

Market Power Mitigation Framework

Draft Amending WEM Rules for consultation

1. Introduction

Explanatory Note

Section 1.35 is amended to switch off the requirement for the Economic Regulation Authority to conduct reviews of the Energy Price Limits and Minimum STEM Price in the months immediately prior to the start of the new market, and to require the Economic Regulation Authority to determine the FCESS Offer Price Ceiling before the New WEM Commencement Day. This is intended to provide an efficient transition to the updated price limits framework.

1.35. **Specific Transitional Provisions for ~~the First Reviews~~ of the **Minimum STEM Energy Price Limits and FCESS Offer Price Ceiling****

1.35.1. In this section 1.35:

Post-Amended Rules: Means the WEM Rules as in force immediately after the New WEM Commencement Day.

1.35.~~12~~. Notwithstanding clause 6.20.13, the Economic Regulation Authority must commence the first review of the Minimum STEM Price under clause 6.20.13 by 1 February 2021.

1.35.~~23~~. Notwithstanding clause 6.20.14, for the first review of the Minimum STEM Price under clause 6.20.13(a), the time period for which the Economic Regulation Authority must consider the matters referred to in clause 6.20.14 is at least the period beginning on 1 October 2019 until the commencement of the first review.

1.35.4. Notwithstanding clause 6.20.6, the Economic Regulation Authority is not required to annually review the appropriateness of the value of the Maximum STEM Price and the Alternative Maximum STEM Price under clause 6.20.6 after 30 June 2023.

1.35.5. Notwithstanding clause 6.20.13, the Economic Regulation Authority is not required to annually review the value of the Minimum STEM Price under clause 6.20.13 after 1 February 2023.

1.35.6. Prior to the New WEM Commencement Day, the Economic Regulation Authority must determine the value of the FCESS Offer Price Ceiling (as defined in the Post-Amended Rules) that will take effect from the New WEM Commencement Day, in accordance with clause 2.26.2A of the Post-Amended Rules.

Explanatory Note

Transitional rules will set the dates for the first reviews of the Market Price Limits, at which time sufficient data about the performance of the market will be available, and to set the initial values for the Market Price Limits. This is intended to provide an efficient transition to the updated price limits framework.

1.XX. Specific Transitional Provisions for the Market Price Limits

1.XX.1. In this section 1.XX:

Pre-Amended Rules: Means the WEM Rules as in force immediately before the New WEM Commencement Day.

1.XX.2. Notwithstanding clause 2.26.2A, the Economic Regulation Authority must commence the first review of the FCESS Offer Price Ceiling under clause 2.26.2A by 1 February 2026.

1.XX.3. Notwithstanding clause 2.26.1, the Economic Regulation Authority must commence the first review of the Energy Offer Price Ceiling under clause 2.26.1 by 1 February 2024.

1.XX.4. Notwithstanding clause 2.26.2C, the Economic Regulation Authority must commence the first review of the Energy Offer Price Floor under clause 2.26.2C by 1 February 2025.

1.XX.5. For the purposes of section 2.26, the last review of the Minimum STEM Price in accordance with clause 6.20.6 of the Pre-Amended Rules will be taken to be the previous review of the Energy Offer Price Floor until the first review of the Energy Offer Price Floor under clause 2.26.2C of the Post-Amended Rules has been completed.

1.XX.6. Subject to clause 2.26.2V, the Energy Offer Price Ceiling that will apply from the New WEM Commencement Day is deemed to be the value equal to the Alternative Maximum STEM Price under the Pre-Amended Rules immediately prior to the New WEM Commencement Day.

1.XX.7. Subject to clause 2.26.2V, the Energy Offer Price Floor that will apply from the New WEM Commencement Day is deemed to be the value equal to the Minimum STEM Price that applied under the Pre-Amending Rules immediately prior to the New WEM Commencement Day.

2. Administration

Monitoring, Enforcement and Audit

2.16. Monitoring the Effectiveness of the Market

Explanatory Note:

The Coordinator will review the effectiveness of the Market Price Limits as part of the review of the effectiveness of the WEM, to provide independent oversight of the efficiency and effectiveness of the Market Price Limits framework, and its application.

2.16.13A. The Coordinator is responsible for the development of the market and, with the assistance of the Economic Regulation Authority and AEMO, must monitor market design problems or inefficiencies.

2.16.13B. In carrying out its responsibilities under clause 2.16.13A, the Coordinator must also monitor:

- (a) the effectiveness of the compliance monitoring and enforcement measures in the WEM Rules and Regulations, including the effectiveness of the Economic Regulation Authority's surveillance activities under sections 2.16A to 2.16D;
- (b) the effectiveness of AEMO in carrying out its functions under the Regulations, the WEM Rules and WEM Procedures; ~~and~~
- (c) the effectiveness of Network Operators in carrying out their functions under the WEM Rules and WEM Procedures; and
- (d) the efficiency and effectiveness of the methodologies for determining the Market Price Limits.

Market Power Mitigation

2.16A. General Trading Obligations

Explanatory Note

Section 2.16A outlines the General Trading Obligations, which will apply to the STEM and RTM (including FCESS markets) and are defined under:

- clause 2.16A.1 – Offer Construction Obligations
- clause 2.16A.2 – Trading Conduct Obligations

These obligations apply to all Market Participants, regardless of whether the Facilities registered to that Market Participant are within a Portfolio that is 'captured' under Stage 1 of the Market Power Test (the Gateway Test).

Clauses 2.16A.4 to 2.16A.6 have been added to assist the Economic Regulation Authority (and the Energy Review Board) regarding conduct that will be considered to be in breach of the WEM Rules. These provisions are similar to clauses 7A.2.14 to 7A.2.16 in the current WEM Rules with respect to Balancing Submissions.

2.16A.1. A Market Participant with market power must offer prices for Market Services 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.

2.16A.2. A Market Participant must not engage in conduct in offering to supply or supplying, or in failing to offer to supply or supplying, a Market Service that:

- (a) is false, misleading, or likely to mislead;
- (b) is fraudulent, dishonest or in bad faith; or
- (c) distorts or manipulates, or is likely to distort or manipulate, prices in the Wholesale Electricity Market.

2.16A.3. In determining whether a Market Participant has engaged in any conduct prohibited by clause 2.16A.2, the Economic Regulation Authority may take into account:

- (a) historical STEM Submissions or Real-Time Market Submissions made by the Market Participant, 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) any information as to whether the Market Participant did not comply with a Dispatch Instruction from AEMO 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.4. A STEM Submission or a Real-Time Market Submission is not made in bad faith under clause 2.16A.2(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.5. 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.6.

- (a) If a Market Participant does not have reasonable grounds for a price, quantity, or Ramp Rate Limit, as applicable, it has included in a STEM Submission or a Real-Time Market Submission at the time it submits that STEM Submission or Real-Time Market Submission, then the Market Participant is, for the purposes of clause 2.16A.2(a), taken to have known that the STEM Submission or 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 Short Term Energy Market or the Real-Time Market, as applicable.
- (b) For the purposes of clause 2.16A.6(a), a Market Participant must adduce evidence that it had reasonable grounds for including a price, quantity or Ramp Rate Limit, as applicable, in the STEM Submission or Real-Time Market Submission.
- (c) To avoid doubt, the effect of clause 2.16A.6(b) is to place an evidentiary burden on a Market Participant, and clause 2.16A.6(b) does not have the effect that, merely because such evidence is adduced, the Market Participant who submitted the STEM Submission or Real-Time Market Submission is taken to have had reasonable grounds for including a price, quantity or Ramp Rate Limit, as applicable.
- (d) Clause 2.16A.6(a) does not imply that merely because the Market Participant had reasonable grounds for making the representation or the conduct referred to in Chapter 6, in respect of the Short Term Energy Market, or Chapter 7, respect of the Real-Time Market, and in particular putting the price, quantity or Ramp Rate Limit, as applicable, in a STEM Submission or a Real-Time Market Submission submitted by a Market Participant, that such representation or conduct is not misleading.

Explanatory Note:

Section 2.16B allows for the grouping of Registered Facilities into Portfolios and Constrained Portfolios, for the purpose of the conducting the three-part market power test in section 2.16C.

Clause 2.16B.1 requires the Economic Regulation Authority to identify each Portfolio operating in the market twice in each year after AEMO has conducted Reserve Capacity Testing. The Economic Regulation Authority is required to publish the Portfolios, and the names of the responsible Market Participants in each Portfolio on its website.

“Portfolio” is defined in the Chapter 11 Glossary as:

1. Registered Facilities owned by the same entity (para (a) of the definition): or
2. Registered Facilities owned by the same entity and any related entity (para (b) of the definition); or
3. a Registered Facility (para (c) of the definition).

At all times, a Registered Facility cannot be contained in more than one Portfolio (i.e. paragraph (a), (b) or (c) of the definition).

Clause 2.16B.2 provides for a similar identification requirement in relation to Portfolios located behind a Network Constraint (a Constrained Portfolio). This requirement applies to Network Constraints that have arisen over a rolling period of 30 Trading Days (Rolling Test Window). Different Constrained Portfolios may arise in the relevant rolling test period depending on the Network Constraints within that period.

2.16B. Portfolio Assessment

2.16B.1. The Economic Regulation Authority must, in accordance with the WEM Procedure referred to in clause 2.16D.14:

- (a) twice each year identify each Portfolio operating in the Wholesale Electricity Market within 20 Business Days of AEMO completing Reserve Capacity testing under section 4.25 for each of the periods specified in clauses 4.25.1(a)(i) and 4.25.1(a)(ii); and
- (b) within 10 Business Days of identifying each Portfolio under clause 2.16B.1(a), publish a list on its website specifying:
 - i. the name of each Registered Facility within each identified Portfolio; and
 - ii. the name of each Market Participant responsible for each Registered Facility within each identified Portfolio.

2.16B.2. Within 10 Business Days 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.14, identify:

- (a) each Constrained Portfolio that operated in the Wholesale Electricity Market during that Rolling Test Window;
- (b) each Network Constraint relevant to each identified Constrained Portfolio; and
- (c) each Market Participant responsible for each Registered Facility within each identified Constrained Portfolio.

Explanatory Note

Clause 2.16B.3 is to clarify that where a Registered Facility is located behind two or more Network Constraints in the relevant 30 Trading Day period, the Registered Facility may be identified as part of more than one Constrained Portfolio. This is relevant to the calculations required of the Economic Regulation Authority under clause 2.16C.2 (i.e. tests to identify Material Constrained Portfolios).

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.

Explanatory Note

Section 2.16C establishes a three-part Market Power Test, intended to identify where a Market Participant has exercised market power through offers made in Submissions in the STEM and RTM, and such offers have resulted in inefficient market outcomes.

2.16C. Market Power Test

Explanatory Note

Clause 2.16C.1 provides for a general 'gateway test', being part of Stage 1 of the market power test, that will apply across the general market to determine Material Portfolios. Material Portfolios are Portfolios identified under clause 2.16B.1 as having a Declared Sent Out Capacity of 10% or greater of the sum of the Sent-Out Capacity of all Portfolios in the Wholesale Electricity Market.

The Economic Regulation Authority is required to notify Market Participants if they are responsible for a Registered Facility within a Material Portfolio.

2.16C.1. The Economic Regulation Authority must, in accordance with the WEM Procedure referred to in clause 2.16D.14:

- (a) within 10 Business Days of identifying each Portfolio under clause 2.16B.1(a), calculate the Declared Sent Out Capacity of each such Portfolio as a percentage of the sum of the Declared Sent Out Capacity for all Portfolios in the Wholesale Electricity Market;
- (b) identify each Portfolio with a Declared Sent Out Capacity proportion equal to or greater than 10% as calculated under clause 2.16C.1(a) ("**Material Portfolio**"); and
- (c) within 10 business days of identifying each Material Portfolio under clause 2.16C.1(b):
 - i. publish the results of the calculations carried out under clause 2.16C.1(a) on its website; and
 - ii. notify each Market Participant responsible for a Registered Facility within each identified Material Portfolio under clause 2.16C.1(b).

