

## **Indicative changes to National Electricity Rules proposed in Draft National Electricity Amendment (Wholesale demand response mechanism) Rule 2019**

### **Important note:**

This document shows changes to the relevant parts of the National Electricity Rules (NER) proposed by the draft National Electricity Amendment (Wholesale demand response mechanism) Rule 2019. It includes parts of chapters 2, 3, 4, 4A, 7, 10 and 11. The proposed changes are shown in a modified version of version 122 of the NER that incorporates, where relevant, changes made by the amending rules listed below. This modified version of parts of the NER is provided to assist in responding to the draft Rule and should not be used for any other purpose.

- Schedule 1 of the National Electricity Amendment (Retailer Reliability Obligation) Rule 2019 which came into effect on 1 July 2019
- Schedule 2 of the National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019 which will come into effect on 31 October 2019
- Schedule 1 of the National Electricity Amendment (Register of distributed energy resources) Rule 2018 which will come into effect on 1 December 2019
- Schedule 1 of the National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019 which will come into effect on 26 March 2020
- Schedule 2 of the National Electricity Amendment (Retailer Reliability Obligation) Rule 2019 which will come into effect on 26 March 2020
- Schedule 1 of the National Electricity Amendment (Five minute settlement) Rule 2017 which will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Participant compensation following market suspension) Rule 2018 which will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Intervention compensation and settlement processes) Rule 2019 which will come into effect on 1 July 2021
- Schedules 1-4 of the National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 which will come into effect on 6 February 2022

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## 2. Registered Participants and Registration

### 2.3.5 Ancillary services load

- (a) If a ~~*Demand Response Service Provider*~~ ~~*Market Ancillary Service Provider*~~ in respect of a *load*, or the *Market Customer* in respect of a *market load*, wishes to use that *load* or *market load* to provide *market ancillary services* in accordance with Chapter 3, then the ~~*Demand Response Service Provider*~~ ~~*Market Ancillary Service Provider*~~ or *Market Customer* (as the case may be) must apply to AEMO for approval to classify the *load* or *market load* as an *ancillary service load*.
- (b) An application under paragraph (a) must be in the form prescribed by AEMO and:
- (1) specify the *market ancillary services* which the ~~*Demand Response Service Provider*~~ ~~*Market Ancillary Service Provider*~~ in respect of a *load* or *Market Customer* in respect of a *market load* (as the case may be) wishes to provide using the relevant *load* or *market load*; ~~and~~
  - (2) in the case of an application made by a ~~*Demand Response Service Provider*~~ ~~*Market Ancillary Service Provider*~~, not be in respect of a *market load* that is a *scheduled load*;
  - (3) identify the units of *load* under the applicant's ownership, operation or control; and
  - (4) demonstrate how the units of *load* identified in subparagraph (3):
    - (i) are under the applicant's ownership, operation or control; and
    - (ii) have the required equipment to be used to provide *market ancillary service* and will be capable of meeting or exceeding the relevant *performance standards* and *specifications* to AEMO's satisfaction.
- (c) AEMO must, within 5 *business days* of receiving an application under paragraph (a), advise the applicant of any further information or clarification which is required in support of its application if, in AEMO's reasonable opinion, the application:
- (1) is incomplete; or
  - (2) contains information upon which AEMO requires ~~classification~~ clarification.
- (d) If the further information or clarification required pursuant to paragraph (c) is not provided to AEMO's satisfaction within 15 *business days* of the request, then the ~~*Demand Response Service Provider*~~ ~~*Market Ancillary Service Provider*~~ or *Market Customer* (as applicable) will be deemed to have withdrawn the application.
- (e) If AEMO is reasonably satisfied that:

- (1) the *load* is able to be used to provide the *market ancillary services* referred to in the application in accordance with the *market ancillary service specification*;
- (1A) the ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ or the *Market Customer* (as the case may be) has an arrangement with the *retail customer* at the relevant *connection point* for the supply of *market ancillary services*; and
- (2) the ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ or the *Market Customer* (as the case may be) has adequate communications and/or telemetry to support the issuing of *dispatch instructions* and the audit of responses,

then *AEMO* must approve the classification in respect of the particular *market ancillary services*.

- (f) If *AEMO* approves the classification of a *load* as an *ancillary service load*, then *AEMO* may impose on the relevant ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ or *Market Customer* (as the case may be) such terms and conditions as *AEMO* considers necessary to ensure that the provisions of the *Rules* applying to *market ancillary services* can be met.
- (g) A ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ and *Market Customer* (as applicable):
  - (1) must comply with any terms and conditions imposed by *AEMO* under paragraph (f);

**Note**

This clause is classified as a 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) must ensure that the *market ancillary services* provided using the relevant *ancillary services load* are provided in accordance with the co-ordinated *central dispatch* process operated by *AEMO* under the provisions of Chapter 3 and in accordance with the *market ancillary service specification*;

**Note**

This clause is classified as a 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) may submit to *AEMO* *market ancillary service offers* in respect of the *ancillary service load* in accordance with the provision of Chapter 3; and
- (4) if the ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ or *Market Customer* (as applicable) submits a *market ancillary service offer* in respect of the relevant *ancillary service load*, must comply with the *dispatch instructions* from *AEMO* in accordance with the *Rules*.

**Note**

This clause is classified as a 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) A ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ or *Market Customer* (as applicable) with an *ancillary service load* must only sell the *market ancillary services* produced using that *ancillary service load* through the *spot market* in accordance with the provisions of Chapter 3.

**Note**

This clause is classified as a 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) A ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ or *Market Customer* (as applicable) is not entitled to receive payment from AEMO for *market ancillary services* except where those *market ancillary services* are produced using an *ancillary service load* in accordance with Chapter 3 or pursuant to a *direction* or *clause 4.8.9 instruction*.
- (j) A ~~*Demand Response Service Provider Market Ancillary Service Provider*~~ and *Market Customer* (as applicable) must immediately notify AEMO if a *load* it has classified as an *ancillary service load* ceases to meet the requirements for classification under this clause 2.3.5.

**2.3.6 Wholesale demand response units**

- (a) If a *Demand Response Service Provider* in respect of a *load* wishes to use the *load* to provide *wholesale demand response* in accordance with Chapter 3, the *Demand Response Service Provider* must:
- (1) apply to AEMO for approval to classify the *load* as a *wholesale demand response unit*; and
  - (2) allocate the *load* to a *scheduled wholesale demand response unit* established in accordance with clause 2.3.7; and
  - (3) where the allocation under subparagraph (2) will result in aggregation of two or more *wholesale demand response units*, apply to AEMO for approval to aggregate under clause 3.8.3.
- (b) A *load* is not eligible for classification as a *wholesale demand response unit* if any *retail customer* at any *connection point* for the *load* (including any *child connection point*) is a *small customer*.
- (c) To be eligible for classification as a *wholesale demand response unit*:
- (1) unless the *Demand Response Service Provider* is also the *retail customer* for the *load*, the *Demand Response Service Provider* must have an arrangement with the *retail customer* at each *connection point* for the *load* for the provision of *wholesale demand response*;
  - (2) the *Demand Response Service Provider* must have nominated a *baseline methodology* to apply to the *wholesale demand response unit* that:

- (i) when applied, produces a baseline that satisfies the baseline methodology metrics; and
    - (ii) otherwise qualifies for application to the wholesale demand response unit having regard to any criteria in the wholesale demand response guidelines;
  - (3) each connection point associated with the load must have a type 1, 2, 3, or 4 metering installation;
  - (4) adequate communications and/or telemetry must be in place to support the issuing of dispatch instructions in respect of the load, together with other loads forming part of the scheduled wholesale demand response unit to which it is allocated and the audit of responses;
  - (5) the load must not be a market load that is a scheduled load; and
  - (6) in respect of each other requirement for classification as a wholesale demand response unit in the wholesale demand response guidelines:
    - (i) the load must satisfy the requirement; or
    - (ii) the requirement must have been waived by AEMO in respect of the load in accordance with the wholesale demand response guidelines.
- (d) An application under paragraph (a) must be in the form prescribed by AEMO and must:
  - (1) identify the load by reference to the applicable NMI;
  - (2) demonstrate how the load identified in subparagraph (1):
    - (i) is under the applicant's operation or control; and
    - (ii) has the required equipment to be used to provide wholesale demand response;
  - (3) nominate the baseline methodology the Demand Response Service Provider proposes be applied to the wholesale demand response unit or include the Demand Response Service Provider's proposal for a baseline methodology made in accordance with the wholesale demand response guidelines; and
  - (4) contain all other information required for the application under the wholesale demand response guidelines.
- (e) AEMO must, within 5 business days of receiving an application under paragraph (a), advise the applicant of any further information or clarification which is required in support of its application if, in AEMO's reasonable opinion, the application:
  - (1) is incomplete; or
  - (2) contains information upon which AEMO requires clarification.
- (f) If the further information or clarification required pursuant to paragraph (e) is not provided to AEMO's satisfaction within 15 business days of the request, then the Demand Response Service Provider will be deemed to have withdrawn the application.



- (g) AEMO must approve the classification of a load the subject of an application under paragraph (a) as a wholesale demand response unit if AEMO is reasonably satisfied that the load is eligible in accordance with paragraphs (b) and (c) to be classified as a wholesale demand response unit.
- (h) If AEMO approves the classification of a load as a wholesale demand response unit, AEMO may impose on the relevant Demand Response Service Provider such terms and conditions as AEMO considers necessary to ensure that the provisions of the Rules applying to wholesale demand response can be met.
- (i) A Demand Response Service Provider must comply with any terms and conditions imposed by AEMO under paragraph (h) in respect of its wholesale demand response unit.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

- (j) A Demand Response Service Provider in respect of a load that has been classified as a wholesale demand response unit, must only sell the wholesale demand response produced using that load:
- (1) through the spot market in accordance with the provisions of Chapter 3; and
  - (2) as part of the scheduled wholesale demand response unit to which the wholesale demand response unit is allocated.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

- (k) A Demand Response Service Provider must immediately notify AEMO if a load it has classified as a wholesale demand response unit ceases to meet the requirements for classification under this clause 2.3.6.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

- (l) A Demand Response Service Provider must in accordance with the wholesale demand response guidelines provide information to AEMO to satisfy AEMO that a load classified as a wholesale demand response unit continues to meet the requirements for classification under this clause 2.3.6.
- (m) If a load classified as a wholesale demand response unit ceases to meet the requirements for classification under this clause 2.3.6, AEMO must in accordance with the wholesale demand response guidelines revoke the classification of that load.

### **2.3.7 Scheduled wholesale demand response units**

- (a) A Demand Response Service Provider may in accordance with the wholesale demand response guidelines apply to AEMO to establish one or more scheduled wholesale demand response units.
- (b) To be eligible to establish a scheduled wholesale demand response unit, a Demand Response Service Provider must satisfy AEMO that, subject to the requirements in clause 3.8.3 for aggregation of two or more wholesale

demand response units, the proposed scheduled wholesale demand response unit is capable of providing at least 5 MW of wholesale demand response (when the scheduled wholesale demand response unit is dispatched to its maximum).

(c) A Demand Response Service Provider:

(1) must ensure that wholesale demand response provided using a scheduled wholesale demand response unit is provided in accordance with the co-ordinated central dispatch process operated by AEMO under the provisions of Chapter 3; and

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

(2) if the Demand Response Service Provider submits a dispatch offer in respect of a scheduled wholesale demand response unit, must comply with the dispatch instructions from AEMO in accordance with the Rules.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

(d) A Demand Response Service Provider is not entitled to receive payment from AEMO for wholesale demand response except where the wholesale demand response is provided by a scheduled wholesale demand response unit in accordance with Chapter 3.

## **2.3AA Demand Response Service Provider~~Market Ancillary Service Provider~~**

### **2.3AA.1 Registration**

(a) A person must not engage in the activity of offering and providing wholesale demand response or market ancillary services in accordance with Chapter 3 as a Demand Response Service Provider ~~Market Ancillary Service Provider~~ unless that person is registered by AEMO as a Demand Response Service Provider ~~Market Ancillary Service Provider~~.

(b) To be eligible for registration as a Demand Response Service Provider ~~Market Ancillary Service Provider~~, a person must satisfy AEMO that the person intends to classify, within a reasonable amount of time, a load as an ancillary service load in accordance with clause 2.3.5 or as a wholesale demand response unit in accordance with clause 2.3.6.:

~~(1) obtain the approval of AEMO to classify load connected to a transmission or distribution system that it wishes to use to provide market ancillary service by:~~

~~(i) identifying units of load under its ownership, operation or control;~~

~~(ii) demonstrating how load identified in (i) are under its ownership, operation or control; and~~

- ~~(iii) demonstrating that the load identified in (i) has the required equipment to be used to provide market ancillary service;~~
- ~~(2) satisfy AEMO that each load referred to in subparagraph (1) will be capable of meeting or exceeding the relevant performance standards and specifications to AEMO's satisfaction.~~
- (c) ~~[Deleted] A Market Ancillary Service Provider may classify the load referred to in subparagraph (b)(1) as an ancillary service load in accordance with clause 2.3.5 where it has obtained the approval of AEMO to do so.~~
- (d) A Demand Response Service Provider's Market Ancillary Service Provider's activities only relate to loads it has classified (in its capacity as a Demand Response Service Provider~~Market Ancillary Service Provider~~) as ancillary service loads or as a wholesale demand response unit, and only while it is also registered with AEMO as a Demand Response Service Provider~~Market Ancillary Service Provider~~.

## 2.4 Market Participant

### 2.4.1 Registration as a category of Market Participant

- (a) A *Market Participant* is a person registered by AEMO as any one or more of the following categories:
- (1) *Market Customer*;
  - (1A) *Market Small Generation Aggregator*;
  - (1B) *Demand Response Service Provider*~~*Market Ancillary Service Provider*~~;
  - (2) *Market Generator*;
  - (3) *Market Network Service Provider*.
- (b) A *Market Participant* may only participate in the *market* in the category in which it has been registered.
- (c) A *Market Participant* may only participate in any of the *markets* or trading activities conducted by AEMO if that *Market Participant* satisfies the relevant *prudential requirements* set out in Chapter 3 applicable to the relevant trading activity.

