FCESS COST REVIEW - EXPOSURE DRAFT

PROPOSED WHOLESALE ELECTRICITY MARKET (WEM) AMENDING RULES

Explanatory Note for the Exposure Draft of the Wholesale Electricity Market Amendment (FCESS Cost Review) Rules 2024.

Following the completion of the initial investigation of the FCESS costs in the Wholesale Electricity Market, this Exposure Draft contains proposed Amending Rules to:

- require Market Participants to specify reasonable Start Decision Cutoff times in their Real-Time Market Submissions;
- clarify that Metered Schedules for Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities are Public Information;
- implement changes to the market power mitigation framework to improve its effectiveness and improve market efficiency, by ensuring Market Participants' offers reflect their efficient variable costs;
- make the current In-Service Capacity Only Scenario (which excludes all capacity offered as Available Capacity) the Reference Scenario;
- rename the current Reference Scenario (which includes any Available Capacity for which the relevant Start Decision Cutoff has not yet passed) the Available Capacity Scenario;
- impose an obligation on Market Participants who offer capacity as Available Capacity to monitor Pre-Dispatch Schedules and Dispatch Schedules for shortfalls in energy, Contingency Reserve Raise or Regulation Raise, and move capacity from Available Capacity to In-Service Capacity as required to alleviate any shortfalls;
- require Market Participants with Facilities accredited for RoCoF Control Service to offer their capacity into the Real-Time Market;
- introduce more efficient tiebreak methods for FCESS and energy;
- remove the payment of FCESS Uplift Payments for the provision of RoCoF Control Service;
- provide an alternative method of compensation (through Energy Uplift Payments) for Facilities constrained on by AEMO to provide RoCoF Control Service only;
- provide for Energy Uplift Payments for Facilities that are constrained on by AEMO during a period covered by a Low Reserve Condition Declaration;
- clarify the requirements for the high and low forecast Scenarios in terms of the treatment of Available Capacity;
- clarify that Energy Uplift Payments are based on In-Service Capacity Price-Quantity Pairs in Real-Time Market Offers only;
- modify the FCESS Uplift Payment calculations to avoid over-compensating FCESS providers when their enablement losses are partially or completely covered by other Real-Time Market payments;
- implement minor error corrections and enhancements across the WEM Rules.

This exposure draft is divided into two parts, based on the expected commencement dates of the Amending Rules. The draft rules presented in this Exposure Draft are pending legal review. Following stakeholder consultation and legal review, the proposed Amending Rules in this Exposure Draft, as amended as the result of this consultation, will be submitted to the Minister for Energy for making and gazettal.

This Exposure Draft notes clauses which are intended to be nominated as a civil penalty provision in Schedule 1 of the Electricity Industry (Wholesale Electricity Market) Regulations 2004. Feedback is welcome on these in submissions.

Energy Policy WA is seeking stakeholder feedback on this Exposure Draft by 5:00 PM (AWST) on 9 September 2024. Feedback can be sent to energymarkets@demirs.wa.gov.au.

Mark-up Colour guide:

Text in black	Rules that are in force
Text in green	Amending Rules that have been made and will commence on a specified date
Text in blue	Amending Rules that have been made but no commencement date has been specified
Text in red - underlined ~~and strikethrough~~	New amendments proposed under these Amending Rules

Part 1: Amending Rules to commence on gazettal

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7.4. Real-Time Market Submissions

Real-Time Market Submissions – Obligations and meaning

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Explanatory Note:

Clause 7.4.12 is amended to require Market Participants to specify reasonable Start Decision Cutoff times in their Real-Time Market Submissions. The maximum notice period allows for:

- 10 minutes to respond to the relevant trigger event (e.g. a Market Schedule or AEMO direction);
- 5 minutes to update Real-Time Market Submissions before Gate Closure; and
- enough time to carry out the requisite physical activities to make the capacity ready for dispatch, which will depend on the expected state of the Facility at the time the activities would commence.

It is assumed that the Real-Time Market Submission updates and the required physical activities can be carried out in parallel.

It is intended that clause 7.4.12 will be nominated as a civil penalty provision in Schedule 1 of the *Electricity Industry (Wholesale Electricity Market) Regulations 2004*.

7.4.12. ~~[Blank]~~A Market Participant must not specify a Start Decision Cutoff for a quantity of Available Capacity in a Real-Time Market Submission for a Facility in a Dispatch Interval that exceeds the sum of:

(a) 10 minutes; and

(b) the greater of:

i. the sum of:

1. the number of minutes between Gate Closure for the Dispatch Interval and the start of the Dispatch Interval; and

2. 5 minutes; and

ii. the minimum time needed to carry out the requisite physical activities to make the capacity ready for dispatch in the Dispatch Interval, given the Market Participant's reasonable expectation of the state of the Facility at the time those activities would commence.

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9.5. The Metered Schedule

9.5.1. For each Trading Interval AEMO must determine the Metered Schedule in accordance with clause 9.5.2 for each:

(a) Scheduled Facility;

(b) Semi–Scheduled Facility;

(c) Non-Scheduled Facility; and

(d) Non-Dispatchable Load.

9.5.2. Subject to clauses 2.30B.10 and 2.30B.11, the Metered Schedule for a Trading Interval for each:

(a) Scheduled Facility;

(b) Semi-Scheduled Facility;

(c) Non-Scheduled Facility; and

(d) Non-Dispatchable Load, excluding Non-Dispatchable Loads referred to in clause 9.5.3,

is the net quantity of energy generated and sent out into the relevant Network or consumed by the Facility during that Trading Interval, Loss Factor adjusted to the Reference Node, and determined from Meter Data Submissions received by AEMO in accordance with section 8.4 or SCADA data maintained by AEMO in accordance with clause 7.13.1E(aA) where interval meter data is not available.

Explanatory Note:

New clause 9.5.2A is inserted to clarify that the Metered Schedules of Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities are Public Information. The clarification is consistent with the publication of the SCADA versions of these values on the WEM Website, and is included to facilitate transparency around Energy Uplift Payments, whose inputs include Metered Schedules.

9.5.2A. A Metered Schedule of a Scheduled Facility, Semi-Scheduled Facility or Non-Scheduled Facility is Public Information.

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Part 2: Amending Rules to commence at 8:00 AM on 20 November 2024

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2.16A. General Trading Obligations

Explanatory Note

The proposed changes in this section revise some of the Market Power Mitigation Strategy changes made in 2023 to ensure offers reflect costs.

Market Participants may have market power or transitory market power and can potentially be unaware of their potential to influence market prices with their offer. It is proposed to align the rules with ERA's Offer Construction Guideline – i.e. that Market Participants' offers must not exceed the sum of all of their efficient variable costs. The proposed changes will remove the need to demonstrate that a Market Participant had market power when formulating its offers. This removes an element of uncertainty from preparing market offers and seeks to limit the practice of withdrawing capacity from the market by pricing at the market cap.

The intention is not to reverse the policy decision to allow Market Participants to bid their efficient variable costs, including the costs incurred under long-term take-or-pay fuel contracts. This will continue to be allowed under the Offer Construction Guidelines.

2.16A.1. ~~A Market Participant must offer prices in each of its STEM Submissions and Real-Time Market Submissions that reflect only the costs that a Market Participant without market power would include in forming profit-maximising price offers in a STEM Submission or Real-Time Market Submission.~~[Blank]

2.16A.2. ~~The Economic Regulation Authority must not determine that a Market Participant has engaged in conduct prohibited by clause 2.16A.1 unless the Economic Regulation Authority has first determined that the Market Participant had market power at the time of offering the relevant prices in its STEM Submission or Real-Time Market Submission.~~[Blank]

2.16A.3. A Market Participant must not engage in conduct in the STEM or Real-Time Market that:

(a) is false, misleading or deceptive, or likely to mislead or deceive;

(b) is fraudulent, dishonest or in bad faith; or

(c) has the purpose, or has or is likely to have the effect, of distorting or manipulating prices in the Wholesale Electricity Market.

2.16A.4. In determining whether a Market Participant has engaged in conduct prohibited by clause 2.16A.3, the Economic Regulation Authority may take into account:

(a) historical STEM Submissions or Real-Time Market Submissions made by the Market Participant with effect on or after the New WEM Commencement Day, including changes to STEM Submissions and Real-Time Market Submissions in which there is, or there appears to be, a pattern of behaviour that may indicate such conduct was engaged in;

(b) the timeliness and accuracy of notification of Forced Outages by the Market Participant;

(c) information regarding whether the Market Participant did not comply with a Dispatch Instruction in respect of its Facility and the reasons for the non-compliance; and

(d) any other information the Economic Regulation Authority considers relevant to its determination.

2.16A.5. A STEM Submission or a Real-Time Market Submission is not made in bad faith under clause 2.16A.3(b) if, at the time it is submitted, the Market Participant had a genuine intention to honour the terms of that STEM Submission or Real-Time Market Submission if the material conditions and circumstances upon which the STEM Submission or Real-Time Market Submission was based remained unchanged until the relevant Trading Interval.

2.16A.6. A Market Participant may be taken to have made a STEM Submission or a Real-Time Market Submission in bad faith notwithstanding that the intention of the Market Participant is ascertainable only by inference from:

(a) the conduct of the Market Participant;

(b) the conduct of any other person; or

(c) the relevant circumstances.

2.16A.7. If a Market Participant does not have reasonable grounds for a price, quantity, or Ramp Rate Limit, as applicable, it has included in a Real-Time Market Submission at the time it submits that Real-Time Market Submission, then the Market Participant is, for the purposes of clause 2.16A.3(a), taken to have known that the Real-Time Market Submission was likely to lead to another Rule Participant being misled or deceived as to the existence or non-existence of a material fact relating to the Real-Time Market.

2.16A.8. For the purposes of clause 2.16A.7, a Market Participant must adduce evidence that it had reasonable grounds for including a price, quantity or Ramp Rate Limit, as applicable, in the Real-Time Market Submission. To avoid doubt, the effect of this clause is to place an evidentiary burden on a Market Participant, and this clause does not have the effect that, merely because such evidence is adduced, the Market Participant who submitted the Real-Time Market Submission is taken to have had reasonable grounds for including a price, quantity or Ramp Rate Limit, as applicable.

2.16A.9. Clause 2.16A.7 does not imply that merely because a Market Participant had reasonable grounds for making the representation or the conduct referred to in Chapter 7, in respect of the Real-Time Market, and in particular putting the price, quantity or Ramp Rate Limit, as applicable, in a Real-Time Market Submission submitted by the Market Participant, that such representation or conduct is not misleading.

2.16B. Portfolio Assessment

Explanatory Note

The current principles in the WEM Rules, including the definition of associated entities as per the *Corporations Act 2001 (Cwlth)* did not achieve the desired outcome indicated in the Market Power Mitigation Strategy: Information Paper. This is largely because the use of the Corporations Act applies very specific meaning to the term associated entities in the context of corporate structures. In the context of the energy market, common or shared trading desks, which may not be reflected in a corporate structure, present an opportunity for the operator of a trading desk to benefit from advance knowledge of how a facility traded through it formulates their offers.

Amending the principles to consider a more general definition or 'wholly or partly owned' will allow for a broader application of portfolio assessment.

The amendment to reduce the frequency of portfolio assessment to only occur annually or by exception (new facilities or change in registration or ownership) will alleviate the administrative burden on both Market Participants and the ERA in meeting this obligation. As registration and ownership arrangements do not change regularly, there is minimal risk in reducing the regularity of this assessment, the introduction of an exception clause also places onus on Market Participants to update the ERA.

An additional clause to place a rule requirement on Market Participants to provide declarations within a specified timeframe has also been included. Currently, this requirement only exists in the WEM Procedure and as a result there is no repercussion for failure or late submission. However, it does impact the ERA's ability to complete the dependent rule obligations in a timely manner.

2.16B.1. The Economic Regulation Authority must, in accordance with the WEM Procedure referred to in clause 2.16D.15:

(a) by ~~1 April and~~ 1 October each year, identify each Portfolio operating in the Wholesale Electricity Market by applying the following principles:

i. each Scheduled Facility, Semi-Scheduled Facility and Non-Scheduled Facility must be allocated to ~~one, but not more than one,~~ a Portfolio;

ii. ~~Registered Facilities which are owned by or registered to the same Market Participant must be allocated to the same Portfolio;~~[Blank]

iii. ~~Registered Facilities which are owned by or registered to Market Participants that are associated entities (as that expression is defined in the Corporations Act) must be allocated to the same Portfolio;~~[Blank]

~~iv. Registered Facilities which are registered to, or owned or controlled by, a Market Participant or other entity, and Registered Facilities that are registered to, or owned or controlled by, an associated entity of that Market Participant or other entity (as those expressions are defined in the Corporations Act) must be allocated to the same Portfolio; and~~

iv. Registered Facilities which are registered to a Market Participant, or wholly or partly owned by a Market Participant, or wholly or partly controlled by a Market Participant or another entity, including by

way of a shared trading desk, must be allocated to the same Portfolio; and

v. ~~without limiting clause 2.16B.1(a)(i),~~ a Registered Facility must not be allocated to a Portfolio containing another Registered Facility unless it is required by ~~clauses 2.16B.1(a)(ii), 2.16B.1(a)(iii) or~~ clause 2.16B.1(a)(iv); ~~and~~

(b) within 10 Business Days of identifying each Portfolio under clause 2.16B.1(a), publish a list on its website specifying the name of each Registered Facility within each identified Portfolio~~.~~; and

(c) within 20 Business Days of a declaration provided under 2.16B.4(b) or 2.16B.4(c), update the published list.

2.16B.2. Within ~~10~~ 20 Business Days after the Settlement Date determined under clause 9.3.1(d) for the Trading Week containing the last Trading Day ~~of the end~~ of each Rolling Test Window, the Economic Regulation Authority must, in accordance with the WEM Procedure referred to in clause 2.16D.15, identify:

(a) each Constraint Equation for a Network Constraint that bound during one or more Dispatch Intervals in the Rolling Test Window; and

(b) each Constrained Portfolio for each Constraint Equation identified under clause 2.16B.2(a).

2.16B.3. The Economic Regulation Authority may, in carrying out its obligations under clause 2.16B.2, specify a Registered Facility within more than one Constrained Portfolio.

2.16B.4. Market Participants must provide declarations to the Economic Regulation Authority, in accordance with the WEM Procedure referred to in clause 2.16D.15, by:

(a) by 1 August of each year; or

(b) within 30 Business Days of registering a new Scheduled Facility, Semi-Scheduled Facility or Non-Scheduled Facility; or

(c) within 30 Business Days of a change in registration or ownership of a Scheduled Facility, Semi-Scheduled Facility or Non-Scheduled Facility currently registered in the Wholesale Electricity Market.