Explanatory Note:

Clause 2.16C.2 provides for the test to identify a Material Constrained Portfolio, being part of Stage 1 of the market power test. The prices submitted for Registered Facilities within a Material Constrained Portfolio are subject to further assessment under clause 2.16C.5 and, potentially, clause 2.16C.6.

This test involves calculating, as a percentage, the Dispatch Intervals the Registered Facilities within each Constrained Portfolio (in aggregate) received Energy Uplift Payments relative to the total number of Dispatch Intervals in which the identified Network Constraint bound during both a Rolling Test Window (3 months) and a Fixed Assessment Period (at least 7 consecutive days) within that Rolling Test Window.

Where Energy Uplift Payments have been made in respect of those Registered Facilities in 10% or more of Dispatch Intervals within a Rolling Test Window and/or a Fixed Assessment Period when the relevant Network Constraint bound, the offers made for those Registered Facilities will be subject to further assessment under Stage 2 of the Market Power Test.

2.16C.2. The Economic Regulation Authority must, in accordance with the WEM Procedure referred to in clause 2.16D.14:

- (a) not more than 20 Business Days following the end of a Rolling Test Window, calculate for that Rolling Test Window and for any Fixed

Assessment Period, as a percentage, the Constrained Uplift Payment Ratio for each Constrained Portfolio as follows:

$$\text{Constrained Uplift Payment Ratio} = \frac{CP_UP}{NC}$$

where:

i. CP_UP is the number of Dispatch Intervals that a Constrained Portfolio received an Energy Uplift Payment in relation to the Network Constraint for which the Constrained Portfolio was identified under clause 2.16B.2(a); and

ii. NC is the total number of Dispatch Intervals in which the Network Constraint relevant to the identification of the Constrained Portfolio identified under clause 2.16B.2(a) bound during the Rolling Test Window; and

(b) within 10 Business Days of identifying each Material Constrained Portfolio pursuant to clause 2.16C.2(a):

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

ii. notify each Market Participant responsible for a Registered Facility within each Portfolio calculated as a Material Constrained Portfolio under clause 2.16C.2(a).

Explanatory Note

A Market Participant responsible for a Registered Facility within a Material Portfolio or a Material Constrained Portfolio is required to create and maintain certain records that may support investigations.

Clause 2.16C.3 specifies the records to be retained by a Market Participant that has received a notice from the Economic Regulation Authority that their Registered Facility has been identified in a Material Portfolio or a Material Constrained Portfolio pursuant to clauses 2.16C.1(c) or 2.16C.2(b). Similar amendments have also been made to clauses 7.4.26(b) and 7.4.27(b).

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(b)(ii), a Market Participant must, in accordance with the WEM Procedure referred to in clause 2.16D.14:

(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;

(b) maintain adequate detailed 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, which must include, for each relevant Facility, the information referred to in clause 2.16D.1(a)(i); and

- (c) maintain adequate detailed 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, which must include, for each relevant Facility, the information referred to in clause 2.16D.1(a)(i).

Explanatory Note:

The following clauses implement Stages 2 and 3 of the market power test.

The determination made by the Economic Regulation Authority under clause 2.16C.4(a) relates to the STEM only and, as this does not involve consideration of Network Constraints, is only conducted for prices offered for Registered Facilities in Material Portfolios based on the gateway test that applies across the whole market (clause 2.16C.1).

The determination under clause 2.16C.5(b) is for the Real-Time Market, and therefore is conducted on prices offered for Registered Facilities for Material Portfolios and Material Constrained Portfolios.

Irregular Price Offers are those that the Economic Regulation Authority has determined to be inconsistent with the requirements provided under clauses 2.16C.5(a) or 2.16C.5(b).

If this is the case, the Economic Regulation Authority must consider the market impacts of these prices in accordance with clause 2.16C.6 with regard to the matters in clause 2.16C.8.

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

- (a) the prices offered by a Market Participant in its Portfolio Supply Curve for each of its Registered Facilities within a Material Portfolio; and
- (b) the prices offered by a Market Participant in its Real-Time Market Submissions for each of its Registered Facilities within a Material Portfolio or a Material Constrained Portfolio.

2.16C.5. The Economic Regulation Authority must investigate a potential breach of clause 2.16A.1, in accordance with the WEM Procedure referred to in clause 2.16D.14, clause 2.13.27, and having regard to the Offer Construction Guideline, if it considers that:

- (a) prices offered by a Market Participant in its Portfolio Supply Curve for each of its Registered Facilities within a Material Portfolio are inconsistent with the prices that a Market Participant without market power would offer in a profit-maximising Portfolio Supply Curve for the same or similar Facilities;
- or
- (b) prices offered by a Market Participant in its Real-Time Market Submissions for each of its Registered Facilities within a Material Portfolio or a Material Constrained Portfolio are inconsistent with the prices that a Market Participant without market power would offer in a profit-maximising Real-Time Market Submission for the same or similar Facilities,

and make a determination whether the prices were an Irregular Price Offer.

2.16C.6. The Economic Regulation Authority must investigate, in accordance with the WEM Procedure specified in 2.16D.14 and clause 2.13.27, whether an Irregular Price Offer determined under clause 2.16C.5 has resulted in an inefficient market outcome.

2.16C.7. Without limiting clauses 2.16C.5 and 2.16C.6, the Economic Regulation Authority must make a determination under clause 2.16C.5 and, if necessary, under clause 2.16C.6, no later than six months following the end of the Trading Day to which the price offers in the relevant STEM Submission or Real-Time Market Submission relates.

2.16C.8. In any investigation under clause 2.16C.6, the Economic Regulation Authority:

(a) must consider any changes to:

i. the 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.9. If, following an investigation, the Economic Regulatory Authority has determined pursuant to clause 2.16C.5 and clause 2.16C.6 that:

(a) an Irregular Price Offer has been made; and

(b) the Irregular Price Offer resulted in an inefficient market outcome,

the Economic Regulation Authority must publish details of its determination, including the name of the relevant Market Participant and the Irregular Price Offer to which the determination relates on its website.

Explanatory Note

Clause 2.16C.10 deems the failure of the offer assessment component under clause 2.16C.5 to be a breach of the Offer Construction Obligation under 2.16A.1.

2.16C.10. Where the Economic Regulation Authority has determined under clause 2.16C.5 that a Market Participant has made an Irregular Price Offer, the Market Participant will be deemed to be in breach of clause 2.16A.1.

Explanatory Note

Section 2.16D sets out the Economic Regulation Authority's obligation to publish guidelines and a WEM Procedure on how it will conduct the market power test, and a framework for Market Participants to seek guidance from the Economic Regulation Authority on offer parameters contained in the Offer Construction Guideline.

Clause 2.16D.1 requires the Economic Regulation Authority to develop the Offer Construction Guideline setting out guidance in relation to the determinations the Economic Regulation Authority must conduct under clauses 2.16C.5 and 2.16C.6 for the market power test, as well as on the obligation under clause 2.16A.1.

Clauses 2.16C.5 and 2.16A.1 relate to assessment of prices in offers, and so the guideline includes matters related to the costs that Market Participants would be expected to include in offers.

The trading conduct guideline is specific to the prohibition in 2.16A.2, and so would focus on examples of relevant conduct.

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 their offer price obligations under clause 2.16A.1, and how the Economic Regulation Authority will assess prices offered under clause 2.16C.5 including, but not limited to, how the Economic Regulation Authority considers:

1. the start-up and shutdown costs of relevant Facilities, including the costs of fuel, water, internal power, additional labour and lost asset value directly attributable to the start-up or shutdown;

2. the variable costs of production for relevant Facilities, including:

i. fuel or charging costs;

ii. opportunity costs;

iii. variable operating and maintenance costs attributable to the production of output;

iv. water costs; and

v. other costs;

3. any relevant regulatory costs or allowances; and

4. amortisation of costs associated with relevant Facilities across Trading Intervals and Dispatch Intervals;

ii. 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;

iii. provides guidance to Market Participants on the records required to be maintained under clause 2.16C.3 and the manner in which they may be recorded and verified; and

(b) trading conduct guidelines that must provide clarity and guidance to Market Participants regarding the prohibited conduct described in clause 2.16A.2.

The trading conduct guidelines must provide examples illustrating the types of conduct that the Economic Regulation Authority considers would be likely to result in a contravention of clause 2.16A.2.

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.

Explanatory Note

Clauses 2.16D.3 and 2.16D.4 stipulate the requirements for consultation in making and amending the guidelines described in clause 2.16D.1.

2.16D.3. In making the guidelines to be developed and maintained under clause 2.16D.1, or any amendments to them, 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; and
- (e) any other matters the Economic Regulation Authority considers relevant to the guidelines, or the amendment to the guidelines, as applicable.

Explanatory Note

Clauses 2.16D.5 to 2.16D.13 provide for a consultation framework that allows Market Participants responsible for the Registered Facilities identified within a Material Portfolio or a Material Constrained Portfolio (and so will be subject to determination under 2.16C.5) to seek guidance from the Economic Regulation Authority in relation to the matters contained in the Offer

Construction Guideline as they relate to the relevant determination. This would include guidance on how particular elements in the Offer Construction Guideline would apply to a specific Facility or circumstance.

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(b)(ii) 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.5, how the matters in the Offer Construction Guideline may apply to a Registered Facility that the Market Participant owns or is responsible for.

2.16D.6. A request made by a Market Participant under 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.14.

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.

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.

Explanatory Note

Clause 2.16D.10 gives the Economic Regulation Authority the discretion to not provide guidance to a Market Participant where it would be unnecessary, duplicative, or entail excessive cost.

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 costs 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.

Explanatory Note

Clause 2.16D.11 identifies that any guidance provided by the Economic Regulation Authority does not bind it or the relevant Market Participant and may be reconsidered, revised or withdrawn.

Clause 2.16D.12 creates an obligation for the Economic Regulation Authority to consider whether amendments to the Offer Construction Guideline are necessary to account for the guidance it has provided to a Market Participant.

2.16D.11. 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. Where the Economic Regulation Authority provides guidance to a Market Participant in accordance with 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.13. The Economic Regulation Authority must publish on its website a copy of any guidance provided to a Market Participant in accordance with 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.

Explanatory Note

Clause 2.16D.14 provides the Economic Regulation Authority with the power to develop a WEM Procedure (the Market Power Monitoring Protocol) that will set out procedural matters associated with the identification and calculations required for the Market Power Test and associated elements.

2.16D.14. 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(a), 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.5 and 2.16C.6 in relation to those price offers;**
- (b) the types, format and extent of the information 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

Explanatory Note

Clause 2.16E.1 precludes the Economic Regulation Authority from taking compliance action or investigation for a breach of clause 2.16A.1 if it has made a determination that a price offer does not constitute an Irregular Price Offer under clause 2.16C.5, or that the Irregular Price Offer has not resulted in an inefficient market outcome under clause 2.16C.6.

2.16E.1. Subject to clauses 2.16C.5 and 2.16C.6, 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.6 that an Irregular Price Offer by the Market Participant has not resulted in an inefficient market outcome.

Administered Market Price Limits, Reviews and Loss Factors

2.26. Economic Regulation Authority Reviews of Market Price Limits and the Methodology for Setting the Benchmark Reserve Capacity Price Administered Prices

Explanatory Note

The updated framework for the review and determination of Market Price Limits has been implemented in section 2.26. As the new term Market Price Limits extends beyond the energy markets, this content has substantially been relocated from the STEM chapter (section 6.20) and revised accordingly.

The clauses in this section:

- require the Economic Regulation Authority to review and determine the Energy Offer Price Ceiling once in every three years (clause 2.26.1), according to the existing formula used for the determining the Alternative Maximum STEM Price (2.26.2);
- require the Economic Regulation Authority to review and determine the FCESS Offer Price Ceiling once in every three years (2.26.2A), stipulating the principles for its determination (clause 2.26.2B);
- require the Economic Regulation Authority to review and determine the Energy Offer Price Floor once in every three years (2.26.2C), according to specified principles and process that are substantially relocated from section 6.20 (clause 2.26.2D to 2.26.2K);
- stipulate report and consultation requirements for a review (clauses 2.26.2L and 2.26.2M);
- allow the review to be brought forward in response to a Rule Participant request (clauses 2.26.2N to 2.26.2Q);
- describe the processes for information requests and the provision of information (clauses 2.26.2R to 2.26.2T); and
- clarify the application and commencement of the Market Price Limits, including any escalation process determined by the Economic Regulation Authority (clauses 2.26.2U and 2.26.2V).

