

## **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) *AEMO* clearing house and trading functions;
- (f) *market* information requirements and obligations;
- (g) the conditions and procedures for *market suspension*; and
- (h) *settlements*.

#### 3.1.1A Definitions

In this Chapter:

**credit limit procedures** means the procedures developed, *published* and maintained by *AEMO* under clause 3.3.8.

**credit period** means the sum of the payment period and the reaction period as determined by *AEMO*.

**maximum credit limit** means the minimum amount of *credit support* a *Market Participant* must provide to *AEMO* for the relevant credit period, as determined by *AEMO* in accordance with clause 3.3.8.

**outstandings limit** means *AEMO's* estimate of the maximum value that a *Market Participant's outstandings* can reach over the payment period if the *Market Participant* has lodged *credit support* equal to the maximum credit limit.

**payment period** means the number of days in a *billing period* plus the number of days until payment is due with respect to transactions for that *billing period*.

**prudential margin** means the allowance made by *AEMO* in determining a *Market Participant's* maximum credit limit for the accrual of the *Market Participant's outstandings* during the reaction period.

**prudential probability of exceedance** means the probability of the *Market Participant's* maximum credit limit being exceeded by its *outstandings* at the end of the reaction period following the *Market Participant* exceeding its outstandings limit on any day, and failing to rectify this breach.

**prudential settings** means the maximum credit limit, outstandings limit and prudential margin as determined by *AEMO* in accordance with clause 3.3.8.

**prudential standard** means the value of the prudential probability of exceedance, expressed as a percentage, and as specified under clause 3.3.4A, to be used by *AEMO* to determine the prudential settings to apply to *Market Participants*.

**reaction period** means a period of 7 days. It represents, for the purpose of calculating the prudential settings, the time from the day that a *Market Participant's outstandings* exceeds its *trading limit* to when the *Market Participant* is suspended from trading under clause 3.15.21(c) if the exceedance is not rectified.

**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 *AEMO* 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, including by providing accurate, reliable and timely forecast information to *Market Participants*, in order to allow for responses that reflect underlying conditions of supply and demand;
  - (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) *market 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 *AEMO* and service providers should be used in preference to bilaterally negotiated arrangements;
  - (7) the relevant action under section 116 of the *NEL* or direction under clause 4.8.9 must not be affected by competitive market arrangements;
  - (8) where arrangements require participants to pay a proportion of *AEMO* costs for *ancillary services*, charges should where possible be allocated to provide incentives to lower overall costs of the *NEM*. 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 *AEMO* to acquire an *ancillary service*, *AEMO* should be responsible for settlement of the service.

- (a1) **[Deleted]**
- (a2) **[Deleted]**
- (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 *Competition and Consumer Act 2010* (Cth) 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 AEMO's Market Responsibilities

### 3.2.1 Market functions of AEMO

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

### 3.2.2 Spot market

*AEMO* 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 a *regional reference price* for each *region* 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, *AEMO* 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) *AEMO* must perform *PASAs* 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 Non-market ancillary services function

- (a) *AEMO* must determine the *market's* requirements for *non-market ancillary services* in accordance with rule 3.11.
- (b) *AEMO* must use reasonable endeavours to acquire *non-market ancillary services* in accordance with rule 3.11.

### 3.2.5 [Deleted]

### 3.2.6 Settlements

*AEMO* 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;

#### Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b) [Deleted].
- (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 *AEMO* 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*;

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b) is a guarantee or bank letter of credit in a form prescribed by *AEMO*;

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (c) is duly executed by the *Credit Support Provider* and delivered unconditionally to *AEMO*;

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (d) constitutes valid and binding unsubordinated obligations of the *Credit Support Provider* to pay to *AEMO* amounts in accordance with its terms which relate to obligations of the relevant *Market Participant* under the *Rules*; and

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (e) permits drawings or claims by *AEMO* to a stated certain amount.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 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) a credit rating determined as acceptable under clause 3.3.4.

### 3.3.4 Acceptable credit rating

- (a) *AEMO* 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 *AEMO*, 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 *AEMO* 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 *AEMO* specifies by notice to the *Market Participants*.

### 3.3.4A Prudential standard

The prudential standard is 2%.

### 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 *AEMO* in respect of the *Market Participant* is not less than the current maximum credit limit for that *Market Participant*.

#### Note

This clause is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 3.3.6 Changes to credit support

- (a) If:
  - (1) a *credit support* provided to *AEMO* 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 *AEMO* 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.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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 AEMO 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 AEMO).

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 3.3.7 Drawings on credit support

- (a) If AEMO 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 AEMO must notify the *Market Participant*.
- (b) If, as a result of AEMO 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 AEMO 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 AEMO additional *credit support* complying with the requirements of this rule 3.3, such that the aggregate undrawn and valid *credit support* held by AEMO 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.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 3.3.8 Credit limit procedures and prudential settings

#### Credit limit procedures

- (a) This clause sets out the framework for the establishment and determination of the prudential settings for *Market Participants* in the NEM.

- (b) The objective of the credit limit procedures is to establish the process by which *AEMO* will determine the prudential settings for each *Market Participant* so that the prudential standard is met for the *NEM*.
- (c) *AEMO* must develop, and, at all times, *publish* and maintain the credit limit procedures that details the methodology to be used by it to determine the prudential settings to apply to *Market Participants*.
- (d) In developing the methodology to be used by *AEMO* to determine the prudential settings to apply to *Market Participants*, *AEMO* must take into consideration the following factors:
  - (1) the *regional reference price* for the *region* for which the prudential settings are being calculated;
  - (2) the time of year;
  - (3) the volatility of *load* and *regional reference price* for the *regions*;
  - (4) *AEMO's* estimate of the *generation* and *load* for each *Market Participant*;
  - (5) the relationship between average *load* and *peak load* for each *Market Participant*;
  - (6) any *prospective reallocations* for the period being assessed;
  - (7) the correlation between *energy*, *reallocations* and the *regional reference price*;
  - (8) the statistical distribution of any accrued amounts that may be owed to *AEMO*;
  - (9) the relevant time period for which the prudential settings are being calculated; and
  - (10) any other factors *AEMO* considers relevant having regard to the objective of the credit limit procedures under paragraph (b).
- (e) **[Deleted]**
- (f) At least once a year, *AEMO* must review, prepare and *publish* a report on the effectiveness of the methodology developed under this clause in achieving the objective of the credit limit procedures under paragraph (b), with any recommendations for the enhancement of the methodology.
- (g) Subject to paragraph (h), *AEMO* must comply with the *Rules consultation procedures* when making or amending the credit limit procedures.
- (h) *AEMO* may make minor or administrative amendments to the credit limit procedures without complying with the *Rules consultation procedures*.

**Prudential settings**

- (i) *AEMO* must determine the prudential settings to apply to *Market Participants* in accordance with:
  - (1) the objective of the credit limit procedures under paragraph (b); and
  - (2) the credit limit procedures.

- (j) The outstandings limit and prudential margin are interdependent, and *AEMO* must determine these simultaneously to meet the prudential standard for the *NEM*.
- (k) The maximum credit limit for a *Market Participant* is the dollar amount determined by *AEMO* using the following formula:

$$\text{MCL} = \text{OSL} + \text{PM}$$

where:

MCL is the maximum credit limit;

OSL is the outstandings limit; and

PM is the prudential margin.

- (k1) The prudential margin for a *Market Participant* must not be a negative amount.
- (l) *AEMO* must review the prudential settings that apply to each *Market Participant* no later than a year after the last determination or review of the *Market Participant's* prudential settings.
- (m) At any time, and for any reason that is consistent with objective of the credit limit procedures under paragraph (b), *AEMO* may change the prudential settings that apply to a *Market Participant*, provided that any change to the *Market Participant's* prudential settings applies no earlier than one *business day* after the date *AEMO* notifies the *Market Participant* of changes to its prudential settings.
- (n) *AEMO* must notify, in writing, the *Market Participant* of any determination or change of a *Market Participant's* prudential settings, and provide reasons for that determination or change.

### 3.3.8A Security Deposits

At any time, a *Market Participant* may provide a security deposit to *AEMO* 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:

$$\text{OS} = - (\text{A} + \text{B} + \text{SDA})$$

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 AEMO or AEMO's reasonable estimate of the *settlement amounts* for *billing periods* (where *final statements* have not been issued by AEMO).

**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 AEMO to the *Market Participant*.

### 3.3.10 Trading limit

The *trading limit* for a *Market Participant* is the dollar amount determined by AEMO 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 by AEMO in accordance with clause 3.3.8

**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*, AEMO 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 statements* or *final statements* or another *interim statement*, notwithstanding that the usual time for the issue of a *preliminary statement* 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:

Call Amount = the higher of:

(OS – TypA); and

(OS – TL)

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*; and

TL is the *trading limit* 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 AEMO may exercise its powers under either or both of clauses 3.3.11(a)(1) or 3.3.11(a)(2).

- (b) AEMO 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 AEMO's rights to issue a further *call notice* or *interim statement* on the same grounds that gave rise to AEMO 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 AEMO 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 AEMO 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) AEMO 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 AEMO 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 AEMO to an increase in the *Market Participant's* maximum credit limit by an amount not less than the *call amount*, and provide to AEMO 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 *AEMO* 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 *AEMO*; or
- (4) provide to *AEMO* 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 *AEMO* is not less than the *call amount*.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b) If *AEMO* gives a *call notice* to a *Market Participant* after 1:00 pm (Sydney time), then *AEMO* 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), *AEMO* 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 *AEMO*:
  - (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 *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO* under a particular *final statement* or *final statements*; and
  - (2) *AEMO* must apply the security deposits in accordance with an agreement reached under clause 3.3.13A(b)(1).

If agreement is not reached between *AEMO* and the *Market Participant* under this clause, then *AEMO* has a discretion to apply the security deposit funds of that *Market Participant* in payment of moneys that the *Market Participant* owes *AEMO* 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 *AEMO* has a discretion as to which amounts owing to *AEMO* 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, *AEMO* 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 *AEMO* a security deposit, then *AEMO* 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 *AEMO* under *final statements* issued not later than the *final statement* for the *billing period* in which the security deposit was paid to *AEMO*. If, for any reason, *AEMO* has not fully applied such security deposit within this time, then *AEMO* must apply the remainder to amounts owing to *AEMO* 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 *AEMO* and *AEMO* reasonably considers that the *Market Participant* will not owe any money to *AEMO* in the future arising from that person's activities as a *Market Participant*,
 then *AEMO* 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 *AEMO*. For this purpose, *AEMO* 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 *AEMO* 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 AEMO 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 AEMO where the *potential value* of that *transaction*, plus the *potential value* of all other *uncompleted transactions*, exceeds the *trading margin* for the *Market Participant*.

#### Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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 AEMO 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) AEMO 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 the *market price cap* 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) AEMO 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 the *market price cap* 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 *AEMO* 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 *AEMO* within 24 hours after *AEMO* has notified the *Market Participant* that additional *credit support* is required.

#### Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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, *AEMO* must consult with *Market Participants* and any other person *AEMO* considers appropriate.
- (b) *AEMO* is not required to meet its obligations under clause 3.3.19(a) in any way which increases *AEMO'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) *AEMO* 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) *AEMO* must determine and *publish* in accordance with rule 3.9:
- (1) a *regional reference price* for each *region* 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) AEMO must operate the *spot market* according to the *timetable* which must be approved by the AEMC and *published* by AEMO following compliance with the *Rules consultation procedures*.
- (b) Subject to paragraph (b1), if AEMO wishes to change the *timetable* at any time, it may do so following compliance with the *Rules consultation procedures*.
- (b1) AEMO may make minor and administrative amendments to the *timetable* without complying with the *Rules consultation procedures*.
- (c) If AEMO amends the *timetable* in accordance with paragraph (b) or (b1), AEMO must:
  - (1) *publish* the amended *timetable*; and
  - (2) operate the *spot market* according to the *timetable* as amended.

## **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 [Deleted]**

## **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 *AEMO* 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 *regional reference prices* in adjacent *regions* so as to reflect the cost of *inter-regional losses*.
- (c) *AEMO* 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), *AEMO* 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 *AEMO* pursuant to clause 3.6.2A.
  - (5) *Inter-regional loss factor* equations are determined by using 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) *AEMO* 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 *AEMO* under clause 3.6.1(c).
- (f) *AEMO* 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 either:
    - (i) two *intra-regional loss factors* where *AEMO* determines, in accordance with the methodology determined under clause 3.6.2(d), that one *intra-regional loss factor* does not, 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* for the *active energy* generation and consumption at that *transmission network connection point*; or
    - (ii) one static *intra-regional loss factor* in all other circumstances;
  - (2A) must be determined in accordance with the methodology determined by *AEMO* under clause 3.6.2(d) for each *transmission network connection point*;
  - (2B) apply for a *financial year*; 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 *intra-regional loss factors* of the constituent *transmission network connection points*.
- (b1) If *AEMO* determines two *intra-regional loss factors* for a *transmission network connection point* under clause 3.6.2(b)(2), *AEMO* must apply the *intra-regional loss factors* in *central dispatch* and *spot market transactions*

in accordance with the procedure determined by *AEMO* under clause 3.6.2(d1).

- (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 *spot price* at each *transmission network connection point* and *virtual transmission node*.
- (d) *AEMO* 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*.
- (d1) *AEMO* must determine, *publish* and maintain, in consultation with *Registered Participants*, a procedure that includes a description of the manner in which *AEMO* will, if two *intra-regional loss factors* apply to a *transmission network connection point*, apply two *intra-regional loss factors* in *central dispatch* and *spot market transactions*. The procedure determined under this paragraph (d1) must describe how *AEMO* will identify and measure the *generation* and *load* at each *transmission network connection point* and apply the relevant *intra-regional loss factor* against that *generation* or *load*.
- (e) In preparing the methodology referred to in clause 3.6.2(d), *AEMO* 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 *AEMO* 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 the *financial year* to which the *load* and *generation* data relates.
  - (5) An *intra-regional loss factor* for a *transmission network connection point* is determined using a volume weighted average of the *marginal loss factors* for the *transmission network connection point*.
- (f) *AEMO* 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 *AEMO* under clause 3.6.2(d).

- (f1) By 1 April in each year, *AEMO* must *publish* the *intra-regional loss factors* revised under clause 3.6.2(f) and to apply for the next *financial year*.
- (g) *AEMO* must, in accordance with the *Rules consultation procedures*, determine, *publish* and maintain the methodology which is to apply to the calculation of average *intra-regional 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, *AEMO* must calculate and *publish* the *intra-regional 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), *AEMO* must:
  - (1) determine an *intra-regional loss factor* in the *financial year* in which an *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 *AEMO* 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 an *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 *AEMO's* reasonable opinion, the modification to that *connection point* results in a material change in the capacity of the *connection point*.
- (j) *AEMO* must, where required to determine an *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 *AEMO* 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 an *intra-regional loss factor* for the *transmission network connection point* must be determined using the forecast *load* and *generation* data determined by *AEMO* 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 *AEMO*, 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 *AEMO* under clause 3.6.2A.
- (l) In the case of a *connection point* that is established in the *financial year* in which an *intra-regional loss factor* is to apply:

- (1) an *intra-regional loss factor* determined by *AEMO* in accordance with clause 3.6.2(i) will apply from the time an *intra-regional loss factor* is determined and *published* by *AEMO*; and
  - (2) *AEMO* must use reasonable endeavours to determine and *publish* an *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 *AEMO* specified by the methodology *published* by *AEMO* under clause 3.6.2A.
- (m) In the case of a *connection point* that is modified in the *financial year* in which an *intra-regional loss factor* is to apply:
  - (1) an *intra-regional loss factor* determined by *AEMO* in accordance with clause 3.6.2(i) will apply from the date when the modification to the *connection point* takes effect; and
  - (2) *AEMO* must use reasonable endeavours to *publish* an *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 *AEMO* specified by the methodology *published* by *AEMO* under clause 3.6.2A.
- (n) For the avoidance of doubt, where *AEMO* 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) *AEMO* 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 *AEMO* for this purpose, under clause 3.6.2A(b).
- (b) *AEMO* 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 *AEMO* under clause 3.6.2A(b) must specify information reasonably required by *AEMO* 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), *AEMO* 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 *AEMO* 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);

**Note**

This subparagraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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.

**Note**

This subparagraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b1) Where a *Generator*, or a *Small Generation Aggregator*, 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.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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

**Note**

This subparagraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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 *AEMO* 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*.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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:

- (i) 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
  - (ii) 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 *AEMO* for *publication* by 1 April. Before providing the *distribution loss factors* to *AEMO* 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* *AEMO* 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

#### Definitions

- (a0) In this clause 3.6.5:

**importing region** means the *region* to which electricity is transferred during the relevant *trading interval* from another *region* through *regulated interconnectors*.

- (a) *Settlements residue* will be allocated, and distributed or recovered by *AEMO* 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 subparagraph (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*);

(3A) **[Deleted]**

(4) if the *settlements residue* arising in respect of a *trading interval*, after taking into account any relevant adjustment in accordance with clauses 5.7.7(aa)(3) or (ab), is a negative amount then, in respect of the *billing period* in which the negative *settlements residue* arises then:

- (i) *AEMO* must recover the amount from the appropriate *Transmission Network Service Provider* at a payment time, interval, and by a method, determined by *AEMO* following consultation with *Transmission Network Service Providers*. *AEMO* may determine that the appropriate *Transmission Network Service Provider* is to pay the negative *settlements residue* amount by a date prior to the date for payment of *final statements* under clause 3.15.16;
- (ii) the appropriate *Transmission Network Service Provider* must pay the negative *settlements residue* amount in accordance with *AEMO's* determination under subparagraph (4)(i);

(4A) if interest costs are incurred by *AEMO* in relation to any unrecovered negative *settlements residue* amount referred to in subparagraph (4), then, in respect of the *billing period* in which the negative *settlements residue* arises then:

- (i) *AEMO* must recover the interest costs from the appropriate *Transmission Network Service Provider* at a payment time, interval, and by a method, determined by *AEMO* following consultation with *Transmission Network Service Providers*. *AEMO* may determine that the appropriate *Transmission Network Service Provider* is to pay the interest cost amount by a date prior to the date for payment of *final statements* under clause 3.15.16; and
- (ii) the appropriate *Transmission Network Service Provider* must pay the interest cost amount in accordance with *AEMO's* determination under subparagraph (4A)(i);

(4B) for the purposes of subparagraphs (3), (4) and (4A), the appropriate *Transmission Network Service Provider* is:

- (i) in the case of *inter-regional settlements residue*:
  - (A) if there is more than one *Transmission Network Service Provider* in the importing region, the *Co-ordinating Network Service Provider*; or
  - (B) if there is no *Co-ordinating Network Service Provider* in the importing region, the *Transmission Network Service Provider* to which a *transmission determination* currently applies in that *region*;
- (ii) in the case of *intra-regional settlements residue*:

- (A) if there is more than one *Transmission Network Service Provider* in the *region*, the *Co-ordinating Network Service Provider*; or
- (B) if there is no *Co-ordinating Network Service Provider* in the *region*, the *Transmission Network Service Provider* to which a *transmission determination* currently applies in that *region*;
- (4C) [Deleted]
- (4D) [Deleted]
- (5) [Deleted]
- (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) [Deleted]

## 3.7 Projected Assessment of System Adequacy

### 3.7.1 Administration of PASA

- (a) *AEMO* 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* and reliability of *supply* prospects so that *Registered 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 (or up to 3 years in advance, where specified).
- (c) On a weekly basis *AEMO* 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 reliability of *supply*; and

- (v) significant changes to *load* forecasts previously notified to *AEMO*,  
for the following 24 months in respect of subparagraphs (i), (iii), (iv) and (v), and for the following 36 months in respect of subparagraph (ii);
- (2) prepare the *unconstrained intermittent generation forecasts* for the following 24 months; and
- (3) following analysis and assessment of the information referred to in subparagraphs (1) and (2), *publish* information that will inform the *market* regarding forecasts of *supply* and demand.
- (d) *AEMO* must use its reasonable endeavours to ensure that it publishes sufficient information to allow the *market* to operate effectively with a minimal amount of intervention by *AEMO*.

### 3.7.2 Medium term PASA

- (a) The *medium term PASA* covers the 24 month period (or, in the case of paragraphs (d)(1)(i) and (f)(5) the 36 month period), commencing from the Sunday after the *day* of publication with a daily resolution. Every week, *AEMO* must review and *publish* the outputs of the *medium term PASA* in accordance with the *timetable*.
- (b) *AEMO* may publish additional updated versions of the *medium term PASA* in the event of changes which, in the judgment of *AEMO*, are materially significant.
- (c) The following *medium term PASA inputs* are to be prepared by *AEMO*:
  - (1) forecast *load* information for each *region* which is:
    - (i) forecasts of the 10% probability of exceedence daily *peak load*, forecasts of the most probable daily *peak load* and forecasts of the time of the peak, on the basis of past trends, day type and special events, including all forecast *scheduled load* and other *load* except for pumped storage *loads*;
    - (ii) subsequently to be adjusted by an amount anticipated in the forecast as *scheduled load* by *load* bidders; and
    - (iii) an indicative half hourly *load* profile for each day type for each *region* for each month of the year;
  - (2) the capabilities of *generating units* for which formal commitments have been made for construction or installation;
  - (3) forecast *network constraints* known to *AEMO* at the time;
  - (4) an *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* for each *day*.
- (d) The following *medium term PASA inputs* must be submitted by each relevant *Scheduled Generator* or *Market Participant* in accordance with the *timetable* and must represent the *Scheduled Generator's* or *Market Participant's* current intentions and best estimates:



- (1) *PASA availability* of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *day* taking into account the ambient weather conditions forecast at the time of the 10% probability of exceedence *peak load* (in the manner described in the procedure prepared under paragraph (h)):
  - (i) for a 36 month period in respect of each *scheduled generating unit*; and
  - (ii) for a 24 month period in respect of each *scheduled load* or *scheduled network service*; and
- (2) weekly *energy constraints* applying to each *scheduled generating unit* or *scheduled load* for a 24 month period.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (e) *Network Service Providers* must provide to *AEMO* an outline of planned *network outages* in accordance with the *timetable* and provide to *AEMO* any other information on planned *network outages* that is reasonably requested by *AEMO* to assist *AEMO* to meet its obligations under paragraph (f)(6).

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (f) *AEMO* must prepare and *publish* the following information in respect of each *day* (unless otherwise specified in subparagraphs (1) to (6)) covered by the *medium term PASA* in accordance with clause 3.13.4(a):
  - (1) forecasts of the 10% probability of exceedence *peak load*, and most probable *peak load*, excluding the relevant aggregated MW allowance referred to in subparagraph (2), and adjusted to make allowance for *scheduled load*;
  - (1A) the maximum and minimum values of the forecasts of the 10% probability of exceedence *peak load* and the forecasts of the most probable *peak load*, prepared by *AEMO* in accordance with paragraph (c)(1);
  - (2) the aggregated MW allowance (if any) to be made by *AEMO* for *generation* from *non-scheduled generating systems* in each of the forecasts of the 10% probability of exceedence *peak load* and most probable *peak load* referred to in subparagraph (1);
  - (3) in respect of each of the forecasts of the 10% probability of exceedence *peak load* and most probable *peak load* referred to in subparagraph (1), a value that is the sum of that forecast and the relevant aggregated MW allowance referred to in subparagraph (2);
  - (4) forecasts of the most probable weekly *energy* for each *region*;

- (5) for a 36 month period, aggregate *generating unit PASA availability* for each *region* and individual *scheduled generating unit PASA availability*;
- (5A) aggregate capacity for each *region* that can be *generated* continuously, calculated by adding the following categories:
  - (i) the capacity of *scheduled generating units* in the *region* that are able to operate at the *PASA availability*; and
  - (ii) the forecast *generation* of *semi-scheduled generating units* in the *region* as provided by the *unconstrained intermittent generation forecasts*;
- (5B) aggregate capacity for each *region* that cannot be *generated* continuously at the *PASA availability* of the *scheduled generating units* in the *region* due to specified weekly *energy constraints*;
- (5C) the adjusted maximum and minimum aggregate *scheduled generating unit PASA availability* for each *region* following adjustment for the inclusion of *Scheduled Generator* probabilistic forced outage information; and
- (6) identification and quantification of:
  - (i) any projected *violations* of *power system security*;
  - (ii) any projected failure to meet the *reliability standard* as assessed in accordance with the *reliability standard implementation guidelines*;
  - (iii) **[Deleted]**
  - (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) For the purpose of paragraph (f) (other than subparagraphs (f)(4) and (f)(6)), *AEMO* must *publish* forecast information in a format consistent with the format of the demand information published under clause 3.13.4(x).
- (h) *AEMO* must publish the procedure it uses for preparation of the *medium term PASA*.

### 3.7.3 Short term PASA

- (a) The *short term PASA* must be *published* at least daily by *AEMO* 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 *trading interval* resolution.

- (c) *AEMO* may *publish* additional updated versions of the *short term PASA* in the event of changes which, in the judgement of *AEMO*, are materially significant.
- (d) The following *short term PASA inputs* are to be prepared by *AEMO*:
  - (1) forecast *load* information for each *region* which is to include:
    - (i) the 10% probability of exceedence half-hourly *load* and most probable half hourly *load* 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 bids* for *scheduled load*;
  - (2) **[Deleted]**
  - (3) forecast *network constraints* known to *AEMO* at the time; and
  - (4) an *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* for each *trading interval*.
- (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) *available capacity* of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *trading interval* under expected market conditions;
  - (2) *PASA availability* of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *trading interval*; and
  - (3) **[Deleted]**
  - (4) projected daily *energy* availability for *energy constrained scheduled generating units* and *energy constrained scheduled loads*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (f) If *AEMO* considers it reasonably necessary for adequate *power system* operation and the maintenance of *power system security* and reliability of *supply*, *Registered Participants* who may otherwise be exempted from providing inputs for the *PASA* must do so to the extent specified by *AEMO*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (g) *Network Service Providers* must provide to *AEMO* an outline of planned *network outages* in accordance with the *timetable* and provide to *AEMO* any

other information on planned *network outages* that is reasonably requested by *AEMO* to assist *AEMO* to meet its obligations under clause 3.7.3(h)(5).

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (h) *AEMO* must prepare and *publish* the following information for each *trading interval* (unless otherwise specified in subparagraphs (1) to (5)) in the period covered by the *short term PASA* in accordance with clause 3.13.4(c):
  - (1) forecasts of the most probable *load* (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) plus *reserve* requirement (as determined under clause 3.7.3(d)(2)), adjusted to make allowance for *scheduled load*, for each *region*;
  - (2) forecasts of *load* (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region* with 10% and 90% probability of exceedence;
  - (3) forecasts of the most probable *energy* (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region* and *trading day*;
  - (4) aggregate *generating unit* availability (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*;
  - (4AA) aggregate capacity (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*, after allowing for the impact of *network constraints*, that can be *generated* continuously, calculated by adding the following categories:
    - (i) the *available capacity* of *scheduled generating units* that are able to operate at the availability as notified to *AEMO* under paragraph (e)(1); and
    - (ii) the forecast *generation* of *semi-scheduled generating units* as provided by the *unconstrained intermittent generation forecasts*;
  - (4AB) aggregate capacity (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*, after allowing for the impact of *network constraints*, that cannot be *generated* continuously at the *available capacity* referred to in subparagraph (4AA)(i) due to specified daily *energy constraints*;
  - (4A) aggregate *generating unit PASA* availability (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*;
  - (4B) the aggregated MW allowance (if any) to be made by *AEMO* for generation from *non-scheduled generating systems* in each forecast:
    - (i) of the most probable *load* referred to in clause 3.7.3(h)(1); and
    - (ii) referred to in clauses 3.7.3(h)(2), (3), (4), (4A), (4AA) and (4AB);

- (4C) in respect of each forecast:
  - (i) of the most probable *load* referred to in clause 3.7.3(h)(1);
  - (ii) referred to in clauses 3.7.3(h)(2), (3), (4), (4A), (4AA) and (4AB),  
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 projected failure to meet the *reliability standard* as assessed in accordance with the *reliability standard implementation guidelines*;
  - (iii) **[Deleted]**
  - (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) If in performing the *short term PASA AEMO* identifies any projected failure to meet the *reliability standard* in respect of a *region* as assessed in accordance with the *reliability standard implementation guidelines*, then *AEMO* must use its reasonable endeavours to advise the *Jurisdictional System Security Coordinator* who represents a *participating jurisdiction* in that *region* of any potential requirements during such conditions to shed *sensitive loads*.
- (j) *AEMO* must publish the procedure it uses for preparation of the *short term PASA*.

### 3.7A Congestion information resource

- (a) The objective of the *congestion information resource* is to provide information in a cost effective manner to *Registered Participants* to enable them to understand patterns of *network* congestion and make projections of *market* outcomes in the presence of *network* congestion (the *congestion information resource objective*).

#### Development of congestion information resource

- (b) To implement the *congestion information resource objective*, *AEMO* must develop and *publish*, in accordance with this rule 3.7A, an information resource comprising:
  - (1) information on *planned network events* that are likely to materially affect *network constraints* in relation to a *transmission system*;
  - (2) historical data on *mis-pricing* at *transmission network* nodes in the *NEM*; and

- (3) any other information that *AEMO*, in its reasonable opinion, considers relevant to implement the *congestion information resource objective*, which is to be known as the *congestion information resource*.
- (c) The *congestion information resource* must contain at least the same level of detail as is required to be included in the interim congestion information resource *published* under clause 11.30.2
- (d) *AEMO* must develop, and amend from time to time, the *congestion information resource*:
  - (1) consistently with the *congestion information resource objective*;
  - (2) in accordance with the *congestion information resource guidelines*; and
  - (3) to incorporate any new, or amend any existing, aspect of the *congestion information resource* where *AEMO* forms the view that such an amendment will improve the implementation of the *congestion information resource objective*
- (e) Subject to paragraph (f), *AEMO* must update and *publish* the information contained in the *congestion information resource* (whether in whole or in part) at intervals to be determined by *AEMO* in accordance with the *congestion information resource guidelines*.
- (f) The intervals determined by *AEMO* for updating and *publishing* the *congestion information resource* must be included in the *timetable*.
- (g) If there has been a material change to the information contained in the *congestion information resource* and *AEMO* considers *Registered Participants* require the new information prior to the next periodic update of the *congestion information resource* in accordance with paragraph (e), *AEMO* may provide *Market Participants* with the new information in accordance with the *congestion information resource guidelines*.
- (h) *AEMO* must *publish* the first *congestion information resource* by 1 September 2011 and there must be a *congestion information resource* available at all times after that date.
- (i) For the purpose of *publishing* the first *congestion information resource* under paragraph (b), *AEMO* may, subject to paragraph (d), *publish* the interim *congestion information resource* referred to in clause 11.30.2, as the first *congestion information resource*, in whole or in part.
- (j) *AEMO* must not *publish confidential information* as part of, or in connection with, the *congestion information resource*.

#### **Congestion information resource guidelines**

- (k) *AEMO* must develop and *publish* guidelines (the *congestion information resource guidelines*) in relation to:
  - (1) the categories of information to be contained in the *congestion information resource* including the source of that information;
  - (2) the scope and type of information to be provided by *Transmission Network Service Providers* in accordance with paragraphs (n) and (o);

- (3) the processes to be implemented by *AEMO* to obtain the information from *Transmission Network Service Providers* in accordance with paragraphs (n) and (o);
  - (4) the determination of the intervals for updating and *publishing* the *congestion information resource* under paragraph (e); and
  - (5) the processes to be implemented by *AEMO* for providing *Registered Participants* with information under paragraph (g).
- (l) *AEMO* must develop and *publish* the first *congestion information resource guidelines* in accordance with the *Rules consultation procedures* by 1 September 2010 and there must be a set of *congestion information resource guidelines* available and up to date at all times after that date.
- (m) *AEMO* must amend the *congestion information resource guidelines* in accordance with the *Rules consultation procedures*.

#### **Information of Transmission Network Service Providers**

- (n) In addition to the obligations imposed on *Transmission Network Service Providers* by rule 3.7, *Transmission Network Service Providers* must provide *AEMO* with the information specified in the *congestion information resource guidelines* as information that is to be provided by them:
- (1) in a form which clearly identifies *confidential information*; and
  - (2) in accordance with the *congestion information resource guidelines*.

##### **Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (o) If there has been a material change to the information provided by a *Transmission Network Service Provider* under paragraph (n), the *Transmission Network Service Provider* must provide *AEMO* with the revised information as soon as practicable.

##### **Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (p) Information contained in the *congestion information resource* which has been provided by, or has been derived from information provided by, a *Transmission Network Service Provider* under this rule 3.7A:
- (1) must represent the *Transmission Network Service Provider's* current intentions and best estimates regarding *planned network events* at the time the information is made available;
  - (2) does not bind the *Transmission Network Service Provider* to comply with an advised *outage* program; and
  - (3) may be subject to change due to unforeseen circumstances outside the control of the *Transmission Network Service Provider*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**3.7B Unconstrained intermittent generation forecast**

- (a) *AEMO* must prepare a forecast of the *available capacity* of each *semi-scheduled generating unit* (to be known as an *unconstrained intermittent generation forecast*) in accordance with this rule 3.7B for the purposes of:
  - (1) the *PASA*;
  - (2) *dispatch*; and
  - (3) *pre-dispatch*.
- (b) A *Semi-Scheduled Generator* must:
  - (1) submit to *AEMO*, in accordance with the *timetable*, the *plant availability* for each *semi-scheduled generating unit* for the purpose of paragraph (a) as soon as the *Semi-Scheduled Generator* becomes aware that the *plant availability* of the unit is at least 6MW below or above the *nameplate rating* of the unit; and
  - (2) where the *Semi-Scheduled Generator* has submitted *plant availability* in accordance with subparagraph (1), notify *AEMO* in accordance with the *timetable* as soon as the *Semi-Scheduled Generator* becomes aware of any changes to the *plant availability* of that *semi-scheduled generating unit* until such time as the *plant availability* of that *semi-scheduled generating unit* is no longer at least 6MW below or above the *nameplate rating* of the unit.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (c) When preparing an *unconstrained intermittent generation forecast* for the purposes referred to in paragraph (a), *AEMO* must take into account:
  - (1) the maximum *generation* of the *semi-scheduled generating unit* provided by the *Semi-Scheduled Generator* as part of its *bid and offer validation data*;
  - (2) the *plant availability* of the *semi-scheduled generating unit* submitted by the *Semi-Scheduled Generator* under paragraph (b);
  - (3) the information obtained for the *semi-scheduled generating unit* from the *remote monitoring equipment* specified in clause S5.2.6.1;
  - (4) the forecasts of the energy available for input into the electrical power conversion process for each *semi-scheduled generating unit*;
  - (5) the *energy conversion model* for each *semi-scheduled generating unit*;
  - (6) the assumption that there are no *network constraints* otherwise affecting the *generation* from that *semi-scheduled generating unit*; and
  - (7) the timeframes of:



- (i) *pre-dispatch*;
  - (ii) *dispatch*,
  - (iii) *medium term PASA*; and
  - (iv) *short term PASA*.
- (d) *NEMMCO* must prepare the first *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* by 31 March 2009 and there must be an *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* available at all times after that date.

### 3.7C Energy Adequacy Assessment Projection

#### Purpose of EAAP

- (a) The purpose of the *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; ;
  - (2) be *published* at least once in every 12 month period and more frequently if required under paragraph (d);
  - (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 *AEMO* 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 *AEMO* considers in, and for the purposes of, preparing the *Integrated System Plan*;
    - (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) *AEMO* must comply with the *EAAP principles* in preparing the *EAAP*.

**Administration of EAAP**

- (d) *AEMO* must *publish* the *EAAP*:
  - (1) at least once in every 12 month period in accordance with the *timetable*; and
  - (2) as soon as practicable after becoming aware of any new information that may materially alter the most recently published *EAAP*.
- (e) For the purposes of preparing the *EAAP*, a *Scheduled Generator* must provide *AEMO* 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 *AEMO* to study the scenarios defined in the *EAAP guidelines*.
- (f) In considering whether information referred to in subparagraph (e)(2) is reasonably required, *AEMO* 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 *AEMO*, 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 *AEMO* 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:
  - (1) at least every 12 months in accordance with the *timetable*; and
  - (2) in accordance with the *EAAP guidelines*, if *AEMO* is required to *publish* an *EAAP* under paragraph (d)(2).
- (i) Without limiting paragraph (h), if 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 *AEMO* must be treated by *AEMO* as *confidential information*.

