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

Draft Rule Change Report The Relevant Demand calculation (RC_2019_01)

Standard Rule Change Process

21 September 2023

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

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1. The Rule Change Proposal, Process and Timeline

On 21 June 2019, Enel X submitted a Rule Change Proposal titled "The Relevant Demand calculation" (RC_2019_01) to the Rule Change Panel seeking to change the calculation of Relevant Demand for Demand Side Programmes (DSPs) because the current calculation method significantly under-calculates the contribution by loads.

Enel X suggested that the Wholesale Electricity Market (WEM) Rules should be amended to:

- include a clear definition of Relevant Demand and what the calculation seeks to achieve; and
- adopt a dynamic baseline methodology that balances accuracy, simplicity and integrity.

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 of Energy's website at Rule Change RC_2019_01 (www.wa.gov.au).

Extension Notices were previously granted for this Rule Change on:

- 26 August 2019;
- 22 June 2020;
- 2 December 2020;
- 25 June 2021;
- 31 December 2021;
- 31 December 2022; and
- 30 June 2023.

The Rule Change Proposal timeline was initially extended three times to allow the Rule Change Panel to hold workshops, manage priorities and prepare documentation, and to allow AEMO to give feedback on the Relevant Demand calculation.

Responsibility for administration of the WEM Rules was transferred from the Rule Change Panel to the Coordinator of Energy (Coordinator) on 1 July 2021 and the Coordinator granted further extensions to allow sufficient time for considering RC_2019_01.

The Coordinator is currently conducting the Reserve Capacity Mechanism (RCM) Review[1] and the Demand Side Response (DSR) Review,[2] which will address the matters raised by RC_2019_01 (among other things).

Stages 1 and 2 of the RCM Review are complete and draft WEM Amending Rules to reflect outcomes from the review have been published for consultation.[3] The Minister for Energy is expected to make the WEM Amending Rules to give effect to the outcomes of the RCM Review in late 2023.

Stages 1 and 2 of the DSR Review are underway and a consultation paper outlining initial proposals will be released soon.

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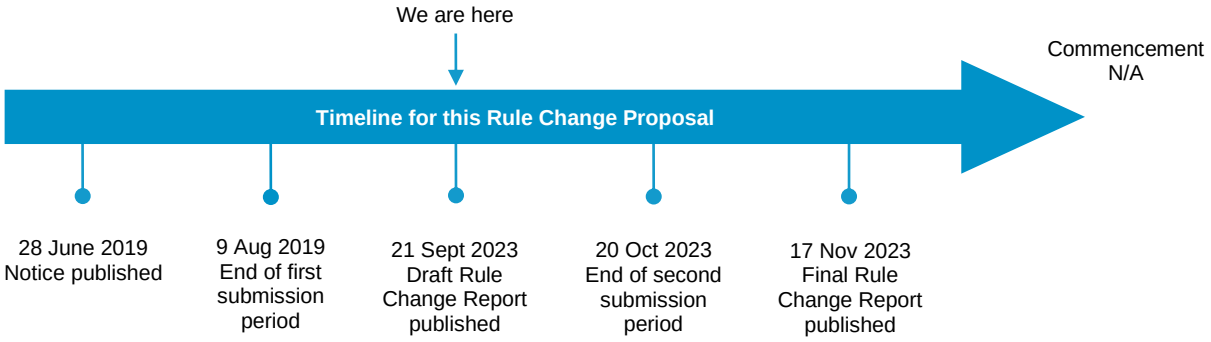
1 Full information on the RCM Review is available at https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review, including the Scope of Work for the review, the *Reserve Capacity Mechanism Review Stage 1 Consultation Paper*, the *Reserve Capacity Mechanism Review: Information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

2 Full information on the DSR Review is available at https://www.wa.gov.au/government/document-collections/demand-side-response-review, including the Scope of Work for the review.

3 The WEM Amending Rules Exposure Draft is available at Reserve Capacity Mechanism Review (www.wa.gov.au)

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 stakeholder has read all the related documents, including the Rule Change Proposal and the first period submissions.

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 were addressed by Stages 1 and 2 of the RCM Review and under the DSR Review.

The issues raised in RC_2019_01 were addressed in:

- the *Reserve Capacity Mechanism Review: Information Paper (Stage 1) and Consultation Paper (Stage 2)* – hereafter referred to as the 'Stage 2 Consultation Paper'; and
- the *Reserve Capacity Mechanism Review: Information Paper (Stage 2)* – hereafter referred to as the 'Stage 2 Information Paper'.

Specifically:

- the Stage 2 Consultation Paper made seven proposals to address the matters raised in RC_2019_01 – see Proposals G, H, I, J, L, O and R; and
- the Stage 2 Information Paper included five Review Outcomes that address the matters raised in RC_2019_01 – see Review Outcomes 3 to 7.

In addition, a dynamic baseline for the Relevant Demand method is being designed under the DSR Review.

The Coordinator considers that the RCM Review and DSR Review address the issues in RC_2019_01 and that the RCM Review and DSR Review took account of the Wholesale Market Objectives.

WEM Rules governing Relevant Demand are being amended as part of the RCM Review and the DSR Review. Therefore, it would be impractical to make further changes to Relevant Demand at this time as making further changes would come at a cost and will have no benefit.

