

Indicative changes to the National Electricity Rules

Note:

This document shows indicative changes to the relevant parts of the National Electricity Rules (NER) proposed to be made by the *National Electricity Amendment (Primary frequency response incentive arrangements) Rule 2022*. The changes are shown in a modified version of the NER that incorporates, where relevant, final rules made by 8 September 2022 which take effect as of 8 June 2025. This modified version of parts of the NER is provided for information only and should not be used for any other purpose. The Australian Energy Market Commission does not guarantee the accuracy, reliability or completeness of this version of the NER or the mark-up.

This document includes changes to the NER to be made by the following rules:

- + National Electricity Amendment (Mandatory primary frequency response) Rule 2020 (Sch 2 commences 4 June 2023)
- + National Electricity Amendment (Fast frequency response market ancillary service) Rule 2021 (commences 9 October 2023)
- + National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 (commences 3 June 2024)

CHAPTER 3

3.11.2A AER reporting on market ancillary services markets

- (a) For the purposes of section 18C(2)(c) of the *NEL*, the *AER* must prepare and *publish* a report in respect of *market ancillary services* for each calendar quarter.
- (b) The report prepared under paragraph (a) must be *published* within 30 *business days* of the end of each calendar quarter and must contain:
 - (1) the following information in relation to each *market ancillary service* listed in clause 3.11.2(a) for the quarter:
 - (i) the total costs paid to *Ancillary Service Providers* for the provision of the *market ancillary service* for each *region*;
 - (ii) the total quantity of the *market ancillary service* that was *dispatched* by *AEMO* in each *region*;
 - (iii) the lowest, highest and average *ancillary service price* for each *region* for the *market ancillary service*; ~~and~~
 - (iv) the number and types of *Ancillary Service Providers*; ~~and~~
 - (v) the total amounts paid to a *Cost Recovery Market Participant* in accordance with clause 3.15.6AA(b).
 - (2) the *AER's* analysis of key trends and outcomes in the *markets* for *market ancillary services* during the quarter; and
 - (3) any other relevant information the *AER* considers necessary or convenient to include in the report.

3.15.6A Ancillary service transactions

Definitions

- (a0) In this clause 3.15.6A:

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

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

~~**Scheduled Participant** has the meaning given to it by subparagraph (k)(5).~~

- (h) The total amount calculated by *AEMO* under paragraph (a) for the *regulating raise service* or the *regulating lower service* in respect of each *trading interval* must be allocated by *AEMO* to each *region* in accordance with the following procedure and the information provided under clause 3.9.2A(b):
 - (1) allocate on a pro-rata basis for each *region* and for the relevant *trading interval* the proportion of the total amount calculated by *AEMO* under

paragraph (a) for the *regulating raise service* and *regulating lower service* between *global market ancillary service requirements* and *local market ancillary service requirements* to the respective marginal prices for each such service; and

(2) calculate for the relevant *trading interval* the sum of the costs of ~~acquiring~~ the *regulating raise service or the regulating lower service for each global market ancillary service requirements* for all regions, and ~~the sum of the costs of acquiring~~ the *regulating raise service or the regulating lower service for each local market ancillary service requirements* for all relevant regions, as determined under subparagraph (1); and

(3) allocate for each trading interval the costs of the global market ancillary service requirements and local market ancillary service requirements calculated in subparagraph (2) in accordance with clauses 3.15.6AA(c) and (d).

(i) When AEMO dispatches a quantity of regulating raise service or regulating lower service in addition to the quantity it determines in accordance with the dispatch algorithm, AEMO must:

(1) for the purposes of paragraphs (f) and (g), include the additional quantity in the cost of delayed services; and

(2) for the purposes of paragraphs (h) and clauses 3.15.6AA(c) and (d), exclude the additional quantity from the cost of regulation services,

taking into account the requirements in clauses 3.8.1(a) and (b) to maximise the value of spot market trading.