### **EAAP guidelines**

- (k) *AEMO* must develop and *publish* guidelines (the *EAAP guidelines*) that:
  - (1) define scenarios that *AEMO* must study in preparing the *EAAP*, including any scenarios that the *Reliability Panel* has identified for study for the purposes of 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);
  - (8) define arrangements for managing the confidentiality of information submitted to *AEMO* under this rule 3.7C; and
  - (9) specify when a *Scheduled Generator* is required to update a *GELF* under paragraph (h)(2).
- (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 *AEMO* reasonably considers will have a material impact on the *EAAP*.
- (m) *AEMO* must comply with the *EAAP principles* in preparing the *EAAP guidelines*.
- (n) *AEMO* must comply with the *EAAP guidelines* in preparing the *EAAP*.
- (o) *AEMO* must develop and *publish* the *EAAP guidelines* in accordance with the *Rules consultation procedures*.

- (p) **[Deleted]**
- (q) *AEMO* 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) *AEMO* 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) **[Deleted]**.

### **3.7D Demand side participation information**

#### **Definitions**

- (a) In this rule:

**contracted demand side participation** means, in relation to a *Registered Participant*, a contractual arrangement under which a person and the *Registered Participant* agree to the adjustment of *non-scheduled load* or the provision of unscheduled generation in certain specified circumstances.

**demand side participation information guidelines** means the guidelines as made and amended by *AEMO* in accordance with paragraphs (e) to (i).

**unscheduled generation** means *generation* from a *generating system* connected to a *transmission system* or *distribution system* which is not a *scheduled generating system* or *semi-scheduled generating system*.

#### **Registered Participants to provide demand side participation information to AEMO**

- (b) A *Registered Participant* must provide to *AEMO* in accordance with the demand side participation information guidelines:
  - (1) *demand side participation information*; or
  - (2) if the *Registered Participant* has no *demand side participation information* to report in respect of the relevant period, a statement to that effect.

#### **AEMO to report on demand side participation information**

- (c) *AEMO* must *publish*, no less than annually, an analysis of volumes and types of demand response reported under paragraph (b), which must include:
  - (1) information on the types of tariffs used by *Network Service Providers* to facilitate demand response and the proportion of *retail customers* on those tariffs; and
  - (2) an analysis of trends, including year-on-year changes, in the information reported under paragraph (b), in respect of each relevant category of *Registered Participant*.

- (d) *AEMO* must *publish* details, no less than annually, on the extent to which, in general terms, *demand side participation information* received under this rule 3.7D has informed *AEMO's* development or use of *load* forecasts for the purposes of the exercise of its functions under the *Rules*.

**Note**

*AEMO* is required under clause 4.9.1(c) to take into account *demand side participation information* received under this rule 3.7D when developing *load* forecasts.

**Demand side participation information guidelines**

- (e) *AEMO* must develop, maintain and *publish* guidelines that specify:
- (1) the information *Registered Participants* must provide to *AEMO* in relation to:
    - (i) *contracted demand side participation*; and
    - (ii) to the extent not covered by subparagraph (1)(i), the adjustment of *non-scheduled load* or the provision of *unscheduled generation* in response to the demand for, or price of, electricity, which may include, but is not limited to:
      - (iii) the circumstances under which *non-scheduled load* may be adjusted or *unscheduled generation* may be provided;
      - (iv) the location at which *non-scheduled load* may be adjusted or *unscheduled generation* may be provided;
      - (v) the quantity of *non-scheduled load* that may be adjusted or *unscheduled generation* that may be provided; and
      - (vi) historic or current information;
  - (2) when *Registered Participants* must provide and update *demand side participation information*;
  - (3) how *demand side participation information* is to be provided, including, for example:
    - (i) the format in which the information must be provided; and
    - (ii) any information *AEMO* requires to assess the accuracy of the information;
  - (4) *AEMO's* methodology for assessing the accuracy of *demand side participation information* provided to it under this rule 3.7D;
  - (4A) the requirements for a statement under paragraph (b)(2), if a *Registered Participant* has no *demand side participation information* to report; and
  - (5) the manner and form in which *AEMO* will *publish* details, in accordance with paragraph (d), on the extent to which *demand side participation information* has informed its *load* forecasts.
- (f) In developing and amending the demand side participation information guidelines, *AEMO* must:

- (1) have regard to the reasonable costs of efficient compliance by *Registered Participants* with the guidelines compared to the likely benefits from the use of *demand side participation information* provided under this rule 3.7D in forecasting *load* for the purposes of the exercise of its functions under the *Rules*; and
- (2) subject to paragraph (g), consult with:
  - (i) *Registered Participants*; and
  - (ii) such other persons who, in *AEMO's* reasonable opinion, have, or have identified themselves to *AEMO* as having, an interest in the demand side participation information guidelines,in accordance with the *Rules consultation procedures*.
- (g) *AEMO* is not required to comply with the *Rules consultation procedures* when making minor or administrative amendments to the demand side participation information guidelines.
- (h) The demand side participation information guidelines must include a minimum period of 3 months between the date of *publication* and the date when the guidelines commence other than when the guidelines are amended under paragraph (g), in which case the guidelines may commence on the date of *publication*.
- (i) There must be demand side participation information guidelines in place at all times after the first demand side participation information guidelines are published by *AEMO* under the *Rules*.

### 3.7E Register of DER information

#### Definitions

- (a) In this rule:

**emergency** means an emergency due to the actual or imminent occurrence of an event (such as fire, flood, storm, earthquake, explosion, accident, act of terrorism or cyber attack) that in any way endangers or threatens to endanger the safety or health of any person or animal, or that destroys or damages, or threatens to destroy or damage, any property.

**emergency services agency** means an agency or person prescribed, approved or accredited under jurisdictional emergency management legislation as an emergency services agency or equivalent (and includes without limitation the ambulance service, state emergency service, police force, fire and rescue service, community and rural fire agencies, and first responder agencies).

**jurisdictional emergency management legislation** means legislation of a *participating jurisdiction* that relates to the management of emergencies.

#### **AEMO must establish a DER register**

- (b) *AEMO* must establish, maintain and update a *DER register*. The *DER register*:

- (1) must include *DER generation information* reported to *AEMO* by *Network Service Providers* in accordance with paragraph (d);
  - (2) must include any *demand side participation information* provided to *AEMO* by *Registered Participants* in accordance with rule 3.7D(b) which in *AEMO's* reasonable opinion will assist *Network Service Providers* to meet their *regulatory obligations or requirements* and/or assist *AEMO* in the exercise of its statutory functions under the *Rules*; and
  - (3) may include information of a type similar to the information referred to in subparagraphs (1) and (2) provided to *AEMO* by any person in connection with the performance of *AEMO's* statutory functions and which in *AEMO's* reasonable opinion will assist *Network Service Providers* to meet their *regulatory obligations or requirements*.
- (c) *AEMO* will be taken to satisfy the requirement to establish and maintain a *DER register* in paragraph (b) if it stores *DER register information* in one or more databases, including without limitation the databases it maintains under the *Market Settlement and Transfer Solution Procedures*.

#### **Obligation on NSPs to provide DER generation information to AEMO**

- (d) *Network Service Providers* must provide to *AEMO* in accordance with the *DER register information guidelines*, *DER generation information* in relation to *connection points* on their *network* which they are entitled to collect under the *Rules*, including but not limited to *DER generation information* they are entitled to collect under clauses 5.3.3(c)(4a), 5.3A.5(c)(1a), 5A.B.2, 5A.B.4, or 5A.C.3.

#### **AEMO may use DER register information in performing its functions**

- (e) For the avoidance of doubt, *AEMO* may use *DER register information* for the purpose of the exercise of its statutory functions under the *NEL* or *Rules*, including performing its *power system security* responsibilities.

##### **Note**

Under section 53D of the *NEL*, *AEMO* may use information it collects under the *Rules* for any purpose connected with its statutory functions unless otherwise specified in the *NEL*, these *Rules* or the Regulations made under the *NEL*.

- (f) *AEMO* must *publish* details, no less than annually, on the extent to which, in general terms, *DER register information* has informed *AEMO's* development or use of *load* forecasts, or the performance of its *power system security* responsibilities under the *Rules*.

##### **Note**

*AEMO* is required under clause 4.9.1(c) to take into account *DER register information* received under this rule 3.7E when developing *load* forecasts.

#### **DER register information guidelines**

- (g) *AEMO* must develop, maintain and *publish* guidelines that specify:
- (1) details of the *DER generation information* that *Network Service Providers* must provide to *AEMO* under paragraph (d), including any

- minimum size of *small generating units* for which a *Network Service Provider* is required to provide *DER generation information*;
- (2) the type of *demand side participation information* provided to *AEMO* by *Registered Participants* under rule 3.7D(b) that *AEMO* will include in the *DER register*;
  - (3) when *Network Service Providers* must provide and update *DER generation information*;
  - (4) how *DER generation information* should be provided to *AEMO* by *Network Service Providers*, including, for example:
    - (i) the format in which the information must be provided; and
    - (ii) any additional information *AEMO* requires to assess the accuracy of the information;
  - (5) how the information in the *DER register* is stored by *AEMO*;
  - (6) the manner and form in which *AEMO* will publish details, in accordance with paragraph (f), on the extent to which *DER register information* has informed its *load* forecasts or the performance of its *power system security* responsibilities;
  - (7) details of how *AEMO* will provide *Network Service Providers* with access to *DER register information* under paragraph (n);
  - (8) the contents, form and timing of the *DER register report* to be published by *AEMO* in accordance with paragraph (l) and how the *DER register information* to be included in that report will be aggregated; and
  - (9) *AEMO's* approach to the protection of any *confidential information* and personal information contained in the *DER register*.
- (h) In developing and amending the *DER register information guidelines*, *AEMO* must:
- (1) have regard to the reasonable costs of efficient compliance by *Network Service Providers* with the guidelines compared to the likely benefits from the use of *DER generation information* as contemplated under this rule 3.7E;
  - (2) consider any risk of unauthorised use or disclosure of *confidential information* or personal information that may arise from including information in the *DER register* compared to the likely benefits of including that information in the register; and
  - (3) subject to paragraph (i), comply with the *Rules consultation procedures*.
- (i) *AEMO* is not required to comply with the *Rules consultation procedures* when making minor or administrative amendments to the *DER register information guidelines*.
- (j) The *DER register information guidelines* must include a minimum period of 3 months between the date of *publication* and the date when the guidelines



commence other than when the guidelines are amended under paragraph (i), in which case the guidelines may commence on the date of *publication*.

- (k) There must be *DER register information guidelines* in place at all times after the first *DER register information guidelines* are published by AEMO under the *Rules*.

#### **Reporting by AEMO**

- (l) AEMO must prepare and publish on its website a report of aggregated *DER register information (DER register report)* in accordance with the *DER register information guidelines*.
- (m) The information in the *DER register report* must be aggregated such that it does not:
  - (1) directly or indirectly disclose *confidential information*; or
  - (2) result in a breach of applicable privacy legislation.

#### **Enabling access to DER register information**

- (n) AEMO must provide or give access to *DER register information* to each *Network Service Provider* in relation to that *Network Service Provider's network* in accordance with the *DER register information guidelines*.
- (o) A *Network Service Provider* must only use the *DER register information* it receives or accesses under paragraph (n) for the purposes of meeting a *regulatory obligation or requirement*.
- (p) Any information received or accessed by a *Network Service Provider* under paragraph (n) must be treated as *confidential information* by the *Network Service Provider*.

#### **AEMO may provide DER register information to emergency services**

- (q) If requested by an emergency services agency, AEMO may provide relevant *DER register information* to that emergency services agency for the purpose of the agency's response to an emergency or for planning in relation to emergency responses.

#### **Protection of DER register information**

- (r) Nothing in this rule 3.7E:
  - (1) requires AEMO to make available *DER register information* where the collection, use or disclosure of that information by AEMO would breach applicable privacy laws; or
  - (2) precludes AEMO from disclosing *confidential information* in the circumstances in which disclosure of *confidential information* is permitted under the *NEL* or the *Rules*.

### **3.7F Generation information page**

- (a) AEMO must establish, maintain and publish on its website an information resource to inform *Registered Participants* and other interested persons of the extent and nature of *generating plant connected*, or proposed to be *connected*, to the *national grid*.

### **Content of generation information page**

- (b) The *generation information page* must contain at least the following information:
  - (1) a list of all *scheduled generating units*, *semi-scheduled generating units* and *non-scheduled generating units*, including information on their respective capabilities and whether the *generating units* are in service;
  - (2) a list of *generating units* for which formal commitments have (and have not) been made for construction or installation, to the extent it is reasonably practicable to do so;
  - (3) *key connection information* received by AEMO pursuant to paragraph (g); and
  - (4) in respect of *key connection information* received by AEMO pursuant to paragraph (g):
    - (i) the name of the *Transmission Network Service Provider* from whom AEMO received that *key connection information*; and
    - (ii) a statement as to whether the *Transmission Network Service Provider* received the *key connection information* in a valid *connection* enquiry under rule 5.3, a valid *application to connect* under rule 5.3, or under clause 5.3.8(d1) or 5.3.8(e).
- (c) For the avoidance of doubt and without limiting AEMO's obligations under rule 8.6, AEMO may include information on the *generation information page* in addition to the information set out in paragraph (b) including, without limitation, *key connection information* that is received by AEMO other than *key connection information* received pursuant to paragraph (g).
- (d) AEMO must update the information contained on the *generation information page* no less than quarterly.

### **Generation information guidelines**

- (e) AEMO must develop, publish on its website and maintain, in accordance with the *Rules consultation procedures*, guidelines in relation to the *generation information page*, which must include:
  - (1) the type of information set out in paragraphs (b) and (c) to be included on the *generation information page* and the source of that information;
  - (2) the intervals for updating the *generation information page*;
  - (3) the manner, timing, and format in which *key connection information* is to be provided by *Transmission Network Service Providers* to AEMO under paragraph (g); and
  - (4) guidance as to the evidence that is required to be submitted to AEMO for the purposes of clause 3.13.3AA(c).
- (f) AEMO may make minor or administrative amendments to the *generation information guidelines* without complying with the *Rules consultation procedures*.

### **Provision of key connection information**

- (g) A *Transmission Network Service Provider* must provide *key connection information* received:
- (1) in a valid *connection* enquiry under rule 5.3;
  - (2) in a valid *application to connect* under rule 5.3; and
  - (3) under clause 5.3.8(d1) or 5.3.8(e),
- to *AEMO* in accordance with the *generation information guidelines*.

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

### **3.8.1 Central Dispatch**

- (a) *AEMO* must operate a *central dispatch* process to *dispatch scheduled generating units, semi-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*:
    - (i) due to availability and *commitment*; or
    - (ii) in the case of *semi-scheduling generating units*, identified by the *unconstrained intermittent generation forecast*;
  - (3) *non-scheduled load* requirements in each *region*;
  - (4) *power system security* requirements determined as described in Chapter 4 and the *power system security standards*;
  - (5) *network constraints*;
  - (6) *intra-regional losses* and *inter-regional losses*;
  - (7) *constraints* consistent with *dispatch bid* and *dispatch 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 *dispatch bid* and *dispatch offer* data; and

- (11) the management of negative *settlements residue*, in accordance with clause 3.8.10 and any guidelines issued by AEMO under clause 3.8.10(c).
- (c) AEMO 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 AEMO's obligations to maintain *power system security* and the pricing principles listed in clause 3.9.1; and
  - (2) AEMO must report to *Registered Participants* any events requiring the relaxation of these *constraints*.
- (d) AEMO must develop and *publish a dispatch algorithm* to be used by AEMO for the purpose of *central dispatch* and pricing in accordance with rules 3.8 and 3.9.
- (e) AEMO must use the *dispatch algorithm* to determine the *loading level* in MW for each *scheduled generating unit*, *semi-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) AEMO 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 AEMO determines the quantity of each *market ancillary service* which will be *enabled*, AEMO 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) AEMO 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 *Generator* must submit *generation dispatch offers* in respect of its *scheduled generating units* or *semi-scheduled generating units* (as the case may be) for each *trading day* in accordance with clause 3.8.6.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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 *AEMO* 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 *AEMO* 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 *AEMO*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 3.8.3 Bid and offer aggregation guidelines

- (a) *Scheduled Generators*, *Semi-Scheduled Generators* or *Market Participants* who wish to aggregate their relevant *generating units*, *scheduled network services* or *scheduled loads* for the purpose of *central dispatch* must apply to *AEMO* to do so.
- (a1) *Market Customers* or *Market Ancillary Service Providers* (as applicable) who wish to aggregate two or more *loads* so they are treated as one

*ancillary service load* for the purpose of *central dispatch*, must apply to *AEMO* to do so.

- (b) *AEMO* must approve applications for aggregation made under paragraph (a) if the following conditions are fulfilled:
  - (1) aggregated *generating units* or *loads* must be:
    - (i) *connected* at a single site with the same *intra-regional loss factor* or, if two *intra-regional loss factors* are determined for the site under clause 3.6.2(b)(2), the same two *intra-regional loss factors*; and
    - (ii) operated by a single *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant*;
  - (2) 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 *Generator* or *Market Participant*;
  - (3) *power system security* must not be materially affected by the proposed aggregation; and
  - (4) *control systems* such as *AGCs* must satisfy the *Rules* after aggregating.
- (b1) *AEMO* must approve applications for aggregation made under paragraph (a1) if the following conditions are fulfilled:
  - (1) aggregated *ancillary services loads* must be *connected* within a single *region* and be operated by a single person (whether in its capacity as a *Market Customer*, *Market Ancillary Service Provider* or both);
  - (2) *power system security* must not be materially affected by the proposed aggregation; and
  - (3) *control systems* must satisfy the requirements of clause 2.3.5(e)(1) and (2) after aggregating.
- (c) Notwithstanding that one or more of the conditions set out in paragraph (b) may not have been fulfilled by the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant*, *AEMO* may approve an application for aggregation provided that such aggregation would not materially distort *central dispatch*.
- (d) Subject to paragraph (f), for the purposes of Chapter 3 (except rule 3.7B) and rule 4.9, a reference to a *generating unit*, *scheduled load* and *scheduled network service* is only taken as a reference to aggregated *generating units*, aggregated *scheduled network services* and aggregated *scheduled loads* aggregated in accordance with this clause 3.8.3.
- (e) *AEMO* 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 *AEMO*, declare individual *scheduled generating unit*, *scheduled network service* or *scheduled load* availability

and operating status to *AEMO* in the *PASA* under rule 3.7 to allow *power system security* to be effectively monitored.

- (g) If a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant's* application for aggregation is denied by *AEMO*, *AEMO* must provide that applicant with reasons for that denial.
- (h) *AEMO* must maintain a database of aggregated *scheduled generating units*, *semi-scheduled generating units*, *scheduled network services*, *scheduled loads* and *ancillary services loads* and their components.
- (i) For the avoidance of doubt, *semi-scheduled generating units* which are registered as a single *semi-scheduled generating unit* under clause 2.2.7 are not aggregated *semi-scheduled generating units* for the purposes of Chapter 3 and rule 4.9.

### 3.8.3A Ramp rates

- (a) This clause 3.8.3A applies to a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* with *generating units*, *scheduled network services* and/or *scheduled loads* providing *ramp rates* to *AEMO* in accordance with the following clauses:
  - (1) with respect to notification of scheduled capacity prior to *dispatch*:
    - (i) clause 3.8.4(c);
    - (ii) clause 3.8.4(e);
    - (iii) clause 3.8.4(d);
  - (2) with respect to offers for *dispatch*:
    - (i) clause 3.8.6(a)(2);
    - (ii) clause 3.8.6(g);
    - (iii) clause 3.8.6A(b);
    - (iv) clause 3.8.7(c); and
  - (3) with respect to *rebids*, clause 3.8.22(b).
- (b) Subject to clauses 3.8.3A(c) and 3.8.3A(i), a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies must provide an up *ramp rate* and a down *ramp rate* to *AEMO* for each *generating unit*, *scheduled network service* and/or *scheduled load* that is:
  - (1) at least:
    - (i) in the case of a *scheduled network service* or *scheduled load* that is not aggregated in accordance with clause 3.8.3, 3MW/minute; or
    - (ii) in the case of a *scheduled network service* or *scheduled load* that is aggregated in accordance with clause 3.8.3, the amount equal to the product of 3MW/minute and the number of individual *scheduled network services* or individual *scheduled loads* (and for the avoidance of doubt clause 3.8.3 does not apply to this paragraph (b)(1)(ii)); or

- (iii) in the case of a *scheduled generating unit*, or *semi-scheduled generating unit* that is not aggregated in accordance with clause 3.8.3, the *generating unit minimum ramp rate requirement*; or
  - (iv) in the case of a *scheduled generating unit*, or *semi-scheduled generating unit* that is aggregated in accordance with clause 3.8.3, the sum of the *generating unit minimum ramp rate requirements* for each individual *generating unit* (and for the avoidance of doubt clause 3.8.3 does not apply to this paragraph (b)(1)(iv)); and
- (2) at most the relevant *maximum ramp rate* provided in accordance with clause 3.13.3(b).

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (c) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies may provide a *ramp rate* to AEMO that is less than that specified in clause 3.8.3A(b)(1) if the *ramp rate* is affected by an event or other occurrence that:
- (1) physically prevents the relevant *generating unit*, *scheduled load* or *scheduled network service* from attaining a *ramp rate* of at least that specified in clause 3.8.3A(b)(1); or
  - (2) makes it unsafe for the relevant *generating unit*, *scheduled load* or *scheduled network service* to operate at a *ramp rate* of at least that specified in clause 3.8.3A(b)(1),

for the period of time in which the *ramp rate* is so affected by that event or other occurrence.

- (d) If a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies provides a *ramp rate* that is less than that specified in clause 3.8.3A(b)(1), it must provide a *ramp rate* to AEMO that is the maximum the relevant *generating unit*, *scheduled load* or *scheduled network service* can safely attain at that time.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (e) If a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies provides a *ramp rate* that is less than that specified in clause 3.8.3A(b)(1), it must simultaneously provide AEMO with a brief, verifiable and specific reason why the *ramp rate* is below that specified in clause 3.8.3A(b)(1).
- (f) The AER may require, upon written request, the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to provide such additional information as it may require from time to time to substantiate and verify the reason provided in clause 3.8.3A(e).



- (g) The *AER* must exercise its powers under clause 3.8.3A(f) in accordance with any guidelines issued by the *AER* from time to time in accordance with the *Rules consultation procedures*.
- (h) If a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies provides a *maximum ramp rate* in accordance with clause 3.13.3(b) of less than that specified in clause 3.8.3A(b)(1), it must provide *AEMO* with a brief, verifiable and specific reason why the *ramp rate* is below that specified in clause 3.8.3A(b)(1).
- (i) Clauses 3.8.3A(b), 3.8.3A(c) and 3.8.3A(e) do not apply to a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies if:
  - (1) it has provided a *maximum ramp rate* in accordance with clause 3.13.3(b) which is less than that specified in clause 3.8.3A(b)(1); and
  - (2) it has notified *AEMO* of this in accordance with clause 3.8.3A(h).
- (j) In addition to the obligations in clause 3.8.3A(d), if clause 3.8.3A(i) applies, the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must only provide *ramp rates* that are, at most, the *maximum ramp rate* for the relevant *generating unit*, *scheduled load* or *scheduled network service* in accordance with clause 3.13.3(b).

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 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 *AEMO* of their *available capacity* as follows in accordance with the *timetable*:

- (a) *Scheduled Generators* and *Market Participants* must notify *AEMO* of the *available capacity* of each *scheduled generating unit*, *scheduled network service* and/or *scheduled load* for each *trading interval* of the *trading day*;

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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;

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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) an up *ramp rate* and a down *ramp rate*;

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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) an up *ramp rate* and a down *ramp rate*;

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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) an up *ramp rate* and a down *ramp rate*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 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 AEMO must be made using the *electronic communication system* unless otherwise approved by AEMO.

### 3.8.6 Generating unit offers for dispatch

#### Scheduled Generator

- (a) A *Scheduled Generator's dispatch offer* must:

- (1) contain its intended *self-dispatch level* for each *trading interval*, and may contain up to 10 *price bands* which may be for:
    - (i) possible *dispatch* above the intended *self-dispatch level*; or
    - (ii) possible *off-loading* below the intended *self-dispatch level*, by *dispatch instruction*;
  - (2) specify for each of the 48 *trading intervals* in the *trading day*:
    - (i) a MW capacity for the intended *self-dispatch level*;
    - (ii) an incremental MW amount for each *price band* specified in the *dispatch offer*; and
    - (iii) an up *ramp rate* and a down *ramp rate*;
  - (3) where the offer specifies a *self-dispatch level* of more than zero, 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*; and
  - (4) 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*.
- (b) A *Scheduled Generator's dispatch offer* may specify the daily energy available for *energy constrained scheduled generating units*.
  - (c) A *Scheduled Generator's loading prices* offered must be equal to or greater than \$0/MWh and may not exceed the product of the *market price cap* multiplied by the relevant *intra-regional loss factor* at the *Scheduled Generator's transmission network connection point* for the *scheduled generating unit*.
  - (d) A *loading price* of a *Scheduled Generator* 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.
  - (e) A *Scheduled Generator's off-loading prices* must be less than \$0/MWh, that is, negative in sign and may not be less than the product of the *market floor price* multiplied by the relevant *intra-regional loss factor* at the *Scheduled Generator's transmission network connection point* for the *scheduled generating unit*.
  - (f) An *off-loading price* of a *Scheduled Generator* specified for a *price band* is to be interpreted as the maximum price payable to AEMO 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.

### **Semi-Scheduled Generator**

- (g) A *Semi-Scheduled Generator's dispatch offer* may contain up to 10 *price bands* and 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 offer*; and
  - (2) an up *ramp rate* and a down *ramp rate*.

### **Semi-Scheduled and Scheduled Generators**

- (h) A *dispatch offer* of a *Semi-Scheduled Generator* or *Scheduled Generator* must meet the following requirements:
- (1) the MW quantities specified are to apply at the terminals of the *semi-scheduled generating unit* or *scheduled generating unit* or, with AEMO's agreement, at any other point in the relevant *Generator's* electrical installation or on the *network*;
  - (2) prices specified for each *price band* specified in the *dispatch offer* must increase monotonically with an increase in available MWs;
  - (3) prices specified are to apply at the *connection point* of the *semi-scheduled generating unit* or the *scheduled generating unit* (as the case may be) 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* and must not be greater than the *market price cap* or less than the *market floor price*;

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

LF where the *connection point*:

- (i) is a *transmission network connection point*, is the relevant *intra-regional loss factor* at that *connection point*; or
  - (ii) is a *distribution network connection point*, is the product of the *distribution loss factor* at that *connection point* multiplied by the relevant *intra-regional loss factor* at the *transmission network connection point* to which it is assigned; and
- (4) the MW quantity specified in each *price band* in each *trading interval* must be specified in whole MW.

### **Note**

Where two *intra-regional loss factors* are determined for a *transmission network connection point* under clause 3.6.2(b)(2), AEMO will determine the relevant *intra-regional loss factor* for use under this clause in accordance with the procedure determined under clause 3.6.2(d1).

### 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) an up *ramp rate* and a down *ramp rate*;
- (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 published by AEMO;

- (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:

$$P = RP \times LF$$

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 relevant *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 relevant *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 the *market price cap* or be less than the *market floor price*; and
- (j) the power delivery range specified in each *price band* in each *trading interval* must be specified in whole MW.

**Note**

Where two *intra-regional loss factors* are determined for a *transmission network connection point* under clause 3.6.2(b)(2), AEMO will determine the relevant *intra-regional loss factor* for use under this clause in accordance with the procedure determined under clause 3.6.2(d1).

### 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) an up *ramp rate* and a down *ramp rate*;
- (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 relevant *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 relevant *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 *AEMO*;
- (h) prices specified must be:
  - (1) more than the product of the *market floor price* multiplied by the relevant *intra-regional loss factor* at the *scheduled load's transmission network connection point*; and
  - (2) less than the product of the *market price cap* multiplied by the relevant *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*.

**Note**

Where two *intra-regional loss factors* are determined for a *transmission network connection point* under clause 3.6.2(b)(2), *AEMO* will determine the relevant *intra-regional loss factor* for use under this clause in accordance with the procedure determined under clause 3.6.2(d1).

### 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* or, with *AEMO's* agreement, at any other point in the relevant 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* or, with *AEMO's* agreement, at any other point in the relevant 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 the *market price cap*;
- (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*;
- (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*;
- (l) the values associated with a *market ancillary service offer* referred to in clause 3.8.7A(j) must represent technical characteristics of the *ancillary service generating unit* or *ancillary service load*; and

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (m) rebids made under clause 3.8.22 of the values associated with the *market ancillary service offer* referred to in clause 3.8.7A(j) must represent technical characteristics at the time of *dispatch* of the *ancillary service generating unit* or *ancillary service load*.



**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**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), AEMO must make available to the *Scheduled Generator*, *Semi-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 AEMO in the *central dispatch* process.
- (b) It is the responsibility of each *Scheduled Generator*, *Semi-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 AEMO in the *central dispatch* process is correct.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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), AEMO 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*, *Semi-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*, *Semi-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 *bid and offer validation data* provided by the relevant *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* then AEMO 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*, *Semi-Scheduled Generator* or *Market Participant* without delay.

**3.8.9 Default offers and bids**

- (a) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* may, at any time, submit a *dispatch offer*, a *dispatch bid* or a *market ancillary service offer* in respect of a *scheduled generating unit*, *semi-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, Semi-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 *AEMO* 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) *AEMO*, in consultation with *Scheduled Generators, Semi-Scheduled Generators and Market Participants* in accordance with the *Rules consultation procedures*, must develop and *publish* procedures to determine the circumstances when *AEMO* may use a prior *dispatch offer or dispatch bid* lodged by a *Scheduled Generator, Semi-Scheduled Generator or Market Participant* as a substitute for a *default dispatch offer or default dispatch bid*.
- (e) *AEMO* 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, Semi-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 *AEMO power system security responsibilities* and any other standards set out in Chapter 4, *AEMO* must determine any *constraints* on the *dispatch of scheduled generating units, semi-scheduled generating units, scheduled network services, scheduled loads, ancillary service generating units or ancillary service loads* which may result from *planned network outages*.
- (b) Subject to paragraph (e), *AEMO* must determine and represent *network constraints* in *dispatch* which may result from limitations on *intra-regional or inter-regional power flows* and, in doing so, must use a *fully co-optimised network constraint formulation*.
- (c) *AEMO* must, in accordance with the *Rules consultation procedures*, develop and *publish* by 1 June 2010, and, where necessary, amend *network constraint* formulation guidelines, to address, amongst other things, the following matters:
  - (1) the circumstances in which *AEMO* will use *alternative network constraint formulations* in *dispatch*;

- (2) the process by which *AEMO* will identify or be advised of a requirement to create or modify a *network constraint* equation, including in respect of:
    - (i) the methodology to be used by *AEMO* in determining *network constraint* equation terms and co-efficients; and
    - (ii) the means by which *AEMO* will obtain information from, and disseminate information to, *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants*;
  - (3) the methodology to be used by *AEMO* in selecting the form of a *network constraint*, equation including in respect of the location of terms on each side of the equation;
  - (4) the process to be used by *AEMO* for applying, invoking and revoking *network constraint* equations in relation to different types of *network constraints*, including in respect of:
    - (i) the circumstances in which *AEMO* will use *alternative network constraint formulations* and *fully co-optimised network constraint formulations*; and
    - (ii) the dissemination of information to *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* in respect of this process; and
  - (5) *AEMO's* policy in respect of the management of negative *settlements residue*, by intervening in the *central dispatch* process under clause 3.8.1 through the use of *fully co-optimised network constraint formulations*, including in respect of the process to be undertaken by *AEMO* to manage negative *settlements residue*.
- (d) *AEMO* must at all times comply with the *network constraint* formulation guidelines issued in accordance with paragraph (c).
- (e) Where, in *AEMO's* reasonable opinion, a specific *network constraint* is such that use of a *fully co-optimised network constraint formulation* is not appropriate, *AEMO* may apply an *alternative network constraint formulation* for the expected duration of that *network constraint*, if *AEMO*:
  - (1) has previously identified, in guidelines issued in accordance with paragraph (c), that it may use an *alternative network constraint formulation* in respect of that type of *network constraint*; and
  - (2) reasonably considers that it can apply an *alternative network constraint formulation* without prejudicing its obligation to operate a *central dispatch* process to *dispatch scheduled generating units*, *semi-scheduled generating units*, *scheduled loads*, *scheduled network services* and *market ancillary services* in order to balance *power system supply* and *power system demand*, consistent with using its reasonable endeavours to maintain *power system security* in accordance with Chapter 4 of the *Rules* and to maximise the value of *spot market trading* on the basis of *dispatch offers* and *dispatch bids*, in accordance with clause 3.8.1(a) and (b).

- (f) *AEMO* must represent *network constraints* as inputs to the *dispatch* process in a form that can be reviewed after the *trading interval* in which they occurred.
- (g) **[Deleted]**

### **3.8.11 Ancillary services constraints**

- (a) *AEMO* must determine the quantity and nature of *ancillary services* which:
  - (1) have been provided or procured in accordance with the *AEMO 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* *AEMO* 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**

*AEMO* 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**

*AEMO* 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**

- (a) During times of *supply scarcity*:
  - (1) *AEMO* must use its reasonable endeavours to ensure all valid and physically realisable *dispatch bids* and *dispatch offers* submitted by *Scheduled Generators*, *Semi-Scheduled Generators* or *Market Participants* are *dispatched*, including those priced at the *market price cap*; and
  - (2) if *AEMO* determines that it will be necessary, after *dispatching* all *dispatch bids* and *dispatch offers* in accordance with subparagraph (a)(1), to take additional action to address the conditions of *supply scarcity*, *AEMO* must determine which *supply scarcity mechanism*, or combination of *supply scarcity mechanisms*, to use in accordance with paragraph (b) and the procedures developed under clause 3.8.14A(a).
- (b) For the purposes of subparagraph (a)(2), when determining which *supply scarcity mechanism*, or combination of *supply scarcity mechanisms*, to use, *AEMO* must use its reasonable endeavours to choose the mechanism, or combination of mechanisms, that is effective in addressing the conditions of *supply scarcity* while minimising the direct and indirect costs of using such a mechanism or mechanisms.

- (c) Without limitation, examples of the types of direct costs referred to in paragraph (b) include:
  - (1) pre-activation and activation costs payable under *reserve contracts* if *AEMO dispatches* or *activates reserves*; and
  - (2) paying compensation to a *Market Customer* that is entitled to compensation under clause 3.12.2, a *Directed Participant* and an *Affected Participant*.
- (d) Without limitation, examples of the types of indirect costs referred to in paragraph (b) include:
  - (1) distortionary effects on the operation of the *market*; and
  - (2) the implied value of lost *load* when *load shedding* occurs as a result of a *clause 4.8.9 instruction*, the value of which may be determined by *AEMO* having regard to the value of customer reliability.

### **3.8.14A Procedures and reporting under conditions of supply scarcity**

- (a) *AEMO* must develop, publish on its website, and may amend from time to time, in accordance with the *Rules consultation procedures*, procedures that set out *AEMO's* approach to determining its choice of *supply scarcity mechanism* under clause 3.8.14. Such procedures must:
  - (1) include details of the methodology *AEMO* will use, and the assumptions *AEMO* may make, when choosing a *supply scarcity mechanism* under clause 3.8.14; and
  - (2) be reviewed by *AEMO* at least once every four years in accordance with the *Rules consultation procedures*.
- (b) In developing and amending the procedures required by paragraph (a), *AEMO*:
  - (1) must have regard to the examples of the types of direct and indirect costs set out in clauses 3.8.14(c) and 3.8.14(d);
  - (2) must take into account any applicable guidelines issued by the *Reliability Panel*;
  - (3) may make minor or administrative amendments to the procedures without complying with the *Rules consultation procedures*; and
  - (4) may develop and publish the procedures as part of other relevant procedures *AEMO* is required to develop under these *Rules*.
- (c) If, during times of *supply scarcity*, *AEMO* uses a *supply scarcity mechanism* pursuant to clause 3.8.14, then *AEMO* must report on the following matters in accordance with paragraph (d):
  - (1) the basis on which *AEMO* determined which *supply scarcity mechanism*, or combination of *supply scarcity mechanisms*, to use under clause 3.8.14; and
  - (2) whether *AEMO* complied with clause 3.8.14 and followed its procedures referred to in paragraph (a), and if it did not, the reasons for not complying with clause 3.8.14 and following those procedures.