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

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 **20 October 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 11 Cloisters Square WA
PERTH BC WA 6850

4. Proposed Amendments

4.1 The Rule Change Proposal

This section provides a summary of Rule Change Proposal RC_2019_01. The full Rule Change Proposal can be found on the Coordinator's website.

On 21 June 2019, Enel X submitted the Rule Change Proposal, which seeks to change the way Relevant Demand for a DSP is calculated to avoid undercalculating the contribution of loads.

Enel X said that the objective of the Relevant Demand calculation should be to determine with reasonable accuracy the 'baseline' consumption of a DSP when it is dispatched.

Enel X stated that a major consequence of the current Relevant Demand calculation is that DSPs effectively commit to curtail a significant amount of load before reaching their Relevant Demand level and are not credited for this reduction. This makes participation in the RCM uneconomic, and even impossible, for certain participants.

Enel X said that DSP availability concerns were better addressed through the testing and compliance framework rather than restricting participation outright through the Relevant Demand calculation.

Enel X highlighted that under-calculating the Relevant Demand of a DSP means that the DSP would be certified for much less capacity than it could provide, and that this leads to outcomes that are inconsistent with the Wholesale Market Objectives.

Enel X also suggested amendments to the WEM Rules to include a clear definition of Relevant Demand and what the calculation seeks to achieve. Enel X's proposed definition was: "An estimate of a demand side programme's counterfactual demand when it is dispatched".

Enel X recommended adopting a baseline that strikes an appropriate balance between accuracy, simplicity and integrity. Enel X suggested a dynamic baseline as an appropriate methodology to replace the current method and preferred an 'X of Y' methodology for the dynamic baseline.

As Enel X did not propose draft Amending Rules, Enel X indicated that the Rule Change Panel would need to develop the Amending Rules, and that additional consultation may be necessary to give stakeholders an opportunity to comment on the Rule Change Proposal.

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

The Rule Change Panel decided to progress this Rule Change Proposal on the basis that stakeholders should be given the opportunity to consider the proposal and make submissions through the Rule Change Process.

The timeline for assessment of this Rule Change Proposal was initially extended to 30 June 2020 to give the Rule Change Panel sufficient time to hold workshops and develop drafting for the proposal, prepare the Draft Rule Change Report, and to manage competing priorities.

Assessment of the Rule Change Proposal was further extended to 31 December 2020 to give AEMO additional time to provide support for the development of the Relevant Demand calculation and to allow time for further workshops. Assessment of the Rule Change Proposal was again extended to 30 June 2021 to allow the Rule Change Panel sufficient time to perform analysis and prepare the Draft Rule Change Report while managing competing priorities.

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

5. Consultation

In accordance with clause 2.7.7, section 5 of this Draft Rule Change Report provides summaries of:

- the consultation that was conducted on the Rule Change Proposal with the MAC and the Coordinator's response to the views of the MAC;
- submissions made in the first submission period and the Coordinator's response to the issues raised in those submissions;
- consultation regarding the WEM Technical Standards; and
- the outcomes of any public forums or workshops held.

Although a summary of these consultations is presented below, the Coordinator has considered each matter raised in its decision on RC_2019_01.

5.1 Pre-Rule Change Proposal

On 14 November 2018, Enel X contacted the Rule Change Panel to discuss tabling a Rule Change Proposal for discussion by the MAC. The Rule Change Proposal was to amend the Relevant Demand calculation, which is set out in Appendix 10 of the WEM Rules.

In response, the Rule Change Panel requested that Enel X submit a Pre-Rule Change Proposal for discussion at the MAC meeting on 5 February 2019.

Enel X submitted the Pre-Rule Change Proposal, as requested, and the MAC discussed the Pre-Rule Change Proposal at its 5 February 2019 meeting.

The main concerns raised by the MAC were how capacity could be certified two years in advance under a dynamic baseline approach, and how much should be paid for DSP capacity. MAC members discussed the following:

- it was not clear how Capacity Credits for a DSP will be determined if its baseline was dynamically determined using information that is only available days before an event;
- there were problems with using a static baseline for loads with variable consumption patterns;
- the initial certification process for a Capacity Year occurs two years before the trigger point for Supplementary Reserve Capacity;
- if DSPs were to receive the same level of capacity payments as generators, a methodology based on consumption during the 12 peak Trading Intervals used for the Individual Reserve Capacity Requirement (IRCR) calculation would be problematic;
- concerns were raised about how DSPs are remunerated– some members opposed DSPs receiving the full Reserve Capacity Price because they provide an energy product, not a capacity product; and
- some members believed that the proposed changes to the Reserve Capacity Price for DSPs[4] will not bring any more DSP capacity into the market unless changes are also made to the baseline methodology.

[4] The Public Utilities Office (now Energy Policy WA) was conducting a review of the Reserve Capacity Price at the time (https://www.wa.gov.au/government/document-collections/improving-reserve-capacity-pricing-signals).Changes to the Reserve Capacity Pricing arrangements were subsequently made via the *Wholesale Electricity Market Amendment (Reserve Capacity Pricing Reforms) Rules 2019* on 22 February 2020.

