

Note:

As a result of the making of the [National Electricity Amendment \(Removal of intervention hierarchy\) Rule 2020 No. 14](#), Item [33] of Schedule 3 of the National Electricity Amendment (Wholesale demand response mechanism) Rule 2020 No. 9 has been deleted.

Indicative markup of the National Electricity Rules showing changes made by the National Electricity Amendment (Wholesale demand response mechanism) Rule 2020 No. 9

Note: This is an indicative consolidated version of the National Electricity Rules as amended by the National Electricity Amendment (Wholesale demand response mechanism) Rule 2020. It includes a markup of amendments made to relevant extracts of Chapters 2, 3, 4, 4A, 7, 10 and 11 of the National Electricity Rules (as amended by rules made by the date of publication of the Wholesale demand response mechanism rule which take effect prior to 24 October 2021). This document is provided for information purposes only. The Australian Energy Market Commission does not guarantee the accuracy, reliability or completeness of this consolidated version of the National Electricity Rules.

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CHAPTER 2

2. Registered Participants and Registration

2.3 Customer

2.3.4 Market Customer

- (a) If electricity, *supplied* through the *national grid* to any person *connected* at a *connection point*, is purchased other than from the *Local Retailer* that load at the *connection point* may be classified by that person or, with the consent of that person, by some other person as a *market load*.
- (b) A *Customer* is taken to be a *Market Customer* only in so far as its activities relate to any *market load* and only while it is also registered with *AEMO* as a *Market Customer*.
- (c) A *Market Customer* must purchase all electricity *supplied* at that *connection point* from the *spot market* and make payments to *AEMO* for electricity supplied at the *connection point* as determined for each *trading interval* in accordance with 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.)

- (d) A *Market Customer* may request *AEMO* to classify any of its *market loads* (excluding a load that has been classified as a *wholesale demand response unit*) as a *scheduled load*.
- (e) *AEMO* must classify a *market load* as a *scheduled load* if it is satisfied that the *Market Customer*:
 - (1) has submitted data in accordance with schedule 3.1;
 - (2) has adequate communications and/or telemetry to support the issuing of *dispatch instructions* and the audit of responses; and
 - (3) has requested that the *load* be so classified and has not withdrawn that request.
- (f) A *Market Customer* may submit *dispatch bids* in respect of *scheduled loads* in accordance with the provisions of Chapter 3.
- (g) A *Market Customer* who submits *dispatch bids* for *scheduled loads* and makes its *scheduled loads* available for *central dispatch* must comply with the *dispatch instructions* from *AEMO* in accordance with the *Rules*.
- (h) A *Customer* who is also a *Local Retailer* must classify any *connection point* which *connects* its *local area* to another part of the *power system* as a *market load*.

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.)

2.3.5 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 each of the *loads* to be used by the applicant to provide *market ancillary services*; and
 - (4) demonstrate how the *loads* identified in subparagraph (3) have the required equipment to be used to provide *market ancillary services* 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 subject to paragraph (e1), *AEMO* must approve the classification in respect of the particular *market ancillary services*.

(e1) *AEMO* must not give approval to a person under paragraph (e) in respect of a load that is classified as a wholesale demand response unit by a different person.

- (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 *qualifying load* wishes to use the *load* to provide *wholesale demand response* in accordance with the *Rules*, the *Demand Response Service Provider* must apply to *AEMO* for approval to classify the *qualifying load* as a *wholesale demand response unit*.
- (b) An application under paragraph (a) must be in the form prescribed by *AEMO* and must:
- (1) identify the *qualifying load*;
 - (2) specify the proposed *maximum responsive component* of the *wholesale demand response unit*; and
 - (3) specify the proposed *baseline methodology* and *baseline settings* to apply to the *wholesale demand response unit*.
- (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 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, the Demand Response Service Provider will be deemed to have withdrawn the application.
- (e) AEMO must, subject to paragraph (f), approve the classification of a load as a wholesale demand response unit if AEMO is reasonably satisfied that:
- (1) the load is a qualifying load;
 - (2) the load is able to be used to provide wholesale demand response in accordance with the Rules;
 - (3) the load is capable of providing a quantity of wholesale demand response at least equal to the maximum responsive component;
 - (4) the Demand Response Service Provider has adequate communications and/or telemetry in place to support the issuing of dispatch instructions in respect of the load;
 - (5) the baseline methodology, when applied to the load and using the proposed baseline settings and historical metering data for the load:
 - (i) 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;
 - (6) the Demand Response Service Provider has submitted data in accordance with schedule 3.1; and
 - (7) the load satisfies each other requirement in the wholesale demand response guidelines for classification as a wholesale demand response unit.
- (f) AEMO must not give approval to a person under paragraph (e) in respect of a load that is classified as an ancillary service load by a different person.
- (g) 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.

(h) A Demand Response Service Provider must comply with any terms and conditions imposed by AEMO under paragraph (g) in respect of its wholesale demand response unit.

Note

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

(i) If a Demand Response Service Provider submits a dispatch bid in respect of a wholesale demand response unit, the Demand Response Service Provider must comply with 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.

(j) 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 wholesale demand response unit in accordance with Chapter 3 or pursuant to a clause 4.8.9 instruction.

(k) A Demand Response Service Provider must notify AEMO if a load the Demand Response Service Provider has classified as a wholesale demand response unit ceases to be a qualifying load as soon as practicable and in any event no later than 10 business days after becoming aware that the load ceases to be a qualifying load.

Note

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

(l) Where a Demand Response Service Provider gives AEMO a notice under paragraph (k) in respect of a load, the load ceases to be classified as a wholesale demand response unit from the time the notice is given.

(m) In this clause 2.3.6:

(1) a load is a **qualifying load** if:

(i) the load comprises a single connection point or a parent connection point in respect of all its associated child connection points that are not market connection points;

(ii) if the connection point is a child connection point, it is also a market connection point;

(iii) no connection point associated with the load is a connection point for a small customer load;

(iv) the load is not a market load that is a scheduled load;

- (v) the Demand Response Service Provider has the consent of the retail customer at the connection point to provide wholesale demand response by means of that load;
- (vi) the Demand Response Service Provider has arrangements for the provision of wholesale demand response by means of that load; and
- (vii) the connection point has a type 1, 2, 3, or 4 metering installation; and
- (2) a load is a **small customer load** if a retail customer at a connection point for the load (including any child connection point):
 - (i) is or would be a small customer in relation to premises delivered electrical power at the connection point; and
 - (ii) the retail customer has not entered into an agreement with its retailer in accordance with rule 5(2)(a) of the National Energy Retail Rules to aggregate the premises referred to in subparagraph (2)(i) with other premises.

Note

Only a business customer within the meaning of the National Energy Retail Law can enter into an agreement with its retailer in accordance with rule 5(2)(a) of the National Energy Retail Rules.

2.3AA — Market Ancillary Service Provider

2.3AA.1 — Registration

- (a) A person must not engage in the activity of offering and providing market ancillary services in accordance with Chapter 3 as a Market Ancillary Service Provider unless that person is registered by AEMO as a Market Ancillary Service Provider.
- (b) To be eligible for registration as a Market Ancillary Service Provider, a person must:
 - (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) 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 Market Ancillary Service Provider's activities only relate to loads it has classified (in its capacity as a Market Ancillary Service Provider) as ancillary service loads, and only while it is also registered with AEMO as a Market Ancillary Service Provider.~~

2.3B Demand Response Service Provider

2.3B.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* unless that person is registered by AEMO as a *Demand Response Service Provider*.~~

~~(b) To be eligible for registration as a *Demand Response Service Provider*, a person must obtain the approval of AEMO to classify 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.~~

~~(c) A *Demand Response Service Provider*'s activities only relate to loads it has classified (in its capacity as a *Demand Response Service Provider*) as *ancillary service loads* or as *wholesale demand response units*, and only while it is also registered with AEMO as a *Demand Response 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*; *or 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).

CHAPTER 3

3. Market Rules

3.7 Projected Assessment of System Adequacy

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) except for pumped storage *loads*,

which must subsequently be adjusted in accordance with *dispatch bids* for *scheduled load* and dispatch bids for 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*, 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*, wholesale demand response unit, *scheduled load* or *scheduled network service* for each *30-minute period*; ~~and~~

(3) projected daily wholesale demand response availability for wholesale demand response units that are wholesale demand response constrained; and~~(3) [Deleted]~~

(4) projected daily *energy* availability for *energy constrained scheduled generating units* and *energy constrained scheduled loads*.

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 *wholesale demand response 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*;

- (4) aggregate *generating unit* availability (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*;
- (4AA) aggregate capacity (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*, after allowing for the impact of *network constraints*, that can be *generated* continuously, calculated by adding the following categories:
 - (i) the *available capacity* of *scheduled generating units* that are able to operate at the availability as notified to AEMO under paragraph (e)(1); and
 - (ii) the forecast *generation* of *semi-scheduled generating units* as provided by the *unconstrained intermittent generation forecasts*;
- (4AB) aggregate capacity (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*, after allowing for the impact of *network constraints*, that cannot be *generated* continuously at the *available capacity* referred to in subparagraph (4AA)(i) due to specified daily *energy constraints*;
- (4A) aggregate *generating unit PASA availability* (excluding the relevant aggregated MW allowance referred to in subparagraph (4B)) for each *region*;
- (4B) the aggregated MW allowance (if any) to be made by *AEMO* for generation from *non-scheduled generating systems* in each forecast:
 - (i) of the most probable *load* referred to in clause 3.7.3(h)(1); and
 - (ii) referred to in clauses 3.7.3(h)(2), (3), (4), (4A), (4AA) and (4AB);
- (4C) in respect of each forecast:
 - (i) of the most probable *load* referred to in clause 3.7.3(h)(1);
 - (ii) referred to in clauses 3.7.3(h)(2), (3), (4), (4A), (4AA) and (4AB),
a value that is the sum of that forecast and the relevant aggregated MW allowance (if any) referred to in clause 3.7.3(4B); and
- (5) identification and quantification of:
 - (i) any projected *violations* of *power system security*;
 - (ii) any projected failure to meet the *reliability standard* as assessed in accordance with the *reliability standard implementation guidelines*;
 - (iii) **[Deleted]**

- (iv) forecast *interconnector* transfer capabilities and the discrepancy between forecast *interconnector* transfer capabilities and the forecast capacity of the relevant *interconnector* in the absence of outages on the relevant *interconnector* only; and
 - (v) when and where *network constraints* may become binding on the *dispatch* of *generation* or *load*.
- (i) If in performing the *short term PASA AEMO* identifies any projected failure to meet the *reliability standard* in respect of a *region* as assessed in accordance with the *reliability standard implementation guidelines*, then *AEMO* must use its reasonable endeavours to advise the *Jurisdictional System Security Coordinator* who represents a *participating jurisdiction* in that *region* of any potential requirements during such conditions to shed *sensitive loads*.
 - (j) *AEMO* must publish the procedure it uses for preparation of the *short term PASA*.