~~(i) In each trading interval in relation to:~~

~~(1) each Cost Recovery Market Participant which has metering to allow their individual contribution to the aggregate deviation in frequency of the power system to be assessed, an ancillary services transaction occurs, which results in a trading amount for that Cost Recovery Market Participant determined in accordance with the following formula:~~

$$~~TA = PTA \times I~~$$

~~and~~

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

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

~~TA (in \$) = the trading amount payable by the Cost Recovery Market Participant in respect of the relevant region and trading interval;~~

~~TSFCAS (in \$) = the total of all amounts calculated by AEMO under paragraph (h)(2) for the regulating raise service or the regulating lower service in respect of a trading interval;~~

~~MPF (a number) = the contribution factor last set by AEMO for the Cost Recovery Market Participant, as the case may be, under paragraph (j) for the region or regions relevant to the regulating raise service or regulating lower service; and~~

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

~~or~~

~~(2) each Cost Recovery Market Participant for whom the trading amount is not calculated in accordance with the formula in subparagraph (1), an ancillary services transaction occurs, which results in a trading amount for that Cost Recovery Market Participant determined in accordance with the following formula:~~

$$~~TA = PTA \times I~~$$

~~and~~

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

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

~~TA (in \$) = the trading amount payable by the Cost Recovery Market Participant in respect of the relevant region and trading interval;~~

~~TSFCAS (in \$) = has the meaning given in subparagraph (1);~~

~~MPF (a number) = the aggregate of the contribution factor set by AEMO under paragraph (j) for Cost Recovery Market Participants, for whom the trading amount is not calculated in accordance with the formula in subparagraph (1) for the~~

- ~~region or regions relevant to the regulating raise service or the regulating lower service;~~
- ~~AMPF (a number) = the aggregate of the MPF figures for all Cost Recovery Market Participants for the trading interval for the region or regions relevant to the regulating raise service or regulating lower service;~~
- ~~TCE (in MWh) = the adjusted consumed energy amounts for the Cost Recovery Market Participant for the trading interval in the region or regions relevant to the regulating raise service or regulating lower service; and~~
- ~~ATCE (in MWh) = the aggregate of the adjusted consumed energy amounts for all Cost Recovery Market Participants, for whom the trading amount is not calculated in accordance with the formula in subparagraph (1), for the trading interval for the region or regions relevant to that regulating raise service or regulating lower service.~~
- (j) ~~AEMO must determine for the purpose of paragraph (i):~~
- ~~(1) a contribution factor for each Cost Recovery Market Participant; and~~
 - ~~(2) notwithstanding the estimate provided in paragraph (nb), if a region has or regions have operated asynchronously during the relevant trading interval, the contribution factors relevant to the allocation of regulating raise service or regulating lower service to that region or regions;~~
- ~~in accordance with the procedure prepared under paragraph (k).~~
- (k) ~~AEMO must prepare a procedure for determining contribution factors for use in paragraph (j) and, where AEMO considers it appropriate, for use in paragraph (nb), taking into account the following principles:~~
- ~~(1) the contribution factor for a Cost Recovery Market Participant should reflect the extent to which the Cost Recovery Market Participant contributed to the need for regulation services;~~
 - ~~(2) the contribution factor for all Cost Recovery Market Participants that do not have metering to allow their individual contribution to the aggregate need for regulation services to be assessed must be equal;~~
 - ~~(3) for the purpose of paragraph (j)(2), the contribution factor determined for a group of regions for all Cost Recovery Market Participants that do not have metering to allow the individual contribution of that Cost Recovery Market Participants to the aggregate need for regulation services to be assessed, must be divided between regions in proportion~~