Consultation requirements in this section have been modelled on a combination of the existing section 2.27C and section 6.20.

Review of Energy Offer Price Ceiling

~~2.26.1~~ [Blank]

~~2.26.2~~ [Blank]

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

2.26.2. In conducting a review pursuant to clause 2.26.1, the Economic Regulation Authority must:

(a) calculate the Energy Offer Price Ceiling using the following formula:

$$\frac{(1 + \text{Risk Margin}) \times (\text{Variable O\&M} + (\text{Heat Rate} \times \text{Fuel Cost}))}{\text{Loss Factor}}$$

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 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;

(b) determine the values for each factor described in clause 2.26.2(a) consistently with the Offer Construction Guideline as it applies to the highest cost generating Facility in the SWIS; and

(c) round up the value in clause 2.26.2(a) to the nearest multiple of \$100/MWh.

Review of FCESS Offer Price Ceiling

2.26.2A. The Economic Regulation Authority must, in accordance with this section 2.26, review the appropriateness of the value of the FCESS Offer Price Ceiling at least once every three years. For the avoidance of doubt, a subsequent review under this clause 2.26.2A must take place no later than three years from the date of publication of the final report from the preceding review.

2.26.2B. In conducting a review pursuant to clause 2.26.2A, the Economic Regulation Authority must:

(a) determine the value of the FCESS Offer Price Ceiling based on its estimate, for the highest cost Facility providing a Frequency Co-optimised Essential System Service in the SWIS, of the variable costs of providing Frequency Co-optimised Essential System Services that are not compensated through other market mechanisms in the Wholesale Electricity Market;

- (b) ensure its determination of the value of the FCESS Offer Price Ceiling is consistent with the Offer Construction Guideline as it applies to the highest cost Facility providing a Frequency Co-optimised Essential System Service in the SWIS; and
- (c) round up its determination of the value of the FCESS Offer Price Ceiling to the nearest multiple of \$50/MWh or \$50/MWs, as applicable.

Review of Energy Offer Price Floor

2.26.2C. The Economic Regulation Authority must, in accordance with this section 2.26, review the appropriateness of the value of the Energy Offer Price Floor at least once every three years. For the avoidance of doubt, a subsequent review under this clause 2.26.2C must take place no later than three years from the date of publication of the final report from the preceding review.

2.26.2D. In conducting a review required by clause 2.26.2C, the Economic Regulation Authority must apply the following principles:

- (a) the Economic Regulation Authority must only revise the value of the Energy Offer Price Floor if it determines that the current value of the Energy Offer Price Floor is not appropriate in accordance with clause 2.26.2E;
- (b) if the Economic Regulation Authority determines that the current Energy Offer Price Floor is not appropriate under clause 2.26.2E, any revised value for the Energy Offer Price Floor must:
 - i. allow for the Real-Time Market for energy to clear without the Reference Trading Price being equal to the Energy Offer Price Floor in most circumstances; and
 - ii. subject to clause 2.26.2D(b)(i), limit the exposure of Market Participants to Reference Trading Prices that are reasonably likely to materially adversely affect the financial viability of a prudent Market Participant.

2.26.2E. In determining whether the current value of the Energy Offer Price Floor is appropriate for the purposes of clause 2.26.2D(a), the Economic Regulation Authority must consider, without limitation, if, since the previous review of the value of the Energy Offer Price Floor under this section 2.26:

- (a) the Real-Time Market for energy has cleared at the Energy Offer Price Floor in one or more Dispatch Intervals due to, in the Economic Regulation Authority's reasonable opinion, the Energy Offer Price Floor being too high; and
- (b) there has been a change in the generation fleet in the SWIS that, in the Economic Regulation Authority's reasonable opinion, is likely to result in:
 - i. the current Energy Offer Price Floor being materially lower than necessary to achieve the criterion in clause 2.26.2D(b)(i), including,

but not limited to, an upgrade or the retirement of a Facility with high cycling costs; or

- ii. the current Energy Offer Price Floor being too high to achieve the criterion in clause 2.26.2D(b)(i), including, but not limited to, the increase of cycling costs due to deterioration or aging of an existing plant.

2.26.2F. When reviewing the Energy Offer Price Floor in accordance with this section 2.26, the Economic Regulation Authority must:

- (a) determine for credible scenarios of low demand, the price at which the operator of the Facility with the highest cycling costs per MW in the SWIS in the scenario would, acting reasonably, decommit the Facility should the Reference Trading Price equal or fall below that price for a single Trading Interval; and
- (b) revise the Energy Offer Price Floor to be the highest price determined under those scenarios that is lower than 95 percent of all of the prices determined under clause 2.26.2F(a).

2.26.2G. When determining the credible scenarios of low demand for the purpose of clause 2.26.2F(a), the Economic Regulation Authority may use historic scenarios but must also account for any changes expected to the SWIS that would come into effect prior to the time that the Energy Offer Price Floor would apply and that are likely to have an effect on the Reference Trading Price. The changes include, but are not limited to:

- (a) expected changes in system demand;
- (b) any expected entrance of a new Facility that will participate in the Real-Time Market;
- (c) expected changes to an existing Facility; and
- (d) any expected permanent exit of a Facility from the Real-Time Market.

2.26.2H. When determining the cycling costs of a Facility under clause 2.26.2F(a), the Economic Regulation Authority must consider:

- (a) the factors that a Market Participant acting reasonably would consider in making a decommitment decision for the Facility with the highest cycling cost in the SWIS, assuming that all energy sent out by the Facility is settled at the Reference Trading Price, including:
 - i. the cost to decommit and recommit within the timeframe specified under clause 2.26.2H(a)(iii), including start-related fuel and variable operating and maintenance costs of the Facility;
 - ii. the minimum stable level of operation of the Facility;
 - iii. the minimum time the Facility must remain out of service once decommitted before recommitment is possible; and

iv. any expected losses or gains, opportunity costs and cost savings that the Market Participant would incur as a result of decommitment for the duration of the minimum time the Facility must remain out of service; and

(b) any other matters that the Economic Regulation Authority considers relevant.

2.26.2I. When determining the cycling costs of a Facility under clause 2.26.2F(a), the Economic Regulation Authority must have regard to the Wholesale Market Objectives and must, as far as practicable, use information about the cost the relevant Facility would incur as provided by the relevant Market Participant but may use estimates where the Economic Regulation Authority considers it to be reasonable.

2.26.2J. A Market Participant may, by the time specified for the close of submissions under clause 2.26.2L(b), provide the Economic Regulation Authority with evidence regarding the costs a Facility incurs when decommitting for the purpose of the WEM Rules and which the Economic Regulation Authority must consider in determining the revised value for the Energy Offer Price Floor under clause 2.26.2C.

2.26.2K. Where a Market Participant provides the Economic Regulation Authority with satisfactory evidence under clause 2.26.2J, the Economic Regulation Authority must consider the information when determining the revised Energy Offer Price Floor as far as the information affects the Economic Regulation Authority's reasonable estimate of any costs that a prudent Market Participant would incur when decommitting its Facility in the scenarios under clause 2.26.2F(a).

Conducting a Review of a Market Price Limit

2.26.2L. In conducting a review of a Market Price Limit under clauses 2.26.1, 2.26.2A or 2.26.2C, the Economic Regulation Authority must publish on its website:

(a) a draft report 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.

2.26.2M. Following the closing date for submissions on the draft report published under clause 2.26.2L, the Economic Regulation Authority must publish a final report on its website containing:

(a) the issues identified by the Economic Regulation Authority;

- (b) the assumptions made by the Economic Regulation Authority in undertaking the review;
- (c) the Economic Regulation Authority's determination of the relevant Market Price Limit, which is to include, where applicable:
 - i. the revised value of the relevant Market Price Limit;
 - ii. the Dispatch Interval from which the revised value of the relevant Market Price Limit will take effect; and
 - iii. any escalation process in the value of the relevant Market Price Limit and the associated times each escalated value will apply from;
- (d) how the Economic Regulation Authority determined the revised value of the relevant Market Price Limit, including any analysis and calculation parameters used in its determination;
- (e) a summary of any submissions received by the Economic Regulation Authority on the draft report published under clause 2.26.2L that were received within the time specified, and any late submissions the Economic Regulation Authority has decided, in its discretion, to take into account;
- (f) the Economic Regulation Authority's responses to the issues raised in those submissions; and
- (g) any other matters the Economic Regulation Authority considers relevant to the review.

2.26.2N. Where a Rule Participant considers there has been a material change in circumstances since the Economic Regulation Authority's most recent review of a Market Price Limit pursuant to clauses 2.26.1, 2.26.2A or 2.26.C, as applicable, the Rule Participant may, subject to clause 2.26.2O(a), notify the Economic Regulation Authority that it considers the Market Price Limit is no longer appropriate in accordance with clause 2.26.2O.

2.26.2O. A notice by a Rule Participant under clause 2.26.2N must:

- (a) be given no earlier than six months after completion of the most recent review of the relevant Market Price Limit by the Economic Regulation Authority under clauses 2.26.1, 2.26.2A or 2.26.2C, as applicable; and
- (b) set out the Rule Participant's reasoning, with any supporting analysis, as to why it considers there has been a material change in circumstances such that the relevant Market Price Limit is no longer appropriate, having regard to the relevant matters in this section 2.26.

2.26.2P. Following receipt of a notice under clause 2.26.2N, the Economic Regulation Authority must, as soon as practicable:

- (a) after considering the information in the notice determine whether it considers it is appropriate to bring forward the next required review of the

relevant Market Price Limit under clauses 2.26.1, 2.26.2A or 2.26.2C, as applicable;

- (b) in making its determination under clause 2.26.2P(a), have regard to the Wholesale Market Objectives and any benefits of undertaking an earlier review; and
- (c) publish the Economic Regulation Authority's response to the notice on its website, which is to include details of whether a review of the relevant Market Price Limit will be progressed, the proposed timing for the review, and the reasons for its decision.

2.26.2Q. If the Economic Regulation Authority decides to bring forward a review of a Market Price Limit pursuant to clause 2.26.2P(a), the Economic Regulation Authority must use its best endeavours to conduct the review in accordance with the proposed timing published in its response to the relevant notice in accordance with clause 2.26.2P(c).

2.26.2R. In conducting a review of a Market Price Limit under clauses 2.26.1, 2.26.2A or 2.26.2C, the Economic Regulation Authority may request information from a Market Participant.

2.26.2S. An information request by the Economic Regulation Authority under clause 2.26.2R must specify the time by which the information specified in the request must be provided by the Market Participant, which must be at least 10 Business Days after the date of the request and be reasonable having regard to the nature of the information requested.

2.26.2T. Following receipt of a request under clause 2.26.2R, the Market Participant must provide the information specified in the request by the time specified in the request.

2.26.2U. Where the Economic Regulation Authority determines under clause 2.26.2M(c)(iii) that an escalation in the value of the relevant Market Price Limit will apply, the Economic Regulation Authority must calculate and publish the escalated value for that Market Price Limit and the Dispatch Interval from which the escalated value will take effect on its website, according to the process and schedule determined under clause 2.26.2M(c)(iii).

2.26.2V. A revised value for a Market Price Limit replaces the previous value after the Economic Regulation Authority has published its final report in accordance with clause 2.26.2M, with effect from the Dispatch Interval specified in the final report or, in the case of an escalated value, the Dispatch Interval published by the Economic Regulation Authority on its website in accordance with clause 2.26.2U.

Explanatory Note

With the Market Price Limits shifting to a more comprehensive three-yearly review process, the additional five-yearly review of the price limit methodologies is redundant. Consequently, these reviews are to be removed from clause 2.26.3.