### 2.12 Interpretation of References to Various Registered Participants

- (a) A person may register in more than one of the categories of *Registered Participant*.
- (b) Notwithstanding anything else in the *Rules*, a reference to:
- (1) a "*Generator*" applies to a person registered as a *Generator* only in so far as it is applicable to matters connected with the person's *scheduled generating units, semi-scheduled generating units, non-scheduled generating units, market generating units* or *non-market generating units*;
  - (1A) a "*Small Generation Aggregator*" applies to a person registered as a "*Small Generation Aggregator*" only in so far as it is applicable to

matters connected with the person's *small generating units* or *market generating units*;

- (1B) a "~~*Demand Response Service Provider*~~" "~~*Market Ancillary Service Provider*~~" applies to a person registered as a "~~*Demand Response Service Provider*~~" "~~*Market Ancillary Service Provider*~~" only in so far as it is applicable to matters connected with the person's *ancillary service load* or *wholesale demand response unit*;
- (2) a "*Scheduled Generator*", "*Semi-Scheduled Generator*", "*Non-Scheduled Generator*", "*Market Generator*" or "*Non-Market Generator*" applies to a person only in so far as it is applicable to matters connected with the person's *scheduled generating units*, *semi-scheduled generating units*, *non-scheduled generating units*, *market generating units* or *non-market generating units* respectively;
- (3) a "*Customer*" applies to a person registered as a *Customer* only in so far as it is applicable to matters connected with the person's *first-tier loads*, *second-tier loads* or *market loads*;
- (4) a "*First Tier Customer*", "*Second Tier Customer*" or "*Market Customer*" applies to a person only in so far as it is applicable to matters connected with the person's *first-tier loads*, *second-tier loads* or *market loads* respectively;
- (4A) a "*Trader*" applies to a person only in so far as it is applicable to matters connected with the person's activities as a *Trader*;
- (4B) a "*Reallocator*" applies to a person only in so far as it is applicable to matters connected with the person's activities as a *Reallocator*;
- (5) subject to clause 2.5.1A(f), a "*Network Service Provider*" applies to a person registered as a *Network Service Provider* only in so far as it is applicable to matters connected with the person's *network services*, including *market network services* and *scheduled network services*;
- (5A) a "*Dedicated Connection Asset Service Provider*" applies to a person only in so far as it is applicable to matters connected with the person's *dedicated connection assets*;
- (6) a "*Market Network Service Provider*" or "*Scheduled Network Service Provider*" applies to a person only in so far as it is applicable to matters connected with the person's *market network services* or *scheduled network services* respectively;
- (7) a "*Market Participant*" applies to a person who is a *Market Participant* and:
- (i) where that person is registered as a *Market Generator*, in so far as it is applicable to matters connected with the person's *market generating units* or *ancillary services generating units*; and
  - (i1) where that person is registered as a *Market Small Generation Aggregator*, in so far as it is applicable to matters connected with the person's *market generating units*; and
  - (i2) where that person is registered as a ~~*Demand Response Service Provider*~~ ~~*Market Ancillary Service Provider*~~, in so far as it is

- applicable to matters connected with the person's *ancillary service load*, *wholesale demand response unit or scheduled wholesale demand response unit*; and
- (ii) where that person is registered as a *Market Customer*, in so far as it is applicable to matters connected with the person's *market loads* or *market ancillary service loads*; and
  - (iii) where that person is registered as a *Market Network Service Provider*, in so far as it is applicable to matters connected with the person's *market network services*; and
  - (iv) where that person is registered in any category of *Market Participant* additional to a *Market Generator* and/or a *Market Customer* and/or a *Market Network Service Provider*, to the extent to which the reference would otherwise apply to the person if it were not taken to be a *Market Generator*, *Market Customer* or *Market Network Service Provider*; and
- (8) a "*Registered Participant*" applies to a person who is registered under Chapter 2 and:
- (i) where that person is registered as a *Generator*, in so far as it is applicable to matters connected with any of the *Generator's scheduled generating units*, *semi-scheduled generating units*, *non-scheduled generating units*, *market generating units* and *non-market generating units*;
  - (ii) where that person is registered as a *Customer*, in so far as it is applicable to matters connected with any of the *Customer's first-tier loads*, *second-tier loads* or *market loads*; and
  - (iii) where that person is registered in any other *Registered Participant* category, to the extent to which the reference would apply to the person if it were not registered in another *Registered Participant* category.
- (c) In rule 2.12, "*matter*" includes any assets, liabilities, acts, omissions or operations (whether past, present or future).



### 3. Market Rules

#### 3.2 AEMO's Market Responsibilities

##### 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, wholesale demand response and *market ancillary services* in accordance with this Chapter including:

- (a) the provision of facilities for the receipt and processing of *dispatch bids*, *dispatch offers* and *market ancillary service offers* for the *spot market*;
- (b) the management of a centralised national *dispatch* process, including the publication of *pre-dispatch schedules* and *spot price forecasts*;
- (c) the determination and publication of *spot prices* and *ancillary service prices* at each *regional reference node* for each *trading interval*;
- (c1) [Deleted]
- (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.

#### 3.7 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.
- (c) On a weekly basis AEMO must:
  - (1) collect and analyse information from all *Scheduled Generators*, *Market Customers*, Demand Response Service Providers, *Transmission Network Service Providers* and *Market Network Service Providers* about their intentions for:
    - (i) *generation*, *transmission*, wholesale demand response unit and *market network service* maintenance scheduling;

- (ii) intended *plant* availabilities or wholesale demand response unit availabilities;
  - (iii) *energy constraints* and wholesale demand response 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;
- (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 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) the 10% probability of exceedence daily *peak load*, most probable daily *peak load* and 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) **[Deleted]**
  - (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*:



- (1) *PASA availability* of each *scheduled generating unit*, *scheduled wholesale demand response 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 (g)); ~~and~~
- (2) *weekly energy constraints* applying to each *scheduled generating unit* or *scheduled load*; ~~and~~
- (3) *weekly wholesale demand response constraints applying to each scheduled wholesale demand response unit.*

**Note**

This clause is classified as a 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 clause is classified as a 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) **[Deleted]**
  - (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) aggregate *generating unit PASA availability* for each *region*;
  - (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; ~~and~~
- (5C) aggregate scheduled wholesale demand response unit PASA availability for each region; 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) *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 *30-minute period* 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* (including wholesale demand response units assuming they are not providing wholesale demand response) except for pumped storage *loads*,  
which must subsequently be adjusted in accordance with *dispatch bids* for *scheduled load* and for dispatch offers for scheduled wholesale demand response units;

- (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 *30-minute period*.
- (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 wholesale demand response unit*, *scheduled load* or *scheduled network service* for each *30-minute period* under expected market conditions;
  - (2) *PASA availability* of each *scheduled generating unit*, *scheduled wholesale demand response unit*, *scheduled load* or *scheduled network service* for each *30-minute period*; ~~and~~
  - (3) **[Deleted]**
  - (4) projected daily *energy* availability for *energy constrained scheduled generating units* and *energy constrained scheduled loads*; ~~and~~
  - (5) projected daily wholesale demand response availability for wholesale demand response constrained scheduled wholesale demand response units.

**Note**

This clause is classified as a 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* process must do so to the extent specified by *AEMO*.

**Note**

This clause is classified as a 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 clause is classified as a 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 *30-minute period* (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* and for scheduled wholesale demand response units assuming no dispatch of any wholesale demand response from those units, 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*;
- (3A) forecasts of the most probable wholesale demand response 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* and aggregate wholesale demand response unit PASA availability;
- (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*; ~~and~~
- (4AC) aggregate wholesale demand response for each region, after allowing for the impact of network constraints, calculated as the available capacity of scheduled wholesale demand response units that are able to operate at the availability as notified to AEMO under paragraph (e)(5);
- (4AD) aggregate wholesale demand response for each region, after allowing for the impact of network constraints, that cannot be provided at the available capacity referred to in subparagraph (4AC) due to specified daily wholesale demand response constraints;
- (4A) aggregate *generating unit PASA availability* (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region* and aggregate wholesale demand response unit PASA availability 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), (4AB), (4AC) and (4AD)~~(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*.

### 3.7D 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 curtailment~~ of *non-scheduled load* or the provision of unscheduled generation in certain specified circumstances, but excluding contractual arrangements for the provision of wholesale demand response by a wholesale demand response unit.

**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 Participants must provide ~~demand side participation information~~ 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.

#### Note

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

### ~~AEMO to report on demand side participation information~~ ~~AEMO to report on use of demand side participation information in load forecasts~~

~~(e) [Deleted]~~

- (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 clause 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), and excluding wholesale demand response, the curtailment 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~~curtailed or unscheduled generation may be provided;
  - (iv) the location at which *non-scheduled load* may be ~~adjusted~~curtailed or unscheduled generation may be provided;
  - (v) the quantity of *non-scheduled load* that may be ~~curtailed~~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; ~~and~~  
(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 these *Rules*.

### 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 wholesale demand response 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, dispatched wholesale demand response based on wholesale demand response 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, dispatched wholesale demand response, 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;
  - (11) ensuring that as far as reasonably practical, in relation to a *AEMO intervention event*:
    - (A) the number of *Affected Participants*; and



- (B) the effect on *interconnector* flows,  
is minimised; and
- (12) 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 *trading 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 clause is classified as a 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 clause is classified as a 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 clause is classified as a 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*, *wholesale demand response dispatch offers* 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 clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**3.8.2A Wholesale demand response unit participation in central dispatch**

- (a) A scheduled wholesale demand response unit is only eligible to participate in central dispatch where at the time for which the dispatch offer is made each wholesale demand response unit comprised in the scheduled wholesale demand response unit is baseline compliant as determined by the most recent baseline compliance testing for the wholesale demand response unit.
- (b) A Demand Response Service Provider must not submit a dispatch offer for a scheduled wholesale demand response unit that is not eligible under paragraph (a) to participate in central dispatch during the time for which the dispatch offer is made.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

- (c) A Demand Response Service Provider must only make a dispatch offer to provide wholesale demand response in a trading interval where and to the extent that, if dispatched, the wholesale demand response is or will be the result of wholesale demand response activities in that trading interval.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

- (d) AEMO must only include dispatch offers in central dispatch in respect of scheduled wholesale demand response units that are eligible under paragraph (a) to participate in central dispatch during the time for which the dispatch offer is made.
- (e) Subject to paragraphs (a), (b) and (c) and clause 3.8.23(c)(6), a Demand Response Service Provider may submit a dispatch offer in respect of its scheduled wholesale demand response unit in accordance with clause 3.8.7B.
- (f) A dispatch offer in respect of a scheduled wholesale demand response unit is an offer to adjust the net aggregate amount of electrical energy flowing at connection points for the relevant wholesale demand response units by the MW amount dispatched by AEMO as the loading level where:
- (1) the dispatch instruction specifies the net aggregate adjustment to have been achieved by the end of the trading interval to which it applies;
  - (2) subject to subparagraph (3), the adjustment is relative to the net aggregate amount of electrical energy flowing at connection points for the relevant wholesale demand response units at the start of the trading interval; and
  - (3) if the scheduled wholesale demand response unit is dispatched to provide wholesale demand response in contiguous trading intervals, the adjustment is relative to the net aggregate amount of electrical energy flowing at connection points for the relevant wholesale demand response units at the start of the first such trading interval.
- (g) The loading level of a scheduled wholesale demand response unit will be determined by AEMO in accordance with clause 3.8.1 when the scheduled wholesale demand response unit is being dispatched by AEMO to provide wholesale demand response.

- (h) The AER must develop guidelines in accordance with the Rules consultation procedures providing guidance to Demand Response Service Providers about:
- (1) how the AER intends to monitor compliance by Demand Response Service Providers with paragraphs (b) and (c); and
  - (2) information Demand Response Service Providers must keep regarding the matters in paragraphs (b) and (c).
- (i) The AER must publish the guidelines developed under paragraph (h) and may amend the guidelines from time to time.

### 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 *Demand Response Service Providers*~~*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.
- (a2) *Demand Response Service Providers* who wish to aggregate two or more wholesale demand response units so they are allocated to the same scheduled wholesale demand response unit 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 *automatic generation control systems* 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*, *Demand Response Service Provider*~~*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.
- (b2) AEMO must approve applications for aggregation made under paragraph (a2) if the following conditions are fulfilled:
- (1) aggregated wholesale demand response units must be connected within a single region and must have been classified under clause 2.3.6 by a single person in its capacity as a Demand Response Service Provider;
  - (2) power system security must not be materially affected by the proposed aggregation; and
  - (3) control systems must satisfy the requirements of clauses 2.3.6(c)(3) and (4) after aggregation.
- (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 process under rule 3.7 to allow *power system security* to be effectively monitored.
- (f1) Demand Response Service Providers that have been granted aggregated status must, if required by AEMO, declare individual wholesale demand response unit availability and operating status to AEMO in the PASA process 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 wholesale demand response 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 wholesale demand response 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~~
    - (v) clause 3.8.7B; 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 clause is classified as a 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 clause is classified as a 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 clause is classified as a 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 wholesale demand response 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 wholesale demand response unit*, *scheduled network service* and/or *scheduled load* for each *trading interval* of the *trading day*;

**Note**

This clause is classified as a 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), (e) and (f)~~ in accordance with clause 3.8.22;

**Note**

This clause is classified as a 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 288 *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 clause is classified as a 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 288 *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 clause is classified as a 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 288 *trading intervals* in the *trading day*; and
  - (2) an up *ramp rate* and a down *ramp rate*; ~~and~~

**Note**

This clause is classified as a 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) for *scheduled wholesale demand response units*, two days ahead of each *trading day*:
- (1) a MW capacity profile that specifies the *wholesale demand response* available for *dispatch* for each of the 288 *trading intervals* in the *trading day*; and
  - (2) an up *ramp rate* and a down *ramp rate*.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

**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*; ~~and~~
  - (4) MW quantities in *wholesale demand response 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.

### **3.8.7B Wholesale demand response dispatch offers**

- (a) A Demand Response Service Provider's wholesale demand response dispatch offer must specify for each of the 288 trading intervals in the trading day if the Demand Response Service Provider is participating in central dispatch in respect of its scheduled wholesale demand response unit in the trading interval.
- (b) Where the Demand Response Service Provider is participating in central dispatch in respect of its scheduled wholesale demand response unit in a trading interval, its wholesale demand response dispatch offer for the trading interval:
- (1) may contain up to 10 price bands;
  - (2) must specify:
    - (i) an incremental MW amount for each price band specified in the dispatch offer;
    - (ii) an up ramp rate and a down ramp rate; and
  - (3) must specify a profile of the net aggregate amount of electrical energy flowing at connection points for the relevant wholesale demand response units, in MW relative to a loading level of zero, that:
    - (i) will apply if the scheduled wholesale demand response unit is dispatched to provide wholesale demand response; and
    - (ii) is for the 6 trading intervals immediately following the last trading interval in which the scheduled wholesale demand response unit is dispatched to provide wholesale demand response.

### **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, 3.8.7A or 3.8.7B~~ ~~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 clause is classified as a 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](#), [3.8.7A](#) or [3.8.7B](#) ~~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 wholesale demand response 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](#), [3.8.7B](#) ~~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 wholesale demand response 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 wholesale demand response 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]**

### 3.8.14 Dispatch under conditions of supply scarcity

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

- (a) subject to:
  - (1) any adjustments which may be necessary to implement action under paragraph (c); and
  - (2) any *plant* operating restrictions associated with a *relevant AEMO intervention event*,all valid *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*;
- (b) subject to:
  - (1) any adjustments which may be necessary to implement action under paragraph (c); and
  - (2) any *plant* operating restrictions associated with a *relevant AEMO intervention event*,

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

- (3) *dispatching scheduled generating units, scheduled wholesale demand response units, scheduled network services or scheduled loads* in accordance with any *scheduled reserve contract*; or
  - (4) *activating loads or generating units* under any *unscheduled reserve contract*; and
- (c) any further corrective actions required are implemented in accordance with clauses 4.8.5B and 4.8.9.

### 3.8.16 Equal priced dispatch bids and dispatch offers

If there are *scheduled generating units, scheduled wholesale demand response 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.