3.7D 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, or 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), 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 or wholesale demand response may be provided;

(iv) the location at which non-scheduled load may be ~~curtailed~~ adjusted or unscheduled generation or wholesale demand response may be provided;

- (v) the quantity of *non-scheduled load* that may be ~~curtailed-adjusted~~ or unscheduled generation or *wholesale demand response* 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, 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 bids*, 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*, *wholesale demand response 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.

3.8.2A Wholesale demand response unit participation in central dispatch

- (a) A Demand Response Service Provider must submit a *dispatch bid* in respect of its *wholesale demand response unit* or, if aggregated, the aggregated *wholesale demand response units*, for each *trading day* in accordance with clause 3.8.7B.

Note

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

- (b) When a *Demand Response Service Provider* provides to *AEMO* for the purposes of the *Rules* the *available capacity* of a *wholesale demand response unit* or aggregated *wholesale demand response units*, the *Demand Response Service Provider* must ensure that:
- (1) the *available capacity* it provides to *AEMO* for a *wholesale demand response unit* that is not aggregated is equal to or less than the *maximum responsive component* of the *wholesale demand response unit*; and
 - (2) the *available capacity* it provides to *AEMO* for aggregated *wholesale demand response units* is equal to or less than the aggregate *maximum responsive component* of the aggregated *wholesale demand response units*.

Note

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

- (c) If a *Demand Response Service Provider* is aware (whether by reason of the *Demand Response Service Provider's* own knowledge or a notification from *AEMO*) at the time the *Demand Response Service Provider* provides *available capacity* of a *wholesale demand response unit* or aggregated *wholesale demand response units* to *AEMO* for the purposes of the *Rules* that:
- (1) the *wholesale demand response unit* is *baseline non-compliant*; or
 - (2) in relation to aggregated *wholesale demand response units*, any of the *wholesale demand response units* in the aggregated *wholesale demand response units* is *baseline non-compliant*,

the Demand Response Service Provider must provide to AEMO an available capacity of zero for the wholesale demand response unit or aggregated wholesale demand response units.

Note

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

(d) If, in relation to a trading interval:

(1) a wholesale demand response unit will be, or is likely to be, spot price exposed; or

(2) in relation to aggregated wholesale demand response units, any of the wholesale demand response units in the aggregated wholesale demand response units will be, or is likely to be, spot price exposed.

the Demand Response Service Provider must provide to AEMO an available capacity of zero for the wholesale demand response unit or aggregated wholesale demand response units in relation to the trading interval.

Note

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

Note

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

(e) If AEMO has given a notice under clause 3.8.23A(e) in relation to a wholesale demand response unit or aggregated wholesale demand response units, from the time the notice takes effect and for so long as the notice remains in place, the Demand Response Service Provider must provide to AEMO an available capacity for the wholesale demand response unit or aggregated wholesale demand response units in accordance with the notice.

Note

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

(f) Without limiting paragraph (c) or (d), a Demand Response Service Provider must establish and implement measures in accordance with good electricity industry practice to identify:

(1) a wholesale demand response unit of the Demand Response Service Provider that is baseline non-compliant; and

(2) when a wholesale demand response unit of the Demand Response Service Provider will be, or is likely to be, spot price exposed in relation to a trading interval.

Note

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

- (g) The AER must develop wholesale demand response participation guidelines in accordance with the Rules consultation procedures which:
- (1) must include guidance about information a Demand Response Service Provider must keep regarding compliance with its obligations under this clause and regarding its representations under clause 3.8.22A(a2); and
 - (2) may include guidance relating to the requirements on Demand Response Service Providers under paragraphs (c) and (d).
- (h) The AER must publish the wholesale demand response participation guidelines and may amend the guidelines from time to time.
- (i) A Demand Response Service Provider must retain the information specified in the wholesale demand response participation guidelines in the manner, and for the period, specified in the guidelines.

Note

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

- (j) In this clause, “aggregated wholesale demand response units” refers to two or more wholesale demand response units that have been aggregated in accordance with clause 3.8.3.

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 treated as one wholesale demand response unit for the purpose of central dispatch must apply to AEMO to do so.

Note

Wholesale demand response units are not aggregated for the purposes of clause 3.15 and calculations under that clause even if aggregated for the purpose of central dispatch.

- (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;
 - (3) *control systems* must satisfy the requirements of clause 2.3.6(e) after aggregation; and
 - (4) each other requirement for aggregation in the *wholesale demand response guidelines* must have been satisfied in respect of the proposed aggregation.
- (b3) If *AEMO* approves an application for aggregation made under paragraph (a2), *AEMO* may impose on the relevant *Demand Response Service Provider* such

terms and conditions as AEMO determines, which may include specification of the maximum responsive component of the aggregated wholesale demand response units and the circumstances in which AEMO may require aggregated wholesale demand response units to be disaggregated.

- (b4) A Demand Response Service Provider must comply with any conditions imposed by AEMO under paragraph (b3) in respect of its wholesale demand response unit.
- (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 with respect to wholesale demand response units must, if required by AEMO, declare individual wholesale demand response unit availability and operating status to AEMO in the short term PASA process under clause 3.7.3 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*, 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.

3.8.4 Notification of scheduled capacity

All *Scheduled Generators* and *Market Participants* with *scheduled generating units*, *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*, *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 *wholesale demand response units*, two *days* ahead of each *trading day*:
- (1) a MW capacity profile that (subject to clauses 3.8.2A(b), (c), (d) and (e)) 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.

3.8.7B Wholesale demand response dispatch bids

The following requirements apply to all *wholesale demand response dispatch bids*:

- (a) the *dispatch bid* may contain up to 10 *price bands*;
- (b) the *dispatch bid* must specify:
 - (1) an incremental MW amount for each *price band* specified in the *dispatch bid*;
 - (2) an up *ramp rate* and a down *ramp rate*;
- (c) the MW quantities specified are to apply at the *connection points* for the *wholesale demand response unit*;
- (d) the *dispatch bid* must specify a price for each *price band*;
- (e) prices specified are to apply at the *connection points* for the *wholesale demand response unit* and for the purposes of *central dispatch* shall be referred to the *regional reference node* as follows:

$$\text{RP} = \text{DOP} \div \text{LF}$$

where

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

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

LF is:

(1) unless paragraph (2) applies, if the *connection point* for the *wholesale demand response unit* is:

(i) a *transmission network connection point*, the relevant *intra-regional loss factor* at that *connection point*; or

(ii) a *distribution network connection point*, the product of the *distribution loss factor* at that *connection point* multiplied by the relevant *intra-regional loss factor* at the *transmission network connection point* to which it is assigned; and

(2) where two or more *wholesale demand response units* have been aggregated in accordance with clause 3.8.3, a deemed loss factor of 1;

(f) prices specified must be:

(1) greater than or equal to the *market floor price* multiplied by LF for the *wholesale demand response unit*; and

(2) less than or equal to the *market price cap* multiplied by LF for the *wholesale demand response unit*,

where LF has the meaning given in paragraph (e);

(g) the price specified for a *price band* is to be interpreted in the *central dispatch* process as the price at or above which the *wholesale demand response unit* will, as applicable:

(1) reduce the consumption of electricity;

(2) increase the export of electricity; or

(3) reduce electricity consumption and start to export electricity,

at the *connection point* by up to the MW increment specified in that *price band*;

(h) the MW quantity in each *price band* in each *trading interval* must be specified in whole MW;

(i) the sum of the MW quantities specified in each *price band* in each *trading interval* must not exceed the *maximum responsive component* of the *wholesale demand response unit*; and

- (j) the dispatch bid may specify the daily wholesale demand response available for wholesale demand response units that are wholesale demand response constrained.

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*, *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*, *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*, *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, 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*, *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*, *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*, *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*, *wholesale demand response unit*, *scheduled network service* or *scheduled load*, as appropriate under this Chapter, that the *scheduled generating unit*, *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*, *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*, *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*, *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*, *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*, *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*, *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*, *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*, *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*, *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*, *wholesale demand response unit*, *scheduled network service* or *scheduled load* that the *scheduled generating unit*, *semi-scheduled generating unit*, *wholesale demand response unit*, *scheduled network service* or *scheduled load* is *inflexible*, *AEMO* will *dispatch* the *scheduled generating unit*, *semi-scheduled generating unit*, *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*, *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*, *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 *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) **[Deleted]**

- (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*, *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*, *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*, *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.
- (n) When a *wholesale demand response unit* is *dispatched* to provide *wholesale demand response*, *AEMO* must as soon as practicable after giving the relevant *dispatch instruction* notify that fact to the *financially responsible Market Participant* for the *connection points* comprised in the *wholesale demand response unit* on a confidential basis.

3.8.22 Rebidding

- (a) Prices for each *price band* that are specified in *dispatch bids*, *dispatch offers* and *market ancillary service offers* are firm and no changes to the price for any *price band* are to be accepted under any circumstances.
- (b) Subject to clauses 3.8.3A, 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*, *wholesale demand response units* 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 wholesale demand response dispatch bid by a Demand Response Service Provider is deemed to represent to other Market Participants through the pre-dispatch schedules published by AEMO that:

(1) any baseline deviation of the wholesale demand response unit in response to a dispatch instruction will be the result of wholesale demand response activity in relation to the wholesale demand response unit; and

(2) there will be no baseline deviation offset in relation to the baseline deviation of the wholesale demand response unit in the period for which the wholesale demand response unit is dispatched.

