Wholesale demand response mechanism – second draft rule markup

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Amendments are marked on version 121 of Chapter 2. As at 6 February 2020, version 132 of Chapter 2 has been published. That version includes changes made by:

- Schedule 1 of the National Electricity Amendment (Retailer Reliability Obligation) Rule 2019 (commenced 1 July 2019).

- Schedule 1 of the National Electricity Amendment (Transparency of new projects) Rule 2019 No. 8 (commenced 19 December 2019).

The changes are not included in this version of 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(3) has requested that the load be so classified and has not withdrawn that request.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.
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.

(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; and

(6) 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 Demand Response Service Provider Market Ancillary Service Provider

2.3AA.1 Registration

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

(b) To be eligible for registration as a Demand Response Service Provider Market Ancillary Service Provider, a person must 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 as

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

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

(iii) demonstrating that the load identified in (i) has the required equipment to be used to provide market ancillary service;

(2) satisfy AEMO that each load referred to in subparagraph (1) will be capable of meeting or exceeding the relevant performance standards and specifications to AEMO’s satisfaction.

(c) [Deleted] A Market Ancillary Service Provider may classify the load referred to in subparagraph (b)(1) as an ancillary service load in accordance with clause 2.3.5 where it has obtained the approval of AEMO to do so.

(d) A Demand Response Service Provider’s Market Ancillary Service Provider’s activities only relate to loads it has classified (in its capacity as a Demand Response Service Provider Market Ancillary Service Provider) as ancillary service loads or as a wholesale demand response unit, and only while it is also registered with AEMO as a Demand Response Service Provider Market Ancillary Service Provider.

2.4 Market Participant

2.4.1 Registration as a category of Market Participant

(a) A Market Participant is a person registered by AEMO as any one or more of the following categories:

(1) Market Customer;

(1A) Market Small Generation Aggregator;

(1B) Demand Response Service Provider Market Ancillary Service Provider;

(2) Market Generator;

(3) Market Network Service Provider.

(b) A Market Participant may only participate in the market in the category in which it has been registered.

(c) A Market Participant may only participate in any of the markets or trading activities conducted by AEMO if that Market Participant satisfies the relevant prudential requirements set out in Chapter 3 applicable to the relevant trading activity.

2.12 Interpretation of References to Various Registered Participants

(a) A person may register in more than one of the categories of Registered Participant.

(b) Notwithstanding anything else in the Rules, a reference to:
(1) a "Generator" applies to a person registered as a Generator only in so far as it is applicable to matters connected with the person’s scheduled generating units, semi-scheduled generating units, non-scheduled generating units, market generating units or non-market generating units;

(1A) a "Small Generation Aggregator" applies to a person registered as a "Small Generation Aggregator" only in so far as it is applicable to matters connected with the person’s small generating units or market generating units;

(1B) a "Demand Response Service Provider" or "Market Ancillary Service Provider" applies to a person registered as a "Demand Response Service Provider" or "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

(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).
Important note:
This document shows changes proposed to Chapter 3 of the National Electricity Rules by the second draft National Electricity Amendment (Wholesale demand response mechanism) Rule 2020. The changes are shown in a modified version of Chapter 3 that incorporates changes made by the Rules listed below. This modified version of Chapter 3 is provided to assist in responding to the draft Rule and should not be used for any other purpose.

- Schedule 1 of the National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019 which will come into effect on 26 March 2020
- Schedule 2 of the National Electricity Amendment (Retailer Reliability Obligation) Rule 2019 which will come into effect on 26 March 2020
- Schedule 1 of the National Electricity Amendment (Five minute settlement) Rule 2017 which will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Five minute settlement and global settlement implementation amendments) Rule 2019 No.7 will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Participant compensation following market suspension) Rule 2018 which will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Intervention compensation and settlement processes) Rule 2019 which will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Application of the regional reference node test to the Reliability and Emergency Reserve Trader) Rule 2019 No. 11 which will into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Application of compensation in relation to AEMO interventions) Rule 2019 No. 13 which will come into effect on 1 July 2021
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) [Deleted] Projected daily wholesale demand response availability for wholesale demand response units that are wholesale demand response constrained; and.

(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; and

(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.

(c) [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 or unscheduled generation or wholesale demand response may be provided;

   (iv) the location at which non-scheduled load may be curtailed 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) \textit{AEMO} may investigate from time to time:

(1) the scope for further development of the \textit{dispatch algorithm} beyond the minimum requirements specified in clause 3.8.1(b); and

(2) the sufficiency of the \textit{dispatch algorithm} in meeting the minimum requirements specified in clause 3.8.1(b),

and following compliance with the \textit{Rules consultation procedures, publish} a report setting out its recommendations.

\textbf{3.8.2A Wholesale demand response unit participation in central dispatch}

(a) A \textit{Demand Response Service Provider} must submit a \textit{dispatch bid} in respect of its \textit{wholesale demand response unit} for each \textit{trading day} in accordance with clause 3.8.7B.

(b) A \textit{Demand Response Service Provider} must determine the \textit{available capacity} of a \textit{wholesale demand response unit} in accordance with applicable requirements in the \textit{wholesale demand response guidelines} and paragraphs (c), (d) and (e).

