



Government of Western Australia
Department of Mines, Industry Regulation and Safety
Energy Policy WA

Draft Rule Change Report: Capacity Credit Allocation Methodology for Intermittent Generators (RC_2018_03)

Standard Rule Change Process

30 June 2023

Working together for a **brighter** energy future.

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Capacity Credit Allocation Methodology for Intermittent Generators
(RC_2018_03)*

Energy Policy WA

Level 1, 66 St Georges Terrace
Perth WA 6000

Locked Bag 100, East Perth WA 6892
Telephone: 08 6551 4600

www.energy.wa.gov.au
ABN 84 730 831 715

Enquiries about this report should be directed to:

Telephone: 08 6551 4600
Email: energymarkets@dmirs.wa.gov.au

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1. The Rule Change Proposal, Process and Timeline

On 1 March 2018, Collgar Wind Farm (Collgar) submitted to the Rule Change Panel a Rule Change Proposal titled “Capacity Credit Allocation Methodology for Intermittent Generators” (RC_2018_03).

This Rule Change Proposal seeks to remove the concept of Load for Scheduled Generation (LSG) from the Wholesale Electricity Market (WEM) Rules and replace it with intervals selected from the actual system peak periods. The LSG is derived as the total metered load on the system less the metered output of all Non-Scheduled Generators.

Collgar suggested that this proposal will provide a more direct link between the requirement for capacity in peak periods and the ability of intermittent generators to provide capacity during periods with the highest demand on the system.

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

The Rule Change Notice and all other documents related to this Rule Change Proposal can be found on the Coordinator’s website at [Rule Change: RC_2018_03 \(www.wa.gov.au\)](http://www.wa.gov.au)

Extension notices were previously granted for this Rule Change on:

- 26 April 2018;
- 18 April 2019;
- 9 December 2019;
- 2 December 2020;
- 25 June 2021;
- 21 December 2021; and
- 31 December 2022.

The timeline for assessment of this Rule Change Proposal was initially extended to allow the Economic Regulation Authority (ERA) to complete its three-yearly review of the Relevant Level Methodology (RLM) in 2018 and to submit its Rule Change Proposal titled “Method used for the assignment of Certified Reserve Capacity to Intermittent Generators” (RC_2019_03).

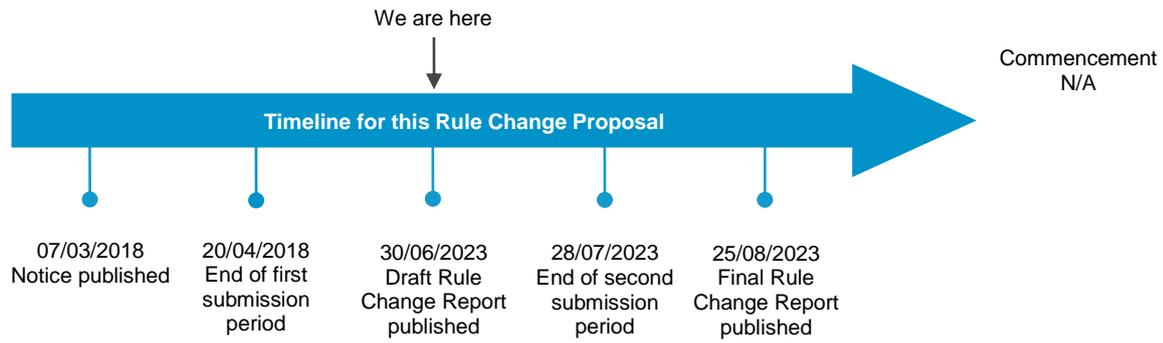
Assessment of the proposal was further extended during the Energy Transformation Strategy.

Responsibility for administration of the WEM Rules was transferred from the Rule Change Panel to the Coordinator of Energy (Coordinator) on 1 July 2021. The Coordinator granted further extensions to allow sufficient time to consider both RC_2018_03 and RC_2019_03.

The Coordinator has since commenced the Reserve Capacity Mechanism (RCM) Review,¹ which has (among other things) addressed the matters considered by RC_2018_03 and RC_2019_03. Stage 1 of the RCM Review is complete, and Stages 2 and 3 are scheduled to be completed in 2023. The Minister for Energy is expected to make Amending Rules to give effect to the outcomes of the RCM Review in 2023.

