

Call for Further Submissions:
Amending the Minimum STEM Price definition and
determination (RC_2019_05)

Standard Rule Change Process

2 June 2020

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1. Rule Change Proposal, Process and Timeline

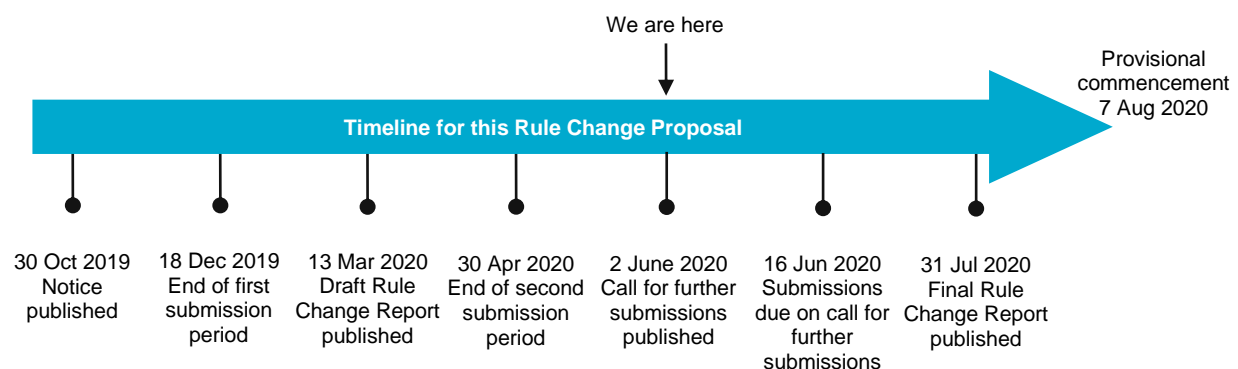
On 25 October 2019, Synergy submitted a Rule Change Proposal titled “Amending the Minimum STEM Price definition and determination” (RC_2019_05).

The Minimum STEM Price represents the price floor for the Short Term Energy Market (**STEM**) and the Balancing Market. The current Market Rules set the Minimum STEM Price at $-\$1,000/\text{MWh}$. This Rule Change Proposal seeks to make the Minimum STEM Price subject to an annual review in line with the relevant price ceilings (Maximum STEM Price and Alternative Maximum STEM Price) and to change the Minimum STEM Price to $-\$200/\text{MWh}$ until the first review of the Minimum STEM Price is complete.

This proposal is being processed using the Standard Rule Change Process described in section 2.7 of the Market Rules.

The second submission period closed on 30 April 2020. The Rule Change Panel considers that some of the feedback provided in the second submission period requires further consultation.

The key dates for progressing this Rule Change Proposal are:



This call for further submissions is drafted on the basis that the reader has read all the related documents, including the Rule Change Proposal, the first period submissions, the Draft Rule Change Report and the second period submissions. All documents related to this Rule Change Proposal can be found on the Rule Change Panel's website at https://www.erawa.com.au/rule-change-panel/market-rule-changes/rule-change-rc_2019_05.

2. Call for Further Submissions

The Rule Change Panel invites interested stakeholders to make submissions on the issues discussed in this call for further submissions, including the proposed revisions to the Amending Rules and the explanatory text boxes in the proposed revisions to the Amending Rules.

The Rule Change Panel notes that issues raised in the second submission period that are not discussed in this call for further submissions will be addressed in the Final Rule Change Report but are not considered to require further consultation at this point.

The Rule Change Panel would like stakeholders to comment on the following questions:

- Should the responsibility for annually reviewing and setting the Minimum STEM Price be given to the Economic Regulation Authority (**ERA**) rather than AEMO?

- Should the Minimum STEM Price be set at:
 - the price that represents the 10% Conditional Value at Risk (**CCaR**), the 5% CCaR or some other percentage, as explained in section 5 of this report;
 - the price that is lower than 90% of the prices determined, lower than 95% or some other percentage; or
 - any other specific price or value that is based on the decommitment costs considered in the approach proposed in the Draft Rule Change Report?
- Do stakeholders have any concerns with:
 - the introduction of a head of power for AEMO (or the ERA if it is given the responsibility for the annual Minimum STEM Price review) to obtain the information it would need to determine the decommitment costs; and/or
 - the proposed process for obtaining this information?
- Do stakeholders have any concerns about the introduction of the proposed guiding principles for setting the credible scenarios of low demand

The submission period is 10 Business Days from the date of publication of this call for further submissions . Submissions must be delivered to the RCP Secretariat by **5:00 PM on Tuesday 16 June 2020**.