- 2.26.3. At least once in every five years, the Economic Regulation Authority must review the methodology for setting the Benchmark Reserve Capacity Price ~~and the Energy Price Limits~~. A review must examine:
- (a) the level of competition in the market;
 - (b) the level of market power being exercised and the potential for the exercise of market power;
 - (c) the effectiveness of the methodology in curbing the use of market power;
 - (d) [Blank]
 - (e) ~~[Blank] historical STEM Bids and STEM Offers and the proportion of STEM Bids and Offers with prices equal to the Energy Price Limits;~~
 - (eA) ~~[Blank] the Bids and Offers with prices equal to the Energy Price Limits submitted for Facilities which have received Constraint On payments in the Trading Intervals to which the Bids and Offers applied;~~
 - (f) the appropriateness of the parameters and methodology in section 4.16 and the WEM Procedure referred to in clause 4.16.3 for recalculating the Benchmark Reserve Capacity Price; and
 - (g) ~~[Blank] the appropriateness of the parameters and methodology in section 6.20 for recalculating the Energy Price Limits; and~~
 - (h) [Blank]
 - (i) other matters which the Economic Regulation Authority considers relevant.

...

3 Power System Security and Reliability

3.15A. Supplementary Essential System Service Mechanism (SESSM)

Explanatory Note

New clause 3.15A.2A requires the Economic Regulation Authority to publish forward-looking six-monthly price benchmarks for efficient Frequency Co-optimised Essential System Services. Clause 3.15A.5 has also been updated to ensure that the role of these benchmarks in the Economic Regulation Authority's analysis of Real-Time Market outcomes will be documented in the relevant WEM Procedure.

3.15A.2. The Economic Regulation Authority may only trigger the SESSM when, pursuant to a review under clauses 3.15.1A or 3.15.1B or its monitoring pursuant to clause 2.16.9, it reasonably considers that Real-Time Market outcomes are not consistent with the efficient operation of the Real-Time Market in respect of Frequency Co-optimised Essential System Services or the Wholesale Market Objectives.

3.15A.2A. Every six months the Economic Regulation Authority must publish the Frequency Co-optimised Essential System Services price benchmarks that reflect the Economic Regulation Authority's expectation of efficient Frequency Co-optimised Essential System Services prices for the relevant forward six-month period.

...

3.15A.5. The Economic Regulation Authority must document in a WEM Procedure the process it will undertake to identify inefficient Real-Time ~~m~~Market outcomes pursuant to clause 3.15A.2, which may include, but is not limited to:

- (a) comparing individual Facility offers of Frequency Co-optimised Essential System Services with:
 - i. offers of Frequency Co-optimised Essential System Services from similar Facilities;
 - ii. expected or known costs for that Facility;
 - iii. offers from the same Facility in different time periods;
 - iv. historic offers of Frequency Co-optimised Essential System Services in the Real-Time Market; and
 - v. the Frequency Co-optimised Essential System Services offer construction guidelines published by the Economic Regulation Authority; and
 - vi. the Frequency Co-optimised Essential System Services price benchmarks required to be published under clause 3.15A.2A;
- (b) comparing existing Facility costs with potential new facility entrant costs;

- (c) an analysis of the information received from expressions of interest forms submitted in accordance with section 3.15B; and
- (d) comparing Frequency Co-optimised Essential System Services market outcomes with other relevant jurisdictions.

...

Explanatory Note

The earlier gazetted rules assume that Enablement Losses will be included in FCESS offer prices. With this approach being replaced with the FCESS Uplift Payment, references to Enablement Losses in section 3.15A have been amended.

3.15A.20. AEMO must develop and publish a SESSM Submission form which must include the following fields for the SESSM procurement:

- (a) the SESSM Availability Quantity for each Dispatch Interval in the SESSM Award Duration up to the quantity set out in the SESSM Service Specification for the existing or new facility which may vary according to the time periods set out in the SESSM Service Specification;
- (b) the proposed SESSM Availability Payment, which:
 - i. is the total amount payable across the SESSM Award Duration for offering the SESSM Availability Quantity into the Real-Time Market; and
 - ii. must be equal to or less than the incremental fixed costs, if any, that are not already covered by any Capacity Credit payments, which would otherwise be incurred to make available the SESSM Availability Quantity of the Frequency Co-optimised Essential System Service in addition to any Base ESS Quantity of that Frequency Co-optimised Essential System Service;
- (c) the proposed SESSM Offer Cap, which must reflect the variable costs inclusive of margin of providing the relevant Frequency Co-optimised Essential System Service, and which:
 - i. is the highest price which the Market Participant or person intending to be a Market Participant will offer the applicable Frequency Co-optimised Essential System Service into the Real-Time Market (~~excluding Enablement Losses~~); and
 - ii. may vary according to the time periods set out in the SESSM Service Specification;
- (d) the SESSM Award Duration; and
- (e) where the SESSM includes more than one Frequency Co-optimised Essential System Service, whether the SESSM Submission is contingent on holding a SESSM Award for more than one Frequency Co-optimised Essential System Service that is also included in the SESSM and, if so, which ones.

...

3.15A.22. Where a Market Participant submits a SESSM Submission under clause 3.15A.21 in respect of an accredited Facility, the SESSM Submission must also include:

- (a) a comparison of the proposed SESSM Availability Quantity of the Facility to its historic quantities offered in the Real-Time Market over the past 12 months in Dispatch Intervals within the SESSM Service Timing; and
- (b) ~~[Blank]the number of Dispatch Intervals in the past 12 months within the SESSM Service Timing for which the Market Participant included forecast Enablement Losses for the Facility in the prices in its Real-Time Market Offers for the relevant Frequency Co-optimised Essential System Service;~~
- (c) ~~[Blank]the average percentage of the price in Real-Time Market Offers for the Dispatch Intervals identified in 3.15A.22(b) that related to forecast Enablement Losses; and~~
- (d) a comparison of the proposed SESSM Offer Cap for the Facility to its historic offer prices offered in the Real-Time Market ~~(excluding Enablement Losses)~~ over the past 12 months.

...

3.15A.27. When selecting the lowest cost combination of SESSM Submissions in accordance with clause 3.15A.26(a), AEMO must:

- (a) exclude SESSM Submissions that do not comply with the SESSM Service Specification;
- (b) exclude SESSM Submissions for new facilities where insufficient evidence has been provided to support the Key Project Dates or that all necessary Environmental Approvals have been granted;
- (c) identify historical Dispatch Intervals matching the SESSM Service Specification;
- (d) calculate energy price profiles for energy matching the SESSM Service Timing for those Dispatch Intervals on the basis of three categories being average cost, high cost and low cost;
- (e) calculate effective Frequency Co-optimised Essential System Service offer prices for each SESSM Submission comprising:
 - i. proposed SESSM Availability Payment divided by the sum of all SESSM Availability Quantities within the SESSM Award Duration;
 - ii. proposed SESSM Offer Cap; and
 - iii. expected ~~FCESS Uplift Payments~~ ~~Enablement Losses~~ based on:
 - 1. Standing Enablement Minimum;
 - 2. start-up costs; and
 - 3. minimum running costs; and

- (f) calculate the lowest cost combination of SESSM Submissions to deliver the requirement under each of the three energy price profiles referred to in clause 3.15A.27(d);
- (g) for submissions provided in accordance with 3.15A.21 adjust the SESSM Availability Quantity to account for Network Constraints; and
- (h) adjust the SESSM Availability Quantity to account for AEMO's assessed capability of the Facility to provide the relevant Frequency Co-optimised Essential System Service.

6. The Short Term Energy Market

STEM Submission and Bilateral Submission Formats

6.6. Format of STEM Submission and Standing STEM Submission Data

Explanatory Note

The following clauses have been amended to remove and update obligations due to the shift to a single energy price cap.

6.6.2A. For:

- (a) a Fuel Declaration the Market Participant must declare which of its Liquid Fuel capable Registered Facilities are assumed to be operating on Liquid Fuel in forming the Portfolio Supply Curve;
- (b) [Blank]
- (c) [Blank]
- (d) a Portfolio Supply Curve:
 - i. one or more Price-Quantity Pairs may be specified; and
 - ii. the cumulative MWh quantity over all Price-Quantity Pairs must not exceed the Maximum Supply Capability determined under clause 6.3A.3(e);
 - ~~iii. the cumulative MWh quantity over all Price-Quantity Pairs with prices exceeding the Maximum STEM Price must not exceed the sum over all Registered Facilities declared in the Fuel Declaration to be operating on Liquid Fuel of the Maximum Facility Supply Capability determined under clause 6.3A.3(d);~~
- (e) a Portfolio Demand Curve:
 - i. one or more Price-Quantity Pairs may be specified; and
 - ii. the cumulative quantity included in the Price-Quantity Pairs must not exceed the Maximum Consumption Capability determined under clause 6.3A.3(d).

...

6.6.5. For Price-Quantity Pairs in Portfolio Supply Curves:

- (a) each Price-Quantity Pair must comprise one price and one quantity;
- (b) each Price-Quantity Pair price must be:
 - i. in units of \$/MWh expressed to a precision of \$0.01/MWh;
 - ii. [Blank]

- iii. greater than or equal to the ~~Minimum STEM~~Energy Offer Price Floor;
 - iv. less than or equal to the Energy Offer Price Ceiling~~Alternative Maximum STEM Price~~; and
 - v. set such that no two Price-Quantity Pairs in a Portfolio Supply Curve have the same price;
- (c) each Price-Quantity Pair quantity must be
- i. in units of MWh expressed to a precision of 0.001 MWh;
 - ii. Loss Factor adjusted; and
- (d) a Price-Quantity Pair means that the Market Participant is prepared to sell a quantity of energy into the STEM for that Price-Quantity Pair equal to:
- i. 0 MWh if the STEM Clearing Price is less than the Price-Quantity Pair price;
 - ii. the Price-Quantity Pair quantity if the STEM Clearing Price is greater than the Price-Quantity Pair price; and
 - iii. an amount between 0 MWh and the Price-Quantity Pair quantity if the STEM Clearing Price equals the Price-Quantity Pair price.

...

6.6.8. For Price-Quantity Pairs in Portfolio Demand Curves:

- (a) each Price-Quantity Pair price must be:
- i. in units of \$/MWh expressed to a precision of \$0.01/MWh;
 - ii. less than or equal to the Energy Offer Price Ceiling~~Alternative Maximum STEM Price~~;
 - iii. greater than or equal to the ~~Minimum STEM~~Energy Offer Price Floor; and
 - iv. set such that no two Price-Quantity Pairs in a Portfolio Demand Curve have the same price;
- (b) each Price-Quantity Pair quantity must be
- i. in units of MWh expressed to a precision of 0.001 MWh;
 - ii. Loss Factor adjusted; and
- (c) a Price-Quantity Pair means that the Market Participant is prepared to buy a quantity of energy from the STEM for that Price-Quantity Pair equal to:
- i. 0 MWh if the STEM Clearing Price is greater than the Price-Quantity Pair price;
 - ii. the Price-Quantity Pair quantity if the STEM Clearing Price is less than the Price-Quantity Pair price; and

- iii. an amount between 0 MWh and the Price-Quantity Pair quantity if the STEM Clearing Price equals the Price-Quantity Pair price.

Explanatory Note

Clauses 6.6.9 to 6.6.12 describe an application process to allow a Market Participant to bid above the lower of the two energy price caps for a Facility that is not liquid fuel capable. This process is redundant with the move to a single energy price cap, so the clauses are to be removed.

~~6.6.9. — A Market Participant may apply to AEMO for all or part of the capacity of one of its Scheduled Facilities that is not Liquid Fuel capable to be treated as if it was dual-fuel capable where one fuel is Liquid Fuel for the purposes of the STEM, the Real-Time Market and settlement. The application must be in a form specified by AEMO, including evidence of the arrangement described in clause 6.6.10(a), and must specify the period to which the application relates.~~

~~6.6.10. — AEMO must assess an application made under clause 6.6.9 and inform the Market Participant whether or not the application is approved. AEMO must approve the application only where the Market Participant provides evidence satisfactory to AEMO that:~~

- ~~(a) — the Market Participant has an arrangement with a user of fuel (“Fuel User”) to release a quantity of fuel for use in a Scheduled Facility which is not Liquid Fuel capable and is registered by the Market Participant;~~
- ~~(b) — the use of fuel released under the arrangement would result in the Fuel User using Liquid Fuel in a Facility or other equipment; and~~
- ~~(c) — as a consequence of clause 6.6.10(a) and (b), the short run marginal cost of generating electricity using the Scheduled Facility using fuel released under the arrangement would be above the Maximum STEM Price.~~

~~6.6.11. — Where AEMO approves an application under clause 6.6.9, AEMO must:~~

- ~~(a) — notify the Market Participant that the application has been approved as soon as practicable; and~~
- ~~(b) — update the relevant Standing Data in accordance with clause 2.34.~~

~~6.6.12. — When AEMO does not approve an application under clause 6.6.9, AEMO must notify the Market Participant as soon as practicable.~~

The STEM Auction Process

6.9. The STEM Auction

Explanatory Note

Clauses 6.9.5 and 6.9.6 are amended to reflect changes to price limits and defined terms.