Minutes for this MAC meeting are available on the Coordinator's website.

Enel X drafted its Rule Change Proposal to address feedback from the MAC and specific comments provided by the RCP support team and submitted the proposal on 29 April 2019.

Some MAC members had raised questions about whether DSPs should be remunerated in the same form and at the same price as other forms of capacity, and raised concerns that DSPs will flood the market under equal pricing and make it difficult for generators to recover their costs.

Enel X did not address these comments in its Rule Change Proposal because the Public Utilities Office had made a clear statement in the *Improving Reserve Capacity Price Signals – a Recommended Capacity Pricing Model – Final Recommendation Report*[5] that demand and supply side capacity should be equally remunerated.

5.2 The Market Advisory Committee

MAC Meetings

At the MAC meeting on 30 April 2019, the Chair noted that the Rule Change Panel had received the Rule Change Proposal from Enel X and that the first submission period ought to be extended if the Rule Change Proposal was progressed.

At the MAC meeting on 11 June 2019, the Chair noted that the Rule Change Panel had sought clarifications from Enel X regarding the Rule Change Proposal and that the Panel was waiting for a response from Enel X before deciding whether to progress the proposal.

Enel X provided its clarification on 21 June 2019, after which the Rule Change Panel decided to progress the proposal and published the Rule Change Notice and Proposal on its website on 28 June 2019.

The MAC discussed the Rule Change Proposal at its meeting on 29 July 2019. The key points discussed were:

- Mr Huxtable (Contestable Customers) suggested that a dynamic baseline calculation would be better for aggregators than for individual loads because the risk of a dynamic baseline for an individual load might be too high;
- Mr Schubert (Economic Regulation Authority (ERA)) considered that using a dynamic baseline was sensible because it would provide a more accurate estimate of the counterfactual demand of a DSP; and
- There was discussion about when the capacity of DSPs and Scheduled Generators has to be available.

The MAC recommended that the Rule Change Panel hold a workshop to discuss RC_2019_01 and its development and implementation options before deciding on next steps for progressing the proposal.

The MAC Workshop

The MAC held a workshop on 20 July 2020 to support the development of the design elements and Amending Rules for the Rule Change Proposal.

5 Published as part of the Reserve Capacity Price Review – see footnote 4.

The workshop covered baseline options, monitoring DSP availability and assignment of Capacity Credits. The following is a summary of the workshop discussion:

Dynamic versus Static Baseline:

- Mr Huxtable stated that the capacity for all DSPs should be measured using a static baseline because this is more reliable than a dynamic measurement.
- Ms Ross (Enel X) noted that most other markets, including those with capacity mechanisms, were moving to dynamic baselines to measure demand response and that the criteria to measure demand response should not be biased.
- Ms Ross said that the baseline is used to measure the counterfactual consumption of DSPs for dispatch and that a counterfactual was not needed for generation facilities because their contribution would be exactly known after dispatch.
- Mr Hutchinson (Enel X) explained that the purpose of the baseline was to determine what the consumption of a DSP would have been if it had not been dispatched and that dynamic baselines tend to better capture the impact of varying temperature and weather conditions.
- Mr Carlberg (Alinta Energy) noted that the entrance of new DSPs could affect the incentive for the entry of new generation facilities, which is needed to keep energy prices low.
- Mr Huxtable noted that Water Corporation loads were usually high when DSP dispatch was most likely, and requiring DSPs to always be available would reduce opportunities to accredit DSPs and could result in debates over maintenance schedules.

Baseline Options:

- Ms Ross considered that an ‘X of Y’ method is best suited to the WEM because it addresses the specific demand distribution. By choosing only a few reference days (X) of the reference period (Y), it is possible to shape the baseline to recognise the weather correlation of the demand profile.
- Mr Hutchinson added that the ‘X of Y’ method is used widely internationally; is proven in many markets and across many gigawatts of capacity; strikes the best balance between accuracy, simplicity and integrity; and has been widely tested against gaming.
- Mr Huxtable noted that previous DSP dispatch was mainly during gas shortages and not correlated to the weather.
- Mr Peake (Perth Energy) noted that the baseline should account for the change in the daily load profile of the South West Interconnected System and sought clarification if historic data had been assessed to determine if the ‘X of Y’ method would reference enough days.
- Mr Hutchinson said that a DSP provider could apply for certification two years ahead under a dynamic baseline regime because the DSP provider could assess which equipment could reduce consumption during a DSP dispatch. A DSP provider could then base its application for certification on this reduction without knowing what its absolute level of consumption would be in the relevant capacity year.
- Mr Hutchinson said that certification is handled in two alternative ways in other markets:
    - to require the DSP provider to provide technical papers proving the curtailment capability of the load upon certification; or
    - to accredit the DSP on face value and audit the actual capability through testing.

Single versus Multiple Baselines:

- The Chair suggested that it would be preferable to have one baseline to keep costs down.
- Ms Ross noted that the approach in the National Electricity Market (NEM) was to develop one dynamic baseline and to consider expanding to multiple baselines at a later stage. Ms Ross suggested using this approach for the WEM.