(c) A \textit{Demand Response Service Provider} must submit \textit{available capacity} of zero for a \textit{wholesale demand response unit} in respect of a \textit{trading interval} if the \textit{Demand Response Service Provider} becomes aware (whether by reason of the \textit{Demand Response Service Provider’s own knowledge} or a notification by \textit{AEMO}) that:

\begin{enumerate}
    \item the \textit{wholesale demand response unit} is not \textit{baseline compliant} during the period in which the \textit{trading interval} falls; or
    \item where two or more \textit{wholesale demand response units} have been aggregated in accordance with clause 3.8.3, any one of the \textit{wholesale demand response units} is not \textit{baseline compliant} during the period in which the \textit{trading interval} falls.
\end{enumerate}

\textbf{Note}

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

(d) A \textit{Demand Response Service Provider} must submit \textit{available capacity} of zero for a \textit{wholesale demand response unit} in respect of a \textit{trading interval} if:

\begin{enumerate}
    \item the \textit{wholesale demand response unit} is \textit{spot price exposed} in respect of the \textit{trading interval}; or
    \item where two or more \textit{wholesale demand response units} have been aggregated in accordance with clause 3.8.3, any one of the \textit{wholesale demand response units} is \textit{spot price exposed} in respect of the \textit{trading interval}.
\end{enumerate}
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) A Demand Response Service Provider must submit available capacity for a wholesale demand response unit in respect of a trading interval in accordance with notification from AEMO under clause 3.8.23(c)(6) for so long as that notice remains in place.

(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 any wholesale demand response unit of the Demand Response Service Provider that is not baseline compliant or is spot price exposed in respect of 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) Demand Response Service Providers 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.

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 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 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;

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;

(f) prices specified must be equal to or more than the market floor price and must not exceed the market price cap;

(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, 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, AEMO must 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 the available capacity the subject of the dispatch bid will, if dispatched, result in a baseline deviation:

1. that is the result of wholesale demand response activity; and

2. in respect of which there is no baseline deviation offset.
(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

(a) If a scheduled generating unit, wholesale demand response unit, scheduled network service or scheduled load fails to respond to a dispatch instruction within a tolerable time and accuracy (as determined in AEMO’s reasonable opinion), then the scheduled generating unit, wholesale demand response unit, scheduled network service or scheduled load (as the case may be):

(1) is to be declared and identified as non-conforming; and

(2) cannot be used as the basis for setting spot prices.

(b) If a semi-scheduled generating unit fails to respond to a dispatch instruction within a tolerable time and accuracy (as determined in AEMO’s reasonable opinion) in a semi-dispatch interval where the unit’s actual generation is more than the dispatch level, the unit is to be declared and identified as non-conforming and cannot be used as the basis for setting spot prices.

(c) If a scheduled generating unit, semi-scheduled generating unit, wholesale demand response unit, scheduled network service or scheduled load is identified as non-conforming under paragraphs (a) or (b):

(1) AEMO must advise the Scheduled Generator, Semi-Scheduled Generator, Demand Response Service Provider, Scheduled Network Service Provider or Market Customer that the relevant generating unit, wholesale demand response unit, scheduled network service or scheduled load is identified as non-conforming, and request and log a reason for the non-compliance with the dispatch instruction;

(2) if in AEMO’s opinion modification of plant parameters is necessary or desirable (including in the case of a wholesale demand response unit, modification of the maximum responsive component), AEMO must request the Scheduled Generator, Demand Response Service Provider, Semi-Scheduled Generator, Scheduled Network Service Provider or Market Customer to submit modified plant parameters or a modified maximum responsive component figure to satisfy AEMO that a realistic real time dispatch schedule can be carried out;

(3) should a Scheduled Generator or Semi-Scheduled Generator fail to meet the requests set out subparagraphs (1) and (2) or if AEMO is not
satisfied that the generating unit will respond to future dispatch instructions as required, AEMO must direct the generating unit’s output to follow, as far as is practicable, a specified output profile to be determined at its discretion by AEMO;

(4) should a Scheduled Network Service Provider fail to meet the requests set out in subparagraphs (1) and (2) or if AEMO is not satisfied that the scheduled network service will respond to future dispatch instructions as required, AEMO must direct the scheduled network service to follow, as far as is practicable, a specified transfer profile to be determined at its discretion by AEMO; and

(5) should a Market Customer not meet the requests set out in subparagraphs (1) and (2) within a reasonable time of the request, or if AEMO is not satisfied that the scheduled load will respond to future dispatch instructions as required, AEMO acting reasonably may invoke a default dispatch bid lodged by the relevant Market Customer or apply constraints as it deems appropriate; and

(6) should a Demand Response Service Provider fail to meet the requests set out in subparagraphs (1) and (2) or if AEMO is not satisfied that the wholesale demand response unit will respond to future dispatch instructions as required, AEMO acting reasonably may notify the Demand Response Service Provider to limit the declared available capacity of the wholesale demand response unit to a maximum figure to be determined by AEMO.