- (d) *AEMO* must provide the information required by paragraph (c) in accordance with the relevant reporting requirements in clauses 3.13.6A, 4.8.15 and 3.20.6, as applicable.

**3.8.15 [Deleted]**

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

If there are *scheduled generating units*, *semi-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 *AEMO*.
- (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* or a *Semi-Scheduled Generator* has a right to *synchronise* its *scheduled generating unit* or *semi-scheduled generating unit* (as the case may be) to the *power system* and have *AEMO dispatch* that *generating unit* subject to the *dispatch* procedures set out in this rule 3.8.
- (e) A *Scheduled Generator* must advise *AEMO* of its intention to *self-commit* and *synchronise* a *scheduled generating unit* with a *nameplate rating* of 30MW or more.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (f) Unless otherwise agreed with *AEMO*, the *Scheduled Generator* must advise of its intention under paragraph (e) through *PASA* and *pre-dispatch* by submitting an amended *available capacity* profile of the *scheduled generating unit* into the *market information bulletin board*.
- (g) The exact time of *synchronisation* for a *scheduled generating unit* will be subject to directions from *AEMO* in accordance with Chapter 4.
- (h) A *Scheduled Generator* or *Market Participant* must notify *AEMO* of any changes to *self-commitment* decisions without delay.
- (i) *AEMO* must notify all *Scheduled Generators* and *Market Participants* of any changes to *self-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 *AEMO* of their planned *self-decommitment* decisions in relation to *slow start generating units* at least 2 days in advance of *dispatch*.

#### Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (c) A *Scheduled Generator* must advise *AEMO* of its intention to *self-decommit* and de-synchronise a *generating unit* with a *nameplate rating* of 30 MW or more.

#### Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (d) Unless otherwise agreed with *AEMO*, the *Scheduled Generator* must advise of its intention under paragraph (c) through *PASA* and *pre-dispatch* by submitting an amended *available capacity* profile of the *scheduled generating unit* into the *market information bulletin board*.
- (e) A *Scheduled Generator* or *Market Participant* must notify *AEMO* as soon as practicable of any changes in their *self-decommitment* decisions.
- (f) *AEMO* must notify all *Scheduled Generators* and *Market Participants* of any changes to *self-decommitment* decisions as soon as practicable.

### 3.8.19 Dispatch inflexibilities

- (a) Subject to clause 3.8.19(a2), 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 *AEMO* through the *PASA* 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*.

#### Note

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (a1) Subject to clause 3.8.19(a2), if a *Semi-Scheduled Generator* reasonably expects one or more of its *semi-scheduled generating units* 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 *semi-scheduled generating unit*, it must advise *AEMO* in its *dispatch offer* in respect of that *semi-scheduled generating unit*, as appropriate under this Chapter, that the *semi-scheduled generating unit* is *inflexible* in that *trading interval* and must specify a maximum *loading level* at or below which the *semi-scheduled generating unit* is to be operated in that *trading interval*. Where the specified maximum *loading level* in these circumstances exceeds the *unconstrained intermittent generation forecast* for the *semi-scheduled generating unit*, the *dispatch level* for the *semi-scheduled generating unit* will nonetheless not exceed the *unconstrained intermittent generation forecast*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (a2) If clause 3.8.19(a) or clause 3.8.19(a1) applies, the *Scheduled Generator*, *Market Participant* or *Semi-Scheduled Generator*:
  - (1) must not advise *AEMO* that a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible* under clause 3.8.19(a) or clause 3.8.19(a1) unless it reasonably expects the *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* 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*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load*; and
  - (2) must, as soon as practicable, advise *AEMO* that a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is not *inflexible* once it no longer reasonably expects the *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* 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*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load*.
- (b) Where a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* advises *AEMO* that a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible* in accordance with clause 3.8.19(a) or 3.8.19(a1) the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must:
  - (1) provide *AEMO* with a brief, verifiable and specific reason why the *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible* at the same time as it advises *AEMO* of the *inflexibility*; and



**Note**

This subparagraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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*, *Semi-Scheduled Generator* or *Market Participant* in the relevant *dispatch offer* or *dispatch bid* for a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* that the *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is *inflexible*, *AEMO* will *dispatch* the *scheduled generating unit*, *semi-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*, *scheduled generating units* or *semi-scheduled generating units* which are not *slow start generating units*, *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* may provide *AEMO*, as part of a *dispatch offer* or *dispatch bid* in respect of those *scheduled loads* or *generating units* or *semi-scheduled 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 *AEMO* to increase its *loading level* 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 subparagraph (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 *AEMO* to reduce *loading level* from the minimum *loading level* (specified under subparagraph (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; and

- (7) The sum ( $T1 + T2 + T3 + T4$ ) must be less than 60 minutes.
- (f) A *dispatch inflexibility profile* for a *scheduled load* must contain parameters to indicate its MW capacity and time related *inflexibilities*.
- (g) AEMO must use reasonable endeavours not to issue a *dispatch instruction* which is inconsistent with a *Scheduled Generator's*, *Semi-Scheduled Generator's* or *Market Participant's dispatch inflexibility profile*.

### 3.8.20 Pre-dispatch schedule

- (a) Each *day*, in accordance with the *timetable*, AEMO 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) AEMO must determine the *pre-dispatch schedule* for each *trading interval* on the basis of:
  - (1) *dispatch bids*, *dispatch offers* and *market ancillary service offers* submitted for that *trading interval*;
  - (2) AEMO's forecast *power system load* for each *region* for that *trading interval*; and
  - (3) the *unconstrained intermittent generation forecasts*,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* AEMO 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 AEMO 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 AEMO 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* the relevant 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.

### Note

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (h) The *pre-dispatch schedule* must be re-calculated and the results re-published by AEMO regularly in accordance with the *timetable*, or more often if a change in circumstances is deemed by AEMO to be likely to have a significant effect on the operation of the *market*.
- (i) AEMO 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*, *Semi-Scheduled Generators* and *Market Participants* at a fee to be set by AEMO 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*, *Semi-Scheduled Generator* or *Market Participant* (as the case may be) must be made available electronically to the relevant *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 level* for each scheduled entity;
  - (3) scheduled provision of *ancillary services*;
  - (4) scheduled *constraints* for the provision of *ancillary services*;
  - (5) scheduled *constraints* due to *network* limitations;
  - (6) *unconstrained intermittent generation forecasts* for each *trading interval*; and
  - (7) for each *semi-scheduled generating unit* and *trading interval*, whether or not a condition for setting a *semi-dispatch interval* applies.
- (k) Where the *pre-dispatch schedule* may have failed to *dispatch* a *scheduled generating unit* or a *semi-scheduled generating unit* to maximise the joint value of *energy* and *ancillary services pre-dispatch* outputs of a *scheduled generating unit* or *semi-scheduled generating unit*, due to the *generating unit* operating outside its *enablement limit*, AEMO must notify the *Scheduled Generator* or *Semi-Scheduled Generator* operating the relevant *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 AEMO using the *dispatch algorithm*.
- (a1) A *dispatch interval* is to be five minutes in duration.
- (b) The *dispatch algorithm* is to be run by AEMO 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 AGC or via an electronic display in the *plant* control room (which may be onsite or offsite) of the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* (as the case may be).
- (e) AEMO may issue *dispatch instructions* in some other form if in its reasonable opinion the methods described in paragraph (d) are not possible.
- (f) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must ensure it has facilities to receive *dispatch instructions* in the manner described in this clause 3.8.21.
- (g) *Dispatch instructions* that are issued via the AGC 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.
- (h) 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 AEMO.
- (i) AEMO 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 AEMO must record the details of the event and the reasons for its action for audit purposes.
- (j) If a *scheduled load*, *scheduled generating unit* or *semi-scheduled generating unit*, in respect of which a *dispatch inflexibility profile* has been notified to AEMO 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 AEMO 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) AEMO 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*, *Semi-Scheduled Generators* and *Market Participants* at a price reflective of costs incurred by AEMO in providing such documentation.
- (m) Where the *central dispatch* process may have failed to *dispatch* a *scheduled generating unit* or *semi-scheduled generating unit* to maximise the joint value of *energy* and *ancillary services* due to the relevant *generating unit* operating outside its *enablement limit*, AEMO must notify the *Scheduled*

*Generator or Semi-Scheduled Generator* operating the relevant *generating unit* electronically 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 3.8.3A, 3.8.7A, 3.8.19(a) and 3.8.22A, a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* may submit a *rebid* to vary:
  - (1) its *available capacity*, *daily energy constraints*, *dispatch inflexibilities* and *ramp rates* of *generating units*, *scheduled network services* and *scheduled loads*; and
  - (2) the *response breakpoints*, *enablement limits* and response limits of *market ancillary services*,
 previously notified in a *dispatch offer*, a *dispatch bid* or a previous *rebid*.
- (c) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must provide:
  - (1) all *rebids* to *AEMO* electronically unless otherwise approved by *AEMO*;

#### Note

This subparagraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (2) to *AEMO*, 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 relevant *Generator* or *Market Participant* as the reason for the *rebid*, occurred;

#### Note

This subparagraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (3) to the *AER*, upon written request, in accordance with guidelines published by the *AER*, such additional information to substantiate and verify the reason for a *rebid* (including any record made under paragraph (ca)) as the *AER* may require from time to time.

#### Note

This subparagraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (ca) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* who makes a *rebid* during the *late rebidding period* must make a contemporaneous record in relation to the *rebid*, which must include a record of:

- (i) the material conditions and circumstances giving rise to the *rebid*;
- (ii) the *Generator's* or *Market Participant's* reasons for making the *rebid*;
- (iii) the time at which the relevant event(s) or other occurrence(s) occurred; and
- (iv) the time at which the *Generator* or *Market Participant* first became aware of the relevant event(s) or other occurrence(s).

**Notes**

Clause 1.9 applies to records made under paragraph (ca).

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (d) The *AER* must provide information provided to it in accordance with paragraph (c)(3) to any *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* that requests such information, except to the extent that the information can be reasonably claimed to be *confidential information*.
- (e) The guidelines referred to in paragraphs (c)(3) must be developed in accordance with the *Rules consultation procedures* and must include:
  - (1) the amount of detail to be included in the information provided to *AEMO* under paragraph (c)(2); and
  - (2) procedures for handling claims by *Scheduled Generators*, *Semi-Scheduled Generators* or *Market Participants* in accordance with paragraph (d) or clause 3.8.19(b)(2) that the information provided to the *AER* by such *Generators* or *Market Participants* under those clauses is *confidential information*.
- (f) The *AER* must *publish* the guidelines developed under this clause 3.8.22 and may amend such guidelines from time to time.
- (g) *AEMO* must:
  - (1) subject to the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* complying with paragraphs (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*, *Semi-Scheduled Generator* or *Market Participant* under paragraph (c)(2)(i).

**3.8.22A Offers, bids and rebids must not be false or misleading**

- (a) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must not make a *dispatch offer*, *dispatch bid* or *rebid* that is false, misleading or likely to mislead.
- (a1) For the purposes of paragraph (a), the making of a *dispatch offer*, *dispatch bid* or *rebid* is deemed to represent to other *Generators* or *Market Participants* through the *pre-dispatch schedules published by AEMO* that the offer, bid or *rebid* will not be changed, unless the *Generator* or *Market*

*Participant* becomes aware of a change in the material conditions and circumstances upon which the offer, bid or *rebid* are based.

- (b) Without limiting paragraph (a), a *dispatch offer*, *dispatch bid* or *rebid* is deemed to be false or misleading if, at the time of making such an offer, bid or *rebid*, a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant*:
  - (1) does not have a genuine intention to honour; or
  - (2) does not have a reasonable basis to make;
 the representations made by reason of paragraph (a1).
- (b1) In any proceeding in which a contravention of paragraph (a) is alleged, in determining whether a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* made a *dispatch offer*, *dispatch bid* or *rebid* that was false, misleading or likely to mislead, a court must have regard to the market design principle set out in clause 3.1.4(a)(2).
- (c) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* may be taken to have contravened paragraph (a) notwithstanding that, after all the evidence has been considered, the false or misleading character of the *dispatch offer*, *dispatch bid* or *rebid* (including either of the matters referred to in subparagraphs (b)(1) and (2)) is ascertainable only by inference from:
  - (1) other *dispatch offers*, *dispatch bids* or *rebids* made by the *Generator* or *Market Participant*, or in relation to which the *Generator* or *Market Participant* had substantial control or influence;
  - (2) other conduct (including any pattern of conduct), knowledge, belief or intention of the relevant *Generator* or *Market Participant*;
  - (3) the conduct (including any pattern of conduct), knowledge, belief or intention of any other person;
  - (4) information published by AEMO to the relevant *Generator* or *Market Participant*; or
  - (5) any other relevant circumstances.
- (d) A *rebid* must be made as soon as practicable after the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* becomes aware of the change in material conditions and circumstances on the basis of which it decides to vary its *dispatch offer* or *dispatch bid*.
- (e) In any proceeding in which a contravention of paragraph (d) is alleged, in determining whether the *Generator* or *Market Participant* made a *rebid* as soon as practicable, a court must have regard to:
  - (1) the market design principle set out in clause 3.1.4(a)(2); and
  - (2) the importance of *rebids* being made, where possible, in sufficient time to allow reasonable opportunity for other *Market Participants* to respond (including by making responsive *rebids*, by bringing one or more *generating units* into operation or increasing or decreasing the *loading level* of any *generating units*, or by adjusting the *loading level* of any *load*) prior to:

- (i) the commencement of the *trading interval* to which the *rebid* relates; or
- (ii) the commencement of any *dispatch interval* within that *trading interval*.

and may have regard to any other relevant matter, including any of the matters referred to in sub-paragraphs (c)(1) to (5).

**Note**

This clause is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

### 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 *AEMO's* reasonable opinion), then the *scheduled generating unit*, *scheduled network service* or *scheduled load* (as the case may be):
  - (1) is to be declared and identified as non-conforming; and
  - (2) cannot be used as the basis for setting *spot prices*.
- (b) If a *semi-scheduled generating unit* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *AEMO's* reasonable opinion) in a *semi-dispatch interval* where the unit's actual *generation* is more than the *dispatch level*, the unit is to be declared and identified as non-conforming and cannot be used as the basis for setting *spot prices*.
- (c) If a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming under paragraphs (a) or (b):
  - (1) *AEMO* must advise the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* that the relevant *generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming, and request and log a reason for the non-compliance with the *dispatch instruction*;
  - (2) if in *AEMO's* opinion modification of *plant* parameters is necessary or desirable, *AEMO* must request the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* to submit modified *plant* parameters to satisfy *AEMO* that a realistic real time *dispatch* schedule can be carried out;
  - (3) should a *Scheduled Generator* or *Semi-Scheduled Generator* fail to meet the requests set out subparagraphs (1) and (2) or if *AEMO* is not satisfied that the *generating unit* will respond to future *dispatch instructions* as required, *AEMO* 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 *AEMO*;
  - (4) should a *Scheduled Network Service Provider* fail to meet the requests set out in subparagraphs (1) and (2) or if *AEMO* is not satisfied that



the *scheduled network service* will respond to future *dispatch instructions* as required, *AEMO* must direct the *scheduled network service* to follow, as far as is practicable, a specified transfer profile to be determined at its discretion by *AEMO*; and

- (5) should a *Market Customer* not meet the requests set out in subparagraphs (1) and (2) within a reasonable time of the request, or if *AEMO* is not satisfied that the *scheduled load* will respond to future *dispatch instructions* as required, *AEMO* acting reasonably may invoke a *default dispatch bid* lodged by the relevant *Market Customer* or apply *constraints* as it deems appropriate.
- (d) Until a *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* satisfactorily responds to the requests under paragraphs (c)(1) and (2) and *AEMO* 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.
- (e) If a *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) continues to be non-conforming under this clause 3.8.23 after a reasonable period of time, *AEMO* must prepare a report setting out the details of the non-conformance and forward a copy of the report to the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* (as the case may be) and the *AER*.
- (f) The direction referred to in paragraphs (c)(3) and (4) must remain in place until the *Scheduled Generator*, *Semi-Scheduled Generator* or *Scheduled Network Service Provider* (whichever is relevant) satisfies *AEMO* of rectification of the cause of the non-conformance.
- (g) 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 *AEMO*'s reasonable opinion), then:
  - (1) the *ancillary service generating unit* or *ancillary service load* is to be declared and identified as non-conforming;
  - (2) *AEMO* 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) *AEMO* 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 *AEMO*.
- (h) *AEMO* must lift the fixed constraint in respect of an *ancillary service generating unit* or *ancillary service load* when *AEMO* 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*.

- (i) 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 *AEMO* 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 *AEMO* has failed to follow the *central dispatch* process set out in this rule 3.8; or
  - (2) *AEMO* declares that it failed to follow the *central dispatch* process set out in this rule 3.8; or
  - (3) *AEMO* determines under clause 3.9.2B(d) that a *dispatch interval* contained a manifestly incorrect input.
- (b) *Spot prices* and *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 *regional reference price* 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(g))

- 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 AEMO 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*;
  - (6B) when an *ancillary service price* is determined under paragraph (6A) for a *regulation service*, it applies to purchases of that *regulation service* and, where appropriate, purchases of a *delayed 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* 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 relevant *intra-regional loss factor* applicable to that *connection point*.

**Note**

Where two *intra-regional loss factors* are determined for a *transmission network connection point* under clause 3.6.2(b)(2), *AEMO* will determine the relevant *intra-regional loss factor* for use under this clause in accordance with the procedure determined under clause 3.6.2(d1).

### 3.9.2 Determination of spot prices

- (a) [Deleted]
- (b) [Deleted]
- (c) Each time the *dispatch algorithm* is run by *AEMO*, 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 *AEMO* 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 *AEMO* reasonably determines that the *central dispatch* process may determine that all *load* in a *region* could not otherwise be supplied and *AEMO* issues instructions that are current for that *dispatch interval* to *Network Service Providers* or *Market Participants* to shed *load*, then *AEMO* must set the *dispatch price* at that *region's regional reference node* to equal the *market price cap*;
  - (2) *AEMO* has declared a *dispatch interval* to be an *intervention dispatch interval* under clause 3.9.3(a), then subject to clauses 3.9.3(b2) and 3.9.3(c) *AEMO* must set the *dispatch price* in accordance with clause 3.9.3;
  - (3) [Deleted]
  - (4) an *administered price period* in accordance with clause 3.14.2 applies, then *AEMO* must limit the *dispatch price* in accordance with clause 3.14.2(d1); and
  - (5) *AEMO* has made a declaration that the *spot market* in a *region* is suspended under clause 3.14.4, then *AEMO* must set the *dispatch price* for each *dispatch interval* during the period for which the *spot market* is suspended in accordance with clause 3.14.5.
- (f) [Deleted]
- (g) [Deleted]

- (h) The *regional reference price* 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*.
- (i) **[Deleted]**
- (j) **[Deleted]**
- (k) If a test is being conducted on a *generating unit* or *scheduled load* in accordance with clause 3.11.2 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 AEMO, 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 AEMO 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*, including the *regulating raise service* and the *regulating lower service*, each time the *dispatch algorithm* is run by AEMO where a local *ancillary services* constraint has been applied, AEMO 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 the *market price cap*, then the *ancillary service price* is reset to the *market price cap*.
- (c1) If a marginal price calculated pursuant to clause 3.9.2A(b) is greater than the *market price cap*, then that marginal price is reset to the *market price cap*.

- (d) If a test is being conducted on a *generating unit* or *scheduled load* in accordance with clause 3.11.2 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 *ancillary service prices*.

### 3.9.2B Pricing where AEMO determines a manifestly incorrect input

#### Definitions

- (a) In this clause 3.9.2B:

**affected dispatch interval** has the meaning given to it by clause 3.9.2B(d).

**automated procedures** has the meaning given to it by clause 3.9.2B(h).

**dispatch interval subject to review** has the meaning given to it by clause 3.9.2B(b).

**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 *AEMO*, 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) *AEMO* 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) *AEMO* may also determine that a *dispatch interval* is subject to review if *AEMO* 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) *AEMO* must determine whether a *dispatch interval* subject to review contained a manifestly incorrect input to the *dispatch algorithm* ("**an affected dispatch interval**").
- (e) Where *AEMO* determines an affected *dispatch interval*, *AEMO* must:
  - (1) replace all *dispatch prices* and *ancillary service 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) *AEMO* 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), *AEMO* 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) *AEMO* 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) **[Deleted]**
- (k) At least once each calendar year, *AEMO* must review the effectiveness of the automated procedures referred to in clause 3.9.2B(h).
- (l) *AEMO* 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) **[Deleted]**

### 3.9.3 Pricing in the event of intervention by AEMO

- (a) In respect of a *dispatch interval* where one or more *AEMO intervention event(s)* is in effect, *AEMO* must declare that *dispatch interval* to be an *intervention dispatch interval*.
- (b) Subject to subparagraphs (b2)(1) and (b2)(2), if, in *AEMO's* reasonable opinion, the reason for an *AEMO intervention event* is to obtain either:
  - (1) a service for which a *dispatch price* or *ancillary service price* is determined by the *dispatch algorithm*; or
  - (2) a service that is a direct substitute for a service for which a *dispatch price* or *ancillary service price* is determined by the *dispatch algorithm*,
 then, subject to paragraph (c), *AEMO* must in accordance with the methodology or assumptions *published* pursuant to paragraph (e) set the *dispatch price* and *ancillary service prices* for an *intervention dispatch interval* at the value which *AEMO*, in its reasonable opinion, considers would have applied as the *dispatch price* and *ancillary service prices* for that *dispatch interval* in the relevant *region* had the *AEMO intervention event* not occurred.
- (b1) Without limitation, examples of the types of service referred to in paragraph (b) include:
  - (1) *energy* that is capable of being provided by any *generating unit* within a *region*;
  - (2) *energy* which, as a result of a *network constraint* or other *constraint*, is only capable of being provided by any *generating unit* located in the part of the *region* that includes the *regional reference node*;
  - (3) *market ancillary services* that are capable of being provided by any *ancillary service generating unit* within a *region*;

- (4) *market ancillary services* which, as a result of a *network constraint* or other *constraint*, are only capable of being provided by any *ancillary service generating unit* located in the part of the *region* that includes the *regional reference node*; and
  - (5) demand response that reduces the need for the provision of *energy* or *market ancillary services* within a region.
- (b2) AEMO must continue to set *dispatch prices* pursuant to clause 3.9.2 and *ancillary service prices* pursuant to clause 3.9.2A if the reason for an *AEMO intervention event* is to obtain:
  - (1) *energy* and *market ancillary services* which, as a result of a *network constraint* or other *constraint*, are only capable of being provided by a *generating unit* or *ancillary service generating unit* in a part of the *region* which, due to the *constraint*, does not include the *regional reference node*; or
  - (2) demand response which, as a result of a *network constraint* or other *constraint*, is needed to reduce demand for *energy* or *market ancillary services* in a part of the *region* which, due to the *constraint*, does not include the *regional reference node*; or
  - (3) a service for which a *dispatch price* or *ancillary service price* is not determined by the *dispatch algorithm*, regardless of whether *energy* or *market ancillary services* are also provided incidental to the provision of that service.
- (b3) Without limitation, examples of the services referred to in subparagraph (b2)(3) include the provision of:
  - (1) *inertia*;
  - (2) *voltage* control;
  - (3) system strength; and
  - (4) *non-market ancillary services*.
- (b4) In respect of any *intervention dispatch interval* in which more than one *AEMO intervention event* is in effect, AEMO must in accordance with the methodology or assumptions *published* pursuant to paragraph (e) set *dispatch prices* and *ancillary service prices* pursuant to paragraph (b) as if:
  - (1) the services described in paragraph (b) were not provided; and
  - (2) *energy* or *market ancillary services* provided incidental to the provision of any services described in subparagraph (b2)(3) were taken into account.
- (c) AEMO 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 *AEMO 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 *AEMO intervention event* was issued,



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

- (d) **[Deleted]**
- (e) Subject to paragraph (g), *AEMO* 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 *AEMO* 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 *AEMO* 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) *AEMO* may make minor and administrative amendments to the methodology developed under paragraph (e) without complying with the *Rules consultation procedures*.

### **3.9.3A Reliability standard and settings review**

#### **Reliability standard and settings guidelines**

- (a) The *Reliability Panel* must develop and publish, and may amend from time to time, guidelines (the *reliability standard and settings guidelines*) that set out the principles and assumptions that the *Reliability Panel* will use in conducting the *reliability standard and settings review*.
- (b) The *Reliability Panel* must develop the *reliability standard and settings guidelines* in accordance with the *Rules consultation procedures* and must amend the *reliability standard and settings guidelines* in accordance with the consultation process set out in clauses 8.8.3(d) to (l).
- (c) There must be *reliability standard and settings guidelines* in force at all times after the date on which the *Reliability Panel* publishes the first *reliability standard and settings guidelines* under the *Rules*.

#### **Conducting the reliability standard and settings review**

- (d) By 30 April of each fourth year (with the first four year period ending in 2014), the *Reliability Panel* must:
  - (1) conduct the *reliability standard and settings review* in accordance with the *Rules consultation procedures* and this clause; and
  - (2) publish a report in accordance with clause 3.9.3B on the *reliability standard* and *reliability settings* that it recommends should apply on and from 1 July in the year commencing 2 years after the year in which the report is published.

### **Requirements for reliability standard and settings review**

- (e) In conducting the *reliability standard and settings review* the *Reliability Panel*:
  - (1) must comply with the *reliability standard and setting guidelines*;
  - (2) must have regard to any terms of reference for the review provided by the *AEMC* under clause 8.8.3(c);
  - (3) must have regard to the potential impact of any proposed change to a *reliability setting* on:
    - (i) *spot prices*;
    - (ii) investment in the *NEM*;
    - (iii) the *reliability* of the *power system*; and
    - (iv) *Market Participants*;
  - (4) must have regard to any value of customer reliability determined by the *AER* under rule 8.12 which the *Reliability Panel* considers to be relevant; and
  - (5) may take into account any other matters specified in the *reliability standards and setting guidelines* or which the *Reliability Panel* considers relevant.
- (f) The *Reliability Panel* may only recommend a *market price cap* or *cumulative price threshold* which the *Reliability Panel* considers will:
  - (1) allow the *reliability standard* to be satisfied without use of *AEMO*'s powers to intervene under clauses 3.20.7(a) and 4.8.9(a); and
  - (2) in conjunction with other provisions of the *Rules*, not create risks which threaten the overall integrity of the *market*.
- (g) If the *Reliability Panel* is of the view that a decrease in either the *market price cap* or the *cumulative price threshold* may mean the *reliability standard* is not maintained, the *Reliability Panel* may only recommend such a decrease where it has considered any alternative arrangements necessary to maintain the *reliability standard*.
- (h) The *Reliability Panel* may only recommend a *market floor price* which the *Reliability Panel* considers will:
  - (1) allow the *market* to clear in most circumstances; and
  - (2) not create substantial risks which threaten the overall stability and integrity of the *market*.
- (i) The *Reliability Panel* must submit to the *AEMC* any *Rule* change proposal that results from a review under this clause as soon as practicable after the review is completed.

### **3.9.3B Reliability standard and settings review report**

A report of the findings of the *Reliability Panel* in a review under clause 3.9.3A must set out the *Reliability Panel*'s conclusions and its recommendations in relation to:

- (a) the *reliability standard*;
- (b) the level of the *reliability settings*;
- (c) the manner of indexing the *market price cap* and the *cumulative price threshold*;
- (d) supporting information including:
  - (1) a description of how the *Reliability Panel* has conducted the review in accordance with the *reliability standard and setting guidelines*;
  - (2) how the *Reliability Panel* has taken into account any terms of reference for the review provided by the *AEMC* under clause 8.8.3(c);
  - (3) details of all relevant *market* conditions and circumstances on which its recommendation is based (if not specified under subparagraph (d)(1)); and
  - (4) an assessment of whether the level of the *market price cap* together with the operation of the *cumulative price threshold* have achieved the objectives set out in clause 3.9.3A(f).

### 3.9.3C Reliability standard and interim reliability measure

- (a) The *reliability standard* for *generation* and *inter-regional transmission elements* in the *NEM* is a maximum expected *unserved energy (USE)* in a *region* of 0.002% of the total *energy* demanded in that *region* for a given *financial year*.
- (a1) The *interim reliability measure* for *generation* and *inter-regional transmission elements* in the *NEM* is a maximum expected *unserved energy* in a *region* of 0.0006% of the total *energy* demanded in that *region* for a given *financial year*.

**Note:**

The *interim reliability measure* is relevant for contracting interim reliability reserves under rule 11.128 and for the Retailer Reliability Obligation under rule 11.132.

- (b) For the purposes of paragraph (a) and (a1), *unserved energy* is to:
  - (1) include *unserved energy* that results from *power system reliability* incidents caused by an event or events that include (but is not limited to):
    - (i) a single *credible contingency event* on a *generating unit* or an *inter-regional transmission element*, that may occur concurrently with *generating unit* or *inter-regional transmission element outages*; or
    - (ii) delays to the construction or commissioning of new *generating units* or *inter-regional transmission elements*, including delays due to industrial action or acts of God; and
  - (2) exclude *unserved energy* that results from *power system security* incidents caused by an event or events that include (but is not limited to):

- (i) multiple *credible contingency events*, a single *non-credible contingency event* or multiple *non-credible contingency events* on a *generating unit* or an *inter-regional transmission element*, that may occur concurrently with *generating unit* or *inter-regional transmission element outages*;
  - (ii) *outages* of *transmission network* or *distribution network* elements that do not significantly impact the ability to transfer *power* into the *region* where the USE occurred; or
  - (iii) industrial action or acts of God at existing *generating facilities* or *inter-regional transmission facilities*.
- (c) For the purpose of paragraph (b)(1), a "*power system reliability incident*" is an incident that *AEMO* considers would have been avoided only if additional *active energy* had been available to the relevant *region* or *regions* from *generation*, demand response or *inter-regional transmission elements*. The reference to "*inter-regional transmission elements*" in this paragraph (c) includes only those *transmission elements* that materially contribute to *inter-regional power transfer*.

### 3.9.3D Implementation of the reliability standard

- (a) *AEMO* must develop, publish and amend from time to time *reliability standard implementation guidelines* that set out how *AEMO* will implement the *reliability standard* and the *interim reliability measure*.
- (b) The *reliability standard implementation guidelines* must include, without limitation, the approach *AEMO* will use and the assumptions it will make in relation to:
  - (1) demand for electricity;
  - (2) *reliability* of existing and future *generation*;
  - (3) *intermittent generation*;
  - (4) *energy constraints*;
  - (5) the treatment of extreme weather events; and
  - (6) *network constraints*.
- (b1) In addition to the matters specified in paragraph (b), the *reliability standard implementation guidelines* must set out:
  - (1) the factors that *AEMO* will consider in determining whether it has an obligation to publish an *EAAP* under clause 3.7C(d)(2); and
  - (2) the method for calculating *unserved energy* in accordance with clause 3.9.3C, including calculation of the amount of *energy* demanded in the relevant *region*.
- (c) *AEMO* must develop and amend the *reliability standard implementation guidelines* in consultation with the *Reliability Panel*, *Registered Participants* and other interested persons in accordance with the *Rules consultation procedures*.

- (d) There must be *reliability standard implementation guidelines* in force at all times after the date on which AEMO publishes the first *reliability standard implementation guidelines* under the Rules.
- (e) AEMO must review the *reliability standard implementation guidelines* at least once every four years. AEMO must conduct the review in consultation with the *Reliability Panel*, *Registered Participants* and other interested persons in accordance with the *Rules consultation procedures*.

### 3.9.4 Market Price Cap

- (a) The *market price cap* is a price cap which is to be applied to *dispatch prices*.
- (b) The value of the *market price cap* for each *financial year* is the dollar amount per MWh calculated by the AEMC under paragraph (c).

#### Note

The current value of the *market price cap* is set out in a schedule of reliability settings published on the AEMC's website [www.aemc.gov.au](http://www.aemc.gov.au)

- (c) By 28 February of each year (commencing 2012), the AEMC must calculate the *market price cap* to apply on and from 1 July of that year in accordance with paragraphs (d) and (e) and *publish* its calculation on its website as part of a schedule of *reliability settings*.
- (d) Subject to paragraph (e), the AEMC must calculate the *market price cap* using the following formula:

$$MPC^x = BV^{MPC} \times \frac{(Q_1^c + Q_2^c + Q_3^c + Q_4^c)}{(Q_1^b + Q_2^b + Q_3^b + Q_4^b)}$$

Where:

MPC is the *market price cap* in dollars per MWh;

x is the *financial year* for which the *market price cap* is being calculated;

BV<sup>MPC</sup> is \$12,500/MWh (being the value of the *market price cap* prior to 1 July 2012);

Q1 to Q4 are the values of the Reliability Settings Index for each of the four quarters of years c and b (as the case may be) as at five months before the start of year x;

Reliability Settings Index is the All groups, Australia CPI found at Index Numbers, All groups, Australia, in Tables 1 and 2 of the Consumer Price Index, Australia published by the Australian Bureau of Statistics for the relevant quarter, except where that index ceases to be published or is substantially changed, in which case the Reliability Settings Index will be such other index as is determined by the AEMC as suitable;

c is the calendar year commencing 18 months before the start of year x; and

b is calendar year 2010.

- (e) If the value calculated by the AEMC under paragraph (d) is:

- (1) not in whole hundreds of dollars, then the *market price cap* for year x will be the value calculated under paragraph (d) rounded to the nearest \$100/MWh;
- (2) less than the *market price cap* applied under this clause 3.9.4 for the preceding *financial year* (year x-1), then the *market price cap* for year x will be the value of the *market price cap* for year x-1.

### 3.9.5 Application of the Market Price Cap

- (a) *Dispatch prices* at *regional reference nodes* must not exceed the *market price cap*.
- (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 the *market price cap* 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 the *market price cap*.
- (c) If the *dispatch price* at any *regional reference node* is set to the *market price cap* 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 *market price cap* divided by the average *loss factor* that applies for *energy flow* in that direction for that *dispatch interval* and determined in accordance with clause 3.9.5(d).
- (d) AEMO 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) [Deleted]
- (d) [Deleted]
- (e) [Deleted]

#### 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 away from that *regional reference node* must be equal to or greater than the *market floor price* multiplied by the average *loss factor* that applies for *energy* flow in that direction for that *dispatch interval* and determined in accordance with clause 3.9.6A(d).

- (d) *AEMO* 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 a *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 *AEMO* 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*.

#### **Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b) A *Scheduled Generator* that is *constrained-on* in accordance with clause 3.9.7(a) is not entitled to receive from *AEMO* any compensation due to its *dispatch price* being less than its *dispatch offer price*.
- (c) In the event that:
  - (1) an *inertia network service* under an *inertia services agreement* is *enabled* such that an *inertia generating unit* is *constrained on* in any *dispatch interval* to provide *inertia*; or
  - (2) a *system strength service* under a *system strength services agreement* is *enabled* such that a *system strength generating unit* is *constrained on* in any *dispatch interval* to provide a *system strength service*,

the relevant *generating unit* must comply with *dispatch instructions* from *AEMO* 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* except to the extent that the *generating unit* is *dispatched* at a level above its minimum *loading level*.

