4) Take into account the current balance of the *Participant compensation fund* and the potential for further liabilities to arise during the year;
  - (5) Recognise that the aggregate liability in any year in respect of *scheduling errors* cannot exceed the balance of the *Participant compensation fund* that would have been available at the end of that year if no compensation payments for *scheduling errors* had been made during that year.
- (i) The manner and timing of payments from the *Participant compensation fund* are to be determined by the *dispute resolution panel*.
  - (j) To the maximum extent permitted by law, *NEMMCO* is not liable in respect of a *scheduling error* except out of the *Participant compensation fund* as contemplated in this clause 3.16.2.

### **3.17 NEMMCO Software**

#### **3.17.1 Acceptance of software**

*NEMMCO* must not alter, reconfigure, reprogram or otherwise modify or enhance any computer software required under this Chapter 3 for the operation of the *market* unless such changes have been duly authorised by the *AER*.

#### **3.17.2 No liability**

To the maximum extent permitted by law, no Contractor, and no employee, officer or agent of *NEMMCO* or a Contractor, is liable (in contract, tort including negligence or otherwise) for any loss or damage suffered or incurred by a *Market Participant* or any other person as a consequence of the use of any computer software to operate the *market*. For the purpose of this clause, "Contractor" means any person or organisation engaged by *NEMMCO* to assist in the development, design, installation, maintenance or upgrading of the computer software used to operate the *market*.

### **3.18 Settlement Residue Auctions**

#### **3.18.1 Settlement residue concepts**

- (a) An "*auction participation agreement*" is an agreement between *NEMMCO* and an *eligible person* concerning the participation by the *eligible person* in *auctions*.

- (b) A "*settlement residue distribution agreement*" or "*SRD agreement*" is an agreement between *NEMMCO* and an *eligible person* entered into following an *auction* under which:
  - (1) *NEMMCO* agrees to distribute to the *eligible person* a portion of the *settlements residues* allocated to a *directional interconnector* for a period specified in the *SRD agreement*; and
  - (2) the *eligible person* agrees to pay *NEMMCO* a certain amount for the right referred to in clause 3.18.1(b)(1).
- (c) For the purposes of this rule 3.18:
  - (1) all the *regulated interconnectors* between any 2 adjacent *regions* are deemed to constitute a single *interconnector*; and
  - (2) the deemed *interconnector* referred to in clause 3.18.1(c)(1) between any 2 adjacent *regions* consists of 2 *directional interconnectors*, one involving a transfer from *region A* to *region B*, and one involving a transfer from *region B* to *region A*.
- (d) Subject to clause 3.18.4, *NEMMCO* must use the portion of the *settlements residue* allocated to a *directional interconnector* remaining after applying the relevant *jurisdictional derogations* under Chapter 9 (as determined by applying the principles referred to in clause 3.6.5) to make payments under *SRD agreements* in relation to that *directional interconnector* and to recover the *auction expense fees*.
- (e) Where a person registered as a *Trader* is required to appoint an agent for the purposes of rule 2.5A(c)(2):
  - (1) the *Trader* must ensure that the agent is a party to the *auction participation agreement* and the *SRD agreement* between *NEMMCO* and the *Trader*; and
  - (2) *NEMMCO* and the *Trader* must ensure that the *auction participation agreement* and the *SRD agreement* referred to in subparagraph (1) provide that the *Trader* and the agent are jointly and severally liable in relation to the obligations of the *Trader* under those agreements.

### **3.18.2 Auctions and eligible persons**

- (a) *NEMMCO* may conduct *auctions* to determine which *eligible persons* will enter into *SRD agreements* with *NEMMCO*.
- (b) *NEMMCO* may only enter into *SRD agreements* with persons (called "*eligible persons*") which satisfy the following criteria:
  - (1) the person is a *Market Customer*, a *Generator* or a *Trader*; and