(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* or *wholesale demand response units*) 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 excluding wholesale demand response units

- (a) If a *scheduled generating unit*, *scheduled network service* or *scheduled load* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *AEMO's* reasonable opinion), then the *scheduled generating unit*, *scheduled network service* or *scheduled load* (as the case may be):
 - (1) is to be declared and identified as non-conforming; and
 - (2) cannot be used as the basis for setting *spot prices*.
- (b) If a *semi-scheduled generating unit* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *AEMO's* reasonable opinion) in a *semi-dispatch interval* where the unit's actual *generation* is more than the *dispatch level*, the unit is to be declared and identified as non-conforming and cannot be used as the basis for setting *spot prices*.
- (c) If a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming under paragraphs (a) or (b):
 - (1) *AEMO* must advise the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* that the relevant *generating unit*, *scheduled network service* or

- scheduled load* is identified as non-conforming, and request and log a reason for the non-compliance with the *dispatch instruction*;
- (2) if in *AEMO*'s opinion modification of *plant* parameters is necessary or desirable, *AEMO* must request the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* to submit modified *plant* parameters to satisfy *AEMO* that a realistic real time *dispatch* schedule can be carried out;
 - (3) should a *Scheduled Generator* or *Semi-Scheduled Generator* fail to meet the requests set out subparagraphs (1) and (2) or if *AEMO* is not satisfied that the *generating unit* will respond to future *dispatch instructions* as required, *AEMO* must direct the *generating unit*'s output to follow, as far as is practicable, a specified output profile to be determined at its discretion by *AEMO*;
 - (4) should a *Scheduled Network Service Provider* fail to meet the requests set out in subparagraphs (1) and (2) or if *AEMO* is not satisfied that the *scheduled network service* will respond to future *dispatch instructions* as required, *AEMO* must direct the *scheduled network service* to follow, as far as is practicable, a specified transfer profile to be determined at its discretion by *AEMO*; and
 - (5) should a *Market Customer* not meet the requests set out in subparagraphs (1) and (2) within a reasonable time of the request, or if *AEMO* is not satisfied that the *scheduled load* will respond to future *dispatch instructions* as required, *AEMO* acting reasonably may invoke a *default dispatch bid* lodged by the relevant *Market Customer* or apply *constraints* as it deems appropriate.
- (d) Until a *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* satisfactorily responds to the requests under paragraphs (c)(1) and (2) and *AEMO* is satisfied that the *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) will respond to future *dispatch instructions* as required, the *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) continues to be non-conforming.
 - (e) If a *generating unit*, *scheduled network service* or *scheduled load* (as the case may be) continues to be non-conforming under this clause 3.8.23 after a reasonable period of time, *AEMO* must prepare a report setting out the details of the non-conformance and forward a copy of the report to the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* (as the case may be) and the *AER*.
 - (f) The direction referred to in paragraphs (c)(3) and (4) must remain in place until the *Scheduled Generator*, *Semi-Scheduled Generator* or *Scheduled Network Service Provider* (whichever is relevant) satisfies *AEMO* of rectification of the cause of the non-conformance.

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

3.8.23A Failure of wholesale demand response units to conform to dispatch instructions

- (a) If a *wholesale demand response unit* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *AEMO's* reasonable opinion), then the *wholesale demand response unit* is to be declared and identified as non-conforming.
- (b) *AEMO* may identify a *wholesale demand response unit* as non-conforming after *dispatch* has occurred and accordingly:
- (1) a non-conforming *wholesale demand response unit* may set *spot prices*; and
 - (2) no change to *spot prices* will be made by reason of a *wholesale demand response unit* being declared and identified as non-conforming.
- (c) If a *wholesale demand response unit* is identified as non-conforming under paragraph (a):

- (1) AEMO must advise the Demand Response Service Provider that the relevant wholesale demand response unit is identified as non-conforming and request and log a reason for the non-compliance with the dispatch instruction; and
- (2) if in AEMO's opinion modification of the maximum responsive component is necessary or desirable, AEMO must request the Demand Response Service Provider to submit a modified maximum responsive component figure to satisfy AEMO that a realistic real time dispatch schedule can be carried out.
- (d) If a wholesale demand response unit is identified as non-conforming under paragraph (a), it continues to be non-conforming until:

 - (1) the Demand Response Service Provider responds to any requests under paragraph (c); and
 - (2) AEMO is satisfied that the wholesale demand response unit will respond to future dispatch instructions as required.
- (e) If a wholesale demand response unit is identified as non-conforming under paragraph (a), AEMO acting reasonably may by notice to a Demand Response Service Provider require the Demand Response Service Provider to limit the available capacity of the non-conforming wholesale demand response unit to a maximum figure determined by AEMO for so long as the wholesale demand response unit remains non-conforming.
- (f) A notice given under paragraph (e) remains in place until:

 - (a) the wholesale demand response unit ceases to be non-conforming in accordance with paragraph (d); or
 - (b) AEMO varies the notice by giving a further notice under paragraph (e).
- (g) If a wholesale demand response unit continues to be non-conforming after a reasonable period, AEMO must prepare a report setting out the details of the non-conformance and forward a copy of the report to the Demand Response Service Provider and the AER.
- (h) In making an assessment for the purposes of this clause, AEMO may have regard to the baseline of the wholesale demand response unit, metering data (including historical metering data), information from remote control equipment or remote monitoring equipment and any other matter which AEMO considers relevant. AEMO may provide its assessment and relevant information to the AER.

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*, *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 network services* or *scheduled loads* which operate in accordance with a *direction*, are to be taken into account in the *central dispatch process*, but the *dispatch offer*, in the case of a *generating unit* or *scheduled network service*, which operates in accordance with a *direction*, or the *dispatch bid*, in the case of a *scheduled load* which operates in accordance with a *direction*, will not be used in the calculation 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).

3.9.7 Pricing for constrained-on scheduled generating units

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

comply with *dispatch instructions* from *AEMO* in accordance with its availability as specified in its *dispatch offer* or *dispatch bid as applicable* 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 paragraph (a)~~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 *trading 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 *trading 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 *spot price* in that *trading 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 *spot 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) requirements determined by *AEMO* for classification of a *load* as a *wholesale demand response unit* in accordance with clause 2.3.6 or for

- aggregation in accordance with clause 3.8.3 and which AEMO reasonably considers necessary;
- (2) without limiting paragraph (a)(1), information about the requirements for telemetry and communications equipment for *wholesale demand response units*;
- (3) the methodology for determination of a regional threshold under paragraph (c);
- (4) information about the process for development of *baseline methodologies* under clause 3.10.3 including how proposals for new *baseline methodologies* may be made;
- (5) the process for a *Demand Response Service Provider* to apply to AEMO for approval to apply a *baseline methodology* and related *baseline settings* to a *wholesale demand response unit* for the purposes of the *Rules*;
- (6) the process for a *Demand Response Service Provider* to apply to AEMO for approval to change the *maximum responsive component* of its *wholesale demand response unit*;
- (7) arrangements for the provision of information about the *maximum responsive component* of the *wholesale demand response unit* and the *baseline methodology* and *baseline settings* applicable to the *wholesale demand response unit*; and
- (8) other information determined by AEMO relating to the supply of *wholesale demand response* under the *Rules*.
- (b) In developing or amending the *wholesale demand response guidelines*, AEMO must have regard to:
- (1) the need not to distort the operation of the *market*;
- (2) the need to maximise the effectiveness of *wholesale demand response* at the least cost to end use consumers of electricity; and
- (3) any other matter determined by AEMO acting reasonably and which must be specified by AEMO in the *wholesale demand response guidelines*.
- (c) AEMO may determine and if it does so, must *publish* a threshold for the total quantity of *wholesale demand response* in a *region* above which AEMO will impose additional or alternative telemetry and communications equipment requirements for any *load* in the *region* seeking to be classified as a *wholesale demand response unit* after the threshold is reached.
- (d) If AEMO determines a threshold under paragraph (c), AEMO must *publish* and update each month information about progress towards reaching the *threshold*.

- (e) AEMO must comply with the Rules consultation procedures when making or amending the wholesale demand response guidelines.
- (f) 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 publish 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 or export of a wholesale demand response unit (as recorded by metering data) and its baseline for each of the measures of baseline accuracy in paragraph (c); and
 - (2) bias means the deviation between actual consumption or export of a wholesale demand response unit (as recorded by metering data) 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) AEMO must determine and publish and may amend arrangements for regular and systematic testing, in relation to wholesale demand response units, to determine whether baseline methodologies approved for application to wholesale demand response units using applicable baseline settings produce baselines that satisfy the baseline methodology metrics (**baseline compliance testing**).
- (e) AEMO must determine and publish and may amend the frequency with which baseline compliance testing will occur, which may be different for different wholesale demand response units or classes of wholesale demand response unit.

- (f) In determining the *baseline methodology metrics* and the frequency of *baseline compliance testing*, AEMO must have regard to:

 - (1) the need not to distort the operation of the *market*;
 - (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 rule 3.7B(c)(4).
- (g) AEMO must conduct *baseline compliance testing* in accordance with AEMO's determinations under paragraphs (d) and (e).
- (h) If *baseline compliance testing* by AEMO indicates that a *wholesale demand response unit* does not satisfy the *baseline compliance standard* in accordance with clause 3.10.4(a), AEMO must notify the relevant *Demand Response Service Provider* as soon as practicable.
- (i) If a *Demand Response Service Provider* becomes aware that its *wholesale demand response unit* does not satisfy the *baseline compliance standard* in accordance with clause 3.10.4(a), the *Demand Response Service Provider* must notify AEMO as soon as practicable.

3.10.3 Baseline methodology development

- (a) AEMO must in accordance with the *wholesale demand response guidelines* develop one or more *baseline methodologies* and must *publish* the *baseline methodologies* in the register maintained under paragraph (d).
- (b) A *baseline methodology* must specify the parameters that must be set for each *wholesale demand response unit* with the approval of AEMO (when approved, the ***baseline settings***) to allow the *baseline methodology* to apply to different *wholesale demand response units*.
- (c) In developing *baseline methodologies*, AEMO must have regard to the need for consistent results to be achievable when AEMO, a *Demand Response Service Provider* or any other person calculates a *baseline* for a *wholesale demand response unit* using the approved *baseline methodology*, approved *baseline settings* and the same set of *metering data*.
- (d) AEMO must establish and maintain a register of *baseline methodologies* and *baseline settings*. The register must include information to facilitate assessment of a *wholesale demand response unit* or prospective *wholesale demand response unit* against the *baseline methodology* and appropriate *baseline settings*.

3.10.4 Baseline non-compliance

- (a) The *baseline compliance standard* is satisfied by a *wholesale demand response unit* if the approved *baseline methodology*, when applied to the *wholesale demand response unit* using the approved *baseline settings*,

produces a *baseline* that satisfies the *baseline methodology metrics* (***baseline compliance standard***).

- (b) A *wholesale demand response unit* of a *Demand Response Service Provider* is ***baseline non-compliant*** if it does not satisfy the *baseline compliance standard* in accordance with paragraph (a) and it continues to be *baseline non-compliant* until the *Demand Response Service Provider* demonstrates that the *wholesale demand response unit* satisfies the *baseline compliance standard* in accordance with paragraph (a).
- (c) Where a *wholesale demand response unit* that has been aggregated with one or more other *wholesale demand response units* becomes *baseline non-compliant* (including by reason of a change to the *baseline methodology metrics*), the *Demand Response Service Provider* may elect to withdraw the *non-compliant wholesale demand response unit* from the aggregated *wholesale demand response unit* on a permanent basis or until it ceases to be *baseline non-compliant*.
- (d) In this rule, a reference to an approved *baseline methodology* or approved *baseline settings* is a reference to the *baseline methodology* or *baseline settings* approved by *AEMO* for application to the *wholesale demand response unit* when the *wholesale demand response unit* is classified under Chapter 2 or, if a replacement *baseline methodology* or modified *baseline settings* are approved by *AEMO* under paragraph (e), the replacement *baseline methodology* or modified *baseline settings* as the case may be.
- (e) *AEMO* may on the application of the *Demand Response Service Provider* approve the application of a replacement *baseline methodology* to a *wholesale demand response unit* or modified *baseline settings* if *AEMO* is reasonably satisfied that the replacement *baseline methodology* or modified *baseline settings*, when applied to the *wholesale demand response unit* and using *historical metering data* for the *wholesale demand response unit*:
- (1) produces a *baseline* that satisfies the *baseline methodology metrics*; and
 - (2) otherwise qualifies for application to the *wholesale demand response unit* having regard to any criteria in the *wholesale demand response guidelines*.