#### **Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (d) A *Scheduled Generator* that is *constrained on* in accordance with paragraph (c) is not entitled to receive from *AEMO* 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* acquired by AEMO 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* not acquired by AEMO as part of the spot market, but acquired:
  - (1) in the case of *SRAS*, by AEMO under *ancillary services agreements*, with the prices for *SRAS* being determined in accordance with the relevant *ancillary services agreements*; and
  - (2) in the case of *NSCAS*:
    - (i) by *Transmission Network Service Providers* under *connection agreements* or *network support agreements* to meet an *NSCAS* need; and
    - (ii) in the circumstances contemplated in clause 3.11.3(c), by AEMO under *ancillary services agreements* entered into following a call for offers made in accordance with rule 3.11.5 to meet a *NSCAS gap* only for *power system security* and reliability of supply of the *transmission network* in accordance with the *power system security standards* and the *reliability standard*, with the prices for *NSCAS* being determined in accordance with the relevant agreements;
  - (3) in the case of *NMAS* other than *SRAS* and *NSCAS*, by *Transmission Network Service Providers* under *connection agreements* or *network support agreements* to meet the service standards in accordance with the technical requirements of schedule 5.1 or in *applicable regulatory instruments*, with the prices for those services being determined in accordance with the relevant agreements.
- (d) AEMO may instruct a person to provide a *non-market ancillary service* under an *ancillary services agreement* or otherwise in accordance with the relevant *performance standards*, and any person so instructed must use reasonable endeavours to comply with that instruction.
- (e) AEMO is not responsible for payment to a person for *non-market ancillary services* provided by that person under a *connection agreement* or a *network support agreement*.

### **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) AEMO 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) AEMO may amend the *market ancillary service specification*, from time to time.
- (d) AEMO 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*.
- (f) 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 *load* as an *ancillary service load* must install and maintain in accordance with the standards referred to in clause 3.11.2(g) 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*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (g) AEMO 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 paragraph 3.11.2(f).
- (h) AEMO may request a *Market Participant* with an *ancillary service generating unit* or an *ancillary service load* to provide to AEMO 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 paragraph 3.11.2(h) promptly but, in any event, in no more than 20 *business days* after notice to do so.
- (i) AEMO may from time to time require a *Registered Participant* which provides a *market ancillary service* under the *Rules* to demonstrate the relevant *plant's* capability to provide the *market ancillary service* to the

satisfaction of *AEMO* according to standard test procedures. A *Registered Participant* must promptly comply with a request by *AEMO* under this clause.

### 3.11.2A AER reporting on market ancillary services markets

- (a) For the purposes of section 18C(2)(c) of the *NEL*, the *AER* must prepare and *publish* a report in respect of *market ancillary services* for each calendar quarter.
- (b) The report prepared under paragraph (a) must be *published* within 30 *business days* of the end of each calendar quarter and must contain:
  - (1) the following information in relation to each *market ancillary service* listed in clause 3.11.2(a) for the quarter:
    - (i) the total costs paid to *Ancillary Service Providers* for the provision of the *market ancillary service* for each *region*;
    - (ii) the total quantity of the *market ancillary service* that was *dispatched* by *AEMO* in each *region*;
    - (iii) the lowest, highest and average *ancillary service price* for each *region* for the *market ancillary service*; and
    - (iv) the number and types of *Ancillary Service Providers*;
  - (2) the *AER's* analysis of key trends and outcomes in the *markets* for *market ancillary services* during the quarter; and
  - (3) any other relevant information the *AER* considers necessary or convenient to include in the report.

### 3.11.3 Acquisition of Network Support and Control Ancillary Service

- (a) Where a *NSCAS report* identifies an *NSCAS gap*, *AEMO* may request the relevant *Transmission Network Service Provider* to advise when the *Transmission Network Service Provider* will have arrangements in place to meet that *NSCAS gap*, or provide reasons why the *NSCAS gap* will not be met.
- (b) Within 30 days of *AEMO's* request under paragraph (a), the *Transmission Network Service Provider* must provide a response to *AEMO*. If the *Transmission Network Service Provider* proposes to put in place arrangements to meet the relevant *NSCAS gap*, it must include in its response full details of those arrangements.
- (c) If, after considering any response made under paragraph (b), *AEMO*:
  - (1) considers that the relevant *NSCAS gap* will remain; and
  - (2) considers it is necessary to acquire *NSCAS* to meet the relevant *NSCAS gap* to prevent an adverse impact on *power system security* and reliability of *supply* of the *transmission network* in accordance with the *power system security standards* and the *reliability standard*,  
*AEMO*:
    - (3) must *publish* details of why it considers that the relevant *NSCAS gap* will remain; and

- (4) must use reasonable endeavours to acquire *NSCAS* to meet the relevant *NSCAS gap* in accordance with clause 3.11.5.

#### **3.11.4 [Not used]**

#### **3.11.5 Tender process for network support and control ancillary services**

- (a) In this clause 3.11.5:

**NSCAS tender guidelines** means the guidelines developed and *published* by *AEMO* in accordance with paragraph (b) as in force from time to time, and includes amendments made in accordance with paragraphs (c) and (d).

- (a1) If *AEMO* proposes to acquire an *NSCAS*, *AEMO* must call for offers from persons who are in a position to provide the *network support and control ancillary service* in accordance with the *NSCAS tender guidelines*.
- (b) *AEMO* must determine and *publish* the *NSCAS tender guidelines*. The *NSCAS tender guidelines* must contain the following:
  - (1) a requirement for *AEMO* to call for *NSCAS* expressions of interest before issuing an *NSCAS* invitation to tender in relation to any required *NSCASs*;
  - (2) a requirement that a person who is to provide *NSCASs* under an *ancillary services agreement* has the *facility* tested in accordance with the *NSCAS tender guidelines*;
  - (3) 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 *NSCASs* proposed by a prospective tenderer;
  - (4) the timeframes over which *AEMO's* assessment of *NSCAS* expressions of interest, *NSCAS* tenders and physical testing of selected *NSCASs* will occur;
  - (5) a requirement for a tenderer to provide sufficient data, models and parameters of relevant *plant* in accordance with the requirements specified in the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet*, to facilitate a thorough assessment of the *network* impacts and *power station* impacts of the use of the relevant *NSCAS*;
  - (6) the terms and conditions of the *ancillary services agreement* that a successful tenderer would be expected to enter into with *AEMO*;
  - (7) the principles *AEMO* will apply in assessing *NSCAS* expressions of interest and *NSCAS* tenders; and
  - (8) any other matter considered appropriate by *AEMO*.
- (c) *AEMO* may amend the *NSCAS tender guidelines*, subject to paragraph (d), and must comply with the *Rules consultation procedures* when making or amending the *NSCAS tender guidelines*.

- (d) *AEMO* may make minor and administrative amendments to the *NSCAS* tender guidelines without complying with the *Rules consultation procedures*.
- (e) *AEMO* is not under any obligation to accept the lowest priced *NSCAS* tender or any *NSCAS* tender in response to an *NSCAS* invitation to tender.
- (f) A *Network Service Provider* must:
  - (1) negotiate in good faith with a prospective tenderer in respect of issues the *NSCAS* 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 an *NSCAS* required by the *NSCAS* 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 prospective tenderer 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 person submits an *NSCAS* tender in response to an *NSCAS* invitation to tender and *AEMO* wishes to negotiate an aspect of that *NSCAS* tender, *AEMO* and that person must negotiate in good faith concerning that aspect.
- (h) In assessing any tenders submitted to meet a particular *NSCAS gap*, *AEMO* must first determine whether those tenders are competitive. The tenders submitted to meet a particular *NSCAS gap* will be deemed to be competitive if the quantity of *NSCAS* that *AEMO* is seeking can be supplied from the conforming tenders received by *AEMO* with any one conforming tender discarded or all conforming tenders from any one party discarded. If the tenders submitted to meet a particular *NSCAS gap* are not deemed to be competitive, *AEMO* and *NSCAS preferred tenderers*, must negotiate in good faith to agree reasonable terms and conditions for the supply of the relevant type of *NSCAS*, taking into account the need to:
  - (1) subject to subparagraph (h)(2), so far as practicable minimise the overall cost of supply of that service; and
  - (2) appropriately remunerate the providers of the relevant *NSCAS* for that service.
- (i) If *AEMO* and a *NSCAS preferred tenderer* cannot agree on the terms and conditions for the supply of a *NSCAS* after 21 *business days* from delivery to the preferred tenderer of a written notice from *AEMO* to negotiate, either *AEMO* or the preferred tenderer may refer the matter to the *Adviser* for the determination of a dispute as to those terms and conditions in accordance with rule 8.2.
- (j) If *AEMO* calls for offers under paragraph (a1), *AEMO* must give a notice to *Registered Participants* and *NSCAS providers* when the tender process is complete.
- (k) Within 5 *business days* of *AEMO* giving a notice under paragraph (j), *AEMO* must *publish* the total estimated annual costs and quantities of each

type of *NSCAS* acquired by *AEMO* under *ancillary services agreements* in respect of each *region* and in total and provide a breakdown of those costs and quantities relating to each *facility* contracted under those agreements.

- (l) An *NSCAS provider* must comply with an *ancillary services agreement* under which they provide one or more *NSCASs*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (m) *AEMO* may from time to time require an *NSCAS Provider* which provides an *NSCAS* under an *ancillary services agreement* to demonstrate the relevant *plant's* capability to provide the *NSCAS* to the satisfaction of *AEMO* according to standard test procedures. An *NSCAS Provider* must promptly comply with a request by *AEMO* under this clause.

### 3.11.6 Dispatch of network support and control ancillary services by AEMO

- (a) For the avoidance of doubt, *AEMO* may *dispatch NSCAS* to:
  - (1) maintain *power system security* and reliability of *supply* of the *transmission network* in accordance with the *power system security standards* and the *reliability standard*; and
  - (2) maintain or increase the *power transfer capability* of that *transmission network* so as to maximise the present value of net economic benefit to all those who produce, consume or transport electricity in the *market*,

but *AEMO* may only call for offers to acquire *NSCAS* to maintain *power system security* and reliability of *supply* of the *transmission network* in accordance with the *power system security standards* and the *reliability standard*.

- (a1) *AEMO* must develop procedures for:
  - (1) *dispatching NCAS*; and
  - (2) reporting to *Registered Participants* and *NSCAS providers*, on a periodic basis, on the effectiveness of the *dispatch* of *NSCASs* using criteria related to the performance of the *power system* specified in the procedures developed under subparagraph (a1)(1).
- (b) *AEMO* must *publish* the procedures developed under this clause 3.11.6.
- (c) *AEMO* may amend a procedure developed under this clause 3.11.6, from time to time.
- (d) *AEMO* must develop and *publish* guidelines for the *dispatch* of *NSCAS* to support the relevant procedure developed under subparagraph (a1)(1).
- (e) Subject to paragraph (f), *AEMO* must comply with the *Rules consultation procedures* when making or amending the guidelines in paragraph (d).
- (f) *AEMO* may make minor and administrative amendments to the guidelines in paragraph (d) without complying with the *Rules consultation procedures*.

### 3.11.7 Guidelines and objectives for acquisition of system restart ancillary services by AEMO

- (a) [not used].
- (a1) *AEMO* must use reasonable endeavours to acquire *SRASs* to meet the *system restart standard* at the lowest long-term cost (the **SRAS Procurement Objective**).
- (b) *AEMO* must consult with the relevant *Network Service Provider* to identify and resolve issues in relation to the capability of any *SRAS* proposed to be provided by an *SRAS Provider* in an *electrical sub-network* to meet the *system restart standard*.
- (c) *AEMO* must develop and *publish* the *SRAS Guideline*. The *SRAS Guideline* must be designed to achieve the *SRAS Procurement Objective*.
- (d) The *SRAS Guideline* must include:
  - (1) a description of the technical and availability requirements of *SRAS*;
  - (2) a process for meeting the aggregate required reliability of *SRASs* for each *electrical sub-network* under clause 8.8.3(aa)(3);
  - (3) a process for the modelling, assessment and physical testing of *SRASs* proposed to be provided by an *SRAS Provider*, including any assumptions to be made by *AEMO* regarding the state of *transmission elements* during a *major supply disruption*;
  - (3A) guidance to *Registered Participants* on the factors influencing a decision of *AEMO* to conduct a *system restart test*, including (but not limited to) the types of conditions or changes in the *power system* which could necessitate a *system restart test*;
  - (3B) guidance to *Registered Participants* required to participate in a *system restart test* under clause 4.3.6 on the measurements and data to be reported to *AEMO* about the operation of their *facilities* during the *system restart test*;
  - (4) a process for determining the number and location of *SRASs* required to be procured for each *electrical sub-network* consistent with the *system restart standard*;
  - (4A) requirements designed to identify any inconsistencies between the arrangements used in the testing of *system restart ancillary services* and those planned to be used in the deployment of *system restart ancillary services* following a *major supply disruption* and how the impact of any inconsistencies will be assessed;
  - (5) guidance to *Registered Participants* on the factors that *AEMO* must take into account when making a decision to follow a particular type of procurement process to acquire *SRASs* to meet the *SRAS Procurement Objective*;
  - (5A) guidance to *Registered Participants* on how *AEMO* will achieve the *SRAS Procurement Objective*;

- (6) a process for *AEMO* to follow for contacting a potential *SRAS Provider* to negotiate the provision of *SRASs* without a competitive tender process; and
  - (7) a process for a potential *SRAS provider* to contact *AEMO* to offer the provision of *SRASs* without a competitive tender process, which offer *AEMO* is in no way obliged to accept.
- (e) *AEMO* may amend the *SRAS Guideline* from time to time.
- (f) When making or amending the *SRAS Guideline*, *AEMO* must, subject to paragraph (g), consult with:
- (1) *Registered Participants*; and
  - (2) Such other persons who, in *AEMO's* reasonable opinion, have, or have identified themselves to *AEMO* as having, an interest in the *SRAS Guideline*,
- in accordance with the *Rules consultation procedures*.
- (g) *AEMO* may make minor and administrative amendments to the *SRAS Guideline* without complying with the *Rules consultation procedures*.

### **3.11.8 Determination of electrical sub-network boundaries**

- (a) For the purpose of acquiring *SRASs* and determining and implementing the *system restart plan*, the *power system* is to be divided into *electrical sub-networks*.
- (b) *AEMO* 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), and must *publish* a report setting out how it has complied with these guidelines.
- (c) *AEMO* must comply with the *Rules consultation procedures* in determining the boundaries of the *electrical sub-networks*.

### **3.11.9 Acquisition of system restart ancillary services by AEMO**

- (a) If *AEMO* proposes to acquire an *SRAS*, *AEMO* must enter into an *ancillary services agreement* with a prospective *SRAS Provider* following the completion of any procurement process to acquire *SRASs* which *AEMO* is satisfied will enable it to meet the *SRAS Procurement Objective*.
- (b) Subject to paragraph (c), *AEMO* must only acquire *SRASs* from a person who is a *Registered Participant*.
- (c) *AEMO* may enter into an agreement to acquire *SRASs* with a person who is not a *Registered Participant* if that agreement includes a condition for the benefit of *AEMO* that no *SRASs* will be provided under the agreement until that person becomes a *Registered Participant*.
- (d) An *SRAS Provider* must comply with an *ancillary services agreement* under which they provide one or more *SRASs*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (e) A dispute concerning any aspect, (other than the aspect of price), of a *SRASs* agreement or a call for offers conducted by *AEMO* for the acquisition of *SRASs*, must be dealt with in accordance with rule 8.2.
- (f) *AEMO* may from time to time require an *SRAS Provider* which provides an *SRAS* under an *ancillary services agreement* to demonstrate the relevant *plant's* capability to provide the *SRAS* to the satisfaction of *AEMO* according to standard test procedures. An *SRAS Provider* must promptly comply with a request by *AEMO* under this clause.
- (g) A prospective *SRAS Provider* must provide to *AEMO* sufficient data, models and parameters of relevant *plant* in accordance with the requirements specified in the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet*, to facilitate a thorough assessment of the *network* impacts and *power station* impacts of the use of the relevant *SRAS*.
- (h) If *AEMO* seeks to enter into an *ancillary services agreement* with a prospective *SRAS Provider*, *AEMO* and that *SRAS Provider* must negotiate in good faith as to the terms and conditions of the *ancillary services agreement*.
- (i) A *Network Service Provider* must:
  - (1) provide any information to *AEMO* which *AEMO* reasonably requires in order for *AEMO* to assess the capability of an *SRAS* to meet the *system restart standard*;
  - (2) negotiate in good faith with a prospective *SRAS Provider* in respect of identifying and, if possible, resolving issues that would prevent the delivery of effective *SRASs* proposed by a prospective *SRAS Provider*; and
  - (3) participate in, or facilitate, testing of an *SRAS* proposed to be provided by a prospective *SRAS Provider* 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 prospective *SRAS Provider* 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*.

### 3.11.10 Reporting

- (a) At least once each year, *AEMO* must prepare and *publish* a report detailing the total estimated annual cost for the provision of *SRASs*, broken down to charges for availability and use, for each *electrical sub-network* and for each *region*.
- (b) At least once each year, *AEMO* must *publish* a report on:



- (1) any *electrical sub-network* where *SRASs* were not acquired by *AEMO* to a level satisfactory to meet the *system restart standard*, and reasons why the *system restart standard* was not met;
- (2) the process followed by *AEMO* to acquire *SRASs* for each *electrical sub-network*;
- (3) the *electrical sub-networks* (if any) in which a *system restart test* was conducted, or was planned but could not be conducted (with reasons);
- (4) whether or not the results of any *system restart test* indicated the *system restart plan* as it relates to that *electrical sub-network* is likely to be consistent with the achievement of the *system restart standard* and the *AEMO power system security responsibilities*;
- (5) how *AEMO* satisfied its obligations to consult with *Test Participants* in relation to any *system restart test*; and
- (6) how *AEMO* sought to minimise the costs and operational impacts of any *system restart tests*.

## 3.12 Market Intervention by AEMO

### 3.12.1 Intervention settlement timetable

- (a) *AEMO* must use reasonable endeavours to complete and fulfil its obligations set out in clauses 3.12.2, 3.12.3, 3.14.5A, 3.14.5B, 3.15.7, 3.15.7A, 3.15.7B, 3.15.8, 3.15.8A, 3.15.9 and 3.15.10C such that final determinations of all total amounts payable or receivable by *AEMO* under clauses 3.12.2, 3.15.7(a), 3.15.8, 3.15.8A and 3.15.9 for each *AEMO intervention event* and/or *market suspension pricing schedule period* (as the case may be) ending during a *billing period* are reflected:
  - (1) if practicable, in the *routine revised statement* issued approximately 20 weeks after the relevant *billing period*; and
  - (2) in the *routine revised statement* issued approximately 30 weeks after the relevant *billing period*.
- (b) Subject to clause 3.12.1(a), *AEMO* must *publish* a timetable that sets a date for each of *AEMO's* and the independent expert's obligations pursuant to clauses 3.12.2, 3.12.3, 3.14.5B(f), 3.14.5B(g), 3.15.7, 3.15.7A, 3.15.7B, 3.15.8, 3.15.8A and 3.15.10C, where required (the *intervention settlement timetable*).
- (c) *AEMO* 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 AEMO intervention

- (a) In respect of each *intervention price trading interval*:
  - (1) an *Affected Participant* is entitled to receive from *AEMO*, or must pay to *AEMO*, 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 *AEMO 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 *AEMO 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(b);

LF where the *scheduled load's connection point* is a *transmission connection point*, is the relevant *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 relevant *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 bid* 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 *AEMO* reasonably determines would have been consumed by the *scheduled load* if the *AEMO 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.

**Note**

Where two *intra-regional loss factors* are determined for a *transmission network connection point* under clause 3.6.2(b)(2), *AEMO* will determine the relevant *intra-regional loss factor* for use under this clause in accordance with the procedure determined under clause 3.6.2(d1).

- (b) In respect of a single *AEMO intervention event*, an *Affected Participant* or *Market Customer* is not entitled to receive from, or obliged to pay to, *AEMO* 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*, AEMO 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 *AEMO intervention event* not occurred; and
    - (ii) an amount equal to:
      - (A) the estimated *trading amount* that it would have received had the *AEMO 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 *AEMO 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 *AEMO 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 AEMO in accordance with paragraph (a)(2) for that *Market Customer*.
- (d) **[Deleted]**
- (e) Subject to paragraph (b), if the figure calculated in accordance with paragraph (c) is:
  - (1) negative, the absolute value of that amount is the amount payable to AEMO by the relevant person; and
  - (2) positive, the absolute value of that amount is the amount receivable from AEMO by the relevant person.
- (f) Subject to paragraphs (h) and (i), within 15 *business days* of receipt of the notice referred to in paragraph (c) an *Affected Participant* or *Market Customer* may make a written submission to AEMO in accordance with paragraph (g) claiming that the amount set out in the notice is greater than or less than 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 *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO intervention event* an *Affected Participant* or *Market Customer* may only make a claim pursuant to paragraph (f) in respect of that *AEMO intervention event* 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 *AEMO 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) *AEMO* 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 an *AEMO intervention event*, or in respect of, in *AEMO's* reasonable opinion, a series of related *AEMO intervention events*; plus
  - (2) the total claims by *Directed Participants* pursuant to clauses 3.15.7B(a) and 3.15.7B(a2) in respect of that *AEMO intervention event*, or in respect of that series of related *AEMO intervention events*.
- (l) *AEMO* 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 *AEMO* determines pursuant to paragraph (l) that an *affected participant's adjustment claim* or *market customer's additional claim* in respect of a *AEMO 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 *AEMO 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 AEMO and market suspension pricing schedule periods**

- (a) Subject to paragraph (a1), if a matter is to be referred to an independent expert pursuant to clauses 3.12.2(l), 3.12.2(m), 3.14.5B(f), 3.14.5B(g), 3.15.7A or 3.15.7B, *AEMO* 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 *AEMO's* nominee pursuant to paragraph (a) more than 25% of the *Referred Affected Participants*, *Referred Market Customers*, *Referred Market Suspension Compensation*

*Claimants and Referred Directed Participants* in relation to the relevant *AEMO intervention event* or *market suspension pricing schedule period* (as the case may be) object in writing to *AEMO's* nominee *AEMO* 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 *AEMO*, nominate an independent expert to be appointed by *AEMO* for the purposes of this clause 3.12.3.
- (b) *AEMO* must provide to the independent expert a copy of all written submissions made by *Referred Affected Participants*, *Referred Market Customers*, *Referred Market Suspension Compensation Claimants* or *Referred Directed Participants* under clause 3.12.2(f), 3.14.5B(a), 3.15.7A(f) or 3.15.7B(a).
- (b1) To the extent reasonably practicable, all claims arising out of a single *AEMO intervention event* or *market suspension pricing schedule period* (as the case may be), or arising out of, in *AEMO's* reasonable opinion, a series of related *AEMO intervention events* or *market suspension pricing schedule periods* (as the case may be), should be determined by the same independent expert as part of the same process.
- (c) *AEMO* 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*;
      - (A1) the amount of compensation payable to each *Referred Market Suspension Compensation Claimant* pursuant to clause 3.14.5B;
      - (B) the total amount of compensation payable to *Referred Directed Participants* pursuant to either clause 3.15.7A or clause 3.15.7B, as the case may be; and
      - (C) the methodology and assumptions, if any, used by the independent expert in making the determination in subparagraphs (c)(1)(ii), (c)(1)(iii) and (c)(1)(iv);
    - (ii) notify individual assessments by delivery to each *Referred Affected Participant* and *Referred Market Customer* and to *AEMO* 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);

- (iii) deliver to each *Referred Directed Participant* and to *AEMO* a draft assessment detailing the calculation of the amount of compensation receivable by that party pursuant to clause 3.15.7A or 3.15.7B as the case may be; and
  - (iv) deliver to each *Referred Market Suspension Compensation Claimant* and to *AEMO* a draft assessment detailing the calculation of the amount of compensation receivable by that party pursuant to clause 3.14.5B.
- (2) The independent expert must call for submissions from all relevant *Referred Affected Participants*, *Referred Market Customers*, *Referred Market Suspension Compensation Claimants* and *Referred Directed Participants* after publishing the draft report and delivering the draft assessment under subparagraph (c)(1).
- (3) Before the *publication* of the final report and delivery of the final assessment pursuant to subparagraph (c)(4), the independent expert must:
  - (i) if requested to do so by a *Referred Affected Participant*, *Referred Market Customer*, *Referred Market Suspension Compensation Claimant* 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*, *Referred Market Suspension Compensation Claimant* 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*, *Referred Market Suspension Compensation Claimant* 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), 3.14.5B, 3.15.7A or 3.15.7B, as the case may be; and
  - (iii) deliver to *AEMO* a final tax invoice for the services rendered by the independent expert and a copy of all final assessments issued pursuant to subparagraph (c)(4)(ii).
- (5) A report prepared under subparagraphs (c)(1)(i) and (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, Referred Market Suspension Compensation Claimant or Referred Directed Participant* under clause 3.12.2(f), 3.14.5B(a), 3.15.7A(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, Referred Market Suspension Compensation Claimant and Referred Directed Participant* in a form developed by *AEMO* pursuant to paragraph (e).
- (d) A final report and a final assessment of an independent expert prepared in accordance with subparagraph (c)(4) is final and binding.
- (e) *AEMO* 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 [DELETED]**

## **3.13 Market Information**

### **3.13.1 Provision of information**

- (a) In addition to any specific obligation or power of *AEMO* under the *Rules* to provide information, *AEMO* must make available to *Scheduled Generators, Semi-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) *AEMO* must make information available to the public on request in respect of *regional reference prices* and, where requested and available, reasons for any significant movements in prices.

### **3.13.2 Systems and procedures**

- (a) Information must be provided to *AEMO* and by *AEMO* on the *electronic communication system* unless:
  - (1) the *electronic communication system* is partially or wholly unavailable, then information will, to the extent of that unavailability, be provided to *AEMO* and by *AEMO* by means of the backup procedures specified by *AEMO* from time to time; or
  - (2) otherwise approved by *AEMO*.
- (b) Information must be provided by using the templates supplied in the *electronic communication system* unless otherwise approved by *AEMO*.



- (c) Where approved by *AEMO*, information may be transmitted to and from *AEMO* and the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* concerned in any agreed format.
- (d) If possible, information provided to *AEMO* must be *time stamped* by *AEMO* on receipt by *AEMO* 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 *AEMO* 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*, *Semi-Scheduled Generators* and *Market Participants* via the *electronic communication system* subject to applicable security requirements.
- (g) Information *published* or notified to a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must be capable of being reviewed by that *Generator* or *Market Participant* and be capable of being downloaded from the *market information bulletin board* to the relevant *Generator* or *Market Participant* via the *electronic communication system*.
- (h) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must notify *AEMO* of, and *AEMO* must *publish*, any changes to submitted information within the times prescribed in the *timetable*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (i) *AEMO* must make a copy of all changes to the data available to *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* for verification and resubmission by the relevant *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*, *Semi-Scheduled Generator* or *Market Participant* may withhold information from *AEMO* 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) Nothing in paragraph (k) allows a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* to avoid providing information to *AEMO* under the *Rules* where that information is generally available.

### 3.13.3 Standing data

- (a) *AEMO* must establish, maintain, update and *publish*:
- (1) a list of all of the *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* and a list of all applications to become a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant*, including *bid and offer validation data*;
  - (2) a list of all of the *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* who will cease to be *Scheduled Generators*, *Semi-Scheduled Generators* or *Market Participants* and the time that each listed *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* will cease to be a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant*;
  - (2A) a list of the *expected closure years* and *closure dates* for all *scheduled generating units* and *semi-scheduled generating units* notified under clauses 2.2.1(e)(2A) and 2.10.1(c1), and make such information available on *AEMO's* website;
  - (3) a list of all of the *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* who are or are going to be suspended and the time at which each listed *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* was suspended or will be suspended.
- (b) All *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* must provide *AEMO* with the *bid and offer validation data* relevant to their *scheduled loads*, *scheduled network services* and *generating units* in accordance with schedule 3.1.

#### **Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b1) In addition to the information provided to *AEMO* in paragraph (b), all *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* which have aggregated their *scheduled loads*, *scheduled network services* and *generating units* in accordance with clause 3.8.3, must provide *AEMO* with:
- (i) the maximum *generation* of each individual *scheduled generating unit*, or *semi-scheduled generating unit* to which the individual *scheduled generating unit*, or *semi-scheduled generating unit* may be dispatched;
  - (ii) the number of individual *scheduled loads* that have been aggregated in accordance with clause 3.8.3; or
  - (iii) the number of *scheduled network services* that have been aggregated in accordance with clause 3.8.3.

#### **Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (c) All *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* will be required to provide *AEMO* with information as set out below:
  - (1) forecasts for *connection points* as prescribed in clause 5.11.1; and
  - (2) metering information for *settlements* purposes as prescribed in Chapter 7.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (d) *Network Service Providers* are to maintain a register of data provided by *Scheduled Generators*, *Semi-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 *AEMO* on request and in a form specified by *AEMO*.
- (e) *Network Service Providers* must, without delay, notify and provide *AEMO* 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 *AEMO*, *Network Service Providers* must provide *AEMO* 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 *AEMO*; and
  - (3) operating procedures and practices for *network* operation and maintenance.
- (g) *Network Service Providers* must notify *AEMO* of any changes to the information provided under clause 3.13.3(f) as soon as practicable.
- (h) *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* must notify *AEMO* of any changes to *bid and offer validation data* 6 weeks prior to the implementation of planned changes and without unreasonable delay in the event of unplanned changes.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (i) *Network Service Providers* must notify *AEMO* 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.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (j) *AEMO* must conduct an annual review of *Scheduled Generator*, *Semi-Scheduled Generator* and *Market Participant bid and offer validation data* in consultation with *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* and *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* must advise *AEMO* of any required changes to the data.
- (k) A *Registered Participant* may request from *AEMO*:
  - (1) *bid and offer validation data*;
  - (2) information that is reasonably required by the *Registered Participant* to carry out *power system* simulation studies (including load flow and dynamic simulations) for planning and operational purposes; 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.

**Note**

In accordance with clause 3.13.3AA, *project developers* may request from *AEMO* the information set out in clauses 3.13.3(k)(1)-(3) and must treat such information as *confidential information* under clause 3.13.3(l).

- (k1) *AEMO* must set out in the *Power System Model Guidelines* the circumstances in which *AEMO* will consider the information under paragraph (k)(2) to be reasonably required by a *Registered Participant*.
  - (l) If *AEMO* holds information requested under clause 3.13.3(k), *AEMO* must provide the requested information to the *Registered Participant* as soon as practicable, subject to the following requirements:
    - (1) If *AEMO* holds and is required under this paragraph (l) to provide a *releasable user guide* that *AEMO* received under clause S5.2.4(b)(8), *AEMO* must provide the *releasable user guide* to the *Registered Participant* in an unaltered form.
    - (2) If *AEMO* holds and is required under this paragraph (l) to provide a form of the model source code that *AEMO* received under clauses S5.2.4(b)(6) and S5.2.4(d) or from any other source, *AEMO* must provide that information:
      - (i) only in the form of, at *AEMO's* discretion:
        - (A) compiled information (such as, for example, compiled Fortran code in object code or dynamic link library (DLL) form);
        - (B) encrypted information; or
        - (C) a secured format agreed by the provider of the model source code,
- unless *AEMO* has the written consent of the person who provided the information to *AEMO* to provide it in another form; and

- (ii) in a form that can be interpreted by a software simulation product nominated by *AEMO*.
- (3) Any information provided by *AEMO* under clause 3.13.3(l) to a *Registered Participant* must be treated as *confidential information*.
- (4) Any information provided by *AEMO* under this clause 3.13.3(l) to a person who is a *project developer* must be treated by that person as *confidential information* even where that person ceases to be a *project developer*.
- (11) *AEMO* may charge a fee, except where the information is requested by a *Network Service Provider* under clause 3.13.3(15), to recover all reasonable costs incurred in providing information to a *Registered Participant* under this clause 3.13.3.
- (12) For the purposes of clause 3.13.3(l), the provider of the model source code is:
  - (1) the *Generator* if the model source code was received from that *Generator* under clause S5.2.4(b)(6) or S5.2.4(d); or
  - (2) the person required under the *Rules* to register as a *Generator* in respect of a *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more, if the model source code was received from that person under clause S5.2.4(b)(6) or S5.2.4(d); or
  - (3) the *Generator*, if the model source code was provided to *AEMO* by a *Network Service Provider* and that same *Network Service Provider* advises *AEMO* that the provider of the model source code is the *Generator*; or
  - (4) the relevant *Network Service Provider*, if that same *Network Service Provider* advises *AEMO* that the provider of the model source code is itself; or
  - (5) otherwise, the relevant Transmission Network Service Provider.
- (13) If *AEMO* is required under clause 3.13.3(l) to provide information requested under clause 3.13.3(k)(2), *AEMO* may provide:
  - (1) historical information relating to the operating conditions of the *power system*;
  - (2) information and data provided to *AEMO* under clauses 3.13.3(f)(1) and 3.13.3(f)(3) and information of the same type provided under clause 3.13.3(g);
  - (3) *network* dynamic model parameter values obtained under clauses 3.13.3(f)(2) and 3.13.3(g);
  - (4) model parameter values and load flow data derived from a *releasable user guide*;
  - (5) a *network* model of the *national grid*, suitable for load flow and fault studies; and
  - (6) other technical data as listed in Schedules 5.5.3 and 5.5.4.

- (14) Despite clause 3.13.3(1), *AEMO* must not provide information relating to *plant* that is the subject of an *application to connect* or a *connection agreement*, until the earlier of:
  - (1) the date when a *connection agreement* relating to that *plant* is executed; or
  - (2) three months before the proposed start of commissioning of that *plant*.
- (15) Subject to clause 3.13.3(16), if a *Transmission Network Service Provider* is responsible for provision of *network* limit advice relating to *power system* stability limits to *AEMO* under clause S5.1.2.3, *AEMO* must, on request from that *Transmission Network Service Provider*, provide all *power system* and *generating system* model information that is reasonably required for planning and operational purposes, if *AEMO* holds that information, including:
  - (1) functional block diagram information, including information provided to *AEMO* under clause S5.2.4(b)(5);
  - (2) *generating unit*, *generating system* and *power system* static and dynamic model information, including model parameters and parameter values; and
  - (3) information provided to *AEMO* in accordance with clause S5.2.4(a).
- (16) If *AEMO* is required to provide information to a *Transmission Network Service Provider* under paragraph (15), this must not include:
  - (1) model source code provided to *AEMO* under clauses S5.2.4(b)(6) and S5.2.4(d), except as allowed under clause 3.13.3(1); and
  - (2) information relating to *plant* that is the subject of an *application to connect* until after the execution of the relevant *connection agreement*.
- (17) Any information provided by *AEMO* under clause 3.13.3(15) to a *Transmission Network Service Provider* must be treated as *confidential information*.
- (m) Where special approvals or exemptions have been granted by *AEMO*, 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 *AEMO*.
- (n) *AEMO* 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 *AEMO* of their *distribution loss factors*, duly authorised by the *AER*, and *AEMO* must *publish* such *distribution loss factors* in accordance with clause 3.6.3(i).
- (p) *AEMO* 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*.

- (p1) *AEMO* must establish, maintain and *publish* a register which identifies:
  - (1) the *Registered Participant* to whom any information is provided under clause 3.13.3(l), including whether the *Registered Participant* is a *project developer*; and
  - (2) the date on which such information was provided.
- (q) In relation to the *declared transmission system* of an *adoptive jurisdiction*:
  - (1) *AEMO* must maintain the register referred to in paragraph (d); and
  - (2) a *declared transmission system operator* must provide *AEMO* with information reasonably required by *AEMO* for maintaining the register and keeping it up to date.

### **3.13.3AA Standing data: Project developers**

- (a) For the purposes of clauses 3.13.3(k), (k1), (l), (11) and (p1) only, *project developers* are deemed to be *Registered Participants*.
- (b) A person may apply to *AEMO* to be a *project developer* for the purposes of paragraph (a) if that person:
  - (1) is not otherwise a *Registered Participant*; and
  - (2) intends to develop *plant* to be *connected* to the *transmission system* or *distribution system* in respect of which another person (other than an *intermediary*) must or may be registered as a *Registered Participant*.
- (c) *AEMO* may:
  - (1) grant an application under paragraph (b) if *AEMO* is reasonably satisfied by the evidence provided in that application that the person intends to develop *plant* of the kind described in paragraph (b)(2); and
  - (2) subsequently revoke a grant made under paragraph (c)(1) if *AEMO* ceases to be reasonably satisfied that the person intends to develop *plant* of the kind described in paragraph (b)(2).