### 3.8.19 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 wholesale demand response 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 wholesale demand response unit, scheduled network service or scheduled load*, it must advise AEMO through the PASA process or in its *dispatch offer* or *dispatch bid* in respect of that *scheduled generating unit, scheduled wholesale demand response unit, scheduled network service or scheduled load*, as appropriate under this Chapter, that the *scheduled generating unit, scheduled wholesale demand response 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 wholesale demand response unit, scheduled network service or scheduled load* is to be operated in that *trading interval*.

#### Note

This clause is classified as a 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 clause is classified as a 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response unit*, *scheduled network service* or *scheduled load* is *inflexible* at the same time as it advises *AEMO* of the *inflexibility*; and

**Note**

This clause is classified as a 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 wholesale demand response unit*, *scheduled network service* or *scheduled load* that the *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled wholesale demand response unit*, *scheduled network service* or *scheduled load* is *inflexible*, *AEMO* will *dispatch* the *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled wholesale demand response 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 wholesale demand response units*, *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*, *scheduled wholesale demand response units*, 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*.
- (f1) A *dispatch inflexibility profile* for a *scheduled wholesale demand response unit* 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:
  - (1) one *30-minute period*; and
  - (2) one *trading interval*, for the period of 60 minutes from the time that the relevant *pre-dispatch schedule* is *published* by AEMO, provided that AEMO may at any stage provide the resolution required by this clause 3.8.20(b)(2) for a period longer than 60 minutes,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) Subject to paragraph (b), AEMO must determine the *pre-dispatch schedule* on the basis of:
  - (1) *dispatch bids*, *dispatch offers* and *market ancillary service offers* submitted for the relevant *trading interval* or *trading intervals*;
  - (2) AEMO's *forecast power system load* for each *region* for the relevant *trading interval* or *trading intervals*; 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*, *Demand Response Service Provider*, *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~~ *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 clause is classified as a 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) Subject to clause 3.8.20(b), the following *pre-dispatch* outputs relating specifically to a *generating unit*, *scheduled wholesale demand response 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 *trading interval* or *30-minute period loading level* (as applicable) 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* or *30-minute period* (as applicable); and
  - (7) for each *semi-scheduled generating unit* and *trading interval* or *30-minute period* (as applicable), whether or not a condition for setting a *semi-dispatch interval* or *semi-dispatch intervals* 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) **[Deleted]**
- (b) The *dispatch algorithm* is to be run by AEMO for each *trading interval*. If the *dispatch algorithm* is not successfully run for any *trading interval* then the values of the last successful run of the *dispatch algorithm* must be used for that *trading interval*.
- (c) *Central dispatch* results in the setting of *spot prices* and *ancillary services prices* for each *trading interval* in accordance with rule 3.9.
- (d) Where possible, *dispatch instructions* will be issued electronically via the *automatic generation control system* or via an electronic display in the *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 *automatic generation control system* are to be issued progressively at intervals of no more than 5 minutes following re-evaluation of *central dispatch* to achieve a prompt and smooth implementation of the outcomes of each *central dispatch* update.
- (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 wholesale demand response unit*, *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 *trading 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 *trading intervals*.
- (k) A *scheduled load*, *scheduled wholesale demand response unit* or *generating unit* whose *dispatch* is *constrained* in any *trading interval* due to a *dispatch inflexibility profile* submitted under clause 3.8.19 cannot be used as the basis for setting the *spot price* in that *trading 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, **3.8.7B**, 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*, ***daily wholesale demand response 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 clause is classified as a 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 clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

Clause 3.8.22(c)(2) applies in respect of any *rebid* submitted during the *late rebidding period*.

- (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 clause is classified as a 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 clause is classified as a 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.
- (a2) For the purposes of paragraph (a), the making of a *dispatch offer* by a *Demand Response Service Provider* in respect of a *scheduled wholesale demand response unit* is deemed to represent to other *Market Participants* through the *pre-dispatch schedules published by AEMO* that the *wholesale demand response* the subject of the *dispatch offer* will, if *dispatched*, be the result of *wholesale demand response activity*.
- (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) or paragraph (a2).
- (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 the commencement of the *trading interval* to which the *rebid* relates, 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 a rebidding civil penalty provision for the purposes of the National Electricity Law. (See clause 6(2) of the National Electricity (South Australia) Regulations.)

### 3.8.23 Failure to conform to dispatch instructions

- (a) If a *scheduled generating unit*, *scheduled wholesale demand response 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 wholesale demand response 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 wholesale demand response 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*, *Demand Response Service Provider*, *Scheduled Network Service Provider* or *Market Customer* that the relevant *generating unit*, *scheduled wholesale demand response 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*, *Demand Response Service Provider*, *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; ~~and~~
- (6) should a *Demand Response Service Provider* fail to meet the requests set out in subparagraphs (1) and (2) or if *AEMO* is not satisfied that the *scheduled wholesale demand response unit* will respond to future *dispatch instructions* as required, *AEMO* must notify the *Demand Response Service Provider* that the *scheduled wholesale demand response unit* is not eligible to participate in central dispatch.
- (d) Until a *Scheduled Generator*, *Semi-Scheduled Generator*, *Demand Response Service Provider*, *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 wholesale demand response unit*, *scheduled network service* or *scheduled load* (as the case may be) will respond to future *dispatch instructions* as required, the *generating unit*, *scheduled wholesale demand response unit*, *scheduled network service* or *scheduled load* (as the case may be) continues to be non-conforming.
  - (e) If a *generating unit*, *scheduled wholesale demand response 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*, *Demand Response Service Provider*, *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.
- (f1) The direction referred to in paragraph (c)(6) must remain in place until the Demand Response Service Provider 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*.

### 3.9 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) [Deleted]
  - (2) a *spot price* at a *regional reference node* is determined by the *central dispatch process* at that *regional reference node* for each *trading interval*;
  - (2A) the *central dispatch process* must determine an *ancillary service price* for each *market ancillary service* at each *regional reference node* for each *trading interval*;

- (3) *spot prices* determine *dispatch* such that a *generating unit*, *scheduled wholesale demand response 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 wholesale demand response 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*, *scheduled wholesale demand response 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 for the *spot price* for the relevant *trading 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* for the relevant *trading 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* for the relevant *trading 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 *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 *spot price* for the relevant *trading 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 (*including through the provision of wholesale demand response*) 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* provide *Market Participants* with signals as to the value of providing or cost of consuming electricity at a particular location at a particular time; and
  - (7A) *ancillary service prices* provide *Ancillary Service Providers* with signals as to the value of providing the relevant *market ancillary service* within a particular *region* at a particular time.
- (b) A single *regional reference price* which is the *spot price* at the *regional reference node* provides a reference from which the *spot prices* are determined within each *region*.
  - (c) The *local spot price* at each *transmission network connection point* is the *spot price* at the *regional reference node* for the *region* to which the *connection point* is assigned multiplied by the 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).

**3.9.3C Reliability standard**

- (a) The *reliability standard* for generation, *wholesale demand response* and *inter-regional transmission elements* in the *national electricity market* 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*.
- (b) For the purposes of paragraph (a) *unserved energy* is to:
  - (1) include *unserved energy* associated with *power system reliability incidents* that result from:
    - (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* associated with *power system security incidents* that result from:
    - (i) multiple *contingency events*, *protected events* or *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*.

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

- (a) In the event that a *network constraint* causes a *scheduled generating unit* or a *scheduled wholesale demand response unit* to be *constrained-on* in any *trading interval*, that *scheduled generating unit* or *scheduled wholesale demand response 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 *spot price* in that *trading interval*.

#### Note

This clause is classified as a 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* or *Demand Response Service Provider* that is *constrained-on* in accordance with clause 3.9.7(a) is not entitled to receive from AEMO any compensation due to its *spot 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 clause is classified as a 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]~~

### 3.10 Wholesale demand response

#### 3.10.1 Wholesale demand response guidelines

- (a) AEMO must develop and publish and may amend wholesale demand response guidelines setting out:

- (1) the requirements for classification of a *load* as a *wholesale demand response unit* in accordance with clause 2.3.6, for establishing a *scheduled wholesale demand response unit* in accordance with clause 2.3.7 and for aggregation in accordance with clause 3.8.3;
  - (2) information to be provided to AEMO in an application under clause 2.3.6 or clause 2.3.7 including information to demonstrate *baseline compliance* under the nominated *baseline methodology*;
  - (3) guidance as to the circumstances in which AEMO may waive a classification requirement;
  - (4) any other information or requirements relating to classification of *loads* as *wholesale demand response units* or establishing *scheduled wholesale demand response units* that AEMO considers appropriate;
  - (5) AEMO's determination under clause 3.10.2 of the *baseline methodology metrics*;
  - (6) AEMO's determination under clause 3.10.2 of the process for *baseline compliance testing* and the periods over which that will occur;
  - (7) AEMO's determination under clause 3.10.4(d) of the conditions to be satisfied in connection with the submission of a notice for modifying a *baseline*;
  - (8) requirements for the form and content of a *baseline methodology*;
  - (9) a description of any classes of *loads* that in AEMO's opinion may reasonably be expected to seek classification as *wholesale demand response unit* and for which AEMO proposes to develop *baseline methodologies*;
  - (10) the process and timing for a *Registered Participant* to submit a proposed *baseline methodology* and for AEMO to seek clarification or additional information and make a decision;
  - (11) the process for a *Demand Response Service Provider* to apply to AEMO to change which *baseline methodology* applies to a *wholesale demand response unit*; and
  - (12) any other information or requirements relating to the testing and approval of *baseline methodologies* that AEMO considers appropriate.
- (b) AEMO must comply with the *Rules consultation procedures* when making or amending the *wholesale demand response guidelines*.
- (c) AEMO may make minor or administrative changes to the *wholesale demand response guidelines* without complying with the *Rules consultation procedures*.

### **3.10.2 Baseline methodology metrics and baseline compliance testing**

- (a) AEMO must determine and may amend the *baseline methodology metrics* setting out the parameters for assessing the *baseline* produced by a *baseline methodology* when applied to a *wholesale demand response unit*.
- (b) The assessment referred to in paragraph (a) must include an assessment of both accuracy and freedom from bias, where:

- (1) accuracy means the deviation between actual consumption of a *wholesale demand response unit* and its *baseline* for each of the measures of baseline accuracy in paragraph (c); and
  - (2) bias means the deviation between actual consumption of a *wholesale demand response unit* and its *baseline* for each of the measures of baseline accuracy in paragraph (c) consistently exhibiting error:
    - (i) in a single direction (either above or below the *baseline*); or
    - (ii) under the same circumstances (for example, during heatwaves).
- (c) The *baseline methodology metrics* must assess accuracy and bias:
  - (1) in particular *trading intervals*; and
  - (2) across multiple *trading intervals* (whether or not contiguous) to test accuracy and bias under a range of conditions or when *demand response* is likely to be *dispatched* or in other circumstances determined by *AEMO*.
- (d) A *wholesale demand response unit* is *baseline compliant* if the *baseline methodology* nominated by the *Demand Response Service Provider* and approved by *AEMO* to apply to the *wholesale demand response unit*, produces a *baseline* that satisfies the *baseline methodology metrics*.
- (e) For the purposes of paragraph (d), *AEMO* must determine and may amend arrangements for the regular and systematic testing, in relation to each *wholesale demand response unit*, of whether the *baseline methodology* when applied to the *wholesale demand response unit* produces a *baseline* that satisfies the *baseline methodology metrics* (***baseline compliance testing***).
- (f) *AEMO* must determine and may amend the periods over which *baseline compliance testing* will occur, which periods may be different for different *wholesale demand response units* or classes of *wholesale demand response unit*.
- (g) In determining the *baseline methodology metrics* and the periods over which *baseline compliance testing* will occur, *AEMO* must have regard to:
  - (1) the need not to distort the operation of the market; and
  - (2) the need to maximise the effectiveness of *wholesale demand response* at the least cost to end use consumers of electricity; and
  - (3) the level of accuracy achieved by the demand forecasts used by *AEMO* for *pre-dispatch* and the forecasts referred to in clause 3.7B(c)(4).

### **3.10.3 Use of a baseline methodology**

- (a) In determining whether to approve the application of a *baseline methodology* to a *wholesale demand response unit*, *AEMO* must use historic consumption for the *wholesale demand response unit* to assess whether the *baseline methodology metrics* are satisfied.
- (b) A *wholesale demand response unit* is only eligible to provide *wholesale demand response* under these *Rules* if it is *baseline compliant*.

- (c) If baseline compliance testing indicates that a wholesale demand response unit is not baseline compliant, AEMO must notify the Demand Response Service Provider.
- (d) Where a wholesale demand response unit ceases to be baseline compliant (including by reason of a change to the baseline methodology metrics):
  - (1) the relevant Demand Response Service Provider may elect to withdraw the wholesale demand response unit from the scheduled wholesale demand response unit to which it is allocated on a permanent basis or until it is baseline compliant; and
  - (2) AEMO may on the application of the Demand Response Service Provider, approve the application of another baseline methodology that when applied to the wholesale demand response unit satisfies the baseline methodology metrics.

### **3.10.4 Calculation of baselines**

- (a) Subject to paragraphs (b) and (c), the baseline for a wholesale demand response unit must be calculated by applying a baseline methodology:
  - (1) that is published or approved by AEMO;
  - (2) that AEMO has approved for application to the wholesale demand response unit; and
  - (3) that produces a baseline for the wholesale demand response unit that satisfies the baseline methodology metrics.
- (b) Where a Demand Response Service Provider is aware of an event or circumstance affecting a wholesale demand response unit in one or more trading intervals that is not and could not reasonably have been accounted for in the baseline methodology and as a result of which the baseline produced by the baseline methodology will not satisfy the baseline methodology metrics, the Demand Response Service Provider may subject to and in accordance with the wholesale demand response guidelines and prior to the commencement of the trading interval submit to AEMO a notice identifying the wholesale demand response unit and specifying:
  - (1) a factor between (and including) zero and 1 to be applied to the baseline produced by the baseline methodology; and
  - (2) the trading intervals in which the factor must be applied.
- (c) If a Demand Response Service Provider gives a notice in accordance with paragraph (b), for the purposes of baseline accuracy testing and settlement, the baseline for the wholesale demand response unit in each trading interval specified in the notice will be the baseline as adjusted by the factor specified in the notice.
- (d) AEMO must determine and may amend conditions for the submission of notices under paragraph (b) which may include:
  - (1) requirements for the submission of notices including timing and content;

- (2) requirements for information to be provided to AEMO or records to be made by the Demand Response Service Provider in connection with the notice;
- (3) events or circumstances that are taken to have been accounted for in the baseline methodology and in respect of which no notice may be given;
- (4) conditions limiting or precluding the submission of notices where reasonably considered necessary by AEMO to maintain the accuracy and reliability of baseline methodologies; and
- (5) any other conditions reasonably determined by AEMO.