The Rule Change Panel prefers to receive submissions by email, using the submission form available at: <https://www.erawa.com.au/rule-change-panel/make-a-rule-change-submission> sent to support@rcpwa.com.au.

Submissions may also be sent to the Rule Change Panel by post, addressed to:

Rule Change Panel
 Attn: Executive Officer
 C/o Economic Regulation Authority
 PO Box 8469
 PERTH BC WA 6849

3. Responsibility for the Annual Review of the Minimum STEM Price

In the Draft Rule Change Report, the Rule Change Panel noted that Synergy proposed for AEMO to be responsible for reviewing the Minimum STEM Price, and that changing the responsibility for the review of the other Energy Price Limits (**EPLs**) is outside the scope of this Rule Change Proposal. Therefore, the Rule Change Panel’s draft decision was to approve giving responsibility for review of the Minimum STEM Price to AEMO so that one party would be responsible for the review of all of the EPLs, even though the Rule Change Panel considered that the ERA might be better placed to be responsible for the annual EPL reviews. The Rule Change Panel indicated that changing responsibility for the EPL reviews might be better considered in a separate Rule Change Proposal after the ERA completes its current five-yearly review of the methodologies for setting the EPLs and the Benchmark Reserve Capacity Price (**BRCP**).

As noted in the Draft Rule Change Report, AEMO estimated that its costs to review the Minimum STEM Price would range from \$70,000 to \$300,000, and the ERA estimated that its costs would be around \$100,000 for each:

- annual review of the Minimum STEM Price, where AEMO proposes a revised value for the Minimum STEM Price; and
- five-yearly review of the methodology for setting the Minimum STEM Price.

In the second period submissions:

- AEMO confirmed its initial cost estimates;
- Alinta Energy expressed the view that the combined costs of the ERA and AEMO of up to \$400,000 per review do not justify the benefit of reviewing and determining the Minimum STEM Price; and
- Synergy expressed the view that the costs stated in the Draft Rule Change Report justify the benefit of a reviewing and determining the Minimum STEM Price.

However, since publication of the Draft Rule Change Report, the ERA has announced that it has suspended its review of the EPLs and BRCP until after the Energy Transformation Strategy reforms are implemented on 1 October 2022.¹

In addition, the ERA Secretariat provided the Rule Change Panel with a preliminary estimate of the costs that it would incur if it were tasked with the annual review of the Minimum STEM price, as follows:

- reviews of whether the current Minimum STEM Price is appropriate could be covered by the ERA's existing budget; and
- reviews of the Minimum STEM Price would cost around \$120,000 per review.

Therefore, the Rule Change Panel considers that it may be justifiable to give the ERA responsibility to review and set the Minimum STEM Price given the cost difference between:

- having AEMO review and recommend a revised Minimum STEM Price and having the ERA review AEMO's process and approve the revised Minimum STEM Price (total cost between \$170,000 and \$400,000 per review); vs.
- having the ERA review and approve the Minimum STEM Price (total cost of \$120,000 per review).

The Rule Change Panel also notes that the Energy Transformation Taskforce (**Taskforce**) is planning to commence consultation on the market power mitigation mechanism in the Wholesale Electricity Market (**WEM**) within the next few months, and the Rule Change Panel expects that this will cover the need for and review of the EPLs and who is to be responsible for ongoing reviews of the EPLs. The Rule Change Panel is of the view that the Taskforce is best placed to make recommendations on the market power mitigation measures to the Minister for Energy. Depending on the timing of the Taskforce's review of market power mitigation mechanisms, the Rule Change Panel considers that it should either reflect the Taskforce's recommendations (if this information is available) or assign responsibility for reviewing and approving the Minimum STEM Price to the party (or parties) that it considers can most efficiently undertake this responsibility.

¹ <https://www.erawa.com.au/cproot/21240/2/NOTICE---Suspension-of-BRCPEPL-method-reviews.pdf>

Comment boxes in the proposed Amending Rules in this call for further submissions indicate how the Market Rules could change to give the ERA responsibility for reviewing the Minimum STEM Price.

RCP Support seeks stakeholders' comments whether the responsibility for annually reviewing and approving the Minimum STEM Price should be given to the ERA rather than AEMO.

4. Changes to the proposed Methodology for determining the Minimum STEM Price

In the Draft Rule Change Report, the Rule Change Panel's draft decision was that AEMO should use the following methodology to determine a new Minimum STEM Price:

- (1) determine for low system demand scenarios that AEMO deems credible, the price at which the facility with the highest decommitment costs in the SWIS (in this scenario) would reasonably decommit if the Balancing Price clears at this price for a single Trading Interval over the timeframe of the Facility's minimum down time; and
- (2) set the Minimum STEM Price to be the price that is lower than 90% of the prices determined under (1).