(d) Until a Scheduled Generator, Semi-Scheduled Generator, Demand Response Service Provider, Scheduled Network Service Provider or Market Customer satisfactorily responds to the requests under paragraphs (c)(1) and (2) and AEMO is satisfied that the generating unit, wholesale demand response unit, scheduled network service or scheduled load (as the case may be) will respond to future dispatch instructions as required, the generating unit, wholesale demand response unit, scheduled network service or scheduled load (as the case may be) continues to be non-conforming.

(e) If a generating unit, wholesale demand response unit, scheduled network service or scheduled load (as the case may be) continues to be non-conforming under this clause 3.8.23 after a reasonable period of time, AEMO must prepare a report setting out the details of the non-conformance and forward a copy of the report to the Scheduled Generator, Semi-Scheduled Generator, Demand Response Service Provider, Scheduled Network Service Provider or Market Customer (as the case may be) and the AER.

(f) The direction referred to in paragraphs (c)(3) and (4) must remain in place until the Scheduled Generator, Semi-Scheduled Generator or Scheduled Network Service Provider (whichever is relevant) satisfies AEMO of rectification of the cause of the non-conformance.
(f1) The notice referred to in paragraph (c)(6) must remain in place until the Demand Response Service Provider satisfies AEMO of rectification of the cause of the non-conformance.

(g) If an ancillary service generating unit or ancillary service load is enabled to provide a market ancillary service and fails to respond in the manner contemplated by the market ancillary service specification (as determined in AEMO’s reasonable opinion), then:

1. the ancillary service generating unit or ancillary service load is to be declared and identified as non-conforming;

2. AEMO must advise the relevant Market Participant that the ancillary service generating unit or ancillary service load is identified as non-conforming, and request a reason for the non-conformance. The relevant Market Participant must promptly provide a reason if requested to do so, and the reason is to be logged; and

3. AEMO may set a fixed level for the relevant ancillary service (in this clause 3.8.23 called the ‘fixed constraint’) for the ancillary service generating unit or ancillary service load and the relevant Market Participant must ensure that the ancillary service generating unit or ancillary service load complies with the fixed constraint set by AEMO.

(h) AEMO must lift the fixed constraint in respect of an ancillary service generating unit or ancillary service load when AEMO is reasonably satisfied (as a result of a test or otherwise) that the ancillary service generating unit or ancillary service load is capable of responding in the manner contemplated by the market ancillary service specification.

(i) In assessing a report of non-conformance with a dispatch instruction by a scheduled load, the AER shall have regard to whether a default dispatch bid had been lodged with AEMO and was, or could have reasonably been, applied in the circumstances applicable to that scheduled load.

3.9 Price Determination

3.9.1 Principles applicable to spot price determination

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

1. [Deleted]

2. a spot price at a regional reference node is determined by the central dispatch process at that regional reference node for each trading interval;

2A the central dispatch process must determine an ancillary service price for each market ancillary service at each regional reference node for each trading interval;
(3) spot prices determine dispatch such that a generating unit, 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).

3.10 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 having regard to the principles in paragraph (b);

(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), having regard to the principles in paragraph (b);
(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) requirements applicable to Demand Response Service Providers in determining and notifying to AEMO the available capacity of a wholesale demand response unit; and

(8) other information determined by AEMO relating to the supply of wholesale demand response under the Rules.

(b) For subparagraphs (a)(1) and (3), 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.

(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 more onerous 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 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 clause 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 is not baseline compliant, AEMO must notify the Demand Response Service Provider as soon as practicable.

(i) If a Demand Response Service Provider becomes aware that its wholesale demand response unit is not baseline compliant, 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 (c).

(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) 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 compliance

(a) A wholesale demand response unit is baseline compliant in respect of a period if:

1. the approved baseline methodology, when applied to the wholesale demand response unit at any time in the period using the approved baseline settings, produces a baseline ending at that time that satisfies the baseline methodology metrics; and

2. the period is not one in respect of which the wholesale demand response unit is not baseline compliant as determined under paragraph (b).

(b) A wholesale demand response unit is not baseline compliant in any period:

1. commencing when the approved baseline methodology, when applied to the wholesale demand response unit using the approved baseline settings, does not produce a baseline ending at that time that satisfies the baseline methodology metrics; and

2. ending when the approved baseline methodology (as may have been replaced under paragraph (e)), when applied to the wholesale demand response unit using the approved baseline settings, produces a baseline ending at that time that satisfies the baseline methodology metrics.

(c) Where a wholesale demand response unit that has been aggregated with one or more other wholesale demand response units is not baseline 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 is baseline 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 load and using historical metering data for the load:

(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), the baseline for a wholesale demand response unit must be 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 of the end of each calendar year, AEMO must prepare and publish a report on the operation of the arrangements for the provision of wholesale demand response under the Rules.

(b) A report under paragraph (a) must report on outcomes relating to the use and accuracy of baseline methodologies in respect of that year, including:

(1) information about:

(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 ineligible for the provision of wholesale demand response due to not being baseline compliant;

(4) potential improvements to the provision of wholesale demand response under the Rules which may include:

(i) changes to baseline methodology metrics as a result of the development 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, following the third anniversary of the commencement of this clause:
(1) conduct a review of the arrangements for the provision of wholesale demand response under the Rules in accordance with paragraph (b) and the Rules consultation procedures; and

(2) publish a report of its findings and recommendations.