### **3.13.3A Statement of opportunities**

#### **ESOO information**

- (a) By 31 August in each year, *AEMO* 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) capabilities of existing *generating units* and *generating units* for which formal commitments have been made for construction or installation;
  - (3) capabilities of proposed *generating units* for which formal commitments have not been made for construction or installation, to the extent it is reasonably practicable to do so;

- (4) planned *plant retirements* (including *expected closure years* and *closure dates* for any *generating units* in the subsequent 10 year period);
- (5) a summary of *network capabilities* and *constraints* based upon *Transmission Annual Planning Reports*;
- (6) proposed *network* developments for which formal commitments have been made for construction or installation;
- (7) proposed *network* developments for which formal commitments have not been made for construction or installation to the extent it is reasonably practicable to do so;
- (8) the operational assumptions made by *AEMO* in relation to *generating units* and *contracted demand side participation*, including outage information and auxiliary supply information;
- (9) operational and economic information about the *market* to assist planning by:
  - (i) *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants*; and
  - (ii) potential *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants*; and
- (10) a *reliability forecast* for each *region* for the *financial year* in which the *statement of opportunities* is published on its website and the subsequent four *financial years* and an *indicative reliability forecast* for the remaining *financial years*.

### Updates

- (b) If after the publication of the most recent *statement of opportunities*, new information becomes available to *AEMO* relating to the matters set out in subparagraphs (a)(1) to (a)(8) that in *AEMO*'s reasonable opinion materially changes the *statement of opportunities*, *AEMO* must, as soon as practicable, publish that information in a descriptive form that is consistent with the *statement of opportunities* and, if it considers appropriate, publish on its website an updated *reliability forecast* in accordance with the *Reliability Forecast Guidelines*.

### ESOO information requests

- (c) *AEMO* may by written notice request a *jurisdictional planning body* to provide *AEMO* with information that *AEMO* requires for the preparation of a *statement of opportunities* and the *jurisdictional planning body* must comply with that notice.
- (d) *AEMO* may, by written request, require provision of information relevant to the matters specified in paragraph (a) from *Registered Participants* that *AEMO* reasonably requires for the preparation of a *statement of opportunities* or an update under paragraph (b). A request for information must comply with the *Reliability Forecast Guidelines*.
- (e) A *Registered Participant* must comply with an information request under paragraph (d) in accordance with the *Reliability Forecast Guidelines*.



**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (f) As soon as practicable after a *Scheduled Generator*, *Semi-Scheduled Generator*, *Market Participant* or *Network Service Provider* becomes aware of a material change to any information required for *publication* by *AEMO* under paragraph (a), that information must be provided to *AEMO* by that *Scheduled Generator*, *Semi-Scheduled Generator*, *Market Participant* or *Network Service Provider*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (g) A *Registered Participant* must ensure that the information provided in response to an information request under paragraph (d) or under paragraph (f) is:
  - (1) not false or misleading in a material particular;
  - (2) in relation to information of a technical nature, is prepared in accordance with *good electricity industry practice*; and
  - (3) represents the *Registered Participant's* current intentions and best estimates.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**ESOO reviews**

- (h) *AEMO* must, no less than annually, prepare and publish on its website information on:
  - (1) the accuracy to date of the demand and supply forecasts, and any other inputs determined by *AEMO* to be material to *reliability forecasts*; and
  - (2) any improvements made by *AEMO* or other relevant parties to the forecasting process that will apply to the next *statement of opportunities*,in accordance with the *Reliability Forecast Guidelines* (as applicable). Where availability of information makes comparisons to older *statement of opportunities* necessary, *AEMO* may include the *statement of opportunities* for the preceding 24 months.
- (i) A *jurisdictional planning body* must provide assistance *AEMO* reasonably requests in connection with the preparation of a report under paragraph (h).

**3.13.4 Spot market**

- (a) Each week, in accordance with the *timetable*, *AEMO* must *publish* details of the outputs of the *medium term PASA*.

- (b) The details to be *published* by *AEMO* 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*, *AEMO* must *publish* details of the outputs of the *short term PASA* for each *trading interval* covered.
- (d) The details of the *short term PASA* *published* each *day* by *AEMO* 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*, *AEMO* 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 *AEMO* 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) 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;
    - (ii) forecast *interconnector* transfer capabilities and the projected impact of any *inter-network* tests on those transfer capabilities; and
    - (iii) when and where *network constraints* may become binding on the *dispatch* of generation or load.
  - (g) Each *day*, in accordance with the *timetable*, *AEMO* 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*, *AEMO* 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 *AEMO* results in a significant change in forecast *spot price*, or in any event no more than 3 hours after the previous such publication, *AEMO* must prepare and *publish* updated *pre-dispatch schedules* and *spot price forecasts*, including the details specified in clause 3.13.4(f).
  - (j) If *AEMO* considers there to be a significant change in a forecast *spot price*, *AEMO* 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) *AEMO* 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 *AEMO* runs the *dispatch algorithm*, *AEMO* 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*, *AEMO* must *publish* the *regional reference prices* for each *region* for that *trading interval*.
  - (n) Each *day*, in accordance with the *timetable*, *AEMO* must *publish* the actual *regional reference prices*, *ancillary service prices*, *regional* and total *interconnected system loads* and *energies*, *inter-regional loss factors* and

details of any *network constraints* for each *trading interval* in the previous *trading day*.

- (n1) In accordance with the *timetable*, AEMO must *publish* the *inter-regional flows*.
- (o) **[Deleted]**
- (p) Each *day*, in accordance with the *timetable*, AEMO 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*, *Semi-Scheduled Generator* or *Market Participant* for each *rebid* under clause 3.8.22(c)(2);
  - (2) identification of the *Scheduled Generator*, *Semi-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 AEMO's telemetry system;
  - (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*, *Semi-Scheduled Generator* or *Market Participant* in accordance with clause 3.8.19(b)(1);
  - (7) in respect of a *semi-scheduled generating unit*, the availability of that *generating unit* specified in the relevant *unconstrained intermittent generation forecast* for each *dispatch interval*; and
  - (8) in respect of *semi-scheduled generating units*, the aggregate of the availability of the *semi-scheduled generating units* referred to in subparagraph (7) in respect of each *region* for each *dispatch interval*.
- (q) Each *day*, in accordance with the *timetable*, AEMO must *publish* details of:
  - (1) *dispatched generation*, *dispatched network service* or *dispatched load* for each *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* and *scheduled load* respectively in each *trading interval* and *dispatch interval*; and
  - (2) for each *semi-scheduled generating unit* in each *trading interval* and *dispatch interval*, whether or not a condition for setting a *semi-dispatch interval* applied,
 for the previous *trading day*.
- (r) In accordance with the *timetable*, AEMO must *publish* details of:
  - (1) actual *generation* for each *scheduled generating unit*, *semi-scheduled generating unit* and *non-scheduled generating unit* or *non-scheduled generating system*;

- (2) actual *network service* for each *scheduled network service*; and
- (3) actual *load* for each *scheduled load*.
- (s) Where *AEMO publishes* details as referred to in clause 3.13.4(r), the requirement to *publish* applies only to data available to *AEMO*.
- (t) *AEMO* 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 *AEMO* runs the *dispatch algorithm* it must, within 5 minutes, *publish* for the relevant *dispatch interval*:
  - (1) details of any MW allowance made by *AEMO* 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 *AEMO* in its *dispatch algorithm* to calculate the *dispatch price* referred to in clause 3.13.4(l) and the sum of the actual *generation* referred to in clause 3.13.4(u)(2).
- (v) Where *AEMO publishes* the information referred to in clause 3.13.4(u), the requirement for *AEMO* to *publish* applies only to data available to *AEMO*.
- (w) Each *day*, in accordance with the *timetable*, *AEMO* 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*, *AEMO* 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*.
- (y) In accordance with the *timetable* and no more than 3 hours after the last such notification, *AEMO* must notify electronically on a confidential basis each *Semi-Scheduled Generator* of the *unconstrained intermittent generation forecast* for its *semi-scheduled generating units* that was taken into account for each *trading interval* of the last *pre-dispatch schedule* published by *AEMO* under paragraph (e).
- (z) At intervals to be determined by *AEMO* under rule 3.7A(e), *AEMO* must, in accordance with the *timetable*, *publish* updates to the *congestion information resource*.

### 3.13.4A Market ancillary services

- (a) *AEMO* 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) *AEMO* 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.
- (c) *AEMO* 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 AEMO**

- (a) [deleted]
- (b) *AEMO* must *publish* annually the quantities and types of *NSCAS* covered under existing *ancillary services agreements*.
- (c) Information *published* under paragraph (b) must include a breakdown of the actual costs and quantities relating to each *facility* contracted under *ancillary services agreements*.

### **3.13.5A Settlements residue auctions**

- (a) If *AEMO* conducts an *auction* under rule 3.18, *AEMO* 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) *AEMO* 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 *settlements residue* attributable to *intra-regional loss factors* for each *region*, for that *billing period*.
- (c) *AEMO* 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 AEMO**

- (a) *AEMO* 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 *AEMO* to issue the *direction*;
  - (5) if applicable, the basis upon which *AEMO* 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) the basis upon which *AEMO* determined its approach to setting *dispatch prices* and *ancillary service prices* in accordance with clause 3.9.3;
  - (7) details of the adequacy and effectiveness of responses to inquiries made by *AEMO* under clause 4.8.5A(d);
  - (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); and
  - (9) if applicable, the information required under clause 3.8.14A(c).
- (b) As soon as reasonably practicable after *AEMO* 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, *AEMO* 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 *AEMO*, 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 *AEMO* 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 40 *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* and *semi-scheduled generating units* for the *dispatch intervals* in the relevant *trading interval* and all *scheduled generating units* and *semi-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 *ancillary service prices* exceeding \$5,000/MWh;
  - (4) identifies any linkages between *spot prices* in the *energy market* and *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) *AEMO* 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) *network constraints by trading interval.*
- (b) All *market information* that AEMO is required to *publish* in accordance with the *Rules* shall also be made available by AEMO to persons other than *Registered Participants* using the *electronic communications system* on the fee basis described in clause 8.7.6. AEMO 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) AEMO must make available for purchase by any party the *statement of opportunities* from the date of *publication* of such statement.
- (d) AEMO 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

#### Definitions

- (a0) In this clause 3.13.10:

**review** means an examination of the specified matters conducted to the standard specified for a "review" in Auditing Standard AUS106: "Explanatory Framework for standards on Audit and Audit Related Services" prepared by the Auditing Standards Board, as varied from time to time.

- (a) AEMO must appoint one or more *market auditors* to carry out reviews of such matters as AEMO 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 AEMO procedures and their compliance with the *Rules*.
- (b) AEMO 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 *AEMO*. *AEMO* 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 *AEMO* approves and those matters which *AEMO* does not approve and setting out *AEMO*'s reasons for that view.
- (e) *AEMO* 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

**Note:**

Clause 3.13.12 only applies in a participating jurisdiction that has not applied the *NERL* as a law of that jurisdiction. In a participating jurisdiction that has applied the *NERL*, the scheme developed by *AEMO* under clause 3.13.12A supersedes clause 3.13.12 and clause 3.13.12 is revoked (see clause 3.13.12A(d)).

- (a) The authority responsible for administering the *jurisdictional electricity legislation* in for each *participating jurisdiction* may provide *AEMO* 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 *AEMO* in relation to *connection points* in that *participating jurisdiction*; and
  - (2) *AEMO* 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 *AEMO*.
- (c) A valid *Jurisdictional NMI Standing Data schedule* must contain the following items:
  - (1) a specification of the categories of *NMI Standing Data* which *AEMO* 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 *AEMO*;
  - (4) the criteria which *AEMO* must use to identify whether *AEMO* 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 *AEMO* of *NMI Standing Data* for *connection points* in that *participating jurisdiction*.
- (d) *AEMO* 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) *AEMO* 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 *AEMO* 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 *AEMO* under clause 3.13.12(a):
- (1) at no charge and in the format reasonably required by *AEMO*; 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 *AEMO* will use and disclose the *NMI Standing Data* in accordance with the *Rules*.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (g) *Market Customers* must only use *NMI Standing Data* provided to it by *AEMO* under this clause 3.13.12 for the purposes permitted by the relevant *Jurisdictional NMI Standing Data schedule*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (h) Where a responsible authority has provided *AEMO* 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 *AEMO* with *NMI Standing Data* in accordance with clause 3.13.12(f) and *AEMO* becomes aware of that failure, then:
- (1) *AEMO* 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 *AEMO* with the *NMI Standing Data* within 5 *business days* of the notice provided under clause 3.13.12(h)(1), *AEMO* 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 *AEMO* otherwise in accordance with clause 3.13.12(h)(3); and
  - (3) if, after receiving a notice from *AEMO* under clause 3.13.12(h)(2), the responsible authority notifies *AEMO* 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 *AEMO*, *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO* becomes aware of that failure, then:
- (1) *AEMO* 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), *AEMO* 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 *AEMO* otherwise in accordance with clause 3.13.12(i)(3); and
- (3) if, after receiving a notice from *AEMO* under clause 3.13.12(i)(2), the responsible authority notifies *AEMO* 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*, *AEMO* 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) *AEMO* must if requested by a responsible authority:
    - (1) develop a regime for monitoring and reporting to the responsible authority on requests received by *AEMO* 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 *AEMO* to make available *NMI Standing Data* if that *NMI Standing Data* has not been provided to *AEMO*;
    - (2) requires *AEMO* to make available *NMI Standing Data* where the collection, use or disclosure of that information by *AEMO* would breach applicable privacy laws;
    - (3) precludes *AEMO* 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 *AEMO* from disclosing *confidential information* in the circumstances in which the disclosure of *confidential information* is permitted under the *NEL* or the *Rules*; and
    - (5) requires *AEMO* to provide information which its software systems cannot provide without modification.

### 3.13.12A NMI Standing Data Schedule

**Note:**

Clause 3.13.12A was inserted in the Rules by the National Electricity Amendment (National Energy Retail Law) Rule 2012. Clause 3.13.12A only applies in a participating jurisdiction that has applied the *NERL* as a law of that jurisdiction. In a participating jurisdiction that has not applied the *NERL* clause 3.13.12 continues to apply.

- (a) *AEMO* must, in consultation with the responsible *authorities* for *participating jurisdictions*, *Registered Participants*, and other interested persons, develop a scheme for an *NMI standing data* schedule (the **NMI Standing Data Schedule**).
- (b) In developing the scheme, *AEMO* must have regard to the *Jurisdictional NMI Standing Data schedules*.

- (c) The proposed scheme must include provisions dealing with:
  - (1) the obligations of *Registered Participants* and others to provide information for inclusion in the Schedule; and
  - (2) the rights of *Registered Participants* and others to have access to the Schedule; and
  - (3) amendment of the Schedule.
- (d) The scheme supersedes clause 3.13.12 and, on the date it takes effect, that clause is revoked.
- (e) *AEMO* must publish a notice of its adoption of the scheme in the South Australian Government Gazette:
  - (1) setting out the provisions of the scheme; and
  - (2) fixing a date for its commencement.
- (f) The scheme takes effect on the date fixed under paragraph (e)(2).

### **3.13.13 Inter-network tests**

- (a) *AEMO* 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 *AEMO* amends the *test program* for an *inter-network test* it must *publish* details of the amendment.
- (c) If *AEMO* 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, *AEMO* must *publish* details of the change.

### **3.13.14 Carbon Dioxide Equivalent Intensity Index**

#### **Carbon dioxide equivalent intensity index procedures**

- (a) *AEMO* must develop, review and amend *carbon dioxide equivalent intensity index procedures* in consultation with *Registered Participants* and such other persons as *AEMO* thinks appropriate, in accordance with the *Rules consultation procedures* and paragraphs (b), (c) and (e)
  - (a1) For the purposes of this clause, reference to a *market generating unit* is not taken to include a *small generating unit*.
- (b) The *carbon dioxide equivalent intensity index procedures* must include:
  - (1) the methodology for calculating the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators*;
  - (2) where relevant, any assumptions used to calculate the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators*;
  - (3) the form of the *emission factors* for the *scheduled generating units* and *market generating units* included in the calculation of the *carbon*

- carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators*;
- (4) the methodology for estimating an *emission factor* where the data on the *emission factor* for a *scheduled generating unit* or *market generating unit* included in the calculation of the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators* is not publicly available;
  - (5) the form of the energy measurements (in MWh) for the *scheduled generating units* and *market generating units* included in the calculation of the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators*;
  - (6) the time interval for updating and publishing the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators*; and
  - (7) the time interval for conducting a review of the *emission factors* under paragraph (j).
- (c) In developing the *carbon dioxide equivalent intensity index procedures*, AEMO must:
- (1) ensure that the methodology used to calculate the *carbon dioxide equivalent intensity index* under paragraph (b)(1) represents the volume weighted average of the carbon dioxide equivalent greenhouse gas emissions from all the *scheduled generating units* and *market generating units* included in the calculation of the *carbon dioxide equivalent intensity index* for the time interval described in paragraph (b)(6);
  - (2) ensure that the methodology used to calculate any *supplementary carbon dioxide equivalent intensity indicators* under paragraph (b)(1) represents the volume weighted average of the carbon dioxide equivalent greenhouse gas emissions from all the *scheduled generating units* and *market generating units* included in the calculation of the *supplementary carbon dioxide equivalent intensity indicators* for the time interval described in paragraph (b)(6);
  - (3) use reasonable endeavours to obtain the data used to calculate the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators* from reliable sources; and
  - (4) have regard to the methodology for determining *emission factors* under the *Australian Government's National Greenhouse and Energy Reporting System* when determining the methodology for estimating the *emission factors* under paragraph (b)(4).
- (d) AEMO must publish the first *carbon dioxide equivalent intensity index procedures* by no later than 22 July 2011 and such procedures must be available at all times after this date.

- (e) *AEMO must conduct a review of the carbon dioxide equivalent intensity index procedures at least once every 3 years after the first carbon dioxide equivalent intensity index procedures are published.*

**Carbon dioxide equivalent intensity index and supplementary carbon dioxide equivalent intensity indicators**

- (f) *AEMO must calculate, update and publish a carbon dioxide equivalent intensity index for the NEM in accordance with the carbon dioxide equivalent intensity index procedures and this clause 3.13.14.*
- (g) *The first carbon dioxide equivalent intensity index must be published as soon as practicable after the first carbon dioxide equivalent intensity index procedures are published under paragraph (d).*
- (h) *If AEMO elects to publish any supplementary carbon dioxide equivalent intensity indicators, AEMO must calculate, update and publish the supplementary carbon dioxide equivalent intensity indicators in accordance with the carbon dioxide equivalent intensity index procedures.*
- (i) *At the same time as it publishes the first carbon dioxide equivalent intensity index under paragraph (g), AEMO must publish a table which lists:*
  - (1) *all the scheduled generating units and market generating units included in the calculation of the carbon dioxide equivalent intensity index; and*
  - (2) *for each scheduled generating unit or market generating unit referred to in subparagraph (1), the emission factor and the source of that information.*
- (j) *AEMO must conduct a review of the emission factors for the scheduled generating units and market generating units included in the calculation of the carbon dioxide equivalent intensity index and any supplementary carbon dioxide equivalent intensity indicators in accordance with the carbon dioxide equivalent intensity index procedures to determine whether the emission factors have changed since the last update of the emission factors.*
- (k) *As soon as practicable after a review under paragraph (j), AEMO must update the carbon dioxide equivalent intensity index and where appropriate, any supplementary carbon dioxide equivalent intensity indicators with any new emission factors, if the emission factor for any scheduled generating units or market generating units included in the calculation of the carbon dioxide equivalent intensity index and any supplementary carbon dioxide equivalent intensity indicators has changed since the last update of the emission factors.*
- (l) *In addition to the obligation under paragraph (k), AEMO must update the carbon dioxide equivalent intensity index and where appropriate, any supplementary carbon dioxide equivalent intensity indicators with any new emission factors as soon as practicable if:*
  - (1) *AEMO is advised that the emission factor for any scheduled generating units or market generating units included in the calculation of the carbon dioxide equivalent intensity index and any*



- supplementary carbon dioxide equivalent intensity indicators* has changed since the last update of the *emission factors*; and
- (2) the data on the *emission factor* is publicly available and, in *AEMO's* opinion, is from a reliable source.
- (m) If:
- (1) a *generating unit* is classified as a *scheduled generating unit* or *market generating unit* under Chapter 2 after the first *carbon dioxide equivalent intensity index* is published under paragraph (g); and
  - (2) data for that *generating unit* is not included in the calculation of the *carbon dioxide equivalent intensity index*,
- then *AEMO* must as soon as practicable update the *carbon dioxide equivalent intensity index* to include data for that *generating unit*.
- (n) For the avoidance of doubt, in updating the *carbon dioxide equivalent intensity index* under paragraph (m), *AEMO* may use the methodology for estimating an *emission factor* under the *carbon dioxide equivalent intensity index procedures* to calculate the *carbon dioxide equivalent intensity index* if the *emission factor* for any *generating units* described in paragraph (m) is not publicly available.
  - (o) *AEMO* must, as soon as practicable after it updates the *carbon dioxide equivalent intensity index* and any *supplementary carbon dioxide equivalent intensity indicators* under paragraphs (k) to (m):
    - (1) update the table described in paragraph (i) with the new *emission factor(s)*, the source of that information and where appropriate, any new *scheduled generating units* or *market generating units* included in the calculation of the *carbon dioxide equivalent intensity index*; and
    - (2) publish the table.
  - (p) *AEMO* must amend the *timetable* to include the time interval in which it must publish the *carbon dioxide equivalent intensity index* under the *carbon dioxide equivalent intensity index procedures* (as amended under this clause 3.13.14).
  - (q) Despite clause 3.4.3(b), *AEMO* may amend the *timetable* under paragraph (p) without following the *Rules consultation procedures*.

### 3.14 Administered Price Cap and Market Suspension

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

- (a) The *administered price cap* for each *region* is \$300/MWh.
- (b) The *administered floor price* for each *region* to apply to *spot prices* is the negative of the value of the *administered price cap*.
- (c) The *cumulative price threshold* for each *financial year* is the dollar amount calculated by the *AEMC* under paragraph (d).

#### Note

The current value of the *cumulative price threshold* is set out in a schedule of reliability settings published on the *AEMC's* website [www.aemc.gov.au](http://www.aemc.gov.au)

- (d) By 28 February of each year (commencing 2012), the *AEMC* must calculate the *cumulative price threshold* to apply on and from 1 July of that year in accordance with paragraphs (e) and (f) and *publish* its calculation on its website as part of a schedule of *reliability* settings.
- (e) Subject to paragraph (f), the *AEMC* must calculate the *cumulative price threshold* using the following formula:

$$CPT^x = BV^{CPT} \times \frac{(Q_1^c + Q_2^c + Q_3^c + Q_4^c)}{(Q_1^b + Q_2^b + Q_3^b + Q_4^b)}$$

Where:

CPT is the *cumulative price threshold* in dollars;

x is the *financial year* for which the *cumulative price threshold* is being calculated;

BV<sup>CPT</sup> is \$187,500 (being the value of the *cumulative price threshold* prior to 1 July 2012);

Q1 to Q4 are the values of the Reliability Settings Index for each of the four quarters of years c and b (as the case may be) as at five months before the start of year x;

Reliability Settings Index is the All groups, Australia CPI found at Index Numbers, All groups, Australia, in Tables 1 and 2 of the Consumer Price Index, Australia published by the Australian Bureau of Statistics for the relevant quarter, except where that index ceases to be published or is substantially changed, in which case the Reliability Settings Index will be such other index as is determined by the *AEMC* as suitable;

c is the calendar year commencing 18 months before the start of year x; and

b is calendar year 2010.

- (f) If the value calculated by the *AEMC* under paragraph (e) is:
- (1) not in whole hundreds of dollars, then the *cumulative price threshold* for year x will be the value calculated under paragraph (e) rounded to the nearest \$100;
  - (2) less than the *cumulative price threshold* applied under this clause 3.14.1 for the preceding *financial year* (year x-1), then the *cumulative price threshold* for year x will be the value of the *cumulative price threshold* for year x-1.

### 3.14.2 Application of Administered Price Cap

- (a) [Deleted]
- (b) *AEMO* must immediately notify all *Market Participants* of the commencement and closing of an *administered price period* under rule 3.14.
- (c) Each of the following periods is an *administered price period* in a *region*:
- (1) a *trading interval*, where the sum of the *spot prices* in the previous 336 *trading intervals*, calculated as if this clause did not apply, exceeds the *cumulative price threshold*;

- (1A) a *dispatch interval*, where the sum of the *ancillary service prices* 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) a *trading interval* in a *trading day* in which a prior *trading interval* is an *administered price period*;
- (2A) a *dispatch interval* in a *trading day* in which a prior *dispatch interval* is an *administered price period*; or
- (2B) a *dispatch interval* within a *trading interval* that is an *administered price period*.
- (3) **[Deleted]**
- (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 clause 3.14.2(c)(1) or (2) 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 *AEMO* must set the *dispatch price* to the *administered price cap*; or
  - (2) is less than the *administered floor price*, *AEMO* must set the *dispatch price* to the *administered floor price*.
- (d2) If within an *administered price period* an *ancillary service price* for any *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 *AEMO* 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(d1)(1), 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 *administered price cap* divided by the average *loss factor* that applies for *energy flow* in that direction for that *dispatch interval* and 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(d1)(2), then *dispatch prices* at all other *regional reference nodes connected by a regulated interconnector or regulated interconnectors* that have an *energy flow* away from that *regional reference node* must be equal to or greater than the *administered floor price* multiplied by the average *loss factor* that applies for *energy flow*

in that direction for that *dispatch interval* and determined in accordance with clause 3.14.2(e)(5).

- (5) *AEMO* 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), *AEMO* 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) *AEMO* 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) *AEMO* 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) **[Deleted]**
- (b) *AEMO* must not suspend the *spot market* solely because:
- (1) *dispatch prices* have reached the *market price cap*;
  - (1A) *spot prices* have reached the *market floor price*;
  - (2) *AEMO* has issued a *direction*; or
  - (3) *AEMO* has otherwise intervened in the market under rule 3.12.
- (c) *AEMO* 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 paragraph (c) must:
- (1) for each *market suspension pricing schedule period*, include details of:
    - (i) the payments made to each *Market Suspension Compensation Claimant* under the *market suspension pricing schedule*;
    - (ii) the compensation paid (if any) to each *Market Suspension Compensation Claimant* under clauses 3.14.5A, 3.14.5B and 3.15.7B; and
    - (iii) the share of compensation costs payable by each *Market Customer* in each *suspended region* and each *region* in which *dispatch prices* were affected in accordance with clause 3.14.5(f), as determined by *AEMO* under clause 3.15.8A; and
  - (2) be made available to *Registered Participants* and the public as soon as practicable after the conclusion of the *market suspension*.

- (e) A *Registered Participant* must co-operate in any such review conducted by *AEMO* (including making available relevant records and information).

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (f) A *Registered Participant* must provide to *AEMO* such information relating to the performance of its equipment during and after a suspension of the *spot market* as *AEMO* reasonably requires for the purposes of analysing or reporting on that suspension.

**Note**

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (g) *AEMO* 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 *AEMO* is required to conduct a review under this clause 3.14.3.

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

- (a) The *spot market* in a *region* can only be suspended by a declaration by *AEMO* in the circumstances described in clause 3.14.3(a), and *AEMO* must *publish* that declaration without delay.
- (b) **[Deleted]**
- (c) The *spot market* in a *region* is deemed to be suspended at the start of the *dispatch interval* in which *AEMO* makes a declaration that the *spot market* is suspended.
- (d) Following a declaration by *AEMO* under clause 3.14.3(a), the *spot market* is to remain suspended in the relevant *region* until *AEMO* 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 *AEMO* declares that the *spot market* is suspended:
  - (1) *AEMO* may issue *directions* to *Registered Participants* in accordance with clause 4.8.9; and
  - (2) *dispatch prices* and *ancillary service prices* in the relevant *region* are to be set by *AEMO* in accordance with clause 3.14.5 until the *time* at which the *spot market* is resumed.
- (f) *AEMO* must within 10 *business days* following the day on which, in accordance with the notice given by *AEMO* under paragraph (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*. *AEMO* 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

#### Definitions

- (a0) In this clause 3.14.5:

**suspension node** has the meaning given to it in clause 3.14.5(f).

- (a) Subject to paragraph (b), if the *spot market* is suspended in a *region* then *central dispatch* and the determination of *dispatch prices*, *spot prices* and *ancillary service prices* in the *suspended region* are to continue in accordance with rules 3.8 and 3.9.
- (b) If, in *AEMO's* reasonable opinion, it is not practicable to operate *central dispatch* and determine *dispatch prices* and *ancillary service prices* in a *suspended region* in accordance with rules 3.8 and 3.9, *AEMO* must set *dispatch prices* and *ancillary service prices* for the *suspended region* at the prices applicable to the relevant *dispatch interval* in the current *market suspension pricing schedule* developed and published in accordance with paragraph (e).
- (c) *Dispatch prices* and *ancillary service prices* determined in accordance with paragraph (b) for a *suspended region*:
  - (1) continue to be subject to the application of clause 3.14.2(d1) and clause 3.14.2(d2) in respect of *administered price periods*, and are to be adjusted (where applicable) in accordance with clause 3.14.2(e);
  - (2) are not to be adjusted in the circumstances set out in clause 3.9.2(e)(1) or clauses 3.9.2(e)(2) and 3.9.3; and
  - (3) are not subject to review under clause 3.9.2B.
- (d) If the *dispatch prices* and *ancillary service prices* in a *suspended region* are being determined in accordance with paragraph (b), they must continue to be determined in accordance with that paragraph until the earlier of:
  - (1) the time that the *spot market* is no longer suspended in the relevant *region*; and
  - (2) if *AEMO* declared the *spot market* to be suspended for the reason set out in clause 3.14.3(a)(1) or (3), the time that, in *AEMO's* reasonable opinion, it is practicable to resume *central dispatch* and the determination of *dispatch prices* and *ancillary service prices* in the *suspended region* in accordance with rules 3.8 and 3.9; and
  - (3) if *AEMO* declared the *spot market* to be suspended for the reason set out in clause 3.14.3(a)(2), the time that, in *AEMO's* reasonable opinion, it is practicable to resume *central dispatch* and the determination of *dispatch prices* and *ancillary service prices* in the *suspended region* in accordance with rules 3.8 and 3.9, provided that the *participating jurisdiction* that directed *AEMO* under clause

3.14.3(a)(2) has agreed to the resumption of *central dispatch* and the determination of *dispatch prices* and *ancillary service prices* in the *suspended region* in accordance with rules 3.8 and 3.9.

- (e) *AEMO* must:
  - (1) develop in accordance with the *Rules consultation procedures* a methodology to be used by *AEMO* (*market suspension pricing methodology*) to prepare and update schedules containing reasonable estimates of typical *market* prices during the periods to which the schedules relate (*market suspension pricing schedule*);
  - (2) develop and update the *market suspension pricing schedule* in accordance with the *market suspension pricing methodology*, to be used during any period in which the *spot market* is suspended; and
  - (3) *publish* the *market suspension pricing methodology* promptly after it has been developed and *publish* the *market suspension pricing schedule* at least 14 days prior to the first day to which the schedule relates.
- (f) If a *dispatch price* is set in accordance with paragraph (b) at a *regional reference node* (**suspension node**), then *dispatch prices* at all other *regional reference nodes* connected by one or more *regulated interconnectors* that have a net *energy* flow towards the suspension node must not exceed the *dispatch price* in the *suspended region* divided by the average *loss factor* that applies for *energy* flow in that direction for that *dispatch interval*.
- (g) Paragraph (f) does not apply to a *dispatch price* at another *regional reference node* that has been replaced in accordance with clause 3.9.2B or where clause 3.8.21(b) applies.
- (h) *AEMO* must use reasonable endeavours to ensure that any adjustments required to *dispatch prices* so that they do not exceed the limits set by paragraph (f) are finalised as soon as practicable but in any event by the end of the next *business day* following the day on which the *spot market* in the *region* ceased to be suspended
- (i) *AEMO* must determine the average *loss factor* applicable to paragraph (f) by reference to the *inter-regional loss factor* equations relating to the relevant *regulated interconnectors*.

### **3.14.5A Payment of compensation due to market suspension pricing schedule periods**

#### **Compensation - objective**

- (a) The objective for the payment of compensation under this clause 3.14.5A and clause 3.14.5B is to maintain the incentive for:
  - (1) *Scheduled Generators* to supply *energy*; and
  - (2) *Ancillary Service Providers* to supply *market ancillary services*, during *market suspension pricing schedule periods*.

### Payment to Market Suspension Compensation Claimants

- (b) Subject to paragraph (c), *AEMO* must pay compensation to *Market Suspension Compensation Claimants* calculated in accordance with paragraph (d) and clause 3.14.5B (as the case may be).
- (c) For the purpose of clauses 3.15.8A and 3.15.10C, the amount of compensation due to a *Market Suspension Compensation Claimant* pursuant to paragraph (b) must include interest on that amount computed at the average *bank bill rate* 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 *market suspension pricing schedule period* occurred and ending on the day on which payment is required to be made pursuant to clause 3.15.10C.
- (d) Subject to clause 3.14.5B, the compensation payable to each *Market Suspension Compensation Claimant* is to be determined in accordance with the formula set out below:

$$C = CO - RE$$

where:

C = the amount of compensation the *Market Suspension Compensation Claimant* is entitled to receive.

CO = the costs the *Market Suspension Compensation Claimant* is deemed to have incurred during the *market suspension pricing schedule period*, to be determined in accordance with the formula set out below:

$$CO = (SOG \times BVG) + (MWE \times BVAS)$$

where:

SOG = the sum of the *Market Suspension Compensation Claimant's sent out generation* (in MWh) during the *market suspension pricing schedule period*.

BVG = the amount (in \$/MWh) calculated in accordance with paragraph (e) below.

MWE = the sum of the relevant *market ancillary services* (in MW) which the *Market Suspension Compensation Claimant's ancillary service generating unit* has been enabled to provide during the *market suspension pricing schedule period*.

BVAS = the amount (in \$/MWh) calculated in



accordance with paragraph (f) below.

RE = the sum of the *trading amounts* determined pursuant to clauses 3.15.6 and 3.15.6A payable to the *Market Suspension Compensation Claimant* during the *market suspension pricing schedule period*,

and where C is a negative number, it will be deemed to be zero.

- (e) The benchmark value for *generation* (BVG) at paragraph (d) is to be determined in accordance with the formula set out below and the *market suspension compensation methodology* developed under paragraph (h):

$$\text{BVG} = \text{BC}_{(\text{av})} \times 1.15$$

where:

$\text{BC}_{(\text{av})}$  = the capacity-weighted average of the benchmark costs (BC) (in \$/MWh) of all *Scheduled Generators* in the same class of *Generator* and same *region* as the *Market Suspension Compensation Claimant*, with each benchmark cost to be determined in accordance with the formula below:

$$\text{BC} = (\text{FC} \times \text{E}) + \text{VOC}$$

where:

FC = the fuel cost (in \$/GJ) for the relevant *Generator*.

E = the efficiency (in GJ/MWh) for the relevant *Generator*.

VOC = the variable operating cost (in \$/MWh) for the relevant *Generator*.

In each case, the above inputs (FC, E and VOC) are to be the same as the equivalent inputs published in the *ISP database*. If there is no equivalent *NTNDP input* for "FC" or "E", it will be deemed to be 1. If there is no equivalent *NTNDP input* for "VOC", it will be deemed to be zero.

- (f) The benchmark value for *market ancillary services* (BVAS) at paragraph (d) is to be determined in accordance with the formula below:

$$\text{BVG} = \text{BC}_{(\text{av})} \times \left( \frac{0.15}{n} \right)$$

where:

$BC_{(av)}$  has the same meaning as in paragraph (e) above.

$n$  means the number of *trading intervals* within a one hour period.