¹ Full information on the RCM Review is available at <https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review>, including the Scope of Work for the review, the *Reserve Capacity Mechanism Review Stage 1 Consultation Paper*, the *Reserve Capacity Mechanism Review: Information Paper (Stage 1) and Consultation Paper (Stage 2)* and all submissions to both papers.

The key dates for progressing this Rule Change Proposal are:



This Draft Rule Change Report is drafted under clause 2.7.6 of the WEM Rules on the basis that the reader has read all the related documents, including the Rule Change Proposal, the first period submissions and the Stage 1 RCM Review Information Paper.

2. The Coordinator's Draft Decision

The Coordinator's draft decision is to reject the Rule Change Proposal.

2.1 Reasons for the Coordinator's Draft Decision

The Coordinator has made its draft decision on the basis that the issues raised in this Rule Change Proposal have been addressed by the outcomes of Stage 1 of the RCM Review.

Collgar's Rule Change Proposal proposed to amend the methodology for allocating Capacity Credits to Intermittent Generators by removing the LSG Trading Intervals and replacing them with system peak Trading Intervals. Collgar indicated that his will provide a more direct link between the requirement for capacity to meet system peak periods and the ability of capacity providers to make capacity available during these peak periods.

Collgar indicated that a more significant reform of the RCM may be required and that it would support a coordinated reform process.

The Coordinator, in consultation with the Market Advisory Committee (MAC), is conducting the RCM Review under clause 2.2D.1 of the WEM Rules.² The RCM Review is being conducted in three stages, and Stage 1 of the review is now complete. The need to better reflect the contribution of intermittent generation to system reliability when assigning Certified Reserve Capacity (CRC) to Intermittent Generators was addressed in Stage 1 of the RCM Review.

The Coordinator consulted on the appropriate method to allocate CRC to Intermittent Generators in the *Reserve Capacity Mechanism Review – Stage 1 Consultation Paper*³ and confirmed the Review Outcomes from Stage 1 of the RCM Review in the *Reserve Capacity Mechanism Review: Consultation Paper (Stage 1) and Information Paper (Stage 2)*.⁴ Review Outcomes 8 to 14 deal with capacity certification and address the matters raised in RC_2018_03.

The Minister for Energy is expected to make Amending Rules to give effect to the outcomes of the RCM Review in late 2023.

The Coordinator considers that the RCM Review has addressed the issues raised in RC_2018_03, and that the RCM Review outcomes are consistent with the Wholesale Market Objectives.

The RLM will be amended as a result of the RCM Review and it would be impractical to make further changes to the RLM at this time – making such changes would come at a cost and would have no benefit.

The detailed analysis behind the Coordinator's decision is provided in section 6 of this report.

² The MAC established the RCM Review Working Group (RCMRWG) to support the RCM Review. Further information on the RCMRWG is available at <https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review>, including the Terms of Reference for the RCMRWG, membership of the RCMRWG, and the meeting papers and minutes for all RCMRWG meetings.

³ <https://www.wa.gov.au/system/files/2022-08/EPWA%20-%20Reserve%20Capacity%20Mechanism%20review%20-%20consultation%20paper%201.pdf>.

⁴ https://www.wa.gov.au/system/files/2023-05/epwa_reserve_capacity_mechanism_review_information_and_consultation_paper.pdf.

3. Call for Second Round Submissions

The Coordinator invites interested stakeholders to make submissions on this Draft Rule Change Report.

The submission period is 20 Business Days from the Draft Rule Change Report publication date. Submissions must be delivered to the Coordinator by **5:00pm AWST on 28 July 2023**.

The Coordinator encourages stakeholders to use the submission form available at <https://www.wa.gov.au/government/document-collections/rule-change-process> and to send the completed form by email to energymarkets@dmirs.wa.gov.au.