(b) The review under paragraph (a) must consider the costs, benefits and effectiveness of the arrangements having regard to:

(1) the impact of the arrangements on the spot price;

(2) the accuracy of baseline methodologies;

(3) market and technological developments; and

(4) any other matters relating to wholesale demand response which the AEMC considers relevant.

3.12 Market Intervention by AEMO

3.12.1 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(1) to provide information requested under clause 3.13.3(k)(2), AEMO may provide:

(1) historical information relating to the operating conditions of the power system;

(2) information and data provided to AEMO under clauses 3.13.3(f)(1) and 3.13.3(f)(3) and information of the same type provided under clause 3.13.3(g);

(3) network dynamic model parameter values obtained under clauses 3.13.3(f)(2) and 3.13.3(g);

(4) model parameter values and load flow data derived from a releasable user guide;

(5) a network model of the national grid, suitable for load flow and fault studies; and

(6) other technical data as listed in Schedules 5.5.3 and 5.5.4.

(14) Despite clause 3.13.3(1), AEMO must not provide information relating to plant that is the subject of an application to connect or a connection agreement, until the earlier of:

(1) the date when a connection agreement relating to that plant is executed; or

(2) three months before the proposed start of commissioning of that plant.

(15) Subject to clause 3.13.3(16), if a Transmission Network Service Provider is responsible for provision of network limit advice relating to power system stability limits to AEMO under clause S5.1.2.3, AEMO must, on request from that Transmission Network Service Provider, provide all power system and generating system model information that is reasonably required for planning and operational purposes, if AEMO holds that information, including:

(1) functional block diagram information, including information provided to AEMO under clause S5.2.4(b)(5);

(2) generating unit, generating system and power system static and dynamic model information, including model parameters and parameter values; and

(3) information provided to AEMO in accordance with clause S5.2.4(a).
(16) If AEMO is required to provide information to a Transmission Network Service Provider under paragraph (15), this must not include:

(1) model source code provided to AEMO under clauses S5.2.4(b)(6) and S5.2.4(d), except as allowed under clause 3.13.3(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(l5) 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.
3.13.3A Statement of opportunities

ESOO information

(a) By 31 August in each year, AEMO must prepare and publish at a reasonable charge to cover the cost of production, a statement of opportunities, including at least the following information for the subsequent 10 year period:

(1) projections of aggregate MW demand and energy requirements for each region;

(2) capabilities of existing generating units and generating units for which formal commitments have been made for construction or installation;

(3) capabilities of proposed generating units for which formal commitments have not been made for construction or installation, to the extent it is reasonably practicable to do so;

(4) planned plant retirements (including expected closure years and closure dates for any generating units in the subsequent 10 year period);

(5) a summary of network capabilities and constraints based upon Transmission Annual Planning Reports; and

(6) proposed network developments for which formal commitments have been made for construction or installation;

(7) proposed network developments for which formal commitments have not been made for construction or installation to the extent it is reasonably practicable to do so;

(8) the operational assumptions made by AEMO in relation to generating units, wholesale demand response units and contracted demand side participation, including outage information and auxiliary supply information;

(9) operational and economic information about the market to assist planning by:

(i) Scheduled Generators, Semi-Scheduled Generators and Market Participants; and

(ii) potential Scheduled Generators, Semi-Scheduled Generators and Market Participants; and

(10) a reliability forecast for each region for the financial year in which the statement of opportunities is published on its website and the subsequent four financial years and an indicative reliability forecast for the remaining financial years.

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

ESOO information requests

(c) AEMO may by written notice request a jurisdictional planning body to provide AEMO with information that AEMO requires for the preparation of a statement of opportunities and the jurisdictional planning body must comply with that notice.

(d) AEMO may, by written request, require provision of information relevant to the matters specified in paragraph (a) from Registered Participants that AEMO reasonably requires for the preparation of a statement of opportunities or an update under paragraph (b). A request for information must comply with the Reliability Forecast Guidelines.

(e) A Registered Participant must comply with an information request under paragraph (d) in accordance with the Reliability Forecast Guidelines.

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

(g) A Registered Participant must ensure that the information provided in response to an information request under paragraph (d) or under paragraph

(1) not false or misleading in a material particular;

(2) in relation to information of a technical nature, is prepared in accordance with good electricity industry practice; and

(3) represents the Registered Participant’s current intentions and best estimates.

ESOO reviews

(h) AEMO must, no less than annually, prepare and publish on its website information on:

(1) the accuracy to date of the demand and supply forecasts, and any other inputs determined by AEMO to be material to reliability forecasts; and
(2) any improvements made by AEMO or other relevant parties to the forecasting process that will apply to the next statement of opportunities,

in accordance with the Reliability Forecast Guidelines (as applicable). Where availability of information makes comparisons to older statement of opportunities necessary, AEMO may include the statement of opportunities for the preceding 24 months.

(i) A jurisdictional planning body must provide assistance AEMO reasonably requests in connection with the preparation of a report under paragraph (h).