- (g) *AEMO* must, in accordance with the *intervention settlement timetable*, advise each *Market Suspension Compensation Claimant* in writing:
  - (1) whether the *Market Suspension Compensation Claimant* is entitled to receive compensation pursuant to paragraph (b); and
  - (2) if so, the amount of compensation payable, as calculated in accordance with paragraph (d).

**Market suspension compensation methodology and schedule of benchmark values**

- (h) *AEMO* must develop, *publish* and make available on its website a methodology (*market suspension compensation methodology*) that specifies:
  - (1) the classes of *Scheduled Generator* and *Ancillary Service Provider* to be used for the purpose of calculating benchmark values;
  - (2) the approach to be adopted by *AEMO* in calculating the benchmark values for each class of *Scheduled Generator* and *Ancillary Service Provider* in each *region*, including determining the equivalent inputs published in the *ISP database* for the purpose of the calculation in paragraph (e); and
  - (3) *AEMO's* administrative fees associated with a claim for compensation under clause 3.14.5B or the manner in which those fees are to be determined.
- (i) *AEMO* may amend the *market suspension compensation methodology* from time to time in accordance with the *Rules consultation procedures*. Notwithstanding this paragraph (i), *AEMO* may make minor and administrative amendments to the *market suspension compensation methodology* without complying with the *Rules consultation procedures*.
- (j) *AEMO* must develop a schedule of benchmark values (**schedule of benchmark values**) for each class of *Scheduled Generator* and *Ancillary Service Provider* in each *region*, calculated in accordance with the formula set out in paragraphs (e) and (f), and using (where appropriate) the equivalent inputs published in the *ISP database*.
- (k) *AEMO* must *publish* and make available on its website an updated schedule of benchmark values no later than one month after each publication of the *Inputs, Assumptions and Scenario Report*.

**3.14.5B Claims for additional compensation due to market suspension pricing schedule periods**

- (a) Subject to paragraphs (b) and (c), *Market Suspension Compensation Claimants* may, within 15 *business days* of receipt of the notice referred to

in clause 3.14.5A(g), make a written submission to *AEMO* claiming an amount equal to the amount by which its direct costs of supplying *energy* or *market ancillary services* during the *market suspension pricing schedule period* exceed the sum of:

- (1) any compensation payable to the *Market Suspension Compensation Claimant* under clause 3.14.5A with respect to that *market suspension pricing schedule period*;
  - (2) the *Market Suspension Compensation Claimant's* "RE" as calculated under clause 3.14.5A(d); and
  - (3) any other compensation which the *Market Suspension Compensation Claimant* has received or is entitled to receive in connection with the relevant *generating unit* supplying *energy* or *market ancillary services* during that *market suspension pricing schedule period*.
- (b) Where a *Market Suspension Compensation Claimant* is a *Directed Participant* with respect to any *dispatch interval* during a *market suspension pricing schedule period*, such *Market Suspension Compensation Claimant*:
- (1) is entitled to make a claim under clause 3.15.7B(a); and
  - (2) is not entitled to make a claim under this clause 3.14.5B.
- (c) A written submission made by a *Market Suspension Compensation Claimant* pursuant to paragraph (a) must:
- (1) itemise each component of the claim;
  - (2) contain sufficient data and information to substantiate each component of the claim; and
  - (3) be signed by an authorised officer of the *Market Suspension Compensation Claimant* certifying that the written submission is true and correct.
- (d) For the purposes of paragraph (a), the direct costs incurred by the *Market Suspension Compensation Claimant* means:
- (1) fuel costs in connection with the relevant *generating unit*;
  - (2) incremental maintenance costs in connection with the relevant *generating unit*;
  - (3) incremental manning costs in connection with the relevant *generating unit*; and
  - (4) other direct costs reasonably incurred in connection with the relevant *generating unit*, where such costs are incurred to enable the *generating unit* to supply *energy* or *market ancillary services* during the *market suspension pricing schedule period*.
- (e) *AEMO* may recover from a *Market Suspension Compensation Claimant* an administrative fee to assist in recouping some of the costs incurred in carrying out its functions under this clause 3.14.5B (which costs may include fees for services rendered by an independent expert under clause 3.12.3). The administrative fees will be determined in accordance with the

*market suspension compensation methodology* developed pursuant to clause 3.14.5A(h).

(f) *AEMO*:

- (1) may (but is not required to) refer a claim by a *Market Suspension Compensation Claimant* under paragraph (a) to an independent expert to determine such claim in accordance with clause 3.12.3 where the claim is equal to or greater than \$50,000; and
- (2) must determine in its sole discretion if any claims by a *Market Suspension Compensation Claimant* made under paragraph (a) and not referred to an independent expert under subparagraph (f)(1) are reasonable, and if so, pay the amount claimed in accordance with clause 3.15.10C,

in accordance with the *intervention settlement timetable*.

(g) Where *AEMO* considers a claim made by a *Market Suspension Compensation Claimant* under paragraph (a) to be unreasonable, it must:

- (1) advise the *Market Suspension Compensation Claimant* of its determination in writing, setting out its reasons; and
- (2) refer the claim to an independent expert to determine the claim in accordance with clause 3.12.3.

### 3.14.6 Compensation due to the application of an administered price cap or administered floor price

#### Definitions

(a) For the purposes of this clause 3.14.6:

**compensation guidelines** means the guidelines made by the *AEMC* under paragraph (e).

**direct costs** means the costs directly incurred by the claimant due to a price limit event

**direct cost only claim** means a claim made under paragraph (i) that does not include a claim for opportunity costs.

**draft opportunity cost methodology** has the meaning given to it in clause 3.14.6(o)(2).

**eligibility period** means the period starting at the beginning of the first *trading interval* in which the price limit event occurs in a *trading day* and ending at the end of the final *dispatch interval* of the last *trading interval* of that *trading day*.

**opportunity costs** means the value of opportunities foregone by the claimant due to the price limit event as defined in the compensation guidelines.

**price limit event** means:

- (1) for *Scheduled Generators* and *Non-Scheduled Generators*:

- (i) the *dispatch price* for a *dispatch interval* is set by the *administered price cap* during an *administered price period*; or
  - (ii) the *dispatch price* for a *dispatch interval* is set as a result of the application of clause 3.14.2(e)(2);
- (2) for *Market Participants* in respect of *scheduled load*:
  - (i) the *dispatch price* for a *dispatch interval* is set by the *administered floor price* during an *administered price period*; or
  - (ii) the *dispatch price* for a *dispatch interval* is set as a result of the application of clause 3.14.2(e)(4); and
- (3) for *Scheduled Network Service Providers*:
  - (i) the *dispatch price* for a *dispatch interval* for a *region* towards which the *Scheduled Network Service Provider* is transporting power is set by the *administered price cap* during an *administered price period*; or
  - (ii) the *dispatch price* for a *dispatch interval* for a *region* towards which the *Scheduled Network Service Provider* is transporting power is set as a result of the application of clause 3.14.2(e)(2).
- (4) for *Ancillary Service Providers*, in respect of an *ancillary service generating unit* or an *ancillary service load*, the *ancillary service price* for a *dispatch interval* is set by the *administered price cap* during an *administered price period*.

**relevant region** means a *region* in which the *dispatch price* or *ancillary service price* (as relevant) is set by the price limit event.

**submission closing date** has the meaning given to it in clause 3.14.6(o)(3).

**total costs** means the direct costs and opportunity costs determined in accordance with the compensation guidelines provided that, in the case of a claimant that is a *Market Network Service Provider*, the total costs must be the costs incurred due to transporting power towards the relevant region and must not include costs incurred, or revenues earned, due to transporting power away from the relevant region.

### Eligibility for compensation

- (b) If a price limit event occurs then the following are eligible to claim *Registered Participants* compensation for the eligibility period:
  - (1) a *Scheduled Generator* or *Non-Scheduled Generator* in the relevant region;
  - (2) a *Market Participant* in respect of a *scheduled load* that has been *dispatched* in the relevant region in that eligibility period;
  - (3) a *Scheduled Network Service Provider* that transported power towards the relevant region; and
  - (4) an *Ancillary Service Provider* that provided *market ancillary services* in the relevant region in the eligibility period,

provided that the relevant claimant has incurred total costs during the eligibility period that exceed the total revenue it received from the *spot market* during that period.

#### **Compensation - objective and basis**

- (c) The objective of the payment of compensation under this clause 3.14.6 is to maintain the incentive for:
  - (1) *Scheduled Generators, Non-Scheduled Generators and Scheduled Network Service Providers* to supply *energy*;
  - (2) *Ancillary Service Providers* to supply *ancillary services*; and
  - (3) *Market Participants* with *scheduled load* to consume *energy* , during price limit events.
- (d) The amount of compensation payable in respect of a claim under this clause 3.14.6 must be based on direct costs and opportunity costs.

#### **Compensation guidelines**

- (e) The *AEMC* must, in accordance with the *transmission consultation procedures*, develop and *publish* guidelines (**compensation guidelines**) that are consistent with paragraphs (c) and (d) and that:
  - (1) define the types of opportunity costs in relation to which a person can make a claim under this clause 3.14.6;
  - (2) outline the methodology to be used to calculate the amount of any compensation payable in respect of a claim under this clause, including the methodology for calculating direct costs and opportunity costs; and
  - (3) set out the information *AEMO* and a claimant must provide to enable the *AEMC* to make a determination as to compensation under this clause 3.14.6.
- (f) The *AEMC* must ensure that there are compensation guidelines in place at all times.

#### **Note:**

The first compensation guidelines were made on 30 June 2009 and have been amended from time to time since that date. The current version of the compensation guidelines are available on the AEMC's website [www.aemc.gov.au](http://www.aemc.gov.au).

- (g) The *AEMC* may from time to time, in accordance with the *transmission consultation procedures*, amend or replace the compensation guidelines.

#### **Process for making a claim**

- (h) A person who is eligible under paragraph (b) may make a claim for compensation by providing the *AEMC* and *AEMO* with written notice of its claim in the form required by the compensation guidelines.
- (i) A claim under paragraph (h) must be made within 5 *business days* of notification by *AEMO* that an *administered price period* has ended.

### **Initial steps on receipt of claim**

- (j) Following its receipt of a notice under paragraph (h), the *AEMC* must promptly:
  - (1) publish a notice on its website stating that it has received a claim under paragraph (h). The notice must:
    - (i) provide information on the general nature of the claim;
    - (ii) state whether or not the claim is a direct cost only claim; and
    - (iii) state that the *AEMC* will publish a notice when it commences formal assessment of the claim; and
  - (2) seek such information from the claimant that the *AEMC* reasonably considers is required to enable assessment of the claim including, in the case of a claim other than a direct cost only claim, the methodology used by the claimant to determine its opportunity costs.

### **Formal commencement of claim**

- (k) As soon as practicable after the *AEMC* is reasonably satisfied that it has sufficient information from the claimant to assess its claim, the *AEMC* must publish a notice on its website that it has formally commenced its assessment of the claim specifying whether or not the claim is a direct cost only claim.

### **Determination of direct cost only claims**

- (l) Not later than 45 *business days* after publication of the notice under paragraph (k) in respect of a direct cost only claim, the *AEMC* must *publish* its final decision as to:
  - (1) whether compensation should be paid by *AEMO* in relation to the claim; and
  - (2) if so, the amount of compensation that should be paid.
- (m) Before making its final decision under paragraph (l) the *AEMC* must consult with the claimant.
- (n) In making its final decision under paragraph (l), the *AEMC* must apply the compensation guidelines unless it is satisfied that there are compelling reasons not to do so.

### **Determination of claims other than direct cost only claims**

- (o) In relation to a claim other than a direct cost only claim, the *AEMC* must, as soon as practicable but not later than 35 *business days* after publication of the notice under paragraph (k) *publish*:
  - (1) the claimant's proposed methodology for determining the claimant's opportunity costs;
  - (2) the methodology the *AEMC* proposes to use in determining the claimant's opportunity costs (**draft opportunity cost methodology**); and

- (3) an invitation for written submissions to be made to the *AEMC* on the draft opportunity cost methodology by a date not less than 20 *business days* after the invitation is made (**submission closing date**).
- (p) Any person may make a written submission to the *AEMC* on the draft opportunity cost methodology by the submission closing date.
- (q) Not later than 35 *business days* after the submission closing date the *AEMC* must *publish* its final decision on:
  - (1) the methodology it will use in determining the claimant's opportunity costs; and
  - (2) whether compensation should be paid by *AEMO* in relation to the claim; and
  - (3) if so, the amount of compensation that should be paid.
- (r) Before making its decision on the matters referred to in paragraph (q), the *AEMC* must consult with the claimant.
- (s) In making its final decision as to the matters referred to in paragraph (q), the *AEMC* must:
  - (1) take into account the submissions made in response to the invitation to in subparagraph (o)(3); and
  - (2) apply the compensation guidelines unless it is satisfied that there are compelling reasons not to do so.

#### **Extensions of time**

- (t) Despite anything to the contrary in this clause 3.14.6, the *AEMC* may extend a period of time specified in this clause if it considers the extension reasonably necessary to enable it to properly assess the claim because of the complexity or difficulty of assessing the claim or because of a material change in circumstances.
- (u) The *AEMC* must publish any extension of time made under paragraph (t).

#### **Costs of claim**

- (v) The *AEMC* may recover from a claimant for compensation under this clause any costs that are incurred by the *AEMC* in carrying out their functions under this clause in respect of that claim. For this purpose the *AEMC* may require the claimant to pay all or a proportion of those costs to the *AEMC* prior to the claim being considered or determined.

### **3.15 Settlements**

#### **3.15.1 Settlements management by AEMO**

- (a) *AEMO* 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*;
  - (3) negative *settlements residue* under clause 3.6.5; and



(4) under clause 3.15.6A.

- (b) *AEMO* must determine the *Participant fees* and the *Market Participants* must pay them to *AEMO* in accordance with the provisions of rule 2.11.

### 3.15.2 Electronic funds transfer

- (a) *AEMO* 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 *AEMO*, all *Market Participants* must use the EFT facility provided by *AEMO* 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) *AEMO* 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:

$$AGE = ME \times DLF$$

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:

$$AGE = ME - AAGE$$

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 relevant *intra-regional loss factor* at that *connection point* or *virtual transmission node* respectively, and for any other *connection point*, is the relevant *intra-regional loss factor* at the *transmission network connection point* or *virtual transmission node* to which it is assigned in accordance with clause 3.6.2(b)(2); 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.

**Note**

Where two *intra-regional loss factors* are determined for a *transmission network connection point* under clause 3.6.2(b)(2), AEMO will determine the relevant *intra-regional loss factor* for use under this clause in accordance with the procedure determined under clause 3.6.2(d1).

- (b) Except with respect to any *dispatch interval* in a *market suspension pricing schedule period* in relation to which AEMO has issued a *direction* to a *Market Suspension Compensation Claimant*, AEMO is entitled to the *trading amount* resulting from a *AEMO 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 *AEMO intervention event*, rendered as a consequence of that event.

### 3.15.6A Ancillary service transactions

**Definitions**

- (a0) In this clause 3.15.6A:

**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*;

a *connection point* is a relevant *connection point* of a *Market Customer* if:

- (1) the *Market Customer* is *financially responsible* for the *connection point*; and
- (2) the *load* at that *connection point* has been classified (or is deemed to be classified) as a *market load*.

**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;

a *connection point* is an applicable *connection point* of a *Market Generator* if:

- (1) the *Market Generator* is *financially responsible* for the *connection point*; and
- (2) the *connection point* connects a *market generating unit* to the *national grid*.

**regional benefit ancillary services procedures** means the procedures to determine the relative benefit that each *region* is estimated to receive from the provision of *NMAS*.

**regional benefit factors** means the factors to allocate, between *regions*, the costs associated with the provision of *NMAS* under each *ancillary services agreement* in accordance with the regional benefit ancillary services procedures.

**Scheduled Participant** has the meaning given to it by clause 3.15.6A(k)(5).

**small generator energy** in respect of a *Market Small Generation Aggregator* for a *trading interval* means the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Small Generation Aggregator's* applicable *connection points*, provided that, if the sum of those figures is negative, then the *Market Small Generation Aggregator's small generator energy* for that *trading interval* is zero; and

a *connection point* is an applicable *connection point* of a *Market Small Generator Aggregator* if:

- (1) the *Market Small Generator Aggregator* is *financially responsible* for the *connection point*; and
  - (2) the *connection point* connects a *small generating unit* classified as a *market generating unit* to the *national grid*.
- (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:

$TA = \text{the aggregate of } \frac{EA \times ASP}{(12)}$  for each *dispatch interval* in a *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 relation to each *NMAS provider* who provides *non-market ancillary services* under an *ancillary services agreement*, an *ancillary services transaction* occurs, which results in an amount payable by *AEMO* to the *NMAS provider* determined in accordance with that agreement.

(b1) Where an amount is payable by *AEMO*:

- (1) under clause 4.3.6(o); or
- (2) under paragraph (b) where it is not determined on a *trading interval basis*,

that amount is recovered in accordance with the relevant paragraphs (c8), (c9), (d) and (e), except that a reference to *trading interval* in the calculation of RBF, AGE, AAGE, TGE, ATGE, TSGE, ATSGE, TCE, ATCE is to be read as "the relevant period", and any other reference to *trading interval* in those paragraphs is to be read as the "relevant *billing period*".

(c) **[Deleted]**

(c1) **[Deleted]**

(c2) Subject to paragraph (b1), *AEMO* must recover its liabilities under *ancillary services agreements* for the provision of:

- (1) *NSCAS* from *Market Customers* in each *region* in accordance with paragraphs (c8) and (c9); and
- (2) *SRASs*, from:
  - (i) *Market Generators* and *Market Small Generation Aggregators* in each *region* in accordance with paragraph (d); and
  - (ii) *Market Customers* in each *region* in accordance with paragraph (e).

(c3) In the statements to be provided under clauses 3.15.14 and 3.15.15 to a *Market Customer*, *AEMO* must separately identify the portion of the total amount payable by *AEMO* in respect of the relevant *billing period* under *ancillary services agreements* for the provision of *NSCAS* that:

- (1) benefits specific *regions* in which there is a *connection point* for which the *Market Customer* is *financially responsible* (being the *regional* amounts given by the first summated term in the paragraph (c8) formula); and
- (2) does not benefit specific *regions* (being the amount *TNSCASp* in the paragraph (c9) formula).

- (c4) *AEMO* must develop and *publish* the regional benefit ancillary services procedures in accordance with the *Rules consultation procedures*. Without limiting the matters to be included in the regional benefit ancillary services procedures, they must require *AEMO* to take into account:
- (1) for an *NSCAS*, the estimated increase for each *region* of the gross economic benefit from increased *power transfer capability*; and
  - (2) for an *SRAS*, that can be used to restart *generating units* in two or more *regions*, the relative benefit provided by that service to each *region*.
- (c5) Subject to paragraph (c6), *AEMO* may amend the regional benefit ancillary services procedures from time to time in accordance with the *Rules consultation procedures*.
- (c6) *AEMO* may make minor and administrative amendments to the regional benefit ancillary services procedures without complying with the *Rules consultation procedures*.
- (c7) From time to time, *AEMO* must determine the regional benefit factors.
- (c8) In each *trading interval*, in relation to each *Market Customer* for each *region*, an *ancillary services* transaction occurs, which results in a *trading amount* for the *Market Customer* determined in accordance with the following formula:

$$TA_{P,R} = \left( \sum_{\text{for all 'S'}} (TNSCAS_{S,P} \times RBF_{S,P,R}) \right) \times \frac{AGE_{P,R}}{AAGE_{P,R}} \times -1$$

Where

Subscript 'P' is the relevant period;

Subscript 'R' is the relevant

Subscript 'S' is the relevant *NSCAS*;

$TA_{P,r}$  (in \$) = *trading amount* payable by the *Market Customer* in respect of the relevant *region* and *trading interval*;

$TNSCAS_{S,p}$  the total amount payable by *AEMO* for the provision of the relevant *NSCAS* under an *ancillary services agreement* in respect of the relevant *trading interval*;

$RBF_{S,p,r}$  (number) = the latest regional benefit factor assigned to the provision of the relevant *NSCAS* under an *ancillary services agreement* in respect of the relevant *region* and *trading interval*, as determined by *AEMO* under paragraph (c7);

$AGE_{P,r}$  (in MWh) = the sum of the *adjusted gross energy* figures in respect of the *Market Customer's* relevant *connection points* located in the *region* for the relevant *trading interval*; and

$AAGE_{P,r}$  (in MWh) = the aggregate  $AGE_{P,r}$  figures for all *Market Customers* in respect of the relevant *region* and *trading interval*.

- (c9) 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:

$$TA_P = TNSCASP \times \frac{AGE_P}{AAGE_P} \times -1$$

Where

Subscript 'P' is the relevant period;

$TA_P$  (in \$) = the *trading amount* payable by the *Market Customer* in respect of the relevant *trading interval*;

$TNSCASP$  (in \$) = the sum of all amounts payable by *AEMO* for the provision of *NSCAS* under *ancillary services agreements* in respect of the relevant *trading interval* minus the sum of the *trading amounts* calculated for all *Market Customers* in respect of all of the relevant *trading interval* under paragraph (c8);

$AGE_P$  (in MWh) = the sum of the *adjusted gross energy* figures in respect of all the *Market Customer's* relevant *connection points* for the relevant *trading interval*; and

$AAGE_P$  (in MWh) = the aggregate  $AGE_P$  figures for all *Market Customers* in respect of the relevant *trading interval*.

- (c10) *AEMO* must *publish* the regional benefit factors determined under paragraph (c7);
- (d) In each *trading interval*, in relation to each *Market Generator* and each *Market Small Generation Aggregator* for each *region*, an *ancillary services* transaction occurs, which results in a *trading amount* for the *Market Generator* or the *Market Small Generation Aggregator* determined in accordance with the following formula:

$$TA = \sum \left( \left( \frac{SRP_i \times RBF_{Ri}}{2} \right) \times \left( \frac{TGE_R + TSGE_R}{ATGE_R + ATSGE_R} \right) \right) \times -1$$

Where

$TA$  (in \$) = the *trading amount* to be determined in respect of the relevant region and *trading interval* (which is a negative number);

$SRP_i$  (in \$) = the amount payable by *AEMO* in respect of the *trading interval* under an individual *ancillary services agreement* in respect of the provision of a specific *SRAS* or, for the purposes of clause 4.3.6(q), the compensation payable by *AEMO* under clause 4.3.6(o) for the relevant *billing period*;

$RBF_{Ri}$  (number) = the latest regional benefit factor assigned to the provision of the relevant *SRAS* under an individual *ancillary services agreement* in respect of the relevant *region* and *trading interval*, as determined by *AEMO* under paragraph (c7);

$TGE_R$  (in MWh) = the *generator energy* for the *Market Generator* for the *trading interval* in that *region*;

$TSGE_R$  (in MWh) = the *small generator energy* for the *Market Small Generator Aggregator* for the *trading interval* in that *region*;

$ATGE_R$  (in MWh) = the aggregate of the *generator energy* figures for all *Market Generators* for the *trading interval* in that *region*; and

$ATSGE_R$  (in MWh) = the aggregate of the *small generator energy* figures for all *Market Small Generator Aggregators* for the *trading interval* in that *region*.

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

$$TA = \sum \left( \left( \frac{SRP_i \times RBF_{Ri}}{2} \right) \times \frac{TCE_R}{ATCE_R} \right) \times -1$$

Where

$TA$  (in \$) = the *trading amount* to be determined in respect of the relevant *region* and *trading interval* (which is a negative number);

$SRP_i$  (in \$) = has the meaning given in clause 3.15.6A(d);

$RBF_{Ri}$  (number) = the latest regional benefit factor assigned to the provision of the relevant *SRAS* under an individual *ancillary services agreement* in respect of the relevant *region* and *trading interval*, as determined by *AEMO* under paragraph (c7);

$TCE_R$  (in MWh) = the *customer energy* for the *Market Customer* for the *trading interval* in that *region*; and

$ATCE_R$  (in MWh) = the aggregate of the *customer energy* figures for all *Market Customers* for the *trading interval* in that *region*.

- (f) The total amount calculated by *AEMO* 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). *AEMO* must:
- (1) allocate for each *region* and for each *dispatch interval* within the relevant *trading interval* the proportion of the total amount calculated by *AEMO* 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 market ancillary service requirement* 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 market 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 market 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* and *small generator energy* for the *Market Small Generation Aggregators* 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* and each *Market Small Generation Aggregator* in a given *region*, an ancillary services transaction occurs, which results in a *trading amount* for that *Market Generator* and that *Market Small Generation Aggregator* determined in accordance with the following formula:

$$TA = RTCRSP \times \frac{TGE + TSGE}{RATGE + RATS GE} \times -1$$

where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
RTCRSP (in \$)	=	the total of all amounts calculated by <i>AEMO</i> as appropriate to recover from the given <i>region</i> as calculated in this clause 3.15.6A(f) for the <i>fast raise service</i> , <i>slow raise service</i> or <i>delayed raise service</i> in respect of <i>dispatch intervals</i> which fall in the <i>trading interval</i> ;
TGE (in MWh)	=	the <i>generator energy</i> for the <i>Market Generator</i> in that <i>region</i> for the <i>trading interval</i> ;
TSGE (in MWh)	=	the <i>small generator energy</i> for the <i>Market Small Generation Aggregator</i> in that <i>region</i>

for the *trading interval*;

RATGE (in MWh) = the aggregate of the *generator energy* figures for all *Market Generators* in that *region* for the *trading interval*; and

RATSGE (in MWh) = the aggregate of the *small generator energy* figures for all *Market Small Generator Aggregators* in that *region* for the *trading interval*.

- (g) The total amount calculated by *AEMO* 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). *AEMO* must:
- (1) allocate for each *region* and for each *dispatch interval* within the relevant *trading interval* the proportion of the total amount calculated by *AEMO* 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 market ancillary service requirement* 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 market 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 market 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 <i>trading amount</i> to be determined (which is a negative number);
RTCLSP (in \$)	=	the total of all amounts calculated by AEMO as appropriate to recover from the given <i>region</i> as calculated in this clause 3.15.6A(g) for the <i>fast lower service</i> , <i>slow lower service</i> or <i>delayed lower service</i> in respect of <i>dispatch intervals</i> which fall in the <i>trading interval</i> ;
TCE (in MWh)	=	the <i>customer energy</i> for the <i>Market Customer</i> in that <i>region</i> for the <i>trading interval</i> ; and
RATCE (in MWh)	=	the aggregate of the <i>customer energy</i> figures for all <i>Market Customers</i> in that <i>region</i> for the <i>trading interval</i> .

- (h) The total amount calculated by AEMO under paragraph (a) for the *regulating raise service* or the *regulating lower service* in respect of each *dispatch interval* which falls within the *trading interval* must be allocated by AEMO to each *region* in accordance with the following procedure and the information provided under clause 3.9.2A(b):
- (1) allocate on a pro-rata basis for each *region* and for each *dispatch interval* within the relevant *trading interval* the proportion of the total amount calculated by AEMO under paragraph (a) for the *regulating raise service* and *regulating lower service* between *global market ancillary service requirements* and *local market ancillary service requirements* to the respective marginal prices for each such service; and
  - (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 *local market ancillary service requirements* for all *regions*, as determined under subparagraph (1).
- (i) In each *trading interval* in relation to:
- (1) each *Market Generator*, *Market Small Generation Aggregator* 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*, *Market Small*

*Generation Aggregator* or *Market Customer* determined in accordance with the following formula:

$$TA = PTA \times -I$$

and

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

for each *dispatch interval* in the *trading interval* for *global market ancillary service requirements* and *local market ancillary service requirements* 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 AEMO under paragraph (h)(2) 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 contribution factor last set by AEMO for the <i>Market Generator</i> , <i>Market Small Generation Aggregator</i> or <i>Market Customer</i> , as the case may be, under paragraph (j) for the <i>region</i> or <i>regions</i> relevant to the <i>regulating raise service</i> or <i>regulating lower service</i> ; and
AMPF (a number)	=	the aggregate of the MPF figures for all <i>Market Participants</i> for the <i>dispatch interval</i> for the <i>region</i> or <i>regions</i> relevant to the <i>regulating raise service</i> or <i>regulating lower service</i> .

or

- (2) in relation to each *Market Customer* for whom the *trading amount* is not calculated in accordance with the formula in subparagraph (1), an ancillary services transaction occurs, which results in a trading amount for that *Market Customer* determined in accordance with the following formula:

$$TA = PTA \times -I$$

and

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

for each *dispatch interval* in the *trading interval* for *global market ancillary service requirements* and *local market ancillary service requirements* where:

TA (in \$)	=	the <i>trading amount</i> to be determined (which is a negative number);
TSFCAS (in \$)	=	has the meaning given in subparagraph (1);
MPF (a number)	=	the aggregate of the contribution factor set by <i>AEMO</i> under paragraph (j) for <i>Market Customers</i> , for whom the <i>trading amount</i> is not calculated in accordance with the formula in subparagraph (1) for the <i>region</i> or <i>regions</i> relevant to the <i>regulating raise service</i> or the <i>regulating lower service</i> ;
AMPF (a number)	=	the aggregate of the MPF figures for all <i>Market Participants</i> for the <i>dispatch interval</i> for the <i>region</i> or <i>regions</i> relevant to the <i>regulating raise service</i> or <i>regulating lower service</i> ;
TCE (in MWh)	=	the <i>customer energy</i> for the <i>Market Customer</i> for the <i>trading interval</i> in the <i>region</i> or <i>regions</i> relevant to the <i>regulating raise service</i> or <i>regulating lower service</i> ; and
ATCE (in MWh)	=	the aggregate of the <i>customer energy</i> figures for all <i>Market Customers</i> , for whom the <i>trading amount</i> is not calculated in accordance with the formula in subparagraph (1), for the <i>trading interval</i> for the <i>region</i> or <i>regions</i> relevant to that <i>regulating raise service</i> or <i>regulating lower service</i> .

(j) *AEMO* must determine for the purpose of paragraph (i):

- (1) a contribution factor for each *Market Participant*; and
- (2) notwithstanding the estimate provided in paragraph (nb), if a *region* has or *regions* have operated asynchronously during the relevant *trading interval*, the contribution factors relevant to the allocation of *regulating raise service* or *regulating lower service* to that *region* or *regions*,

in accordance with the procedure prepared under paragraph (k).

- (k) *AEMO* must prepare a procedure for determining contribution factors for use in paragraph (j) and, where *AEMO* considers it appropriate, for use in paragraph (nb), 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) for the purpose of paragraph (j)(2), the contribution factor determined for a group of *regions* for all *Market Customers* that do not have metering to allow the individual contribution of that *Market Customer* to the aggregate need for *regulation services* to be assessed, must be divided between *regions* in proportion to the total *customer energy* for the *regions*;
  - (4) 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 *AEMO*;
  - (5) 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*:
    - (i) subject to the provision of *primary frequency response* by that Scheduled Participant in accordance with the *Primary Frequency Response Requirements*, the Scheduled Participant achieves its *dispatch* target at a uniform rate;
    - (ii) the Scheduled Participant is *enabled* to provide a *market ancillary service* and responds to a control signal from *AEMO* to *AEMO's* satisfaction; or
    - (iii) 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;
  - (6) where contributions are aggregated for *regions* that are operating asynchronously during the calculation period under paragraph (i), the contribution factors should be normalised so that the total contributions from any non-synchronised *region* or *regions* is in the same proportion as the total *customer energy* for that *region* or *regions*; and
  - (7) a *Semi-Scheduled Generator* will not be assessed as contributing to the deviation in the *frequency* of the *power system* if within a *dispatch interval*, the *semi-scheduled generating unit*:
    - (i) subject to the provision of *primary frequency response* by that *semi-scheduled generating unit* in accordance with the *Primary*

*Frequency Response Requirements*, achieves its *dispatch level* at a uniform rate;

- (ii) is *enabled* to provide a *market ancillary service* and responds to a control signal from AEMO to AEMO's satisfaction; or
  - (iii) is not *enabled* to provide a *market ancillary service*, but responds to a need for *regulation services*.
- (l) AEMO may amend the procedure referred to in clause 3.15.6A(j) from time to time.
  - (m) AEMO must comply with the *Rules consultation procedures* when making or amending the procedure referred to in clause 3.15.6A(k).
  - (n) AEMO 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*, AEMO must *publish* the factors determined in accordance with clause 3.15.6A(j)(1) 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).
  - (nb) When a *region* is or *regions* are operating asynchronously, AEMO must *publish* (where appropriate in accordance with the procedure developed under paragraph (k)), an estimate of the contribution factors referred to in paragraph (j)(2) to be applied for information purposes only by *Market Participants* for the duration of the separation.
  - (o)
- [Deleted]**
- (p) When AEMO dispatches a quantity of *regulating raise service* or *regulating lower service* in addition to the quantity it determines in accordance with the *dispatch algorithm*, AEMO must:
    - (1) for the purposes of paragraphs (f) and (g), include the additional quantity in the cost of *delayed services*; and
    - (2) for the purposes of paragraphs (h) and (i), exclude the additional quantity in the cost of *regulation services*,
 taking into account the requirements in clauses 3.8.1(a) and (b) to maximise the value of *spot market* trading.

### **3.15.7 Payment to Directed Participants**

- (a) Subject to paragraphs (b) and (d1), AEMO 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*.
- (a1) AEMO must compensate each *Directed Participant* for the provision of:
  - (1) *energy* or *market ancillary services* pursuant to a *direction*, under this clause 3.15.7 and clause 3.15.7B, as the case may be; and

- (2) services, other than *energy* or *market ancillary services*, pursuant to a *direction* (**other compensable services**), in accordance with the fair payment compensation for those services determined under clause 3.15.7A.
- (a2) For the purpose of paragraph (a1) a *Directed Participant* provides *energy* or *market ancillary services* if it was *directed* to provide one or more of the following services:
  - (1) *energy*;
  - (2) any one of the *market ancillary services*;
  - (3) a service that is a direct substitute for *energy* or a *market ancillary service*; or
  - (4) a service that was provided by the *Directed Participant* where *energy* or *market ancillary services* are provided incidental to the provision of that service, including without limitation:
    - (i) *inertia*;
    - (ii) *voltage* control; and
    - (iii) system strength.
- (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 3.15.7(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

$$DCP = AMP \times DQ$$

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 *ancillary service prices* (as the case may be) for the relevant service provided by *Scheduled Generators*, *Semi-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 *AEMO* issues a *direction*:
  - (1) the *Directed Participant* had submitted a *dispatch bid, dispatch offer or rebid* acknowledged by *AEMO* in accordance with clause 3.8.8 for *dispatch* of the service that is to be *dispatched* in accordance with the *direction*; and
  - (2) the *direction* was issued because *AEMO* was prevented from *dispatching* the *Directed Participant's plant* in accordance with that *dispatch bid, dispatch offer or rebid* due to a failure of the *central dispatch process*,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* acknowledged by *AEMO* in accordance with clause 3.8.8, as the case may be.
- (d1) Where a *Directed Participant* is also a *Market Suspension Compensation Claimant* with respect to any *dispatch interval* in relation to which *AEMO* has issued a *direction*, such *Directed Participant*:
  - (1) may be entitled to compensation calculated in accordance with clause 3.14.5A(d); and
  - (2) is not entitled to compensation calculated in accordance with paragraph (c).
- (e) *AEMO* 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**

#### **AEMO to determine if Directed Participant provided an other compensable service**

- (a) If *AEMO* has issued a *direction*, *AEMO* must, in its reasonable opinion, determine whether the *Directed Participant* that was issued the *direction* was required to provide an *other compensable service* in order to comply with that *direction*.