### **3.10.5 Baseline methodology development**

- (a) AEMO must in accordance with the wholesale demand response guidelines develop baseline methodologies applicable to one or more classes of wholesale demand response units and must publish the baseline methodologies developed by it in the register maintained under paragraph (b).
- (b) AEMO must establish and maintain a register of baseline methodologies developed by AEMO or (at the request of the relevant Registered Participant) approved by AEMO under paragraph (d), together with information to facilitate assessment of a wholesale demand response unit or prospective wholesale demand response units against the baseline methodology.
- (c) A Registered Participant may in accordance with the wholesale demand response guidelines submit to AEMO for approval a proposed baseline methodology.
- (d) If AEMO is reasonably satisfied that a proposed baseline methodology satisfies the requirements for approval in the wholesale demand response guidelines, AEMO must approve the baseline methodology.
- (e) If AEMO does not approve a proposed baseline methodology, AEMO must notify the Registered Participant who submitted the proposal, providing reasons for the refusal.
- (f) A baseline methodology approved under paragraph (d) is confidential information of the relevant Registered Participant unless the Registered Participant requests the baseline methodology be included in the register maintained under paragraph (b).
- (g) Notwithstanding paragraph (f), AEMO may disclose the baseline methodology applicable to a connection point for a wholesale demand response unit to the financially responsible Market Participant for the connection point under and in accordance with the Market Settlement and Transfer Solution Procedures.

### **3.10.6 Wholesale demand response annual reporting**

- (a) Within six months of the end of each calendar year, AEMO must prepare and publish a report on the operation of the arrangements for the provision of wholesale demand response under the Rules.
- (b) A report under paragraph (a) must report on outcomes relating to the use and accuracy of baseline methodologies in respect of that year, including:



- (1) information about *baseline methodologies* available for use under the *wholesale demand response guidelines* and the extent to which the *baseline methodologies* are being used, with an analysis of trends over time;
  - (2) for each *baseline methodology* and type of *wholesale demand response unit*, an assessment against the *baseline methodology metrics* as measured during the *wholesale demand response unit* classification process and *baseline accuracy testing*;
  - (3) any periods for which any *wholesale demand response units* have been ineligible for the provision of *wholesale demand response* due to not being *baseline compliant*;
  - (4) potential improvements to the provision of *wholesale demand response* under the *Rules* which may include:
    - (i) changes to *baseline methodology metrics* as a result of the development or approval of new *baseline methodologies*;
    - (ii) the development of new *baseline methodologies*;
    - (iii) any other any measures that may be taken to improve the accuracy or reduce the bias of *baseline methodologies*; and
    - (iv) changes to the *wholesale demand response guidelines* or the *Rules*; and
  - (5) the timing and process for making any improvements.
- (c) A report under paragraph (a) must include, for the period under review:
- (1) the number of registered *Demand Response Service Providers*;
  - (2) the number and capacity of *wholesale demand response units*;
  - (3) the number and average capacity of *scheduled wholesale demand response units*;
  - (4) the amount of *dispatched wholesale demand response* and the frequency of *dispatch*;
  - (5) analysis of the *spot market* price levels at which *wholesale demand response* was *dispatched*;
  - (6) analysis of trends, including year-on-year changes, in the matters referred to in paragraphs (1) to (5).

### **3.10.7 AEMC wholesale demand response review**

- (a) The *AEMC* must, following the third anniversary of the commencement of this clause:
  - (1) conduct a review of the arrangements for the provision of *wholesale demand response* under the *Rules* in accordance with paragraph (b) and the *Rules consultation procedures*; and
  - (2) publish a report of its findings and recommendations.
- (b) The review under paragraph (a) must consider the costs, benefits and effectiveness of the arrangements having regard to:

- (1) the impact of the arrangements on the spot price;
- (2) the accuracy of baseline methodologies;
- (3) market and technological developments; and
- (4) any other matters relating to wholesale demand response which the AEMC considers relevant.

### 3.12 Market Intervention by AEMO

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

(a) In respect of each *intervention pricing 30-minute period*:

- (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 wholesale demand response 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 pricing 30-minute period*;

RRP (in dollars per MWh) is the *regional reference price* in the relevant *intervention pricing 30-minute period* determined in accordance with clause 3.9.3;

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 pricing 30-minute period*;

QD (in MWh) is the difference between the amount of electricity consumed by the *scheduled load* during the relevant *intervention pricing 30-minute period* 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 pricing 30-minute period*, then the adjustment that the *Market Customer* is entitled to claim in respect of that *scheduled load* for that *intervention pricing 30-minute period* 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 *intervention pricing 30-minute period*, 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 pricing 30-minute period*, *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 pricing 30-minute period* 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) *AEMO* must include in an *Affected Participant's* or *Market Customer's final statement* provided pursuant to clause 3.15.15 for a *billing period* in which one or more *intervention pricing 30-minute periods* occurred:
- (1) the amount notified by *AEMO* pursuant to paragraph (c) if the absolute value of such amount is greater than \$5,000; and
  - (2) in all other cases no amount in relation to compensation pursuant to this clause 3.12.2.
- (e) If the figure calculated in accordance with paragraph (c) is:
- (1) negative, the absolute value of that amount is the amount payable to *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 *intervention pricing 30-minute period* an *Affected Participant* or *Market Customer* may only make a claim pursuant to paragraph (f) in respect of that *intervention pricing 30-minute period* 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*, *scheduled wholesale demand response 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*, *scheduled wholesale demand response unit* or *scheduled network service*;
    - (ii) incremental maintenance costs in connection with the *scheduled generating unit*, *scheduled wholesale demand response unit* or *scheduled network service*; and
    - (iii) incremental manning costs in connection with the *scheduled generating unit*, *scheduled wholesale demand response 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 a *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), 3.15.7B(a1) 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.

### 3.12A Mandatory restrictions

#### 3.12A.1 Restriction offers

- (a) *AEMO* must develop, and may vary from time to time, in accordance with the *Rules consultation procedures* a *mandatory restrictions* trading system. The trading system must include:
- (1) procedures for the acquisition by *AEMO* of capacity the subject of *restriction offers*;
  - (2) the standard terms and conditions upon which *AEMO* shall accept a *restriction offer*;
  - (3) the criteria to be applied by *AEMO* in the appointment of an appropriately qualified independent expert for the purposes of clause 3.12A.7(g)(ii); and
  - (4) procedures for the rebidding and *dispatch* of capacity the subject of an *accepted restriction offer*.
- (b) The *restriction offer procedures* must take into account the following principles:
- (1) *AEMO* may accept a *restriction offer* for all or part of the capacity of a *scheduled generating unit* or *scheduled wholesale demand response unit* or *scheduled network service*, as recorded in the *bid and offer validation data* for that *scheduled generating unit* or *scheduled wholesale demand response unit* or *scheduled network service*.
  - (2) *AEMO* must use its reasonable endeavours to acquire capacity from valid *restriction offers* or to terminate in whole or part an *accepted restriction offer* in a manner that minimises the estimated *restriction shortfall amount*.
  - (3) *AEMO* may at any time terminate an *accepted restriction offer* in whole or in part by providing 4 hours notice to the relevant *Scheduled Generator* or *Demand Response Service Provider* or *Scheduled Network Service Provider* that an *accepted restriction offer* is so terminated.

- (4) The submission of *restriction offers* must be made in the form and by the means set out in procedures developed and *published* by AEMO for the purpose of the submission of *restriction offers*.
  - (5) If a *restriction offer* is made in accordance with the *restriction offer procedures*, AEMO must make available to the parties who submitted the *restriction offer* the following information without delay:
    - (i) acknowledgment of receipt of a valid *restriction offer*; and
    - (ii) notification detailing why a *restriction offer* is invalid, if appropriate.
  - (6) If any details contained within a *restriction offer* are inconsistent with the *bid and offer validation data* provided by the relevant party then AEMO has the right to reject that *restriction offer* as invalid.
  - (7) A valid *restriction offer* must set out for each *trading interval* of a *trading day*:
    - (i) the price offered in \$/MWh or as otherwise permitted by the *restriction offer procedures*; and
    - (ii) MW amount for that *trading interval* being offered.
  - (8) AEMO must only accept *restriction offers* from *Scheduled Generators*, *Demand Response Service Providers* and *Scheduled Network Service Providers* with a *connection point* located in the *region* in which *mandatory restrictions* apply or are proposed to apply.
- (c) The standard terms and conditions developed by AEMO pursuant to clause 3.12A.1(a)(2) must take into account the following principles:
- (1) All capacity the subject of the *restriction offer* must be available for immediate *dispatch* in the *central dispatch* process at all times.
  - (2) An *accepted restriction offer* is binding and may only be revoked or varied if the *Scheduled Generator*, *Demand Response Service Provider* or *Scheduled Network Service Provider* notifies AEMO in accordance with the *restriction offer procedures* of a revocation or variation. Immediately upon receipt of such notification AEMO must amend the *accepted restriction offer* to reduce the capacity of the *accepted restriction offer* by the notified capacity. Such capacity must not be *dispatched* by AEMO pursuant to a *dispatch offer* for such capacity during the remainder of the *trading day* in which the *accepted restriction offer* was revoked or varied in accordance with this clause 3.12A.1(c) provided that such capacity may be re-offered as a *restriction offer*.
  - (3) A *restriction offer* may be amended or revoked in accordance with the *restriction offer procedures* at any time prior to it becoming an *accepted restriction offer*.

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

In each *trading interval* when *mandatory restrictions* apply, each *scheduled generating unit*, *scheduled wholesale demand response unit* or *scheduled network service* the subject of an *accepted restriction offer* with respect to that *trading*

*interval* must rebid the total capacity the subject of such *restriction offer* by varying the respective *dispatch offers* or *network dispatch offers* in accordance with the procedures developed pursuant to clause 3.12A.1(a)(4).

#### Note

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

### 3.12A.5 Dispatch of restriction offers

- (a) In a *trading interval* AEMO may only *dispatch* the capacity of a *scheduled generating unit* or *scheduled network service* in accordance with the procedures for the *rebidding* and *dispatch* of capacity the subject of an *accepted restriction offer* developed by AEMO in consultation with *Registered Participants*. Such procedures must as far as reasonably practical incorporate the following principles:
- (i) *dispatch* of *accepted restriction offers* only after all the capacity of *scheduled loads*, *scheduled generating units* and *scheduled network services* contained in valid *dispatch offers* and *dispatch bids* have been *dispatched*;
  - (ii) recognise any requirement for advance notice or action for generators to operate at minimum generation, provide advance notice to *loads* or obtain capacity of *market network services* that are or may become the subject of a *AEMO intervention event*;
  - (iii) be consistent with the price of *accepted restriction offers* in accordance with clause 3.12A.6; and
  - (iv) minimise the *restriction shortfall amount*.
- (b) Notwithstanding the provisions of this clause 3.12A.5, at no time is AEMO required to *dispatch* the capacity of a *Scheduled Generator*, *Demand Response Service Provider* or *Scheduled Network Service Provider* the subject of an *accepted restriction offer* if such *dispatch* would prevent AEMO from meeting its obligations for system security.

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

- (a) AEMO is entitled to the *trading amount* received by *Scheduled Generators*, *Demand Response Service Providers* and *Scheduled Network Service Providers* from the *dispatch* of capacity the subject of an *accepted restriction offer* in accordance with 3.15.10B.
- (b) AEMO must, as soon as reasonably practicable following the end of a *mandatory restriction period*, calculate:
- (i) the aggregate amount payable to AEMO pursuant to clause 3.12A.7(a) from all *accepted restriction offers* in that *mandatory restriction period*;
  - (ii) the aggregate amount payable by AEMO pursuant to all *accepted restriction offers* in that *mandatory restriction period*; and



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

**Note**

This clause is classified as a 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 the *restriction shortfall amount* is between minus \$100,000 and \$0, then each *Market Customer* in the relevant *region* must pay to *AEMO* an amount determined in accordance with the following formula:

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

Where:

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

RSA is the *restriction shortfall amount*.

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

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

- (g) If the *restriction shortfall amount* is less than minus \$100,000:
- (i) each *Market Customer* in the relevant *region* must pay to *AEMO* an amount determined in accordance with the following formula:

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

Where

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

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

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

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

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

- (ii) AEMO must within 10 days of the end of a *mandatory restriction period* appoint an appropriately qualified independent expert as AEMO's agent to determine the *restriction demand reduction* claimed by each *Market Customer* in a *region* for the purposes of clause 3.12A.7(g).
- (h) If the *restriction shortfall amount* is a positive number then AEMO must pay to *Market Customers* in the relevant *region* an amount equal to:

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

Where:

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

RSA is the *restriction shortfall amount*.

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

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

- (i) When appointing the independent expert under clause 3.12A.7(g), AEMO must include as part of the independent expert's terms of appointment the following requirements:
  - (1) The independent expert must prepare a statement of the principles which the independent expert believes should be followed in determining the *restriction demand reduction* of *Market Customers*.
  - (2) Within 5 *business days* of his or her appointment, the independent expert must provide AEMO with details of his or her estimated fees and costs.
  - (3) Within 5 *business days* of his or her appointment, the independent expert must provide the statement prepared under clause 3.12A.7(i)(1) to all *Market Customers* in the relevant *region* and request that each

*Market Customer* in the relevant *region* provide him or her with details of the *restriction demand reduction* claimed by that *Market Customer* and such additional information specified by the independent expert to fulfil its obligations.

- (4) The independent expert must offer to meet with and consult each *Market Customer* who may be liable to make a payment to *AEMO* pursuant to clause 3.12A.7(g).
- (5) The independent expert must within 30 *business days* of his or her appointment or such later date as approved by *AEMO* in its sole discretion:
  - (i) *publish* a draft report; and
  - (ii) provide each *Market Customer* in the relevant *region* with a draft statement.
- (6) The draft report must contain:
  - (i) the *restriction shortfall amount* based upon the independent expert's estimated fees and costs; and
  - (ii) the methodology used by the independent expert in determining the *restriction demand reduction* of each *Market Customer* in a *region*.

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

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

- (11) The independent expert must provide *AEMO* with his or her final tax invoice for services rendered at the time of publication of the final report.
- (i1) Each *Market Customer* must within 10 *business days* of the independent expert requesting information in accordance with clause 3.12A.7(i)(3) deliver to the independent expert all such information.

**Note**

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

- (i2) The independent expert may request a *Market Customer* to provide further information that he or she requires to prepare either the draft or final report or a draft or final statement within 5 *business days* of the request being made.
- (j) A *Market Customer* must not unreasonably withhold information sought by the independent expert and must use its reasonable endeavours to provide the independent expert with the information required within the relevant timeframe specified in this clause 3.12A.7.
- (k) If a *Market Customer* has not provided the independent expert with information required under this clause 3.12A.7 within the specified time period, then the independent expert is entitled to make such assumptions concerning that information as he or she thinks appropriate.
- (l) Subject to the review process specified in clause 3.12A.7(m), a determination made by an independent expert appointed under clause 3.12A.7(g) binds all *Market Customers*.
- (m) Following the publication of the independent expert's final report, a *Market Customer* may request the *Adviser* to establish a *dispute resolution panel* to redetermine that *Market Customer's restriction demand reduction* only if the *Market Customer* reasonably believes that the independent expert's determination:
- (1) has incorrectly assessed the *restriction demand reduction* of that *Market Customer* by more than 10%; or
  - (2) was made negligently or in bad faith.
- (n) The determination of a *dispute resolution panel* established under clause 3.12A.7(m):
- (1) binds all *Market Customers* and each *Market Customer* must comply with a determination of the *dispute resolution panel*; and

**Note**

This clause is classified as a 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) may only order reimbursement of the reasonable fees and expenses incurred by a *Market Customer* in disputing the independent expert's determination and no other amounts.
- (o) Any amounts determined by the *dispute resolution panel* as payable by *AEMO* on behalf of the independent expert for the reasonable fees and

expenses incurred by a *Market Customer* in disputing the independent expert's determination must be included on the next statement provided under clauses 3.15.14 and 3.15.15.