2.16C. ~~Market Power Test~~Materiality Test

Explanatory Note

The 'Market Power Test' defined in section 2.16C overstates the market effect of Facilities with low-capacity factors such as peaking generation plant and Non-Scheduled Facilities. The term market power test is not a real assessment of market power.

The name 'Market Power Test' could lead a Market Participant to assume they do not have market power if they are not captured within a Material Portfolio or Material Constrained Portfolio. The threshold test is renamed a materiality test to provide clarity on the distinction.

2.16C.1. The Economic Regulation Authority must, in accordance with the WEM Procedure referred to in clause 2.16D.15:

(a) within 10 Business Days of identifying each Portfolio p under clause 2.16B.1(a), calculate Portfolio p's percentage share of the total maximum sent out capacity of all Registered Facilities assigned to a Portfolio as follows:

$$\text{MSOC\_Share}(p) = \frac{\sum_{f \in p} \text{MSOC}(f)}{\sum_{f \in \text{Facilities}} \text{MSOC}(f)} \times 100$$

where:

i. MSOC(f) is the maximum sent out capacity specified for Registered Facility f in Appendix 1(b)(v), Appendix 1(c)(v) or Appendix 1(d)(v) as applicable;

ii. f∈p denotes all Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities f assigned to Portfolio p; and

iii. f∈Facilities denotes all Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities assigned to a Portfolio identified under clause 2.16B.1(a);

(b) identify each Portfolio where the value determined under clause 2.16C.1(a) is equal to or greater than 10% ("**Material Portfolio**"); and

(c) within 10 Business Days of identifying each Material Portfolio under clause 2.16C.1(b):

i. publish a list specifying the name of each Registered Facility within each identified Portfolio and the results of the calculations carried out under clause 2.16C.1(a) on its website; and

ii. notify each Market Participant that has a Registered Facility assigned to a Material Portfolio identified under clause 2.16C.1(b).

2.16C.1A. Each set of Material Portfolios identified by the Economic Regulation Authority under clause 2.16C.1(b) replaces the previous set of Material Portfolios identified by the Economic Regulation Authority under clause 2.16C.1(b) (if any) with effect from the time that the Economic Regulation Authority publishes the results of the relevant calculations under clause 2.16C.1(c)(i).

2.16C.2. The Economic Regulation Authority must, not more than 20 Business Days after the Settlement Date determined under clause 9.3.1(d) for the Trading Week containing the last Trading Day ~~following the end~~ of a Rolling Test Window, in accordance with the WEM Procedure referred to in clause 2.16D.15:

(a) calculate for that Rolling Test Window and for any relevant Fixed Assessment Period, as a percentage, the Constrained Uplift Payment Ratio for each Constrained Portfolio identified under clause 2.16B.2(b) as follows:

$$\text{Constrained Uplift Payment Ratio} = \frac{\text{CP\_UP}}{\text{NC}} \times 100$$

where:

i. CP_UP is the number of Dispatch Intervals in the Rolling Test Window or Fixed Assessment Period (as applicable) in which:

1. the Constraint Equation relevant to the identification of the Constrained Portfolio identified under clause 2.16B.2(a) bound; and

2. a Registered Facility in the Constrained Portfolio received an Energy Uplift Payment; and

ii. NC is the total number of Dispatch Intervals in the Rolling Test Window or Fixed Assessment Period (as applicable) in which the Constraint Equation relevant to the identification of the Constrained Portfolio bound;

(b) identify each Constrained Portfolio with a Constrained Uplift Payment Ratio equal to or greater than 10% as calculated under clause 2.16C.2(a) ("**Material Constrained Portfolio**");

(c) publish the results of the calculations carried out under clauses 2.16C.2(a) and 2.16C.2(b) on its website; and

(d) notify each Market Participant that has a Registered Facility assigned to a Material Constrained Portfolio identified under clause 2.16.2C(b).

2.16C.2A. Each set of Material Constrained Portfolios identified by the Economic Regulation Authority under clause 2.16C.2(b) replaces the previous set of Material Constrained Portfolios identified by the Economic Regulation Authority under clause 2.16C.2(b) (if any) with effect from the time that the Economic Regulation Authority publishes the results of the relevant calculations under 2.16C.2(c).

Explanatory Note

The change to WEM Rule 2.16C.3 is to prevent very small generators from having to keep records to justify their bids.

2.16C.3. By no later than three months from the date of receipt of a notice from the Economic Regulation Authority under clause 2.16C.1(c)(ii) or clause 2.16C.2(d), a Market Participant with Facilities (except Non-Scheduled Facilities) identified in a Material Portfolio or a Material Constrained Portfolio must, in accordance with the WEM Procedure referred to in clause 2.16D.15:

(a) maintain adequate records (that are capable of independent verification) of the internal governance arrangements the Market Participant has in place to comply with its obligations under ~~clause 2.16A.1~~ clause 2.16C.5;

(b) maintain adequate records (that are capable of independent verification) of the methods, assumptions and cost inputs the Market Participant used to develop the prices in the Portfolio Supply Curve offered in its STEM

Submissions or Standing STEM Submissions, including, for each relevant Facility; and

(c) maintain adequate records (that are capable of independent verification) of the methods and cost inputs the Market Participant used to develop the prices offered, quantities and Ramp Rate Limits in its Real-Time Market Submissions or Standing Real-Time Market Submissions, including, for each relevant Facility.

2.16C.4. The Economic Regulation Authority must monitor the following price offers for compliance with ~~clause 2.16A.1~~ clause 2.16C.5:

(a) the prices offered by a Market Participant ~~which has one or more Registered Facilities assigned to a Material Portfolio~~ in its STEM Portfolio Supply Curve; and

(b) the prices offered by a Market Participant in its Real-Time Market Submissions for each of its Registered Facilities ~~assigned to a Material Portfolio or a Material Constrained Portfolio~~.

2.16C.5. A Market Participant must not make an Irregular Price Offer that results in an inefficient market outcome.

Explanatory Note

The following changes:

- Remove reference to WEM Rule 2.16A.1 which is proposed to be deleted.
- Remove requirement to prove a Market Participant had market power as part of the determination of whether an Irregular Price Offer occurred.
- Amend definition of an Irregular Price Offer by making a reference to a newly defined term Economic Price Offer.
- New clause 2.16C.6A defines an Economic Price Offer.
- Delete WEM Rule 2.16C.11 that is based on WEM Rule 2.16A.1 which is proposed to be deleted.
- New clause 2.16C.8 ensures that the timeframe for the ERA's determination under clause 2.16C.8 does not include the time it takes for the ERA to be provided with information.

2.16C.6. The Economic Regulation Authority must investigate potential breaches of clause 2.16C.5 ~~2.16A.1~~:

(a) in accordance with clause 2.13.27 and the WEM Procedure referred to in clause 2.16D.15; and

(b) having regard to the Offer Construction Guideline,

and if it considers that:

(c) a price offered by a Market Participant in its Portfolio Supply Curve was inconsistent with ~~the price that a Market Participant without market power would offer in a profit-maximising Portfolio Supply Curve~~ an Economic Price Offer; or

(d) a price offered by a Market Participant in its Real-Time Market Submissions was inconsistent with ~~the price that a Market Participant~~

~~without market power would offer in a profit-maximising Real-Time Market~~ an Economic Price Offer,

the Economic Regulation Authority must determine that the price was an Irregular Price Offer.

2.16C.6A. An Economic Price Offer is an offer which is not greater than the sum of all efficient variable costs for the provision of the relevant Market Service, including all costs incurred under long-term take-or-pay fuel contracts.

2.16C.7. The Economic Regulation Authority must investigate and determine, in accordance with clause 2.13.27 and the WEM Procedure referred to in clause 2.16D.15, whether an Irregular Price Offer determined under clause 2.16C.6 has resulted in an inefficient market outcome.

2.16C.8. Without limiting clauses 2.16C.6 and 2.16C.7, the Economic Regulation Authority must make a determination under clause 2.16C.6 and, if necessary, under clause 2.16C.7, no later than six months from the day the Economic Regulation Authority commenced its investigation under clause 2.16C.6.

2.16C.8A. If the Economic Regulation Authority requests that a Market Participant provides information under clause 2.13.28, or a submission under the WEM Procedure specified in clause 2.15.1, the timeframe specified in clause 2.16C.8 for the Economic Regulation Authority to make a determination will be suspended and will recommence from the date the Market Participant has provided the information or the submission requested by the Economic Regulation Authority.

2.16C.9. In conducting an investigation under clause 2.16C.7, the Economic Regulation Authority:

(a) must consider any changes to:

i. a STEM Clearing Price or Reference Trading Price;

ii. Energy Uplift Payments; or

iii. the quantities of energy scheduled in respect of Market Participants in the STEM Auction, or the dispatch of Facilities in the Real-Time Market,

that are likely to have occurred as a result of the Irregular Price Offer; and

(b) may consider any other matters it considers relevant.

2.16C.10. If, following an investigation, the Economic Regulation Authority has determined pursuant to clause 2.16C.6 and clause 2.16C.7 that a Market Participant has breached the obligation specified in clause 2.16C.5, the Economic Regulation Authority must:

(a) at least two Business Days prior to publication of its determination under clause 2.16C.10(b), notify the relevant Market Participant of the determination; and

(b) publish on its website details of its determination, including the name of the relevant Market Participant and the Irregular Price Offer to which the determination relates.

~~2.16C.11. For the avoidance of doubt, the Economic Regulation Authority may investigate any alleged breach of clause 2.16A.1, even if the Economic Regulation Authority was not monitoring the Market Participant's price offers under clause 2.16C.4 at the time the alleged breach occurred.~~

2.16D. Guidance, WEM Procedures and Consultation Framework

2.16D.1. The Economic Regulation Authority must develop, maintain and publish on its website, the following guidelines:

(a) an Offer Construction Guideline that:

i. provides guidance to Market Participants in relation to the ~~price offer obligations under clause 2.16A.1~~ application of clause 2.16C.6A;

ii. details how the Economic Regulation Authority will assess prices offered under clause 2.16C.6;

iii. permits the recovery of all efficient variable costs of producing the relevant electricity, including all costs incurred under long-term take-or-pay fuel contracts;

iv. outlines how the Economic Regulation Authority will consider price offers for different Facility types, including Electric Storage Resources;

v. provides examples illustrating the types of conduct that the Economic Regulation Authority considers would be likely to contravene the ~~price offer obligations under clause 2.16A.1~~ obligation of Market Participants to submit Economic Price Offers; and

vi. provides guidance to Market Participants on how the Economic Regulation Authority will assess inefficient market outcomes under clause 2.16C.7; and

(b) a Trading Conduct Guideline that must provide clarity and guidance to Market Participants regarding the prohibited conduct described in clause 2.16A.3. The Trading Conduct Guideline must provide examples illustrating the types of conduct that the Economic Regulation Authority considers would be likely to contravene clause 2.16A.3.

2.16D.2. Subject to the provisions of this section 2.16D, the Economic Regulation Authority may amend the guidelines to be developed and maintained under clause 2.16D.1 at any time.

2.16D.3. In developing and maintaining the guidelines under clause 2.16D.1, or any amendments to them under clause 2.16D.2, the Economic Regulation Authority must publish on its website:

(a) a draft report containing a copy of the proposed guidelines, or the proposed amendments to the guidelines, as applicable, and a request for submissions;

(b) the closing date for submissions, which must be no earlier than four weeks after the date of publication of the draft report; and

(c) a copy of all submissions received provided that if a submission contains information that the Economic Regulation Authority reasonably considers to be confidential, the Economic Regulation Authority may redact that information to the extent it considers appropriate.

2.16D.4. Following the closing date for submissions on the draft report published under clause 2.16D.3, the Economic Regulation Authority must publish a final report on its website containing:

(a) the final guidelines, or the amendments to the guidelines, as applicable;

(b) where applicable, the reasons for the amendment to the guidelines;

(c) a summary of any submissions received by the Economic Regulation Authority on the draft report published under clause 2.16D.3 that were received within the time specified, and any late submissions the Economic Regulation Authority has decided, in its discretion, to take into account;

(d) the Economic Regulation Authority's responses to the issues raised in those submissions;

(e) any other matters the Economic Regulation Authority considers relevant to the guidelines, or the amendment to the guidelines, as applicable; and

(f) the date that the final guidelines, or the amendment to the guidelines, will commence.

2.16D.5. A Market Participant that has received a notice from the Economic Regulation Authority under clauses 2.16C.1(c)(ii) or 2.16C.2(d) may, in accordance with clause 2.16D.6, request guidance from the Economic Regulation Authority in relation to the Offer Construction Guideline, including, for the purposes of the Economic Regulation Authority's assessment of prices offered under clause 2.16C.6, how the matters in the Offer Construction Guideline may apply to the Market Participant's Registered Facility.

2.16D.6. A request made by a Market Participant under clause 2.16D.5 must:

(a) be in writing;

(b) identify the matters in the Offer Construction Guideline on which the Market Participant is seeking guidance;

(c) specify the Market Participant's reasons for seeking guidance;

(d) where relevant, provide supporting materials that illustrate or evidence the matters raised in the request; and

(e) include any other information specified in the WEM Procedure referred to in clause 2.16D.15.

2.16D.7. Within 20 Business Days of receipt of a request under clause 2.16D.5, the Economic Regulation Authority must:

(a) consider the request; and

(b) subject to clause 2.16D.10, use reasonable endeavours to provide guidance on the matters specified in the request~~.~~,

unless the Economic Regulation Authority has already commenced processing another request received under clause 2.16D.5, in which case the 20 Business Days will commence after the earlier request has been resolved.

2.16D.8. The Economic Regulation Authority may request further information from a Market Participant that has made a request under clause 2.16D.5. If, within 15 Business Days of the date of the Economic Regulation Authority's request for further information, the Market Participant does not provide the information requested, or the Economic Regulation Authority reasonably considers the information provided is not satisfactory, the Market Participant will be deemed to have withdrawn the relevant request.

2.16D.9. If the Economic Regulation Authority issues a request for further information under clause 2.16D.8, the timeframe specified in clause 2.16D.7 for the Economic Regulation Authority to provide the relevant guidance will recommence from the date the Market Participant has provided all of the further information requested by the Economic Regulation Authority.