6.9.5. AEMO must determine an aggregate STEM bid curve for each Trading Interval from the STEM Bids where this aggregate STEM bid curve:

- (a) describes the quantity that Market Participants in aggregate wish to purchase from AEMO through the STEM at every price between, and including, the ~~Minimum STEM~~Energy Offer Price Floor and the ~~Alternative Maximum STEM~~Energy Offer Price Ceiling; and
 - (b) passes through the point indicating zero consumption at the ~~Alternative Maximum STEM~~Energy Offer Price Ceiling.
- 6.9.6. AEMO must determine an aggregate STEM offer curve for each Trading Interval from the STEM Offers where this aggregate STEM offer curve:
- (a) describes the quantity that Market Participants in aggregate wish to sell to AEMO through the STEM at every price between, and including, the ~~Minimum STEM~~Energy Offer Price Floor and the ~~Alternative Maximum STEM~~Energy Offer Price Ceiling; and
 - (b) passes through the point indicating zero supply at the ~~Minimum STEM~~Energy Offer Price Floor.

...

~~The Non-Balancing Dispatch Merit Order~~

Explanatory Note

The rules for review and determination of the Market Price Limits are to be relocated to section 2.26, so section 6.20 is to be deleted.

~~6.20. Energy Price Limits[Blank]~~

~~6.20.1. The Energy Price Limits are:~~

- ~~(a) the Maximum STEM Price;~~
- ~~(b) the Alternative Maximum STEM Price; and~~
- ~~(c) the Minimum STEM Price.~~

~~6.20.2. The Maximum STEM Price is the value published on the WEM Website and revised in accordance with clauses 6.20.6 and 6.20.11.~~

~~6.20.3. Subject to clause 6.20.11, the Alternative Maximum STEM Price is to equal:~~

- ~~(a) from 8 AM on September 1, 2006, \$480/MWh; and~~
- ~~(b) from 8 AM on the first day of each subsequent month the sum of:

 - ~~i. \$440/MWh multiplied by the amount determined as follows:

 - ~~1. the average of the Singapore Gas Oil (0.5% sulphur) price, expressed in Australian dollars, for the three months ending immediately before the preceding month as published by the International Energy Agency in its monthly Oil Market~~~~~~

~~Report, or the average of another suitable published price as determined by AEMO, divided by;~~

- ~~2. the average of the Singapore Gas Oil (0.5% sulphur) price, expressed in Australian dollars, for May, June and July 2006 or, if a revised Alternative Maximum STEM Price takes effect in accordance with clause 6.20.11, for the three months ending immediately before the month preceding the month in which the revised Alternative Maximum STEM Price takes effect, as published by the International Energy Agency in its monthly Oil Market Report, or the average of another suitable published price as determined by AEMO; and~~
- ~~ii from 8 AM on September 1, 2006, to 8 AM on 1 September, 2007, \$40/MWh, and for each subsequent 12-month period \$40/MWh multiplied by the CPI for the June quarter of the relevant 12-month period divided by CPI for the 2006 June quarter or, if a revised Alternative Maximum STEM Price takes effect in accordance with clause 6.20.11, the June quarter of the year in which the revised Alternative Maximum STEM Price takes effect, where CPI is the weighted average of the Consumer Price Index All Groups value of the eight Australian State and Territory capital cities as determined by the Australian Bureau of Statistics;~~

~~rounded to the nearest whole dollar, where a half dollar is rounded up, with the exception that from the date and time that a revised Alternative Maximum STEM Price takes effect in accordance with clause 6.20.11, the revised values supersede the values in 6.20.3(b)(i) and 6.20.3(b)(ii), and are to be the values used in calculating the Alternative Maximum STEM Price for each month subsequent to the month in which the revised Alternative Maximum STEM Price takes effect.~~

~~6.20.4. [Blank]~~

~~6.20.5. [Blank]~~

~~6.20.6. The Economic Regulation Authority must annually review the appropriateness of the value of the Maximum STEM Price and Alternative Maximum STEM Price.~~

~~6.20.7. In conducting the review required by clause 6.20.6 the Economic Regulation Authority:~~

~~(a) may propose revised values for the following:~~

- ~~i. the Maximum STEM Price, where this is to be based on the Economic Regulation Authority's estimate of the short run marginal cost of the highest cost generating works in the SWIS fuelled by natural gas and is to be calculated using the formula in paragraph (b); and~~

~~ii. the Alternative Maximum STEM Price, where this is to be based on the Economic Regulation Authority's estimate of the short run marginal cost of the highest cost generating works in the SWIS fuelled by distillate and is to be calculated using the formula in paragraph (b);~~

~~(b) must calculate the Maximum STEM Price or Alternative Maximum STEM Price using the following formula:~~

$$\text{(1 + Risk Margin)} \times (\text{Variable O\&M} + (\text{Heat Rate} \times \text{Fuel Cost})) / \text{Loss Factor}$$

~~Where~~

- ~~i. Risk Margin is a measure of uncertainty in the assessment of the mean short run average cost for a 40 MW open cycle gas turbine generating station, expressed as a fraction;~~
- ~~ii. Variable O&M is the mean variable operating and maintenance cost for a 40 MW open cycle gas turbine generating station, expressed in \$/MWh, and includes, but is not limited to, start-up related costs;~~
- ~~iii. Heat Rate is the mean heat rate at minimum capacity for a 40 MW open cycle gas turbine generating station, expressed in GJ/MWh;~~
- ~~iv. Fuel Cost is the mean unit fixed and variable fuel cost for a 40 MW open cycle gas turbine generating station, expressed in \$/GJ; and~~
- ~~v. Loss Factor is the marginal loss factor for a 40 MW open cycle gas turbine generating station relative to the Reference Node.~~

~~Where the Economic Regulation Authority must determine appropriate values for the factors described in paragraphs (i) to (v) as applicable to the Maximum STEM Price and Alternative Maximum STEM Price.~~

~~6.20.8. [Blank]~~

~~6.20.9. In conducting the review required by clause 6.20.6 the Economic Regulation Authority must prepare a draft report describing how it has arrived at a proposed revised value of one or both of the Maximum STEM Price and Alternative Maximum STEM Price. The draft report must also include details of how the Economic Regulation Authority determined the appropriate values to apply for the factors described in clauses 6.20.7(b)(i) to 6.20.7(b)(v). The Economic Regulation Authority must publish the draft report on its website and advertise the report in newspapers widely published in Western Australia and request submissions from all sectors of the Western Australia energy industry, including end-users, within six weeks of the date of publication.~~

- ~~6.20.9A. Prior to proposing a final revised value for one or both of the Maximum STEM Price and Alternative Maximum STEM Price in accordance with clause 6.20.10, the Economic Regulation Authority may publish a request for further submissions on its website. Where the Economic Regulation Authority publishes a request for further submissions in accordance with this clause, it must request submissions from all sectors of the Western Australia energy industry, including end-users.~~
- ~~6.20.10. The Economic Regulation Authority must consider in-time submissions on the draft report described in clause 6.20.9, and any in-time submissions received under clause 6.20.9A, and may consider any late submissions, and after considering the submissions must propose a final revised value for one or both of the Maximum STEM Price and Alternative Maximum STEM Price.~~
- ~~6.20.10A. Within five days of the ERA proposing a final revised value of one or both of the Maximum STEM Price and Alternative Maximum STEM Price in accordance with 6.20.10, AEMO must publish on the WEM Website the:~~
- ~~(a) — proposed revised value for one or both of the Maximum STEM Price and Alternative Maximum STEM Price; and~~
 - ~~(b) — any rules that could cause different values to apply at different times.~~
- ~~6.20.11. A proposed revised value for the Maximum STEM Price and the Alternative Maximum STEM Price replaces the previous value after AEMO has posted a notice on the WEM Website of the new value of the applicable Energy Price Limit, with effect from the time specified in AEMO's notice.~~
- ~~6.20.12. The Minimum STEM Price is:~~
- ~~(a) — \$1000/MWh until the first time the value of the Minimum STEM Price is revised by the Economic Regulation Authority and takes effect in accordance with clause 6.20.29; and then~~
 - ~~(b) — the revised value published in each final report by the Economic Regulation Authority pursuant to clause 6.20.29, from the time specified in the relevant final report until such time as a further revised value is published and takes effect in a subsequent final report.~~
- ~~6.20.13. The Economic Regulation Authority must annually review the value of the Minimum STEM Price and must:~~
- ~~(a) — determine whether the Minimum STEM Price is appropriate in accordance with clause 6.20.14; and~~
 - ~~(b) — subject to clause 6.20.15, determine the value of the Minimum STEM Price, with reference to clause 6.20.16 and in accordance with clauses 6.20.17 to 6.20.20, where the Economic Regulation Authority determines that the current value of the Minimum STEM Price is not appropriate.~~
- ~~6.20.14. In determining whether the Minimum STEM Price is appropriate under clause 6.20.13(a), subject to clause 1.35.2, the Economic Regulation Authority must~~

consider without limitation, if since the last annual review of the Minimum STEM Price under clause 6.20.13:

- ~~(a) — the Real-Time Market for energy has settled at the Minimum STEM Price in one or more Trading Intervals because, in the Economic Regulation Authority's reasonable opinion, the Minimum STEM Price was too high;~~
- ~~(b) — AEMO dispatched a Facility below the sum of all quantities priced at the Minimum STEM Price in the Facility's Real-Time Market Offer for energy in the Dispatch Interval, for reasons other than Outages, binding Network Constraints and the dispatch of Essential System Services, because, in the Economic Regulation Authority's reasonable opinion, the Minimum STEM Price was too high;~~
- ~~(c) — there has been a change in the generation fleet in the SWIS that, in the Economic Regulation Authority's reasonable opinion, is likely to result in:
 - ~~i. — the current Minimum STEM Price being materially lower than necessary to achieve the criterion in clause 6.20.16(a), including but not limited to an upgrade or the retirement of a Facility with high cycling costs; or~~
 - ~~ii. — the current Minimum STEM Price being too high to achieve the criterion in clause 6.20.16(a), including but not limited to the increase of cycling costs due to deterioration or aging of an existing plant; and~~~~
- ~~(d) — a Market Participant has notified the Economic Regulation Authority that it considers the Minimum STEM Price is not appropriate or requested the Minimum STEM Price be revised or amended and provided reasons for the basis of its consideration or request.~~

~~6.20.15. — The Economic Regulation Authority must not revise the value of the Minimum STEM Price under clause 6.20.13(b), if it determines the Minimum STEM Price is appropriate under clause 6.20.13(a).~~

~~6.20.16. — The Minimum STEM Price must:~~

- ~~(a) — allow clearance of the Real-Time Market for energy without the Reference Trading Price being equal to the Minimum STEM Price in most circumstances; and~~
- ~~(b) — subject to clause 6.20.16(a), limit Market Participants' exposure to Reference Trading Prices that would threaten the financial viability of a prudent Market Participant.~~

~~6.20.17. — When revising the value of the Minimum STEM Price in accordance with clause 6.20.13(b), the Economic Regulation Authority must:~~

- ~~(a) — determine for credible scenarios of low demand, the price at which the operator of the Facility with the highest cycling costs per MW in the scenario would, acting reasonably, decommit the Facility should the~~

~~Reference Trading Price equal or fall below that price for a single Trading Interval; and~~