In the second period submissions:

- Synergy and the ERA note that the selection of the 90% threshold is arbitrary.
- The ERA suggested that the choice of the 90% threshold could result in a Minimum STEM Price that is too high and therefore may not allow for the differentiation of Facilities. The ERA proposes to use the 10% CCaR instead.²

RCP Support has clarified with the ERA that the 10% CCaR represents the average of the 10% highest decommitment costs from the scenarios, which would deliver a similar result to the 90% threshold if the scenarios result in a unimodal distribution, but would be more robust against the risk of setting the Minimum STEM Price to high if the distribution was bimodal or multimodal. The ERA also clarified that the choice of percentage for the CCaR was arbitrary and should be considered carefully.

The Rule Change Panel seeks stakeholders' views on whether the Minimum STEM Price should be set at the price:

- that represents the 10% CCaR, the 5% CCaR or some other percentage;
- that is lower than 90% of the prices determined, lower than 95% or lower than some other percentage; or
- any other specific price or threshold that is based on the decommitment costs considered in the approach proposed in the Draft Rule Change Report?

² CCaR is also known as conditional value at risk (CVaR). Further information about this risk measurement can be found at the following links:

- <https://au.mathworks.com/discovery/conditional-value-at-risk.html>
- <https://www.styleadvisor.com/resources/statfacts/conditional-value-risk>
- https://en.wikipedia.org/wiki/Expected_shortfall

5. Information Gathering Powers for AEMO (or the ERA)

In its second period submission, AEMO requested to include a head of power to obtain the necessary information about Facility decommitment costs from Market Participants. The Rule Change Panel considers that this is a reasonable request and that such a provision should be included in the Market Rules if AEMO is tasked with the annual review of the Minimum STEM Price.

The Rule Change Panel has provided the proposed drafting for such a head of power and the process for AEMO to collect this information in the proposed Amending Rules in this call for further submissions, including explanations in comment boxes.

The Rule Change Panel asks stakeholders to raise any concerns with the introduction of a head of power for AEMO (or the ERA if it is given the responsibility for the annual Minimum STEM Price review) to request the information it would need to determine the decommitment costs.

The Rule Change Panel seeks stakeholders' comments about the proposed process for requesting this information as outlined in section 7 of this call for further submissions.

6. Further Codification of the Methodology for Setting the Minimum STEM Price

In its second period submission, AEMO requested further codification of the methodology for setting the Minimum STEM Price and noted that there is ambiguity about how AEMO is to come up with the credible scenarios of low demand.

RCP Support notes that there is a continuum in the level of codification that can be specified in the Market Rules regarding the methodology for setting the Minimum STEM Price between:

- fully codifying the methodology, which will provide transparency and repeatability to the process; vs.
- not codifying the methodology and allowing AEMO (or the ERA) full flexibility to determine the Minimum STEM Price, which will provide flexibility to the process and allow for process improvements over time, and will take better advantage of the expertise of the reviewer.

RCP Support believes that process to set the Minimum STEM Price specified in the Draft Rule Change Report strikes about the right balance in the level of codification of the process, noting that the Market Rules would not prevent AEMO (or the ERA) from fully publishing its methodology and results, subject to confidentiality of input data.

Nevertheless, RCP Support proposes to include clauses to outline how the scenarios should be determined. RCP Support proposes:

- that the Market Rules should allow but not mandate AEMO to use historic Balancing Market data but account for any changes in the SWIS that are likely to have an effect on the Balancing Price by the time the new Minimum STEM Price would come into effect; and
- that AEMO should consider the following:
 - expected changes in system demand;
 - expected entrance of new Facilities that will participate in the Balancing Market;

- expected changes to existing Facilities; and
- expected exit of a Facility that will cease to participate in the Balancing Market.

RCP Support has also proposed some additional changes to specify aspects of the methodology to assess the Minimum STEM Price, which are explained in comment boxes in the proposed Amending Rules.

RCP Support seeks stakeholders' comments about the introduction of clauses for setting the credible scenarios of low demand and the other changes specified in the comment boxes.