2.16D.10. The Economic Regulation Authority is not required to provide guidance to a Market Participant in relation to a request under clause 2.16D.5 where it considers that:

(a) the Offer Construction Guideline already provides sufficient guidance on the matters raised in the request;

(b) the request does not meet the requirements in clause 2.16D.6;

(c) the cost the Economic Regulation Authority would incur to provide the guidance sought in the request is unreasonable or excessive; or

(d) the request is substantially similar to a previous request considered by the Economic Regulation Authority from the same Market Participant.

2.16D.11. Subject to clause 2.16D.12, any guidance provided by the Economic Regulation Authority pursuant to clause 2.16D.7 is not binding on the Economic Regulation Authority, the Market Participant who made the request, or any other person, and the Economic Regulation Authority may, at any time, reconsider, revise or withdraw any guidance provided to a Market Participant.

2.16D.12. In conducting an investigation under clauses 2.16C.6 or 2.16C.7, the Economic Regulation Authority must take into account any guidance it may have provided to the Market Participant under clause 2.16D.7 that is relevant to the matters being investigated.

2.16D.13. Where the Economic Regulation Authority provides guidance to a Market Participant under clause 2.16D.7, the Economic Regulation Authority must consider whether the Offer Construction Guideline should be amended to reflect that guidance. Where the Economic Regulation Authority considers the Offer Construction Guideline should be amended, the Economic Regulation Authority must initiate an amendment to the Offer Construction Guideline in accordance with clause 2.16D.3 as soon as practicable.

2.16D.14. The Economic Regulation Authority must publish on its website a copy of any guidance provided to a Market Participant under clause 2.16D.7 provided that the Economic Regulation Authority must first redact all information that is confidential or commercially sensitive in the guidance, including the name of the Market Participant to whom the guidance was provided. Where the Economic Regulation Authority considers the guidance cannot be redacted to ensure the identity of the Market Participant to whom the guidance was provided remains confidential, the Economic Regulation Authority is not required to publish the guidance.

2.16D.15. The Economic Regulation Authority must document in a WEM Procedure:

(a) the methodologies and processes to be followed by the Economic Regulation Authority in relation to:

i. identifying each Portfolio and Constrained Portfolio operating in the Wholesale Electricity Market pursuant to clauses 2.16B.1(a) and 2.16B.2, respectively;

ii. carrying out the calculations under clauses 2.16C.1(a) and 2.16C.2(a) in relation to identifying each Material Portfolio and Material Constrained Portfolio, respectively; and

iii. monitoring prices offered by a Market Participant under clause 2.16C.4, and making determinations under clauses 2.16C.6 and 2.16C.7 in relation to those price offers;

(b) the types and format of the information, and level of detail required to be maintained or recorded by a Market Participant to enable the Economic Regulation Authority to carry out its monitoring of price offers under clause 2.16C.4; and

(c) details of the processes the Economic Regulation Authority and Market Participants must follow in respect to a request for guidance under clause 2.16D.5, which may include a template that a Market Participant must use for making a request.

2.16E. Irregular Price Offers – Limited Application of Section 2.13

2.16E.1. ~~Subject to clauses 2.16C.6 and 2.16C.7, the Economic Regulation Authority must not, in respect of a price offer described in clause 2.16C.4, investigate a Market Participant under clause 2.13.27, or take enforcement action under clause 2.13.36 for a breach of clause 2.16A.1, where the Economic Regulation Authority has determined under clause 2.16C.7 that an Irregular Price Offer by the Market Participant has not resulted in an inefficient market outcome.~~[Blank]

2.16E.2. ~~Where~~ If the Economic Regulation Authority has investigated a potential breach under clause 2.16C.6 and determined either that a price offer by a Market Participant is not an Irregular Price Offer, or that an Irregular Price Offer by a Market Participant has not resulted in an inefficient market outcome, the Economic Regulation Authority must notify the Market Participant of the results of the investigation and the reasons for its decision.

…

2.26. Economic Regulation Authority Reviews of Market Price Limits

2.26.1. The Economic Regulation Authority must, in accordance with this section 2.26, review the value of the Energy Offer Price Ceiling at least once every three years. For the avoidance of doubt, the Economic Regulation Authority must complete a subsequent review under this clause 2.26.1 and publish its final report no later than three years from the date of publication of the final report from the preceding review.

Explanatory Note

Clause 2.26.2(a)(iii) is amended to require the ERA to consider the minimum stable loading level based on the best information available to them, rather than dispatchable loading level specified in Standing Data.

2.26.2. In conducting a review pursuant to clause 2.26.1, the Economic Regulation Authority must calculate the Energy Offer Price Ceiling by:

(a) applying the following formula:

(1 + Risk Margin) × (Variable O&M +(Heat Rate × Fuel Cost))/Loss Factor

where:

i. Risk Margin is a measure of uncertainty in the assessment of the mean short run average cost for the highest cost Facility in the SWIS, expressed as a fraction;

ii. Variable O&M is the mean variable operating and maintenance cost for the highest cost Facility in the SWIS, expressed in $/MWh, and includes, but is not limited to, start-up related costs;

iii. Heat Rate is the mean heat rate at the minimum ~~dispatchable loading level specified in Standing Data~~ stable loading level, based

on the Economic Regulation Authority's assessment of available information, for the highest cost Facility in the SWIS, expressed in GJ/MWh;

iv. Fuel Cost is the mean unit fixed and variable fuel cost for the highest cost Facility in the SWIS, expressed in $/GJ; and

v. Loss Factor is the marginal loss factor for the highest cost Facility in the SWIS, relative to the Reference Node, determined in accordance with section 2.27,

where the Economic Regulation Authority must determine the values for each factor described in clauses 2.26.2(a)(i) to 2.26.2(a)(v) consistently with the Offer Construction Guideline as it applies to the highest cost generating Facility in the SWIS;

(b) rounding up the value in clause 2.26.2(a) to the nearest multiple of $100/MWh; and

(c) determining whether an indexation process should apply to the Energy Offer Price Ceiling to reflect movements in input costs and, if so, determining the formula for the indexation calculation and the frequency at which indexation will apply.

…

3.11. Determining & Procuring Frequency Co-optimised Essential System Service Requirements

…

Explanatory Note:

Clause 3.11.2 is amended to use the Available Capacity Scenario for the measure specified in clause 3.11.2(a).

3.11.2. AEMO must identify, record and publish on the WEM Website by no later than noon on the first Business Day following the day on which the Trading Day ends:

(a) the number of Dispatch Intervals in the previous 90 Trading Days for which, four hours ahead of the relevant Dispatch Interval, AEMO has scheduled a shortfall in each Frequency Co-optimised Essential System Service, as a result of AEMO's obligations under clauses 3.12.1 and 3.12.2, in the ~~Reference~~ Available Capacity Scenario; and

(b) the number of Dispatch Intervals in the previous 90 Trading Days for which AEMO directed a Market Participant to commit a Facility to provide a Frequency Co-optimised Essential System Service due to a forecast real-time shortfall not being resolved in response to a Low Reserve Condition Declaration ("**FCESS Participation Shortfall**").

…

7.4. Real-Time Market Submissions

Real-Time Market Submissions – Obligations and meaning

…

Explanatory Note:

New clause 7.4.2C requires Market Participants who have offered energy capacity as Available Capacity to monitor Pre-Dispatch Schedules and Dispatch Schedules for shortfalls in energy, Contingency Reserve Raise or Regulation Raise and update their Real-Time Market Submissions as needed to alleviate a predicted shortfall.

New clause 7.4.2D provides for the following exceptions to the obligation specified in clause 7.4.2C:

- Available Capacity that is not subject to Reserve Capacity Obligations;
- Available Capacity that would not assist in alleviating the predicted shortfall if it was converted to In-Service Capacity (e.g. if the specific shortfall relates to a shortage of Contingency Reserve Raise offers, rather than a shortage of energy offers); and
- Available Capacity held by a Market Participant in excess of the quantity required to resolve the predicted shortfall (e.g. Synergy would not be expected to move all of its capacity to In-Service to address a shortfall that could be resolved by the commitment of a single Facility).

It is intended that proposed clause 7.4.2C will be nominated as a civil penalty provision in Schedule 1 of the *Electricity Industry (Wholesale Electricity Market) Regulations 2004*.

7.4.2C. Subject to clause 7.4.2D, if:

(a) a Market Participant offers capacity as Available Capacity in its Real-Time Market Submissions for energy for a Dispatch Interval;

(b) the Reference Scenario for the Dispatch Interval in the last Pre-Dispatch Schedule or Dispatch Schedule provided to the Market Participant before the relevant Start Decision Cutoff predicts a real-time shortfall in energy, Contingency Reserve Raise or Regulation Raise; and

(c) the shortfall identified under clause 7.4.2C(b) relates to a lack of energy In-Service Capacity in the Dispatch Interval,

then the Market Participant must, as soon as practicable, update its Real-Time Market Submissions for the Dispatch Interval to convert the Available Capacity to In-Service Capacity to alleviate the predicted shortfall.

7.4.2D. Clause 7.4.2C does not apply to:

(a) Available Capacity that is not subject to Reserve Capacity Obligations;

(b) Available Capacity that would not assist in alleviating the predicted shortfall if it was converted to In-Service Capacity; and

(c) Available Capacity held by a Market Participant in excess of the quantity required to resolve the predicted shortfall.

7.4.3. A Real-Time Market Submission is deemed to constitute a declaration by an Authorised Officer of the Market Participant.

7.4.4. Where a Market Participant holds a SESSM Award for a Registered Facility, without limiting any other obligation or requirement under this section 7.4, the Market Participant must make Real-Time Market Submissions for the Registered Facility in accordance with the SESSM Award.

Explanatory Note

Clauses 7.4.5(b) and 7.4.5(c) are amended to refer to the Available Capacity Scenario rather than the Reference Scenario (because the clauses assume that the Scenario will include Available Capacity for which the relevant Start Decision Cutoff has not passed).

7.4.5. For the purpose of a Real-Time Market Submission under clause 7.4.4, a Market Participant must:

(a) for all Dispatch Intervals within the SESSM Service Timing and the Week-Ahead Schedule Horizon:

i. offer a quantity of the relevant Frequency Co-optimised Essential System Service greater than or equal to the lower of:

1. the sum of the relevant Base ESS Quantity and SESSM Availability Quantity; and

2. the lowest Remaining Available Capacity for that Frequency Co-optimised Essential System Service under any Outage applying to the Registered Facility in the Dispatch Interval, or, if there are no applicable Outages, the relevant maximum accredited quantity of that Frequency Co-optimised Essential System Service for the Registered Facility,

in Price-Quantity Pairs; and

ii. specify an offer price in Price-Quantity Pairs relating to the SESSM Availability Quantity not exceeding the SESSM Offer Cap for the SESSM Award;

(b) where the ~~Reference~~ Available Capacity Scenario for a Pre-Dispatch Interval projects a shortfall in an awarded Frequency Co-optimised Essential System Service, ensure that the Real-Time Market Submissions for the Registered Facility and Frequency Co-optimised Essential System Service for that Pre-Dispatch Interval are offering a quantity of the relevant Frequency Co-optimised Essential System Service greater than or equal to the lowest Remaining Available Capacity for that Frequency Co-optimised Essential System Service under any Outage applying to the Registered Facility in the Pre-Dispatch Interval, or, if there are no applicable Outages, the relevant maximum accredited quantity of the Frequency Co-optimised Essential System Service for the Registered Facility; and

(c) where the ~~Reference~~ Available Capacity Scenario for a Pre-Dispatch Interval or Dispatch Interval projects that the Registered Facility will be enabled to provide an awarded Frequency Co-optimised Essential System Service, ensure that the Real-Time Market Submissions for the Registered Facility for that Pre-Dispatch Interval or Dispatch Interval:

i. present the relevant Essential System Service Enablement Quantity as In-Service Capacity; and

ii. offer sufficient capacity as In-Service Capacity for energy to allow the Registered Facility to be dispatched for energy between any relevant Enablement Limits.

Explanatory Note:

New clause 7.4.5A requires a Market Participant with a Facility that is accredited to provide RoCoF Control Service to make its accredited capacity available in the Real-Time Market for all Dispatch Intervals.

It is intended that clause 7.4.5A will be nominated as a civil penalty provision in Schedule 1 of the *Electricity Industry (Wholesale Electricity Market) Regulations 2004*.

7.4.5A. A Market Participant must, in respect of each of its Facilities accredited for RoCoF Control Service, ensure that for each Dispatch Interval the quantity offered in the Real-Time Market Submission for RoCoF Control Service is the largest quantity of RoCoF Control Service that is capable of being provided by the Facility in the Dispatch Interval.

Explanatory Note:

Clause 7.4.6 is deleted because it is no longer required.

7.4.6. [Blank]~~Where the Reference Scenario for a Pre-Dispatch Interval or Dispatch Interval projects that a Registered Facility will be enabled to provide RoCoF Control Service, and all or part of the relevant Essential System Service Enablement Quantity is included in the Real-Time Market Submissions for the Registered Facility as Available Capacity, the Market Participant for the Registered Facility must submit updated Real-Time Market Submissions for the Registered Facility for that Pre-Dispatch Interval or Dispatch Interval as soon as practicable to:~~

(a) present the relevant Essential System Service Enablement Quantity as In-Service Capacity; or

(b) present the relevant Essential System Service Enablement Quantity such that the Registered Facility is not enabled for RoCoF Control Service in the Reference Scenario for the relevant Pre-Dispatch Interval or Dispatch Interval.

7.4.7. [Blank]

…

7.5. Dispatch Algorithm

…

7.5.14. AEMO must determine and publish on the WEM Website the RoCoF Upper Limit at least annually.

Explanatory Note:

New clause 7.5.15:

- requires AEMO to include 'tiebreaking' Constraint Equations in the Dispatch Algorithm to avoid Degenerate Solutions when multiple Real-Time Market Submissions for a Market Service include Price-Quantity Pairs with the same price (AEMO already does this, but the requirement is not currently explicit in the WEM Rules); and
- specifies more efficient tiebreak orders for FCESS and energy dispatch.

The new FCESS tiebreak order is intended to reduce the overall cost of FCESS Uplift Payments by:

- reducing where possible the number of Facilities that are dispatched for a given FCESS in a Dispatch Interval; and
- prioritising the dispatch of Facilities that are more likely to have lower FCESS Uplift Payments.

The new energy tiebreak order is intended to reduce the incidence of Facilities receiving infeasible Dispatch Targets under the Reference Scenario.