### 3.13 Market Information

#### 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*, *scheduled wholesale demand response units* and *generating units* in accordance with schedule 3.1.

#### Note

This clause is classified as a 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*, *scheduled wholesale demand response units* 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-; or

(iv) the number of individual *wholesale demand response units* that have been aggregated in accordance with clause 3.8.3.

**Note**

This clause is classified as a 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 clause is classified as a 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 clause is classified as a 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 clause is classified as a 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.
- (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*.
- (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(1), 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(1) 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(1); 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.

### 3.13.3A 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*; and
  - (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*, *scheduled wholesale demand response 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*.
- (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*.
- (g) A *Registered Participant* must ensure that the information provided in response to an information request under paragraph (d) or under paragraph
- (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.

### 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).

- (j) In this clause:

**contracted demand side participation** has the meaning given in rule 3.7D.

### 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 *30-minute period* 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) Subject to clause 3.8.20(b), details of the *pre-dispatch schedule* to be *published* must include the following for each *trading interval* or *30-minute period* (as applicable) 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* **and scheduled wholesale demand response unit** 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* and *scheduled wholesale demand response unit* 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* and *scheduled wholesale demand response unit* 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 *30-minute period* (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* for each *30-minute period* to changes in the forecast *load* or *generating unit* or *scheduled wholesale demand response unit* availability.
- (h1) Together with its forecast *spot prices*, *AEMO* may *publish* details of the expected sensitivity of the forecast *spot prices* for each *trading interval* 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 *spot 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.
- (11) In addition to the *spot price*, *AEMO* must *publish* a *30-minute price* for a *regional reference node* for each *30-minute period*.
- (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 wholesale demand response 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*, *Demand Response Service Provider* or *Market Participant* for each *rebid* under clause 3.8.22(c)(2);
  - (2) identification of the *Scheduled Generator*, *Semi-Scheduled Generator*, *Demand Response Service Provider* 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 wholesale demand response 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*, *Demand Response Service Provider* 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 *trading 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 *trading interval*.
- (q) Each *day*, in accordance with the *timetable*, *AEMO* must *publish* details of:
- (1) *dispatched generation*, *dispatched wholesale demand response*, *dispatched network service* or *dispatched load* for each *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled wholesale demand response unit*, *scheduled network service* and *scheduled load* respectively in each *trading interval*; and
- (2) for each *semi-scheduled generating unit* in each *trading 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*; ~~and~~
- (4) actual wholesale demand response provided by each scheduled wholesale demand response unit.
- (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 ~~and aggregated information of actual wholesale demand response provided by scheduled wholesale demand response units.~~
- (u) Each time *AEMO* runs the *dispatch algorithm* it must, within 5 minutes, *publish* for the relevant *trading 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 *spot price* referred to in clause 3.13.4(1) and the sum of the actual *generation* referred to in clause 3.13.4(u)(2).
- (v) Where *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*.

### 3.14 Administered Price Cap and Market Suspension

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

##### Eligibility for compensation

- (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.

**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 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* and *Demand Response Service Providers*:



- (i) the *spot price* for a *trading interval* is set by the *administered price cap* during an *administered price period*; or
  - (ii) the *spot price* for a *trading 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 *spot price* for a *trading interval* is set by the *administered floor price* during an *administered price period*; or
  - (ii) the *spot price* for a *trading 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 *spot price* for a *trading 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 *spot price* for a *trading 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 generating unit* or an *ancillary service load*, the *ancillary service price* for a *trading interval* is set by the *administered price cap* during an *administered price period*.

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

**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.

- (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* or Demand Response Service Provider 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, Demand Response Service Providers and Scheduled Network Service Providers* to supply energy (including by means of wholesale demand response);
  - (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.; ~~and~~
  - (5) under clause 3.15.6B.
- (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.

### 3.15.6A Ancillary service transactions

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

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

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 *trading interval*; and
- ASP (in \$ per MW per hour) = the *ancillary service price* for the *market ancillary service* for the *trading 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 payable by *AEMO* under paragraph (b) 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) In this clause:

**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.

- (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) *system restart ancillary services*, 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 a *system restart ancillary service*, 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:

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

Where

Subscript 'P' is the relevant period;

Subscript 'R' is the relevant

Subscript 'S' is the relevant NSCAS;

TA<sub>p,r</sub> (in \$) = trading amount payable by the Market Customer in respect of the relevant region and trading interval;

TNSCAS<sub>s,p</sub> 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<sub>s,p,r</sub> (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<sub>p,r</sub> (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<sub>p,r</sub> (in MWh) = the aggregate AGE<sub>p,r</sub> 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:

$$TA_p = TNSCAS_p \times \frac{AGE_p}{AAGE_p} \times -1$$

Where

Subscript 'P' is the relevant period;

TA<sub>p</sub>(in \$) = the trading amount payable by the Market Customer in respect of the relevant trading interval;

TNSCAS<sub>p</sub> (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<sub>p</sub> (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<sub>p</sub> (in MWh) = the aggregate AGE<sub>p</sub> 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<sub>i</sub> (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 *system restart ancillary service*;

RBF<sub>Ri</sub> (number) = the latest regional benefit factor assigned to the provision of the relevant *system restart ancillary service* under an individual *ancillary services agreement* in respect of the relevant *region* and *trading interval*, as determined by AEMO under paragraph (c7);

TGE<sub>R</sub> (in MWh) = the *generator energy* for the *Market Generator* for the *trading interval* in that *region*;

TSGE<sub>R</sub> (in MWh) = the *small generator energy* for the *Market Small Generator Aggregator* for the *trading interval* in that *region*;

ATGE<sub>R</sub> (in MWh) = the aggregate of the *generator energy* figures for all *Market Generators* for the *trading interval* in that *region*; and

ATSGE<sub>R</sub> (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<sub>i</sub> (in \$) = has the meaning given in clause 3.15.6A(d);

RBF<sub>Ri</sub> (number) = the latest regional benefit factor assigned to the provision of the relevant *system restart ancillary service* under an individual *ancillary services agreement* in respect of the relevant *region* and *trading interval*, as determined by AEMO under paragraph (c7);

TCE<sub>R</sub> (in MWh) = the *customer energy* for the *Market Customer* for the *trading interval* in that *region*; and

ATCE<sub>R</sub> (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 *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 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 the relevant *trading 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 the relevant *trading 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*, the wholesale demand response energy for Demand Response Service Providers 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 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 the relevant *trading interval*, as determined pursuant to clause 3.15.6A(f)(3).

In each *trading interval*, in relation to each *Market Generator*, each *Demand Response Service Provider* 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*, that *Demand Response Service Provider* and that *Market Small Generation Aggregator* determined in accordance with the following formula:

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

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

where:

- TA (in \$) = the *trading amount* to be determined (which is a negative number);
- RTCRSP (in \$) = the total of all amounts calculated by AEMO as appropriate to recover from the given *region* as calculated in this clause 3.15.6A(f) for the *fast raise service*, *slow raise service* or *delayed raise service* in respect of *trading interval*;
- TGE (in MWh) = the *generator energy* for the *Market Generator* in that *region* for the *trading interval*;
- TWDRE (in MWh)  $\equiv$  the *wholesale demand response energy for a Demand Response Service Provider* in that *region* for the *trading interval*;
- TSGE (in MWh) = the *small generator energy* for the *Market Small Generator Aggregator* in that *region* 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~~
- RATS GE (in MWh) = the aggregate of the *small generator energy* figures for all *Market Small Generator Aggregators* in that *region* for the *trading interval*; ~~and~~.

RATWDRE (in MWh)  $\equiv$  the aggregate of the *wholesale demand response energy figures for all Demand Response Service Providers in that region in that 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 *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 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 the relevant *trading 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 the relevant *trading 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 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 the relevant *trading interval*, as determined pursuant to clause 3.15.6A(g)(3).

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

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

where:

TA (in \$)  $=$  the *trading amount* to be determined (which is a negative number);

- RTCLSP (in \$) = the total of all amounts calculated by *AEMO* as appropriate to recover from the given *region* as calculated in this clause 3.15.6A(g) for the *fast lower service*, *slow lower service* or *delayed lower service* in respect of *trading interval*;
- TCE (in MWh) = the *customer energy* for the *Market Customer* in that *region* for the *trading interval*; and
- RATCE (in MWh) = the aggregate of the *customer energy* figures for all *Market Customers* in that *region* for the *trading interval*.
- (h) The total amount calculated by *AEMO* under paragraph (a) for the *regulating raise service* or the *regulating lower service* in respect of each *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 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 the relevant *trading 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*, *Demand Response Service Provider* 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*, *Demand Response Service Provider* or *Market Customer* determined in accordance with the following formula:
 
$$TA = PTA \times -I$$
 and
 
$$PTA = \text{the aggregate of} \left( TSCAS \times \frac{MPF}{AMPF} \right)$$
 for each *trading interval* for *global market ancillary service requirements* and *local market ancillary service requirements* where:

- TA (in \$) = the *trading amount* to be determined (which is a negative number);
- TSFCAS (in \$) = the total of all amounts calculated by *AEMO* under paragraph (h)(2) for the *regulating raise service* or the *regulating lower service* in respect of a *trading interval*;
- MPF (a number) = the contribution factor last set by *AEMO* for the *Market Generator*, *Market Small Generation Aggregator*, *Demand Response Service Provider* or *Market Customer*, as the case may be, under paragraph (j) for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*; and
- AMPF (a number) = the aggregate of the MPF figures for all *Market Participants* for the *trading interval* for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*.

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:

$$TA = PTA \times -1$$

and

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

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

- TA (in \$) = the *trading amount* 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 *AEMO* under paragraph (j) for *Market Customers*, for whom the *trading amount* is not calculated in accordance

with the formula in subparagraph (1) for the *region* or *regions* relevant to the *regulating raise service* or the *regulating lower service*;

AMPF (a number) = the aggregate of the MPF figures for all *Market Participants* for the *trading interval* for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*;

TCE (in MWh) = the *customer energy* for the *Market Customer* for the *trading interval* in the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*; and

ATCE (in MWh) = the aggregate of the *customer energy* figures for all *Market Customers*, for whom the *trading amount* is not calculated in accordance with the formula in subparagraph (1), for the *trading interval* for the *region* or *regions* relevant to that *regulating raise service* or *regulating lower service*.

(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 wholesale demand response 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 *trading interval*:
  - (i) 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 *trading interval*, the *semi-scheduled generating unit*:
  - (i) 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) In this clause 3.15.6A:

- (1) '**generator energy**' in respect of a *Market Generator* for a *trading interval* means the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Generator's* applicable *connection points*, provided that, if the sum of those figures is negative, then the *Market Generator's generator energy* for that *trading interval* is zero;
- (2) a *connection point* is an applicable *connection point* of a *Market Generator* if:
  - (A) the *Market Generator* is *financially responsible* for the *connection point*; and
  - (B) the *connection point* connects a *market generating unit* to the *national grid*;
- (3) '**customer energy**' in respect of a *Market Customer* for a *trading interval* means the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Customer's* relevant *connection points*;
- (4) a *connection point* is a relevant *connection point* of a *Market Customer* if:
  - (A) the *Market Customer* is *financially responsible* for the *connection point*; and
  - (B) the *load* at that *connection point* has been classified (or is deemed to be classified) as a *market load*;
- (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~~
- (6) a *connection point* is an applicable *connection point* of a *Market Small Generator Aggregator* if:
  - (A) the *Market Small Generator Aggregator* is *financially responsible* for the *connection point*; and
  - (B) the *connection point* connects a *small generating unit* classified as a *market generating unit* to the *national grid*.<sup>1</sup>
- (7) '**wholesale demand response energy**' in respect of a *Demand Response Service Provider* for a *trading interval* means the sum of the *wholesale demand response* provided by relevant *scheduled wholesale demand response units* for that *trading interval* in respect of that *Demand Response Service Provider* provided that, if the sum of those figures is



negative, then the Demand Response Service Provider's wholesale demand response energy for that trading interval is zero; and

(8) a scheduled wholesale demand response unit is a relevant scheduled wholesale demand response unit of a Demand Response Service Provider if it was dispatched to provide wholesale demand response in the trading interval.

(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.

### **3.15.6B Wholesale demand response transactions**

(a) In each trading interval, in relation to a connection point for a dispatched wholesale demand response unit in the trading interval, a wholesale demand response transaction occurs, which results in a trading amount for the relevant Demand Response Service Provider determined in accordance with the formula:

$$\text{TA} = \text{WDRSQ} \times (\text{RRP} - \text{WDRRR})$$

where:

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

WDRSQ  $\equiv$  the wholesale demand response settlement quantity for the wholesale demand response load for that trading interval, expressed in MWh and calculated under paragraph (c);

RRP  $\equiv$  the regional reference price for the regional reference node to which the connection point is assigned, expressed in dollars per MWh; and

WDRRR  $\equiv$  the wholesale demand regional reimbursement rate for the regional reference node to which the connection point is assigned, expressed in dollars per MWh and determined under paragraph (e).

(b) In each trading interval, in relation to a connection point for a dispatched wholesale demand response unit in the trading interval, a wholesale demand response transaction occurs, which results in a trading amount for the financially responsible Market Participant for the connection point determined in accordance with the formula:

$$\text{TA} = \text{WDRSQ} \times (\text{WDRRR} - \text{RRP})$$

where:

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

WDRSQ ≡ the wholesale demand response settlement quantity for the connection point for that trading interval, expressed in MWh and calculated under paragraph (c);

WDRRR ≡ the wholesale demand regional reimbursement rate for the regional reference node to which the connection point is assigned, expressed in dollars per MWh and determined under paragraph (e); and

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

(c) The wholesale demand response settlement quantity for a connection point for a wholesale demand response unit for a trading interval is determined in accordance with the formula:

$$\text{WDRSQ} = \text{BSQ} + \text{ME}$$

where:

WDRSQ ≡ the wholesale demand response settlement quantity to be determined;

BSQ ≡ the baseline settlement quantity for the connection point for the trading interval, expressed in MWh and calculated under paragraph (d); and

ME ≡ 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).

(d) The baseline settlement quantity for a connection point for a wholesale demand response unit for a trading interval is the baseline for the wholesale demand response load for the trading interval (as may have been adjusted in accordance with clause 3.10.4(c)).

(e) The wholesale demand regional reimbursement rate for a regional reference node for a trading interval is the load weighted average spot price for the regional reference node determined by the AER in accordance with paragraph (f) for the quarter in which the trading interval falls.

(f) The AER must calculate and provide to AEMO for each quarter commencing on 1 January, 1 April, 1 July and 1 October the load weighted average spot

price for each regional reference node over the 12 month period ending immediately before the start of the quarter.

## 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 energy only (including by means of wholesale demand response), and for the avoidance of doubt, does not include contractual or other arrangements for the provision of *ancillary services*.

### 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 wholesale demand response 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 wholesale demand response 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*.

### **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.

### **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*.
- (1) *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 paragraph (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*.