3.10.5 Calculation of baselines

- (a) Subject to paragraph (b), for the purposes of the *Rules* the *baseline* for a *wholesale demand response unit* is calculated by applying the approved *baseline methodology* and approved *baseline settings* for the *wholesale demand response unit*.
- (b) *AEMO* may determine and amend procedures (***abnormal baseline notice procedures***) for the submission of a notice to *AEMO* by a *Demand Response Service Provider* identifying a *wholesale demand response unit* of the *Demand Response Service Provider* and requesting and, if approved by

AEMO, implementing a temporary adjustment to the calculation of the baseline for that wholesale demand response unit.

- (c) AEMO may impose conditions on its approval of a temporary adjustment to the calculation of a baseline under paragraph (b).
- (d) In determining the abnormal baseline notice procedures, AEMO must include terms and conditions that:

 - (1) only permit an abnormal baseline notice to be given in respect of an event or circumstance affecting a wholesale demand response unit 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 unless adjusted by the factor specified in the notice; and
 - (2) limit the frequency of abnormal baseline notices and the number of trading intervals to which a factor specified in the notice may be applied (at any time, and in aggregate in any 12 month period) as reasonably considered necessary by AEMO to maintain the accuracy and reliability of baseline calculations.
- (e) AEMO may specify in the abnormal baseline notice procedures:

 - (1) requirements for the submission of abnormal baseline notices including timing and content;
 - (2) information to be provided to AEMO or records to be made by the Demand Response Service Provider in connection with an abnormal baseline notice;
 - (3) events or circumstances that are taken to have been accounted for in the baseline methodology and in respect of which no abnormal baseline notice may be given;
 - (4) conditions limiting or precluding the submission of an abnormal baseline notice where reasonably considered necessary by AEMO to maintain the accuracy and reliability of baseline calculations; and
 - (5) any other terms and conditions reasonably determined by AEMO.
- (f) AEMO must comply with the Rules consultation procedures when making or amending the abnormal baseline notice procedures.
- (g) AEMO may make minor or administrative changes to the abnormal baseline notice procedures without complying with the Rules consultation procedures.

3.10.6 Wholesale demand response annual reporting

- (a) Within six months after 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:

(i) *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; and

(ii) proposals for new *baseline methodologies* received by AEMO and new *baseline methodologies* being developed;

(2) for each *baseline methodology*, an assessment against the *baseline methodology metrics* as measured during the *wholesale demand response unit classification* process and *baseline compliance testing*;

(3) any periods for which any *wholesale demand response units* have been *baseline non-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 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 amount of *dispatched wholesale demand response* and the frequency of *dispatch*;

(4) analysis of the *spot market* price levels at which *wholesale demand response* was *dispatched*;

(5) the frequency and extent of *wholesale demand response units* declared to be *non-conforming* under clause 3.8.23(a);

(6) analysis of the impact of *dispatched wholesale demand response* on the procurement and use of each *market ancillary service*; and

(7) analysis of trends, including year-on-year changes, in the matters referred to in paragraphs (1) to (6).

3.10.7 AEMC wholesale demand response review

- (a) The AEMC must, by 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

3.12.1 Intervention settlement timetable

- (a) *AEMO* must use reasonable endeavours to complete and fulfil its obligations set out in clauses 3.12.2, 3.12.3, 3.14.5A, 3.14.5B, 3.15.6B, 3.15.7, 3.15.7A, 3.15.7B, 3.15.8, 3.15.8A, 3.15.9 and 3.15.10C such that final determinations of all total amounts payable or receivable by *AEMO* under clauses 3.12.2, 3.15.7(a), 3.15.8, 3.15.8A and 3.15.9 for each *AEMO intervention event* and/or *market suspension pricing schedule period* (as the case may be) ending during a *billing period* are reflected:
- (1) if practicable, in the *routine revised statement* issued approximately 20 weeks after the relevant *billing period*; and
 - (2) in the *routine revised statement* issued approximately 30 weeks after the relevant *billing period*.
- (b) Subject to clause 3.12.1(a), *AEMO* must *publish* a timetable that sets a date for each of *AEMO*'s and the independent expert's obligations pursuant to clauses 3.12.2, 3.12.3, 3.14.5B(f), 3.14.5B(g), 3.15.7, 3.15.7A, 3.15.7B, 3.15.8, 3.15.8A and 3.15.10C, where required (the *intervention settlement timetable*).

- (c) *AEMO* must at least once a month revise and *publish* the *intervention settlement timetable* to reflect any changes to the *intervention settlement timetable*.

3.13 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*, *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*, *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.

Note

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

- (k1) *AEMO* must set out in the *Power System Model Guidelines* the circumstances in which *AEMO* will consider the information under paragraph (k)(2) to be reasonably required by a *Registered Participant*.

- (l) If *AEMO* holds information requested under clause 3.13.3(k), *AEMO* must provide the requested information to the *Registered Participant* as soon as practicable, subject to the following requirements:
 - (1) If *AEMO* holds and is required under this paragraph (l) to provide a *releasable user guide* that *AEMO* received under clause S5.2.4(b)(8), *AEMO* must provide the *releasable user guide* to the *Registered Participant* in an unaltered form.
 - (2) If *AEMO* holds and is required under this paragraph (l) to provide a form of the model source code that *AEMO* received under clauses S5.2.4(b)(6) and S5.2.4(d) or from any other source, *AEMO* must provide that information:
 - (i) only in the form of, at *AEMO*'s discretion:
 - (A) compiled information (such as, for example, compiled Fortran code in object code or dynamic link library (DLL) form);
 - (B) encrypted information; or
 - (C) a secured format agreed by the provider of the model source code,

unless *AEMO* has the written consent of the person who provided the information to *AEMO* to provide it in another form; and
 - (ii) in a form that can be interpreted by a software simulation product nominated by *AEMO*.
 - (3) Any information provided by *AEMO* under clause 3.13.3(l) to a *Registered Participant* must be treated as *confidential information*.
 - (4) Any information provided by *AEMO* under this clause 3.13.3(l) to a person who is a *project developer* must be treated by that person as *confidential information* even where that person ceases to be a *project developer*.
- (11) *AEMO* may charge a fee, except where the information is requested by a *Network Service Provider* under clause 3.13.3(15), to recover all reasonable costs incurred in providing information to a *Registered Participant* under this clause 3.13.3.
- (12) For the purposes of clause 3.13.3(l), the provider of the model source code is:
 - (1) the *Generator* if the model source code was received from that *Generator* under clause S5.2.4(b)(6) or S5.2.4(d); or
 - (2) the person required under the *Rules* to register as a *Generator* in respect of a *generating system* comprised of *generating units* with a combined

- nameplate rating* of 30 MW or more, if the model source code was received from that person under clause S5.2.4(b)(6) or S5.2.4(d); or
- (3) the *Generator*, if the model source code was provided to *AEMO* by a *Network Service Provider* and that same *Network Service Provider* advises *AEMO* that the provider of the model source code is the *Generator*; or
 - (4) the relevant *Network Service Provider*, if that same *Network Service Provider* advises *AEMO* that the provider of the model source code is itself; or
 - (5) otherwise, the relevant Transmission Network Service Provider.
- (13) If *AEMO* is required under clause 3.13.3(l) to provide information requested under clause 3.13.3(k)(2), *AEMO* may provide:
- (1) historical information relating to the operating conditions of the *power system*;
 - (2) information and data provided to *AEMO* under clauses 3.13.3(f)(1) and 3.13.3(f)(3) and information of the same type provided under clause 3.13.3(g);
 - (3) *network* dynamic model parameter values obtained under clauses 3.13.3(f)(2) and 3.13.3(g);
 - (4) model parameter values and load flow data derived from a *releasable user guide*;
 - (5) a *network* model of the *national grid*, suitable for load flow and fault studies; and
 - (6) other technical data as listed in Schedules 5.5.3 and 5.5.4.
- (14) Despite clause 3.13.3(l), *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(l); and
 - (2) information relating to *plant* that is the subject of an *application to connect* until after the execution of the relevant *connection agreement*.
- (17) Any information provided by *AEMO* under clause 3.13.3(15) to a *Transmission Network Service Provider* must be treated as *confidential information*.
- (m) Where special approvals or exemptions have been granted by *AEMO*, including approval to aggregate *generating units, market network services, loads* for *central dispatch*, or exemptions from *central dispatch*, details of such special arrangements must be *published* by *AEMO*.
- (n) *AEMO* must determine and *publish intra-regional loss factors* in accordance with clause 3.6.2 by 1 April each year and whenever changes occur.
- (o) *Network Service Providers* must advise *AEMO* of their *distribution loss factors*, duly authorised by the *AER*, and *AEMO* must *publish* such *distribution loss factors* in accordance with clause 3.6.3(i).
- (p) *AEMO* must *publish* on a quarterly basis details of:
- (1) *interconnector* transfer capability; and
 - (2) the discrepancy between *interconnector* transfer capability and the capacity of the relevant *interconnector* in the absence of *outages* on the relevant *interconnector* only,
- for each day of the preceding quarter for all *interconnectors*.
- (p1) *AEMO* must establish, maintain and *publish* a register which identifies:
- (1) the *Registered Participant* to whom any information is provided under clause 3.13.3(l), including whether the *Registered Participant* is a *project developer*; and
 - (2) the date on which such information was provided.

- (q) In relation to the *declared transmission system* of an *adoptive jurisdiction*:
 - (1) *AEMO* must maintain the register referred to in paragraph (d); and
 - (2) a *declared transmission system operator* must provide *AEMO* with information reasonably required by *AEMO* for maintaining the register and keeping it up to date.