Monitoring of DSP Availability for Capacity Cost Refunds:

- Mr Hutchinson indicated that different mechanisms were used by different markets to handle maintenance of equipment and outages, such as having forced outage provisions like generators, that incentivise a participant to inform the operator if capacity is not available.
- Mr Hutchinson noted that other markets do not monitor availability in real-time but undertake audits (tests) and apply penalties if the demand response resource does not deliver.
- Ms Petchey (AEMO) considered that DSPs would not have to be available 24 hours a day, as other Facilities were, and was not sure if they should have the option for maintenance or outages.
- Ms Petchey added that the DSPs' availability should be monitored so that AEMO would know if they were available and when to apply refunds.
- Mr Higgins (AEMO) questioned the benefit of improving the baseline if DSPs would not be dispatched more frequently because AEMO did not have any real time information.
- Ms Ross noted that DSPs would have sufficient incentives to ensure that the demand response was available if the right level of penalties was implemented.
- Ms Ross added that Enel X was providing demand response for rare events in the NEM and had been called upon three times during the last three summers. The subsequent audits of those dispatches had all been positive.

Basis for Assigning Capacity Credits:

- Ms Petchey considered that it would be inconsistent to assign Capacity Credits to DSPs on face value while placing rigorous requirements for provision of documentation on other Facilities. Therefore, participants should be required to at least provide evidence (e.g. contracts) that they could control consumption reduction of the relevant Associated Loads.
- Ms Petchey noted that AEMO was assessing a DSP's Relevant Demand when assigning Capacity Credits and questioned the relevance of this information because past performance of loads is not necessarily an indicator of future performance.
- Ms Petchey noted that the WEM Rules require that AEMO cannot not certify a DSP if it is certain that the DSP would not deliver the required capacity.
- Mr Hutchinson noted that requiring too much evidence from DSPs so far in advance would unnecessarily increase the costs of providing the service.
- Mr Peake noted that, if DSPs did not have to provide information upon certification, other Facilities should also not be obliged to provide fuel contracts at the time of certification.
- Dr Ng (ERM Power) added that the minimum fuel requirement period should also be reduced to match the availability requirement for DSPs.
- Mr Higgins noted that a mechanism should be developed to give confidence to the AEMO controllers about the availability of DSPs.
- Dr Ng agreed AEMO controllers should have more visibility on the availability of DSPs.

The RCP support team and AEMO agreed to develop a 'straw man' Relevant Demand calculation method for discussion with the MAC, aiming to process the Rule Change Proposal for the 2021 Capacity Cycle.

Responsibility for processing the Rule Change Proposal was subsequently transferred to the Coordinator on 30 June 2021, before the straw man could be finalised for discussion by the MAC.

5.3 The Coordinator's Response to the Market Advisory Committee

The Coordinator's assessment of each of the issues identified in the MAC's advice and the Coordinator's response are presented in section 6 of this report.

5.4 Submissions Received during the First Submission Period

The first submission period for this Rule Change Proposal was held between 28 June 2019 and 9 August 2019. The Rule Change Panel received submissions from:

- AEMO;
- the Australian Energy Council (AEC);
- Perth Energy;
- Synergy; and
- the Water Corporation.

AEMO agreed there should be changes to the Relevant Demand calculation.

AEMO agreed that a baseline measure of consumption is important for the dispatch of DSPs, certified reserve capacity (CRC) and availability monitoring, but that more than one approach is needed for each process.

On the topic of using dynamic baselines for dispatch, AEMO advised that:

- work was needed to specify a dynamic baseline calculation;
- different baseline approaches may be better suited to different load types based on the main causes of load variation, and
- it would be necessary to consider the role of Consumption Deviation Applications.

On the topic of estimating baseline consumption for CRC, AEMO considered that the CRC process must include verification that the assigned CRC does not exceed AEMO's reasonable expectation of the total demand of the Associated Loads under peak demand conditions.

On the topic of monitoring DSP availability, AEMO considered that a method is needed to quantify ongoing availability of a DSP to reflect its contribution to satisfying the Planning Criterion. AEMO suggested that refunds should be payable for failure to satisfy Reserve Capacity Obligations.

The AEC supported the principle that improvements may be needed with respect to the use of DSPs as a mechanism for assisting the WEM in meeting its objectives. The AEC considered that, given the supply of available capacity, there was no urgency to change the WEM Rules, and this issue might be further explored once the Energy Transformation Taskforce has completed the Whole of System Plan (WOSP).

The AEC noted that it may be more appropriate to undertake a broader review of the role and value of DSPs in the WEM than to simply redraft the Relevant Demand calculation methodology.

The AEC supported the creation of a defined term for Relevant Demand but suggested that the proposed definition needs to consider a planning perspective as well as an operational perspective.

In relation to the development of a dynamic baseline methodology, the AEC observed that there was insufficient detail in the Rule Change Proposal for Market Participants to properly assess the value of the proposal.

In general, the AEC supported the use of DSPs as a mechanism to help the WEM meet its objectives but cautioned against developing an inappropriate baseline methodology.

The AEC referred to a draft rule determination[6] by the Australian Energy Market Commission as describing a good baseline for DSPs.

Perth Energy supported the alignment of the Reserve Capacity Price that a Facility is paid with the services it provides to the market – either full harmonisation of requirements and a single price, or differential requirements and a price reflective of the value of those services.