- 
- (2) the person satisfies any criteria specified in the *auction rules*, which criteria must comply with clause 3.18.2(g).
  - (c) *Auctions* must be conducted in accordance with the *auction rules*.
  - (d) *NEMMCO* may, with the approval of the *settlement residue committee*, suspend, or remove a suspension, on conducting *auctions* for one or more *directional interconnectors* for a specified period if *NEMMCO* believes it is not practicable to conduct those *auctions* or those *auctions* are unlikely to lead to the entry into of *SRD agreements* in relation to all of the *settlements residues* being auctioned.
  - (e) *NEMMCO* may, after complying with the *Rules consultation procedures*, cease conducting *auctions*.
  - (f) If *NEMMCO* takes any action under clause 3.18.2(d) or (e), then it must post a notice on its website specifying the action taken as soon as practicable after taking it.
  - (g) Any criteria specified in the *auction rules* concerning persons with whom *NEMMCO* may enter into *SRD agreements* must not exclude any persons other than those specified in subparagraphs (1) – (6) below and must exclude the persons specified in subparagraphs (1), (2), (5) and (6) below:
    - (1) persons who have not entered into an *auction participation agreement*;
    - (2) *Transmission Network Service Providers*;
    - (3) **[Deleted]**
    - (4) persons:
      - (i) who have defaulted on payment obligations under an *auction participation agreement* or a *SRD agreement*; or
      - (ii) in relation to whom a *default event* has occurred;
    - (5) any person who *NEMMCO* considers is acting on behalf of or in concert with a person described in clauses 3.18.2(g)(1)-(2);
    - (5a) any person who *NEMMCO* considers is acting on behalf of or in concert with a person described in clause 3.18.2(g)(4); or
    - (6) any person who would be a “retail client” as defined in section 761G (7) of the Corporations Act 2001 (Cth), if they entered into an *SRD agreement* with *NEMMCO*.
  - (h) **[Deleted]**
-

### 3.18.3 Auction rules

- (a) *NEMMCO* must develop rules (called "*auction rules*") which set out:
- (1) additional criteria which a person must satisfy to be an *eligible person* (which must include, without limitation, criteria requiring the person to enter into an *auction participation agreement* with *NEMMCO* in a form satisfactory to *NEMMCO*);
  - (2) the procedures for conducting *auctions* and the timing of *auctions*;
  - (3) the mechanism for calculating the *auction* clearing price in respect of each *directional interconnector* for each *auction*;
  - (4) the mechanism for calculating *auction expense fees*;
  - (5) the procedures and timetable for billing and settling *auction amounts*; and
  - (6) the standard form of any *auction participation agreement* referred to in clause 3.18.3(a)(1).
- (b) In developing and amending the *auction rules*, *NEMMCO* must give effect to the following principles:
- (1) **[Deleted]**
  - (2) to the extent reasonably practicable, an *auction* must be structured in a way that maximises the value of the relevant *settlements residue*;
  - (3) the price for each unit of the *settlements residue* in respect of a *directional interconnector* will be the same for all *SRD agreements* resulting from the same *auction* and will be equal to the *auction* clearing price in respect of the *directional interconnector* for the *auction*; and
  - (4) enhancing competition and efficiency by promoting interstate trade in electricity.
- (c) *NEMMCO* must make the *auction rules* available to *Registered Participants* and to any other person who requests a copy.
- (d) *NEMMCO* may amend the *auction rules* at any time with the approval of the *settlement residue committee*.
- (e) Subject to clause 3.18.3(f), in developing and amending the *auction rules*, *NEMMCO* must comply with the *Rules consultation procedures*.

- (f) *NEMMCO* need not, provided it has consulted to the extent practicable in the circumstances, comply with the *Rules consultation procedures* in relation to a proposed amendment to the *auction rules* if:
  - (1) the amendment has the support of at least three-quarters of the members of the *settlement residue committee*; and
  - (2) *NEMMCO* considers the amendment is urgent.