3.13.4 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* taking into account the most probable availability of wholesale demand response units plus required *scheduled reserve* for each *region* and for the total *power system*;
 - (2) forecasts of the most probable *energy* consumption for each *region* and for the total *power system*;
 - (3) forecast *inter-regional loss factors*;
 - (4) aggregate *generating plant* availability for each *region* and aggregate availability of each type of *market ancillary service* for each *region*;
 - (5) projected *supply* surpluses and deficits for each *region*, including shortages of *scheduled reserve* and projected *market ancillary service* surpluses and deficits for each *region*;
 - (5A) the aggregated MW allowance (if any) made by *AEMO* for generation from *non-scheduled generating systems* in each forecast:
 - (i) of the most probable peak *power system load* referred to in clause 3.13.4(f)(1);

- (ii) referred to in clause 3.13.4(f)(2);
 - (iii) of aggregate *generating plant* availability referred to in clause 3.13.4(f)(4); and
 - (iv) of projected *supply* surpluses and deficits referred to in clause 3.13.4(f)(5) but not including shortages of *scheduled reserve* or projected *market ancillary service* surpluses and deficits for each *region*.
- (5B) in respect of each forecast:
- (i) of the most probable peak *power system load* referred to in clause 3.13.4(f)(1);
 - (ii) referred to in clause 3.13.4(f)(2);
 - (iii) of aggregate *generating plant* availability referred to in clause 3.13.4(f)(4); and
 - (iv) of projected *supply* surpluses and deficits referred to in clause 3.13.4(f)(5) but not including shortages of *scheduled reserve* or projected *market ancillary service* surpluses and deficits for each *region*,
- a value that is the sum of that forecast and the relevant aggregated MW allowance (if any) referred to in clause 3.13.4(f)(5A); and
- (6) identification and quantification of:
- (i) where a projected *supply* deficit in one *region* can be supplemented by a surplus in a neighbouring *region* (dependent on forecast *interconnector* capacities) and the expected *interconnector flow*;
 - (ii) forecast *interconnector* transfer capabilities and the projected impact of any *inter-network tests* on those transfer capabilities; and
 - (iii) when and where *network constraints* may become binding on the *dispatch* of *generation* or *load*.
- (g) Each *day*, in accordance with the *timetable*, *AEMO* must *publish* forecasts of *spot prices* and *ancillary service prices* at each *regional reference node* for each *trading interval* or *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* 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.
- (l1) 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*, *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* or *Market Participant* for each *rebid* under clause 3.8.22(c)(2);

- (2) identification of the *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* submitting the *dispatch bid, dispatch offer* or *market ancillary offer*;
 - (3) the *dispatch bid prices* or *dispatch offer prices*;
 - (4) quantities for each *trading interval*;
 - (5) the *ramp rate* of each *generating unit, scheduled load* and *scheduled network service* as measured by *AEMO's* telemetry system;
 - (6) identification of *trading intervals* for which the *plant* was specified as being *inflexible* in accordance with clause 3.8.19 and the reasons provided by the *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* in accordance with clause 3.8.19(b)(1);
 - (7) in respect of a *semi-scheduled generating unit*, the availability of that *generating unit* specified in the relevant *unconstrained intermittent generation forecast* for each *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, 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*.
- (s) Where *AEMO publishes* details as referred to in clause 3.13.4(r), the requirement to *publish* applies only to data available to *AEMO*.
- (t) *AEMO* may, in *publishing* the details referred to in clause 3.13.4(s), *publish* aggregated information of actual *generation* for *non-scheduled generating*

units or non-scheduled generating systems that have a nameplate rating that is less than 30 MW.

- (u) Each time *AEMO* runs the *dispatch algorithm* it must, within 5 minutes, *publish* for the relevant *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(l) and the sum of the actual *generation* referred to in clause 3.13.4(u)(2).
- (v) Where *AEMO publishes* the information referred to in clause 3.13.4(u), the requirement for *AEMO* to *publish* applies only to data available to *AEMO*.
- (w) Each *day*, in accordance with the *timetable*, *AEMO* must *publish* details of any operational irregularities arising on the previous *trading day* including, for example, any circumstances in which there was prima facie evidence of a failure to follow *dispatch instructions*.
- (x) Each *trading interval*, *AEMO* must, for each *regional reference node*, *publish* the demand for that *trading interval*, both inclusive and exclusive of the aggregate actual *generation* from *non-scheduled generating systems*.
- (y) In accordance with the *timetable* and no more than 3 hours after the last such notification, *AEMO* must notify electronically on a confidential basis each *Semi-Scheduled Generator* of the *unconstrained intermittent generation forecast* for its *semi-scheduled generating units* that was taken into account for each *trading interval* of the last *pre-dispatch schedule* published by *AEMO* under paragraph (e).
- (z) At intervals to be determined by *AEMO* under rule 3.7A(e), *AEMO* must, in accordance with the *timetable*, *publish* updates to the *congestion information resource*.

3.14 Administered Price Cap and Market Suspension

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

Compensation - objective

- (a) The objective for the payment of compensation under this clause 3.14.5A and clause 3.14.5B is to maintain the incentive for:
 - (1) *Scheduled Generators* to supply energy; and

- (2) *Ancillary Service Providers to supply market ancillary services;* and
(3) *Demand Response Service Providers to supply wholesale demand response,*

during *market suspension pricing schedule periods*.

Payment to Market Suspension Compensation Claimants

- (b) Subject to paragraph (c), *AEMO* must pay compensation to *Market Suspension Compensation Claimants* calculated in accordance with paragraph (d) and clause 3.14.5B (as the case may be).
- (c) For the purpose of clauses 3.15.8A and 3.15.10C, the amount of compensation due to a *Market Suspension Compensation Claimant* pursuant to paragraph (b) must include interest on that amount computed at the average *bank bill rate* beginning on the day on which payment was required to be made under clauses 3.15.16 and 3.15.17 in respect of the *final statement* for the *billing period* in which the *market suspension pricing schedule period* occurred and ending on the day on which payment is required to be made pursuant to clause 3.15.10C.
- (d) Subject to clause 3.14.5B, the compensation payable to each *Market Suspension Compensation Claimant* is to be determined in accordance with the formula set out below:

$$C = CO - RE$$

where:

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

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

$$CO = (SOG \times BVG) + (MWE \times BVAS) + \underline{(MWDR \times BVDR)}$$

where:

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

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

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

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

MWDR = the sum of the wholesale demand response settlement quantities of the Market Suspension Compensation Claimant (in MWh) during the market suspension pricing schedule period.

BVDR = the amount (in \$/MWh) calculated in accordance with paragraph (f1) below.

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

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

If a quantity of energy is both sent out generation and wholesale demand response, it must be included in the calculation of MWDR and not SOG.

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

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

where:

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

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

where:

- FC = the fuel cost (in \$/GJ) for the relevant *Generator*.
- E = the efficiency (in GJ/MWh) for the relevant *Generator*.
- VOC = the variable operating cost (in \$/MWh) for the relevant *Generator*.

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

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

$$BVG = BC_{(av)} \times \left(\frac{0.15}{n} \right)$$

where:

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

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

- (f1) The benchmark value for *wholesale demand response* (BVDR) at paragraph (d) is to be determined in accordance with the formula below:

$$BVDR = BCE_{(av)} \times 1.15$$

where:

$BCE_{(av)}$ means the value of $BC_{(av)}$ determined under paragraph (e) above (in \$/MWh) for a class of *Scheduled Generator* in the same *region* as the *Market Suspension Compensation Claimant*, as selected by *AEMO* in accordance with the *market suspension compensation methodology*.

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

Market suspension compensation methodology and schedule of benchmark values

- (h) *AEMO* must develop, *publish* and make available on its website a methodology (*market suspension compensation methodology*) that specifies:
- (1) the classes of *Scheduled Generator* and *Ancillary Service Provider* to be used for the purpose of calculating benchmark values;
 - (2) the approach to be adopted by *AEMO* in calculating the benchmark values for each class of *Scheduled Generator* and *Ancillary Service Provider* in each *region*, including determining the equivalent inputs published in the *ISP database* for the purpose of the calculation in paragraph (e); ~~and~~
(2A) the approach to be adopted by *AEMO* in selecting the class of *Scheduled Generator* to be used when determining the value of $BC_{(av)}$ for the calculation in paragraph (f1); and
 - (3) *AEMO*'s administrative fees associated with a claim for compensation under clause 3.14.5B or the manner in which those fees are to be determined.
- (i) *AEMO* may amend the *market suspension compensation methodology* from time to time in accordance with the *Rules consultation procedures*. Notwithstanding this paragraph (i), *AEMO* may make minor and administrative amendments to the *market suspension compensation methodology* without complying with the *Rules consultation procedures*.
- (j) *AEMO* must develop a schedule of benchmark values (**schedule of benchmark values**) for each class of *Scheduled Generator* and *Ancillary Service Provider* in each *region*, calculated in accordance with the formula set out in paragraphs (e) and (f), and using (where appropriate) the equivalent inputs published in the *ISP database*.
- (k) *AEMO* must *publish* and make available on its website an updated schedule of benchmark values no later than one month after each publication of the Inputs, Assumptions and Scenario Report (as defined in clause 5.10.2).

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

- (a) Subject to paragraphs (b) and (c), *Market Suspension Compensation Claimants* may, within 15 *business days* of receipt of the notice referred to in clause 3.14.5A(g), make a written submission to *AEMO* claiming an amount equal to the amount by which its direct costs of supplying energy, ~~or market ancillary services~~ or wholesale demand response during the *market suspension pricing schedule period* exceed the sum of:
- (1) any compensation payable to the *Market Suspension Compensation Claimant* under clause 3.14.5A with respect to that *market suspension pricing schedule period*;

- (2) the *Market Suspension Compensation Claimant's* "RE" as calculated under clause 3.14.5A(d); and
 - (3) any other compensation which the *Market Suspension Compensation Claimant* has received or is entitled to receive in connection with the relevant *generating unit* supplying energy or *market ancillary services* or the relevant *wholesale demand response unit* supplying *wholesale demand response* during that *market suspension pricing schedule period*.
- (b) Where a *Market Suspension Compensation Claimant* is a *Directed Participant* with respect to any *trading interval* during a *market suspension pricing schedule period*, such *Market Suspension Compensation Claimant*:
- (1) is entitled to make a claim under clause 3.15.7B(a); and
 - (2) is not entitled to make a claim under this clause 3.14.5B.
- (c) A written submission made by a *Market Suspension Compensation Claimant* pursuant to paragraph (a) must:
- (1) itemise each component of the claim;
 - (2) contain sufficient data and information to substantiate each component of the claim; and
 - (3) be signed by an authorised officer of the *Market Suspension Compensation Claimant* certifying that the written submission is true and correct.
- (d) For the purposes of paragraph (a), the direct costs incurred by the *Market Suspension Compensation Claimant* means, in respect of a *generating unit* supplying energy or *market ancillary services*:
- (1) fuel costs in connection with the relevant *generating unit*;
 - (2) incremental maintenance costs in connection with the relevant *generating unit*;
 - (3) incremental manning costs in connection with the relevant *generating unit*; and
 - (4) other direct costs reasonably incurred in connection with the relevant *generating unit*, where such costs are incurred to enable the *generating unit* to supply energy or *market ancillary services* during the *market suspension pricing schedule period*.
- (d1) For the purposes of paragraph (a), the direct costs incurred by the *Market Suspension Compensation Claimant* means, in respect of a *wholesale demand response unit* supplying *wholesale demand response*:

- (1) fuel costs in connection with the relevant *wholesale demand response unit*;
 - (2) incremental maintenance costs in connection with the relevant *wholesale demand response unit*;
 - (3) incremental manning costs in connection with the relevant *wholesale demand response unit*; and
 - (4) other direct costs reasonably incurred in connection with the relevant *wholesale demand response unit*, where such costs are incurred to enable the *wholesale demand response unit* to supply *wholesale demand response* during the *market suspension pricing schedule period*.
- (e) *AEMO* may recover from a *Market Suspension Compensation Claimant* an administrative fee to assist in recouping some of the costs incurred in carrying out its functions under this clause 3.14.5B (which costs may include fees for services rendered by an independent expert under clause 3.12.3). The administrative fees will be determined in accordance with the *market suspension compensation methodology* developed pursuant to clause 3.14.5A(h).
- (f) *AEMO*:
- (1) may (but is not required to) refer a claim by a *Market Suspension Compensation Claimant* under paragraph (a) to an independent expert to determine such claim in accordance with clause 3.12.3 where the claim is equal to or greater than \$50,000; and
 - (2) must determine in its sole discretion if any claims by a *Market Suspension Compensation Claimant* made under paragraph (a) and not referred to an independent expert under subparagraph (f)(1) are reasonable, and if so, pay the amount claimed in accordance with clause 3.15.10C,
- in accordance with the *intervention settlement timetable*.
- (g) Where *AEMO* considers a claim made by a *Market Suspension Compensation Claimant* under paragraph (a) to be unreasonable, it must:
- (1) advise the *Market Suspension Compensation Claimant* of its determination in writing, setting out its reasons; and
 - (2) refer the claim to an independent expert to determine the claim in accordance with clause 3.12.3.

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

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* and *Scheduled Network Service Providers* to supply energy;
- (2) *Ancillary Service Providers* to supply *ancillary services*; ~~and~~
- (3) *Market Participants* with *scheduled load* to consume energy; and
- (4) *Demand Response Service Providers* to supply *wholesale demand response*.

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.

- (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.

3.15.6B Wholesale demand response transactions

- (a) In each *trading interval*, in relation to the *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:

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

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 the *wholesale demand response unit* for the *trading interval*, expressed in MWh and calculated under paragraph (c) except that if the *wholesale demand response settlement quantity* for a *trading interval* is greater than MRCSQ for the *trading interval*, then WDRSQ equals MRCSQ for the *trading interval*;
- MRCSQ ≡ the maximum responsive component quantity for the *connection point* for the *trading interval*, expressed in MWh and calculated under paragraph (e);
- TLF ≡ for a *transmission network connection point*, is the relevant *intra-regional loss factor* at that *connection point*, and for any other *connection point*, is the relevant *intra-regional loss factor* at the *transmission network connection point* or *virtual transmission node* to which it is assigned in accordance with clause 3.6.2(b)(2);
- RRP ≡ the *regional reference price* for the *regional reference node* to which the *connection point* is assigned, expressed in dollars per MWh; and

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 (f).

(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:

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

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 the wholesale demand response unit for the trading interval, expressed in MWh and calculated under paragraph (c) except that if the wholesale demand response settlement quantity for a trading interval is greater than MRCSQ for the trading interval, then WDRSQ equals MRCSQ for the trading interval;

MRCSQ ≡ the maximum responsive component quantity for the connection point for the trading interval, expressed in MWh and calculated under paragraph (e);

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

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 (f); 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 dispatched wholesale demand response unit for a trading interval is determined in accordance with the formula:

$$\text{WDRSQ} = -1 \times (\text{BSQ} - \text{ME}) \times \text{DLF}$$

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);
- 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 a negative value where the flow is in the other direction); and
- DLF ≡ the distribution loss factor applicable at the connection point.

- (d) The baseline settlement quantity for a connection point for a wholesale demand response unit for a trading interval is the baseline (in MWh) for the wholesale demand response unit for the trading interval (as may be subject to temporary adjustment under clause 3.10.5(b)).

Note

The definition of baseline in Chapter 10 states that a baseline is 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.

- (e) The maximum responsive component quantity for a connection point for a wholesale demand response unit for a trading interval is equal to the maximum responsive component for the wholesale demand response unit (in MW and expressed as a positive number) divided by the number of trading intervals in an hour.
- (f) The wholesale demand regional reimbursement rate for a regional reference node for a trading interval is the peak period load weighted average spot price for the regional reference node determined by AEMO in accordance with paragraph (g) for the quarter in which the trading interval falls.
- (g) AEMO must calculate and publish for each quarter commencing on 1 January, 1 April, 1 July and 1 October the peak period load weighted average spot price for each regional reference node over the 12--month period ending

immediately before the start of the quarter. For this purpose, peak periods are periods during the “peak load profile” specified in the contract specification Australian Peak Load Electricity Futures Contract in the ASX 24 Operating Rules of the Australian Securities Exchange as amended from time to time or, where this specification ceases to be in effect, during an equivalent peak period determined by AEMO acting reasonably.

3.15.7 Payment to Directed Participants

- (a) Subject to paragraphs (b) and (d1), *AEMO* must pay compensation to *Directed Participants* calculated in accordance with clauses 3.15.7, 3.15.7A and 3.15.7B, as the case may be, for any service which the *Directed Participant* was required to provide in order to comply with the *direction*.
- (b) For the purpose of clause 3.15.8 and 3.15.10C the amount of compensation due to a *Directed Participant* pursuant to clause 3.15.7(a) must include interest on the sum of that amount less any payment made in accordance with clause 3.15.10C(a), computed at the average *bank bill rate* for the period beginning on the day on which payment was required to be made under clauses 3.15.16 and 3.15.17 in respect of the *final statement* for the *billing period* in which the *direction* was issued and ending on the day on which payment is required to be made pursuant to clause 3.15.10C.
- (c) Subject to clause 3.15.7(d) and clause 3.15.7B, the compensation payable to each *Directed Participant* for the provision of *energy* or *market ancillary services* pursuant to a *direction* is to be determined in accordance with the formula set out below

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

where:

- DCP = the amount of compensation the *Directed Participant* is entitled to receive;
- AMP = the price below which are 90% of the *spot prices* or *ancillary service prices* (as the case may be) for the relevant service provided by *Scheduled Generators*, *Semi-Scheduled Generators*, *Scheduled Network Service Providers*, *Demand Response Service Providers* or *Market Customers* in the *region* to which the *direction* relates, for the 12 months immediately preceding the *trading day* in which the *direction* was issued; and
- DQ = is either:
- (A) the difference between the total *adjusted gross energy* delivered or consumed by the *Directed Participant* and the total *adjusted gross energy* that would have been delivered or consumed by the

Directed Participant had the *direction* not been issued; or

- (B) the amount of the relevant *market ancillary service* which the *Directed Participant* has been *enabled* to provide in response to the *direction*.

(d) If at the time *AEMO* issues a *direction*:

- (1) the *Directed Participant* had submitted a *dispatch bid*, *dispatch offer* or *rebid* acknowledged by *AEMO* in accordance with clause 3.8.8 for *dispatch* of the service that is to be *dispatched* in accordance with the *direction*; and
- (2) the *direction* was issued because *AEMO* was prevented from *dispatching* the *Directed Participant's plant* in accordance with that *dispatch bid*, *dispatch offer* or *rebid* due to a failure of the *central dispatch process*,

the *Directed Participant* is entitled to receive compensation for the provision of that service at a price equal to the price in that *dispatch bid*, *dispatch offer* or *rebid* acknowledged by *AEMO* in accordance with clause 3.8.8, as the case may be.

(d1) Where a *Directed Participant* is also a *Market Suspension Compensation Claimant* with respect to any *trading interval* in relation to which *AEMO* has issued a *direction*, such *Directed Participant*:

- (1) may be entitled to compensation calculated in accordance with clause 3.14.5A(d); and
- (2) is not entitled to compensation calculated in accordance with paragraph (c).

(e) *AEMO* must, in accordance with the *intervention settlement timetable*, advise each *Directed Participant* in writing of the amount the *Directed Participant* is entitled to receive pursuant to clause 3.15.7(c) or clause 3.15.7(d).

3.15.9 Reserve settlements

- (a) *AEMO's* costs incurred in contracting for the provision of *reserves* are to be met by fees imposed on *Market Customers* in accordance with this clause 3.15.9.
 - (a1) If clause 3.15.9A applies in respect of a *region*, fees imposed under this clause 3.15.9 may be subject to subsequent adjustment under clause 3.15.9A.
 - (b) *AEMO* must, in accordance with the *intervention settlement timetable*, calculate:

- (1) the aggregate of the amounts payable by *AEMO* under *reserve contracts* in respect of the relevant *billing period*;
 - (2) any amounts determined as payable by *AEMO*:
 - (i) by the independent expert under clause 3.12.3 in respect of an *AEMO intervention event* that is an exercise of the *RERT* during the relevant *billing period*; or
 - (ii) as a result of a *scheduled generating unit*, *scheduled network service*, *wholesale demand response unit* or *scheduled load* under a *scheduled reserve contract* being *dispatched* or *generating units* or *loads* under an *unscheduled reserve contract* being *activated*,

in respect of the relevant *billing period*; and
 - (3) the aggregate of the amounts receivable by *AEMO* under the *Rules* in respect of *reserve contracts* during the relevant *billing period*.
- (c) Separate amounts must be calculated under paragraph (b):
- (1) for *reserve contracts* entered into by *AEMO* specifically in respect of the *Market Participant's region* in accordance with paragraph (d); and
 - (2) for *reserve contracts* other than those entered into for and allocated to a specific *region* or *regions*.
- (d) Where either:
- (1) without the intervention in the *market* of *AEMO* a *region* would otherwise, in *AEMO's* reasonable opinion, fail to meet the minimum *power system security standards* or *the reliability standard*; or
 - (2) a *region* requires a level of *power system reliability* or *reserves* which, in *AEMO's* reasonable opinion, exceeds the level required to meet the *reliability standard*,

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

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

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

where:

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

UC is the total usage charges (or equivalent charges) paid by *AEMO* under *reserve contracts*, as allocated in accordance with paragraph (e1);

E_{UC} is the sum of all that *Market Customer's adjusted gross energy* amounts in the relevant *region* (the "**relevant region**") in each *trading interval* during which *reserves* were *dispatched* or *activated* under a *reserve contract* in the *billing period*, excluding any *loads* in that *region* in respect of which the *Market Customer* submitted a *dispatch bid* for any such *trading interval*;

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

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

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

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

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

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

Note

This 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) Operational and administrative costs incurred by *AEMO* in arranging for the provision of *reserves*, other than its liabilities under the terms of the *reserve contracts* into which it has entered, are to be recovered by *AEMO* from all *Market Participants* as part of the fees imposed in accordance with rule 2.11.
- (h) For the purposes of clause 3.15.19, a re-determination by a panel established under clause 3.12.2 is to be taken to be an agreement between *AEMO* and each of the *Market Participants* and *Scheduled Generators*.