However, Perth Energy considered that the framework needed to be considered more holistically to ensure each aspect of the RCM worked as intended and delivered the most economic outcome for the market overall.

Perth Energy suggested that the following questions needed to be answered before Market Participants can assess the various methods to determine the Relevant Demand:

- what role should demand-side resources play in the WEM;
- what value do demand-side resources provide; and
- what capacity and energy price should demand-side resources be paid.

Perth Energy suggested deferring consideration of the appropriate method to determine the counterfactual demand of a DSP until the role of demand-side resources in the new market design has been determined by the Electricity Transformation Taskforce.

Synergy did not support the Rule Change Proposal on the basis that:

- the proposed method would likely increase the Capacity Credits that DSPs receive without improving the 'capacity product' they provide compared to other capacity resources;
- allocating more Capacity Credits to DSPs could lead to situations in which the DSPs' underlying demand is lower than their Relevant Demand, increasing risks that they will not be able to deliver their full certified capacity when required;
- the planned RCM reforms will increase the capacity price that DSPs receive – incentivising investment in demand-side capacity – while increasing the responsiveness of the capacity price to new capacity investments (via a steeper demand curve); and
- the proposal did not provide draft Amending Rules or a comparison of the costs and benefits of the proposed reforms.

Synergy suggested delaying RC_2019_01 until the impact of the RCM reforms was understood.

6 See the *Draft Rule Determination – National Electricity Amendment (Wholesale Demand Response Mechanism) Rule 2019* that was published on 18 July 2019 at Wholesale demand response mechanism | AEMC.

The Water Corporation agreed that, despite the pricing reforms, the current method for calculating Relevant Demand together with availability requirement meant that it was unlikely that meaningful levels of demand side response would be delivered in the future. The Water Corporation agreed that reviewing the Relevant Demand was very important.

The Water Corporation did not support the proposed change to the Relevant Demand calculation as a standalone rule change, as the methodology had to be considered along with all elements of DSPs, and the intent and structure of the capacity market in the WEM.

The Water Corporation stated that greater visibility to AEMO of the real-time delivery of demand response would enhance the efficiency of the market.

The Rule Change Proposal did not provide Amending Rules, so the submitting parties could not provide assessments as to whether the WEM Rules, as amended by the Amending Rules, would better achieve the Wholesale Market Objectives. However, the submitting parties commented on the impact of the Rule Change Proposal on the Wholesale Market Objectives, as summarised in Table 1.

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

Submitter	Wholesale Market Objective Assessment
AEMO	Accurate estimates of DSP dispatch could improve equity between supply- and demand-side capacity resources. However, less rigorous DSP certification and availability monitoring could result in higher costs for consumers. AEMO proposed revising the role of consumption baselines in assigning CRC and monitoring DSP availability.
AEC	Developing consumption baselines will increase costs for AEMO, and thus the consumer. Incentivising DSPs may result in a capacity mix without the same level of risk assurance as provided by the current WEM Rules.
Perth Energy	A more accurate Relevant Demand calculation method would better address the Wholesale Market Objectives. However, the Rule Change Proposal does not provide sufficient detail on the alternative approach or its associated costs.
Synergy	Coupled with proposed RCM reforms that are likely to incentivise DSP participation, this proposal could lead to excessive investment in demand-side capacity, decrease the Reserve Capacity Price and discourage investment in more reliable capacity.
Water Corporation	Demand side response, executed well, supports all of the Wholesale Market Objectives.

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 in section 6 of this report.

5.6 Advice on the WEM Technical Standards

The Coordinator did not consider that the Amending Rules 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

The Rules Change Panel held a MAC workshop to discuss this Rules Change Proposal (see Section 5.2). The Coordinator did not hold a public forum or a workshop for this Rule Change Proposal. The Coordinator's assessment of the issues discussed in the MAC workshop is presented in section 6 of this report.

6. The Coordinator's Draft Assessment

In preparing its Draft Rule Change Report, the Coordinator must assess the Rule Change Proposal considering 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 considered 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 presented in section 6.1;
- the Coordinator's assessment of the Rule Change Proposal against the Wholesale Market Objectives can be found 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 can be found 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 section 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 section 5.5 and section 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 Amending Rules will 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

This rule change request proposed a change to the way in which the Relevant Demand of a DSP is calculated.

In Enel X's view:

- the Relevant Demand calculation should more effectively determine the 'baseline' consumption of a DSP with reasonable accuracy when it is dispatched; and
- any baseline methodology for a DSP should strike an appropriate balance between accuracy, simplicity and integrity.

Enel X advocated for a dynamic baseline as the best way of achieving this, together with the use of an 'X of Y' methodology.

6.1.1 Dynamic versus Static Baseline

The RCM Review considered whether a dynamic baseline should be used for dispatch of DSPs.

The Stage 2 Consultation Paper proposed to adopt a dynamic baseline, as indicated in Proposal J.

> Proposal J:
>
> Adopt a dynamic baseline to measure DSP dispatch performance against.
>
> Continue to assess the detailed dynamic baseline methodology.
>
> Consider reducing the number of hours that DSPs can be dispatched.

The rationale for Proposal J is provided in section 4.3 of the Stage 1 Information Paper.