7. Proposed Amending Rules

To assist stakeholders in preparing their submissions, RCP Support has prepared the following revisions to the proposed Amending Rules, including clarifications in comment boxes, to reflect the following additional amendments that RCP Support deems may be required based on issues raised in the second submission period:

- further amend clause 6.20.7(a)(iii) to remove the perceived conflict with clauses 6.20.8A raised in the ERA's submission;
- further amend clause 6.20.8 to address the issue raised by the ERA that the 'objectives' stated in that clause are not the objectives for the decision whether to have a floor;
- introduce a new clause 6.20.B to accommodate AEMO's request to increase the codification of the methodology for determining a revised Minimum STEM price;
- further amend clauses 6.20.8A, 6.20.8C (previously clause 6.20.8B), 6.20.8D (previously clause 6.20.8C), 6.20.8E (previously clause 6.20.8D) and 6.20.8F (previously clause 6.20.8E) to address the ERA's concern that the term 'decommitment cost' is ambiguous; and
- introduce new clauses 6.20.8E, 6.20.8F and 6.20.8G to allow AEMO to request information from Market Participants that it requires to determine a revised Minimum STEM Price, and to require Market Participants to provide that information.

RCP Support notes that further amendments may be needed several clauses and some additional clauses may need to be introduced if the Rule Change Panel decides to task the ERA instead of AEMO with the annual review of the minimum STEM Price. The required changes are outlined in comment boxes. RCP Support seeks stakeholder's feedback on these further amendments if the annual review would be undertaken by the ERA.

The revised proposed Amending Rules are presented below, marked up against the Market Rules as at 30 March 2020 (~~deleted text~~, added text), changes from the proposed Amending Rules as presented in the Draft Rule Change Report for this proposal are made in [track changes in blue colour highlighted grey](#):

2.26. Economic Regulation Authority Approval of Administered Prices

RCP Support proposes to further amend clause 2.26.1 to improve the readability of the clause.

- 2.26.1. Where AEMO has proposed a revised value for the Benchmark Reserve Capacity Price in accordance with section 4.16 or ~~a change in the value of one or more~~

completes a review of the Energy Price Limits in accordance with section 6.20, the Economic Regulation Authority must:

- (a) review the report provided by AEMO, including all submissions received by AEMO in preparation of the report;
- (b) make a decision as to decide whether or not to approve the revised value for the Benchmark Reserve Capacity Price or any recommended value comprising the Energy Price Limits;
- (c) in making its decision, only consider:
 - i. whether the proposed revised value for the Benchmark Reserve Capacity Price or Energy Price Limit proposed by AEMO reasonably reflects the application of the method and guiding principles described in clauses sections 4.16 or 6.20 (as applicable);
 - ii. whether AEMO has carried out an adequate public consultation process; and
- (d) notify AEMO as to whether or not it has approved the revised or recommended value.

2.26.2. Where the Economic Regulation Authority rejects a revised Benchmark Reserve Capacity Price or the an Energy Price Limits proposed submitted by AEMO it must give reasons and may direct AEMO to carry out all or part of the review process under section 4.16 or 6.20 (as applicable) again in accordance with any directions or recommendations of the Economic Regulation Authority.

RCP Support proposes to further amend clause 2.26.3 to reflect the proposed further amendments to clause 6.20.8.

RCP Support notes that the proposed drafting of clause 2.26.3 may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the minimum STEM Price, new proposed clause 2.26.3(h) would be deleted because the ERA would already have to make this assessment as part of the annual review. Therefore, there would not be any value for the ERA to make this assessment again.

2.26.3. The Economic Regulation Authority must review the methodology for setting the Benchmark Reserve Capacity Price and the Energy Price Limits not later than the fifth anniversary of the first Reserve Capacity Cycle and, subsequently, not later than the fifth anniversary of the completion of the preceding review under this clause 2.26.3. 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) historical Reserve Capacity Offers and the proportion of Reserve Capacity Offers with prices equal to the Benchmark Reserve Capacity Price, in the case of Reserve Capacity Cycles up to and including the 2014 Reserve Capacity Cycle;
- (dA) historical Reserve Capacity Offers and the proportion of Reserve Capacity Offers with prices equal to 110 percent of the Benchmark Reserve Capacity Price, in the case of Reserve Capacity Cycles from the 2015 Reserve Capacity Cycle up to and including the 2018 Reserve Capacity Cycle;
- (dB) historical Reserve Capacity Offers and the proportion of Reserve Capacity Offers with prices equal to 130 percent of the Benchmark Reserve Capacity Price, in the case of Reserve Capacity Cycles from the 2019 Reserve Capacity Cycle onwards;
- (e) historical STEM Bids and STEM Offers and the proportion of STEM Bids and Offers with prices equal to the Energy Price Limits;
- (f) the appropriateness of the parameters and methodology in section 4.16 and the Market Procedure referred to in clause 4.16.3 for recalculating the Benchmark Reserve Capacity Price;
- (g) the appropriateness of the parameters and methodology in section 6.20 for recalculating the Energy Price Limits;
- (h) whether the Minimum STEM Price meets the objectives-criteria referred to in clause 6.20.8;
- (h)(i) the performance of Reserve Capacity Auctions, STEM Auctions and the Balancing Market in meeting the Wholesale Market Objectives; and
- (i)(i) other matters which the Economic Regulation Authority considers relevant.