3.15.10 Administered price cap or administered floor price compensation payments

(a1) In this clause 3.15.10:

cost recovery region means the *region* in which:

- (1) the *spot price* was set by the *administered price cap* or *administered floor price*; or
 - (2) the *ancillary service price* was set by the *administered price cap*,
- in the eligibility period.

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

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

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

where

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

E_i is the sum of all of the *Market Customer's adjusted gross energy* amounts, determined in accordance with clauses 3.15.4 and 3.15.5, in respect of each *trading interval* in the eligibility period and each *connection point* for which the *Market Customer* is *financially responsible* in the cost recovery region.

$\sum E_i$ is the sum of all amounts determined as “ E_i ” in accordance with this clause 3.15.10 for all *Market Customers* in the cost recovery region.

- (c) Within 25 *business days* of being notified by the *AEMC* that compensation is to be paid to a *Scheduled Generator*, *Non-Scheduled Generator*, *Market Participant*, *Scheduled Network Service Providers* or *Ancillary Service Provider* in accordance with clause 3.14.6, *AEMO* shall include in statements provided under clauses 3.15.14 and 3.15.15 separate details of any amounts payable by or to *Market Participants* as determined in accordance with this clause 3.15.10.

3.20 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*, *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*, *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*.
- (l) *AEMO* may only enter into a *unscheduled reserve contract* if the contract contains:
 - (1) a provision that the other party to the contract has not and will not otherwise offer the *unscheduled reserve* the subject of the contract in the market for the *trading intervals* to which the contract with *AEMO* relates; and
 - (2) a nominal MW value reflecting *AEMO*'s view of the likely available capacity of that *reserve contract*.
- (m) *AEMO* must use reasonable endeavours to ensure that:
 - (1) subject to 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*.

3.20.7 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*, *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 wholesale demand response 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*, *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*, *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*, *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 *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*, *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]**

Ancillary Service Generating Unit and Ancillary Service Load Data:

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

Note:

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

Wholesale demand response unit data:

<u>Data</u>	<u>Units of Measurement</u>
<u><i>Wholesale demand response unit information:</i></u>	
<u><i>Wholesale demand response unit name</i></u>	
<u><i>Dispatchable unit identifier</i></u>	
<u><i>Maximum responsive component of the wholesale demand response unit</i></u>	<u>MW</u>
<u><i>Maximum ramp rate</i></u>	<u>MW/minute</u>

CHAPTER 4

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*, *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*, *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*, *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* 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*, *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 Power System Security Operations

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 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 Dispatch instructions to Demand Response Service Providers

- (a) *AEMO* may, at any time, give instructions to a *Demand Response Service Provider* in relation to any of its *wholesale demand response units* nominating the level or schedule of *baseline deviation* to be achieved by the *wholesale demand response unit* over the specified period (*dispatch instructions*) in accordance with clause 4.9.5(b).
- (b) Where two or more *wholesale demand response units* have been aggregated in accordance with clause 3.8.3, paragraph (a) applies in respect of the aggregate *baseline deviation* of the aggregated *wholesale demand response units*.

- (c) A baseline deviation quantity nominated in a dispatch instruction must not be less than zero and must not be more than the available capacity of the wholesale demand response unit or aggregated wholesale demand response units.
- (d) A Demand Response Service Provider must, with respect to wholesale demand response units in relation to which a dispatch bid has been submitted for a particular trading interval, ensure that appropriate personnel or electronic facilities are available at all 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.

- (e) AEMO must make, as a power system operating procedure, a procedure setting out arrangements for notifying a Demand Response Service Provider whether it is being given a dispatch instruction in relation to its wholesale demand response unit to provide wholesale demand response in a trading interval.

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 *wholesale demand response unit* must include the following:

- (1) specific reference to the *wholesale demand response unit* to which the *dispatch instruction* applies;
- (2) the desired *baseline deviation* of the *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 in the provision of the *baseline deviation* by the *wholesale demand response unit* or a specific target time to reach the *baseline deviation* 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 wholesale demand response units is at all times able to comply with its latest dispatch bid.*

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 of its wholesale demand response units, as soon as the Demand Response Service Provider becomes aware of the event.

Note

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

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) A Demand Response Service Provider must in respect of its wholesale demand response units 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.)

CHAPTER 4A

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 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.

Part F Compliance with the Retailer Reliability Obligation

Division 2 Key concepts

4A.F.3 Share of one-in-two year peak demand forecast

- (a) For the purposes of section 14R(2) of the *National Electricity Law*, a liable entity's share of the one-in-two year peak demand forecast for a compliance TI ("**liable share**") is calculated as follows:

$$LS = \left(\frac{LL}{HAPD} \right) \times OITPDF$$

where:

<i>LS</i>	=	the liable entity's liable share (in MW);
<i>LL</i>	=	the liable entity's liable load as determined under paragraph (b) (in MW);
<i>HAPD</i>	=	the highest adjusted peak demand occurring in a compliance TI in the relevant <i>reliability gap period</i> where adjusted peak demand is determined under paragraph (d) (in MW);
<i>OITPDF</i>	=	the one-in-two year peak demand forecast (in MW),

except that if $OITPDF/HAPD > one$, then it is taken to be equal to one.

Note

Section 14R(2) of the *National Electricity Law* states –

The liable entity must comply with the obligation that the liable entity's net contract position for the *trading interval* is not less than the liable entity's share of the one-in-two year peak demand forecast for the *trading interval* determined in accordance with the *Rules*.

Section 14R(2) is a reliability obligation civil penalty.

- (b) A liable entity's liable load for a compliance TI is calculated as follows:
- (1) if the liable entity is a *Market Customer*, the aggregate of the *adjusted gross energy* for each *connection point* for which it is *financially responsible* for the compliance TI (less any *adjusted gross energy* allocated to a prescribed opt-in customer at one of those *connection points*) based on the relevant *routine revised statements* for the *billing periods* relating to the *reliability gap period* given approximately 30 weeks after the relevant *billing period*;
 - (2) if the liable entity is not a *Market Customer*, the aggregate of the *adjusted gross energy* for each *connection point* for which it is registered as an opt-in customer (or part thereof if it is a prescribed opt-in customer registered for a portion of the *load* at that *connection point*) based on the relevant *routine revised statements* provided to the relevant *Market Customer* for the *connection points* for the *billing periods* relating to the *reliability gap period* given approximately 30 weeks after the relevant *billing period*;
 - (3) the quantity in subparagraph (1) or (2) (as applicable) is to be adjusted by adding:
 - (i) the liable entity's measured actual demand response (other than wholesale demand response) under a qualifying contract at each *connection point* for which it is *financially responsible* for the compliance TI, or registered if an opt-in customer, multiplied by the *distribution loss factor* for that *connection point*; and
 - (ii) the wholesale demand response settlement quantity for each connection point for which the liable entity is financially responsible for the compliance TI;
 - (4) the quantities in subparagraphs (1), (2) and (3) (as applicable) are to be adjusted for *intra-regional loss factors* at the *transmission network connection point* to which the *connection point* is assigned; and
 - (5) the final quantity is to be multiplied by the number of *trading intervals* in an hour,
- in each case, as determined in accordance with the *PoLR cost procedures*. To avoid doubt, a liable entity's demand is not to be adjusted for what its demand would have been but for *unserved energy* during a compliance TI.
- (c) For a liable entity that is a *Market Customer*, a liable entity's liable load relates to the *connection points* for which that liable entity is *financially responsible* for a compliance TI and those *connection points* do not need to be the same *connection points* referred to in clause 4A.D.2.

- (d) The adjusted peak demand for a compliance TI is the actual demand for the *region* in that compliance TI as determined under clause 4A.A.4(b) adjusted for:
- (1) the measured actual demand response of all liable entities during that compliance TI (other than wholesale demand response) as determined in accordance with the *PoLR cost procedures*; and
 - (2) the wholesale demand response settlement quantities for that compliance TI for all connection points for which a liable entity is financially responsible.

CHAPTER 7

7. Metering

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

7.15 Security of metering installation and energy data

7.15.5 Access to energy 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) an *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 or receive NMI Standing Data or 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*).

7.15.6 Access to baseline data

- (a) Baseline data is confidential and must be treated as confidential information in accordance with the Rules.

- (b) For the purposes of clause 8.6.2(c), the retail customer for the connection point for a wholesale demand response unit is deemed to have provided the baseline data relating to the wholesale demand response unit.
- (c) A Demand Response Service Provider for a wholesale demand response unit must if requested by the retail customer at the connection point for the wholesale demand response unit provide to the retail customer the baseline data relating to the wholesale demand response unit.
- (d) AEMO must provide baseline data and access to baseline data in accordance with paragraphs (e) and (f).
- (e) A Demand Response Service Provider may access and receive baseline data relating to its wholesale demand response units.
- (f) A retailer may access and receive baseline data relating to a wholesale demand response unit if the retailer is the financially responsible Market Participant for the connection point for the wholesale demand response unit.

CHAPTER 10

10. Glossary

abnormal baseline notice

A notice given to AEMO in accordance with clause 3.10.5(b) and the abnormal baseline notice procedures.

abnormal baseline notice procedures

The procedures which may be made by AEMO under clause 3.10.5.

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, 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*.

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

- (a) The total MW capacity available for *dispatch* by a *scheduled generating unit, semi-scheduled generating 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~~price band).
- (b) For a *wholesale demand response unit*, subject to clauses 3.8.2A(b), (c), (d) and (e):
 - (1) the total MW capacity available for *dispatch* by the *wholesale demand response unit* (i.e. maximum plant availability); and
 - (2) 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 calculated in accordance with clause 3.10.5 and 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(d) to determine whether a baseline methodology when applied to a wholesale demand response unit produces a baseline that satisfies the baseline methodology metrics.

baseline compliance standard

Has the meaning given in clause 3.10.4(a).

baseline data

The following information in relation to a wholesale demand response unit:

- (a) the baseline methodology and baseline settings approved for application to the wholesale demand response unit;
- (b) the maximum responsive component of the wholesale demand response unit; and
- (c) periods when the wholesale demand response unit has been dispatched to provide wholesale demand response and the quantity of wholesale demand response provided.

baseline deviation

For a wholesale demand response unit in a period, a deviation between the amount of electrical energy flowing at the connection point for the wholesale demand response unit in the period and the baseline of the wholesale demand response unit for the period.

baseline deviation offset

In relation to *baseline deviation* by a *dispatched wholesale demand response unit* in the period for which it is *dispatched*, electrical energy flowing at another *connection point* in the period that directly or indirectly offsets any part of the *baseline deviation* of the *wholesale demand response unit* in that period including where the offset occurs due to or by reason of:

- (a) the relevant *wholesale demand response activity* or an activity connected with or undertaken in conjunction with the *wholesale demand response activity*; or
- (b) the configuration of the *wholesale demand response unit* or any facility associated with the *wholesale demand response unit*.

baseline methodology

A methodology to determine a *baseline* for a *wholesale demand response unit*.