(j) In this clause:

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

3.13.4 Spot market

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

(b) The details to be published by AEMO under clause 3.13.4(a) must include the information specified in clause 3.7.2(f).

(c) Each day, in accordance with the timetable, AEMO must publish details of the outputs of the short term PASA for each 30-minute period covered.

(d) The details of the short term PASA published each day by AEMO under clause 3.13.4(c) must include the information specified in clause 3.7.3(h).

(e) Each day, in accordance with the timetable, AEMO must publish a half hourly pre-dispatch schedule for the period described in clause 3.8.20(a).

(f) Subject to clause 3.8.20(b), details of the pre-dispatch schedule to be published must include the following for each trading interval or 30-minute period (as applicable) in the period covered:

(1) forecasts of the most probable peak power system load 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 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:

\[ CO = (SOG \times BVG) + (MWE \times BVAS) + (MWDR \times BVDR) \]
where:

\[
\text{SOG} = \text{the sum of the Market Suspension Compensation Claimant’s sent out generation (in MWh) during the market suspension pricing schedule period.}
\]

\[
\text{BVG} = \text{the amount (in $/MWh) calculated in accordance with paragraph (e) below.}
\]

\[
\text{MWE} = \text{the sum of the relevant market ancillary services (in MW) which the Market Suspension Compensation Claimant’s ancillary service generating unit has been enabled to provide during the market suspension pricing schedule period.}
\]

\[
\text{BVAS} = \text{the amount (in $/MWh) calculated in accordance with paragraph (f) below.}
\]

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

\[
\text{BVDR} = \text{the amount (in $/MWh) calculated in accordance with paragraph (f1) below.}
\]

\[
\text{RE} = \text{the sum of the trading amounts determined pursuant to clauses 3.15.6 and 3.15.6A payable to the Market Suspension Compensation Claimant during the market suspension pricing schedule period,}
\]

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):

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

where:
BC_{av} = \text{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:}

BC = (FC \times E) + VOC

where:

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

E = \text{the efficiency (in GJ/MWh) for the relevant Generator.}

VOC = \text{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 NTNDP inputs. If there is no equivalent NTNDP input for “FC” or “E”, it will be deemed to be 1. If there is no equivalent NTNDP input for “VOC”, it will be deemed to be zero.

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

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

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 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, Ancillary Service Provider and Demand Response 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, Ancillary Service Provider and Demand Response Service Provider in each region, including determining the equivalent NTNDP inputs for the purpose of the calculation in paragraph (e); and

(3) AEMO’s administrative fees associated with a claim for compensation under clause 3.14.5B or the manner in which those fees are to be determined.

(i) AEMO may amend the market suspension compensation methodology from time to time in accordance with the Rules consultation procedures. Notwithstanding this paragraph (i), AEMO may make minor and administrative amendments to the market suspension compensation methodology without complying with the Rules consultation procedures.

(j) AEMO must develop a schedule of benchmark values (schedule of benchmark values) for each class of Scheduled Generator, Ancillary Service Provider and Demand Response Service Provider in each region, calculated in accordance with the formula set out in paragraphs (e), (f) and (f1)(e) and (f), and using (where appropriate) the equivalent NTNDP inputs.

(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 NTNDP.

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, 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, 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:

\[
TA = (WDRSQ \times TLF) \times (RRP - WDRRR)
\]

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 as calculated under paragraph (c);
- \(TLF\) = 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 (e).

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

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

where:

- \( \text{TA} \) = the trading amount to be determined (which will be a positive or negative dollar amount for each trading interval);
- \( \text{WDRSQ} \) = the wholesale demand response settlement quantity for the connection point for the wholesale demand response unit for the trading interval, expressed in MWh as calculated under paragraph (c);
- \( \text{TLF} \) = 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);
- \( \text{WDRRR} \) = the wholesale demand regional reimbursement rate for the regional reference node to which the connection point is assigned, expressed in dollars per MWh and determined under paragraph (e); and
- \( \text{RRP} \) = the regional reference price for the regional reference node to which the connection point is assigned, expressed in dollars per MWh.

(c) The wholesale demand response settlement quantity for a connection point for a wholesale demand response unit for a trading interval is:

1. unless subparagraph (2) applies, zero; or
2. where the wholesale demand response unit was dispatched to provide wholesale demand response in the trading interval, determined in accordance with the formula:

\[ \text{WDRSQ} = -| \times (\text{BSQ} - \text{ME}) \times \text{DLF} \]

where:

- \( \text{WDRSQ} \) = 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 for the wholesale demand response unit for the trading interval (as may be subject to temporary adjustment under clause 3.10.5(c)).

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

(f) AEMO must calculate and publish for each quarter commencing on 1 January, 1 April, 1 July and 1 October the load weighted average spot price for each regional reference node over the 12 month period ending immediately before the start of the quarter.