...

6.20. Energy Price Limits

- 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 Market Web Site 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.

RCP Support notes that the proposed drafting of clause 6.20.4 may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the minimum STEM Price, clause 6.20.4 would be further amended to:

- replace 'AEMO' with 'the Economic Regulation Authority';
- replace 'in the notice posted by' with 'in the final report published by' and
- amend the cross references as necessary.

6.20.4. ~~[Blank]~~The Minimum STEM Price is:

- (a) -\$1,000/MWh until the time specified in the notice posted by AEMO under clause 6.20.11(b) following AEMO's first review of the Minimum STEM Price under clause 6.20.6; and
- (b) from the time specified in the notice posted by AEMO under clause 6.20.11(b) following AEMO's first review of the Minimum STEM Price under clause 6.20.6, the value published on the Market Web Site and revised in accordance with clauses 6.20.6 and 6.20.11.

6.20.5. [Blank]

RCP Support proposes to further amend clause 6.20.6 to include a cross reference to clause 6.20.6A which outlines how AEMO must determine whether the Minimum STEM Price is appropriate.

RCP Support notes that the proposed drafting of clause 6.20.6 may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the minimum STEM Price:

- clause 6.20.6 would be further amended to remove the steps in (b) and (c); and
- a new clause would be introduced to implement the review process for the Minimum STEM Price to be carried out by the ERA.

6.20.X. The Economic Regulation Authority must annually review the value of the Minimum STEM Price and:

- (a) must determine whether the Minimum STEM Price is appropriate in accordance with clause 6.20.6A, and
- (b) must revise the value for the Minimum STEM Price where the Economic Regulation Authority determines that the current value of the Minimum STEM Price is not appropriate.

6.20.6. AEMO must annually review the appropriateness of the values of the Maximum STEM Price, ~~and~~ Alternative Maximum STEM Price and Minimum STEM Price and:-

- (a) must recommend revised values for the Maximum STEM Price and the Alternative Maximum STEM Price;
- (b) must determine whether the Minimum STEM Price is appropriate in accordance with clause 6.20.6A, and
- (c) must recommend a revised value for the Minimum STEM Price where AEMO determines that the current value of the Minimum STEM Price is not appropriate.

RCP Support proposes to further amend clause 6.20.6A to:

- improve readability;

- specify that AEMO should consider if a Minimum STEM Price event was due to the Minimum STEM Price being too high;
- include events where AEMO breaks a tie between quantities priced at the Minimum STEM Price but the Balancing Market settles above the Minimum STEM Price due to the ex-post pricing; and
- reflect the proposed further amendments to clause 6.20.8.

RCP Support notes that the proposed drafting of clause 6.20.6A may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the minimum STEM Price, clause 6.20.6A would be further amended to:

- replace 'AEMO' with 'the Economic Regulation Authority' (except for in the term: 'AEMO dispatches down any quantities...'); and
- amend the cross references as necessary.

6.20.6A. In reviewing-determining whether the Minimum STEM Price is appropriate under clause 6.20.6(b), AEMO must consider without limitation, if since the last annual review under clause 6.20.6:

(a) any incidents where the Balancing Market has settled at the Minimum STEM Price since the last annual review under clause 6.20.6 in one or more Trading Intervals because, in AEMO's reasonable opinion, the Minimum STEM Price was too high;

(b) AEMO dispatched down any quantities in merit priced at the Minimum STEM Price in the Balancing Merit Order because, in AEMO's reasonable opinion, the Minimum STEM price was too high;

(bc) whether there has been a change in the generation fleet in the SWIS since the last annual review under clause 6.20.6 that in AEMO's reasonable opinion is likely to result in:

i. the current Minimum STEM Price being materially lower than necessary to achieve the objectives-criterion in clause 6.20.8(a), including but not limited due to an upgrade or the retirement of a Facility with high cycling costs;

ii. the current Minimum STEM Price being materially higher than necessary too high to achieve the objectives-criterion in clause 6.20.8(a), including but not limited to the increase of cycling costs due to deterioration or aging of an existing plant; and

(cd) whether any Market Participant has notified AEMO that it they do not considers the current Minimum STEM Price is not appropriate or requested the Minimum STEM Price be revised or amended.