Submissions may also be sent to the Coordinator by post, addressed to:

Coordinator of Energy

Attn: Director, Wholesale Markets Branch

Energy Policy WA

Locked Bag 100

EAST PERTH 6892

4. Proposed Amendments

4.1 The Rule Change Proposal

This section provides a summary of Rule Change Proposal RC_2018_03. The full Rule Change Proposal can be found on the Coordinator's website.

On 1 March 2018, Collgar submitted to the Rule Change Panel a Rule Change Proposal titled "Capacity Credit Allocation Methodology for Intermittent Generators" (RC_2018_03).

Collgar indicated that it believes that the RLM is flawed as the approach appears arbitrary and overly conservative in allocating Capacity Credits to intermittent generators.

Collgar considered that LSG does not provide a direct link between the requirement for capacity to meet system peak demand and the ability of capacity providers to make capacity available during the peak periods.

Collgar proposed to remove the concept of LSG from the WEM Rules and to replace it with intervals selected from the actual system peak periods. Collgar considered that this will provide a more direct link between the requirement for capacity in peak periods and the ability of intermittent generators to provide capacity during the periods of the highest demand on the system

Collgar also expressed the view that further and more significant reform of the mechanism for allocating Capacity Credits may be required and that it would support a coordinated review.

4.2 The Rule Change Panel's Initial Assessment of the Proposal

The WEM Rules require the ERA to undertake three-yearly reviews of the RLM. At the time Collgar submitted RC_2018_03, the ERA's next review was due for completion by 1 April 2019 and the ERA had advised that it intended to commence its review in May 2018.

The ERA's review of the RLM was expected to include an assessment of the use of LSG and to potentially also result in more material changes to the RLM than those proposed by Collgar. The Rule Change Panel considered it would be inefficient and potentially counter-productive to conduct an overlapping review of the RLM while the ERA's review was in progress.

Therefore, the Rule Change Panel decided to delay its assessment of RC_2018_03 until after the ERA had completed its review of the RLM.

On 1 July 2021, responsibility for the administration of the WEM Rules was transferred from the former Rule Change Panel to the Coordinator of Energy. As a result, the Coordinator became responsible for progressing this Rule Change Proposal.

5. Consultation

In accordance with clause 2.7.7 of the WEM Rules, section 5 of this Draft Rule Change Report summarises the submissions made in the first submission period and provides the Coordinator's response to the issues raised in those submissions;

A summary of these consultations is presented below, and the Coordinator has considered and taken into account each matter raised in making its decision on RC_2018_03.

5.1 Pre-Rule Change Proposal

Collgar Wind Farm did not make use of the informal Pre-Rule Change Process to seek advice from the Market Advisory Committee (MAC) in developing its Rule Change Proposal.

5.2 The Market Advisory Committee

The Rule Change Proposal was discussed at the MAC meeting on 14 March 2018. The key points discussed at this meeting are summarised below and the minutes from the meeting are available on Energy Policy WA's website.⁵

- Mr Zhang (Collgar) noted that excluding the output of Intermittent Generators from the LSG Trading Intervals tended to remove from consideration the Trading Intervals where Intermittent Generators contribute the most. Mr Zhang's contended that if an Intermittent Generator had high output at the system peak it was unfair to not give the generator the benefit of its actual performance.
- Mr Myhre (Collgar) noted that the concept of capacity was based on peak demand and that, if Intermittent Generators are serving that peak demand, it should not matter whether they do so at the same time as Scheduled Generators.
- Mr Myhre noted that Collgar believed that, although it was not a perfect solution, its proposal would be a reasonable first step in moving away from the current, conservative approach and that Collgar was aware that the ERA will undertake a more thorough analysis of the methodology in the near future.
- Mr Myhre considered that the current RLM was very controversial when it was first implemented, with views largely divided between Intermittent Generators and other stakeholders. The decision at the time was to err on the side of caution, as there was insufficient information available on the performance of Intermittent Generators, and system security was the main concern.
- Mr Myhre advised that Collgar's analysis was based on historical data for the five largest wind farms, that the numbers presented in the proposal were purely indicative of what level of change could be expected, and that the results could be refined using data from AEMO as part of the Rule Change Process.
- Mr Huxtable (Water Corporation) noted that the proposed selection of peak Trading Intervals would not align with the selection of peak Trading Intervals for Individual Reserve Capacity requirement (IRCR) calculation. Mr Myhre agreed and noted that Collgar considered proposing the use of the IRCR Trading Intervals but decided it would be too complicated a change.