The adoption of a dynamic baseline was subsequently confirmed, as indicated in Review Outcome 4 in the Stage 2 Information Paper:

> Review Outcome 4:
>
> DSP performance will be measured against a dynamic baseline. EPWA will continue to engage with participants on the design of the dynamic baseline.
>
> …

The rationale for this Review Outcome is provided in section 2.2.2 of the Stage 2 Information Paper.

In summary, there was general support through the RCM Review to adopt a dynamic baseline. For loads with variable consumption patterns, a static baseline can under- or overstate the counterfactual consumption during likely times of dispatch. Both under- and overstatement of the counterfactual consumption are problematic:

- if the counterfactual load is overstated, then DSP dispatch will not deliver the expected reduction in load, which increases the risk to system reliability; and
- if the counterfactual load is understated, then system security is not at risk, but the DSP will deliver more reduction than required or requested, meaning that load will have been unnecessarily curtailed.

A dynamic baseline more accurately reflects the actual curtailment delivered by the DSP compared to its level if not dispatched. A dynamic baseline also allows better forecasting of the actual response expected from dispatched DSPs, which provides for more reliable operation of the power system.

6.1.2 Baseline Options

As indicated in Review Outcome 4 from the RCM Review, DSP performance will be measured against a dynamic baseline and EPWA will engage with stakeholders on the design of the dynamic baseline.

EPWA has commenced work on the detailed design of the dynamic baseline through the DSR Review. EPWA is consulting with the MAC on all aspects of the DSR Review, including the design of the dynamic baseline, and the MAC has established the DSR Review Working Group (DSRRWG) to support the DSR Review.[7]

EPWA is currently finalising a public consultation paper on the proposals resulting from the DSR Review, including a high-level design for the dynamic baseline.

Following the close of the consultation period, EPWA will proceed to the detailed design of the dynamic baseline, in consultation with the MAC and DSRRWG, and will develop WEM Amending Rules to reflect the outcomes from the DSR review.

6.1.3 Single versus Multiple Baselines

As indicated in section 6.1.2, EPWA has commenced work on the detailed design of a dynamic baseline as part of the DSR Review. This design will consider the issue of single versus multiple baselines.

6.1.4 Monitoring of DSP Availability for Capacity Credit Refunds

The RCM Review considered the issue of Reserve Capacity Testing for DSPs.

The Stage 2 Consultation Paper proposed to adjust the approach to Reserve Capacity Testing for DSPs, as indicated in Proposal L.

Proposal L:

Adjust Reserve Capacity Testing for DSPs to reflect a shift to a dynamic dispatch baseline.

Require AEMO to consider the expected baseline when scheduling DSP tests.

Treat a failed test as the beginning of a Forced Outage, rather than a permanent reduction of Capacity Credits.

The rationale for Proposal L is provided in section 5.1.2 of the Stage 2 Consultation Paper.

The Stage 2 Information Paper subsequently confirmed Proposal L and provided more detail, as indicated in Review Outcome 5 from the Stage 2 Information Paper:

Review Outcome 5:

…

When scheduling Reserve Capacity tests, AEMO will be required to consider:

…

[7] Further information on the DSRRWG is available at Demand Side Response Review (www.wa.gov.au), including the Terms of Reference for the DSRRWG, membership of the DSRRWG, and the meeting papers and minutes for all DSRRWG meetings

- Conducting DSP tests under conditions like those that AEMO expects would apply when actual DSP dispatch is most likely. This will ensure that the dynamic baseline against which the tests are assessed aligns with that expected for actual DSP dispatch.

A DSP failing a test will pay refunds for the reduction not achieved until it passes a subsequent test.

The rationale for Review Outcome 5 is provided in section 2.3.1 of the Stage 2 Information Paper.

In summary, with a dynamic baseline, testing for DSPs needs to be conducted:

- against the new baseline, calculated from similar intervals (but with no curtailment) in recent historical data; and
- at times that are representative of conditions under which DSPs are likely to be dispatched, so that the dynamic baseline is as close as possible to what it would be in times of system stress.

DSPs that fail two tests currently have no incentive to restore their capability to meet their original level of Capacity Credits for the rest of the Capacity Year. Instead of treating a test failure as enduring unavailability of capacity, treating it in a similar manner as the start of a Forced Outage (meaning that the participant would incur refunds until it passes a retest) provides an incentive for participants to remedy the unavailability.

There was general support to adjust the DSP testing regime in line with the dynamic baseline.

The RCM Review also considered the issue of monitoring DSP availability for Capacity Credit Refunds.

The Stage 2 Consultation Paper proposed to allow DSP providers to manage their own outages and to adjust how DSP availability is measured, as indicated in Proposal O.

Proposal O:

Allow DSP owners to manage their own outage schedules, without participating in the outage planning regime.

Adjust DSP availability measurement to use actual demand of the Associated Loads rather than the Relevant Demand.

The rationale for Proposal O is provided in section 5.2.2 of the Stage 2 Consultation Paper.

The Stage 2 Information Paper subsequently confirmed Proposal O, as indicated in Review Outcome 6:

Review Outcome 6:

…

DSP owners will manage their own outages, without participating in the outage regime.