Tiebreaking Constraints

7.5.15. AEMO must include Constraint Equations in the Dispatch Algorithm to avoid Degenerate Solutions caused by tied Price-Quantity Pairs for a Market Service in Real-Time Market Submissions. The Constraint Equations must, subject to other constraints, dispatch quantities from tied Price-Quantity Pairs:

(a) for Real-Time Market Submissions for a Frequency Co-optimised Essential System Service, in the following order:

i. quantities from Interruptible Loads, in ascending order of Facility Tiebreak Number; then

ii. quantities from Scheduled Facilities and Semi-Scheduled Facilities with an Enablement Minimum (as specified in the Real-Time Market Submission for the Frequency Co-optimised Essential System Service and updated by AEMO, if applicable, under clause 7.4.52) less than or equal to zero, in ascending order of Facility Tiebreak Number; then

iii. quantities from Scheduled Facilities and Semi-Scheduled Facilities with an Enablement Minimum (as specified in the Real-Time Market Submission for the Frequency Co-optimised Essential System Service and updated by AEMO, if applicable, under clause 7.4.52) greater than zero, in ascending order of:

1. the estimated energy dispatch cost for the Enablement Minimum, as calculated in accordance with clause 7.5.16; then

2. Facility Tiebreak Number; and

(b) for Real-Time Market Submissions for energy, in ascending order of Facility Tiebreak Number.

7.5.16. For the purposes of clause 7.5.15(a)(iii)(1), the estimated energy dispatch cost for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m is:

$$\text{EstDispatchCost}(m,f,DI) = \sum_{pq \in \text{EnergyOffer}(f,DI)} (\text{EnergyQty}(f,DI,pq) \times \text{LFAOP}(f,DI,pq))$$

where:

(a) $pq \in \text{EnergyOffer}(f,DI)$ denotes all Price-Quantity Pairs pq in the Real-Time Market Offer for energy for Registered Facility f in Dispatch Interval DI that are not excluded in the relevant Scenario;

(b) EnergyQty(f,DI,pq) is the part of the quantity from Price-Quantity Pair pq that is included in the Enablement Minimum for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m (as specified in the relevant Real-Time Market Submission and updated by AEMO, if applicable, under clause 7.4.52); and

(c) LFAOP(f,DI,pq) is the Loss Factor Adjusted Price for Price-Quantity Pair pq.

Explanatory Note:

New clause 7.5.17 requires AEMO to determine the randomised Facility Tiebreak Numbers used in clause 7.5.15 for each of the Facilities that are dispatched by WEMDE for each Trading Day.

7.5.17. For each Trading Day, AEMO must:

(a) determine a unique random number (Facility Tiebreak Number) for each Scheduled Facility, Semi-Scheduled Facility and Interruptible Load; and

(b) use the Facility Tiebreak Numbers determined under clause 7.5.17(a) for the Trading Day in the Dispatch Algorithm as specified in clause 7.5.15 for all Dispatch Intervals or Pre-Dispatch Intervals (as applicable) in the Trading Day.

Explanatory Note:

New clause 7.5.18 requires AEMO to document the method used to determine randomised Facility Tiebreak Numbers in a WEM Procedure.

7.5.18. AEMO must document in a WEM Procedure the method to be used by AEMO to determine Facility Tiebreak Numbers under clause 7.5.17(a).

…

7.6. Dispatch

…

Explanatory Note:

Clause 7.6.23 and the reference to that clause in clause 7.6.27(a) are removed because the scenario contemplated by those clauses does not occur in practice. This is because AEMO includes Constraint Equations in the Dispatch Algorithm to deal with tied Price-Quantity Pairs and avoid a Degenerate Solution from eventuating.

The heading above clause 7.6.23 has been amended to reflect that the clauses following it no longer relate to tiebreaking.

~~Tiebreaking~~Oscillation Control Constraint Equations

7.6.23. [Blank]~~Where the Dispatch Algorithm determines a Degenerate Solution, AEMO may issue Dispatch Instructions that override the output of the Dispatch Algorithm to the extent required to adjust the Dispatch Target of one or more Registered Facilities with tied Price-Quantity Pairs, and in doing so must seek to, in the following priority order:~~

~~(a) ensure that Dispatch Targets can be met by Registered Facilities; and~~

~~(b) ensure pro-rata loading of tied Price-Quantity Pairs.~~

7.6.24. AEMO may include Oscillation Control Constraint Equations in the Dispatch Algorithm to reduce the occurrence of:

(a) Degenerate Solutions that result in inconsistent Dispatch Targets between Dispatch Intervals; and

(b) significant changes in Essential System Services Enablement Quantities between Dispatch Intervals.

7.6.25. Where AEMO includes Oscillation Control Constraint Equations in the Dispatch Algorithm in accordance with clause 7.6.24, AEMO must ensure that:

(a) the Dispatch Algorithm firstly takes into account all Constraint Equations other than Constraint Equations used to avoid Degenerate Solutions;

(b) the Dispatch Algorithm violates an Oscillation Control Constraint Equation only in order to take into account other Constraints (according to the formulation specified under clauses 7.2.4(e) and 7.2.4(f)); and

(c) the Constraint Relaxation process in clause 7.2.6 is applied when the Dispatch Algorithm determines that it is necessary to violate an Oscillation Control Constraint Equation.

7.6.26. When setting the parameters of Oscillation Control Constraint Equations, which determine the extent to which Oscillation Control Constraint Equations will bind, AEMO must consider the historic cost of binding Oscillation Control Constraint

Equations as published in the Congestion Information Resource and the benefits to Power System Security and Power System Reliability of those Oscillation Control Constraint Equations.

7.6.27. AEMO must document in a WEM Procedure:

(a) [Blank]~~the process to be followed by AEMO when issuing Dispatch Instructions that override the output of the Dispatch Algorithm for Dispatch Intervals where the Dispatch Algorithm determines a Degenerate Solution pursuant to clause 7.6.23; and~~

(b) situations that are deemed to be significant for the purposes of clause 7.6.24(b).

AEMO Control of Registered Facilities

…

7.7. Scarcity and Intervention

7.7.1. To support the Central Dispatch Process and to maintain Power System Security and Reliability, AEMO may direct a Market Participant to operate a Registered Facility in a particular way in accordance with Chapters 3 and 3A.

7.7.2. Where AEMO has entered into a Supplementary Capacity Contract, AEMO may direct the relevant resource to provide an Eligible Service in accordance with the terms of the Supplementary Capacity Contract.

7.7.2A. In the event of a system shutdown or major supply disruption, AEMO may dispatch System Restart Service Providers to provide System Restart Services, and must dispatch facilities in accordance with the System Restart Plan and Local Black Start Procedures.

7.7.3. Where AEMO has issued a Low Reserve Condition Declaration relating to an actual or projected shortfall in Essential System Services, AEMO may direct a Market Participant to make a Real-Time Market Submission for a Registered Facility that has been accredited to provide an Essential System Service in accordance with section 2.34A, that requires a quantity specified by AEMO of Essential System Service to be offered up to the maximum accredited quantity, or the lowest Remaining Available Capacity under any Outage, applying to the Registered Facility for that Frequency Co-optimised Essential System Service in any of the Dispatch Intervals covered by the Low Reserve Condition Declaration.

Explanatory Note:

Clauses 7.7.4 and 7.7.5 are amended to refer to the Available Capacity Scenario instead of the Reference Scenario.

7.7.4. Where AEMO has issued a Low Reserve Condition Declaration relating to an actual or projected shortfall in energy and the Short Term PASA, Medium Term

PASA or the ~~Reference~~ Available Capacity Scenario for the Pre-Dispatch Schedule projects that a Registered Facility will be needed to provide energy, AEMO may, as applicable:

(a) where the projected energy shortfall will occur within four weeks of the date of the notice:

i. reject one or more Planned Outages for the Registered Facility; or

ii. issue an Outage Recall Direction to the Registered Facility; or

(b) where the projected energy shortfall will occur within one week of the date of the notice, direct the relevant Market Participant to make a Real-Time Market Submission for a Registered Facility offering its full Reserve Capacity Obligation Quantity as In-Service Capacity.

7.7.5. Where AEMO has issued a Low Reserve Condition Declaration and the Short Term PASA or the ~~Reference~~ Available Capacity Scenario for the Pre-Dispatch Schedule projects that a Registered Facility will be needed to provide an Essential System Service, AEMO may direct a Market Participant to synchronise the Registered Facility to provide the Essential System Service.

7.7.6. Following a Contingency Event that results in a SWIS Frequency outside the Normal Operating Frequency Excursion Band, AEMO may adjust Essential System Service requirements to allow for an orderly transition back to full Essential System Service Enablement Quantities.

7.7.7. Following a Contingency Event that results in a SWIS Frequency outside the Normal Operating Frequency Excursion Band, if AEMO reasonably determines that the Dispatch Algorithm is not appropriately scheduling Registered Facilities for Essential System Services, AEMO may reduce the quantity of one or more Frequency Co-optimised Essential System Service requirement, including to zero, to reflect the activation of enabled Registered Facilities.

7.7.8. Where AEMO issues a direction to a Market Participant in accordance with this section 7.7 or under clauses 3.4.4, 3.4.5 or 3.5.5, AEMO must, as soon as practicable, input appropriate Constraint Equations in the Dispatch Algorithm to ensure that the Dispatch Algorithm generates Dispatch Instructions that will allow the Registered Facility to comply with those directions.

Explanatory Note:

New clause 7.7.8A allows for the provision of Energy Uplift Payments in two situations:

- when AEMO constrains on a Registered Facility to provide RoCoF Control Service (this is a short-term solution that will be reviewed as part of the planned review of RoCoF Control Service procurement and compensation); and
- when:
    - AEMO has issued a Low Reserve Condition Declaration;

- a Market Participant has offered the capacity of its Facility as In-Service Capacity (this is not explicit in clause 7.7.8A(b) but enforced through the Energy Uplift Payment calculations); and
- AEMO constrains the Facility on to provide at least a minimum level of Injection (typically its minimum stable load level).

The reason why these Constraint Equations are deemed to reflect Network Constraints is that this is the simplest and fastest option for implementing the relevant Energy Uplift Payments. It is expected that the approach will be refined in future to allocate these Constraint Equations to their own, distinct categories.

7.7.8A. If AEMO includes a Constraint Equation in the Dispatch Algorithm under clause 7.7.8 to facilitate a direction to:

(a) synchronise a Registered Facility to provide a RoCoF Control Service; or

(b) ensure, during a period subject to a Low Reserve Condition Declaration, a minimum level of Injection from a Registered Facility,

then for the purposes of clauses 7.14.1 and 9.9.9 the Constraint Equation is deemed to reflect a Network Constraint.

7.7.9. A Dispatch Instruction issued by AEMO in accordance with a direction under clauses 3.4.4, 3.4.5, 3.5.5 or 7.11D.2A, must be consistent with the Registered Facility's data held by AEMO, including Standing Data, at the time the Dispatch Instruction is determined.

7.7.10. Where AEMO directs a Market Participant to vary the operation of a Registered Facility in a way that is not fully set out in a Dispatch Instruction, AEMO must record:

(a) the date, time, and duration of the direction;

(b) the name of the Registered Facility;

(c) the nature of the direction (for example, commitment, fuel choice, reactive power output); and

(d) the reason for the direction.

7.7.11. Subject to clause 7.7.12, Market Participants must comply with directions given by AEMO in accordance with this section 7.7.

7.7.12. A Market Participant is not required to comply with a direction referred to in clause 7.7.11 if it would endanger the safety of any person, damage equipment, or breach any applicable law.

7.7.13. Where a Market Participant cannot, in accordance with clause 7.7.12, comply with a direction from AEMO under this section 7.7, the Market Participant must notify AEMO as soon as possible and provide the reasons why it cannot comply, which must be one or more of the reasons specified in clause 7.7.12.

7.7.14. AEMO must document in a WEM Procedure the process it will use to determine which Registered Facility to direct under clauses 7.7.3, 7.7.4 or 7.7.5.

7.8. Market Schedules

7.8.1. AEMO must determine, make available to Market Participants and publish on the WEM Website the following Market Schedules in accordance with the Real-Time Market Timetable:

(a) Week-Ahead Schedules;

(b) Pre-Dispatch Schedules; and

(c) Dispatch Schedules.

7.8.2. AEMO must use processes that are consistent with the principles in section 7.11A in determining Market Schedules.

7.8.3. AEMO must determine Market Schedules comprising multiple Scenarios.

Explanatory Note:

Clauses 7.8.4, 7.8.5 and 7.8.5A are amended, and new clause 7.8.5B inserted, to:

- redefine the Reference Scenario to be what is currently known as the InServeCapacityOnly Scenario; and
- retain the current Reference Scenario but rename it the Available Capacity Scenario.

7.8.4. Where AEMO determines a Market Schedule comprising multiple Scenarios, AEMO must designate a Reference Scenario and Available Capacity Scenario for each Market Schedule.

7.8.5. A Reference Scenario for a Dispatch Schedule must:

(a) represent AEMO's best estimate of future dispatch and market outcomes;

(b) take into account:

i. Enablement Minimums;

ii. Low Breakpoints;

iii. High Breakpoints;

iv. Enablement Maximums;

v. whether each Facility is Inflexible; and

vi. Planned Outages and Forced Outages; and

(c) exclude any Available Capacity in Real-Time Market Submissions ~~where the Start Decision Cutoff for the Registered Facility has passed~~.

7.8.5A. A Reference Scenario for a Pre-Dispatch Schedule or Week-Ahead Schedule must:

(a) represent AEMO's best estimate of future dispatch and market outcomes; and

(b) exclude any Available Capacity in Real-Time Market Submissions ~~where the Start Decision Cutoff for the Registered Facility has passed~~.

7.8.5B. AEMO must use the same inputs and assumptions for an Available Capacity Scenario for a Week-Ahead Schedule, Pre-Dispatch Schedule or Dispatch Schedule as for the corresponding Reference Scenario, except that it must include any Available Capacity in Real-Time Market Submissions for which the relevant Start Decision Cutoff has not yet passed.

Explanatory Note:

Clause 7.8.6 is amended and new clause 7.8.6A inserted to clarify the relationship of the high and low forecast Scenarios to the corresponding Reference Scenario and/or Available Capacity Scenario. EPWA seeks feedback from stakeholders on whether the proposed relationships (i.e. in which the high and low forecast Scenarios are based on the Available Capacity Scenario for Week-Ahead Schedules and the Reference Scenario for Pre-Dispatch Schedules) best suit the needs of Market Participants.