⁵ https://www.wa.gov.au/system/files/2023-06/mac_2018_03_14-minutes_0.pdf.

- Mr Maticka (AEMO) questioned why Collgar considered the proposal should be progressed before the ERA's upcoming RLM review. Mr Myhre replied that Collgar considered the proposed changes would not have a big cost impact and could be assessed against the Wholesale Market Objectives without affecting the ERA's RLM Review.

5.3 The Rule Change Panel's Response to the Market Advisory Committee

The Rule Change Panel ceased to exist on 1 July 2021 and did not provide a response to the MAC's advice on 14 March 2018.

5.4 Submissions Received during the First Submission Period

The first submission period for this Rule Change Proposal was held between 7 March 2018 and 20 April 2018. The Rule Change Panel received submissions from:

- AEMO;
- Community Electricity;
- Mr Shane Cremin;
- Perth Energy;
- the Public Utilities Office (PUO);⁶
- Mr Noel Schubert; and
- Synergy.

AEMO did not support Collgar's proposal. AEMO suggested that RC_2018_03 could reduce the ability of the RCM to support whole-of-system reliability when compared with the current RLM and suggested that it would be better to defer any decision until after the ERA had completed its 2018 review of the RLM.

AEMO considered that the proposal would also undervalue the need for dispatchable firm capacity, which is required to maintain reliable supply, and that it would remove or reduce other valuable investment signals that are provided through the use of LSG in the RLM.

AEMO indicated that Collgar's proposal would require it to make moderate changes to its Relevant Level Calculation Tool at an estimated cost of \$160,000 and that it would take approximately 9 weeks to implement the changes from the date of publication of the Final Rule Change Report.

Community Electricity and Perth Energy considered that it was not an appropriate time to process RC_2018_03 due to the ERA's review, which may render the proposal obsolete.

Mr Cremin supported Collgar's proposal to the extent that Collgar's proposed change is relatively simple and cost effective to implement, and suggested that this should be balanced against the likely timeframes for the ERA to complete its RLM review. Mr Cremin considered that the Capacity Credit allocation methodology for Intermittent Generators should be reviewed as part of a broader review of the adequacy of the RCM.

The PUO supported Collgar's proposal as it would provide for improved alignment of capacity certification of Intermittent Generators with their likely generation output during peak demand periods.

Mr Schubert supported Collgar's proposal and agreed that the LSG concept does not provide a

⁶ The PUO is now Energy Policy WA (EPWA).

direct link to the value of intermittent generation at system peak demand times.

Synergy did not support this Rule Change Proposal and considered that the whole of the Capacity Credit cycle needs to be taken into account, including the testing and refunds mechanism, to ensure that capacity providers are paid a price for the capacity that reflects the value that capacity provides to the system.

Synergy suggested that an artificial increase in Capacity Credits would cause an economically inefficient price signal by lowering the Reserve Capacity Price in a manner that does not represent the true value of capacity. This may result in adverse commercial outcomes for other market participants depending on their relative IRCR and Capacity Credit position.

The assessments by the submitting parties as to whether the WEM Rules, as amended by the Amending Rules in the Rule Change Proposal, would better achieve the Wholesale Market Objectives is provided in Table 1.

Table 1: Comments on the Wholesale Market Objectives from the First Period Submissions

Submitter	Wholesale Market Objective Assessment
AEMO	AEMO considered that Collgar’s proposal would be detrimental to the achievement of all of the market objectives other than Market objective (e).
Community Electricity	Community Electricity made no specific comments regarding the Wholesale Market Objectives.
Mr Schubert	Mr Schubert considered that proposed changes will better facilitate achievement of objectives (a) to (d) and will have no material impact on objective (e).
Perth Energy	Perth Energy made no specific comments in relation to the Wholesale Market Objectives.
PUO	The PUO considered that the Rule Change Proposal will better facilitate achievement of the objectives (a) to (d) through an improved recognition of the contribution made by Non-Scheduled Generators towards system reliability as part of the capacity certification process.
Mr Cremin	Mr Cremin considered that the Rule Change Proposal will better facilitate achievement of objectives (a) to (d) by the removal of the concept of LSG from the WEM Rules, and that Market Objective (e) was unlikely to be impacted.
Synergy	Synergy considered that Collgar’s proposal will distort the price signals sent by the RCM and result in artificial capacity being assigned to Non-Scheduled Generators, which will increase system security risks.

