

Exposure Draft: Individual Reserve Capacity Requirement adjustment for Associated Loads

Proposed Wholesale Electricity Market Amending Rules

Explanatory Note

The Coordinator of Energy has completed the review of the Reserve Capacity Mechanism (RCM) in the Wholesale Electricity Market (WEM) and the WEM Amendment (Reserve Capacity Reform) Rules 2023 (RCM Reform Rules) were made by the Minister for Energy (Minister) in early December 2023.

The RCM Reform Rules were laid out in four schedules assuming a certain order in which they were to be sequenced/commenced with only the first schedule commencing upon the Gazettal of the RCM Reform Rules.

AEMO subsequently revised the commencement timeline for implementing the RCM Reform Rules and identified a number of areas where it did not have the ability to implement the RCM Reform Rules as originally drafted. This requires changes to the remaining 3 Schedules of the RCM Reform Rules, that are yet to be commenced, prior to their implementation.

AEMO has now completed its feasibility assessment of the RCM Reform Rules and following a prioritisation and implementation planning process has confirmed the commencement dates for specific parts of the schedules that remain to be implemented.

Energy Policy WA (EPWA) is currently working on changes to the remaining schedules to allow for the revised implementation schedule and to address the drafting issues identified. However, EPWA has identified that a necessary change to address one of the identified issues requires further consultation. Therefore, EPWA has developed the below Exposure Draft.

The draft rules presented in this Exposure Draft are pending legal review. Following industry consultation and legal review, the proposed Amending Rules in this Exposure Draft together with the additional changes to the remaining 3 schedules will be submitted to the Minister for making and gazettal.

Mark-up Colour guide for Draft Amending WEM Rules:

The Amending Rules are based on the Wholesale Electricity Market Amendment (Miscellaneous Amendments No. 3) Rules 2024.

Text in blue	Amending Rules that have been made and were in Schedule 3 of the RCM Reform Rules, but no commencement date has been specified.
Text in red - <u>underlined</u> and strikethrough	New amendments proposed as a result of the RCM Reform Rules sequencing.

Deadline for Submissions on the Exposure Draft

EPWA is seeking stakeholder feedback on this Exposure Draft **by 5:00 PM (AWST) on 8 October 2024**. Feedback can be sent to energymarkets@demirs.wa.gov.au

Explanatory Note

New clauses 7.13.5A is amended and 7.13.5B is added to specify how AEMO must estimate the contribution of each Associated Load to the change in Withdrawal of the relevant Demand Side Programme (DSP), where the DSP was dispatched during one of the Peak or Flexible Individual Reserve Capacity Requirement (IRCR) Intervals.

This is so that the Sent Out Meter Schedule (SOMS) of Associated Loads of a DSP can be adjusted for the Peak IRCR and Flexible IRCR calculations. That is, if an Associated Load is part of a DSP that was dispatched during the Peak IRCR Intervals or the Flexible IRCR Intervals, then their SOMS must be adjusted to reflect the best estimate of what they would have consumed had the DSP not been dispatched (counterfactual consumption). This is to ensure these loads do not benefit twice: once as a capacity provider and then a second time through reduced IRCR payments.

It is not possible to determine the counterfactual consumption of each Associated Load by looking at its respective Relevant Demand, as the Relevant Demand calculation only applies for the DSP as a whole. As such, the proposed approach attempts to allocate the DSP reduction in proportion to what each Associated Load was consuming or withdrawing on the relevant dispatch day.

Clause 7.13.5A introduces the Deemed DSP Dispatch Contribution quantity for an Associated Load. This quantity is only calculated for Trading Intervals that are Peak IRCR Intervals or Flexible IRCR Intervals and in which the relevant DSP was under a Dispatch Instruction or undergoing a Reserve Capacity Test.

Clause 7.13.5B outlines the calculation of the Deemed DSP Dispatch Contribution quantity for an Associated Load. The calculation allocates the reduction of the DSP to all Associated Loads in the DSP in proportion to the absolute value of each Associated Load's Sent-Out Metered Schedule (SOMS) in the last Trading Interval in the Adjustment Window for the DSP on the Trading Day that contains the Trading Interval that the DSP was dispatched for. Note:

- The reduction in the Demand Side Program's DSP Energy Level (see definition at the end of this document) is calculated by subtracting capacity shortfalls from the dispatch quantity AEMO advises under clause 7.13.5. If there are no capacity shortfalls, then the DSP's reduction is deemed to equal the quantity specified by AEMO in the relevant Dispatch Instruction.
- The reduction share uses absolute values to account for the fact that some Associated Loads may have a positive SOMS (Injecting) while others may have a negative SOMS (Withdrawing). Without the absolute value function, injecting loads would receive negative allocations.
- Under this approach, the DSP reduction is capped at the Peak or Flexible RCOQ. This means that if a DSP over-delivers and provides more than its RCOQ, the additional quantity delivered is not added back on to the load's SOMS value.

Example

A DSP comprising five Associated Loads is dispatched for the 5pm Trading Interval on Trading Day 5 February 2024. This Trading Interval also happens to be one of the Peak IRCR Intervals calculated for the 2023/24 Hot Season. This means that the five Associated Loads need to have their SOMS adjusted for use in the Peak IRCR calculation.