7.8.6. In determining Week-Ahead Schedules ~~and Pre-Dispatch Schedules~~, AEMO must include Scenarios that:

(a) [Blank]~~include In-Service Capacity in Real-Time Market Submissions, and exclude Available Capacity in Real-Time Market Submissions;~~

(b) use the same inputs and assumptions as for the Available Capacity Scenario, except for the inclusion of a higher load forecast ~~than the Reference Scenario~~; and

(c) use the same inputs and assumptions as for the Available Capacity Scenario, except for the inclusion of a lower load forecast ~~than the Reference Scenario~~.

7.8.6A. In determining Pre-Dispatch Schedules, AEMO must include Scenarios that:

(a) use the same inputs and assumptions as for the Reference Scenario, except for the inclusion of a higher load forecast; and

(b) use the same inputs and assumptions as for the Reference Scenario, except for the inclusion of a lower load forecast.

…

7.11B. Determination of Market Clearing Prices

…

Explanatory Note:

The Reference Scenario will continue to be used to determine Market Clearing Prices.

7.11B.1A. Subject to clause 7.11D.5, if AEMO fails to run the Dispatch Algorithm for the purposes of the Central Dispatch Process for a Dispatch Interval, then AEMO must:

(a) determine the Market Clearing Prices for the Dispatch Interval from the Reference Scenario for the Dispatch Interval in the Market Schedule identified in accordance with clause 7.11B.1B; and

(b) determine the information identified in clauses 7.13.1BA, 7.13.1DA and 7.13.1EA for the Dispatch Interval using the Reference Scenario for the Dispatch Interval in the Market Schedule identified in accordance with clause 7.11B.1B.

…

7.11C. Corrections to Price Determinations and Intervention Pricing

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7.11C.2. Where AEMO determines that a Dispatch Interval is an Affected Dispatch Interval, AEMO must, by noon on the first Business Day following the end of the Trading Day which contains the Dispatch Interval:

(a) replace all Market Clearing Prices for the Dispatch Interval with the Market Clearing Prices from the Reference Scenario for the Dispatch Interval in the Market Schedule identified in accordance with clause 7.11B.1B;

(b) if AEMO has already calculated the relevant Reference Trading Price, recalculate and adjust the Reference Trading Price, in accordance with clause 7.11A.1(b); and

(c) determine the information identified in clauses 7.13.1BA, 7.13.1DA and 7.13.1EA for the Dispatch Interval using the Reference Scenario for the Dispatch Interval in the Market Schedule identified in accordance with clause 7.11B.1B.

…

7.13. Settlement and Monitoring Data

…

Explanatory Note:

EPWA seeks feedback from stakeholders on whether the requirement in clause 7.13.1I should apply to the Available Capacity Scenario as well as the Reference Scenario.

7.13.1I. AEMO must publish the following information on the WEM Website as soon as practicable after it has made the information available to Market Participants:

(a) the information referred to in clauses 7.13.1, 7.13.1B, 7.13.1BA, 7.13.1C, 7.13.1CA, 7.13.1CB, 7.13.1CC, 7.13.1CD, 7.13.1G and 7.13.1H; and

(b) the information referred to in clause 7.13.1A for the Reference Scenario of the applicable Market Schedule.

…

Not In-Service Capacity

7.13A. Not In-Service Capacity

Explanatory Note:

Clause 7.13A.1(b) is amended to use the correct defined term.

7.13A.1. Subject to clause 7.11D.5, AEMO must determine the Not In-Service Capacity for each Scheduled Facility or Semi-Scheduled Facility f for which a Market Participant holds Capacity Credits, in the Dispatch Interval DI as:

(a) if AEMO has failed to use the Dispatch Algorithm for the purposes of the Central Dispatch Process for Dispatch Interval DI or AEMO has determined that Dispatch Interval DI is an Affected Dispatch Interval:

NISCap(f,DI) = 0

(b) if clause 7.13A.1(a) does not apply and AEMO has directed a Registered Facility to offer its capacity as ~~In Service~~ In-Service Capacity:

NISCap(f,DI) = Max(0, Min(RCOQ(f,DI), ReqDispEnergy(f,DI)) – Max(ISSDCEnergy(f,DI), ISDispEnergy(f,DI))

or

(c) otherwise:

NISCap(f,DI) = Max(0, Min(RCOQ(f,DI), EstDispEnergy(f,DI)) – Max(ISSDCEnergy(f,DI), ISDispEnergy(f,DI))

where:

i. NISCap(f,DI) is the Not In-Service Capacity quantity for the relevant Facility f in Dispatch Interval DI;

ii. EstDispEnergy(f,DI) is the quantity of estimated energy dispatch immediately prior to the Start Decision Cutoff time for the relevant Facility f in Dispatch Interval DI, calculated in accordance with clause 7.13A.2;

iii. ISSDCEnergy(f,DI) is the quantity of In-Service Capacity offered immediately after the Start Decision Cutoff time for the relevant Facility f in Dispatch Interval DI, calculated in accordance with clause 7.13A.3;

iv. ISDispEnergy(f,DI) is the total MW quantity of In-Service Capacity for the relevant Facility f included in the Real-Time Market Offers for

energy that were used to formulate Dispatch Instructions and calculate Market Clearing Prices for Dispatch Interval DI; and

v. ReqDispEnergy(f,DI) is the quantity of In-Service Capacity for the relevant Facility f required by AEMO in Dispatch Interval DI.

Explanatory Note:

Clause 7.13A.2 is amended to replace references to the Reference Scenario with references to the Available Capacity Scenario.

7.13A.2. EstDispEnergy(f, DI) for each Scheduled Facility or Semi-Scheduled Facility f in Dispatch Interval DI is determined from the most recent Market Schedule made available to Market Participants before the Start Decision Cutoff from the Price-Quantity Pair for Injection for the relevant Facility f with the longest minimum time to synchronise, as specified in clause 7.4.40(g)(i)(3), as applicable:

(a) where at least one Dispatch Schedule has been made available to Market Participants that contains Dispatch Interval DI within a Trading Interval, the total MW quantity of energy scheduled for dispatch by the Dispatch Algorithm in the Dispatch Interval DI for the relevant Facility f determined in the ~~Reference~~ Available Capacity Scenario of the Dispatch Schedule; or

(b) where at least one Pre-Dispatch Schedule has been made available to Market Participants that contains Dispatch Interval DI within a Trading Interval, then the total MW quantity of energy scheduled for dispatch by the Dispatch Algorithm in the Trading Interval for the relevant Facility f determined in the ~~Reference~~ Available Capacity Scenario of the Pre-Dispatch Schedule; or

(c) where at least one Week-Ahead Schedule has been made available to Market Participants that contains Dispatch Interval DI within a Trading Interval, then the total MW quantity of energy scheduled for dispatch by the Dispatch Algorithm in the Trading Interval for the relevant Facility f determined in the ~~Reference~~ Available Capacity Scenario of the Week-Ahead Schedule; or

(d) otherwise, zero.

7.13A.3. ISSDCEnergy(f,DI) for each Scheduled Facility or Semi-Scheduled Facility f in Dispatch Interval DI is determined from the most recent Market Schedule made available to Market Participants after the Start Decision Cutoff from the Price-Quantity Pair for Injection for the relevant Facility f with the longest minimum time to synchronise, as specified in clause 7.4.40(g)(i)(3), as applicable:

(a) where at least one Dispatch Schedule has been made available to Market Participants that contains Dispatch Interval DI within a Trading Interval, the total MW quantity of In-Service Capacity included in the Real-Time Market Submission for energy from the relevant Facility f in the Dispatch Interval DI; or

(b) where at least one Pre-Dispatch Schedule has been made available to Market Participants that contains Dispatch Interval DI within a Trading Interval, the total MW quantity of In-Service Capacity included in the Real-Time Market Submission for energy from the relevant Facility f in the Trading Interval; or

(c) where at least one Week-Ahead Schedule has been made available to Market Participants that contains Dispatch Interval DI within a Trading Interval, the total MW quantity of In-Service Capacity included in the Real-Time Market Submission for energy from the relevant Facility f in the Trading Interval; or

(d) otherwise, zero.

Congestion Rental

7.14. Calculation of Congestion Rental

Explanatory Note:

Clause 7.14.1 is amended to clarify that the set of "Network Constraints" considered under the clause includes Constraints that are deemed to be Network Constraints under new clause 7.7.8A.

7.14.1. Subject to clause 7.11D.5, AEMO must calculate for each Scheduled Facility or Semi-Scheduled Facility and each Dispatch Interval of a Trading Day, the Congestion Rental in respect of the full set of Network Constraints invoked in the Dispatch Algorithm (including Constraints deemed to be Network Constraints under clause 7.7.8A). The Congestion Rental for Registered Facility f in Dispatch Interval DI is:

$$\text{CongestionRental}(f,DI) = \sum_{n \in N} \text{ConstraintCoefficient}(f,n,DI) \times \text{MarginalConstraintValue}(n,DI)$$

where:

(a) ConstraintCoefficient(f,n,DI) is the coefficient of Registered Facility f in respect of the cleared energy quantity of Registered Facility f in Network Constraint n in Dispatch Interval DI;

(b) MarginalConstraintValue(n,DI) is the marginal value of Network Constraint n in Dispatch Interval DI; and

(c) $n \in N$ denotes all Network Constraints applied in Dispatch Interval DI.

…

Explanatory Note:

New section 7.17 sets out the calculation rules for Estimated FCESS Uplift Payments. The calculation is based on the final settlement calculations, but uses alternative inputs if the final inputs are unavailable in the relevant timeframe (e.g. Market Clearing Price for energy instead of Final Reference Trading Price).

Note the new section is numbered 7.17 because although sections 7.15.and 7.16 do not yet exist, they will be inserted in the WEM Rules by the Wholesale Electricity Market Amendment (Cost Allocation Reform) Rules 2024.

Estimated FCESS Uplift Payments

7.17. Calculation of Estimated FCESS Uplift Payments

7.17.1. The Estimated FCESS Uplift Payment for a Scheduled Facility or Semi-Scheduled Facility f in Dispatch Interval DI is:

$$\text{EstFCESSUpliftPayment}(f,DI) = \begin{cases} 0, \text{ if } \sum_{m \in FCESS} \text{EnablementQty}(m,f,DI) = 0 \\ 0, \text{ if DispatchTarget}(f,DI) \leq 0 \\ \text{Max}(0, \text{RTMDispatchCost}(f,DI) - \text{RTMBaseCompensation}(f,DI)), \text{ otherwise} \end{cases}$$

where:

(a) $m \in FCESS$ denotes each of the Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and Regulation Lower Frequency Co-optimised Essential System Services;

(b) EnablementQty(m,f,DI) is the Essential System Service Enablement Quantity for Registered Facility f in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario;

(c) DispatchTarget(f,DI) is the Dispatch Target for Registered Facility f in Dispatch Interval DI, as calculated for the relevant Market Schedule and Scenario;

(d) RTMDispatchCost(f,DI) is the estimated Real-Time Market dispatch cost based on Real-Time Market Offers for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 7.17.2; and

(e) RTMBaseCompensation(f,DI) is the Real-Time Market base compensation amount for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 7.17.3.

7.17.2. For the purposes of clause 7.17.1, the estimated Real-Time Market dispatch cost based on Real-Time Market Offers for Registered Facility f in Dispatch Interval DI is:

$$\text{RTMDispatchCost}(f,DI) = \left(\sum_{epq \in \text{EnergyOffer}(f,DI)} (\text{ClearedEnergyQty}(f,DI,epq) \times \text{EnergyPrice}(f,DI,epq)) + \sum_{m \in \text{FCESS}} \sum_{fpq \in \text{FCESSOffer}(m,f,DI)} (\text{ClearedQty}(m,f,DI,fpq) \times \text{FCESSPrice}(m,f,DI,fpq) \times \text{PF}(m,f,DI)) \right) \times \frac{5}{60}$$

where:

(a) epq∈EnergyOffer(f,DI) denotes all Price-Quantity Pairs in the Real-Time Market Offer for energy for Registered Facility f in Dispatch Interval DI that are not excluded in the relevant Scenario;

(b) ClearedEnergyQty(f,DI,epq) is the part of the quantity from Price-Quantity Pair epq that is included in the estimated FCESS Minimum Dispatch Target (as calculated in accordance with clause 7.17.4 for the relevant Market Schedule and Scenario) for Registered Facility f in Dispatch Interval DI;

(c) EnergyPrice(f,DI,epq) is the price specified in Price-Quantity Pair epq for Registered Facility f in Dispatch Interval DI;

(d) m∈FCESS denotes each of the Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and Regulation Lower Frequency Co-optimised Essential System Services;

(e) fpq∈FCESSOffer(m,f,DI) denotes all Price-Quantity Pairs fpq in the Real-Time Market Offer for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m (if one exists) that are not excluded in the relevant Scenario;

(f) ClearedQty(m,f,DI,fpq) is the part of the quantity from Price-Quantity Pair fpq that is included in the relevant Essential System Service Enablement Quantity determined for Registered Facility f in Dispatch Interval DI for the relevant Market Schedule and Scenario;

(g) FCESSPrice(m,f,DI,fpq) is the price specified in Price-Quantity Pair fpq for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m;

(h) PF(m,f,DI) is the Facility Performance Factor for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m as determined for the relevant Market Schedule and Scenario; and

(i) 5/60 represents the period of a Dispatch Interval in hours.

7.17.3. For the purposes of clause 7.17.1, the estimated Real-Time Market base compensation amount for Registered Facility f in Dispatch Interval DI is:

RTMBaseCompensation(f,DI)

$$= \left(\text{FCESSMinDispatchTarget}(f,DI) \times \text{EMCP}(DI) \times \text{LF}(f,DI) + \sum_{m \in \text{FCESS}} (\text{EnablementQty}(m,f,DI) \times \text{MCP}(m,DI) \times \text{PF}(m,f,DI)) \right) \times \frac{5}{60}$$

where:

(a) FCESSMinDispatchTarget(f,DI) is the estimated FCESS Minimum Dispatch Target (as calculated in accordance with clause 7.17.4) for Registered Facility f in Dispatch Interval DI for the relevant Market Schedule and Scenario;

(b) EMCP(DI) is the Market Clearing Price for energy for Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario;

(c) LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;

(d) m∈FCESS denotes each of the Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and Regulation Lower Frequency Co-optimised Essential System Services;

(e) EnablementQty(m,f,DI) is the Essential System Service Enablement Quantity for Registered Facility f in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario;

(f) MCP(m,DI) is the Market Clearing Price for Frequency Co-optimised Essential System Service m in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario;

(g) PF(m,f,DI) is the Facility Performance Factor for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m as determined for the relevant Market Schedule and Scenario; and

(h) 5/60 represents the period of a Dispatch Interval in hours.