#### 3.18.4 Proceeds and fees

- (a) *NEMMCO* must distribute:
  - (1) subject to clause 3.6.5(a)(4A) and (4B), proceeds from each *auction* in respect of a *directional interconnector*; and
  - (2) subject to clauses 3.18.4(b) and (c), any portion of the *settlements residue* allocated to the *directional interconnector* which is not the subject of a *SRD agreement*,

to the appropriate *Network Service Providers* in accordance with the principles referred to in clause 3.6.5 in relation to the allocation and distribution of *settlements residue* attributable to *regulated interconnectors*.
- (b) The costs and expenses incurred by *NEMMCO* in establishing and administering the arrangements contemplated by this rule 3.18, in conducting *auctions* under this rule 3.18 and in entering into and administering *auction participation agreements* and *SRD agreements* under this rule 3.18 will be recovered from *settlements residue* by way of *auction expense fees*.
- (c) The *auction expense fees* are to be developed by *NEMMCO* in accordance with the *auction rules* and approved by the *settlement residue committee*, and recovered as follows:
  - (1) to the extent the *settlements residue* is distributed to *eligible persons* under clause 3.18.1(d), in accordance with the *auction rules*; and
  - (2) to the extent the *settlements residue* is distributed to *Network Service Providers* under clause 3.18.4(a)(2), as if the *settlements residue* was being distributed to *eligible persons* in accordance with the *auction rules*.
- (d) The *auction expense fees* for an *auction* are to be *published* before the *auction*.
- (e) *Eligible persons* and *NEMMCO* must pay *auction amounts* in accordance with the *auction rules*, and, for the avoidance of doubt, amounts payable by *eligible persons* to *NEMMCO* under *SRD agreements* will not be regarded as amounts payable under the *Rules* for the purposes of rule 3.15.

- (f) *NEMMCO* may nominate an electronic funds transfer facility for the purposes of paying *auction amounts* and, if it does so, *eligible persons*, *Network Service Providers* and *NEMMCO* must use that facility for paying and receiving *auction amounts*.

### **3.18.5 Settlement residue committee**

- (a) *NEMMCO* must establish a settlement residue committee.
- (b) The functions of the *settlement residue committee* are to:
  - (1) approve any suspension, or removal of a suspension, imposed by *NEMMCO* on the conducting of *auctions*;
  - (2) approve proposed amendments to the *auction rules* developed by *NEMMCO*;
  - (3) monitor, review and report on the *auctions* conducted by *NEMMCO* under this rule 3.18; and
  - (4) approve the costs and expenses incurred by *NEMMCO* in conducting *auctions* under this rule 3.18 and in entering into and administrating *auction participation agreements* and *SRD agreements* under this rule 3.18.
- (c) The *settlement residue committee* is to consist of:
  - (1) an employee of *NEMMCO* appointed by *NEMMCO*, who will act as chairman of the committee;
  - (2) a person representing *Generators*;
  - (3) a person representing *Market Customers*;
  - (4) a person representing *Transmission Network Service Providers*;
  - (5) a person representing *Traders*;
  - (6) a person appointed jointly by the relevant *Ministers* of the *participating jurisdictions*; and
  - (7) a person appointed by the *AEMC* to represent end use customers of electricity.
- (d) *NEMMCO* may remove the person referred to in clause 3.18.5(c)(1) at any time for any reason.
- (e) The persons referred to in clauses 3.18.5(c)(2), (3), (4) and (5) must be appointed and removed by *NEMMCO* after consultation with the class of *Registered Participants* the person is to represent, and *NEMMCO* must:

- (1) appoint a person agreed to by at least one third in number of the relevant class of *Registered Participants*; and
  - (2) commence consultation on the removal of such a person if requested to do so by a member of the relevant class of *Registered participants*, and must remove that person if so agreed by at least one third in number of the relevant class of *Registered Participants*.
- (f) The *Ministers* of the *participating jurisdictions* acting jointly may remove the person referred to in clause 3.18.5(c)(6) at any time for any reason.
- (g) The *AEMC* may remove the person referred to in clause 3.18.5(c)(7) at any time for any reason.
- (h) A person holds office as a member of the *settlement residue committee* until that person:
- (1) resigns from office;
  - (2) if the person is the person referred to in clause 3.18.5(c)(1), is removed from office by *NEMMCO* in accordance with clause 3.18.5(d);
  - (3) if the person is a person referred to in clauses 3.18.5(c)(2), (3), (4) or (5), is removed from office by *NEMMCO* in accordance with clause 3.18.5(e)(2);
  - (4) if the person is the person referred to in clause 3.18.5(c)(6), is removed from office by the *Ministers* of the *participating jurisdictions* in accordance with clause 3.18.5(f); or
  - (5) if the person is the person referred to in clause 3.18.5(c)(7), is removed from office by the *AEMC* in accordance with clause 3.18.5(g),
- and such a person is eligible for re-appointment.
- (i) A person may resign as a member of the *settlement residue committee* by giving notice in writing to that effect to *NEMMCO*.