- ~~to the aggregate of the adjusted consumed energy amounts for the regions;~~
- ~~(4) the individual Cost Recovery Market Participant's contribution to the aggregate need for regulation services will be determined over a period of time to be determined by AEMO;~~
- ~~(5) a Registered Participant which has classified a scheduled generating unit, scheduled bidirectional unit, scheduled load or ancillary service unit (called a **Scheduled Participant**) will not be assessed as contributing to the deviation in the frequency of the power system if within a trading interval:~~
- ~~(i) subject to the provision of primary frequency response by that Scheduled Participant in accordance with the Primary Frequency Response Requirements, the Scheduled Participant achieves its dispatch target at a uniform rate;~~
 - ~~(ii) the Scheduled Participant is enabled to provide a market ancillary service and responds to a control signal from AEMO to AEMO's satisfaction; or~~
 - ~~(iii) the Scheduled Participant is not enabled to provide a market ancillary service, but responds to a need for regulation services in a way which tends to reduce the aggregate deviation;~~
- ~~(6) where contributions are aggregated for regions that are operating asynchronously during the calculation period under paragraph (i), the contribution factors should be normalised so that the total contributions from any non-synchronised region or regions is in the same proportion as the total load for that region or regions; and~~
- ~~(7) a Semi-Scheduled Generator will not be assessed as contributing to the deviation in the frequency of the power system if within a trading interval, the semi-scheduled generating unit:~~
- ~~(i) subject to the provision of primary frequency response by that semi-scheduled generating unit in accordance with the Primary Frequency Response Requirements, achieves its dispatch level at a uniform rate;~~
 - ~~(ii) is enabled to provide a market ancillary service and responds to a control signal from AEMO to AEMO's satisfaction; or~~
 - ~~(iii) is not enabled to provide a market ancillary service, but responds to a need for regulation services.~~
- ~~(l) AEMO may amend the procedure referred to in clause 3.15.6A(j) from time to time.~~
- ~~(m) AEMO must comply with the Rules consultation procedures when making or amending the procedure referred to in clause 3.15.6A(k).~~
- ~~(n) AEMO must publish, in accordance with the timetable, the historical data used in determining a factor for each Market Participant for the purposes of clauses 3.15.6A(h) and (i) in accordance with the procedure contemplated by clause 3.15.6A(k).~~

- ~~(na) Notwithstanding any other provisions of the Rules, AEMO must publish the factors determined in accordance with clause 3.15.6A(j)(1) at least 10 business days prior to the application of those factors in accordance with clauses 3.15.6A(h) and 3.15.6A(i).~~
- ~~(nb) When a region is or regions are operating asynchronously, AEMO must publish (where appropriate in accordance with the procedure developed under paragraph (k)), an estimate of the contribution factors referred to in paragraph (j)(2) to be applied for information purposes only by Cost Recovery Market Participants for the duration of the separation.~~
- ~~(o) **[Deleted]**~~
- ~~(p) When AEMO dispatches a quantity of regulating raise service or regulating lower service in addition to the quantity it determines in accordance with the dispatch algorithm, AEMO must:~~
- ~~(1) for the purposes of paragraphs (f) and (g), include the additional quantity in the cost of delayed services; and~~
 - ~~(2) for the purposes of paragraphs (h) and (i), exclude the additional quantity in the cost of regulation services,~~
- ~~taking into account the requirements in clauses 3.8.1(a) and (b) to maximise the value of spot market trading.~~

regulating lower service in that trading interval; and

RCR (in MW) ≡ the requirement for corrective response determined by AEMO under subparagraph (g)(6)(i).

(2) each eligible unit which does not have appropriate metering, an ancillary services transaction occurs, which results in a trading amount for the relevant Cost Recovery Market Participant determined in accordance with the following formula:

$$TA = RCF \times \frac{P_{regulation}}{12} \times RCR \times \frac{TE}{ATE}$$

for each trading interval for each global market ancillary service requirement and each local market ancillary service requirement, where:

TA (in \$) ≡ the trading amount payable or receivable by the Cost Recovery Market Participant;

RCF (a number) ≡ the residual contribution factor for eligible units that do not have appropriate metering, for the relevant trading interval and relevant to the global market ancillary service requirement or local market ancillary service requirement for the regulating raise service or regulating lower service, having regard to the principle in paragraph (f)(4);

P_{regulation} (in \$ per MW per hour) ≡ has the meaning given in subparagraph (1);

RCR (in MW) ≡ has the meaning given in subparagraph (1).