- ~~(b) — revise the Minimum STEM Price to be the highest price determined under those scenarios that is lower than 95 percent of all of the prices determined under clause 6.20.17(a).~~

~~6.20.18. — When determining the credible scenarios of low demand for the purpose of clause 6.20.17(a), the Economic Regulation Authority may use historic scenarios but must also account for any changes expected to the SWIS that would come into effect prior to the time that the Minimum STEM Price would apply and that are likely to have an effect on the Reference Trading Price. The changes include, but are not limited to:~~

- ~~(a) — expected changes in system demand;~~
- ~~(b) — any expected entrance of a new Facility that will participate in the Real-Time Market;~~
- ~~(c) — expected changes to an existing Facility; and~~
- ~~(d) — any expected permanent exit of a Facility from the Real-Time Market.~~

~~6.20.19. — When determining the cycling costs of a Facility under clause 6.20.17(a), the Economic Regulation Authority must consider:~~

- ~~(a) — the factors that a Market Participant acting reasonably would consider in making a decommitment decision for the Facility with the highest cycling cost in the SWIS, assuming that all energy sent out by the Facility is settled at the Reference Trading Price:
 - ~~i. — the cost to decommit and recommit within the timeframe specified under clause 6.20.19(a)(iii), including start-related fuel and variable operating and maintenance costs of the Facility;~~
 - ~~ii. — the minimum stable level of operation of the Facility;~~
 - ~~iii. — the minimum time the Facility must remain out of service once decommitted before recommitment is possible;~~
 - ~~iv. — any expected losses or gains, opportunity costs and cost savings that the Market Participant would incur as a result of decommitment for the duration of the minimum time the Facility must remain out of service; and~~~~
- ~~(b) — any other matters that the Economic Regulation Authority deems relevant.~~

~~6.20.20. — In determining the cycling costs of a Facility pursuant to clause 6.20.17(a), the Economic Regulation Authority must have regard to the Wholesale Market Objectives and must, as far as practicable, use information about the cost the relevant Facility would incur as provided by the relevant Market Participant but may use estimates where the Economic Regulation Authority considers reasonable.~~

- ~~6.20.21. When undertaking its review under clause 6.20.13, the Economic Regulation Authority may request a Market Participant to provide the information listed in clause 6.20.19(a)(i) for a specific Facility if the Economic Regulation Authority considers that it needs this information.~~
- ~~6.20.22. If the Economic Regulation Authority requests information under clause 6.20.21, the Economic Regulation Authority must specify the time by which the information must be provided and must give the Market Participant at least 10 Business Days to provide the requested information.~~
- ~~6.20.23. If the Economic Regulation Authority requests information under clause 6.20.21, the respective Market Participant must provide this information within the timeframe specified in the request.~~
- ~~6.20.24. A Market Participant may, by the timeframe specified for the close of submissions under clause 6.20.27, provide the Economic Regulation Authority with evidence regarding the costs a Facility incurs when decommitting for the purpose of the WEM Rules and which the Economic Regulation Authority must consider in determining the revised value for the Minimum STEM Price under clause 6.20.13(b).~~
- ~~6.20.25. Where a Market Participant provides the Economic Regulation Authority with satisfactory evidence under clause 6.20.24, the Economic Regulation Authority must consider the information when determining the revised Minimum STEM Price as far as the information affects the Economic Regulation Authority's reasonable estimate of any costs that a prudent Market Participant would incur when decommitting its Facility in the scenarios under clause 6.20.17(a).~~
- ~~6.20.26. In conducting the review required by clause 6.20.13, the Economic Regulation Authority must prepare and publish on its website a draft report setting out:~~
- ~~(a) its determination and reasons as to the appropriateness of the current value of the Minimum STEM Price; and~~
 - ~~(b) if applicable:
 - ~~i. the proposed revised value for the Minimum STEM Price;~~
 - ~~ii. how it arrived at the revised value for the Minimum STEM Price and, subject to the Economic Regulation Authority's confidentiality obligations, details of how the Economic Regulation Authority determined the values that applied in respect of each of the factors described in clause 6.20.19; and~~
 - ~~iii. a proposed effective date for the revised value.~~~~
- ~~6.20.27. The Economic Regulation Authority must publish a request for submissions from interested parties on the draft report referred to in clause 6.20.26 on its website where the deadline for the submissions must be no earlier than six weeks after the date of publication of the draft report.~~

~~6.20.28. Prior to revising the value of the Minimum STEM Price in accordance with clause 6.20.29, the Economic Regulation Authority may publish a request for further submissions on its website. Where the Economic Regulation Authority publishes a request for further submissions in accordance with this clause, it must request submissions from all sectors of the Western Australia energy industry, including end-users.~~

~~6.20.29. After considering the submissions received on the draft report referred to in clause 6.20.27 and any submissions received under clause 6.20.28, the Economic Regulation Authority must:~~

~~(a) publish any submissions received on its website;~~

~~(b) prepare and publish on its website a final report, setting out:~~

~~i. its determination and reasons as to the appropriateness of the current value of the Minimum STEM Price; and~~

~~ii. if applicable:~~

~~1. the revised value for the Minimum STEM Price;~~

~~2. how it arrived at the revised value for the Minimum STEM Price and, subject to the Economic Regulation Authority's confidentiality obligations, details of how the Economic Regulation Authority determined the values applied in respect of each of the factors described in clause 6.20.19; and~~

~~3. the date the revised value is to take effect, where the effective date must be at least five Business Days after the publication of the report; and~~

~~(c) if applicable, inform AEMO of the revised value for the Minimum STEM Price and when the revised value is to take effect.~~

~~6.20.30. A revised value for the Minimum STEM Price replaces the previous value after the Economic Regulation Authority has published its final report in accordance with clause 6.20.29, with effect from the time specified in final report.~~

7 Real-Time Market Operation and Dispatch

Real-Time Market Submissions: Obligations and meaning

Explanatory Note

The earlier gazetted rules assume that Enablement Losses will be included in FCESS offer prices. As this approach is being replaced with the FCESS Uplift Payment, references to Enablement Losses in this section have been amended.

- 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 Availability Quantity not exceeding the SESSM Offer Cap for the SESSM Award ~~before accounting for Enablement Losses~~;
 - (b) where the Reference 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 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.

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Explanatory Note

See Explanatory Note for clause 2.16C.3.

- 7.4.26. Where a subsequent Real-Time Market Submission is made under this section 7.4, a Market Participant must:
- (a) specify the reason for the revision in the subsequent Real-Time Market Submission, and create and maintain adequate detailed records (that are capable of independent verification) of the time at which the changed circumstances that gave rise to the subsequent Real-Time Market Submission occurred, and the time at which the Market Participant became aware of the changed circumstances; and
 - (b) where the Real-Time Market Submission relates to Dispatch Intervals within the Pre-Dispatch Schedule Horizon, create and maintain ~~a record~~ adequate detailed records (that are capable of independent verification) of the reasons, including identifying any technical limitations, for submitting the subsequent Real-Time Market Submission, including details of any changed circumstances and the impact of those circumstances that gave rise to the subsequent Real-Time Market Submission for the relevant Registered Facility at the time of the changed circumstance and the time at which the Market Participant became aware of the changed circumstances.
- 7.4.27. Where a Real-Time Market Submission specifies an Enablement Minimum, Enablement Maximum, Low Breakpoint, High Breakpoint, Maximum Upwards Ramp Rate or Maximum Downwards Ramp Rate, that is different to the Standing Enablement Minimum, Standing Enablement Maximum, Standing Low Breakpoint, Standing High Breakpoint, Standing Maximum Upwards Ramp Rate or Standing Maximum Downwards Ramp Rate value, as applicable, specified in the Standing Data for the Registered Facility, the Market Participant must:
- (a) specify the reason for the difference in the Real-Time Market Submission, and create and maintain adequate detailed records (that are capable of independent verification) of the time at which the changed circumstances that gave rise to the subsequent Real-Time Market Submission occurred, and the time at which the Market Participant became aware of the changed circumstances; and
 - (b) where the Real-Time Market Submission relates to Dispatch Intervals within the Pre-Dispatch Schedule Horizon, create and maintain ~~a record~~ adequate detailed records (that are capable of independent verification) of

the reasons, including identifying any technical limitations, for the differences between the relevant values specified in the Real-Time Market Submission and the corresponding values specified in the Standing Data for the relevant Registered Facility at the time of the changed circumstance and the time at which the Market Participant became aware of the changed circumstances.

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Real-Time Market Submissions: Processing

Explanatory Note

Clause 7.4.51 requires AEMO to reduce any Loss Factor Adjusted Prices from Real-Time Market Submissions that are outside the Energy Offer Price Ceiling/Energy Offer Price Floor to those limits. This clause has been amended such that this also applies to Standing Real-Time Market Submissions.

New clause 7.4.51A is added to apply a similar process to the FCESS markets.

7.4.51. Where a Loss Factor Adjusted Price determined in accordance with clause 7.4.50 or clause 7.4.60 is outside the relevant Energy Offer Cap, AEMO must use the relevant Energy Offer Cap for the Real-Time Market Submission or Standing Real-Time Market Submission in the Dispatch Algorithm.

7.4.51A. Where a price for Regulation, Contingency Reserve or RoCoF Control Service in a Real-Time Market Submission or Standing Real-Time Market Submission:

- (a) is greater than the FCESS Offer Price Ceiling, AEMO must use the FCESS Offer Price Ceiling in the Dispatch Algorithm; and
- (b) is less than zero, AEMO must use a price of zero in the Dispatch Algorithm.

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7.11B. Determination of Market Clearing Prices

Explanatory Note

In addition to the update to the defined term for the energy price cap, clause 7.11B.3 has been updated to use the defined term Energy Market Clearing Price.

7.11B.3. If, for any Dispatch Interval:

- (a) the Market Clearing Prices for the Dispatch Interval have not already been determined by the Central Dispatch Process;
- (b) AEMO reasonably determines that the Central Dispatch Process may determine that there is insufficient capacity to meet all load; and
- (c) AEMO has issued a manual load shed direction to a Network Operator under clause 3.6.6A,

then AEMO must set the Energy Market Clearing Price ~~for energy~~ for the Dispatch Interval to equal the ~~Alternative Maximum STEM~~Energy Offer Price Ceiling.

Explanatory Note

The Energy Offer Price Ceiling is to apply to both offer prices and clearing prices for energy. New clause 7.11B.3A applies this cap to energy clearing prices.

7.11B.3A. If, for any Dispatch Interval, the Energy Market Clearing Price determined using the Dispatch Algorithm is greater than the Energy Offer Price Ceiling, then AEMO must set the Energy Market Clearing Price in that Dispatch Interval to equal the Energy Offer Price Ceiling.

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9. Settlement

Settlement Calculations

9.10. Settlement Calculations - Essential System Services

Explanatory Note

The amount payable to Market Participant p for providing Essential System Services in Trading Day d is the sum of the following components, each calculated for Market Participant p for Trading Day d:

- Contingency Reserve Raise amount payable;
- Contingency Reserve Lower amount payable;
- RoCoF Control Service amount payable;
- Regulation amount payable;
- System Restart Services amount payable; and
- FCESS Uplift Payment.

All ESS amounts payable are calculated at the Dispatch Interval level before being aggregated to Trading Interval and Trading Day amounts.

The Regulation Raise and Regulation Lower amounts payable have been added together into a single Regulation amount payable to mitigate duplicating cost recovery calculations for Regulation Raise and Regulation Lower since the same cost recovery method is used for both services (see clause 9.10.36).

In contrast, the cost recovery methods for Contingency Reserve Raise and Contingency Reserve Lower are different, because the cost is allocated to different 'causers' and they are calculated at different granularity.