### **3.19 Market Management Systems Access Procedures**

- (a) *NEMMCO* may develop and *publish Market Management Systems Access Procedures* in consultation with *Registered Participants* in accordance with the *Rules consultation procedures*, which procedures will govern how *Registered Participants* and *Metering Providers* can use the *market management systems*.
- (b) *NEMMCO* may amend the *Market Management Systems Access Procedures* from time to time in consultation with *Registered Participants*

in accordance with the *Rules consultation procedures*, and any such amendments must be *published* by NEMMCO.

- (c) NEMMCO and all *Registered Participants* and *Metering Providers* must comply with the *Market Management Systems Access Procedures*.
- (d) A *Registered Participant* which complies with the *Market Management Systems Access Procedures* and promptly pays all relevant *Participant fees* as and when they fall due has a right to be connected to the *market management systems*.
- (e) If a *Registered Participant* fails to comply with the *Market Management Systems Access Procedures*, NEMMCO must:
  - (1) notify that *Registered Participant* describing the nature of the breach; and
  - (2) at a time following notification of the breach by NEMMCO under clause 3.19(e)(1) determined by NEMMCO having regard to a balancing of the need to provide a *Registered Participant* with the opportunity to remedy the breach and the nature of the breach, notify the AER that the *Registered Participant* has breached the *Market Management Systems Access Procedures*.

### **3.20 Reliability and Emergency Reserve Trader**

#### **3.20.1 Expiry of reserve and emergency reliability trader**

This rule 3.20 expires on the earlier of:

- (a) 30 June 2012; or
- (b) a date determined by the AEMC on the advice of the *Reliability Panel* in accordance with clause 3.20.9.

#### **3.20.2 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* under *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, 3.12, 3.12A.5, 3.15.6, 3.15.9, 4.8.5A and 4.8.5B; and



- (ii) any other provision of the *Rules* necessary to exercise the *RERT*;
- (3) the *RERT principles*; and
- (4) the *RERT guidelines*.
- (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 contracts* at the least cost to end use consumers of electricity.
- (c) In having regard to the *RERT principles*, *NEMMCO* must have regard where relevant to the *RERT guidelines*.

### 3.20.3 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 *scheduled reserve contracts*); and
  - (2) *unscheduled reserves* (being *unscheduled reserve contracts*).
- (b) *NEMMCO* may determine to enter into *reserve contracts* to ensure that the reliability of *supply* in a *region* or *regions* meets the relevant *power system security and reliability standards* 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, a *reserve contract* more than nine months prior to the date that *NEMMCO* reasonably expects that the *reserve* under that contract may be required to ensure reliability of *supply*.
- (e) Subject to paragraph (d), *NEMMCO* may :
  - (1) enter into *reserve contracts*; or
  - (2) renegotiate existing *reserve contracts*,

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

- (f) In entering into *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 3.15.9.
- (g) If, at any time *NEMMCO* determines that it is necessary to commence contract negotiations for the provision of additional *reserves*, *NEMMCO* must *publish* a notice of its intention to do so.
- (h) When contracting for the provision of *scheduled reserves* under *scheduled 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* seeks to enter into a *reserve contract* with a *Registered Participant* then the *Registered Participant* must *negotiate* with *NEMMCO* in good faith as to the terms and conditions of the contract.
- (j) *NEMMCO* may only enter into a *reserve contract* if the contract contains a provision that the other party to the contract has not and will not otherwise offer the *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.

#### **3.20.4 Dispatch pricing methodology for unscheduled reserve contracts**

- (a) Subject to paragraph (c), *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 *unscheduled reserve contracts* be *activated*.
- (b) *NEMMCO* may develop and *publish* the methodology developed in accordance with this clause 3.20.4 as part of the methodology *NEMMCO* is required to develop under clause 3.9.3(e).
- (c) *NEMMCO* may make minor and administrative amendments to the methodology developed in accordance with this clause 3.20.4 without complying with the *Rules consultation procedures*.