The DSP was instructed by AEMO at 3pm to modify its DSP Energy Level by 30MW (DIMW) at 5pm on 5 February 2024. In accordance with Appendix 10 as per [Exposure Draft of the Miscellaneous Amendments No.3 WEM Amending Rules](#), the Adjustment Window for the DSP will be 2-3pm on 5 February 2024. In accordance with clause 7.13.5B, the SOMS of the Associated Loads during the 2:30-3pm Trading Interval will be used to allocate the reduction the DSP has achieved.

The DSP has a PRCOQ of 30MW and FRCOQ of 15MW.

AEMO determines during settlement that the DSP has only delivered 25MW (using the DSP’s Relevant Demand and DSP Metered Schedule). Hence:

- The DSP has a Peak Capacity Shortfall of 5MW (30MW-25MW).
- The DSP has a Flexible Capacity Shortfall of 0MW as it has delivered more than its FRCOQ.
- The DSP has reduced its DSP Energy Level by: 30MW (DIMW) – Max(5MW ,0MW)= **25MW**.

The 25MW must be shared across the DSP’s five Associated Loads in proportion to the absolute value of each load’s SOMS.

The table below summarises the SOMS of the Associated Loads during the 2:30-3pm Trading Interval and the implied shares of each Associated Load.

Associated Load	SOMS during 2:30-3pm Trading Interval (MWh)	Absolute value of SOMS during 2:30-3pm Trading Interval (MWh)	Share of reduction	MW reduction share allocated to load
AL1	-25 (consuming)	25	45.5%	11.364
AL2	10 (spilling)	10	18.2%	4.545
AL3	5	5	9.1%	2.273
AL4	-10	10	18.2%	4.545
AL5	-5	5	9.1%	2.273

For example, AL1 is allocated 11.364MWh of the 25MWh reduction achieved by the DSP. Let us say that AL1’s meter data indicates that it had a SOMS of -30MWh on 5 February 2024, 5:00-5:30pm. For the purposes of the Peak IRCR calculations, AEMO must adjust the -30MWh by subtracting 11.364 MWh so that the Associated Load’s adjusted consumption is -41.364MWh.

This approach attempts to allocate the DSP reductions in proportion to what each load was doing on the relevant dispatch day. A drawback of this approach is that all Associated Loads in a DSP are allocated an adjustment – even those Associated Loads who may not have been called on to curtail by the DSP.

7.13. Settlement and Monitoring Data

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7.13.5A. ~~If AEMO estimates a non-zero quantity for~~ has issued a Dispatch Instruction for a non-zero MW quantity to a Demand Side Programme for a Trading Interval under clause 7.13.1F(e)7.6.5A and that Trading Interval is a Peak or Flexible IRCR Interval, AEMO must estimate determine, for the purposes of clause 10 of Appendix 4 and clause 11 of Appendix 5, the Deemed DSP Dispatch Contribution for each Associated Load of that Demand Side Programme for that Trading Interval, in accordance with clause 7.13.5B ~~the quantity in MWh by which each Associated Load of each Demand Side Programme reduced its consumption in the Trading Interval.~~

7.13.5B. The Deemed DSP Dispatch Contribution for an Associated Load l of a Demand Side Programme f in a Trading Interval t is the quantity in MWh by which the Associated Load is deemed to have reduced its consumption in the Trading Interval, calculated as follows:

$$DR(l, t) = \{DIMW(f, t) - \text{Max}[PCS(f, t), FCS(f, t)]\} \times \frac{|SOMS(l, t^*)|}{\sum_{al \in f} |SOMS(al, t^*)|}$$

where:

- (a) $DR(l, t)$ is the Deemed DSP Dispatch Contribution for Associated Load l in Trading interval t ;
- (b) $DIMW(f, t)$ is the quantity by which the Demand Side Programme f was instructed by AEMO to restrict its DSP Energy Level in Trading Interval t as specified by AEMO in accordance with clause 7.13.5
- (c) $PCS(f, t)$ is the Peak Capacity Shortfall for Demand Side Programme f in Trading Interval t as calculated in clause 4.26.2D;
- (d) $FCS(f, t)$ is the Flexible Capacity Shortfall for Demand Side Programme f in Trading Interval t as calculated in clause 4.26.14;
- (e) $|SOMS(l, t)|$ is absolute value of the Sent Out Metered Schedule for Associated Load l in Trading Interval t^* ;
- (f) $|SOMS(al, t)|$ is the absolute value of the Sent Out Metered Schedule for Associated Load al in Trading Interval t^* ;
- (g) t^* denotes the last Trading Interval in the Adjustment Window (as defined in Step 3.1 of Appendix 10) for Demand Side Programme f on the Trading Day that contains Trading Interval t ; and
- (h) $al \in DSP$ refers to all Associated Loads of Demand Side Programme f of which Associated Load l is a part.

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Glossary

DSP Energy Level: The Withdrawal or Injection made by a Demand Side Programme in a Dispatch Interval or a Trading Interval, where:

- (a) the DSP Energy Level of a Demand Side Programme that expects to Inject during the Dispatch Interval should denote the MW Injection of the Demand Side Programme, multiplied by negative one; and
- (b) the DSP Energy Level of a Demand Side Programme that expects to Withdraw during the Dispatch Interval should denote the MW Withdrawal of the Demand Side Programme, multiplied by negative one.