7.17.4. For the purposes of clauses 7.17.2 and 7.17.3, the estimated FCESS Minimum Dispatch Target for Registered Facility f in Dispatch Interval DI is:

FCESSMinDispatchTarget(f,DI) = max(0, Raise_MinDT(f,DI), Lower_MinDT(f,DI))

where:

(a) Raise_MinDT(f,DI) is the minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Raise and Regulation Raise in Dispatch Interval DI, as calculated in accordance with clause 7.17.5; and

(b) Lower_MinDT(f,DI) is the minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Lower and Regulation

Lower in Dispatch Interval DI, as calculated in accordance with clause 7.17.6.

7.17.5. For the purposes of clause 7.17.4, the estimated minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Raise and Regulation Raise in Dispatch Interval DI is:

$$Raise\_MinDT(f,DI) = \begin{cases} \max(EM\_CR(f,DI), EM\_RR(f,DI)), \\ \text{if } CR\_EnablementQuantity(f,DI) > 0 \text{ and } RR\_EnablementQuantity(f,DI) > 0 \\ EM\_CR(f,DI), \text{ if } CR\_EnablementQuantity(f,DI) > 0 \text{ and } RR\_EnablementQuantity \leq 0 \\ EM\_RR(f,DI), \text{ if } RR\_EnablementQuantity(f,DI) > 0 \text{ and } CR\_EnablementQuantity \leq 0 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) EM_CR(f,DI) is the Enablement Minimum for Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;

(b) EM_RR(f,DI) is the Enablement Minimum for Regulation Raise for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;

(c) CR_EnablementQuantity(f,DI) is the Essential System Service Enablement Quantity for Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario; and

(d) RR_EnablementQuantity(f,DI) is the Essential System Service Enablement Quantity for Regulation Raise for Registered Facility f in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario.

7.17.6. For the purposes of clause 7.17.4, the estimated minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Lower and Regulation Lower in Dispatch Interval DI is:

$$Lower\_MinDT(f,DI) = \begin{cases} CL\_EnablementQuantity(f,DI) + RL\_EnablementQuantity(f,DI) + \\ \max(EM\_CL(f,DI), EM\_RL(f,DI)), \\ \text{if } CL\_EnablementQuantity(f,DI) > 0 \text{ and } RL\_EnablementQuantity(f,DI) > 0 \\ EM\_CL(f,DI) + CL\_EnablementQuantity(f,DI), \\ \text{if } CL\_EnablementQuantity(f,DI) > 0 \text{ and } RL\_EnablementQuantity(f,DI) \leq 0 \\ EM\_RL(f,DI) + RL\_EnablementQuantity(f,DI), \\ \text{if } RL\_EnablementQuantity(f,DI) > 0 \text{ and } CL\_EnablementQuantity(f,DI) \leq 0 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) CL_EnablementQuantity(f,DI) Essential System Service Enablement Quantity for Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario;

(b) RL_EnablementQuantity(f,DI) is the Essential System Service Enablement Quantity for Regulation Lower for Registered Facility f in Dispatch Interval DI as calculated for the relevant Market Schedule and Scenario;

(c) EM_CL(f,DI) is the Enablement Minimum for Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52; and

(d) EM_RL(f,DI) is the Enablement Minimum for Regulation Lower for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52.

…

9.9. Settlement Calculations – Real-Time Energy

…

Explanatory Note:

Clauses 9.9.8 and 9.9.9 are amended to conform with settlement calculation standards by extending the IsMisPriced(f,DI) calculation in clause 9.9.9 to include all the relevant tests.

Additionally, clause 9.9.9(f) is amended to allow a Registered Facility providing RoCoF Control Service to be eligible for an Energy Uplift Payment.

9.9.8. The Energy Uplift Payment for Registered Facility f in Dispatch Interval DI is:

$$EnergyUpliftPayment(f,DI) = IsMisPriced(f,DI) \times EnergyUpliftPrice(f,DI) \times EnergyUpliftQuantity(f,DI)$$

where:

(a) IsMisPriced(f,DI) is the mispricing trigger for Registered Facility f in Dispatch Interval DI ~~which will equal 1 when AEMO has suspended the Real-Time Market under clause 7.11D.1 in the Dispatch Interval or~~ determined as either 1 or 0 calculated in accordance with clause 9.9.9;

(b) EnergyUpliftPrice(f,DI) is the Energy Uplift Price for Registered Facility f in Dispatch Interval DI calculated in accordance with clause 9.9.10; and

(c) EnergyUpliftQuantity(f,DI) is the Energy Uplift Quantity for Registered Facility f in Dispatch Interval DI calculated in accordance with clause 9.9.11.

9.9.9. The mispricing trigger for Registered Facility f in Dispatch Interval DI is:

~~IsMisPriced(f,DI) = { 1, if ClearedQuantity(f,DI) > 0 and CongestionRental(f,DI) > 0 and MarginalOfferPrice(f,DI) > Energy_MCP(DI) and f ∉ FacilitiesInBindingDownRampRate(DI) and f ∉ FacilitiesInBindingESSEnablementMinimum(DI) and ∀ c (f ∉ FacilitiesInBindingNCESS(c,DI)) ; 0, otherwise~~

IsMisPriced(f,DI) = { 1, if RTMSuspFlag(DI) = 1 ; 1, if ClearedQuantity(f,DI) > 0 and and CongestionRental(f,DI) > 0 MarginalOfferPrice(f,DI) > Energy_MCP(DI) and f ∉ FacilitiesInBindingDownRampRate(DI) and f ∉ FacilitiesInBindingESSEnablementMinimum(DI) and ∀ c (f ∉ FacilitiesInBindingNCESS(c,DI)) ; 0, otherwise

where:

(a) RTMSuspFlag(DI) is the RTM Suspension Flag for Dispatch Interval DI;

(~~a~~aA) ClearedQuantity(f,DI) is the cleared energy quantity for Registered Facility f in Dispatch Interval DI as recorded in the relevant Dispatch Instruction (where this quantity can be a Dispatch Target, Dispatch Cap or Dispatch Forecast);

(b) CongestionRental(f,DI) is the Congestion Rental for Registered Facility f in Dispatch Interval DI in respect of a set of Network Constraints N as published under clause 7.13.1EA(b);

(c) MarginalOfferPrice(f,DI) is the highest price associated with any cleared Price-Quantity Pair in respect of a Market Participant's Real-Time Market Submission for energy that was dispatched for Registered Facility f in Dispatch Interval DI;

(d) Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI;

(e) FacilitiesInBindingDownRampRate(DI) is the set of Registered Facilities whose EOI Quantity is higher than it would otherwise be in Dispatch Interval DI as a result of a binding ramp rate constraint applied under clause 7.2.4(c); and

(f) FacilitiesInBindingESSEnablementMinimum(DI) is the set of Registered Facilities whose EOI Quantity is constrained to its Enablement Minimum value in Dispatch Interval DI, as a result of a binding Essential System Service Enablement Minimum constraint applied under clause 7.8.5(b)(i) for a Frequency Co-optimised Essential System Service other than RoCoF Control Service; and

(g) FacilitiesInBindingNCESS(c,DI) is the set of Registered Facilities provided under clause 5.9.1(b) for NCESS Contract c and Dispatch Interval DI.

Explanatory Note:

Clause 9.9.10 is amended to clarify that the Marginal Offer Price should be determined from Price-Quantity Pairs for In-Service Capacity only, and that no Energy Uplift Payments should be made for capacity not offered as In-Service Capacity.

9.9.10. The Energy Uplift Price for Registered Facility f in Dispatch Interval DI is:

~~EnergyUpliftPrice(f,DI) = Max(0, (MarginalOfferPrice(f,DI) – ReferenceTradingPrice(t)))~~

$$\text{EnergyUpliftPrice(f,DI)} = \begin{cases} 0, \text{ if InServiceTrancheCount=0} \\ \text{Max}\left(0,\left(\text{MarginalOfferPrice(f,DI)} - \text{ReferenceTradingPrice(t)}\right)\right), \text{ otherwise} \end{cases}$$

where:

(a) InServiceTrancheCount is the number of Price-Quantity Pairs for non-zero quantities of In-Service Capacity in the Real-Time Market Offer for energy for Registered Facility f in Dispatch Interval DI;

(~~a~~b) MarginalOfferPrice(f,DI) is:

i. the highest price associated with any cleared (or scheduled) Price-Quantity Pair for In-Service Capacity in respect of a Market Participant's Real-Time Market ~~Submission~~ Offer for energy that was dispatched for Registered Facility f in Dispatch Interval DI; or

ii. if AEMO has suspended the Real-Time Market under clause 7.11D.1, the highest price Price-Quantity Pair in respect of a Market Participant's Real-Time Market Submission for energy associated with the MW Injection or Withdrawal of Registered Facility f for Dispatch Interval DI as monitored by AEMO's SCADA system as prepared under clause 7.13.1E(a)(vi); and

(~~b~~c) ReferenceTradingPrice(t) is the Final Reference Trading Price for Trading Interval t containing Dispatch Interval DI.

…

9.10. Settlement Calculations - Essential System Services

…

Explanatory Note:

Clauses 9.10.3B to 9.10.3O are amended, and new clause 9.10.3HA inserted, to:

- remove FCESS Uplift Payments for the provision of RoCoF Control Service; and
- amend the FCESS Uplift Payment calculation to avoid overcompensating a Market Participant when a Facility's enablement losses are partially or completely covered by other Real-Time Market payments.

Under the proposed changes, a Facility is only eligible for an FCESS Uplift Payment in a Dispatch Interval if:

- AEMO has not suspended the Real-Time Market;
- the Facility is a Scheduled Facility or Semi-Scheduled Facility that has been issued a Dispatch Target greater than zero;
- the Facility is not eligible for an Energy Uplift Payment in the Dispatch Interval (i.e. its IsMisPriced flag is equal to zero); and
- the Facility has a non-zero Essential System Service Enablement Quantity for one or more of Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise or Regulation Lower (as adjusted by AEMO under clauses 9.10.6(c), 9.10.10(c), 9.10.22(c) and 9.10.23(c)).

These criteria are the same as the current criteria, except that provision of RoCoF Control Service no longer qualifies a Facility for an FCESS Uplift Payment.

The revised FCESS Uplift Payment is equal to the amount by which the Facility's "estimated dispatch cost" exceeds its "base compensation amount". The estimated dispatch cost is calculated as the sum of:

- the Facility's deemed energy provision costs, determined using the offer price for each dispatched tranche of energy in its "FCESS Minimum Dispatch Target"; and
- the Facility's deemed FCESS provision costs, determined using the offer price for each dispatched tranche of the FCESS in its adjusted Essential System Service Enablement Quantity, and taking the applicable Facility Performance Factor into account.

The base compensation amount is calculated as the sum of:

- the Facility's FCESS Minimum Dispatch Target multiplied by the relevant price for that energy (i.e. the product of the applicable Reference Trading Price and the Facility's Loss Factor); and
- the base payment made for each of the four applicable FCESS (i.e. the product of adjusted Essential System Service Enablement Quantity, final Market Clearing Price and Performance Factor).

The FCESS Minimum Dispatch Target, determined under a new clause 9.10.3G, is the minimum theoretical Dispatch Target from which the Facility would have been able to provide the Essential System Service Enablement Quantities that were determined for the Facility for the Dispatch Interval. It is usually the same as the Facility's Dispatch Target for the Dispatch Interval, but may be a lower value if, for example, the Facility is ramping down due to an energy price change and is subject to a binding ramp down rate constraint in the Dispatch Interval.

The revised calculation is intended to ensure that if FCESS Market Clearing Prices are high enough to cover a Facility's enablement losses, the FCESS Uplift Payment does not over-compensate the Market Participant.

9.10.3B. The FCESS Uplift Payment for Registered Facility f in Trading Interval t is:

$$\text{FCESSUpliftPayment}(f,t) = \sum_{DI \in t} \text{FCESSUpliftPayment}(f,DI)$$

where:

(a) FCESSUpliftPayment(f,DI) is the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI as calculated under ~~clause 9.10.3H~~ clause 9.10.3C; and

(b) DI∈t denotes all Dispatch Intervals DI in Trading Interval t.