RCP Support notes that the proposed drafting of clause 6.20.6B may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.6B would be further amended to:

- replace 'AEMO must not recommend a revised value' with 'The Economic Regulation Authority must not revise the value'; and
- amend the cross references as necessary.

6.20.6B. AEMO must not recommend a revised value for the Minimum STEM Price under clause 6.20.7, if it determines the Minimum STEM Price is appropriate under clause 6.20.6(b).

RCP Support proposes to further amend clause 6.20.7(a)(iii) to address the perceived conflict that the ERA raised with clause 6.20.8A.

RCP Support notes that the proposed drafting of clause 6.20.7 may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.7 would be further amended to remove clause 6.20.7(a)(iii). A new clause would be introduced to establish the review process of the Minimum STEM Price by the ERA:

6.20.X. In conducting the review required by clause 6.20.X the Economic Regulation Authority must, subject to clause 6.20.6B, revise the value for the Minimum STEM Price, with reference to clause 6.20.8 and in accordance with clauses 6.20.8A to 6.20.8D;

6.20.7. In conducting the review required by clause 6.20.6 AEMO:

- (a) ~~may propose revised~~ must recommend values for each of the following:
- i. the Maximum STEM Price, ~~where this which~~ is to be based on AEMO'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 which~~ is to be based on AEMO'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); and
 - iii. subject to clause 6.20.6B, the Minimum STEM Price, which is to be based on AEMO's estimate of the decommitment costs of the Facility with the highest decommitment costs in the SWIS and is to be determined with reference to clause 6.20.8 and in accordance with clauses 6.20.8A, ~~and 6.20.8B,~~ to 6.20.8D;

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

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

Where

- i. Risk Margin is a measure of uncertainty in the assessment of the mean short run average cost for 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 AEMO 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.

RCP Support notes that an assessment of the need for and objectives of the Minimum STEM Price is outside the scope of the Rule Change Proposal and will be more appropriately considered by the Taskforce as part of its review of the market power mitigation measure in the WEM. Therefore, RCP Support proposes further amendments to clause 6.20.8 to:

- clarify that the stated criteria are not the objectives of having a Minimum STEM Price but are the criterial to use when setting the value for the Minimum STEM Price; and
- establish that criterion (a) is superior to criterion (b) because RCP Support considers that a Minimum STEM Price would distort the market if it were set so that it would not allow Facilities to differentiate themselves sufficiently to avoid (in most circumstances).

6.20.8. ~~[Blank]~~ The objectives of the Minimum STEM Price must be set to are to:

- (a) ~~facilitate allow~~ clearance of the Balancing Market without the Balancing Price being equal to the Minimum STEM Price in most circumstances; and
- (b) ~~subject to clause 6.20.8(a), limit Market Participants' exposure to Balancing Prices that could would~~ threaten the financial viability of a prudent Market Participant.

RCP Support proposes further amendments to clause 6.20.8A to reflect that the considered costs should not be limited to the minimum stable generation, as raised by the ERA.

RCP Support notes that the proposed drafting of clause 6.20.8A may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.8A would be further amended to replace 'AEMO' with 'the Economic Regulation Authority'

6.20.8A. When determining the Minimum STEM Price AEMO must:

- (a) determine for credible scenarios of low demand, the price at which the operator of the Facility with the highest decommitment cycling costs per MW of its minimum stable level of operation in the scenario would, acting reasonably, decommit the Facility should the Balancing Price equal or fall below that price for a single Trading Interval; and
- (b) determine the Minimum STEM Price to be the price that is lower than 90 percent of the prices determined under this clause 6.20.8B8A(a).

RCP Support proposes to include new clause 6.20.8B to provide guidance to AEMO on how to set the credible scenarios of low demand.

RCP Support notes that the proposed drafting of clause 6.20.8B may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.8B would be further amended to replace 'AEMO' with 'the Economic Regulation Authority'

6.20.8B. When determining the credible scenarios of low demand for the purpose of clause 6.20.8A, AEMO 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 Balancing 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 Balancing Market;
- (c) expected changes to an existing Facility; and
- (d) any expected exit of Facility that will cease to participate in the Balancing Market.

RCP Support proposes further amendments to clause 6.20.8C (clause 6.20.8B in the Draft Rule Change Report) to:

- specify the meaning of ‘fully exposed to the Balancing Market’; and
- address the ERA’s concern that the decommitment cost should not be limited to the minimum stable level of operation.