TE (in MWh) ≡ the sum of the absolute value of any adjusted gross energy amount, for the Cost Recovery Market Participant for an eligible unit that does not have appropriate metering, for the trading interval in the region or regions relevant to the global market ancillary service requirement or local market

ancillary service requirement for the regulating raise service or regulating lower service; and

ATE (in MWh) ≡ the aggregate of the absolute value of adjusted gross energy amounts for all Cost Recovery Market Participants, for eligible units that do not have appropriate metering, for the trading interval for the region or regions relevant to the global market ancillary service requirement or local market ancillary service requirement for the regulating raise service or regulating lower service.

Cost recovery for regulation services used

(c) In each trading interval in relation to:

- (1) each eligible unit which has appropriate metering, an ancillary services transaction occurs, which results in a trading amount for the relevant Cost Recovery Market Participant determined in accordance with the following formula:

$$TA = TSFCAS \times U \times NCF$$

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

TA (in \$) ≡ the trading amount payable by the Cost Recovery Market Participant;

TSFCAS (in \$) ≡ each amount calculated by AEMO under clause 3.15.6A(h)(2) for the regulating raise service or the regulating lower service in respect of a trading interval;

U (a number) ≡ the usage determined by AEMO under subparagraph (g)(6)(ii); and

NCF (a number) ≡ the negative contribution factor for the eligible unit determined by AEMO under paragraph (e) for the relevant trading interval and the region or regions relevant to the global market ancillary service requirement or local market ancillary service requirement for the

regulating raise service or regulating lower service.

- (2) each eligible unit for which the trading amount is not calculated in accordance with the formula in subparagraph (1), an ancillary services transaction occurs, which results in a trading amount for the relevant Cost Recovery Market Participant determined in accordance with the following formula:

$$TA = TSFCAS \times U \times NRCF \times \frac{TE}{ATE}$$

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

<u>TA (in \$)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (1);</u>
<u>TSFCAS (in \$)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (1);</u>
<u>U (a number)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (1);</u>
<u>NRCF (a number)</u>	<u>≡</u>	<u>the negative residual contribution factor for all eligible units that do not have appropriate metering, for the relevant trading interval and the region or regions relevant to the global market ancillary service requirement or local market ancillary service requirement for the regulating raise service or regulating lower service, having regard to the principle in paragraph (f)(4);</u>
<u>TE (in MWh)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (b)(2); and</u>
<u>ATE (in MWh)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (b)(2).</u>

Cost recovery for regulation services not used

- (d) In each trading interval in relation to:

- (1) each eligible unit which has appropriate metering, an ancillary services transaction occurs, which results in a trading amount for the relevant

Cost Recovery Market Participant determined in accordance with the following formula:

$$TA = TSFCAS \times (1 - U) \times DCF$$

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

<u>TA (in \$)</u>	<u>≡</u>	<u>the trading amount payable by the Cost Recovery Market Participant;</u>
<u>TSFCAS (in \$)</u>	<u>≡</u>	<u>has the meaning given in paragraph (c)(1);</u>
<u>U (a number)</u>	<u>≡</u>	<u>has the meaning given in paragraph (c)(1); and</u>
<u>DCF (a number)</u>	<u>≡</u>	<u>the default contribution factor for the eligible unit determined by AEMO under subparagraph (g)(4) for the relevant trading interval and the region or regions relevant to the global market ancillary service requirement or local market ancillary service requirement for the regulating raise service or regulating lower service.</u>