Copies of all submissions received during the first submission period are available in full on the Coordinator’s website.

5.5 The Coordinator's Response to Submissions Received during the First Submission Period

The Coordinator's overall assessment of the issues raised in the first period submissions is presented in section **Error! Reference source not found.** of this report.

The Coordinator considers that the issues raised in this Rule Change Proposal and the first period submissions were addressed under Stage 1 of the RCM Review.

5.6 Advice on the WEM Technical Standards

The Coordinator did not consider that the RC_2019_03 will directly or indirectly affect the WEM Technical Standards and therefore did not seek advice from AEMO or a Network Operator.

5.7 Public Forums and Workshops

Neither the Rule Change Panel nor the Coordinator held a public forum or workshop specifically on this Rule Change Proposal.

6. The Coordinator's Draft Assessment

In preparing its Draft Rule Change Report, the Coordinator must assess the Rule Change Proposal in light of clauses 2.4.2 and 2.4.3.

Clause 2.4.2 states:

The Coordinator must not make Amending Rules unless it is satisfied that the WEM Rules, as proposed to be amended or replaced, are consistent with the Wholesale Market Objectives.

Clause 2.4.3 sets out the matters that the Coordinator must have regard to in deciding whether to make Amending Rules, including:

- (a) any applicable statement of policy principles given to the Coordinator under clause 2.5.2;
- (aA) any advice provided by the MAC regarding the evolution or the development of the WEM or these WEM Rules;
- (b) the practicality and cost of implementing the Rule Change Proposal;
- (c) the views expressed in any submissions on the Rule Change Proposal;
- (d) any advice by the MAC where the MAC met to consider the Rule Change Proposal;
- (dA) whether the advice from the MAC provided under clause 2.4.3(d) reflects a consensus view or a majority view, and, if the latter, any dissenting views included in or accompanying the advice and how these views have been taken into account by the Coordinator;
- (e) any technical studies that the Coordinator considers are necessary to assist in assessing the Rule Change Proposal; and
- (f) any advice or information provided by AEMO or a Network Operator under clause 2.4.3C.

When making its draft decision, the Coordinator has had regard to each of the matters identified in clauses 2.4.2 and 2.4.3 as follows:

- the Coordinator's overall assessment of the Rule Change Proposal is in section 6.1;
- the Coordinator's assessment of the Rule Change Proposal against the Wholesale Market Objectives is in section 6.3;
- the Minister has not provided a statement of policy principles to the Coordinator in respect of this Rule Change Proposal;
- the Coordinator's assessment of the practicality and cost of implementing the Rule Change Proposal is in section 6.7;
- a summary of the views expressed by the MAC is in section 5.2 and the Coordinator's responses to these views are in sections 5.3 and section 6.1;
- a summary of the submissions in the first submission period is in section 5.4 and the Coordinator's responses to these submissions are in sections 5.5 and 6.1;
- the Coordinator does not believe a technical study in respect of this Rule Change Proposal is required and therefore has not commissioned one; and
- the Coordinator did not consider that the proposed Amending Rules would directly or indirectly affect a WEM Technical Standard and therefore did not seek advice from AEMO or Western Power on the WEM Technical Standards.

6.1 Assessment of the Proposed Changes

Collgar proposed to remove the concept of LSG in determining the Relevant Level and to replace it with Trading Intervals selected from the actual system peak periods. Collgar noted that further and more significant reforms of the RCM mechanism may be required and indicated that it would support a coordinated review process.

AEMO, Community Electricity and Perth Energy did not support this Rule Change Proposal and proposed deferring any decision until the ERA completed its 2018 RLM Review under clause 4.11.3C of the WEM Rules.