### 3.20.6 Reporting on RERT by AEMO

#### Post-dispatch or activation report

- (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*; and
  - (2) the total estimated volume (in MWh) of *reserves dispatched* or *activated* under *reserve contracts*,

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 then 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) if applicable, the basis upon which *AEMO* considered it impractical to set *spot prices* and *ancillary service prices* in accordance with clause 3.9.3(b);
  - (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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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 wholesale demand response 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:



- (i) clause 3.20.3(i) in relation to *generating units* or *loads* that are the subject of *unscheduled reserve contracts*; and
  - (ii) clause 3.20.3(h) in relation to *scheduled wholesale demand response units* that are the subject of *scheduled reserve contracts*;
- (1A) 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]**

### 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*, *scheduled wholesale demand response units*, *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]**

## 4. Power System Security

### 4.1 Introduction

#### 4.1.1 Purpose

(a) This Chapter:

- (1) provides the framework for achieving and maintaining a secure *power system*;
- (2) provides the conditions under which *AEMO* can intervene in the processes of the *spot market* and issue *directions* to *Registered Participants* so as to maintain or re-establish a secure and reliable *power system*;
- (3) has the following aims:
  - (i) to detail the principles and guidelines for achieving and maintaining *power system security*;
  - (ii) to establish the processes for the assessment of the adequacy of *power system reserves*;
  - (iii) to establish processes to enable *AEMO* to plan and conduct operations within the *power system* to achieve and maintain *power system security*; and
  - (iv) to establish processes for the actual *dispatch* of *scheduled generating units*, *semi-scheduled generating units*, *scheduled wholesale demand response units*, *scheduled loads*, *scheduled network services* and *ancillary services* by *AEMO* and for *AEMO* to enable *inertia network services* or *system strength services*.

(b) By virtue of this Chapter and the *National Electricity Law*, *AEMO* has responsibility to maintain and improve *power system security*. This Chapter also requires the *Jurisdictional System Security Coordinator* for each *participating jurisdiction* to advise *AEMO* of the requirements of the *participating jurisdiction* regarding *sensitive loads* and *priority of load shedding* and requires *AEMO* to provide copies of the relevant *load shedding procedures* and *EFCS settings schedules* to the *Jurisdictional System Security Coordinator*.

### 4.3 Power System Security Responsibilities and Obligations

#### 4.3.1 Responsibility of AEMO for power system security

The *AEMO power system security responsibilities* are:

- (a) to maintain *power system security*;
- (b) to monitor the operating status of the *power system*;
- (c) to co-ordinate the *System Operators* in undertaking certain of its activities and operations and monitoring activities of the *power system*;

- (d) to ensure that *high voltage* switching procedures and arrangements are utilised by *Network Service Providers* to provide adequate protection of the *power system*;
- (e) to assess potential infringement of the *technical envelope* or *power system operating procedures* which could affect the security of the *power system*;
- (f) to ensure that the *power system* is operated within the limits of the *technical envelope*;
- (g) to ensure that all *plant* and equipment under its control or co-ordination is operated within the appropriate operational or emergency limits which are advised to *AEMO* by the respective *Network Service Providers* or *Registered Participants*;
- (h) to assess the impacts of technical and any operational *plant* on the operation of the *power system*;
- (i) to arrange the *dispatch* of *scheduled generating units*, *semi-scheduled generating units*, *scheduled wholesale demand response units*, *scheduled loads*, *scheduled network services* and *ancillary services* (including *dispatch* by remote control actions or specific directions) in accordance with the *Rules*, allowing for the dynamic nature of the *technical envelope*;
- (j) to determine any potential *constraint* on the *dispatch* of *generating units*, *scheduled wholesale demand response units*, *loads*, *market network services* and *ancillary services* and to assess the effect of this *constraint* on the maintenance of *power system security*;
- (k) to assess the availability and adequacy, including the dynamic response, of *contingency capacity reserves* and *reactive power reserves* in accordance with the *power system security standards* and to ensure that appropriate levels of *contingency capacity reserves* and *reactive power reserves* are available:
  - (1) to ensure the *power system* is, and is maintained, in a *satisfactory operating state*; and
  - (2) to arrest the impacts of a range of significant multiple *contingency events* (affecting up to 60% of the total *power system load*) or *protected events* to allow a prompt restoration or recovery of *power system security*, taking into account under-frequency initiated *load shedding* capability provided under *connection agreements*, by *emergency frequency control schemes* or otherwise;
- (l) to monitor demand and generation and *wholesale demand response* capacity in accordance with the *reliability standard implementation guidelines* and, if necessary, initiate action in relation to a *relevant AEMO intervention event*;
- (m) to publish as appropriate, information about the potential for, or the occurrence of, a situation which could significantly impact, or is significantly impacting, on *power system security*, and advise of any *low reserve* condition for the relevant periods determined in accordance with the *reliability standard implementation guidelines*;
- (n) to refer to *Registered Participants*, as *AEMO* deems appropriate, information of which *AEMO* becomes aware in relation to significant risks to the *power*

*system* where actions to achieve a resolution of those risks are outside the responsibility or control of *AEMO*;

- (o) to utilise resources and services provided or procured as *ancillary services*, *system strength services* or *inertia network services* or otherwise to maintain or restore the *satisfactory operating state* of the *power system*;
- (p) to procure adequate *system restart ancillary services* in accordance with clause 3.11.9 to enable *AEMO* to co-ordinate a response to a *major supply disruption*;
- (pa) to coordinate the provision of *emergency frequency control schemes* by *Network Service Providers* and to determine the settings and intended sequence of response by those schemes;
- (pb) to determine the boundaries of *inertia sub-networks* and the *inertia requirements* for each *inertia sub-network* and to *enable inertia network services*;
- (pc) to determine the *system strength requirements* for each *region* and to *enable system strength services*;
- (q) to interrupt, subject to clause 4.3.2(1), *Registered Participant connections* as necessary during emergency situations to facilitate the re-establishment of the *satisfactory operating state* of the *power system*;
- (r) to issue a *direction* or *clause 4.8.9 instruction* (as necessary) to any *Registered Participant*;
- (s) to co-ordinate and direct any rotation of widespread interruption of demand in the event of a *major supply* shortfall or disruption;
- (t) to liaise with *participating jurisdictions* should there be a need to manage an extensive disruption, including the use of emergency services powers in a *participating jurisdiction*;
- (u) to determine the extent to which the levels of *contingency capacity reserves* and *reactive power reserves* are or were appropriate through appropriate testing, auditing and simulation studies;
- (v) to investigate and review all major *power system* operational incidents and to initiate action plans to manage any abnormal situations or significant deficiencies which could reasonably threaten *power system security*. Such situations or deficiencies include without limitation:
  - (1) *power system frequencies* outside those specified in the definition of *satisfactory operating state*;
  - (2) *power system voltages* outside those specified in the definition of *satisfactory operating state*;
  - (3) actual or potential *power system* instability; and
  - (4) unplanned/unexpected operation of major *power system* equipment; and
- (w) to ensure that each *System Operator* satisfactorily interacts with *AEMO*, other *System Operators* and *Distribution System Operators* for both *transmission* and *distribution network* activities and operations, so that *power system*

*security* is not jeopardised by operations on the *connected transmission networks* and *distribution networks*.

## 4.4 Power System Frequency Control

### 4.4.2 Operational frequency control requirements

To assist in the effective control of *power system frequency* by *AEMO* the following provisions apply:

- (a) *AEMO* may give *dispatch instructions* in respect of *scheduled generating units*, *semi-scheduled generating units*, *scheduled wholesale demand response units*, *scheduled loads*, *scheduled network services* and *market ancillary services* pursuant to rule 4.9;
- (b) Each *Generator* must ensure that all of its *generating units* meet the technical requirements for frequency control in clause S5.2.5.11;

#### Note

This clause is classified as a 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) *AEMO* must use its reasonable endeavours to arrange to be available and specifically allocated to *regulating duty* such *generating plant* as *AEMO* considers appropriate which can be automatically controlled or directed by *AEMO* to ensure that all normal *load* variations do not result in *frequency* deviations outside the limitations specified in clause 4.2.2(a); and
- (d) *AEMO* must use its reasonable endeavours to ensure that adequate *facilities* are available and are under the direction of *AEMO* to allow the managed recovery of the *satisfactory operating state* of the *power system*.

### 4.8.4 Declaration of conditions

*AEMO* may declare the following conditions in relation to a period of time, either present or future:

- (a) *Low reserve* condition – when *AEMO* considers that the balance of *generation* *or wholesale demand response* capacity and demand for the period being assessed does not meet the *reliability standard* as assessed in accordance with the *reliability standard implementation guidelines*.
- (b) *Lack of reserve (LOR)* condition – when *AEMO* determines, in accordance with the *reserve level declaration guidelines*, that the probability of *load shedding* (other than the reduction or *disconnection* of *interruptible load*) is, or is forecast to be, more than remote.

### 4.8.5 Managing declarations of conditions

- (a) *AEMO* must as soon as reasonably practicable *publish* any declaration under clause 4.8.4.
  - (a1) The *publication* of any such declaration must, to the extent reasonably practicable, include the following:
    - (1) the nature and extent of the *low reserve* or *lack of reserve* condition; and

- (2) the time period over which the *low reserve* or *lack of reserve* condition applies.
- (b) If *AEMO* makes a declaration under clause 4.8.4, *AEMO* must use its reasonable endeavours to follow the processes set out in clauses 4.8.5A and 4.8.5B.
- (c) Following a declaration under clause 4.8.4, *AEMO* must as soon as reasonably practicable *publish* notice of:
  - (1) any cancellation of that declaration; or
  - (2) any significant change in the *low reserve* or *lack of reserve* condition due to changed positions of *Scheduled Network Service Providers*, *Market Customers*, *Demand Response Service Providers*, *Semi-Scheduled Generators* and *Scheduled Generators* or due to other reasons.

## 4.9 Power System Security Related Market Operations

### 4.9.1 Load forecasting

- (a) *AEMO* must produce (at the intervals indicated and in accordance with the *timetable*) an indicative *load* forecast for each *region* for the periods indicated below:
  - (1) each *day*, a forecast for the *day* ahead, such forecast divided into half-hourly *load* forecasts for each *trading interval*;
  - (2) each *day*, a forecast for 2 to 7 *days* (inclusive) ahead, the forecasts for each *day* divided into half-hourly *load* forecasts for each *trading interval*;
  - (3) every week, a forecast for the 24 *months* ahead of the *day* on which the forecast is produced, with a daily profile based on an estimated weekly *peak load* condition with allowances for weekends and holidays.
- (b) These forecasts must provide an indicative estimate of the total *generation* or *wholesale demand response* capacity required to meet the forecast *load* (called "**forecast load (as generated)**"), and in the case of *generation capacity*, an equivalent estimation of the *supply* required to be delivered to the relevant *transmission network* (called "**forecast load (sent out)**").
- (c) The following factors must be taken into account in the development of the *load* forecasts, to the extent that such are relevant to the particular forecast:
  - (1) the annual *load* forecasts and *load* profiles collected by the *Network Service Providers* from all *Registered Participants* as required by schedule 5.7, including *load* management expectations and expected *sent out generation* from *embedded generating units*;
  - (2) historic *load* data, including *transmission* losses and *power station* in-house use of the *generated* output;
  - (3) weather forecasts and the current and historic weather conditions and pattern;
  - (4) the incidence of major events or activities which are known to *AEMO*;

- (5) anticipated pumped storage *loads*;
  - (6) official economic activity forecasts from *participating jurisdictions*; and
  - (7) other information provided by *Registered Participants*.
- (d) *AEMO* must develop a methodology to create the indicative *load* forecasts.
- (e) **[Deleted]**
- (f) **[Deleted]**
- (g) The *load* forecasts produced by *AEMO* are indicative only as *AEMO* has no direct influence over *Market Participants* in their decisions about their level of demand and, accordingly, no person may claim any loss or damage from *AEMO* as a result of any difference between *load* forecasts and actual *load*.

#### **4.9.2B Instructions to Demand Response Service Providers**

- (a) *AEMO* may, at any time, give instructions to *Demand Response Service Providers* to provide *wholesale demand response* consistent with *dispatch offers* made in accordance with Chapter 3 (*dispatch instructions*).
- (b) A *Demand Response Service Provider* must, with respect to *scheduled wholesale demand response units* in relation to which a *dispatch offer* has been submitted for a particular *trading interval*, ensure that appropriate personnel or electronic facilities are available at all relevant times to receive and immediately act upon *dispatch instructions* issued by *AEMO* to the *Demand Response Service Provider*.

#### **Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

#### **4.9.5 Form of dispatch instructions**

- (a) A *dispatch instruction* for a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* must include the following:
- (1) specific reference to the *generating unit* (including any aggregated *generating unit*), *scheduled network service* or *scheduled load* or other *facility* to which the *dispatch instruction* applies;
  - (2) the desired outcome of the *dispatch instruction* (if applicable) such as *active power*, *reactive power*, *transformer tap* or other outcome;
  - (3) in the case of a *dispatch instruction* under clause 4.9.2, the *ramp rate* (if applicable) which is to be followed by the *generating unit* or a specific target time to reach the outcome specified in the *dispatch instruction*;
  - (4) the time the *dispatch instruction* is issued;
  - (5) if the time at which the *dispatch instruction* is to take effect is different from the time the *dispatch instruction* is issued, the start time; and
  - (6) in the case of a *dispatch instruction* for a *semi-scheduled generating unit*:



- (i) a notification as to whether the *dispatch interval* to which the *dispatch instruction* relates is a *semi-dispatch interval* or a *non semi-dispatch interval*; and
  - (ii) the *dispatch level*.
- (a1) A *dispatch instruction* for an *ancillary service* must include:
- (1) specific reference to the *generating unit* or *load* to which the *dispatch instruction* applies;
  - (2) the desired outcome of the *dispatch instruction*;
  - (3) the time the *dispatch instruction* is issued; and
  - (4) if the time at which the *dispatch instruction* is to take effect is different from the time the *dispatch instruction* is issued, the start time.
- (a2) A *dispatch instruction* for a *scheduled wholesale demand response unit*, must include the following:
- (1) specific reference to the *scheduled wholesale demand response unit* to which the *dispatch instruction* applies;
  - (2) the desired *loading level* of the *scheduled wholesale demand response unit* at the end of the *trading interval* to which it relates;
  - (3) the *ramp rate* (if applicable) which is to be followed by the *scheduled wholesale demand response* or a specific target time to reach the outcome specified in the *dispatch instruction*;
  - (4) the time the *dispatch instruction* is issued; and
  - (5) if the time at which the *dispatch instruction* is to take effect is different from the time the *dispatch instruction* is issued, the start time.
- (b) The *dispatch instruction* must be provided as provided in clause 3.8.21.

#### 4.9.8 General responsibilities of Registered Participants

- (a) A *Registered Participant* must comply with a *dispatch instruction* given to it by AEMO unless to do so would, in the *Registered Participant's* reasonable opinion, be a hazard to public safety or materially risk damaging equipment.

**Note**

This clause is classified as a 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* must ensure that each of its *scheduled generating units* is at all times able to comply with the latest *generation dispatch offer* under Chapter 3 in respect of that *generating unit*.

**Note**

This clause is classified as a 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 ensure that each of its *scheduled network services* is at all times able to comply with the latest *network dispatch offer* under Chapter 3 in respect of that *market network service*.