~~9.10.3C. The Enablement Losses in respect of Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI are:~~

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

$$EnablementLosses\_CR(f,DI) = Max(0, EL\_CR\_Factor(f,DI) \times \frac{5}{60} \times LF(f,DI) \times Max(0, EM\_CR(f,DI)) \times (LFAOP(f,DI) - Energy\_MCP(DI)))$$

~~where:~~

~~i. EL_CR_Factor(f,DI) is:~~

~~1. 1 if:~~

~~i. CR_EnablementQuantity(f,DI), determined in accordance with clause 9.10.6(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and~~

~~ii. IsMisPriced(f,DI), determined in accordance with clause 9.9.9 for Registered Facility f in Dispatch Interval DI, is equal to zero; and~~

~~2. zero otherwise;~~

~~ii. 5/60 represents the period of a Dispatch Interval in hours;~~

~~iii. LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;~~

~~iv. EM_CR(f,DI) is the Enablement Minimum for Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;~~

~~v. LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy which corresponds to the Enablement Minimum for Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI, as specified in the relevant Real-Time Market Submission; and~~

~~vi. Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI; and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~$EnablementLosses\_CR(f,DI) = 0$~~

~~9.10.3D. The Enablement Losses in respect of Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI are:~~

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~$$EnablementLosses\_CL(f,DI) = Max(0, EL\_CL\_Factor(f,DI) \times \frac{5}{60} \times LF(f,DI) \times Max(0, EM\_CL(f,DI)) \times (LFAOP(f,DI) - Energy\_MCP(DI)))$$~~

~~where:~~

~~i. EL_CL_Factor(f,DI) is:~~

~~1. 1 if:~~

~~i. CL_EnablementQuantity(f,DI), determined in accordance with clause 9.10.10(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and~~

~~ii. IsMisPriced(f,DI), determined in accordance with clause 9.9.9 for Registered Facility f in Dispatch Interval DI, is equal to zero; and~~

~~2. zero otherwise;~~

~~ii. 5/60 represents the period of a Dispatch Interval in hours;~~

~~iii. LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;~~

~~iv. EM_CL(f,DI) is the Enablement Minimum for Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;~~

~~v. LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy which corresponds to the Enablement Minimum for Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI, as specified in the relevant Real-Time Market Submission; and~~

~~vi. Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI; and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~$EnablementLosses\_CL(f,DI) = 0$~~

~~9.10.3E. The Enablement Losses in respect of RoCoF Control Service for Registered Facility f in Dispatch Interval DI are:~~

(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:

$$EnablementLosses\_RCS(f,DI) = Max(0, EL\_RCS\_Factor(f,DI) \times \frac{5}{60} \times LF(f,DI) \times Max(0, EM\_RCS(f,DI)) \times (LFAOP(f,DI) - Energy\_MCP(DI)))$$

where:

i. EL_RCS_Factor(f,DI) is:

1. 1 if:

i. RCS_EnablementQuantity(f,DI), determined in accordance with clause 9.10.14(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and

ii. IsMisPriced(f,DI), determined in accordance with clause 9.9.9 for Registered Facility f in Dispatch Interval DI, is equal to zero; and

2. zero otherwise;

ii. 5/60 represents the period of a Dispatch Interval in hours;

iii. LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;

iv. EM_RCS(f,DI) is the Enablement Minimum for RoCoF Control Service for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.42(b) and updated by AEMO, if applicable, under clause 7.4.52;

v. LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy which corresponds to the Enablement Minimum for RoCoF Control Service for Registered Facility f in Dispatch Interval DI, as specified in the relevant Real-Time Market Submission; and

vi. Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI; and

(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:

$$EnablementLosses\_RCS(f,DI) = 0$$

9.10.3F. The Enablement Losses in respect of Regulation Raise for Registered Facility f in Dispatch Interval DI are:

(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:

$$EnablementLosses\_RR(f,DI) = Max(0, EL\_RR\_Factor(f,DI) \times \frac{5}{60} \times LF(f,DI) \times Max(0, EM\_RR(f,DI)) \times (LFAOP(f,DI) - Energy\_MCP(DI)))$$

where:

i. EL_RR_Factor(f,DI) is:

1. 1 if:

i. RR_EnablementQuantity(f,DI), determined in accordance with clause 9.10.22(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and

ii. IsMisPriced(f,DI), determined in accordance with clause 9.9.9 for Registered Facility f in Dispatch Interval DI, is equal to zero; and

2. zero otherwise;

ii. 5/60 represents the period of a Dispatch Interval in hours;

iii. LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;

iv. EM_RR(f,DI) is the Enablement Minimum for Regulation Raise for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;

v. LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy which corresponds to the Enablement Minimum for Regulation Raise for Registered Facility f in Dispatch Interval DI, as specified in the relevant Real-Time Market Submission; and

vi. Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI; and

(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:

$$EnablementLosses\_RR(f,DI) = 0$$

9.10.3G. The Enablement Losses in respect of Regulation Lower for Scheduled Facility or Semi-Scheduled Facility f in Dispatch Interval DI are:

(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:

$$EnablementLosses\_RL(f,DI) = Max(0, EL\_RL\_Factor(f,DI) \times \frac{5}{60} \times LF(f,DI) \times Max(0, EM\_RL(f,DI)) \times (LFAOP(f,DI) - Energy\_MCP(DI)))$$

where:

i. EL_RL_Factor(f,DI) is:

1. 1 if:

i. RL_EnablementQuantity(f,DI), determined in accordance with clause 9.10.23(c) for Registered

Facility f in Dispatch Interval DI, is greater than zero; and

ii. IsMisPriced(f,DI), determined in accordance with clause 9.9.9 for Registered Facility f in Dispatch Interval DI, is equal to zero; and

2. zero otherwise;

ii. 5/60 represents the period of a Dispatch Interval in hours;

iii. LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;

iv. EM_RL(f,DI) is the Enablement Minimum for Regulation Lower for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;

v. LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy which corresponds to the Enablement Minimum for Regulation Lower for Registered Facility f in Dispatch Interval DI, as specified in the relevant Real-Time Market Submission; and

vi. Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI; and

(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:

EnablementLosses_RL(f,DI) = 0

9.10.3H. The FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI is zero if AEMO has suspended the Real-Time Market under clause 7.11D.1, otherwise:

FCESSUpliftPayment(f,DI) =Max(EnablementLosses_CR(f,DI),

EnablementLosses_CL(f,DI), EnablementLosses_RCS(f,DI),

EnablementLosses_RR(f,DI), EnablementLosses_RL(f,DI))

where:

(a) EnablementLosses_CR(f,DI) is the Enablement Losses in respect of Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.10.3C;

(b) EnablementLosses_CL(f,DI) is the Enablement Losses in respect of Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.10.3D;

(c) EnablementLosses_RCS(f,DI) is the Enablement Losses in respect of RoCoF Control Service for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.10.3E;

~~(d) EnablementLosses_RR(f,DI) is the Enablement Losses in respect of Regulation Raise for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.10.3F; and~~

~~(e) EnablementLosses_RL(f,DI) is the Enablement Losses in respect of Regulation Lower for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.10.3G.~~

9.10.3C. The FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI is:

$$\text{FCESSUpliftPayment}(f,DI) = \begin{cases} \text{Max}(0,\text{RTMDispatchCost}(f,DI) - \text{RTMBaseCompensation}(f,DI)), & \text{if FCESSUpliftEligibleFlag}(f,DI) = 1 \\ 0, & \text{otherwise} \end{cases}$$

where:

(a) RTMDispatchCost(f,DI) is the estimated Real-Time Market dispatch cost based on Real-Time Market Offers for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 9.10.3D;

(b) RTMBaseCompensation(f,DI) is the Real-Time Market base compensation amount for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 9.10.3E; and

(c) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 9.10.3F.

9.10.3D. The estimated Real-Time Market dispatch cost based on Real-Time Market Offers for Registered Facility f in Dispatch Interval DI is:

$$\text{RTMDispatchCost}(f,DI) = \left(\sum_{epq \in \text{EnergyOffer}(f,DI)} (\text{ClearedEnergyQty}(f,DI,epq) \times \text{EnergyPrice}(f,DI,epq)) + \sum_{m \in \text{FCESS}} \sum_{fpq \in \text{FCESSOffer}(m,f,DI)} (\text{ClearedQty}(m,f,DI,fpq) \times \text{FCESSPrice}(m,f,DI,fpq) \times \text{PF}(m,f,DI)) \right) \times \frac{5}{60}$$

where:

(a) epq∈EnergyOffer(f,DI) denotes all Price-Quantity Pairs for In-Service Capacity epq in the Real-Time Market Offer for energy for Registered Facility f in Dispatch Interval DI;

(b) ClearedEnergyQty(f,DI,epq) is the part of the quantity from Price-Quantity Pair epq that is included in the FCESS Minimum Dispatch Target for Registered Facility f in Dispatch Interval DI;

(c) EnergyPrice(f,DI,epq) is the price specified in Price-Quantity Pair epq for Registered Facility f in Dispatch Interval DI;

(d) m∈FCESS denotes each of the Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and Regulation Lower Frequency Co-optimised Essential System Services;

(e) fpq∈FCESSOffer(m,f,DI) denotes all Price-Quantity Pairs for In-Service Capacity fpq in the Real-Time Market Offer for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m (if one exists);

(f) ClearedQty(m,f,DI,fpq) is the part of the quantity from Price-Quantity Pair fpq that is included in the relevant Essential System Service Enablement Quantity determined for Registered Facility f in Dispatch Interval DI in accordance with clauses 9.10.6(c), 9.10.10(c), 9.10.22(c) or 9.10.23(c) as applicable;

(g) FCESSPrice(m,f,DI,fpq) is the price specified in Price-Quantity Pair fpq for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m;

(h) PF(m,f,DI) is the Facility Performance Factor for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m as determined by AEMO under clause 7.11D.2(b)(iv) or published under clauses 7.13.1B(k) or 7.13.1BA(j); and

(i) 5/60 represents the period of a Dispatch Interval in hours.

9.10.3E. The Real-Time Market base compensation amount for Registered Facility f in Dispatch Interval DI is:

$$\text{RTMBaseCompensation}(f,DI) = \left(\text{FCESSMinDispatchTarget}(f,DI) \times \text{ReferenceTradingPrice}(t) \times \text{LF}(f,DI) + \sum_{m \in \text{FCESS}} (\text{EnablementQty}(m,f,DI) \times \text{MCP}(m,DI) \times \text{PF}(m,f,DI)) \right) \times \frac{5}{60}$$

where:

(a) FCESSMinDispatchTarget(f,DI) is the FCESS Minimum Dispatch Target for Registered Facility f in Dispatch Interval DI calculated accordance with clause 9.10.3G;

(b) ReferenceTradingPrice(t) is the Final Reference Trading Price for the Trading Interval t that contains Dispatch Interval DI;

(c) LF(f,DI) is the Loss Factor applicable to the Measurement Point associated with Registered Facility f in Dispatch Interval DI;

(d) $m \in FCESS$ denotes each of the Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and Regulation Lower Frequency Co-optimised Essential System Services;

(e) EnablementQty(m,f,DI) is the Essential System Service Enablement Quantity for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m (as adjusted in accordance with clauses 9.10.6(c), 9.10.10(c), 9.10.22(c) or 9.10.23(c) as applicable);

(f) MCP(m,DI) is the final Market Clearing Price for Frequency Co-optimised Essential System Service m in Dispatch Interval DI;

(g) PF(m,f,DI) is the Facility Performance Factor for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m as determined by AEMO under clause 7.11D.2(b)(iv) or published under clauses 7.13.1B(k) or 7.13.1BA(j); and

(h) 5/60 represents the period of a Dispatch Interval in hours.

9.10.3F. The FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI is:

$$FCESSUpliftEligibleFlag(f,DI) = \begin{cases} 1, \text{ if } RTMSuspFlag(DI)=0 \\ \text{and } f \in EligibleFacilities(DI) \\ \text{and } IsMisPriced(f,DI)=0 \\ \text{and } DispatchTarget(f,DI)>0 \\ \text{and } \sum_{m \in FCESS} EnablementQty(m,f,DI) > 0 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) RTMSuspFlag(DI) is the RTM Suspension Flag for Dispatch Interval DI;

(b) EligibleFacilities(DI) is the set of Scheduled Facilities and Semi-Scheduled Facilities in Dispatch Interval DI;

(c) IsMisPriced(f,DI) is the mispricing trigger for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.9.9;

(d) DispatchTarget(f,DI) is the Dispatch Target for Registered Facility f in Dispatch Interval DI;

(e) $m \in FCESS$ denotes each of the Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and Regulation Lower Frequency Co-optimised Essential System Services; and

(f) EnablementQty(m,f,DI) is the Essential System Service Enablement Quantity for Registered Facility f in Dispatch Interval DI for Frequency Co-optimised Essential System Service m, determined in accordance with clauses 9.10.6(c), 9.10.10(c), 9.10.22(c) or 9.10.23(c) as applicable.

9.10.3G. The FCESS Minimum Dispatch Target for Registered Facility f in Dispatch Interval DI is:

FCESSMinDispatchTarget(f,DI)

$$= \begin{cases} \max(0, \text{Raise\_MinDT}(f,DI), \text{Lower\_MinDT}(f,DI)), \\ \quad \text{if FCESSUpliftEligibleFlag}(f,DI)=1 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) Raise_MinDT(f,DI) is the minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Raise and Regulation Raise in Dispatch Interval DI, as calculated in accordance with clause 9.10.3H;

(b) Lower_MinDT(f,DI) is the minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Lower and Regulation Lower in Dispatch Interval DI, as calculated in accordance with clause 9.10.3HA; and

(c) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, as calculated in accordance with clause 9.10.3F.

9.10.3H. The minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Raise and Regulation Raise in Dispatch Interval DI is:

Raise_MinDT(f,DI)

$$= \begin{cases} \max(\text{EM\_CR}(f,DI), \text{EM\_RR}(f,DI)), \\ \quad \text{if CR\_EnablementQuantity}(f,DI) > 0 \text{ and RR\_EnablementQuantity}(f,DI) > 0 \\ \text{EM\_CR}(f,DI), \text{ if CR\_EnablementQuantity}(f,DI) > 0 \text{ and RR\_EnablementQuantity} \leq 0 \\ \text{EM\_RR}(f,DI), \text{ if RR\_EnablementQuantity}(f,DI) > 0 \text{ and CR\_EnablementQuantity} \leq 0 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) EM_CR(f,DI) is the Enablement Minimum for Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;

(b) EM_RR(f,DI) is the Enablement Minimum for Regulation Raise for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52;

(c) CR_EnablementQuantity(f,DI) is the quantity determined in accordance with clause 9.10.6(c) for Registered Facility f in Dispatch Interval DI; and

(d) RR_EnablementQuantity(f,DI) is the quantity determined in accordance with clause 9.10.22(c) for Registered Facility f in Dispatch Interval DI.

9.10.3HA. The minimum theoretical Dispatch Target from which Registered Facility f could have provided its Essential System Service Enablement Quantities for Contingency Reserve Lower and Regulation Lower in Dispatch Interval DI is:

$$Lower\_MinDT(f,DI) = \begin{cases} CL\_EnablementQuantity(f,DI) + RL\_EnablementQuantity(f,DI) + \max(EM\_CL(f,DI), EM\_RL(f,DI)), \\ \text{if } CL\_EnablementQuantity(f,DI) > 0 \text{ and } RL\_EnablementQuantity(f,DI) > 0 \\ EM\_CL(f,DI) + CL\_EnablementQuantity(f,DI), \\ \text{if } CL\_EnablementQuantity(f,DI) > 0 \text{ and } RL\_EnablementQuantity(f,DI) \leq 0 \\ EM\_RL(f,DI) + RL\_EnablementQuantity(f,DI), \\ \text{if } RL\_EnablementQuantity(f,DI) > 0 \text{ and } CL\_EnablementQuantity(f,DI) \leq 0 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) CL_EnablementQuantity(f,DI) is the quantity determined in accordance with clause 9.10.10(c) for Registered Facility f in Dispatch Interval DI;

(b) RL_EnablementQuantity(f,DI) is the quantity determined in accordance with clause 9.10.23(c) for Registered Facility f in Dispatch Interval DI;

(c) EM_CL(f,DI) is the Enablement Minimum for Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52; and

(d) EM_RL(f,DI) is the Enablement Minimum for Regulation Lower for Registered Facility f in Dispatch Interval DI as specified in the relevant Real-Time Market Submission in accordance with clause 7.4.41(d) and updated by AEMO, if applicable, under clause 7.4.52.