- (b) *AEMO* must within 10 *business days* of issuing the *direction* referred to in paragraph (a), notify the relevant *Directed Participant* of *AEMO's* determination under paragraph (a), and such notice must include:
  - (1) the date and time of the relevant *direction*;
  - (2) the *scheduled plant* or *market generating unit* the subject of the relevant *direction*;
  - (3) the circumstances of the relevant *direction*;
  - (4) *AEMO's* determination as to whether an *other compensable service* was provided in order to comply with the *direction* and, if applicable, a description of the *other compensable service* provided; and
  - (5) *AEMO's* reasons for its determination.
- (c) If *AEMO* determines pursuant to paragraph (a) that the *Directed Participant* was not required to provide an *other compensable service* in order to comply with the relevant *direction*, the *Directed Participant* may, within 10 *business days* of receipt of the notice referred to in paragraph (b), make a written submission to *AEMO* setting out its reasons for why it considers that an *other compensable service* was required to be provided by the *Directed Participant* in complying with that *direction*.
- (d) *AEMO* must take into consideration any submissions referred to in paragraph (c), and must within 10 *business days* of receipt of such submissions, notify the *Directed Participant* of its final determination as to whether an *other compensable service* was required to be provided by the *Directed Participant* in complying with the relevant *direction*, including *AEMO's* reasons for its determination.

**Directed Participant not required to provide an other compensable service not entitled to compensation**

- (e) A *Directed Participant* that was not required to provide an *other compensable service* in order to comply with a *direction*:
  - (1) is not entitled to compensation under this clause 3.15.7A; and
  - (2) is not entitled to claim additional compensation under clause 3.15.7B.

**Directed Participant required to provide an other compensable service can claim fair payment compensation**

- (f) If *AEMO* determines pursuant to paragraph (a) that the *Directed Participant* was required to provide an *other compensable service* in order to comply with the relevant *direction*, the *Directed Participant* may, within 15 *business days* of receipt of the notice referred to in paragraph (b), make a written submission to *AEMO* claiming compensation under this clause 3.15.7A at the fair payment compensation of the *other compensable services* provided pursuant to that *direction*.
- (g) For the purpose of determining the fair payment compensation under this clause 3.15.7A, the following must be taken into account:
  - (1) relevant contractual arrangements which specify a price for the relevant service;

- (2) the loss of revenue incurred by the *Directed Participant* in respect of a *scheduled generating unit, semi-scheduled generating unit, scheduled load, ancillary service generating unit, market generating unit, ancillary services load* or *scheduled network services*, as the case may be, as a result of the provision of the *other compensable service* under *direction*;
- (3) the net direct costs incurred by the *Directed Participant* in respect of that *scheduled generating unit, semi-scheduled generating unit, market generating unit, ancillary service generating unit, scheduled load, ancillary service load, or scheduled network services*, as the case may be, as a result of the provision of the *other compensable service* under *direction* including without limitation:
  - (i) fuel costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (ii) incremental maintenance costs in connection with the relevant *generating unit, load* or *scheduled network services*;
  - (iii) incremental manning costs in connection with the relevant *generating unit, load* or *scheduled network services*;
  - (iv) acceleration costs of maintenance work in connection with the relevant *generating unit, load* or *scheduled network services*, where such acceleration costs are incurred to enable the *generating unit, load* or *scheduled network services* to comply with the *direction*;
  - (v) delay costs for maintenance work in connection with the relevant *generating unit, load* or *scheduled network services*, where such delay costs are incurred to enable the *generating unit, load* or *scheduled network services* to comply with the *direction*; and
  - (vi) other costs incurred in connection with the relevant *generating unit, load* or *scheduled network services*, where such costs are incurred to enable the *generating unit, load* or *scheduled network services* to comply with the *direction*.

**AEMO must refer claims to an independent expert in certain circumstances**

- (h) *AEMO* must, in accordance with the *intervention settlement timetable* refer a claim by a *Directed Participant* pursuant to paragraph (f) to an independent expert to determine such claim in accordance with clause 3.12.3 if:
  - (1) the claim is equal to or greater than \$20,000; or
  - (2) *AEMO* considers that the claim is unreasonable; or
  - (3) *AEMO* considers that the assessment of the claim involves issues of complexity or difficulty.
- (i) If *AEMO* considers that either of paragraphs (h)(2) or (h)(3) apply, *AEMO* must, in accordance with the *intervention settlement timetable* advise the *Directed Participant* in writing of its decision, setting out its reasons.

- (j) *AEMO* must include as part of the terms of appointment of an independent expert all the requirements set out in clause 3.12.3(c), and the additional following requirements:
  - (1) that the independent expert must, in determining the fair payment compensation of the relevant *other compensable service* for the purposes of this clause 3.15.7A, only take into account:
    - (i) the factors referred to in paragraph (g) and;
    - (ii) the following principles:
      - (A) the disinclination of *Directed Participants* to provide the *other compensable service* the subject of the *direction* must be disregarded; and
      - (B) the urgency of the need for the *other compensable service* the subject of the *direction* must be disregarded;
  - (2) that the independent expert's draft report must set out a description of the *other compensable services* provided in response to the *direction*;
  - (3) that the independent expert's final report must set out the description of the *other compensable services* provided in response to the *direction*.

**AEMO may determine compensation itself in some circumstances**

- (k) If none of the factors set out in paragraph (h) apply, then *AEMO* may, after taking into account any submissions received in accordance with paragraph (f), determine in its sole discretion the amount of compensation payable to a *Directed Participant* under this clause 3.15.7A in relation to that *Directed Participant's* claim pursuant to paragraph (f).
- (l) Subject to paragraph (h), if a *Directed Participant* entitled to make a written submission pursuant to paragraph (f) has not provided such a submission to *AEMO* within 15 *business days* of receipt of the notice referred to in paragraph (b), then *AEMO* may at its sole discretion determine the amount of compensation payable to that *Directed Participant* under this clause 3.15.7A at the fair payment compensation of the *other compensable services* provided pursuant to the relevant *direction*.
- (m) If *AEMO* decides in accordance with either of paragraphs (k) or (l) to determine compensation payable to a *Directed Participant* under this clause 3.15.7A in relation to that *Directed Participant's* claim pursuant to paragraph (f) *AEMO* must in accordance with the *intervention settlement timetable*:
  - (1) *publish* and deliver in writing to the relevant *Directed Participant* a draft determination detailing *AEMO's* calculation of the amount of compensation receivable by that party pursuant to clause 3.15.7A, and request submissions from the *Directed Participant* on that draft determination;
  - (2) take into consideration any written submissions made by the relevant *Directed Participant* in relation to the draft determination, if *AEMO*

receives those submissions within 15 *business days* of delivering the draft assessment to that *Directed Participant*; and

- (3) prepare, *publish* and deliver in writing to the relevant *Directed Participant* its final determination of the amount of compensation receivable by that *Directed Participant* pursuant to this clause 3.15.7A.
- (n) The final determination by *AEMO* in accordance with paragraph (m)(3) is final and binding.

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

- (a) Subject to clause 3.15.7B(a4), a *Directed Participant* entitled to compensation pursuant to clause 3.14.5A(d) or clause 3.15.7 may, within 15 *business days* of receipt of the advice referred to in clauses 3.14.5A(g) or 3.15.7(e), make a written submission to *AEMO* 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*, *semi-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 3.14.5A(g) or clause 3.15.7(e); 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) [Deleted]
- (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 *AEMO* requesting compensation from *AEMO* for that difference.
- (a3) For the purposes of the calculation of additional net direct costs pursuant to paragraph (a)(1), the additional net direct costs incurred by the *Directed Participant* in respect of that *scheduled generating unit*, *semi-scheduled generating unit* or *scheduled network services* (as the case may be) includes without limitation:
  - (1) fuel costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (2) incremental maintenance costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (3) incremental manning costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (4) acceleration costs of maintenance work in connection with the relevant *generating unit* or *scheduled network services*, where such

- acceleration costs are incurred to enable the *generating unit* or *scheduled network services* to comply with the *direction*;
- (5) delay costs for maintenance work in connection with the relevant *generating unit* or *scheduled network services*, where such delay costs are incurred to enable the *generating unit* or *scheduled network services* to comply with the *direction*;
  - (6) other costs incurred in connection with the relevant *generating unit* or *scheduled network services*, where such costs are incurred to enable the *generating unit* or *scheduled network services* 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 relevant *generating unit* or *scheduled network services* being available.
- (a4) In respect of a single *direction*, a *Directed Participant* may only make a claim pursuant to clauses 3.15.7B(a) or 3.15.7B(a2) if the amount of the claim is greater than \$5,000.
- (b) The submissions pursuant to clauses 3.15.7B(a) 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, 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) *AEMO* must, in accordance with the *intervention settlement timetable*:
- (1) refer a claim by a *Directed Participant* under clause 3.15.7B(a) or 3.15.7B(a2) 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) and 3.15.7B(a2) are reasonable and if so pay the amount claimed in accordance with clause 3.15.10C.
- (d) If *AEMO* considers that a claim by a *Directed Participant* under clause 3.15.7B(a) 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

#### Definitions

(a0) In this clause 3.15.8:

**ancillary service compensation recovery amount** has the meaning given to it in clause 3.15.8(e).

**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;

a *connection point* is a "relevant connection point" of a *Market Customer* if:

- (1) the *Market Customer* is *financially responsible* for the *connection point*; and
- (2) the *load* at that *connection point* has been classified (or is deemed to be classified) as a *market load*.

**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;

a *connection point* is an "applicable connection point" of a *Market Generator* if:

- (1) the *Market Generator* is *financially responsible* for the *connection point*; and
- (2) the *connection point* connects a *market generating unit* to the *national grid*.

**small generator energy** in respect of a *Market Small Generation Aggregator* for a *trading interval* means the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Small Generation Aggregator's* applicable connection points, provided that, if the sum of those figures is negative, then the *Market Small Generation Aggregator's* small generator energy for that *trading interval* is zero; and

a *connection point* is an "applicable connection point" of a *Market Small Generation Aggregator* if:

- (1) the *Market Small Generation Aggregator* is *financially responsible* for the *connection point*; and
- (2) the *connection point* connects a *small generating unit* classified as a *market generating unit* to the *national grid*.

(a) AEMO 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 *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO* to *Directed Participants* (other than *Directed Participants* who are also *Market Suspension Compensation Claimants*) pursuant to clause 3.15.7(a) in respect of a *direction* for the provision of *energy*; plus
  - (iii) the total amount payable by *AEMO* to the independent expert pursuant to clause 3.12.3(c).
- (b) *AEMO* must, in accordance with the *intervention settlement timetable*, calculate a figure for each *Market Customer* in each *region* applying the following formula:

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

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 *AEMO* pursuant to clause 3.15.8(b1) at the time of issuing the *direction*.

*CRA* is the *compensation recovery amount*.

#### **Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b1) *AEMO* 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) *AEMO* 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 *AEMO* 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 *AEMO* pursuant to clause 3.15.8(b), subject to the provisions of clause 3.15.22.
- (e) *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO* 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) *AEMO* must use the appropriate formula set out in clause 3.15.6A(c8), (c9), (d), (e), (f), (g), (h) or (i) depending on which *ancillary service* was the subject of the *direction*;
  - (2) TNSCASP, TSRP, RTCRSP, RTCLSP 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, TSGE, AGE, ATCE, ATGE, ATSGE or AAGE 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 AEMO under clause 3.12.2 and 3.15.7 not recovered under clauses 3.15.8(b) and 3.15.8(e) must be recovered from *Market Customers*, *Market Generators* and *Market Small Generation Aggregators*. AEMO must, in accordance with the *intervention settlement timetable*, calculate a figure for each *Market Customer*, *Market Generator* and *Market Small Generation Aggregator* in each *region* applying the following formula:

$$MCP = \frac{TGE + TSGE - TCE}{RATGE + RATSGE - RATCE} \times \frac{RB}{\Sigma RB} \times CRA \times -1$$

where:

MCP	=	the amount payable or receivable by a <i>Market Customer</i> , <i>Market Generator</i> or <i>Market Small Generation Aggregator</i> under this clause 3.15.8(g);
TGE	=	the generator energy for the <i>Market Generator</i> in that <i>region</i> of the relevant <i>trading interval</i> for the period of the <i>direction</i> ;
TSGE	=	the small generator energy for the <i>Market Small Generation Aggregator</i> in that <i>region</i> of the relevant <i>trading interval</i> for the period of the <i>direction</i> ;
TCE	=	the customer energy for the <i>Market Customer</i> in that <i>region</i> of the relevant <i>trading interval</i> for the period of the <i>direction</i> ;
RATGE	=	the aggregate of the generator energy for all <i>Market Generators</i> in that <i>region</i> of the relevant <i>trading interval</i> for the period of the <i>direction</i> ;
RATSGE	=	the aggregate of the small generator energy for all <i>Market Small Generation Aggregations</i> in that <i>region</i> of the relevant <i>trading interval</i> for the period of the <i>direction</i> ;

RATCE	=	the aggregate of the customer energy for all <i>Market Customers</i> in that <i>region</i> of the relevant <i>trading interval</i> for the period of the <i>direction</i> ;
RB	=	the regional benefit determined by <i>AEMO</i> under clause 3.15.8(b1) at the time of issuing the <i>direction</i> ; and
CRA	=	the <i>compensation recovery amount</i> .

### 3.15.8A Funding of compensation for market suspension pricing schedule periods

#### Definitions

(a0) In this clause:

**ancillary service compensation recovery amount** has the meaning given to it in clause 3.15.8A(f).

- (a) *AEMO* must, in accordance with the *intervention settlement timetable*, calculate the *market suspension compensation recovery amount* being the sum of:
- (1) the total of the compensation payable by *AEMO* to *Market Suspension Compensation Claimants* calculated in accordance with clauses 3.14.5A(d), 3.14.5B and 3.15.7B (as the case may be) for the provision of *energy* during a *market suspension pricing schedule period*; plus
  - (2) the total amount payable by *AEMO* to the independent expert pursuant to clause 3.12.3(c); less
  - (3) any administrative costs payable by *Market Suspension Compensation Claimants* pursuant to clause 3.14.5B(e).
- (b) *AEMO* must, in accordance with the *intervention settlement timetable*, calculate a figure for each *Market Customer* in each *region* applying the following formula:

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

where

MCP is the amount payable by a *Market Customer* pursuant to this clause 3.15.8A(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 *trading intervals* that occur during a *market suspension pricing schedule period*.

RB is the regional benefit determined by *AEMO* pursuant to paragraph (e).

CRA is the *market suspension compensation recovery amount*.

- (c) If the figure calculated for a *Market Customer* under clause 3.15.8A(b) is negative, the *Market Customer* is liable to pay the absolute value of that amount to *AEMO*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (d) If the figure calculated for a *Market Customer* under clause 3.15.8A(b) is positive, then the amount payable by the *Market Customer* to *AEMO* is deemed to be zero.
- (e) *AEMO* must, as soon as practicable, determine the relative benefit each *region* received from the payment of compensation under clauses 3.14.5A and 3.14.5B (as the case may be). In determining the relative benefit each *region* received from the payment of such compensation, *AEMO* must take into account, where applicable, the reason the compensation was paid, the *load* at risk of not being supplied if the compensation was not paid or the extent of improvement in available *energy* reserves 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.
- (f) *AEMO* must, in accordance with the *intervention settlement timetable*, calculate for each *market ancillary service* the subject of a *direction*, the "***ancillary service compensation recovery amount***" being:
  - (1) the total of the compensation payable by *AEMO* to *Market Suspension Compensation Claimants* calculated in accordance with clauses 3.14.5A(d), 3.14.5B and 3.15.7B (as the case may be) for the provision of *market ancillary services* during a *market suspension pricing schedule period*; plus
  - (2) the total amount payable by *AEMO* to the independent expert pursuant to clause 3.12.3(c); less
  - (3) any administrative costs payable by *Market Suspension Compensation Claimants* pursuant to clause 3.14.5B(e).
- (g) The *trading amount* must be calculated as follows:
  - (1) subject to clause 3.15.8A(g)(2) and (3) *AEMO* must use the appropriate formula set out in clause 3.15.6A(c8), (c9), (d), (e), (f), (g), (h) or (i) depending on which *market ancillary service* was provided during a *market suspension pricing schedule period*;
  - (2) TNSCASP, TSRP, RTCRSP, RTCLSP 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 that *market suspension pricing schedule period*; and
  - (3) if TCE, TGE, TSGE, AGE, ATCE, ATGE, ATSGE or AAGE 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 within the market suspension pricing schedule period in which the Market Suspension Compensation Claimant provided market ancillary services'.*

### **3.15.9 Reserve settlements**

- (a) *AEMO'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.*
- (a1) If clause 3.15.9A applies in respect of a *region*, fees imposed under this clause 3.15.9 may be subject to subsequent adjustment under clause 3.15.9A.
- (b) *AEMO must, in accordance with the intervention settlement timetable, calculate:*
  - (1) *the aggregate of the amounts payable by AEMO under reserve contracts in respect of the relevant billing period;*
  - (2) *any amounts determined as payable by AEMO:*
    - (i) *by the independent expert under clause 3.12.3 in respect of an AEMO intervention event that is an exercise of the RERT during the relevant billing period; 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; or*
    - (iii) *to Affected Participants and Market Customers pursuant to clause 3.12.2 in respect of an AEMO intervention event that is an exercise of the RERT during the relevant billing period,*  
*in respect of the relevant billing period;*
  - (3) *the aggregate of the amounts receivable by AEMO under the Rules in respect of reserve contracts during the relevant billing period; and*
  - (4) *any amounts determined as receivable by AEMO:*
    - (i) *by the independent expert under clause 3.12.3 in respect of an AEMO intervention event that is an exercise of the RERT during the relevant billing period; or*
    - (ii) *from Affected Participants and Market Customers pursuant to clause 3.12.2 in respect of an AEMO intervention event that is an exercise of the RERT during the relevant billing period,*  
*in respect of the relevant billing period.*
- (c) *Separate amounts must be calculated under paragraph (b):*
  - (1) *for reserve contracts entered into by AEMO 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 *AEMO* a *region* would otherwise, in *AEMO's* reasonable opinion, fail to meet the minimum *power system security standards* or *the reliability standard*; or
- (2) a *region* requires a level of *power system reliability* or *reserves* which, in *AEMO's* reasonable opinion, exceeds the level required to meet the *reliability standard*,

then *AEMO* must:

- (3) recover its net liabilities, or distribute its net profits, under the terms of *reserve contracts* entered into to meet these requirements; and
- (4) recover any amounts determined as payable by *AEMO* to *Affected Participants* and *Market Customers* (less any amounts determined as receivable by *AEMO* from *Affected Participants* and *Market Customers*) pursuant to clause 3.12.2 in respect of an *AEMO intervention event* that is an exercise of the *RERT*; and
- (5) recover any amounts determined as payable by *AEMO* by the independent expert under clause 3.12.3 in respect of an *AEMO intervention event* that is an exercise of the *RERT*,

from or to the *Market Customers* in that *region* in accordance with paragraph (e).

(e) In respect of:

- (1) *reserve contracts* entered into by *AEMO*; and
- (2) any amounts determined as payable by *AEMO* to *Affected Participants* and *Market Customers* (less any amounts determined as receivable by *AEMO* from *Affected Participants* and *Market Customers*) pursuant to clause 3.12.2 in respect of an *AEMO intervention event* that is an exercise of the *RERT*; and
- (3) any amounts determined as payable by *AEMO* by the independent expert under clause 3.12.3 in respect of an *AEMO intervention event* that is an exercise of the *RERT*,

*AEMO* 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:

$$MCP = \left[ \frac{E_{UC} \times UC}{\sum E_{UC}} \right] + \left[ \frac{E_{OC} \times OC}{\sum E_{OC}} \right]$$

where:

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

UC is:

- (1) the total usage charges (or equivalent charges) paid by *AEMO* under *reserve contracts*, as allocated in accordance with paragraph (e1); and
- (2) the total amount determined as payable by *AEMO* to *Affected Participants* and *Market Customers* (less any amounts determined as

receivable by *AEMO* from *Affected Participants* and *Market Customers*) pursuant to clause 3.12.2 in respect of an *AEMO intervention event* that is an exercise of the *RERT*; and

- (3) the total amount determined as payable by *AEMO* by the independent expert under clause 3.12.3 in respect of an *AEMO intervention event* that is an exercise of the *RERT*.

$E_{UC}$  is the sum of all that *Market Customer's adjusted gross energy* amounts in the relevant *region* (the "**relevant region**") in each *trading interval* during which *reserves* were *dispatched* or *activated* under a *reserve contract* 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*;

$\Sigma E_{UC}$  is the sum of all amounts determined as " $E_{UC}$ " in accordance with this paragraph (e) in respect of that *region* for the relevant *billing period*;

$OC$  is the total amount paid by *AEMO* under *reserve contracts* in the relevant *region* in the *billing period*, other than:

- (1) amounts determined as " $UC$ " in accordance with this paragraph (e) in respect of that *billing period*; and
- (2) operational and administrative costs described in paragraph (g);

$E_{OC}$  is the sum of all that *Market Customer's adjusted gross energy* amounts in the relevant *region* in the *billing period*, excluding any *loads* in that *region* in respect of which the *Market Customer* submitted a *dispatch bid* for any *trading interval* during that *billing period*; and

$\Sigma E_{OC}$  is the sum of all amounts determined as " $E_{OC}$ " in accordance with this paragraph (e) in respect of that *region* for the relevant *billing period*.

- (e1) For the purposes of determining amount " $UC$ " in paragraph (e), *AEMO* must reasonably allocate usage charges (or equivalent charges) under *reserve contracts* to the *trading intervals* during which *reserves* were *dispatched* or *activated* in the relevant *region* in the *billing period*.
- (f) A *Market Customer* is liable to pay *AEMO* an amount equal to the sum calculated under paragraph (e) in respect of that *Market Customer*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (g) Operational and administrative costs incurred by *AEMO* 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 *AEMO* 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 *AEMO* and each of the *Market Participants* and *Scheduled Generators*.

### 3.15.9A Procurer of last resort cost allocation

- (a) In this clause:

**aggregate RERT dispatched** has the meaning given in subparagraph (c)(2).

**aggregate RERT fixed payments** has the meaning given in subparagraph (c)(3).

**aggregate RERT procured** has the meaning given in subparagraph (c)(1).

**aggregate RERT variable payments** has the meaning given in subparagraph (c)(4).

**availability liability** means the liability calculated under paragraph (g).

**fixed PoLR costs** has the meaning given in clause paragraph (d).

**PoLR debt** has the meaning given in paragraph (f).

**usage liability** means the liability calculated under paragraph (h).

**variable PoLR costs** has the meaning given in paragraph (e).

(b) This clause:

- (1) is a cost recovery scheme under section 14T of the *NEL* that allows *AEMO* to recover the costs of contracting *reserves* under rule 3.20 that are related to a *reliability gap period* where there are one or more *PoLR liable entities*;
- (2) operates as part of, and as an adjustment to, the cost recovery mechanism in clause 3.15.9 by reallocating certain *RERT* costs recovered under clause 3.15.9 to *PoLR liable entities* as PoLR debts; and
- (3) only applies in respect of a *reliability gap period* for a *region* if the *AER* provides *AEMO* with an *AER PoLR report* for that *reliability gap period*.

#### **Step 1 - Identifying RERT costs which are PoLR costs**

- (c) *AEMO* must, in respect of each *reliability gap period* for a *region* the subject of an *AER PoLR report*, calculate:
- (1) the aggregate of the nominal values of reserves (in MW) procured under *reserve contracts* for all or part of that *reliability gap period* ("**aggregate RERT procured**");
  - (2) the aggregate volume (in MWh) of *reserves dispatched* or *activated* during each *PoLR TI* notified in the *AER PoLR report* ("**aggregate RERT dispatched**");
  - (3) the aggregate of all amounts of "OC" as defined in clause 3.15.9(e) paid by *AEMO* for that *reliability gap period* ("**aggregate RERT fixed payments**");
  - (4) the aggregate of all amounts of "UC" as defined under clause 3.15.9(e) paid by *AEMO* for a *PoLR TI* notified in the *AER PoLR report* ("**aggregate RERT variable payments**");
  - (5) the fixed PoLR costs for that entire *reliability gap period* as calculated under paragraph (d); and



- (6) the variable PoLR costs for each *PoLR TI* notified in the *AER PoLR report* as calculated under paragraph (e),

in each case, in accordance with this clause and the *PoLR cost procedures*.

- (d) The fixed costs ("**fixed PoLR costs**") for the *reliability gap period* the subject of an *AER PoLR report* must be calculated by *AEMO* as follows:

$$FPC = \left( \frac{FRG}{ARP} \right) \times ARFP$$

where:

FPC = the fixed PoLR costs for that entire *reliability gap period* (in \$);

FRG = the *forecast reliability gap* for that *reliability gap period* (in MW);

ARP = the aggregate RERT procured (in MW) for that *reliability gap period*; and

ARFP = the aggregate RERT fixed payments (in \$) for that *reliability gap period*,

except that if  $FRG/ARP > one$ , then it is taken to be one.

- (e) The variable costs ("**variable PoLR costs**") for each *PoLR TI* during a *reliability gap period* that is the subject of an *AER PoLR report* must be calculated by *AEMO* as follows:

$$VPC = \left( \frac{FRG}{ARD} \right) \times ARVP$$

where:

VPC = the variable PoLR costs for that *PoLR TI* (in \$);

FRG = the *forecast reliability gap* for that *reliability gap period* (in MW);

ARD = the aggregate *RERT dispatched or activated* in that *PoLR TI* multiplied by the number of *trading intervals* in an hour (in MW); and

ARVP = the aggregate RERT variable payments for that *reliability gap period* (in \$),

except that if  $FRG/ARD > one$ , then it is taken to be one.

## Step 2 - Calculating PoLR debts

- (f) A *PoLR liable entity* is liable to pay *AEMO* an amount for a *reliability gap period* the subject of an *AER PoLR Report* ("**PoLR debt**") calculated as the lesser of:
- (1) the aggregate of:
    - (i) the *PoLR* *liable entity's* availability liability for that *reliability gap period*; and
    - (ii) the sum of the usage liability for all *PoLR TIs* for that *PoLR liable entity* in that *reliability gap period*, and
  - (2) \$100 million.

### Note

Section 14T of the *NEL* provides that a *PoLR liable entity* is not liable for more than \$100 million under a PoLR cost recovery scheme in relation to a *reliability gap period*.

- (g) A *PoLR liable entity's* availability liability for the entire *reliability gap period* ("**availability liability**") is calculated as follows:

$$AL = \frac{LHUM}{\text{Max} [AHUM, FRG]} \times FPC$$

where:

- AL = that *PoLR liable entity's* availability liability (in \$);
- LHUM = that *PoLR liable entity's* highest *uncontracted MW* position for any *PoLR TI* in that *reliability gap period* (in MW);
- Max = the higher of AHUM and FRG;
- AHUM = the aggregate of all *PoLR liable entities'* highest *uncontracted MW* positions in any *PoLR TI* in that *reliability gap period* (in MW);
- FRG = the *forecast reliability gap* for that *reliability gap period* (in MW);
- FPC = the fixed PoLR costs for that *reliability gap period*.

- (h) The *PoLR liable entity's* usage liability for a *PoLR TI* ("**usage liability**") is calculated as follows:

$$UL = \frac{LUM}{\text{Max} [AUM, FRG]} \times VPC$$

where:

- UL = that *PoLR liable entity's* usage liability (in \$);
- LUM = that *PoLR liable entity's* *uncontracted MW* position for

- that *PoLR TI* (in MW);
- Max = the higher of AUM and FRG;
- AUM = the aggregate of all *PoLR liable entities' uncontracted MW positions* in that *PoLR TI* (in MW);
- FRG = the *forecast reliability gap* for that *reliability gap period* (in MW);
- VPC = the variable PoLR costs for that *PoLR TI*.

### Step 3 - Recovering PoLR debts and rebating RERT costs

- (i) If the *PoLR liable entity* is a *Market Customer*, *AEMO* may include the PoLR debt in the next *settlement statement* issued to that *Market Customer*.
- (j) If the *PoLR liable entity* is not a *Market Customer*, *AEMO* may issue a tax invoice to that entity for the PoLR debt with a due date for payment of not less than 30 days.
- (k) *AEMO* must rebate the proceeds from any PoLR debts it recovers in relation to a *reliability gap period* for a *region* to the *Market Customers* who have paid fees under clause 3.15.9 for that *reliability gap period* based on their share of the total *energy* purchased at *connection points* in that *region* during that *reliability gap period* as determined in accordance with the *PoLR cost procedures*.
- (l) *AEMO* must develop, publish on its website and maintain, in accordance with the *Rules consultation procedures*, *PoLR cost procedures* that include:
  - (1) the methodology and inputs for calculating aggregate RERT dispatched, aggregate RERT fixed payments, aggregate RERT procured, aggregate RERT variable payments, fixed PoLR costs, variable PoLR costs and PoLR debts;
  - (2) the process and timeframes for calculating, invoicing, recovering, rebating and reporting on PoLR debts; and
  - (3) any other matters specified in Chapter 4A.
- (m) *AEMO* may make minor or administrative amendments to the *PoLR cost procedures* without complying with the *Rules consultation procedures*.

### 3.15.10 Administered price cap or administered floor price compensation payments

- (a1) In this clause 3.15.10:

**cost recovery region** means the *region* in which:

- (1) the *dispatch price* was set by the *administered price cap* or *administered floor price*; or
- (2) the *ancillary service price* was set by the *administered price cap*,

in the *eligibility period*.

**eligibility period** has the same meaning as in clause 3.14.6(a).

- (a) If the *AEMC* awards compensation to a *Scheduled Generator*, *Non-Scheduled Generator*, *Market Participant*, *Scheduled Network Service Provider* or *Ancillary Service Provider* under clause 3.14.6, then *AEMO* must determine an amount which shall be payable by each *Market Customer* who purchased electricity from the *spot market* in the cost recovery region.
- (b) *AEMO* shall determine the amounts payable for each *eligibility period* by each of the *Market Customers* referred to in clause 3.15.10(a) as follows:

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

where

*APC* is the total amount of any compensation payments awarded by the *AEMC* to *Scheduled Generators*, *Non-Scheduled Generators*, *Market Participants*, *Scheduled Network Service Providers* or *Ancillary Service Providers* in respect of that *eligibility period* in accordance with clause 3.14.6.

*E<sub>i</sub>* 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 *eligibility period* and each *connection point* for which the *Market Customer* is *financially responsible* in the cost recovery region *i*.

$\sum E_i$  is the sum of all amounts determined as "*E<sub>i</sub>*" in accordance with this clause 3.15.10 for all *Market Customers* in the cost recovery region.

- (c) Within 25 *business days* of being notified by the *AEMC* that compensation is to be paid to a *Scheduled Generator*, *Non-Scheduled Generator*, *Market Participant*, *Scheduled Network Service Providers* or *Ancillary Service Provider* in accordance with clause 3.14.6, *AEMO* 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, *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 *AEMO*, 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 *AEMO*, the *AER* or the *AEMC* under or in connection with the *Rules* on or after 1 July 2000, *AEMO*, 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 *AEMO*, 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 *AEMO*, 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

**Note**

This subparagraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (3) *AEMO* 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*, *AEMO*, 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*, *AEMO*, 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 [DELETED]

### 3.15.10C Intervention and Market Suspension Pricing Schedule Period Settlements

- (a) *AEMO* must include in the *final statements* provided under clause 3.15.15 for a *billing period* in which one or more *intervention price trading intervals* occurred:
  - (1) for each *Affected Participant* and *Market Customer* in relation to the relevant *AEMO intervention event* the amount calculated pursuant to clause 3.12.2(c);
  - (2) for each *Directed Participant* in relation to the relevant *AEMO intervention event* the amount calculated pursuant to clause 3.15.7(c) or clause 3.15.7(a1)(2), as the case may be;

- (3) for each *Market Customer* in relation to an *AEMO intervention event* that is a *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 *AEMO* 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 *AEMO* 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 *AEMO* to *Directed Participants* calculated pursuant to clause 3.15.7(c) and 3.15.7(a1)(2); and
          - (v) clause 3.15.8(a)(2)(iii) shall be zero;
        - (4) for each *Market Customer*, *Market Generator* and *Market Small Generation Aggregator* in relation to an *AEMO intervention event* that is a *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) TNSCASP, TSRP, RTCRSP, RTCLSP and TSFCAS shall be the total compensation payable by *AEMO* for the relevant *ancillary service* calculated in accordance with clause 3.15.7(c) or clause 3.15.7(a1)(2), as the case may be; and
        - (4A) for each *Market Customer* in relation to an *AEMO intervention event* that is an exercise of the *RERT*, the amounts calculated pursuant to clause 3.15.9(b)(1), (b)(2)(ii) and (b)(3), and clause 3.15.9(e).
      - (a1) *AEMO* must include in the final statement provided under clauses 3.15.14 and 3.15.15 for a *billing period* in which a *market suspension pricing schedule period* occurred:
        - (1) for each *Market Suspension Compensation Claimant* in relation to that *market suspension pricing schedule period*:
          - (i) the amount calculated in accordance with clauses 3.14.5A(d), 3.14.5B and 3.15.7B (as the case may be); and
          - (ii) any administrative fees payable under clause 3.14.5B(e); and
        - (2) for each *Market Customer* in relation to that *market suspension pricing schedule period*, the amount payable pursuant to clause 3.15.8A(c).
      - (b) *AEMO* must include in each statement it provides under clause 3.12.1(a) following a final determination of all total amounts payable or receivable by it pursuant to clauses 3.12.2, 3.14.5A, 3.14.5B, 3.15.7(a), 3.15.8, 3.15.8A and 3.15.9, 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);
- (1A) receivable by each *Market Suspension Compensation Claimant* pursuant to clauses 3.14.5A(b) and 3.14.5B (as the case may be);
- (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 clause 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) or clause 3.15.9(e):
  - (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*, *Market Generator* and *Market Small Generation Aggregator* equal to:
    - (i) the amount payable by the *Market Customer*, *Market Generator* or *Market Small Generation Aggregator*, 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) TNSCASP, TSRP, RTCRSP, RTCLSP and TSFCAS shall be the total compensation payable by AEMO for the relevant *ancillary service* calculated in accordance with clause 3.15.7(a1)(2); less
    - (ii) the amount paid by the *Market Customer*, *Market Generator* or *Market Small Generation Aggregator*, 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 AEMO a written notice of the court's determination.
  - (3) AEMO 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 AEMO 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 AEMO 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 AEMO to each relevant *Market Customer*, *Market Generator* and *Market Small Generation Aggregator* 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) TNSCASP, TSRP, RTCRSP, RTCLSP, 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 *AEMO*, under which *AEMO* 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 *AEMO* 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 *AEMO* in accordance with the *reallocation procedures* and the timetable for *reallocation requests* as published by *AEMO* from time to time (the **reallocation timetable**).
- (e) Upon receipt of a *reallocation request* *AEMO* 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*, *AEMO* 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 *AEMO* in respect of the *reallocation request* at the time it was registered;
  - (3) both *Market Participants* notify *AEMO* 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 *AEMO* 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) *AEMO* 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) *AEMO* 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, *AEMO* 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 *AEMO* 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 *AEMO* may exercise following a *default event*, upon deregistration of a *reallocation request* *AEMO* 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) *AEMO* 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) *AEMO* 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 *AEMO* 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) *AEMO* is not required to meet its obligations under paragraph (a) in any way which increases *AEMO'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* *AEMO* 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) *AEMO* 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, *AEMO* is prevented from calculating the net *settlement amount* in accordance with clause 3.15.12(a) by factors which are beyond the control of *AEMO* and which deprive *AEMO* 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 *AEMO*.
- (c) *AEMO* 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 *AEMO* 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 *AEMO* 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*, *AEMO* 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 *AEMO* calculates an *estimated settlement amount* in accordance with clause 3.15.12(b), *AEMO* 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*, *AEMO* must give to each *Market Participant* a *final statement* stating the amounts payable by the *Market Participant* to *AEMO* or receivable by the *Market Participant* from *AEMO* (subject to clause 3.15.22) in respect of the relevant *billing period*.
- (b) Unless *AEMO* 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 AEMO**

- (a) Subject to clause 3.15.15A(b), if *AEMO* 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 *AEMO* 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 *AEMO* 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 each *payment date*, and in accordance with the *timetable*, each *Market Participant* must pay to *AEMO* in cleared funds the net amount stated to be payable by that *Market Participant* in the relevant *final statement*, whether or not the *Market Participant* continues to dispute the net amount payable.

**Note**

This clause is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**3.15.17 Payment to market participants**

Subject to clause 3.15.22 on the *day* on which *AEMO* is to be paid under clause 3.15.16, *AEMO* 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 *AEMO* 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 *AEMO* issuing a written notice of dispute in the form prescribed by *AEMO'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 *AEMO* 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 *AEMO*.