3.15.7 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

\[ DCP = AMP \times DQ \]

where:

\[
\begin{align*}
DCP &= \text{the amount of compensation the Directed Participant is entitled to receive;} \\
AMP &= \text{the price below which are 90\% of the spot prices or ancillary service prices (as the case may be) for the relevant service provided by Scheduled Generators, Semi-Scheduled Generators, Scheduled Network Service Providers, Demand Response Service Providers or Market Customers in the region to which the direction relates, for the 12 months immediately preceding the trading day in which the direction was issued; and} \\
DQ &= \text{is either:}
\end{align*}
\]

(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 (e).

(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).

3.20 Reliability and Emergency Reserve Trader

3.20.1 Definitions

For the purposes of this rule 3.20:

(a) estimated average VCR for a region, means the average value of customer reliability (expressed in $/MWh) determined by AEMO, having regard to the RERT guidelines and any values of customer reliability developed by the AER under rule 8.12; and

(b) references to market mean a market for the trading of energy only (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.

3.20.6 Reporting on RERT by AEMO

Post-dispatch or activation report

(a) If AEMO dispatches or activates reserves, then AEMO must, as soon as practicable, and in any event no later than 5 business days thereafter, publish and make available on its website a report that includes details of:

1. the total estimated payments made under reserve contracts; and
2. the total estimated volume (in MWh) of reserves dispatched or activated under reserve contracts,

for the relevant region. In circumstances where reserves are dispatched or activated over consecutive days, the reference to "5 business days" in this clause 3.20.6(a) is to be read as "5 business days from the final consecutive day in which the reserves were dispatched or activated".

RERT report

(b) AEMO must:

1. publish a report (RERT report) that includes the information specified in paragraphs (d) to (f); and
2. update the RERT report from time to time,

in accordance with paragraph (c).

(c) AEMO must:

1. publish the first RERT report no later than 30 business days after 31 December 2019;
2. publish any updated RERT report no later than 30 business days after then end of each calendar quarter; and
3. maintain on its website a copy of the RERT report as updated.

Information to include in RERT report – reserve contracts

(d) The RERT report must, with respect to any reserve contracts entered into by AEMO, include a detailed explanation of:

1. the estimated average amount payable by AEMO under reserve contracts for each region, broken down by payment type:
2. AEMO’s modelling, forecasts and analysis used to determine:
   (i) whether to enter into those reserve contracts; and
(ii) the amount of reserve procured under those reserve contracts, including how those amounts were determined in accordance with the methodology specified in clause 3.20.7(e)(2),

and where AEMO procured an amount of reserves greater than any shortfall identified in the relevant declaration under clause 4.8.4, an explanation of why a greater amount was procured;

(3) the periods in which the reserves are expected to be required to address the relevant low reserve or lack of reserve condition, including whether they align with any periods identified in the relevant declaration under clause 4.8.4

(4) the term of the reserve contract, including the basis on which AEMO considered the term to be reasonably necessary to address the relevant low reserve or lack of reserve condition; and

(5) the basis on which AEMO had regard to the RERT principle in clause 3.20.2(b)(3) when entering into those reserve contracts, and where the average amount payable by AEMO under reserve contracts exceeded the estimated average VCR for the relevant region, an explanation of why this had occurred.

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

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

(1) the circumstances giving rise to the need for the dispatch of scheduled reserves or activation of unscheduled reserves, including the modelling, forecasts and analysis used by AEMO to determine the need for such dispatch or activation of reserves;

(2) the basis on which it determined the latest time for that dispatch of scheduled reserves or activation of unscheduled reserves and on what basis it determined that a market response would not have avoided the need for the dispatch of scheduled reserves or the activation of unscheduled reserves;

(3) the changes in dispatch outcomes due to the dispatch of scheduled reserves or activation of unscheduled reserves;

(4) the processes implemented by AEMO to dispatch the scheduled reserves or activate the unscheduled reserves;

(5) if applicable, reasons why AEMO did not follow any or all of the processes set out in rule 4.8 either in whole or in part prior to the dispatch of scheduled reserves or the activation of unscheduled reserves;

(6) the basis upon which AEMO determined its approach to setting spot prices and ancillary service prices in accordance with clause 3.9.3.
(7) the total amount of reserves dispatched or activated, and if applicable, why such amounts were different to those previously forecast or modelled by AEMO;

(8) the periods in which reserves were dispatched or activated, and if applicable, why such periods were different to those previously forecast or modelled by AEMO;

(9) the estimated costs of load shedding (including an amount expressed in $/MWh) in a region avoided as a result of the dispatch or activation of reserves; and

(10) the impact of the dispatch of scheduled reserves or activation of unscheduled reserves on:

(i) the reliability of supply into the market; or

(ii) where applicable, power system security.

(f) Where AEMO has, in accordance with clause 3.15.9, included the amounts arising under a reserve contract in a final statement provided under clause 3.15.15, the RERT report must include a detailed explanation of:

(1) AEMO’s costs associated with exercising the RERT (including an amount expressed in $/MWh), including the payments under the reserve contract for the relevant billing periods; and

(2) a breakdown of the recovery of those costs (including an amount expressed in $/MWh) from each Market Customer, as determined by AEMO, in each region.