DSP availability will be measured using the actual demand of the Associated Loads, rather than the Relevant Demand.

The rationale for Review Outcome 6 is provided in section 2.3.2 of the Stage 2 Information Paper.

In summary, the infrequent nature of DSP dispatch and the availability incentives provided by the improved certification and refund processes mean that allowing participants to schedule their own outages remains appropriate. If DSP dispatch becomes more frequent, especially if DSPs move away from the top of the merit order, it may become appropriate for them to participate in the outage planning process.

The RCM Review also considered refunds for DSPs.

The Stage 2 Consultation Paper proposed to amend the approach to refunds for DSPs, as indicated in Proposal R.

> ### Proposal R:
>
> Amend the Maximum Facility Refund for DSPs to include the DSM Reserve Capacity Security.
>
> DSPs that voluntarily surrender Capacity Credits during the Capacity Year will forfeit their DSM Reserve Capacity Security in proportion to the amount of the reduction.

The rationale for Proposal R is provided in section 5.3.2 of the Stage 2 Consultation Paper.

Proposal R was subsequently confirmed, and more detail was provided, as indicated in Review Outcome 7 from the Stage 2 Information Paper:

> ### Review Outcome 7:
>
> …
>
> The maximum capacity refund for DSPs will be increased to 125% of potential capacity payments, instead of drawing on the Reserve Capacity Security.
>
> DSPs that voluntarily surrender Capacity Credits during the Capacity Year will forfeit their DSP Reserve Capacity Security in proportion to the amount of the reduction.
>
> …

The rationale for Review Outcome 7 is provided in section 2.3.3 of the Stage 2 Information Paper.

In summary, the capital-light nature of DSPs means that DSPs require additional incentives to provide for their availability. AEMO noted that drawing on Reserve Capacity Security is relatively involved and manual process, and that it is not always possible to draw on part of a security. Therefore, increasing the maximum reserve capacity refund is the best available method to provide the incentive.

6.1.5 Basis for Assigning Capacity Credits

The RCM Review considered the issue of assigning Capacity Credits to DSPs.

The Stage 2 Consultation Paper proposed to establish different approaches for assigning CRC to DSPs depending on whether the DSP has one or more Associated Loads from the previous year, to remove Consumption Deviation Applications (CDAs) from the assessment of DSPs' CRC, and to allow load collocated with generation or storage to be an Associated Load. This is indicated in Proposals G, H and I of the Stage 2 Consultation Paper, as follows:

> ### Proposal G:
>
> Where a DSP has:
>
> - the same Associated Loads that it had in the previous year, assign CRC based on IRCR of the Associated Loads less the minimum load requirement of the Associated Loads; and
> - different Associated Loads from the previous year, assign CRC based on a value nominated by the Market Participant.

> ### Proposal H:
>
> Remove CDAs from the assessment of DSP CRC.

Proposal I:

Allow sites with collocated load and generation or storage to be Associated Loads of a DSP.

The rationale for Proposals G, H and I are provided in sections 4.2.3, 4.2.4 and 4.2.5 of the Stage 2 I Consultation Paper, respectively.

These proposals were subsequently confirmed, with some improvements, as indicated in Review Outcome 3 from the Stage 2 Information Paper:

Review Outcome 3:

DSPs comprised of a single Associated Load will be allocated CRC based on the IRCR of the Associated Load less its minimum load requirement.

DSPs comprised of more than one Associated Load will be allocated CRC based on their nominated response.

CDAs will be removed from the assessment of DSP CRC. AEMO will adjust consumption records when the DSP is dispatched or tested.

Sites with collocated load and generation or storage can be Associated Loads of the DSP. Capability Class 2 facilities with collocated load and storage which hold Capacity Credits will be prohibited from self-scheduling their storage purely to reduce IRCR exposure.

The rationale for Review Outcome 3 is provided in section 2.2.1 of the Stage 2 Information Paper.

In summary, the 95% POE consumption limb of the Relevant Demand calculation always sets the Relevant Demand. As a result, this method favours a flat load profile, which significantly mutes the incentive for loads with variable profiles to participate in the RCM. Participants with such flexible loads can reduce their IRCR exposure by managing their own load behind the meter.

Many stakeholders supported Proposal G, noting that self-nomination of the quantity better allowed aggregators to manage their programmes over time, and would encourage greater demand-side participation in the WEM for the benefit of system security and reliability.

Some submitters were concerned that proponents would nominate a higher CRC value than they could provide or would make opportunistic applications they did not intend to follow through, and that these nominations would unreasonably reduce the Reserve Capacity Price for serious capacity providers.

The Coordinator maintains that there is ample incentive to prevent this from occurring, due to the potential for DSP providers to:

- lose their Reserve Capacity Security if no capacity is made available;
- pay refunds when there is a shortfall of capacity; and
- pay refunds higher than capacity payments.

Submissions generally supported the proposal for the removal of CDAs. Excluding these maintenance intervals from consideration is inconsistent with the treatment of other Facilities. Planned outages of scheduled facilities are not approved to occur at times of expected system stress, and intermittent generation is assessed on its performance in all intervals. DSP Associated Loads should also be measured on their actual consumption during periods of system stress.