(2) each eligible unit for which the trading amount is not calculated in accordance with the formula in subparagraph (1), an ancillary services transaction occurs, which results in a trading amount for the relevant Cost Recovery Market Participant determined in accordance with the following formula:

$$TA = TSFCAS \times (1 - U) \times DRCF \times \frac{TE}{ATE}$$

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

<u>TA (in \$)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (1);</u>
<u>TSFCAS (in \$)</u>	<u>≡</u>	<u>has the meaning given in subparagraph (1);</u>

<u>U (a number)</u>	≡	<u>has the meaning given in subparagraph (1);</u>
<u>DRCF (a number)</u>	≡	<u>the default residual contribution factor for the eligible unit determined by AEMO under subparagraph (g)(4)(ii) for the relevant <i>trading interval</i> and the <i>region</i> or <i>regions</i> relevant to the <i>global market ancillary service requirement</i> or <i>local market ancillary service requirement</i> for the <i>regulating raise service</i> or <i>regulating lower service</i>;</u>
<u>TE (in MWh)</u>	≡	<u>has the meaning given in subparagraph (b)(2); and</u>
<u>ATE (in MWh)</u>	≡	<u>has the meaning given in subparagraph (b)(2).</u>

Frequency contribution factors procedure

- (e) AEMO must determine, in accordance with the frequency contribution factors procedure, a contribution factor (which may be positive or negative) for each eligible unit for the purposes of clauses 3.15.6A(i) and 3.15.6AA(a) and (b).
- (f) AEMO must develop, *publish* on its website, and may amend from time to time, in accordance with the *Rules consultation procedures*, the frequency contribution factors procedure for determining contribution factors for use in paragraph (e), taking into account the following principles:
- (1) a negative contribution factor for an eligible unit should reflect the extent to which the unit contributed to increasing the deviation in *frequency* of the *power system*;
 - (2) a positive contribution factor for an eligible unit should reflect the extent to which the unit contributed to reducing the deviation in *frequency* of the *power system*;
 - (3) a contribution factor is a number between -1 and 1;
 - (4) the residual contribution factor for all eligible units that do not have *appropriate metering* must be equal across and within all classes of *Cost Recovery Market Participants*;
 - (5) separate contribution factors must be determined with respect to the contribution to the need to raise or lower the *frequency* of the *power system*;
 - (6) a contribution factor for each eligible unit must be determined by AEMO for every *trading interval* unless in AEMO's reasonable opinion it is impractical to do so, in which case AEMO must determine a default contribution factor;
 - (7) a contribution factor for each eligible unit applies for the *region* or *regions* relevant to the *global market ancillary service requirement* or

local market ancillary service requirement for the regulating raise service or regulating lower service;

- (8) a default contribution factor for an eligible unit must be determined based on historical data for that eligible unit unless in AEMO's reasonable opinion it is impractical to do so; and
 - (9) a default contribution factor must only be used in paragraph (b) to determine the trading amount payable by a Cost Recovery Market Participant.
- (g) AEMO must include in the frequency contribution factors procedure:
- (1) the criteria for determining whether an eligible unit has appropriate metering;
 - (2) a formula that AEMO will use in each trading interval to calculate the measure of the need to raise or lower the frequency of the power system, in order to determine a contribution factor under paragraph (e), which:
 - (i) must be based on the frequency of the power system in the relevant region or regions;
 - (ii) must contain sufficient detail so that a Cost Recovery Market Participant can use it to estimate the need to raise or lower the frequency of the power system during each trading interval; and
 - (iii) may include parameters to be determined by AEMO from time to time to be applied to the different elements of the formula;
 - (3) the methodology AEMO will use to determine a contribution factor to apply to an eligible unit which reflects the relevant Cost Recovery Market Participant's contribution to the deviation in frequency of the power system;
 - (4) the methodology AEMO will use to determine a default contribution factor to apply to an eligible unit:
 - (i) under paragraph (b) to determine the trading amount payable by a Cost Recovery Market Participant or paragraph (c), where it is impractical for AEMO to determine a contribution factor for that unit in a trading interval based on the data measured for that trading interval under subparagraph (f)(8);
 - (ii) for the allocation of costs of any enabled regulating raise service or enabled regulating lower service that was not used by AEMO in that trading interval under paragraph (d); and
 - (5) the data AEMO will use to calculate the contribution factor for an eligible unit with appropriate metering, which must include the unit's active power output or consumption and a measure of frequency, and may include:
 - (i) the frequency measured at the connection point for the eligible unit; and
 - (ii) any other data AEMO considers relevant;
 - (6) the methodology AEMO will use to determine:

(i) the requirement for corrective response under subparagraph (b)(1), which is a measure of the total volume in MW that contributed to reducing the deviation in frequency of the power system. This methodology may include parameters to be determined by AEMO from time to time to be applied in determining the requirement for corrective response; and

(ii) the usage under subparagraph (c)(1), which is the proportion of enabled regulating raise service or regulating lower service that contributed to reducing the deviation in frequency of the power system,

relevant to the global market ancillary service requirement or local market ancillary service requirement for the regulating raise service or regulating lower service; and

(7) the methodology AEMO will use to determine a reference trajectory in each trading interval for each eligible unit which has appropriate metering, which must be informed by:

(i) the dispatch target for a scheduled generating unit, scheduled load, scheduled bidirectional unit and ancillary service unit at the end of the previous trading interval and at the end of the relevant trading interval;

(ii) the dispatch level for a semi-scheduled generating unit at the end of the previous trading interval and at the end of the relevant trading interval; and

(iii) where practical, any information provided by a Registered Participant for a non-scheduled generating unit or non-scheduled bidirectional unit that relates to its expected trajectory over the trading interval,

and may be informed by any other factors AEMO considers relevant.

(h) AEMO may make minor or administrative amendments to the frequency contribution factors procedure without complying with the Rules consultation procedures.

Publication requirements

(i) AEMO must publish any data that will be used to determine default contribution factors under subparagraph (g)(4) at least 5 days before the billing period in which the contribution factor will apply.

(j) AEMO must publish any parameters it determines under paragraph (g)(2) and (g)(6) at least 5 business days prior to applying those parameters.

(k) AEMO must publish, as soon as practicable after the relevant trading interval:

(1) the contribution factors determined in accordance with paragraph (e);

(2) the data calculated from applying the formula referred to in paragraph (g)(2);

(3) the requirement for corrective response determined under subparagraph (g)(6)(i); and

- (4) the usage determined under subparagraph (g)(6)(ii).
- (1) AEMO must *publish* the data used to determine the contribution factors for the *transactions* referred to in paragraphs (b), (c) and (d) including the measured data for each eligible unit which has appropriate metering, in accordance with the *timetable*.

CHAPTER 4

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

- (c) *AEMO* must use reasonable endeavours to arrange to be available and allocated to *regulating duty* such *generating plant* as *AEMO* considers appropriate for automatic control or direction 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);
- (c1) subject to clause 4.4.2A(c), each *Scheduled Generator* and *Semi-Scheduled Generator* that has received a *dispatch instruction* in accordance with clause 4.9.2 to generate a volume greater than zero MW must operate its *generating system* in accordance with the *Primary Frequency Response Requirements* as applicable to that *generating system*;

Note

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

- (c) *AEMO* must use reasonable endeavours to ensure that adequate *facilities* are available and under the direction of *AEMO* to allow the managed recovery of the *satisfactory operating state* of the *power system*.