**Note**

This clause is classified as a 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 *Registered Participant* must ensure that each of its *facilities* is at all times able to comply with any relevant *dispatch bid* under Chapter 3 in respect of the *facility* (as adjusted by any subsequent restatement of that bid under Chapter 3).

**Note**

This clause is classified as a 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 *Market Participant* which has classified a *generating unit* or *load* as an *ancillary service generating unit* or an *ancillary service load*, as the case may be, must ensure that the *ancillary service generating unit* or *ancillary service load* is at all times able to comply with the latest *market ancillary service offer* for the relevant *trading interval*.

**Note**

This clause is classified as a 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 *Semi-Scheduled Generator* must ensure that each of its *semi-scheduled generating units* is at all times able to comply with its latest *generation dispatch offer*.

**Note**

This clause is classified as a 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 *Demand Response Service Provider* must ensure that each of its *scheduled wholesale demand response units* is at all times able to comply with its latest *dispatch offer*.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

**4.9.9E Wholesale demand response availability changes**

A *Demand Response Service Provider* must, without delay, notify AEMO of any event which has changed or is likely to change the availability of any *wholesale demand response*, as soon as the *Demand Response Service Provider* becomes aware of the event.

**4.11 Power System Security Support****4.11.1 Remote control and monitoring devices**

- (a) All remote control, operational *metering* and monitoring devices and local circuits as described in schedules 5.2, 5.3 and 5.3a, must be installed and maintained in accordance with the standards and protocols determined and advised by AEMO (for use in the *control centres*) for each:

- (1) *scheduled generating unit and semi-scheduled generating unit connected to the transmission or distribution network; and*
- (2) *substation connected to the network.*

**Note**

This clause is classified as a 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 provider of any *ancillary services, system strength services or inertia network services* must arrange the installation and maintenance of all *remote control equipment and remote monitoring equipment* in accordance with the standards and protocols determined and advised by *AEMO* for use in the relevant *control centre*.

**Note**

This clause is classified as a 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) The control and monitoring devices must include provision for indication of *active power and reactive power* output, provision for signalling the status and any associated alarm condition relevant to achieving adequate control of the *transmission network*, and provision for indication of *generating plant* active and reactive output.

**Note**

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

- (c1) The provider of any *wholesale demand response* must arrange the installation and maintenance of all *remote control equipment and remote monitoring equipment* in accordance with the standards and protocols determined and advised by *AEMO* for use in the relevant *control centre*.

**Note**

The AEMC proposes to recommend that this clause be classified as a civil penalty provision.

- (d) Where reasonably necessary to allow *AEMO* to discharge its *market and power system security* functions *AEMO* may, by notice in writing, require a *Network Service Provider*, a *Generator* or a *Market Network Service Provider* to:
  - (1) install *remote monitoring equipment* which, in *AEMO*'s reasonable opinion, is adequate to enable *AEMO* to remotely monitor the performance of a *transmission system or distribution system, generating unit* (including its *dynamic performance*) or a *market network service facility* as appropriate; and
  - (2) upgrade, modify or replace any *remote monitoring equipment* already installed in a *facility* provided that the existing *remote monitoring equipment* is, in the reasonable opinion of *AEMO*, no longer fit for the intended purpose.
- (e) A *Network Service Provider, Generator or Market Network Service Provider* who receives a notice in accordance with clause 4.11.1(d), must comply with

the notice within 120 *business days* or such further period that *AEMO* requires.

**Note**

This clause is classified as a 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) [Deleted]

(g) A *Generator* or *Market Network Service Provider* wishing to receive *dispatch instructions* electronically from *AEMO's automatic generation control system* under clause 3.8.21(d) must comply with *AEMO's* reasonable requirements in respect of how the remote control signals are issued by the *automatic generation control system* and transmitted to the *facility*.

**Note**

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

## 4A Retailer Reliability Obligation

### Part E Qualifying Contracts and Net Contract Position

#### Division 1 Key concepts

##### 4A.E.1 Qualifying contracts

- (a) The *AER*, in the Contracts and Firmness Guidelines:
- (1) may include guidance for liable entities to determine whether a contract or arrangement is a qualifying contract;
  - (2) must not prescribe other types of contracts or arrangements that are taken to be qualifying contracts under section 14O(1)(b) of the *National Electricity Law*; and
  - (3) may specify the types of contracts or other arrangements that are taken to be excluded contracts (and therefore not qualifying contracts) under section 14O(2) of the *National Electricity Law*.

#### Note

Section 14O(1) of the *National Electricity Law* defines a qualifying contract of a liable entity as a contract or other arrangement to which the liable entity is a party –

- (a) that -
- (i) is directly related to the purchase or sale, or price for the purchase or sale, of electricity from the *wholesale exchange* during a stated period; and
  - (ii) the liable entity entered into to manage its exposure in relation to the volatility of the spot price; or
- (b) of another type prescribed by the *Rules* to be a qualifying contract.

Section 14O(2) of the *National Electricity Law* states a qualifying contract does not include a contract or arrangement mentioned in subsection (1)(a) that is prescribed by the *Rules* to be an excluded contract for the reliability obligations.

- (b) In providing guidance under subparagraph (a)(1) in the Contracts and Firmness Guidelines, the *AER* must have regard to the principle that the contract or other arrangement should support (directly or indirectly) investment in plant or other arrangements that:
- (1) can supply *energy* that may be *dispatched*; or
  - (2) can reduce demand ~~foref~~ *energy* that may be activated,
- as required to meet *energy* requirements in the relevant *region*.

- (c) A demand side participation contract or other arrangement, under which a person provides demand response (including wholesale demand response) by curtailing person—curtails—non-scheduled load or the provision of *unscheduled generation* in certain specified circumstances, will only be a qualifying contract if it meets the requirements of section 14O(1)(a) of the *National Electricity Law* and (unless it is for the provision of wholesale demand response that is subject to dispatch by AEMO) is registered in AEMO's Demand Side Participation Information Portal.
- (d) A MLO product is taken to be a qualifying contract and have a firmness factor of one for the buyer of that product.
- (e) Subject to paragraph (c), a liable entity's own *generation* or *load curtailment* or the provision by a liable entity of wholesale demand response may be an arrangement that is a qualifying contract in accordance with the Contracts and Firmness Guidelines.

## 7. Metering

### Part F Security of metering installation and energy data

#### 7.15 Security of metering installation and energy data

##### 7.15.5 Access to data

- (a) Access to *energy data* recorded by a *metering installation* must only be provided where passwords are allocated in accordance with rule 7.15.

**Note**

This clause is classified as a 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 *Metering Coordinator* must ensure that access to *energy data* from the *metering installation* is scheduled appropriately to ensure that congestion does not occur.
- (c) Except as specified in paragraphs (d) or (e), only the following persons may access or receive *metering data*, *settlements ready data*, *NMI Standing Data*, and data from the *metering register* for a *metering installation*:
- (1) *Registered Participants* with a financial interest in the *metering installation* or the *energy* measured by that *metering installation*;
  - (2) the *Metering Coordinator* appointed in respect of the *connection point* for that *metering installation*, or a person who was previously appointed as the *Metering Coordinator* in respect of that *connection point*, as required in connection with a *Metering Coordinator default event* in accordance with procedures authorised under the *Rules*;
  - (3) the *Metering Provider* appointed with respect to that *metering installation*;
  - (4) the *Metering Data Provider* appointed with respect to that *metering installation*, or who was previously appointed with respect to a *metering installation* as required in accordance with the *Rules* and procedures authorised under the *Rules*;
  - (5) *AEMO* and its authorised agents; and
  - (5a) in relation to a *metering installation* at a *child connection point*, an *Embedded Network Manager*;
  - (6) the *AER* or *Jurisdictional Regulators* upon request to *AEMO*.
- (d) In addition to the persons listed in paragraph (c), the following persons may access or receive *metering data* in accordance with the *Rules* and procedures authorised under the *Rules*:
- (1) a *retail customer* or *customer authorised representative*, upon request by that *retail customer* or its *customer authorised representative* to the *retailer* or *Distribution Network Service Provider* in relation to that *retail customer's metering installation* in accordance with the *metering data provision procedures*;

- (2) if a *small customer* has consented to a person accessing the *metering data* from its *small customer metering installation* in accordance with clause 7.15.4(b)(3), to that person;
  - (3) a *large customer* or a *customer authorised representative*, in relation to *metering data* from the *metering installation* in respect of the *connection point* of the *large customer*;
  - (4) the *energy ombudsman* in accordance with paragraphs 7.11.1(i) – (k); and
  - (5) an *Exempt Embedded Network Service Provider* in relation to a *metering installation* at a *child connection point* on its *network*.
- (e) In addition to the persons listed in paragraphs (c) and (d), a *retailer* may access and receive *NMI Standing Data*.
- (f) Without limiting this clause 7.15.5 or clause 7.13.3:
- (1) a *retailer* may access and receive *NMI Standing Data*;
  - (2) a *customer authorised representative* may receive *metering data*;
  - (3) a *retailer* or a *Distribution Network Service Provider* may access, receive or provide *metering data* to a *customer authorised representative*; ~~and~~
  - (4) *Exempt Embedded Network Service Provider* and its *Embedded Network Manager* may access or receive *metering data*; ~~and~~
  - (5) a *Demand Response Service Provider* may access and receive *NMI Standing Data and metering data*.

after having first done whatever may be required or otherwise necessary, where relevant, under any applicable privacy legislation (including if appropriate making relevant disclosures or obtaining relevant consents from *retail customers*).



## 10. Glossary

### *AEMO intervention event*

An event where *AEMO* intervenes in the *market* under the *Rules* by:

- (a) issuing a *direction* in accordance with clause 4.8.9; or
- (b) exercising the *reliability and emergency reserve trader* in accordance with rule 3.20 by:
  - (1) *dispatching scheduled generating units, scheduled wholesale demand response units, scheduled network services or scheduled loads* in accordance with a *scheduled reserve contract*; or
  - (2) *activating loads or generating units* under an *unscheduled reserve contract*.

### *Affected Participant*

- (a) In respect of a particular *direction* in an *intervention pricing 30-minute interval*:
  - (1) A *Scheduled Generator* or *Scheduled Network Service Provider*:
    - (i) which was not the subject of the *direction*, that had its *dispatched quantity* affected by that *direction*; or
    - (ii) which was the subject of the *direction*, that had its *dispatched quantity* for other *generating units* or other services which were not the subject of that *direction* affected by that *direction*, however, the *Scheduled Generator* or *Scheduled Network Service Provider* is only an *Affected Participant* in respect of those *generating units* and services which were not the subject of that *direction*; or
  - (2) an *eligible person* entitled to receive an amount from *AEMO* pursuant to clause 3.18.1(b)(1) where there has been a change in flow of a *directional interconnector*, for which the *eligible person* holds units for the *intervention pricing 30-minute period*, as a result of the *direction*; and
- (b) in relation to the exercise of the *RERT* under rule 3.20:
  - (1) a *Scheduled Generator*, *Demand Response Service Provider* or *Scheduled Network Service Provider*:
    - (i) whose *plant* or *scheduled network service* was not *dispatched* under a *scheduled reserve contract*, that had its *dispatched quantity* affected by the *dispatch* of *plant* or *scheduled network service* under that *scheduled reserve contract*; and
    - (ii) who was not the subject of *activation* under an *unscheduled reserve contract*, that had its *dispatched quantity* affected by the *activation* of *generating units* or *loads* under that *unscheduled reserve contract*;

- (2) a *Scheduled Generator*, *Demand Response Service Provider* or *Scheduled Network Service Provider* whose plant or *scheduled network service* was dispatched under a *scheduled reserve contract*, that had its dispatched quantity for other *generating units*, *other scheduled wholesale demand response units* or other services which were not dispatched under the *scheduled reserve contract* affected by that dispatch of plant or *scheduled network service* under that *scheduled reserve contract*, however, the *Scheduled Generator*, *Demand Response Service Provider* or *Scheduled Network Service Provider* is only an *Affected Participant* in respect of those *generating units*, *scheduled wholesale demand response units* and services which were not dispatched under that *scheduled reserve contract*; or
- (3) an *eligible person* entitled to receive an amount from AEMO pursuant to clause 3.18.1(b)(1) where there has been a change in flow of a *directional interconnector*, for which the *eligible person* holds units for the *intervention pricing 30-minute period*, as a result of the dispatch of plant or *scheduled network service* under a *scheduled reserve contract* or the activation of *generating units*, *scheduled wholesale demand response units* or loads under an *unscheduled reserve contract*.

### ***Ancillary Service Provider***

A person (*including a Demand Response Service Provider*) who engages in the activity of owning, controlling or operating a *generating unit*, *load* or *market load* classified in accordance with Chapter 2 as an *ancillary service generating unit* or *ancillary service load*, as the case may be.

### ***available capacity***

The total MW capacity available for *dispatch* by a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled wholesale demand response unit* or *scheduled load* (i.e. maximum plant availability) or, in relation to a specified *price band*, the MW capacity within that *price band* available for *dispatch* (i.e. availability at each price band).

### ***baseline***

For a *wholesale demand response unit*:

- (a) when the *wholesale demand response unit* is not being dispatched to provide *wholesale demand response*, a forecast of the amount of electrical energy flowing at the *connection point* for the *wholesale demand response unit*; and
- (b) when the *wholesale demand response unit* is being dispatched to provide *wholesale demand response*, an estimate of what the amount of electrical energy flowing at the *connection point* for the *wholesale demand response unit* would have been if the *wholesale demand response unit* had not been dispatched,

in each case expressed as a positive value where the flow is towards the *transmission network connection point* to which the *connection point* is assigned and a negative value where the flow is in the other direction.

**baseline compliance testing**

Testing in accordance with arrangements determined by AEMO under clause 3.10.2(e) and described in the *wholesale demand response guidelines* to determine whether a *baseline methodology* when applied to a *wholesale demand response unit* produces a *baseline* that satisfies the *baseline methodology metrics*.

**baseline compliant**

A *wholesale demand response unit* is *baseline compliant* if the *baseline methodology* nominated by the *Demand Response Service Provider* and approved by AEMO to apply to the *wholesale demand response unit* produces a *baseline* that satisfies the *baseline methodology metrics*.

**baseline methodology**

A methodology applied to a *wholesale demand response unit* to determine a *baseline* for the *wholesale demand response unit* developed or approved by AEMO under clause 3.10.5 and in accordance with the *wholesale demand response guidelines*.

**baseline methodology metrics**

Parameters determined by AEMO in accordance with clause 3.10.2(a) for assessing the *baseline* produced by a *baseline methodology* when applied to a *wholesale demand response unit* in accordance with clause 3.10.2.

***bid and offer validation data***

Data submitted by *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* to AEMO in relation to their *scheduled loads*, *scheduled generating units*, *semi-scheduled generating units*, *scheduled wholesale demand response units* and *scheduled market network services* in accordance with schedule 3.1.

***central dispatch***

The process managed by AEMO for the *dispatch* of *scheduled generating units*, *semi-scheduled generating units*, *scheduled wholesale demand response units*, *scheduled loads*, *scheduled network services* and *market ancillary services* in accordance with rule 3.8.

***constrained off***

In respect of a *generating unit*, the state where, due to a *constraint* on a *network*, the output of that *generating unit* is limited below the level to which it would otherwise have been *dispatched* by AEMO on the basis of its *dispatch offer*.