### 3.20.5 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* functions and powers granted to *NEMMCO* under this rule 3.20.

### 3.20.6 Reporting on RERT by NEMMCO

- (a) If a *scheduled generating unit, scheduled network service* or *scheduled load* under a *scheduled reserve contract* with *NEMMCO* is *dispatched* or *generating units* or *loads* are activated under an *unscheduled reserve contract*, then *NEMMCO* must, as soon as practicable thereafter, *publish* a report detailing:
  - (1) the circumstances giving rise to the need for the *dispatch* of *scheduled reserves* or *activation* of *unscheduled reserves*;
  - (2) the basis on which it determined the latest time for that *dispatch* of *scheduled reserves* or *activation* of *unscheduled reserves* and on what basis it determined that a market response would not have avoided the need for the *dispatch* of *scheduled reserves* or the *activation* of *unscheduled reserves*;
  - (3) the changes in *dispatch* outcomes due to the *dispatch* of *scheduled reserves* or *activation* of *unscheduled reserves*; and
  - (4) the processes implemented by *NEMMCO* to *dispatch* the *scheduled reserves* or *activate* the *unscheduled 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 *scheduled reserves* or the *activation* of *unscheduled reserves*; and
  - (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 reasonably practicable after *NEMMCO* has, in accordance with clause 3.15.9, included the amounts arising under a *reserve contract* in a *final statement* provided under clause 3.15.15, *NEMMCO* must *publish* details of:
  - (1) the payments under the *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* in which *NEMMCO* has exercised the *RERT*, *NEMMCO* must *publish* a report detailing:
  - (1) each occasion during the *financial year* on which it intervened to secure the availability of *reserves*;
  - (2) each occasion during the *financial year* when a *scheduled generating unit*, *scheduled network service* or *scheduled load* under a *scheduled reserve contract* was *dispatched* or *generating units* or *loads* under an *unscheduled reserve contract* were *activated*; and
  - (3) its costs and finances in connection with its *RERT* activities during the *financial year* according to appropriate accounting standards including profit and loss, balance sheet, sources and applications of funds.

### 3.20.7 NEMMCO's exercise of the RERT

- (a) Notwithstanding clauses 4.8.5A and 4.8.5B, if *NEMMCO* considers the latest time for exercising the *RERT* by:
  - (1) the *dispatch* of *scheduled reserves* it has available under *scheduled reserve contracts*; or
  - (2) the *activation* of *unscheduled reserves* it has available under *unscheduled reserve contracts*,has arrived, *NEMMCO* may *dispatch* such *scheduled reserves* or *activate* such *unscheduled reserves*.
- (b) *NEMMCO* must follow the relevant procedures in this rule 3.20 prior to *dispatching* a *scheduled generating unit*, *scheduled network service* or *scheduled load* the subject of a *scheduled reserve contract* or *activating* *generating units* or *loads* the subject of an *unscheduled reserve contract* unless it is not reasonably practicable to do so.
- (c) Subject to paragraph (b), *NEMMCO* must only *dispatch* a *scheduled generating unit*, a *scheduled network service* or a *scheduled load* the subject of a *scheduled reserve contract* or *activate* *generating units* or *loads* the subject of an *unscheduled reserve contract* in accordance with the procedures developed pursuant to paragraph (e).
- (d) In order to effect the *dispatch* of a *scheduled generating unit*, *scheduled network service* or *scheduled load* the subject of a *scheduled reserve contract* or the *activation* of *generating units* or *loads* the subject of an *unscheduled 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 *scheduled reserve contract*; or
  - (2) change other inputs to the *dispatch process* to give effect to the *dispatch* of *scheduled generating units*, *scheduled network services* or *scheduled loads* the subject of a *scheduled revenue contract* or the *activation* of *generating units* or *loads* the subject of an *unscheduled reserve contract*.
- (e) *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 take into account the *RERT principles* and *RERT guidelines*. These procedures must include measures to be adopted in order to reduce the possibility that *generating units* or *loads* likely to be *activated* under *unscheduled reserve contracts* are otherwise engaged at the time the *unscheduled reserve contracts* are entered into by *NEMMCO*.
- (f) When exercising the *RERT* under this rule 3.20, *NEMMCO* must take into account the *RERT guidelines*.
- (g) *NEMMCO* must *publish* the first procedures referred to in paragraph (e) by 30 June 2009.