9.10.3. The Essential System Service amount payable to Market Participant p for Trading Day d is:

$$ESS_Payable(p,d) = CR_Payable(p,d) + CL_Payable(p,d) +$$

$$RCS_Payable(p,d) + Regulation_Payable(p,d) + SRS_Payable(p,d) + NCESS_Payable(p,d) + \underline{FCESSUpliftPayment(p,d)}$$

where:

- (a) $CR_Payable(p,d)$ is the Contingency Reserve Raise amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.4;
- (b) $CL_Payable(p,d)$ is the Contingency Reserve Lower amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.8;
- (c) $RCS_Payable(p,d)$ is the RoCoF Control Service amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.12;

- (d) Regulation_Payable(p,d) is the Regulation amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.20; ~~and~~
- (e) SRS_Payable(p,d) is the System Restart Service amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.25; ~~and~~
- (f) NCESS_Payable(p,d) is the NCESS amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.27A; ~~and~~
- (g) FCESSUpliftPayment(p,d) is the FCESS Uplift Payment amount payable to Market Participant p for Trading Day d calculated in accordance with clause 9.10.27E.

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Explanatory Note

Clauses 9.10.27E to 9.10.27N implement the calculation of the FCESS Uplift Payment.

FCESS Uplift Payments are made to Market Participants in respect of their Registered Facilities, in specific circumstances where a generator may be required to run to provide a FCESS but would not otherwise be required for energy. In this situation, where the generator is required to run at its minimum generation level, it is possible that neither the energy price nor FCESS price compensate the generator for its energy opportunity cost, thereby leaving them out of pocket.

The total amount of FCESS Uplift Payment payable to a Market Participant in a Trading Day is the sum of FCESS Uplift Payments made in respect of all of its Registered Facilities in the Trading Intervals in that Trading Day.

9.10.27E. The FCESS Uplift Payment amount payable to Market Participant p for Trading Day d is:

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

where:

- (a) FCESSUpliftPayment(f,t) is the FCESS Uplift Payment amount payable for Registered Facility f in Trading Interval t as calculated in accordance with clause 9.10.27F;
- (b) f ∈ p denotes all Registered Facilities f registered to Market Participant p;
and
- (c) t ∈ d denotes all Trading Intervals t in Trading Day d.

Explanatory Note

The total amount of FCESS Uplift Payment payable to a Market Participant in a Trading Interval is the sum of FCESS Uplift Payments made in respect of all of its Registered Facilities in the Dispatch Intervals in that Trading Interval.

9.10.27F. The FCESS Uplift Payment amount payable for Registered Facility f in Trading Interval t is:

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

where:

(a) FCESUpliftPayment(f,DI) is the FCESS Uplift Payment amount payable for Registered Facility f in Dispatch Interval DI as calculated under clause 9.10.27L; and

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

Explanatory Note

The following clauses calculate the Enablement Losses for a Registered Facility in respect of each individual FCESS, with the FCESS Uplift Payment for a Registered Facility in a Dispatch Interval being the maximum of the Enablement Losses calculated for the different FCESSs.

For each FCESS, Enablement Losses are calculated in a Dispatch Interval where the Registered Facility is enabled to provide that FCESS for a quantity greater than zero, and its energy Dispatch Target is equal to the sum of the Enablement Minimum and the Essential System Service Enablement Quantity. The enablement quantity for each service is taken from the relevant clause above, so that it is adjusted accordingly where the Registered Facility is subject to an outage.

For an eligible Registered Facility, the Enablement Losses are the difference between its marginal energy offer price and the market clearing price for energy, multiplied by the highest Enablement Minimum for any FCESS that it is enabled to provide in that Dispatch Interval, with adjustments for Loss Factors.

The calculations are based on the calculation of Estimated Enablement Losses in the Glossary in Chapter 11.

9.10.27G. The Enablement Losses in respect of Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI are:

$$\text{EnablementLosses_CR}(f,DI) = \text{Max}(0, \text{EL_CR_Factor}(f,DI) \times \frac{5}{60} \times \text{LF}(f,DI) \times \text{EM_CR}(f,DI) \times (\text{LFAOP}(f,DI) - \text{Energy_MCP}(DI)))$$

where:

(a) EL_CR_Factor(f,DI) is 1 for Registered Facility f in Dispatch Interval DI if:

i. CR_EnablementQuantity(f,DI), determined in accordance with clause 9.10.6(c), is greater than zero; and

ii. its Dispatch Target is equal to EM_CR(f,DI),

and 0 otherwise;

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

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

(d) EM_CR(f,DI) is the Enablement Minimum for Contingency Reserve Raise for Registered Facility f in Dispatch Interval DI;

(e) LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy in the Real-Time Market Submission for Registered Facility f and Dispatch Interval DI which corresponds to EM_CR(f,DI); and

(f) Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI.

9.10.27H. The Enablement Losses in respect of Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI are:

$$\text{EnablementLosses_CL}(f,DI) = \text{Max}(0, \text{EL_CL_Factor}(f,DI) \times \frac{5}{60} \times \text{LF}(f,DI) \times \text{EM_CL}(f,DI) \times (\text{LFAOP}(f,DI) - \text{Energy_MCP}(DI)))$$

where:

(a) EL_CL_Factor(f,DI) is 1 for Registered Facility f in Dispatch Interval DI if:

i. CL_EnablementQuantity(f,DI), determined in accordance with clause 9.10.10(c), is greater than zero; and

ii. the Registered Facility has a constraint applied that represents the trade-off between the Dispatch Target, the Essential System Service Enablement Quantity for Contingency Reserve Lower and the Essential System Service Enablement Quantity for Contingency Reserve Raise, taking into account the values in clauses 7.8.5(b)(i) to 7.8.5(b)(iv), which is binding,

and 0 otherwise;

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

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

(d) EM_CL(f,DI) is the Enablement Minimum for Contingency Reserve Lower for Registered Facility f in Dispatch Interval DI;

(e) LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy in the Real-Time Market Submission for Registered Facility f and Dispatch Interval DI which corresponds to EM_CL(f,DI); and

(f) Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI.

9.10.27I. The Enablement Losses in respect of RoCoF Control Service for Registered Facility f in Dispatch Interval DI are:

$$\text{EnablementLosses_RCS}(f,DI) = \text{Max}(0, \text{EL_RCS_Factor}(f,DI) \times \frac{5}{60} \times \text{LF}(f,DI) \times \text{EM_RCS}(f,DI) \times (\text{LFAOP}(f,DI) - \text{Energy_MCP}(DI)))$$

where:

(a) EL_RCS_Factor(f,DI) is 1 for Registered Facility f in Dispatch Interval DI if:

- i. RCS EnablementQuantity(f,DI), determined in accordance with clause 9.10.14(c), is greater than zero; and
 - ii. its Dispatch Target is equal to EM RCS(f,DI), and 0 otherwise;
- (b) 5/60 represents the period of a Dispatch Interval in hours;
- (c) LF(f,DI) is the Loss Factor applicable to the network connection point associated with Registered Facility f in Dispatch Interval DI;
- (d) EM RCS(f,DI) is the Enablement Minimum for RoCoF Control Service for Registered Facility f in Dispatch Interval DI;
- (e) LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy in the Real-Time Market Submission for Registered Facility f and Dispatch Interval DI which corresponds to EM RCS(f,DI); and
- (f) Energy MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI.

9.10.27J. The Enablement Losses in respect of Regulation Raise for Registered Facility f in Dispatch Interval DI are:

$$\text{EnablementLosses_RR}(f,DI) = \text{Max}(0, \text{EL_RR_Factor}(f,DI) \times \frac{5}{60} \times \text{LF}(f,DI) \times \text{EM_RR}(f,DI) \times (\text{LFAOP}(f,DI) - \text{Energy_MCP}(DI)))$$

where:

- (a) EL RR Factor(f,DI) is 1 for Registered Facility f in Dispatch Interval DI if:
- i. RR EnablementQuantity(f,DI), determined in accordance with clause 9.10.22(c), is greater than zero; and
 - ii. its Dispatch Target is equal to EM RR(f,DI), and 0 otherwise;
- (b) 5/60 represents the period of a Dispatch Interval in hours;
- (c) LF(f,DI) is the Loss Factor applicable to the network connection point associated with Registered Facility f in Dispatch Interval DI;
- (d) EM RR(f,DI) is the Enablement Minimum for Regulation Raise for Registered Facility f in Dispatch Interval DI;
- (e) LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy in the Real-Time Market Submission for Registered Facility f and Dispatch Interval DI which corresponds to EM RR(f,DI); and
- (f) Energy MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI.

9.10.27K. The Enablement Losses in respect of Regulation Lower for Registered Facility f in Dispatch Interval DI are:

$$\text{EnablementLosses_RL}(f,DI) = \text{Max}(0, \text{EL_RL_Factor}(f,DI) \times \frac{5}{60} \times \text{LF}(f,DI) \times \text{EM_RL}(f,DI) \times (\text{LFAOP}(f,DI) - \text{Energy_MCP}(DI)))$$

where:

- (a) EL_RL_Factor(f,DI) is 1 for Registered Facility f in Dispatch Interval DI if:
- i. RL_EnablementQuantity(f,DI), determined in accordance with clause 9.10.23(c), is greater than zero; and
 - ii. the Registered Facility has a constraint applied that represents the trade-off between the Dispatch Target, the Essential System Service Enablement Quantity for Contingency Reserve Lower and the Essential System Service Enablement Quantity for Contingency Reserve Raise, taking into account the values in clauses 7.8.5(b)(i) to 7.8.5(b)(iv), which is binding,
- and 0 otherwise;
- (b) 5/60 represents the period of a Dispatch Interval in hours;
- (c) LF(f,DI) is the Loss Factor applicable to the network connection point associated with Registered Facility f in Dispatch Interval DI;
- (d) EM_RL(f,DI) is the Enablement Minimum for Regulation Lower for Registered Facility f in Dispatch Interval DI;
- (e) LFAOP(f,DI) is the Loss Factor Adjusted Price in the Price-Quantity Pair for energy in the Real-Time Market Submission for Registered Facility f and Dispatch Interval DI which corresponds to EM_RL(f,DI); and
- (f) Energy_MCP(DI) is the Final Energy Market Clearing Price for Dispatch Interval DI.

9.10.27L. The FCESS Uplift Payment amount payable for Registered Facility f in Dispatch Interval DI is:

$$\text{FCESSUpliftPayment}(f,DI) = \text{Max}(\text{EnablementLosses_CR}(f,DI), \text{EnablementLosses_CL}(f,DI), \text{EnablementLosses_RCS}(f,DI), \text{EnablementLosses_RR}(f,DI), \text{EnablementLosses_RL}(f,DI))$$

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 9.10.27G;
- (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 9.10.27H;

- (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 9.10.27I;
- (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 9.10.27J; 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 9.10.27K.

Explanatory Note

For transparency and to support market signals, AEMO will be required to publish FCESS Uplift Payments by Registered Facility and Dispatch Interval.

9.10.27M. AEMO must, as soon as practicable after each Settlement Statement Date, publish on the WEM Website the FCESS Uplift Payments payable to each Registered Facility and each Dispatch Interval in the relevant Trading Week.

Explanatory Note

The total cost of FCESS Uplift Payments in Trading Interval t is the sum of the FCESS Uplift Payment amounts payable to all Market Participants in Trading Interval t. This is calculated for the purpose of allocating the cost of FCESS Uplift Payments under clauses 9.10.28, 9.10.46 and 9.10.47.

9.10.27N. The total cost of FCESS Uplift Payments in Trading Interval t is:

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

where:

- (a) FCESSUpliftPayment(f,t) is the FCESS Uplift Payment amount payable for Registered Facility f in Trading Interval t as calculated in accordance with clause 9.10.27F; and
- (b) f ∈ F denotes all Registered Facilities.

Explanatory Note

The amount recoverable from Rule Participant p for contributing to the Essential System Services requirement in Trading Day d is the sum of the following components, each calculated for Rule Participant p for Trading Day d:

- Contingency Reserve Raise amount recoverable;
- Contingency Reserve Lower amount recoverable;
- RoCoF Control Service amount recoverable;
- Regulation amount recoverable;
- System Restart Services amount recoverable; and
- FCESS Uplift Payment amount recoverable.

All ESS recoverable amounts are calculated at the Trading Interval level, except Contingency

Reserve Raise. This is because meter data is only available at 30-minute intervals until five-minute settlement is implemented on 1 October 2025.

Contingency Reserve Raise cost recovery amounts are calculated at the Dispatch Interval level because it uses quantities calculated in the Dispatch Engine rather than metered schedules.