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* using applicable *baseline settings*.

baseline non-compliant

Has the meaning given in clause 3.10.4(b).

baseline settings

Has the meaning given in clause 3.10.3(b).

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*, *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*, *wholesale demand response units*, *scheduled loads*, *scheduled network services* and *market ancillary services* in accordance with rule 3.8.

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 *loading level* 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 bid*.

constraint, constrained

A limitation on the capability of a *network*, ~~load~~, ~~or a generating unit~~ or a *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 *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 bid

A notice submitted by a *Market Participant* to *AEMO* relating to the *dispatch* of a *scheduled load* in accordance with clause 3.8.7 or a *wholesale demand response dispatch bid*.

dispatch bid price

The price submitted for a *price band* and a *trading interval* in a *dispatch bid*.

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*, *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.

dispatchable unit identifier

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

dispatched load

The *load* which has been *dispatched* as part of *central dispatch*, but not including *dispatched wholesale demand response*.

dispatched wholesale demand response unit

In a *trading interval*, a *wholesale demand response unit* which has received instructions from *AEMO* as part of *central dispatch* to provide *wholesale demand response* in the *trading interval*.

dispatched wholesale demand response

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

good electricity industry practice

The exercise of that degree of skill, diligence, prudence and foresight that reasonably would be expected from a significant proportion of operators of *facilities* forming part of the *power system* for the *generation*, *transmission* or *supply* of electricity or the *provision of wholesale demand response* under conditions comparable to those applicable to the relevant *facility* consistent with *applicable regulatory instruments*, *reliability*, safety and environmental protection. The determination of comparable conditions is to take into account factors such as the relative size, duty, age and technological status of the relevant *facility* and the *applicable regulatory instruments*.

inflexible, inflexibility

In respect of a *scheduled generating unit*, *wholesale demand response unit*, *scheduled load* or *scheduled network service* for a *trading interval* means that the *scheduled generating unit*, *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 *baseline deviation* (in MW) of the *wholesale demand response unit*.

~~*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* and the *Demand Response Service Provider* responsible for the *wholesale demand response unit*.

Market Suspension Compensation Claimant

- (a) A *Scheduled Generator* or a *Demand Response Service Provider* who supplied *energy* or *wholesale demand response* during a *market suspension pricing schedule period*:
 - (1) in a *suspended region*; or
 - (2) in a *region* where *spot prices* were affected in accordance with clause 3.14.5(f); or
- (b) an *Ancillary Service Provider* in a *suspended region*, in respect of an *ancillary service generating unit* which is also a *scheduled generating unit*, who provided *market ancillary services* during a *market suspension pricing schedule period*.

maximum responsive component

The maximum quantity (in MW) of wholesale demand response that a wholesale demand response unit is able to provide in accordance with the Rules.

For wholesale demand response units aggregated in accordance with clause 3.8.3, the maximum responsive component specified by AEMO as a condition of aggregation under clause 3.8.3(b3) (if any) or otherwise, the aggregate maximum responsive component of the aggregated wholesale demand response units.

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 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.

qualifying load

Has the meaning given in clause 2.3.6(m).

scheduled plant

In respect of a *Registered Participant*, a *scheduled generating unit*, a *semi-scheduled generating unit*, an ancillary service load, 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 *wholesale demand response units*; or
- (d)(e) arising out of the ability to reduce *scheduled loads*.

small customer load

Has the meaning given in clause 2.3.6(m).

spot price exposed

A *wholesale demand response unit* is *spot price exposed* in relation to a *trading interval* if:

- (a) the price:
 - (1) for electricity consumed in that *trading interval* at any *connection point* for the *wholesale demand response unit* (or that would have been consumed but for a reduction in demand); and
 - (2) payable by a *retail customer* to the *financially responsible Market Participant* for the *connection point* or its *related body corporate*,
is equal to, or varies by reference to, the *spot price* in that *trading interval*; or
- (b) the price:
 - (1) for or in respect of electricity supplied to the *transmission or distribution network* in that *trading interval* at any *connection point* for the *wholesale demand response unit*; and
 - (2) payable by the *financially responsible Market Participant* for the *connection point* or its *related body corporate* to a *retail customer*,
is equal to, or varies by reference to, the *spot price* in that *trading interval*.

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 *wholesale demand response unit*).

wholesale demand regional reimbursement rate

The rate determined in accordance with clause 3.15.6B(f).

wholesale demand response

Means a *baseline deviation* achieved by (as applicable to a *wholesale demand response unit*):

- (a) reducing the consumption of electricity; or
- (b) increasing the export of electricity; or
- (c) reducing the consumption of electricity and starting to export electricity, at the *connection point* of the *wholesale demand response unit* in response to a *dispatch instruction* but only to the extent:
- (d) resulting from *wholesale demand response activity*; and
- (e) there is no *baseline deviation offset*.

wholesale demand response activity

An activity in relation to a *wholesale demand response unit* for which both of the following criteria are satisfied:

- (a) the activity is undertaken for the purpose of achieving a *baseline deviation* in a period in accordance with a *dispatch instruction* relating to the *wholesale demand response unit* and period; and
- (b) the activity would not be undertaken but for the *dispatch instruction*.

wholesale demand response constraint

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

wholesale demand response dispatch bid

A notice submitted by a *Demand Response Service Provider* to *AEMO* relating to the *dispatch* of a *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 participation guidelines

Guidelines made by the *AER* under clause 3.8.2A(g).

wholesale demand response settlement quantity

The quantity determined for a *wholesale demand response unit* under clause 3.15.6B(c).

wholesale demand response unit

- (a) A *load* which has been classified in accordance with Chapter 2 as a *wholesale demand response unit*.
- (b) For the purposes of Chapter 3 (except clause 3.8.2A and rule 3.15) and rule 4.9, two or more *wholesale demand response units* referred to in paragraph (a) that have been aggregated in accordance with clause 3.8.3.

CHAPTER 11

11. Savings and Transitional Rules

Part ZZZZA Wholesale demand response

11.125 Rules consequential on the making of the National Electricity Amendment (Wholesale demand response mechanism) Rule 2020

11.125.1 Definitions

(a) In this rule 11.125:

Amending Rule means the National Electricity Amendment (Wholesale demand response mechanism) Rule 2020.

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 2.3B.1 means clause 2.3B.1 as in force immediately after the effective date.

new clause 3.8.2A(g) means clause 3.8.2A(g) 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 3.10.1 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 3.10.3(a) means clause 3.10.3(a) as in force immediately after the effective date.

new clause 3.10.3(c) means clause 3.10.3(c) 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 3.10.6 means clause 3.10.6 as in force immediately after the effective date.

(b) Italicised terms used in this rule 11.125 have the same meaning as in new Chapter 10.

11.125.2 Wholesale demand response guidelines

(a) No later than 4 months before the effective date, AEMO must make and publish:

(1) the wholesale demand response guidelines in accordance with new clause 3.10.1; and

(2) AEMO's determination of the baseline methodology metrics and matters relating to baseline compliance testing under new clause 3.10.2.

(b) AEMO must comply with the Rules consultation procedure when making the wholesale demand response guidelines and the determinations under paragraph (a).

(c) The wholesale demand response guidelines and determinations made under paragraph (a) must come into effect no later than 4 months before the effective date so as to enable the following to be made before the effective date:

(1) applications for approval to classify a load as a wholesale demand response unit under new clause 2.3.6; and

(2) applications for aggregation of wholesale demand response units under new clause 3.8.3(a2).

(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 or new clause 3.8.3 (as applicable) and the wholesale demand response guidelines made under paragraph (a).

11.125.3 Baseline methodologies

(a) No later than 4 months before the effective date, AEMO must establish the register of baseline methodologies under new clause 3.10.3(c).

(b) No later than 4 months before the effective date, AEMO must develop one or more baseline methodologies in accordance with new clause 3.10.3(a) and publish them in the register established under new clause 3.10.3(c).

11.125.4 Wholesale demand response participation guidelines

- (a) By the effective date, the AER must in accordance with the Rules consultation procedures make and publish the wholesale demand response participation guidelines under new clause 3.8.2A(g).
- (b) The guidelines made under paragraph (a) must come into effect on and from the effective date.

11.125.5 Extension of time for registration and aggregation

- (a) The period of 15 business days specified in clause 2.9.2(b) is extended to 30 business days as follows:
 - (1) during the period commencing 4 months before the effective date and ending 3 months after the effective date; and
 - (2) in respect of an application under new clause 2.3B.1 to register as a Demand Response Service Provider or an application for approval to classify a load as a wholesale demand response unit under new clause 2.3.6.
- (b) The period of 20 business days specified in clause 3.8.3(e) is extended to 40 business days:
 - (1) during the period commencing 4 months before the effective date and ending 3 months after the effective date; and
 - (2) in respect of an application to aggregate two or more wholesale demand response units.

11.125.6 Amendments to AEMO, AER and AEMC 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 procedure used by AEMO for preparation of the short term PASA and published under clause 3.7.3(j);
 - (3) the market suspension compensation methodology made by AEMO under clause 3.14.5A(h);
 - (4) the schedule of benchmark values made by AEMO under clause 3.14.5A(j);
 - (5) the PoLR cost procedures made by AEMO under clause 3.15.9A(1);
 - (6) the principles and process used by AEMO to calculate the estimated settlement amount developed by AEMO under clause 3.15.12(c);

- (7) the RERT procedures;
- (8) the Market Settlement and Transfer Solution Procedures; and
- (9) the other documents mentioned in clause 11.103.2(a).

(b) Where the only change to:

- (1) a document referred to in paragraph (a); or
- (2) any other document made by AEMO under or in accordance with the Rules,

to take into account the Amending Rule is to replace the term *Market Ancillary Service Provider* with *Demand Response Service Provider*, AEMO is not required to consult before amending the document to make that replacement.

(c) 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.

(d) By the effective date, the AEMC must review and where necessary amend and publish the compensation guidelines made under clause 3.14.6(e) to take into account the Amending Rule.

(e) Amendments made in accordance with this clause must take effect on and from the effective date.

11.125.7 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.

11.125.8 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.

11.125.9 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.

11.125.10 Wholesale demand response annual reporting

(a) New clause 3.10.6 does not apply to the calendar year in which the effective date occurs (the commencement year).

(b) AEMO must prepare the first report under new clause 3.10.6 within six months after the end of the calendar year after the commencement year, covering the period from the effective date to the end of that calendar year.