AEMO considered that Collgar's proposal is premised on a historical assessment of reliability risk. The use of LSG accounts for the need for dispatchable firm capacity to ensure that reliability is maintained when capacity availability is reduced. By changing the RLM from periods of highest LSG to periods of highest demand, the proposal would remove the consideration of reduced capacity availability and likely overvalue the contribution of Intermittent Generators to whole-of-system reliability. This would have the effect of undervaluing dispatchable capacity.

Synergy did not support this Rule Change Proposal and considered that the existing RLM supports the main objectives of the RCM and should not be changed. Synergy argued that Collgar's proposal does not take into account all of the commercial implications of the RCM and does not address important exemptions Intermittent Generators receive under the RCM.

The PUO and Mr Schubert supported the Rule Change Proposal because it provided improved alignment of capacity certification for Intermittent Generators with their likely generation output during peak demand periods.

Mr Cremin supported the proposed changes to the extent that this proposal is simple and cost effective, but indicated that it should be balanced against the likely timeframes expected for the ERA to complete its RLM Review.

The ERA completed its 2018 RLM Review on 31 March 2019 with the publication of its final report.⁷ The ERA's report found that the current RLM is not fit for purpose and recommended changes to it. The ERA subsequently submitted Rule Change Proposal RC_2019_03 on 30 September 2019 proposing changes to the RLM that reflected the outcomes of its review.

The Coordinator agreed with the ERA's findings that the current RLM is not fit for purpose, but recognised that there are broader concerns with the RCM than just the issues raised in either RC_2018_03 or RC_2019_03 and, as result, commenced the RCM Review in November 2021.

The issues raised by Collgar in the Rule Change Proposal and in the first period submissions were addressed by Stage 1 of the RCM Review, which has now been completed by the Coordinator.

6.2 Additional Amendments to the Proposed Amending Rules

The Coordinator has not made any changes to the proposed Amending Rules following the first submission period.

⁷ All documents relating to the ERA's review, including the final report, are available on the ERA's website at <https://www.erawa.com.au/electricity/wholesale-electricity-market/methodology-reviews/review-of-methodused-to-assign-capacity-to-intermittent-generators-2018>.

6.3 Wholesale Market Objectives

The Coordinator considers that the RCM Review addressed the issues raised in RC_2018_03, that the Review Outcomes from the RCM Review are consistent with the Wholesale Market Objectives and that there would be no benefit from making further changes to the RLM.

6.4 Protected Provisions

The Coordinator proposes to reject the Rule Change Proposal, so this proposal will not impact any Protected Provisions.

6.5 Civil Penalty Provisions

The Coordinator proposes to reject the Rule Change Proposal, so this proposal will not impact any Civil Penalty Provisions.

6.6 Reviewable Decisions

The Coordinator proposes to reject the Rule Change Proposal, so this proposal will not impact any Reviewable Decisions.

6.7 Cost and Practicality of Implementation

AEMO indicated that it would need to make moderate changes to its Relevant Level Calculation Tool, which was developed to automate the calculation of the Relevant Level in accordance with Appendix 9 of the WEM Rules. AEMO estimated the cost of making these changes at \$160,000.

Community Electricity, and Synergy did not provide any views about any potential impact of the Rule Change Proposal on costs for their organisations, and Perth Energy stated that its costs would not be impacted by the Rule Change Proposal.

The PUO did not consider that the Rule Change Proposal will have any material implications for the electricity sector reform initiatives, including the implementation of a constrained network access model for Western Power's network and the potential improvements to reserve capacity pricing arrangements.

AEMO indicated that it would take approximately 9 weeks from the date of publication of the Final Rule Change Report to implement the proposed Amending Rules.

6.8 Assessment

The Coordinator has made a draft decision to reject RC_2018_03 because the issues raised in this Rule Change Proposal were addressed by Stage 1 of the RCM Review.

The Coordinator considers that the RCM Review outcomes are consistent with the Wholesale Market Objectives.

The RLM will be amended as a result of the RCM Review and it would be impractical and inefficient to make further changes to the RLM at this time as making further changes would come at a cost and would have no benefit.

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Level 1, 66 St Georges Terrace, Perth WA 6000

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