Information to include in RERT report – end of financial year

(g) The first updated RERT report following the end of each financial year must, in addition to the requirements of paragraphs (d) to (f) specify:

(1) each occasion during the financial year on which it secured the availability of reserves by entering into reserve contracts;

(2) each occasion during the financial year when a scheduled generating unit, wholesale demand response unit, scheduled network service or scheduled load under a scheduled reserve contract was dispatched or generating units or loads under an unscheduled reserve contract were activated; and

(3) its costs and finances in connection with its RERT activities during the financial year according to appropriate accounting standards including profit and loss, balance sheet, sources and applications of funds (including an amount expressed in $/MWh).
3.20.7 AEMO’s exercise of the RERT

(a) Notwithstanding clauses 4.8.5A and 4.8.5B, if AEMO considers the latest time for exercising the RERT by:

(1) the dispatch of scheduled reserves it has available under scheduled reserve contracts; or

(2) the activation of unscheduled reserves it has available under unscheduled reserve contracts,

has arrived, AEMO may dispatch such scheduled reserves or activate such unscheduled reserves to ensure that the reliability of supply in a region or regions meets the reliability standard or, where practicable, to maintain power system security.

(b) AEMO must follow the relevant procedures in this rule 3.20 prior to dispatching a scheduled generating unit, wholesale demand response unit, scheduled network service or scheduled load the subject of a scheduled reserve contract or activating generating units or loads the subject of an unscheduled reserve contract unless it is not reasonably practicable to do so.

(c) Subject to paragraph (b), AEMO must only dispatch a scheduled generating unit, a scheduled network service or a scheduled load the subject of a scheduled reserve contract or activate generating units or loads the subject of an unscheduled reserve contract in accordance with the procedures developed pursuant to paragraph (e).

(d) In order to effect the dispatch of a scheduled generating unit, 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]

Scheduled Generating Unit Data:

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

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

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

### Scheduled Network Service Data:

<table>
<thead>
<tr>
<th>Data</th>
<th>Units of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>installation/link name</td>
<td></td>
</tr>
<tr>
<td>Dispatchable Unit Identifier</td>
<td></td>
</tr>
<tr>
<td>connection point identifiers for terminal nodes A and B</td>
<td></td>
</tr>
<tr>
<td>maximum power transfer capability to node A</td>
<td>MW</td>
</tr>
<tr>
<td>maximum power transfer capability to node B</td>
<td>MW</td>
</tr>
<tr>
<td>maximum ramp rate of power transfer capability of the installation</td>
<td>MW/minute</td>
</tr>
</tbody>
</table>
### Ancillary Service Generating Unit and Ancillary Service Load Data:

<table>
<thead>
<tr>
<th>Data</th>
<th>Units of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ancillary service generating unit and ancillary service load information</em></td>
<td></td>
</tr>
<tr>
<td>Note: Repeat the following items for each dispatchable unit identifier where there are two or more of them in the power station/installation.</td>
<td></td>
</tr>
<tr>
<td>Unit/load name</td>
<td></td>
</tr>
<tr>
<td>Dispatchable unit identifier</td>
<td></td>
</tr>
<tr>
<td>Market ancillary service*</td>
<td></td>
</tr>
<tr>
<td>Maximum market ancillary service capacity*</td>
<td>MW</td>
</tr>
<tr>
<td>Minimum enablement level*</td>
<td>MW</td>
</tr>
<tr>
<td>Maximum enablement level*</td>
<td>MW</td>
</tr>
<tr>
<td>Maximum lower angle*</td>
<td>Degrees</td>
</tr>
<tr>
<td>Maximum upper angle*</td>
<td>Degrees</td>
</tr>
</tbody>
</table>

**Note:**

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

### Wholesale demand response unit data:

<table>
<thead>
<tr>
<th>Data</th>
<th>Units of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale demand response unit information:</td>
<td></td>
</tr>
<tr>
<td>Wholesale demand response unit name</td>
<td></td>
</tr>
<tr>
<td>Dispatchable unit identifier</td>
<td></td>
</tr>
<tr>
<td>Maximum responsive component of the wholesale demand response unit</td>
<td>MW</td>
</tr>
<tr>
<td>Maximum ramp rate</td>
<td>MW/minute</td>
</tr>
</tbody>
</table>
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(l), 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 to provide wholesale demand response consistent with dispatch bids made in accordance with Chapter 3 (dispatch instructions) in an amount up to the available capacity of the wholesale demand response unit.

(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 available capacity of the aggregated wholesale demand response unit.
(c) 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.

(d) AEMO must make, as a power system operating procedure, a procedure setting out arrangements for notifying a Demand Response Service Provider whether its wholesale demand response unit is being given a dispatch instruction 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 loading level 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 wholesale demand response by the wholesale demand response unit or a specific target time to reach the outcome specified in the dispatch instruction;

(4) the time the dispatch instruction is issued; and

(5) if the time at which the dispatch instruction is to take effect is different from the time the dispatch instruction is issued, the start time.

(b) The dispatch instruction must be provided as provided in clause 3.8.21.

4.9.8 General responsibilities of Registered Participants

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

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

(b) A Scheduled Generator must ensure that each of its scheduled generating units is at all times able to comply with the latest generation dispatch offer under Chapter 3 in respect of that generating unit.