9.10.28. The Essential System Service amount recoverable from Rule Participant p for Trading Day d is:

$$\text{ESS_Recoverable}(p,d) = \text{CR_Recoverable}(p,d) + \text{CL_Recoverable}(p,d) + \text{RCS_Recoverable}(p,d) + \text{Regulation_Recoverable}(p,d) + \text{SRS_Recoverable}(p,d) + \text{NCESS_Recoverable}(p,d) + \text{FCESS_UP_Recoverable}(p,d)$$

where:

- (a) CR_Recoverable(p,d) is the Contingency Reserve Raise amount recoverable from Market Participant p for Trading Day d calculated in accordance with clause 9.10.29;
- (b) CL_Recoverable(p,d) is the Contingency Reserve Lower amount recoverable from Market Participant p for Trading Day d calculated in accordance with clause 9.10.31;
- (c) RCS_Recoverable(p,d) is the RoCoF Control Service amount recoverable from Rule Participant p for Trading Day d calculated in accordance with clause 9.10.33;
- (d) Regulation_Recoverable(p,d) is the Regulation amount recoverable from Market Participant p for Trading Day d calculated in accordance with clause 9.10.35; ~~and~~
- € SRS_Recoverable(p,d) is the System Restart Service amount recoverable from Market Participant p for Trading Day d calculated in accordance with clause 9.10.40; ~~and~~
- (f) NCESS_Recoverable(p,d) is the NCESS amount recoverable from Market Participant p for Trading Day d calculated in accordance with clause 9.10.44; ~~and~~
- (g) FCESS UP Recoverable(p,d) is the FCESS Uplift Payment amount recoverable from Market Participant p for Trading Day d calculated in accordance with clause 9.10.46.

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Explanatory Note

Clauses 9.10.46 and 9.10.47 calculate the portion of FCESS Uplift Payments to be recovered from each Market Customer.

The amount recoverable from Market Participant p for FCESS Uplift Payments on Trading Day d is the sum of the amounts recoverable from Market Participant p for FCESS Uplift Payments for each Trading Interval t in Trading Day d.

9.10.46. The FCESS Uplift Payment amount recoverable from Market Participant p for Trading Day d is:

$$\text{FCESS_UP_Recoverable}(p,d) = \sum_{t \in d} \text{FCESS_UP_Recoverable}(p,t)$$

where:

(a) FCESS_UP_Recoverable(p,t) is the FCESS Uplift Payment amount recoverable from Market Participant p for Trading Interval t in accordance with clause 9.10.47; and

(b) t ∈ d denotes all Trading Intervals t in Trading Day d.

Explanatory Note

The amount recoverable from Market Participant p for FCESS Uplift Payments in Trading Interval t is the:

- total cost of FCESS Uplift Payments in Trading Interval t,
multiplied by

- Market Participant p's Consumption Share for Trading Interval t.

The cost is allocated according to Consumption Share as FCESS Uplift Payments are not directly attributable to a single FCESS, may arise due to the simultaneous provision of multiple FCESSs and could be argued to be compensating costs associated with energy provision.

9.10.47. The FCESS Uplift Payment amount recoverable from Market Participant p for Trading Interval t is:

$$\text{FCESS_UP_Recoverable}(p,t) = \text{FCESSUpliftPayment}(t) \times \text{ConsumptionShare}(p,t)$$

where:

(a) FCESSUpliftPayment (t) is the total cost of FCESS Uplift Payments in Trading Interval t as calculated in accordance with clause 9.10.27N; and

(b) ConsumptionShare(p,t) is the Consumption Share for Market Participant p in Trading Interval t as calculated in accordance with clause 9.5.6.

11. Glossary

~~**Alternative Maximum STEM Price:** The maximum price set in accordance with clause 6.20.3 that may be associated with a Portfolio Supply Curve for a portfolio including Facilities expected to run on Liquid Fuel or any Portfolio Demand Curve forming part of a STEM Submission or Standing STEM Submission.~~

~~**Constrained Portfolio:** The group of Registered Facilities within a Portfolio located behind a particular Network Constraint.~~

~~**Constrained Uplift Payment Ratio:** Has the meaning given in clause 2.16C.2.~~

Explanatory Note

The definition of Enablement Losses has been amended so that it can be used as part of the calculation of the FCESS Uplift Payment.

The updated definition improves its applicability to the provision of lower services, whereby a facility may incur Enablement Losses when it is issued a Dispatch Target equal to its Enablement Minimum plus the required enablement quantity.

Enablement Losses: For a Registered Facility operating in a Dispatch Interval at:

- (a) the sum of its Enablement Minimum and its Essential System Service Enablement Quantity, in respect of Contingency Reserve Lower or Regulation Lower; or
- (b) its Enablement Minimum in a Dispatch Interval, in respect of each other Frequency Co-optimised Essential System Service,

the difference between energy revenue and the cost of providing that energy.

~~**Energy Offer Price Ceiling:** The price equal to the Alternative Maximum STEM Price in \$/MWh determined in accordance with clause 2.26.2, and as may be escalated in accordance with clause 2.26.2U as applicable, that is the maximum price that may be associated with a Portfolio Supply Curve forming part of a STEM Submission or Standing STEM Submission, and with a Real-Time Market Submission or Standing Real-Time Market Submission for Injection or Withdrawal by a Registered Facility.~~

~~**Energy Offer Price Floor:** The price equal to the Minimum STEM Price in \$/MWh determined in accordance with clauses 2.26.2D to 2.26.2K, and as may be escalated in accordance with clause 2.26.2U, that is the minimum price that may be associated with a Portfolio Supply Curve forming part of a STEM Submission or Standing STEM Submission, and with a Real-Time Market Submission or Standing Real-Time Market Submission for Injection or Withdrawal by a Registered Facility.~~

~~**Energy Price Limits:** The set of price limits comprising the Maximum STEM Price, the Alternative Maximum STEM Price and the Minimum STEM Price.~~

~~**FCESS Offer Price Ceiling:** The price, in \$/MW or \$/MWs, as applicable, determined in accordance with clause 2.26.2B and as may be escalated in accordance with clause~~

2.26.2U, that is the maximum price that may be offered in a Real-Time Market Submission or Standing Real-Time Market Submission for the provision of a Frequency Control Essential System Service.

FCESS Uplift Payment: Is the Energy Uplift Payment in respect of a Facility and, in relation to a:

- (a) Trading Interval, has the meaning given in clause 9.10.27F; and
- (b) Dispatch Interval, has the meaning given in clause 9.10.27G.

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

Irregular Price Offer: A price described in clauses 2.16C.5(a) or 2.16C.5(b).

Market Price Limits: The set of price limits comprising the Energy Offer Price Ceiling, the Energy Offer Price Floor and the FCESS Offer Price Ceiling.

Material Constrained Portfolio: A Constrained Portfolio with a Constrained Uplift Payment Ratio equal to 10 percent or greater as calculated under clause 2.16C.2(a).

Material Portfolio: Has the meaning given in clause 2.16C.1(b).

~~**Maximum STEM Price:** The price determined in accordance with clause 6.20.2 as the maximum price that may be associated with a Portfolio Supply Curve for a portfolio including no Facilities expected to run on Liquid Fuel forming part of a STEM Submission or Standing STEM Submission.~~

~~**Minimum STEM Price:** Means the minimum price that a Market Participant can use in Price-Quantity Pairs in a STEM Submission and in Balancing Price-Quantity Pairs in a Balancing Submission, as determined in accordance with section 6.20.~~

Offer Construction Guideline: The guideline published by the Economic Regulation Authority under clause 2.16D.1(a), as may be amended in accordance with clause 2.16D.2.

Portfolio: Means:

- (a) each Registered Facility that is owned by the same entity and each Registered Facility that is owned by an associated entity of that entity (as those expressions are defined in the Corporations Act); or
- (b) if paragraph (a) does not apply, each Registered Facility that is owned by the same entity (as that expression is defined in the Corporations Act); or
- (c) if neither paragraphs (a) or (b) applies, a Registered Facility.

For the avoidance of doubt, at all times, a Registered Facility cannot be contained in more than one type of Portfolio described in paragraphs (a), (b) or (c).

Price Cap: Means:

- (a) a maximum price that is:
 - i. for a Balancing Facility to run on Non-Liquid Fuel, the Maximum STEM Price; or
 - ii. for a Balancing Facility to run on Liquid Fuel, the Alternative Maximum STEM Price; and
- (b) a minimum price that is the Minimum STEM Price.

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.

Appendix 6: STEM Price Curve Determination

Explanatory Note

Appendix 6 is amended to reflect changes to price limits and defined terms.

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- (a) Determine for every price between the ~~Minimum STEM Energy Offer~~ Price Floor and the ~~Alternative Maximum STEM Energy Offer~~ Price Ceiling:
- i. the maximum cumulative quantity the Market Participant is prepared to sell into the STEM from all of its Price-Quantity Pairs in its Portfolio Supply Curve;
 - ii. the minimum cumulative quantity the Market Participant is prepared to sell into the STEM from all of its Price-Quantity Pairs in its Portfolio Supply Curve;
 - iii. the maximum cumulative quantity the Market Participant is prepared to buy from the STEM from all of its Price-Quantity Pairs in its Portfolio Demand Curve;
 - iv. the minimum cumulative quantity the Market Participant is prepared to buy from the STEM from all of its Price-Quantity Pairs in its Portfolio Demand Curve;
 - v. the STEM Price Curve quantity for that price where
 1. the minimum STEM Price Curve quantity for that price equals the value in [Appendix 6\(a\)\(ii\)](#) less the value in [Appendix 6\(a\)\(iii\)](#);
 2. the maximum STEM Price Curve quantity for that price equals the value in [Appendix 6\(a\)\(i\)](#) less the value in [Appendix 6\(a\)\(iv\)](#); and
 3. the STEM Price Curve for that price includes all quantities between those in [Appendix 6\(a\)\(v\)\(1\)](#) and [Appendix 6\(a\)\(v\)\(2\)](#).
- (b) If the minimum of the quantities determined under [Appendix 6\(v\)\(1\)](#) for the Market Participant for the Trading Interval is greater than the Net Bilateral Position of the Market Participant in the Trading Interval then:
- i. if, for every price between the ~~Minimum STEM Energy Offer~~ Price Floor and the ~~Alternative Maximum STEM Energy Offer~~ Price Ceiling, the quantity determined under [Appendix 6\(a\)\(v\)\(1\)](#) is equal to the quantity determined under [Appendix 6\(a\)\(v\)\(2\)](#), then amend the STEM Price Curve for the ~~Minimum STEM Energy Offer~~ Price Floor to include all quantities between the Net Bilateral Position of the Market Participant and the quantity determined for the ~~Minimum STEM Energy Offer~~ Price Floor under [Appendix 6\(a\)\(v\)\(2\)](#); and

- ii. otherwise, amend the STEM Price Curve for the lowest price for which the quantity determined under Appendix 6(a)(v)(1) is not equal to the quantity determined under Appendix 6(a)(v)(2), to include all quantities between the Net Bilateral Position of the Market Participant and the quantity determined for the price under Appendix 6(a)(v)(2).
- (c) If the maximum of the quantities determined under Appendix 6(a)(v)(2) for the Market Participant for the Trading Interval is less than the Net Bilateral Position of the Market Participant then:
- i. if, for every price between the ~~Minimum STEM Energy Offer Price Floor~~ and the ~~Alternative Maximum STEM Energy Offer Price Ceiling~~, the quantity determined under Appendix 6(a)(v)(1) is equal to the quantity determined under Appendix 6(a)(v)(2), then amend the STEM Price Curve for the ~~Alternative Maximum STEM Energy Offer Price Ceiling~~ to include all quantities between the quantity determined for the ~~Alternative Maximum STEM Energy Offer Price Ceiling~~ under Appendix 6(a)(v)(1) and the Net Bilateral Position of the Market Participant; and
 - ii. otherwise, amend the STEM Price Curve for the highest price for which the quantity determined under Appendix 6(a)(v)(1) is not equal to the quantity determined under Appendix 6(a)(v)(2), to include all quantities between the quantity determined for the price under Appendix 6(a)(v)(1) and the Net Bilateral Position of the Market Participant.

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