Explanatory Note:

Clause 9.10.3I is amended to use a new FCESS Uplift Payment eligibility flag and exclude references to RoCoF Control Service.

9.10.3I. The number of Frequency Co-optimised Essential System Services to be allocated a share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI is:

$$FCESSCount(f,DI) = \begin{cases} CREnabledFlag(f,DI) + CLEnabledFlag(f,DI) + RREnabledFlag(f,DI) + RLEnabledFlag(f,DI), \\ \text{if } FCESSUpliftEligibleFlag(f,DI) = 1 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) CREnabledFlag(f,DI) is:

i. 1 if CR_EnablementQuantity(f,DI), determined in accordance with clause 9.10.6(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and

ii. zero otherwise;

(b) CLEnabledFlag(f,DI) is:

i. 1 if CL_EnablementQuantity(f,DI), determined in accordance with clause 9.10.10(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and

ii. zero otherwise;

(c) RREnabledFlag(f,DI) is:

i. 1 if RR_EnablementQuantity(f,DI), determined in accordance with clause 9.10.22(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and

ii. zero otherwise;

(d) RLEnabledFlag(f,DI) is:

i. 1 if RL_EnablementQuantity(f,DI), determined in accordance with clause 9.10.23(c) for Registered Facility f in Dispatch Interval DI, is greater than zero; and

ii. zero otherwise; and

(e) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, as calculated in accordance with clause 9.10.3F.

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSCount(f,DI)~~

~~= EL_CR_Factor(f,DI) + EL_CL_Factor(f,DI)~~
~~+ EL_RCS_Factor(f,DI) + EL_RR_Factor(f,DI)~~
~~+ EL_RL_Factor(f,DI)~~

~~where:~~

~~i. EL_CR_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3C(a)(i);~~

~~ii. EL_CL_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3D(a)(i);~~

~~iii. EL_RCS_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3E(a)(i);~~

~~iv. EL_RR_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3F(a)(i); and~~

~~v. EL_RL_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3G(a)(i); and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSCount(f,DI) = 0~~

Explanatory Note:

Clause 9.10.3J is amended to conform with settlement calculation standards for the WEM Rules.

9.10.3J. The share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service is:

$$FCESSUplift\_Share(f,DI) = \begin{cases} 0, \text{ if } FCESSCount(f,DI) = 0 \\ \dfrac{FCESSUpliftPayment(f,DI)}{FCESSCount(f,DI)}, \text{otherwise} \end{cases}$$

where:

(a) FCESSUpliftPayment(f,DI) is the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI as calculated under clause 9.10.3C; and

(b) FCESSCount(f,DI) is the number of Frequency Co-optimised Essential System Services to be allocated a share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI as calculated under clause 9.10.3I.

~~(a) if FCESSCount(f,DI) is greater than zero:~~

~~$$FCESSUplift\_Share(f,DI) = \frac{FCESSUpliftPayment(f,DI)}{FCESSCount(f,DI)}$$~~

~~where:~~

~~i. FCESSUpliftPayment(f,DI) is the FCESS Uplift Payment determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3H; and~~

~~ii. FCESSCount(f,DI) is the number of Frequency Co-optimised Essential System Services determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3I; and~~

~~(b) otherwise:~~

~~$$FCESSUplift\_Share(f,DI) = 0$$~~

9.10.3K. The share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to Contingency Reserve Raise is ~~zero if AEMO has suspended the Real-Time Market under clause 7.11D.1, otherwise~~:

$$FCESSUplift\_CR(f,DI) = \begin{cases} FCESSUplift\_Share(f,DI) \times CREnabledFlag(f,DI), \\ \quad \text{if } FCESSUpliftEligibleFlag(f,DI) = 1 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, as calculated under clause 9.10.3J;

(b) CREnabledFlag(f,DI) is the value calculated for Registered Facility f in Dispatch Interval DI under clause 9.10.3I(a); and

(c) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, as calculated in accordance with clause 9.10.3F.

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_CR(f,DI) = FCESSUplift_Share(f,DI) × EL_CR_Factor(f,DI)~~

~~where:~~

~~i. FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J; and~~

~~ii. EL_CR_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3C(a)(i); and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_CR(f,DI) = 0~~

9.10.3L. The share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to Contingency Reserve Lower is ~~zero if AEMO has suspended the Real-Time Market under clause 7.11D.1, otherwise~~:

$$\text{FCESSUplift\_CL}(f,DI) = \begin{cases} \text{FCESSUplift\_Share}(f,DI) \times \text{CLEnabledFlag}(f,DI), \\ \quad \text{if FCESSUpliftEligibleFlag}(f,DI) = 1 \\ 0, \text{ otherwise} \end{cases}$$

where:

(a) FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J;

(b) CLEnabledFlag(f,DI) is the value calculated for Registered Facility f in Dispatch Interval DI under clause 9.10.3I(b); and

(c) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, as calculated in accordance with clause 9.10.3F.

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_CL(f,DI) = FCESSUplift_Share(f,DI) × EL_CL_Factor(f,DI)~~

~~where:~~

~~i. FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to~~

~~each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J; and~~

~~ii. EL_CL_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3D(a)(i); and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_CL(f,DI) = 0~~

9.10.3M. [Blank]~~The share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to the RoCoF Control Service is zero if AEMO has suspended the Real-Time Market under clause 7.11D.1, otherwise:~~

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_RCS(f,DI)~~
~~= FCESSUplift_Share(f,DI) × EL_RCS_Factor(f,DI)~~

~~where:~~

~~i. FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J; and~~

~~ii. EL_RCS_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3E(a)(i); and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_RCS(f,DI) = 0~~

9.10.3N. The share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to Regulation Raise is ~~zero if AEMO has suspended the Real-Time Market under clause 7.11D.1, otherwise~~:

$$\text{FCESSUplift\_RR}(f,DI) = \begin{cases} \text{FCESSUplift\_Share}(f,DI) \times \text{RREnabledFlag}(f,DI), & \text{if FCESSUpliftEligibleFlag}(f,DI) = 1 \\ 0, & \text{otherwise} \end{cases}$$

where:

(a) FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J;

(b) RREnabledFlag(f,DI) is the value calculated for Registered Facility f in Dispatch Interval DI under clause 9.10.3I(c); and

(c) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, as calculated in accordance with clause 9.10.3F.

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_RR(f,DI) = FCESSUplift_Share(f,DI) × EL_RR_Factor(f,DI)~~

~~where:~~

~~i. FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J; and~~

~~ii. EL_RR_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3F(a)(i); and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_RR(f,DI) = 0~~

9.10.3O. The share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to Regulation Lower is ~~zero if AEMO has suspended the Real-Time Market under clause 7.11D.1, otherwise~~:

$$\underline{FCESSUplift\_RL(f,DI) = \begin{cases} FCESSUplift\_Share(f,DI) \times RLEnabledFlag(f,DI), \\ \quad \text{if } FCESSUpliftEligibleFlag(f,DI) = 1 \\ 0, \text{ otherwise} \end{cases}}$$

where:

(a) FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J;

(b) RLEnabledFlag(f,DI) is the value calculated for Registered Facility f in Dispatch Interval DI under clause 9.10.3I(d); and

(c) FCESSUpliftEligibleFlag(f,DI) is the FCESS Uplift Payment eligibility flag for Registered Facility f in Dispatch Interval DI, as calculated in accordance with clause 9.10.3F.

~~(a) if Registered Facility f is a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_RL(f,DI) = FCESSUplift_Share(f,DI) × EL_RL_Factor(f,DI)~~

~~where:~~

~~i. FCESSUplift_Share(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to each applicable Frequency Co-optimised Essential System Service, determined under clause 9.10.3J; and~~

~~ii. EL_RL_Factor(f,DI) is the quantity determined for Registered Facility f in Dispatch Interval DI under clause 9.10.3G(a)(i); and~~

~~(b) if Registered Facility f is not a Scheduled Facility or Semi-Scheduled Facility:~~

~~FCESSUplift_RL(f,DI) = 0~~

9.10.3P. AEMO must, as soon as practicable after each Settlement Statement Date, publish on the WEM Website the FCESS Uplift Payment for each Scheduled Facility or Semi-Scheduled Facility for each Dispatch Interval in the relevant Trading Week, and the share of each FCESS Uplift Payment allocated to each Frequency Co-optimised Essential System Service.

…

Explanatory Note:

Clause 9.10.15 is amended to reflect the removal of FCESS Uplift Payments for RoCoF Control Service.

9.10.15. The cost of procuring RoCoF Control Service in Dispatch Interval DI is:

$$RCS\_Payable(DI) = \sum_{f \in Facilities} RCS\_Payable(f,DI) + \sum_{f \in Facilities} FCESSUplift\_RCS(f,DI)$$

where:

(a) RCS_Payable(f,DI) is the RoCoF Control Service amount payable for Registered Facility f in Dispatch Interval DI as calculated in accordance with clause 9.10.14; and

(b) [Blank]~~FCESSUplift_RCS(f,DI) is the share of the FCESS Uplift Payment for Registered Facility f in Dispatch Interval DI to be allocated to the RoCoF Control Service, determined under clause 9.10.3M; and~~

(c) f∈Facilities denotes all Registered Facilities f.

…

11. Glossary

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Available Capacity Scenario: A Scenario that is identical to the Reference Scenario for the relevant Dispatch Interval or Pre-Dispatch Interval in a Market Schedule except for the inclusion of any Available Capacity in Real-Time Market Submissions for which the relevant Start Decision Cutoff has not yet passed.

…

Explanatory Note:

The defined term Enablement Losses is no longer required.

~~**Enablement Losses**: For a Registered Facility providing a Frequency Co-optimised Essential System Service in a Dispatch Interval, an estimate of the difference between the revenue received for providing energy and the Frequency Co-optimised Essential System Service in the Dispatch Interval and the cost of providing those services, determined in accordance with clauses 9.10.3C, 9.10.3D, 9.10.3E, 9.10.3F or 9.10.3G as applicable.~~

…

~~**Estimated FCESS Uplift Payment**: For a Scheduled Facility or Semi-Scheduled Facility in a Dispatch Interval is:~~

$$\text{EstimatedFCESSUpliftPayment} = \text{Max}(0, \frac{5}{60} \times LF \times \text{Max}(0, EM) \times (LFAOP - MCP))$$

~~where:~~

~~(a) 5/60 represents the period of a Dispatch Interval in hours;~~

~~(b) LF is the Loss Factor for the Registered Facility;~~

~~(c) EM is the greatest Enablement Minimum in a Real-Time Market Submission, as updated by AEMO (as applicable) under clause 7.4.52, for a Frequency Co-optimised Essential System Service for the Registered Facility in the Dispatch Interval for which the Registered Facility had an Essential System Service Enablement Quantity greater than zero;~~

~~(d) LFAOP is the Loss Factor Adjusted Price in the Price-Quantity Pair which corresponds to the greatest Enablement Minimum for a Frequency Co-optimised Essential System Service for which the Registered Facility had an Essential System Service Enablement Quantity greater than zero, as specified in the Real-Time Market Submission for energy for the Registered Facility in the Dispatch Interval; and~~

~~(e) MCP is the Energy Market Clearing Price in the Dispatch Interval based on the Market Schedules published by AEMO.~~

Estimated FCESS Uplift Payment: An estimate of the FCESS Uplift Payment for a Scheduled Facility or Semi-Scheduled Facility in a Dispatch Interval or Pre-Dispatch Interval, calculated by AEMO for a Market Schedule and Scenario in accordance with clause 7.17.1 and made available to the Market Participant in accordance with clause 7.13.1D(c).

...

Facility Tiebreak Number: A unique random number determined for a Registered Facility for a Trading Day under clause 7.5.17.

…

FCESS Minimum Dispatch Target: The minimum theoretical Dispatch Target from which a Registered Facility could have provided its Essential System Service Enablement Quantities for Contingency Reserve Raise, Contingency Reserve Lower, Regulation Raise and

Regulation Lower in a Dispatch Interval, as calculated by AEMO in accordance with clause 9.10.3G.

…

FCESS Uplift Payment: A payment made to a Market Participant as compensation for ~~Enablement Losses~~ enablement losses incurred by a Registered Facility providing one or more Frequency Co-optimised Essential System Services, determined in accordance with:

(a) clause 9.10.3B, for a Trading Interval; and

(b) clause ~~9.10.3H~~ 9.10.3C, for a Dispatch Interval.

…

Fixed Assessment Period: A period of at least seven consecutive Trading Days in which the Constraint Equation relevant to the identification of a Constrained Portfolio under clause 2.16B.2(b) has continuously bound within ~~a~~ or across a Rolling Test Window. A Rolling Test Window may contain multiple Fixed Assessment Periods.

…

Explanatory Note:

The Reference Scenario will still be used to determined Forecast Operational Demand and Forecast Operational Withdrawal.

Forecast Operational Demand: For a Dispatch Interval or Pre-Dispatch Interval, AEMO's estimate of the total Injection required, in MW, from Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities at the end of the interval, as determined by the Dispatch Algorithm for a Reference Scenario of a Market Schedule.

Forecast Operational Withdrawal: For a Dispatch Interval or Pre-Dispatch Interval, AEMO's estimate of the total Withdrawal, in MW, from Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities (excluding Registered Facilities that are not required to specify Price-Quantity Pairs for Withdrawals under clause 7.4.46A) at the end of the interval, as determined by the Dispatch Algorithm for a Reference Scenario of a Market Schedule.

…

Not In-Service Capacity: Means, for a Scheduled Facility or a Semi-Scheduled Facility in a Dispatch Interval, the sent-out capacity, in MW, that was expected to be dispatched in the ~~Reference~~ Available Capacity Scenario of the relevant Market Schedule at the Start Decision Cutoff, but was not offered as In-Service Capacity, as calculated in clause 7.13A.1.

…

Explanatory Note:

No change is proposed to the definition of Reference Scenario.

Reference Scenario: The Scenario that represents AEMO's best estimate of future dispatch and market outcomes.

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Rolling Test Window: A ~~rolling~~ consecutive three-month period of Trading Days, ~~with a successive three-month period beginning on the first Trading Day after the last Trading Day falling within the immediately prior three-month period.~~ commencing at 8:00 AM on the first day of a month and ending at 8:00 AM on the first day of a month. A Rolling Test Window does not overlap with any other Rolling Test Window with a new Rolling Test Window commencing immediately after the end of the preceding Rolling Test Window.

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