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

(b1) A Scheduled Network Service Provider must ensure that each of its scheduled network services is at all times able to comply with the latest network dispatch offer under Chapter 3 in respect of that market network service.
Note
This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

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

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

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

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

(e) A Semi-Scheduled Generator must ensure that each of its semi-scheduled generating units is at all times able to comply with its latest generation dispatch offer.

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

(f) A Demand Response Service Provider must ensure that each of its 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.)
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 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 for 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:

\[ LS = \frac{LL}{HAPD} \times OITPDF \]

where:

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

except that if \( OITPDF/HAPD > 1 \), 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.
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 and receive NMI Standing Data and metering data.

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

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.
Important note:

This document shows changes proposed to Chapter 10 of the National Electricity Rules by the second draft National Electricity Amendment (Wholesale demand response mechanism) Rule 2020. The changes are shown in a modified version of Chapter 10 that incorporates changes made by the Rules listed below. This modified version of Chapter 10 is provided to assist in responding to the draft Rule and should not be used for any other purpose.

- Schedule 6 of the National Electricity Amendment (Five minute settlement) Rule 2017 which will come into effect on 1 July 2021
- Schedule 2 of the National Electricity Amendment (Participant compensation following market suspension) Rule 2018 which will come into effect on 1 July 2021
- Schedule 4 of the National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 which will come into effect on 6 February 2022
- Schedule 5 of the National Electricity Amendment (Five minute settlement and global settlement implementation amendments) Rule 2019 No 7 which will come into effect on 6 February 2022.
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

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

In relation to a wholesale demand response unit:

(a) the available capacity must not exceed the maximum responsive component of the wholesale demand response unit; and

(b) the available capacity must be limited or reduced to zero where required under the Rules, including under clause 3.8.2A(b) to (d) or clause 3.8.23(c)(6).
baseline

For a wholesale demand response unit:

(a) when the wholesale demand response unit is not being dispatched to provide wholesale demand response, a forecast of the amount of electrical energy flowing at the connection point for the wholesale demand response unit; and

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

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

baseline compliance testing

Testing in accordance with arrangements determined by AEMO under clause 3.10.2(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 compliant

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; and

(b) 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

For 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 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.

**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 wholesale demand response unit

In a trading interval, a wholesale demand response unit which has been dispatched 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 wholesale demand response to be provided by the wholesale demand response unit (in MW).

Market Ancillary Service Provider

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

Market Participant

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

Market Settlement and Transfer Solution Procedures

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

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

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) 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 respect of a trading interval if:

(a) the price:

   (i) 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

   (ii) 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:

   (i) 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

   (ii) 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(e).

wholesale demand response

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

 (a) reducing the consumption of electricity of the wholesale demand response unit; or

 (b) increasing the export of electricity of a wholesale demand response unit; or

 (c) reducing the consumption of electricity of the wholesale demand response unit and starting to export electricity from 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 respect of a wholesale demand response unit for which both of the following criteria are satisfied:

 (a) the activity is undertaken in response to a dispatch instruction for the purpose of achieving a baseline deviation in the period to which the dispatch instruction relates; and
(b) the activity would not be undertaken but for a dispatch instruction to provide wholesale demand response in the period by means of the wholesale demand response unit.

**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(e) 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.
11. Savings and Transitional Rules

Part ZZZ[Z] Wholesale demand response

11.[124] Rules consequential on the making of the National Electricity Amendment (Wholesale demand response mechanism) Rule 2020

11.[124].1 Definitions

(a) In this rule 11.[124]:

- **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 2.3AA.1** means clause 2.3AA.1 as in force immediately after the effective date.
- **new clause 3.8.2A(h)** means clause 3.8.2A(h) 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.

(b) Italicised terms used in this rule 11.124] have the same meaning as in new Chapter 10.

11.124.2 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).

11.124.3 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.[124].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(h).

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

11.[124].5 Extension of time for registration

The period of 15 business days specified in clause 2.9.2(b) is extended to 30 business days as follows:

(a) during the period commencing 4 months before the effective date and ending 3 months after the effective date; and

(b) in respect of an application under new clause 2.3AA.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.

11.[124].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 medium term PASA and published under clause 3.7.2(g);

(3) the procedure used by AEMO for preparation of the short term PASA and published under clause 3.7.3(i);

(4) the market suspension compensation methodology made by AEMO under clause 3.14.5A(h);

(5) the schedule of benchmark values made by AEMO under clause 3.14.5A(i);

(6) the PoLR cost procedures made by AEMO under clause 3.15.9A(1);

(7) the principles and process used by AEMO to calculate the estimated settlement amount developed by AEMO under clause 3.15.12(c);

(8) the RERT procedures;

(9) the Market Settlement and Transfer Solution Procedures; and

(10) the other documents mentioned in clause 11.103.2(a).

(b) By the effective date, the AER must review and where necessary amend and publish the following documents to take into account the Amending Rule:
(1) the guidelines maintained under clause 3.8.22 in respect of rebidding; and

(2) the Contracts and Firmness Guidelines.

c) 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.

d) Amendments made in accordance with paragraphs (a), (b) or (c) must take effect on and from the effective date.

11.[124].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.[124].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.[124].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.