### 3.20.8 RERT Guidelines

- (a) For the purposes of this rule 3.20, the *Reliability Panel* must develop and *publish* guidelines (the '*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* that is to be the subject of a *reserve contract* is not available to the *market* through any other arrangement;
  - (4) the process *NEMMCO* should undertake in contracting for *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

- (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 30 November 2008 and there must be such guidelines in place at all times after that date.

### 3.20.9 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 3.20.1, complete a review of the *RERT* ('*RERT review*') to determine:
  - (1) whether the *RERT* should expire on the date specified in clause 3.20.1(a); or
  - (2) whether the *RERT* should expire prior to the date referred to in subparagraph (1) and, if so, 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).

### Schedule 3.1 - Registered Bid and Offer Data

- (a) The *registered bid and offer data* are the standard data requirements for verification and compilation of *dispatch bids* and *dispatch offers* on the *trading day* schedule.
- (b) *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* must notify NEMMCO of their *registered bid and offer data* in accordance with this schedule 3.1 in respect of each of their *scheduled loads, semi-scheduled generating units* and *scheduled generating units* at least six weeks prior to commencing participation in the *market*.
- (c) *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* must review their *registered bid and offer data* annually in accordance with the *timetable* advised by NEMMCO and provide details of any *changes* to NEMMCO.
- (d) *Registered bid and offer data* may be updated by a *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* at any time but may be subject to audit at NEMMCO's request.
- (e) A copy of all *changes* to the data must be returned to each *Scheduled Generator, Semi-Scheduled Generator* and *Market Participant* for verification and resubmission by the *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* as necessary.
- (f) *Registered bid and offer data* may include tolerance levels.

### Scheduled Generating Unit Data:

Data	Units of Measurement
<b>Power station information:</b>	
node number/identifier	
total station registered capacity	MW
total station <i>sent out generation</i> at registered capacity	MW
daily <i>energy constraint</i> , if applicable	MWh per day
<b>Generating unit information:</b>	
full <i>load</i>	MW ( <i>generated and sent out</i> )
normal or technical minimum <i>load</i>	MW ( <i>generated and sent out</i> )
additional emergency <i>generation</i> above	MW

registered capacity	
normal and maximum <i>ramp rates</i>	MW/minute
response time to full <i>load</i> from cold standby	minutes
aggregation data	
capability chart	
notice to <i>synchronise</i>	minutes
minimum shutdown time	minutes
maximum shutdowns per day	

**Semi-Scheduled Generating Unit Data:**

Data	Units of Measurement
<b>Power station information:</b>	
node number/identifier	
total registered capacity	MW
<b>Generating unit information</b>	
capacity	MW
normal and maximum <i>ramp rate</i>	MW/minute
aggregation data	

**Scheduled Load Data:**

Data	Units of Measurement
node number/identifier	
<i>normally on</i> or <i>normally off</i>	
<i>maximum load</i>	MW
daily <i>energy constraint</i> , if applicable	MWh per day
normal and maximum <i>ramp rates</i>	MW/minute
aggregation data	

**Scheduled Network Service Data:**

Data	Units of Measurement
node number/identifier for <i>connection points A</i> and <i>B</i>	



registered <i>power transfer capability</i> to node 1 (may be seasonal etc)	MW
registered <i>power transfer capability</i> to node 2 (may be seasonal etc)	MW
additional transient <i>power transfer capability</i> in each direction	MW
normal and maximum transfer <i>ramp rates</i> (if applicable)	MW/minute
loss vs flow as piecewise linear relationships for each direction which, taken together, are convex over the entire range of <i>power transfer capabilities</i> in both directions	
aggregation data	