RCP Support notes that the proposed drafting of clause 6.20.8C may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.8C would be further amended to replace ‘AEMO’ with ‘the Economic Regulation Authority’.

6.20.8BC. When determining the decommitment-cycling costs of a Facility under clause 6.20.8A, AEMO must consider:

- (a) the factors that a Market Generator acting reasonably would consider in making a decommitment decision for the Facility with the highest decommitment-cycling cost in the SWIS that is fully exposed to the Balancing Price, including but not limited to assuming that all energy sent out by the Facility is settled at the Balancing Price:
- i. the cost to decommit and recommit within the timeframe specified under clause 6.20.8BC(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 costs that the Market Generator would incur because the Facility does not maintain level of generation required under contract;
 - iv. any expected net losses or gains, opportunity costs and cost savings that the Market Generator 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 AEMO deems relevant.

RCP Support proposes further amendments to clause 6.20.8D (clause 6.20.8C in the Draft Rule Change Report) to address:

- the ERA’s concern that the term ‘decommitment cost’ is ambiguous;
- address the ERA’s concern that AEMO should have regard to the Wholesale Market Objectives when determining the cycling costs; and
- the ERA’s concern that the term ‘actual costs’ is ambiguous.

RCP Support notes that the proposed drafting of clause 6.20.8D may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.8D would be further amended to replace 'AEMO' with 'the Economic Regulation Authority'.

6.20.8CD. In determining the decommitment-cycling costs of a Facility under clause 6.20.8A, AEMO must have regard to the Wholesale Market Objectives and must, as far as practicable, use actual costs information about the cost of that the relevant Facility would incur as provided by the relevant Market Participant but may use estimates where AEMO considers reasonable with the highest decommitment cost per MW of its minimum stable level of operation in the SWIS.

RCP Support proposes to introduce new clauses 6.20.8E, 6.20.8F and 6.20.8G to introduce a head of power and process for AEMO to request the information that it would need to determine the decommitment costs in accordance with clause 6.20.8C(a)(i).

RCP Support notes that the information specified in clause 6.20.8C(a)(ii) and (iii) would be available to AEMO as it is provided as part of the Standing Data.

RCP Support notes that it proposes not to extend AEMO's power to request information to the information specified in clause 6.20.8C(a)(iv) because this information should only be provided voluntarily under clause 6.20.8H (previous clause 6.20.8D) if the participant considers it necessary that it is accounted for.

RCP Support notes that the proposed drafting of clauses 6.20.E, 6.20.F and 6.20.G may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clauses 6.20.E, 6.20.F and 6.20.G would be further amended to replace 'AEMO' with 'the Economic Regulation Authority'.

6.20.8E. When undertaking its review under clause 6.20.6, AEMO may request a Market Participant to provide the information listed in clause 6.20.8C(i) for a specific Facility if AEMO considers that it needs this information.

9.20.8F. If AEMO requests information under clause 6.20.8E, AEMO must specify the time by which the information must be provided and must give the Market Participant at least five Business Days to provide the requested information.

6.20.8G. If AEMO requests information under clause 6.20.8E, the respective Market Participant must provide this information within the timeframe specified in the request.

RCP Support proposes further amendments to clause 6.20.8H (previous clause 6.20.8D) to address the ERA's concern that the term 'actual decommitment cost' is ambiguous.

RCP Support notes that the proposed drafting of clause 6.20.8H may change depending on the outcome of the further submission period regarding the question of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.8H would be further amended to:

- replace 'AEMO' with 'the Economic Regulation Authority'; and
- replace 'AEMO Confidential' with 'Rule Participant Market Restricted'.

6.20.8D8H. A Market Participant may, by the timeframe specified for the close of submissions under clause 6.20.9, provide AEMO with evidence regarding their actual decommitment costs a Facility incurs when decommitting, which information is 'AEMO Confidential' for the purpose of the Market Rules and which AEMO must consider in determining the revised value for the Minimum STEM Price under clause 6.20.7(a)(iii).

RCP Support proposes further amendments to clause 6.20.8I (clause 6.20.8E in the Draft Rule Change Report) to:

- address the ERA's concern that the term 'decommitment cost' is ambiguous; and
- reflect that the only contract information that a prudent Market Generator would incur should be considered when setting the Minimum STEM Price.

RCP Support notes that the proposed drafting of clause 6.20.8I may change depending on the outcome of the further submission period in regard to whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the decision was to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.4 would be further amended to replace 'AEMO' with 'the Economic Regulation Authority'

6.20.8E8I. Where a Market Participant provides AEMO with satisfactory evidence under clause 6.20.8B8H, AEMO must consider the information when determining the revised Minimum STEM Price as far as the information affects AEMO's reasonable estimate of any decommitment costs-costs that a prudent Market Generator would incur when decommitting its Facility in the scenarios under clause 6.20.8A(a).