6.1.6 Other Matters Raised by Stakeholders

Deferral of the Proposal

In the first submissions period, the AEC, Perth Energy and Synergy suggested that RC_2019_01 was not urgent and should be deferred until after the Energy Transformation Taskforce had completed the WOSP and had determined the role of DSPs in the new market design, and until the impact of the RCM reforms was better understood.

The Coordinator agreed, and this was why consideration of the Rule Change Proposal was deferred until after the RCM Review was completed.

Reserve Capacity Pricing

Two stakeholders (Perth Energy and Synergy) raised the issue of Reserve Capacity Pricing for DSPs, noting that the planned Reserve Capacity Pricing reforms would increase the Reserve Capacity Price received by DSPs while increasing the responsiveness of the price to new capacity, and suggested that the DSP framework needs to be considered holistically, including Reserve Capacity Pricing.

The Coordinator notes that these concerns and the need for the DSP framework to be considered holistically were addressed by the RCM Review.

DSP Availability Requirements

The Water Corporation expressed concern that, despite the pricing reforms, the current method for calculating Relevant Demand together with the availability requirement meant that it was unlikely that meaningful levels of demand side response would be delivered in the future.

The Coordinator notes that the RCM Review considered the DSP availability requirements, as similar concerns were raised during the RCM Review. These concerns were addressed through the introduction of a new methodology for determining the DSO availability requirement, as outlined Review Outcome 4 from the Stage 2 Information Paper:

> #### Review Outcome 3:
>
> …
>
> AEMO will determine the DSP minimum dispatch requirement annually in the ESOO as follows:
>
> (1) identify the 50% POE peak demand;
>
> (2) identify the number of Capacity Credits held by DSPs in the latest Capacity Year for which Capacity Credits have been issued;
>
> (3) subtract the value determined in step (2) from the value determined in step (1);
>
> (4) using the load duration curve from the 10% POE peak demand forecast, identify the number of hours in which the demand is greater than the value determined in step (3); and
>
> (5) set the DSP dispatch requirement for year 3 of the current Reserve Capacity Cycle as the number of hours determined in step (4).

6.2 Additional Amendments to the Proposed Amending Rules

Enel X did not propose any Amending Rules. The Coordinator has also not proposed any Amending Rules following the first submission period.

EPWA has developed draft WEM Amending Rules to reflect the outcomes of the RCM Review, and following consultation on the draft with the RCMRWG, has published a revised draft of the WEM Amending Rules for public consultation.[8] The Minister is expected to make the WEM Amending Rules implementing the outcomes of RCM Review in late 2023.

EPWA will commence drafting of WEM Amending Rules to reflect the outcomes from the DSR Review and will consult on the draft following completion of Stages 1 and 2 of that review. It is planned for the Minister to make the Amending Rules from the DSR Review in early 2024.

The WEM Amending Rules implementing the outcomes of the RCM Review and DSR Review will address the matters raised in RC_2019_01.

6.3 Wholesale Market Objectives

The Coordinator considers that the RCM Review and DSR Review address the issues in RC_2019_01, that the Review Outcomes and Proposals from these reviews have taken account of the Wholesale Market Objectives, and that there would be no benefit to making further changes to the Relevant Demand calculation methodology.

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 expected the implementation cost to be in the $150,000 to $500,000 range, in line with the estimate in AEMO's response to the ERA's draft decision on AEMO's Allowable Revenue and Forecast Capital Expenditure 2019-20 to 2021-22 (AR5 period), and indicated that it would provide a revised estimate when the draft Amending Rules were provided.

AEMO could not confirm an implementation timeframe, as the Rule Change Proposal did not include a specific design recommendation or proposed rule amendments.

8 The WEM Amending Rules Exposure Draft is available at Reserve Capacity Mechanism Review (www.wa.gov.au).

AEMO said that it would need to consider the broader budgetary impacts of this project and whether this influences implementation timing, given that the ERA did not approve an allowance for business-as-usual rule changes in AEMO's Forecast Capital Expenditure.

The AEC expressed the view there was insufficient detail in the Rule Change Proposal for Market Participants to assess implementation impacts.

Perth Energy indicated that the proposed changes would have no operational impact for it.

Synergy said that it could not properly assess the potential costs to its business or time requirements until draft Amending Rules and a cost-benefit analysis are available.

The Water Corporation said that the proposed changes were unlikely to increase its participation in the RCM unless they were accompanied by other changes to availability requirements. Any changes to SCADA/IT infrastructure would be balanced against the financial benefit of participation. The Water Corporation stated that the capacity cycle timeframe would be more than adequate to implement any changes.

6.8 Assessment

The Coordinator has made a draft decision to reject RC_2019_01 because the issues raised in this Rule Change Proposal were addressed by the RCM Review and because a specific design of a dynamic baseline for the Relevant Demand calculation is being addressed in the DSR Review.

The Coordinator considers that the RCM Review and DSR Review address the issues in RC_2019_01 and that the RCM Review and DSR Review took account of the Wholesale Market Objectives.

The WEM Rules governing Relevant Demand will be amended under the RCM Review and the DSR Review. Therefore, it would be impractical and inefficient to make further changes to Relevant Demand at this time as making further changes would come at a cost and will have no benefit.

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