**Dispatch Inflexibility Profile:**

Data	Units of Measurement
time for response from receipt of <i>dispatch</i> instruction from zero <i>load</i> , T1 (see clause 3.8.19(e)(1))	minutes
time after T1 required to reach minimum <i>loading level</i> , T2 (see clause 3.8.19(e)(2))	minutes
time after T2 for which <i>plant</i> must operate at or above the minimum <i>loading level</i> , T3 (see clause 3.8.19(e)(3))	minutes
time required by <i>plant</i> to reduce from its minimum <i>loading level</i> to zero, T4 (see clause 3.8.19(e)(4))	minutes
minimum <i>loading level</i> (see clauses 3.8.19(e)(2), (3), (4))	MW

**Aggregation Data:**

Where *dispatch bids* or *dispatch offers* are submitted for aggregated *generating units*, *market network services* or *loads* then, unless otherwise exempted by NEMMCO, each *Scheduled Generator*, *Semi-Scheduled Generator* and *Market Participant* must provide the information required in accordance with this schedule 3.1 for each *generating unit*, *market network service* or *load* included in those *dispatch bids* or *dispatch offers* both separately and in aggregated form.

*Semi-scheduled generating units* which together are taken to be one *semi-scheduled generating unit* under clause 2.2.7(k) must provide the information

required in accordance with this schedule 3.1 for each *generating unit* both separately and in aggregate.

### **Schedule 3.2 - [Deleted]**

### **Schedule 3.3 - Principles for Determination of Maximum Credit Limits & Prudential Margins**

This schedule sets out the principles to be followed by *NEMMCO* in determining the *maximum credit limit* and *prudential margin* for a *Market Participant*.

#### **S3.3.1 Principles for determining maximum credit limits**

- (a) The *maximum credit limit* should be set on the principle of imposing a guarantee of payment being made to *NEMMCO* to a level of a *reasonable worst case*.
- (b) When calculating the *maximum credit limit* *NEMMCO* should have regard to:
  - (1) impartial objectivity rather than subjectivity, though it is recognised that some key parameters will need to be subjectively estimated from a limited amount of data - the estimation should be as impartial as possible;
  - (2) the average level and volatility of the *regional reference price* for the *region* for which the *maximum credit limit* is being calculated, measured over a period of time comparable to the frequency of breaches of the *maximum credit limit*;
  - (3) the pattern of the quantity of electricity recorded in the *metering data* for the *Market Participant*;
  - (4) the quantity and pattern of the *prospective reallocation* in the immediate future;
  - (5) the correlation between the metered amounts of electricity and the *regional reference price*;
  - (6) the length of the *credit period*, which is the number of days from the start of a *billing period* to the end of the *reaction period* taking into account:
    - (i) the length of the *billing period*;
    - (ii) the typical time from the end of the *billing period* to the day on which *settlement* for that *billing period* is due to be paid (the *payment period*);

- (iii) any current written request from the *Market Participant* to *NEMMCO* for the *maximum credit limit* to be determined on a *payment period* taken, for the purposes of clause 3.3.8 and not otherwise, to be 14 days; and
  - (iv) the time from a *default event* to the suspension or other removal of the *defaulting Market Participant* from the *market*, being a period of up to 7 days (the *reaction period*);
- (7) the statistical distribution of accrued amounts that may be owed to *NEMMCO*; and
- (8) the degree of confidence that the *maximum credit limit* will be large enough to meet large defaults (i.e. the degree of reasonableness in a *reasonable worst case*).
- (c) As far as practicable, this schedule 3.3 must be read and construed as taking into account *market ancillary service transactions* for the calculation of the *maximum credit limit* for the relevant *Market Participant*.

### **S3.3.2 Principles for determining prudential margins**

The value of the *prudential margin* for a *Market Participant* is set on the same principles as the *maximum credit limit* except that:

- (1) if the aggregate of all *trading amounts* for the *Market Participant* is a positive amount the quantity and pattern of those *trading amounts* are not taken into account when determining the *prudential margin*;
- (2) if the aggregate of all *reallocation amounts* for the *Market Participant* is a positive amount the quantity and pattern of those *reallocation amounts* are not taken into account when determining the *prudential margin*; and
- (3) the *prudential margin* is calculated in respect of the *reaction period*.