In respect of a *wholesale demand response unit*, the state where, due to a *constraint on a network*, the *wholesale demand response* of that *wholesale demand response unit* is limited below the level to which it would otherwise have been *dispatched* by AEMO on the basis of its *dispatch offer*.

***constrained on***

In respect of a *generating unit*, the state where, due to a *constraint* on a *network* or in order to provide *inertia network services* under an *inertia services agreement* or *system strength services* under a *system strength services agreement*, the output of that *generating unit* is limited above the level to which it would otherwise have been *dispatched* by AEMO on the basis of its *dispatch offer*.

In respect of a *wholesale demand response unit*, the state where, due to a *constraint on a network*, the *wholesale demand response* of that *wholesale demand response unit* is limited above the level to which it would otherwise have been dispatched by AEMO on the basis of its *dispatch offer*.

***constraint, constrained***

A limitation on the capability of a *network*, ~~load~~, ~~of a generating unit~~ or a *scheduled wholesale demand response unit* such that it is unacceptable to either transfer, consume or generate the level of electrical power, or provide the level of *wholesale demand response*, that would occur if the limitation was removed.

***Demand Response Service Provider***

A person who offers and provides *load* as either or both:

- (a) *wholesale demand response* in respect of a *scheduled wholesale demand response unit*; and
- (b) a *market ancillary service* in respect of *ancillary service load*,

and who is registered by AEMO as a *Demand Response Service Provider* under Chapter 2. The relevant person does not need to be the *Market Customer* for the relevant *load*.

***Directed Participant***

A *Scheduled Generator*, *Semi-Scheduled Generator*, *Market Generator*, *Demand Response Service Provider* in respect of its *ancillary service load*~~*Market Ancillary Service Provider*~~, *Scheduled Network Service Provider* or *Market Customer* the subject of a *direction*.

***dispatch***

The act of initiating or enabling all or part of the response specified in a *dispatch bid*, *dispatch offer* or *market ancillary service offer* ~~in respect of a *scheduled generating unit*, *semi-scheduled generating unit*, a *scheduled load*, a *scheduled network service*, an *ancillary service generating unit* or an *ancillary service load*~~ in accordance with rule 3.8, or a *direction* or operation of capacity the subject of a *reserve contract* or an instruction under an *ancillary services agreement* or to enable an *inertia network service* or *system strength service* as appropriate.

***dispatch inflexibility profile***

Data which may be provided to AEMO by *Market Participants*, in accordance with clause 3.8.19, to specify *dispatch inflexibilities* in respect of *scheduled loads*, *scheduled wholesale demand response units* or *scheduled generating units* which are not *slow start generating units*.

***dispatch instruction***

An instruction given to a *Registered Participant* under clauses 4.9.2, 4.9.2A, 4.9.2B, 4.9.3, 4.9.3A, or to an *NMAS provider* under clause 4.9.3A.

***dispatch offer***

A *generation dispatch offer* or a *network dispatch offer* or a *wholesale demand response dispatch offer*.

***dispatch offer price***

The price submitted by a *Scheduled Generator*, *Semi-Scheduled Generator*, *Demand Response Service Provider* or a *Scheduled Network Service Provider* for a *price band* and a *trading interval* in a *dispatch offer*.

***dispatchable unit identifier***

An unique reference label allocated by AEMO for each *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled wholesale demand response unit*, *scheduled load*, and *scheduled network service*.

***dispatched wholesale demand response unit***

*A wholesale demand response unit allocated to a scheduled wholesale demand response unit which has been dispatched as part of central dispatch.*

***dispatched wholesale demand response***

*Wholesale demand response which has been dispatched as part of central dispatch.*

***inflexible, inflexibility***

In respect of a *scheduled generating unit*, *scheduled wholesale demand response unit*, *scheduled load* or *scheduled network service* for a *trading interval* means that the *scheduled generating unit*, *scheduled wholesale demand response unit*, *scheduled load* or *scheduled network service* is only able to be *dispatched* in the *trading interval* at a fixed *loading level* specified in accordance with clause 3.8.19(a).

***load shedding***

Reducing or *disconnecting load* from the *power system*, *other than by means of wholesale demand response.*

***loading level***

The level of output, consumption or power flow (in MW) of a *generating unit*, *load* or *scheduled network service*.

*For a wholesale demand response unit, the level of wholesale demand response (in MW).*

**~~*Market Ancillary Service Provider*~~**

~~*A person who offers and provides load as a market ancillary service under Chapter 2 and who is registered by AEMO as a Market Ancillary Service Provider under Chapter 2. The relevant person does not need to be the Market Customer for the relevant load.*~~

***Market Participant***

A person who is registered by AEMO as a *Market Generator*, *Market Customer*, *Market Small Generation Aggregator*, ~~*Market Ancillary Service Provider*~~ *Demand Response Service Provider* or *Market Network Service Provider* under Chapter 2.

***Market Settlement and Transfer Solution Procedures***

The procedures from time to time *published* by AEMO under clause 7.16.2 which include those governing:

- (a) the recording of financial responsibility for *energy* flows at a *connection point*, the transfer of that responsibility between *Market Participants* and the recording of *energy* flows at a *connection point*; and
- (b) the recording of the classification of a *connection point* as a *wholesale demand response unit*, the *Demand Response Service Provider* responsible for the *wholesale demand response unit*, the transfer of that responsibility between *Market Participants* and the *baseline methodology* applicable to the *wholesale demand response unit*.

### **PASA availability**

The *physical plant capability* (taking ambient weather conditions into account in the manner described in the procedure prepared under clause 3.7.2(g)) of a *scheduled generating unit*, *scheduled load* or *scheduled network service* available in a particular period, including any *physical plant capability* that can be made available during that period, on 24 hours' notice.

For a *scheduled wholesale demand response unit*, the maximum MW *wholesale demand response* available in a particular period, including any *wholesale demand response* that can be made available during that period, on 24 hours' notice.

### **plant**

- (a) In relation to a *connection point*, includes all equipment involved in generating, utilising or transmitting electrical *energy*.
- (b) In relation to *dispatch bids* and *offers*, controllable generating equipment, ~~and~~ controllable loads and *wholesale demand response units*.
- (c) In relation to the *statement of opportunities* prepared by AEMO, individually controllable generating facilities registered or capable of being registered with AEMO.
- (d) In relation to the *regulatory investment test for transmission*, any of the definitions of *plant* in paragraphs (a) to (c) relevant to the application of the *regulatory investment test for transmission* to a RIT-T project.
- (e) In relation to the *regulatory investment test for distribution*, any of any of the definitions of *plant* in paragraphs (a) to (c) relevant to the application of the *regulatory investment test for distribution* to a RIT-D project.
- (f) In relation to a *system strength remediation scheme*, includes all equipment involved in the implementation of the scheme.

### **scheduled plant**

In respect of a *Registered Participant*, a *scheduled generating unit*, a *semi-scheduled generating unit*, a *scheduled wholesale demand response unit*, a *scheduled network service* or a *scheduled load* classified by or in respect to that *Registered Participant* in accordance with Chapter 2.

### **scheduled reserve**

The amount of surplus or unused capacity:

- (a) of *scheduled generating units*;
- (b) of *scheduled network services*; ~~or~~

(c) of scheduled wholesale demand response units; or

(d)(e) arising out of the ability to reduce scheduled loads.

### **scheduled wholesale demand response unit**

One or more wholesale demand response units established as a scheduled wholesale demand response unit in accordance with clause 2.3.7.

### **unscheduled reserve**

The amount of surplus or unused capacity:

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

(b) arising out of the ability to reduce demand (other than a scheduled load or scheduled wholesale demand response unit).

### **wholesale demand response**

An adjustment to the amount of electrical energy flowing at the connection point for a wholesale demand response unit in response to a dispatch instruction, where the adjustment is relative to the amount of electrical energy flowing at the start of the trading interval, or series of contiguous trading intervals for which the wholesale demand response was dispatched.

For a scheduled wholesale demand response unit, the net aggregate adjustment across all wholesale demand response units allocated to the scheduled wholesale demand response unit.

### **wholesale demand response activity**

An activity in respect of a scheduled wholesale demand response unit that:

(a) results in the provision of wholesale demand response by the scheduled wholesale demand response unit;

(b) is undertaken in order to comply with a dispatch instruction to provide wholesale demand response; and

(c) will not or would not have been undertaken but for the dispatch instruction.

### **wholesale demand response constraint**

A limitation on the capability of a scheduled wholesale demand response unit to provide wholesale demand response at the level that would occur if the limitation were removed.

### **wholesale demand response dispatch offer**

A notice submitted by a Demand Response Service Provider to AEMO relating to the dispatch of a scheduled wholesale demand response unit in accordance with clause 3.8.7B.

### **wholesale demand response guidelines**

Guidelines made by AEMO under clause 3.10.1.

### **wholesale demand response unit**

A load which has been classified in accordance with Chapter 2 as a wholesale demand response unit.

## 11. Savings and Transitional Rules

### Part [ZZZT] Wholesale demand response

#### 11.[118] Rules consequential on the making of the National Electricity Amendment (Wholesale demand response mechanism) Rule 2019

##### 11.[118].1 Definitions

(a) In this rule 11.[118]:

**Amending Rule** means the National Electricity Amendment (Wholesale demand response mechanism) Rule 2019.

**commencement date** means the date of commencement of Schedule 6 of the Amending Rule.

**Contracts and Firmness Guidelines** has the meaning in Chapter 4A.

**effective date** means the date of commencement of Schedules 1, 3, 4 and 5 of the Amending Rule.

**new Chapter 2** means Chapter 2 as in force immediately after the effective date.

**new Chapter 10** means Chapter 10 as in force immediately after the effective date.

**new clause 2.3.6** means clause 2.3.6 as in force immediately after the effective date.

**new clause 2.3.7** means clause 2.3.7 as in force immediately after the effective date.

**new clause 3.8.3** means clause 3.8.3 as in force immediately after the effective date.

**new clause 3.8.3(a2)** means clause 3.8.3(a2) as in force immediately after the effective date.

**new clause 3.8.2A(a)** means clause 3.8.2A(a) as in force immediately after the effective date.

**new clause 3.8.2A(b)** means clause 3.8.2A(b) as in force immediately after the effective date.

**new clause 3.10.1** means clause 3.10.1 as in force immediately after the effective date.

**new clause 3.10.2** means clause 3.10.2 as in force immediately after the effective date.

**new clause 3.10.5(a)** means clause 3.10.5(a) as in force immediately after the effective date.

**new clause 3.10.5(b)** means clause 3.10.5(b) as in force immediately after the effective date.



new clause 3.10.5(c) means clause 3.10.5(c) as in force immediately after the effective date.

new clause 3.10.6(d) means clause 3.10.6(d) as in force immediately after the effective date.

new rule 3.10 means clause 3.10 as in force immediately after the effective date.

- (b) Italicised terms used in this rule 11.[118] have the same meaning as in new Chapter 10.

### **11.[118].2 Wholesale demand response guidelines**

- (a) No later than 6 months before the effective date, AEMO must make and publish the wholesale demand response guidelines in accordance with new rule 3.10 including its determination of the baseline methodology metrics and the periods over which baseline compliance testing will occur under new clause 3.10.2.
- (b) AEMO must comply with the Rules consultation procedure when making the wholesale demand response guidelines under paragraph (a).
- (c) The wholesale demand response guidelines made under paragraph (a) must come into effect no later than 6 months before the effective date so as to enable the following to be made before the effective date:
- (1) applications for classification of loads as wholesale demand response units under new clause 2.3.6;
  - (2) applications to establish scheduled wholesale demand response units under new clause 2.3.7;
  - (3) applications for aggregation of wholesale demand response units under new clause 3.8.3(a2); and
  - (4) applications for approval of baseline methodologies under new clause 3.10.5(c).
- (d) If an application referred to in paragraph (c) is made after the wholesale demand response guidelines are made under paragraph (a) and before the effective date, AEMO must assess the application in accordance with the applicable provisions in new clause 2.3.6, new clause 2.3.7, new clause 3.8.3 or new rule 3.10 (as applicable) and the wholesale demand response guidelines made under paragraph (a).

### **11.[118].3 Baseline methodologies**

- (a) No later than 6 months before the effective date, AEMO must establish the register of baseline methodologies under new clause 3.10.5(b).
- (b) No later than 6 months before the effective date, AEMO must develop baseline methodologies in accordance with new clause 3.10.5(a) and publish them in the register established under new clause 3.10.5(b).

### **11.[118].4 Wholesale demand response monitoring guidelines**

- (a) By the effective date, the AER must in accordance with the Rules consultation procedures make and publish the guidelines under new clause 3.10.6(d) with

respect to compliance by *Demand Response Service Providers* with new clauses 3.8.2A(b) and ().

- (b) The guidelines made under paragraph (a) must come into effect on and from the effective date.

#### **11.[118].5 Amendments to AEMO and AER documents**

- (a) By the effective date, *AEMO* must review and where necessary amend and publish the following documents to take into account the Amending Rule:
- (1) the *spot market* operations timetable in accordance with clause 3.4.3;
  - (2) the *PoLR cost procedures* made by *AEMO* under clause 3.15.9A(1);
  - (3) the *RERT procedures*;
  - (4) the *Market Settlement and Transfer Solution Procedures*; and
  - (5) the other documents mentioned in clause 11.103.2(a).
- (b) By the effective date, the *AER* must review and where necessary amend and publish the following documents to take into account the Amending Rule:
- (1) the guidelines maintained under clause 3.8.22 in respect of *rebidding*;  
and
  - (2) the *Contracts and Firmness Guidelines*.
- (c) Amendments made in accordance with paragraph (a) or (b) must take effect on and from the effective date.

#### **11.[118].6 Amendments to the demand side participation information guidelines**

- (a) By 31 December 2020, *AEMO* must review and where necessary amend and publish the demand side participation information guidelines made under rule 3.7D(e) to take into account the Amending Rule.
- (b) The amendments made in accordance with paragraph (a) must take effect on and from 31 March 2021.

#### **11.[118].7 Amendment to RERT guidelines**

- (a) With effect on and from the effective date, the *RERT guidelines* are amended as set out below:
- In the explanatory note at the end of section 2 of the *RERT guidelines*, insert “(including by means of *wholesale demand response*)” after “*energy only*”.
- (b) By the effective date, the *Reliability Panel* must make and publish the *RERT guidelines* in the form amended by paragraph (a).
- (c) For the purposes of paragraph (b), the *Reliability Panel* is not required to make and publish the *RERT guidelines* in accordance with the *Rules consultation procedures*.

**11.[118].8 Renaming of Market Ancillary Service Providers**

- (a) A person who immediately before the effective date is registered with AEMO as a *Market Ancillary Service Provider* in respect of an *ancillary service load* is taken to be registered with AEMO as a *Demand Response Service Provider* in respect of that *ancillary service load* with effect on and from the effective date.
- (b) A *load* classified as an *ancillary service load* immediately before the effective date continues to be classified as an *ancillary service load* on and from the effective date.
- (c) To avoid doubt, registrations and classifications referred to in paragraphs (a) and (b) are, on and from the effective date, subject to new Chapter 2 as if they had been made under new Chapter 2.