4.8.16 AEMO reporting on frequency performance

- (a) Each week *AEMO* must prepare and publish on its website, a report (**weekly report**) in respect of *frequency* performance outcomes for the previous week, which includes:
 - (1) an indicative comparison of *power system frequency* performance against the following measures specified in the *frequency operating standard*:
 - (i) the proportion of time that the *frequency* of the *power system* was inside of the *normal operating frequency band*;
 - (ii) the recovery times to return to the *normal operating frequency band* where *frequency* left the *normal operating frequency band*; and

- (iii) the time error requirements;
 - (2) the *regulation services* that were *dispatched* by *AEMO* in each *region*; and
 - (3) measures indicating the proportion of *dispatched regulation services* that were used by *AEMO*.
- (b) Within 30 *business days* of the end of each calendar quarter, *AEMO* must prepare and publish on its website, a report (**quarterly report**) in respect of *power system frequency* during the quarter, which includes:
 - (1) where applicable, *AEMO*'s assessment of the impact of any actions taken by *AEMO* to improve *power system frequency* control outcomes;
 - (1A) *AEMO's assessment of the level of aggregate frequency responsiveness in the power system provided by frequency responsive plant in each region;*
 - (1B) the basis on which *AEMO* determined the quantity and type of any *market ancillary service* or combination of *market ancillary services*, procured by *AEMO* in order to improve *power system frequency* control outcomes, including, to the extent that is relevant, the relationship between the volume of the *market ancillary services* procured and the levels of *inertia* in the *power system*;
 - (2) *AEMO*'s assessment of the achievement of the *frequency operating standard*, including (where applicable) an analysis of how and why the *frequency operating standard* was not met;
 - (3) the rate of change of *power system frequency* associated with the largest *frequency* deviation, and any other significant *frequency* deviation, in each month;
 - (4) *AGC* estimates of the additional electrical power (in MW) required to be produced or consumed to correct a given *power system frequency* deviation (known as the 'area control error'); and
 - (5) a list of any reviewable operating incidents that affected *power system frequency*.
- (c) Where necessary or convenient, *AEMO* may present the information in the weekly reports and quarterly reports separately for the *Tasmania region* and aggregated for the remaining *regions*.
- (d) *AEMO* must publish on its website, the methodology and assumptions used by *AEMO* in preparing each weekly report and quarterly report.

10. Glossary

trading amount

The positive or negative dollar amount resulting from a *transaction*, determined pursuant to clauses 3.15.6, 3.15.6A, [3.15.6AA](#) or 3.15.11.

11. Savings and Transitional Rules

Clause 11.122.2 Interim Primary Frequency Response Requirements

After clause 11.122.2(d), insert the following note:

Note

The obligations on *AEMO* to publish the Primary Frequency Response

Requirements under clause 4.4.2A(a) are now subject to clause 11.152.2(b).

After Part ZZZZZA, insert:

Part ZZZZZB Primary frequency response incentive arrangements

11.152 Rules consequential on the making of the National Electricity Amendment (Primary frequency response incentive arrangements) Rule 2022

11.152.1 Definitions

For the purposes of this rule 11.152:

Amending Rule means the National Electricity Amendment (Primary frequency response incentive arrangements) Rule 2022.

Commencement date means 8 June 2025.

new clause 3.15.6AA(f) means clause 3.15.6AA(f) of the *Rules* as in force on and from the Commencement date.

old clause 3.15.6A(k) means clause 3.15.6A(k) of the *Rules* as in force immediately before the Commencement date.

11.152.2 Primary Frequency Response Requirements

- (a) Despite clause 11.122.2(d), the interim Primary Frequency Response Requirements developed and published by *AEMO* in accordance with clause 11.122.2(a) will continue to apply until the *Primary Frequency Response Requirements* are made and published under paragraph (b).
- (b) *AEMO* must develop and publish the *Primary Frequency Response Requirements* under clause 4.4.2A(a) by 8 May 2023.

11.[xxx].3 Frequency Contribution Factors Procedure

- (a) *AEMO* must develop and publish the first frequency contribution factors procedure required under new clause 3.15.6AA(f) by 8 June 2023.

- (b) On and from the Commencement date the frequency contribution factors procedure developed and published under new clause 3.15.6AA(f) will replace the procedure prepared and published by *AEMO* under old clause 3.15.6A(k) in its entirety, and that procedure will no longer apply.