**3.15.19 Revised Statements and Adjustments**

- (a) Where a dispute about a *final statement* has been either resolved by agreement between *AEMO* 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, *AEMO* 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 AEMO under clause 3.15.19(a)(3).
- (b) For each *billing period* AEMO 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 AEMO'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 *AEMO* 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**"), *AEMO* 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) *AEMO* must develop and publish a policy for *routine* and *special revised statements*. *AEMO* may amend the policy at any time. *AEMO* 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 *AEMO*;
  - (2) the process by which the calendar can be amended or varied by *AEMO* and the process by which *Market Participants* are notified of any amendment and variation; and
  - (3) a transitional process by which *AEMO* 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.

#### Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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

#### Definitions

- (a0) In this clause 3.15.21:

**default notice** has the meaning given to it in clause 3.15.21(b).

- (a) Each of the following is a *default event* in relation to a *Market Participant*:
- (1) the *Market Participant* does not pay money due for payment to *AEMO* under the *Rules* by the appointed *time* on the due date;
  - (2) *AEMO* does not receive payment in full of any amount claimed by *AEMO* 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 *AEMO* 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 *AEMO* 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 is



- appointed in respect of the *Market Participant* or a provider of *credit support* for the *Market Participant*;
- (12) an order is made, or a resolution is passed, for the winding up of the *Market Participant* or a provider of *credit support* for the *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*, *AEMO* 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 *AEMO* determines represents the amount of any money actually or contingently owing by the *Market Participant* to *AEMO* pursuant to the *Rules*.
- (c) If a *default event* that is not an *external administration 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 *AEMO*, or if *AEMO* receives notice from the *defaulting Market Participant* that it is not likely to remedy the default, then *AEMO* may issue a *suspension notice*. For the avoidance of doubt, nothing in paragraphs (c1) to (c6) limits *AEMO*'s discretion in relation to issuing a *suspension notice* under this paragraph (c).
- (c1) If an *external administration 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 *AEMO*, or if *AEMO* receives notice from the *defaulting Market Participant* that it is not likely to remedy the default, then *AEMO* must:
- (1) issue a *suspension notice* to the *defaulting Market Participant* under which the *Market Participant* is suspended from all activities in relation to each category of *Market Participant* for which it is registered (each a *registration category*); or

- (2) make a *non-suspension decision* in relation to all activities in relation to each *registration category* of the *Market Participant*; or
  - (3) issue a *suspension notice* to the *defaulting Market Participant* under which the *Market Participant* is suspended from some specified activities or *registration categories* of the *Market Participant* and make a *non-suspension decision* in relation to the activities or *registration categories* that are not the subject of the suspension notice issued under this subparagraph (3).
- (c2) *AEMO* may only make a *non-suspension decision* in relation to any activities or *registration categories* of a *defaulting Market Participant* if:
  - (1) the external administrator has requested or consented to the *non-suspension decision* and has undertaken that the *defaulting Market Participant* will meet its relevant liabilities under the *Rules*; and
  - (2) taking into account the following matters, *AEMO* considers that the *defaulting Market Participant* should not be suspended in relation to that activity or *registration category*:
    - (i) the likelihood that the *defaulting Market Participant* will comply with its obligations under the *Rules* relevant to that registration;
    - (ii) in the case where the *defaulting Market Participant* is a *Market Generator*, *Market Small Generator Aggregator* or *Market Network Service Provider*, the potential impact of the suspension of that registration on the *reliability* of the *power system*;
    - (iii) in the case where the *Market Participant* is not in a category referred to in subparagraph (ii), the potential impact of the suspension of that registration on the *reliability* of the *power system* if *AEMO* considers that matter to be relevant; and
    - (iv) any other matters *AEMO* considers relevant to the making of the *non-suspension decision*.
- (c3) *AEMO* may make a *non-suspension decision* conditional on the *defaulting Market Participant* continuing to satisfy specified obligations including, without limitation, conditions relating to compliance with the *Rules*.
- (c4) A *defaulting Market Participant* must comply with any conditions specified in a *non-suspension decision*.
- (c5) Promptly after making a *non-suspension decision* in relation to a *defaulting Market Participant*, *AEMO* must:
  - (1) notify the *defaulting Market Participant* of its decision and any conditions that must be satisfied by the *defaulting Market Participant* if the *non-suspension decision* is to remain in effect; and
  - (2) *publish* a notice specifying:
    - (i) that an *external administration default event* has occurred in respect of the *defaulting Market Participant*;

- (ii) that *AEMO* has made a *non-suspension decision* in accordance with paragraph (c2);
  - (iii) the *registration categories* of the *defaulting Market Participant* affected by the *non-suspension decision* and the activities (or subset of activities) of those *registration categories* that are the subject of the *non-suspension decision*; and
  - (iv) that despite the *non-suspension decision*, *AEMO* may issue a *suspension notice* in relation to the *registration categories* and activities covered by the *non-suspension decision* in the circumstances set out in subparagraphs (c6)(1) to (3).
- (c6) Despite paragraph (c), if at any time after the issue of a *non-suspension decision*:
  - (1) *AEMO* considers that the *defaulting Market Participant* has failed to satisfy any of the conditions that apply to the *non-suspension decision*;
  - (2) a further *default event* occurs in respect of the *defaulting Market Participant*; or
  - (3) *AEMO* is not satisfied that the *defaulting Market Participant* will meet its relevant liabilities under the *Rules*,

then *AEMO* may immediately issue a *suspension notice* to the *defaulting Market Participant* in relation to the *registration categories* and activities of the *defaulting Market Participant* covered by that *non-suspension decision*.

  - (d) At the time of issue of a *suspension notice*, or as immediately thereafter as is practicable, *AEMO* 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) *AEMO* must lift a *suspension notice* if the *default event* is remedied and there are no other circumstances in existence which would entitle *AEMO* to issue a *suspension notice*.
  - (f) *AEMO* 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. *AEMO* must issue a public notice promptly after a *suspension notice* is lifted.
  - (g) From the time of suspension that *AEMO* 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 *AEMO* 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*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (i) Following the issue of a *suspension notice*, *AEMO* 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*.

### 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 *AEMO* from *Market Participants* in accordance with clause 3.15.16 in respect of that *billing period* on the *payment date* in accordance with the *timetable*,  
plus
  - (2) if there is one or more *Market Participants* in default, the aggregate amount which *AEMO* 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 *AEMO* by those *Market Participants* in respect of that *billing period* in accordance with clause 3.15.16 but not received on the *payment date* in accordance with the *timetable*,  
plus
  - (4) if there is one or more *Market Participants* in default, the aggregate of *energy trading amounts* and *reallocation* amounts payable to *AEMO* 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 on the *payment date* in accordance with the *timetable*,  
minus
  - (5) *inter-regional* and *intra-regional settlements* surpluses as determined or allocated by *AEMO* in accordance with the procedure established under clause 3.6.5.
- (b) The maximum amount which *AEMO* 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 AEMO 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 AEMO to each relevant *Market Participant* for any of these *transactions* in respect of that *billing period* shall be reduced by applying the following formula:

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

where:

AAP is the reduced amount actually payable by AEMO 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:

$SS_1$  is the shortfall or surplus payable by or due to the *Market Participant* in respect of the *financial year*;

$SAP_1$  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

$AAP_1$  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) *AEMO* 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 *AEMO* 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*, *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO*.
- (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 *AEMO* must pay interest on any unpaid moneys due and payable by it under this Chapter.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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) *AEMO* 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*, *Semi-Scheduled Generators* and *Scheduled Network Service Providers* as determined by the *dispute resolution panel* for *scheduling errors* under this Chapter 3.
- (b) *AEMO* 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 *AEMO* 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 *AEMO* and is the property of *AEMO*.
- (e) Any interest paid on money held in the *Participant compensation fund* will accrue to and form part of the *Participant compensation fund*.
- (f) *AEMO* 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* or a *Semi-Scheduled Generator*, the relevant *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* or *Semi-Scheduled Generator* who receives an instruction in respect of a *scheduled generating unit* or *semi-scheduled generating unit* (as the case may be) 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* or *Semi-Scheduled Generator* who receives a *dispatch instruction* in respect of a *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* or *semi-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, *AEMO* 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 [Deleted]**

## **3.18 Settlements Residue Auctions**

### **3.18.1 Settlements residue concepts**

- (a) An *auction participation agreement* is an agreement between *AEMO* and an *eligible person* concerning the participation by the *eligible person* in *auctions*.
  - (b) A *SRD agreement* is an agreement between *AEMO* and an *eligible person* entered into following an *auction* under which:
    - (1) in all cases:
      - (i) *AEMO* agrees to issue a *SRD unit* to an *eligible person*;
      - (ii) the *eligible person* agrees to pay *AEMO* the *auction* clearing price for the *SRD unit*;
    - (2) where a secondary trading decision is made under clause 3.18.3A(a):
      - (i) the *eligible person* has a right to offer a *SRD unit* in future *auctions*;
      - (ii) if the *SRD unit* is cleared in a future *auction*, *AEMO* is required to cancel the *SRD unit*; and
      - (iii) the cancellation of a *SRD unit* by *AEMO* pursuant to subparagraph (ii) does not terminate the underlying *SRD agreement* between *AEMO* and the *eligible person* under which that *SRD unit* was issued, and, for the avoidance of doubt, does not affect the obligation of:
        - (A) the *eligible person* to pay *AEMO* for the *SRD unit* issued to it under the *SRD agreement*; or
        - (B) *AEMO* to pay the *eligible person* for cancellation of the *SRD unit* under the *SRD agreement*,
- in accordance with this rule 3.18 and the *auction rules*.

- (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 paragraph (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, *AEMO* 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:
  - (1) distribute *settlements residue* to relevant *eligible persons* holding *SRD units*; and
  - (2) 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), *AEMO* and the *Trader* must ensure that the *auction participation agreement* and the *SRD agreement* entered into by the *Trader* and its agent provides 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) *AEMO* may conduct *auctions* to determine which *eligible persons* will be issued with *SRD units* under *SRD agreements* with *AEMO*.
- (b) *AEMO* may only enter into a *SRD agreement* with a person (called an *eligible person*) who satisfies the following criteria:
  - (1) the person is a *Market Customer*, a *Generator* or a *Trader*, or a person seeking to be eligible for registration as a *Trader* under rule 2.5A; and
  - (2) the person satisfies any criteria specified in the *auction rules*, which criteria must comply with paragraph (g).
- (c) *Auctions* must be conducted in accordance with this rule 3.18 and the *auction rules*.
- (d) *AEMO* 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 *AEMO* 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) *AEMO* may, after complying with the *Rules consultation procedures*, cease conducting *auctions*.
- (f) If *AEMO* takes any action under paragraph (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 *AEMO* may enter into *SRD agreements* must be consistent with paragraph (b), 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 previously 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 *AEMO* considers is acting on behalf of or in concert with a person described in subparagraphs (1) or (2);
  - (5a) any person who *AEMO* considers is acting on behalf of or in concert with a person described in subparagraph (4); or
  - (6) any person who would be a **retail client** as defined in section 761GA of the *Corporations Act 2001* (Cth), if they entered into an *SRD agreement* with *AEMO*.
- (h) **[Deleted]**

### 3.18.3 Auction rules

- (a) In all cases, *AEMO* 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 *AEMO* in a form satisfactory to *AEMO*);
  - (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 subparagraph (1).
- (a1) Where a secondary trading decision is made under clause 3.18.3A(a), *AEMO* must amend the *auction rules* to set out:
  - (1) a right for an *eligible person* that holds a *SRD unit* to offer that *SRD unit* in another *auction* in accordance with the *auction rules*;

- (2) if an *eligible person* offers a *SRD unit* in an *auction*, a right for *AEMO* to cancel that *SRD unit* in accordance with the *SRD agreement* and the *auction rules*;
  - (3) the requirements for cancellation of *SRD units* by *AEMO*; and
  - (4) mechanisms for calculating and distributing *auction amounts*;
  - (5) a mechanism for calculating and determining the margin referred to in clause 3.18.4A(b), which must take into account the relevant prices at which the *eligible person* offers *SRD units* in an *auction* as well as the *auction* clearing prices at which the *eligible person* received *SRD units* in previous *auctions*; and
  - (6) the procedures *AEMO* will follow to obtain and manage the margins referred to in clause 3.18.4A.
- (b) In developing and amending the *auction rules*, *AEMO* 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 *SRD unit* to be paid by *eligible persons* will be the same for all *SRD units* cleared in 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) *AEMO* must make the *auction rules* available to *Registered Participants* and to any other person who requests a copy.
- (d) *AEMO* may amend the *auction rules*:
  - (1) at any time, with the approval of the *settlement residue committee* and in accordance with the *Rules consultation procedures*; or
  - (2) if *AEMO* has consulted to the extent practicable in the circumstances in relation to the proposed amendment, the amendment has the support of at least three quarters of the members of the *settlement residue committee*, and *AEMO* considers the amendment is urgent.

### 3.18.3A Secondary trading of SRD units

- (a) *AEMO* may, with the approval of the *settlement residue committee*, decide to implement secondary trading of *SRD units* by *eligible persons* in accordance with this rule 3.18 and the *auction rules* at a specified date (**secondary trading decision**).
- (b) Before the date specified under paragraph (a), *AEMO* must amend the *auction rules* in accordance with clause 3.18.3(d)(1) to include the requirements specified in clause 3.18.3(a1).

### 3.18.4 Proceeds and fees

- (a) *AEMO* must distribute to the relevant *Network Service Provider*:

- (1) subject to clauses 3.6.5(a)(4) and 3.6.5(a)(4A) and paragraph (a1), the *auction* clearing price for each *SRD unit* received by an *eligible person* in an *auction* in accordance with the *auction rules*; and
- (2) subject to paragraphs (b) and (c), any portion of the *settlements residue* allocated to the *directional interconnector* in respect of which a *SRD unit* has not been issued under a *SRD agreement*,

in accordance with the principles in clause 3.6.5 in relation to the allocation and distribution of *settlements residue* attributable to *regulated interconnectors*.

- (a1) Where a secondary trading decision is made under clause 3.18.3A(a), *AEMO* must pay an *eligible person* the *auction* clearing price for each *SRD unit* that is offered by that *eligible person* and subsequently cancelled by *AEMO* pursuant to clause 3.18.1(b)(2)(ii) and in accordance with the relevant *SRD agreement* and the *auction rules*.
- (b) The costs and expenses incurred by *AEMO* 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 *AEMO* 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 *AEMO* must pay *auction amounts* in accordance with the *auction rules*, and, for the avoidance of doubt, amounts payable by *eligible persons* to *AEMO* under *SRD agreements* and any amounts payable by *AEMO* to *eligible persons* under *SRD agreements* will not be regarded as amounts payable under the *Rules* for the purposes of rule 3.15.

**Note**

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (f) *AEMO* 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 *AEMO* must use that facility for paying and receiving *auction amounts*.

### 3.18.4A Secondary trading proceeds and margin

- (a) This clause 3.18.4A applies where a secondary trading decision is made under clause 3.18.3A(a).
- (b) When an *eligible person* offers a *SRD unit* in an *auction*, the *eligible person* must provide a margin to *AEMO* at the same time as it offers the *SRD unit*, in accordance with the requirements of the *auction rules* and the *SRD agreement*.

#### **Note**

Clause 3.18.3(a1)(5) requires the *auction rules* to set out a mechanism for calculating and determining the margin.

- (c) If an *eligible person* provides a margin under paragraph (b) and subsequently that *eligible person's SRD agreement* or *auction participation agreement* is terminated by *AEMO*, then *AEMO* must apply the margin provided by that *eligible person* to:
  - (1) any outstanding amounts owing to *AEMO* by that *eligible person*; or
  - (2) any amounts that would have been owing to *AEMO* by that *eligible person* under *SRD agreements* had the *SRD agreements* or *auction participation agreement* not been terminated,in accordance with this rule 3.18 and the *auction rules*.
- (d) If the full amount payable by *AEMO* to *eligible persons* for cancellation of *SRD units* pursuant to clause 3.18.4(a1) is less than the amount available to *AEMO* from *auction* proceeds provided to *AEMO* by *eligible persons* (**shortfall**) then *AEMO* must recover that shortfall:
  - (1) first, from the *auction* proceeds payable to the relevant *Network Service Provider* under clause 3.18.4(a)(1); and
  - (2) if the amount under paragraph (d)(1) is insufficient, then *AEMO* must recover the remaining amount that could not be recovered in accordance with clause 3.6.5, as if references to *negative settlements residue* amounts were references to the shortfall.
- (e) If an *eligible person's SRD agreement* or *auction participation agreement* is terminated by *AEMO*, then any *SRD units* which that person held immediately prior to the relevant agreement being terminated may be made available by *AEMO* in another *auction*.

### 3.18.5 Settlement residue committee

- (a) *AEMO* must establish a *settlements residue committee*.
- (b) The functions of the *settlement residue committee* are to:
  - (1) approve any suspension, or removal of a suspension, imposed by *AEMO* on the conducting of *auctions*;
  - (2) approve proposed amendments to the *auction rules* developed by *AEMO*;
  - (3) monitor, review and report on the *auctions* conducted by *AEMO* under this rule 3.18; and

- (4) approve the costs and expenses incurred by *AEMO* 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.
- (c) The *settlement residue committee* is to consist of:
  - (1) an employee of *AEMO* appointed by *AEMO*, 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 *retail customers*.
- (d) *AEMO* 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 *AEMO* after consultation with the class of *Registered Participants* the person is to represent, and *AEMO* 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 *AEMO* 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 *AEMO* 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 *AEMO*.

### 3.19 Market Management Systems Access Procedures

- (a) *AEMO* 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*, *Metering Providers* and *Metering Data Providers* can use the *market management systems*.
- (b) *AEMO* 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 *AEMO*.
- (c) *AEMO* and all *Registered Participants*, *Metering Providers* and *Metering Data Providers* must comply with the *Market Management Systems Access Procedures*.

#### Note

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (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*, *AEMO* must:
- (1) notify that *Registered Participant* describing the nature of the breach; and
  - (2) at a time following notification of the breach by *AEMO* under clause 3.19(e)(1) determined by *AEMO* 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 Definitions

For the purposes of this rule 3.20:

- (a) **estimated average VCR** for a *region*, means the average value of customer reliability (expressed in \$/MWh) determined by *AEMO*, having regard to the



*RERT guidelines* and any values of customer reliability developed by the *AER* under rule 8.12; and

- (b) references to **market** mean a *market* for the trading of *energy* only, and for the avoidance of doubt, does not include contractual or other arrangements for the provision of *ancillary services*.

### 3.20.2 Reliability and emergency reserve trader

- (a) *AEMO* 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* (*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, 3.15.6, 3.15.9, 3.15.9A, 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*.

**Note:**

See Rule 11.128 for transitional provisions regarding the operation of *RERT* as it relates to the *interim reliability measure*.

- (b) *AEMO* must have regard to the following principles (*RERT principles*) in exercising the *RERT* under paragraph (a):
  - (1) actions taken should be those which *AEMO* reasonably expects, acting reasonably, to have the least distortionary effect on the operation of the *market*;
  - (2) actions taken should aim to maximise the effectiveness of *reserve contracts* at the least cost to end use consumers of electricity; and
  - (3) the average amount payable by *AEMO* under *reserve contracts* for each MWh of *reserves* for a *region* should not exceed the estimated average VCR for that *region*.
- (c) In having regard to the *RERT principles*, *AEMO* must have regard where relevant to the *RERT guidelines*.

### 3.20.3 Reserve contracts

- (a) Subject to paragraph (f), and in order to ensure that the reliability of *supply* in a *region* meets the *reliability standard* for the *region*, *AEMO* 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) Subject to paragraph (f), *AEMO* may:
  - (1) enter into *reserve contracts*; or

- (2) vary existing *reserve contracts*,  
in addition to the contracts already entered into by *AEMO* under this rule 3.20.
- (c) If, at any time *AEMO* determines that it is necessary to commence contract negotiations for the provision of additional *reserves* under this rule 3.20, *AEMO* must *publish* a notice of its intention to do so.

#### **Consultation with jurisdictions**

- (d) *AEMO* must consult with persons nominated by the relevant *participating jurisdictions* in relation to any determination to enter into contracts under this rule 3.20.
- (e) In entering into *reserve contracts* under this rule 3.20, *AEMO* must agree with the relevant nominated persons referred to in paragraph (d) cost-sharing arrangements between the *regions* for the purpose of clause 3.15.9.

#### **Procurement trigger and lead time**

- (f) *AEMO* must not enter into a *reserve contract* for a *region* (or vary a *reserve contract* for a *region* that was entered into following a previous declaration under clause 4.8.4 for that *region*):
  - (1) unless it has made a declaration under clause 4.8.4 for that *region*; and
  - (2) more than 12 months prior to the:
    - (i) commencement of any time period specified in the declaration in accordance with clause 4.8.5(a1)(2); or
    - (ii) where no such time period is specified, the date *AEMO* reasonably expects that the *reserves* under that contract may be required to address the *low reserve* or *lack of reserve* condition, having regard to the *reliability standard implementation guidelines*.

For the avoidance of doubt, *AEMO* may negotiate with potential tenderers in relation to *reserve contracts* at any time.

#### **Offering scheduled reserves into the market**

- (g) When contracting for the provision of *scheduled reserves* under *scheduled reserve contracts*, *AEMO* must not enter contracts in relation to capacity of *scheduled generating units*, *scheduled network services* or *scheduled loads* for which *dispatch offers* or *dispatch bids* have been submitted or are considered by *AEMO* to be likely to be submitted or be otherwise available for *dispatch* at any time during:
  - (1) the period from the date of execution of the *scheduled reserve contract* until the end of its term; and
  - (2) the 12 month period immediately preceding the date of execution of the *scheduled reserve contract*, except where that capacity was *dispatched* under a *reserve contract*.
- (h) A person must not enter into a *scheduled reserve contract* in relation to capacity for which *dispatch offers* or *dispatch bids* were submitted, or that

was otherwise available for *dispatch* at any time during the 12 month period immediately preceding the date of execution of the *scheduled reserve contract*, except where that capacity was *dispatched* under a *scheduled reserve contract*.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**Offering unscheduled reserves during specified trading intervals**

- (i) A person must not enter into an *unscheduled reserve contract* if the person is party to another contract or arrangement under which it is required to offer the *unscheduled reserves* the subject of the *unscheduled reserve contract* in the market for the *trading intervals* to which the contract with *AEMO* relates.

**Note**

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**Terms and conditions of a contract**

- (j) If *AEMO* seeks to enter into a *reserve contract* with a *Registered Participant* then the *Registered Participant* must negotiate with *AEMO* in good faith as to the terms and conditions of the contract.
- (k) *AEMO* may only enter into a *scheduled reserve contract* if the contract contains:
  - (1) a provision that the other party to the contract has not and will not otherwise offer the *scheduled reserve* the subject of the contract in the market at any time during the period from the date of execution of that contract until the end of its term; and
  - (2) a nominal MW value reflecting *AEMO's* view of the likely available capacity of that *reserve contract*.
- (l) *AEMO* may only enter into a *unscheduled reserve contract* if the contract contains:
  - (1) a provision that the other party to the contract has not and will not otherwise offer the *unscheduled reserve* the subject of the contract in the market for the *trading intervals* to which the contract with *AEMO* relates; and
  - (2) a nominal MW value reflecting *AEMO's* view of the likely available capacity of that *reserve contract*.
- (m) *AEMO* must use reasonable endeavours to ensure that:
  - (1) subject to subparagraph (f)(2), the term of a *reserve contract* is no longer than *AEMO* considers is reasonably necessary to address the relevant *low reserve* or *lack of reserve* condition; and

- (2) the amount of *reserve* procured under a *reserve contract* is no more than *AEMO* considers is reasonably necessary to address the relevant *low reserve* or *lack of reserve* condition.

having regard to the *RERT principles*.

### 3.20.4 Dispatch pricing methodology for unscheduled reserve contracts

- (a) Subject to paragraph (c), *AEMO* 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) *AEMO* may develop and *publish* the methodology developed in accordance with this clause 3.20.4 as part of the methodology *AEMO* is required to develop under clause 3.9.3(e).
- (c) *AEMO* 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 AEMO's risk management and accounts relating to the reliability safety net

- (a) *AEMO* may enter into insurance arrangements with an insurance provider with a view to minimising potential financial losses in respect of *AEMO's RERT* activities described in this rule 3.20.
- (b) *AEMO* must ensure that it maintains in its books separate accounts relating to the *RERT* functions and powers granted to *AEMO* under this rule 3.20.

### 3.20.6 Reporting on RERT by AEMO

#### Post-dispatch or activation report

#### Definitions

- (a0) In this clause 3.20.6:

**RERT report** has the meaning given to it in clause 3.20.6(b).

- (a) If *AEMO dispatches* or *activates reserves*, then *AEMO* must, as soon as practicable, and in any event no later than 5 *business days* thereafter, *publish* and make available on its website a report that includes details of:
  - (1) the total estimated payments made under *reserve contracts*;
  - (2) the total estimated volume (in MWh) of *reserves dispatched* or *activated* under *reserve contracts*; and
  - (3) if applicable, the information required under clause 3.8.14A(c),for the relevant *region*. In circumstances where *reserves* are *dispatched* or *activated* over consecutive days, the reference to "5 *business days*" in this clause 3.20.6(a) is to be read as "5 *business days* from the final consecutive day in which the *reserves* were *dispatched* or *activated*".

### **RERT report**

- (b) *AEMO* must:
- (1) *publish* a report (**RERT report**) that includes the information specified in paragraphs (d) to (f); and
  - (2) update the RERT report from time to time, in accordance with paragraph (c).
- (c) *AEMO* must:
- (1) *publish* the first RERT report no later than 30 *business days* after 31 December 2019;
  - (2) *publish* any updated RERT report no later than 30 *business days* after the end of each calendar quarter; and
  - (3) maintain on its website a copy of the RERT report as updated.

### **Information to include in RERT report – reserve contracts**

- (d) The RERT report must, with respect to any *reserve contracts* entered into by *AEMO*, include a detailed explanation of:
- (1) the estimated average amount payable by *AEMO* under *reserve contracts* for each *region*, broken down by payment type;
  - (2) *AEMO*'s modelling, forecasts and analysis used to determine:
    - (i) whether to enter into those *reserve contracts*; and
    - (ii) the amount of *reserve* procured under those *reserve contracts*, including how those amounts were determined in accordance with the methodology specified in clause 3.20.7(e)(2),  
and where *AEMO* procured an amount of *reserves* greater than any shortfall identified in the relevant declaration under clause 4.8.4, an explanation of why a greater amount was procured;
  - (3) the periods in which the *reserves* are expected to be required to address the relevant *low reserve* or *lack of reserve* condition, including whether they align with any periods identified in the relevant declaration under clause 4.8.4;
  - (4) the term of the *reserve contract*, including the basis on which *AEMO* considered the term to be reasonably necessary to address the relevant *low reserve* or *lack of reserve* condition; and
  - (5) the basis on which *AEMO* had regard to the *RERT principle* in clause 3.20.2(b)(3) when entering into those *reserve contracts*, and where the average amount payable by *AEMO* under *reserve contracts* exceeded the estimated average VCR for the relevant *region*, an explanation of why this had occurred.

### **Information to include in RERT report – dispatch or activation of reserves**

- (e) The RERT report must, with respect to any *reserves dispatched* or *activated* under *reserve contracts*, include a detailed explanation of:

- (1) the circumstances giving rise to the need for the *dispatch* of *scheduled reserves* or *activation* of *unscheduled reserves*, including the modelling, forecasts and analysis used by *AEMO* to determine the need for such *dispatch* or *activation* of *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*;
  - (4) the processes implemented by *AEMO* to *dispatch* the *scheduled reserves* or *activate* the *unscheduled reserves*;
  - (5) if applicable, reasons why *AEMO* 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*;
  - (6) the basis upon which *AEMO* determined its approach to setting *dispatch prices* and *ancillary service prices* in accordance with clause 3.9.3;
  - (7) the total amount of *reserves dispatched* or *activated*, and if applicable, why such amounts were different to those previously forecast or modelled by *AEMO*;
  - (8) the periods in which *reserves* were *dispatched* or *activated*, and if applicable, why such periods were different to those previously forecast or modelled by *AEMO*;
  - (9) the estimated costs of *load shedding* (including an amount expressed in \$/MWh) in a *region* avoided as a result of the *dispatch* or *activation* of *reserves*; and
  - (10) the impact of the *dispatch* of *scheduled reserves* or *activation* of *unscheduled reserves* on:
    - (i) the reliability of *supply* into the market; or
    - (ii) where applicable, *power system security*.
- (f) Where *AEMO* 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, the RERT report must include a detailed explanation of:
- (1) *AEMO's* costs associated with exercising the *RERT* (including an amount expressed in \$/MWh), including the payments under the *reserve contract* for the relevant *billing periods*; and
  - (2) a breakdown of the recovery of those costs (including an amount expressed in \$/MWh) from each *Market Customer*, as determined by *AEMO*, in each *region*.

**Information to include in RERT report – end of financial year**

- (g) The first updated RERT report following the end of each *financial year* must, in addition to the requirements of paragraphs (d) to (f) specify:
  - (1) each occasion during the *financial year* on which it secured the availability of *reserves* by entering into *reserve contracts*;
  - (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 (including an amount expressed in \$/MWh).

**3.20.7 AEMO's exercise of the RERT**

- (a) Notwithstanding clauses 4.8.5A and 4.8.5B, if *AEMO* 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, *AEMO* may *dispatch* such *scheduled reserves* or *activate* such *unscheduled reserves* to ensure that the reliability of supply in a *region* or *regions* meets the *reliability standard* or, where practicable, to maintain *power system security*.
- (b) *AEMO* 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), *AEMO* 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* *AEMO* 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 reserve contract* or the *activation of generating units* or *loads* the subject of an *unscheduled reserve contract*.

- (e) *AEMO* 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:
  - (1) the methodology, information and assumptions that *AEMO* uses to satisfy itself that a person complies with clause 3.20.3(i) in relation to *generating units* or *loads* that are the subject of *unscheduled reserve contracts* and the measures *AEMO* will adopt 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 required to be *activated* by *AEMO*;
  - (2) a methodology to be used by *AEMO* to determine the appropriate term of a *reserve contract* and the amount of *reserves* to procure in accordance with clause 3.20.3(m); and
  - (3) the basis on which *AEMO* determines the estimated average VCRs for the purposes of the *RERT principle* in clause 3.20.2(b)(3).
- (e1) If *AEMO* develops standardised forms of *reserve contracts*, it:
  - (1) must *publish* and maintain on its website a document that specifies the standard terms, conditions and specifications for each type of *reserve contract*, including permitted variations from those standard terms, conditions and specifications; and
  - (2) may amend such document from time to time.
- (f) When exercising the *RERT* under this rule 3.20, *AEMO* must take into account the *RERT guidelines*.
- (g) **[Deleted]**

### 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 *AEMO* 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 *AEMO* 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 *AEMO* should undertake in contracting for *reserves* including the process for tendering for contracts for such *reserves*;
  - (4A) the process *AEMO* should undertake in contracting for *reserves* in relation to different notice situations specified in the *RERT guidelines* to ensure reliability of *supply*;



- (4B) the process *AEMO* should undertake in contracting for *reserves* in relation to the different types of declarations made under clause 4.8.4 to ensure reliability of *supply*;
  - (5) any specific or additional assumptions about key parameters that *AEMO* must take into account in assessing the cost effectiveness of exercising the *RERT*;
  - (5A) the information, assumptions and parameters *AEMO* must take into account when determining the estimated average VCRs, and the application of those estimated average VCRs for the purposes of the *RERT principle* in clause 3.20.2(b)(3);
  - (6) matters relevant to *AEMO* managing a portfolio of *reserve contracts*; and
  - (7) additional forecasts that *AEMO* 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) [Deleted]

### 3.20.9 [Deleted]

## Schedule 3.1 Bid and Offer Validation Data

- (a) The *bid and offer validation 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 *AEMO* of their *bid and offer validation 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 *bid and offer validation data* annually in accordance with the *timetable* advised by *AEMO* and provide details of any changes to *AEMO*.
- (d) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must notify *AEMO* of any proposed change to its *bid and offer validation data* in accordance with clause 3.13.3(h) at least six weeks prior to the date of the proposed change and any proposed change may be subject to audit at *AEMO*'s request and must be consistent with *AEMO*'s register of *performance standards* referred to in rule 4.14(n) in respect of the relevant *plant*.
- (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) [Deleted]

### Scheduled Generating Unit Data:

Data	Units of Measurement
<b><i>Power station information:</i></b>	
<i>power station name</i>	
<b><i>Scheduled generating unit information:</i></b>	
<b>Note:</b> Repeat the following items for each <i>scheduled generating unit</i> where there are two or more <i>scheduled generating units</i> in the <i>power station</i> .	
<i>scheduled generating unit name</i>  <b>Note:</b> This may be the same name as the <i>power station name</i> when the <i>power station</i> has only one single or aggregated <i>scheduled generating unit</i> .	
<i>Dispatchable unit identifier</i>	
maximum generation of the <i>scheduled generating unit</i> , to which the <i>scheduled generating unit</i> may be dispatched.	MW (generated)
maximum ramp rate of the <i>scheduled generating unit</i>	MW/minute

### Semi-Scheduled Generating Unit Data:

Data	Units of Measurement
<b>Power station information:</b>	
<i>power station name</i>	
<b>Semi-scheduled generating unit information:</b>	
<b>Note:</b> Repeat the following items for each <i>semi-scheduled generating unit</i> where there are two or more <i>semi-scheduled generating units</i> in the <i>power station</i> .	
<i>semi-scheduled generating unit name</i>  <b>Note:</b> This may be the same name as the <i>power station name</i> when the <i>power station</i> has only one <i>semi-scheduled generating unit</i> .	
<i>Dispatchable unit identifier</i>	
maximum generation of the <i>semi-scheduled generating unit</i> , to which the <i>semi-scheduled generating unit</i> may be dispatched	MW ( <i>generated</i> )
maximum ramp rate of the <i>semi-scheduled generating unit</i>	MW/minute

### Scheduled Load Data:

Data	Units of Measurement
<b>Load installation information:</b>	
<i>load installation name</i>	
<b>Scheduled load information:</b>	
<b>Note:</b> Repeat the following items for each scheduled load where there are two or more scheduled loads.	
<i>scheduled load name</i>  <b>Note:</b> This may be the same name as the <i>load installation name</i> when the <i>load installation</i> has only one <i>scheduled load</i> .	
<i>Dispatchable unit identifier</i>	
maximum load of the <i>scheduled load</i> , to which the <i>scheduled load</i> may be dispatched	MW
maximum ramp rate of the <i>scheduled load</i>	MW/minute

### Scheduled Network Service Data:

Data	Units of Measurement
installation/link name	
<i>Dispatchable Unit Identifier</i>	
<i>connection point</i> identifiers for terminal nodes A and B	
maximum <i>power transfer capability</i> to node A	MW
maximum <i>power transfer capability</i> to node B	MW
maximum <i>ramp rate of power transfer capability</i> of the installation	MW/minute

### Ancillary Service Generating Unit and Ancillary Service Load Data:

Data	Units of Measurement
<b>Power station/load installation information:</b>	
<i>power station/load</i> installation name	
<b>Ancillary service generating unit and ancillary service load information</b>	
<b>Note:</b> Repeat the following items for each <i>dispatchable unit identifier</i> where there are two or more of them in the <i>power station/installation</i> .	
Unit/load name	
<i>Dispatchable unit identifier</i>	
<i>market ancillary service</i> *	
maximum <i>market ancillary service capacity</i> *	MW
<i>minimum enablement level</i> *	MW
<i>maximum enablement level</i> *	MW
<i>maximum lower angle</i> *	Degrees
<i>maximum upper angle</i> *	Degrees

**Note:**

For those items marked with an asterisk, repeat the block of data for each *market ancillary service* offered.

### Dispatch Inflexibility Profile:

[Deleted]

### Aggregation Data:

[Deleted]

**Schedule 3.2**      **[Deleted]**

**Schedule 3.3**      **[Deleted]**