RCP Support notes that the proposed drafting of clause 6.20.9 may change depending on the outcome of the further submission regarding the questions of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.9 would be further amended to:

- remove the reference to confidentiality; and
- remove the reference to clause 6.20.8A.

6.20.9. In conducting the review required by clause 6.20.6 AEMO must prepare a draft report describing how it has arrived at ~~a proposed revised~~ the recommended value

of ~~an~~ each Energy Price Limit. The draft report must also include, subject to AEMO's obligations of confidentiality, details of how AEMO determined the appropriate values to apply for the factors described in clauses 6.20.7 (b)(i) to (v), and 6.20.8A. AEMO must publish the draft report on the Market Web Site 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.

RCP Support notes that the proposed drafting of clause 6.20.9A may change depending on the outcome of the further submission regarding the questions of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.9A would be further amended to reflect that AEMO only recommends a new value for the Alternative Maximum STEM Price and the Maximum STEM Price.

6.20.9A. Prior to ~~proposing a final revised value to an~~ recommending a final value for each of the any Energy Price Limit in accordance with clause 6.20.10, AEMO may publish a request for further submissions on the Market Web Site. Where AEMO 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.

RCP Support notes that the proposed drafting of clause 6.20.10 may change depending on the outcome of the further submission regarding the questions of whether AEMO or the ERA should be responsible for the annual review of the Minimum STEM Price.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, clause 6.20.10 would be further amended to reflect that AEMO only recommends a new value for the Alternative Maximum STEM Price and the Maximum STEM Price.

6.20.10. After considering the submissions on the draft report described in clause 6.20.9, and any submissions received under clause 6.20.9A, AEMO must ~~propose a final revised~~ recommend a final value for ~~any proposed change to an~~ each of the any Energy Price Limits considered in the report described in clause 6.20.9 and submit those values and its final report, including any submissions received, to the Economic Regulation Authority for approval.

6.20.11. A ~~proposed revised~~ recommended value for any Energy Price Limit replaces the previous value after:

- (a) the Economic Regulation Authority has approved that value in accordance with clause 2.26.1; and
- (b) AEMO has posted a notice on the Market Web Site of the new value of the applicable Energy Price Limit,

with effect from the time specified in AEMO's notice.

If the Panel were to decide to task the ERA with the annual review of the Minimum STEM Price, new clauses would need to be introduced to establish the process for the ERA to consult on the annual review of the Minimum STEM Price:

6.20.12. In conducting the review required by clause 6.20.X, the Economic Regulation Authority must prepare a draft report describing how it has arrived at a proposed revised value for the Minimum STEM Price. The draft report must include, subject to the Economic Regulation Authority's confidentiality obligations, details of how the Economic Regulation Authority determined the appropriate values to apply for the factors described in clause 6.20.8A. The Economic Regulation Authority must publish the draft report on its website and request submissions from all sectors of the Western Australia energy industry, including end-users, within six weeks of the date of publication.

6.20.13 Prior to revising the value of the Minimum STEM Price in accordance with clause 6.20.14, 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.

6.20.14 After considering the submissions on the draft report described in clause 6.20.12, the Economic Regulation Authority must:

(a) publish any submissions to its draft report on its website;

(b) decide on the revised the value of the Minimum STEM Price;

(c) prepare a final report stating the revised value for the Minimum STEM Price and the reasons for its decision, and publish its final report on its website; and

(b) inform AEMO of the revised value for the Minimum STEM Price and when the revised price is to take effect.

6.20.15 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 6.20.14, with effect from the time specified in final report.

...

RCP Support proposes additional changes to clause 10.5.1 to ensure that the Minimum STEM Price is published together with the other EPLs.

10.5.1. AEMO must set the class of confidentiality status for the following information under clause 10.2.1 as Public and AEMO must make each item of information available from or via the Market Web Site after that item of information becomes available to AEMO:

...

(e) details of bid, offer and clearing price limits as approved by the Economic Regulation Authority including:

- i. the Benchmark Reserve Capacity Price;
- ii. the Maximum STEM Price; ~~and~~
- iii. the Alternative Maximum STEM Price; ~~and~~
- iv. the Minimum STEM Price.

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11. Glossary

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Minimum STEM Price: Means ~~negative \$1,000.00 per MWh.~~ the minimum price at which a Market Participant can offer generation in the STEM or the Balancing Market, as determined in accordance with section 6.20.

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