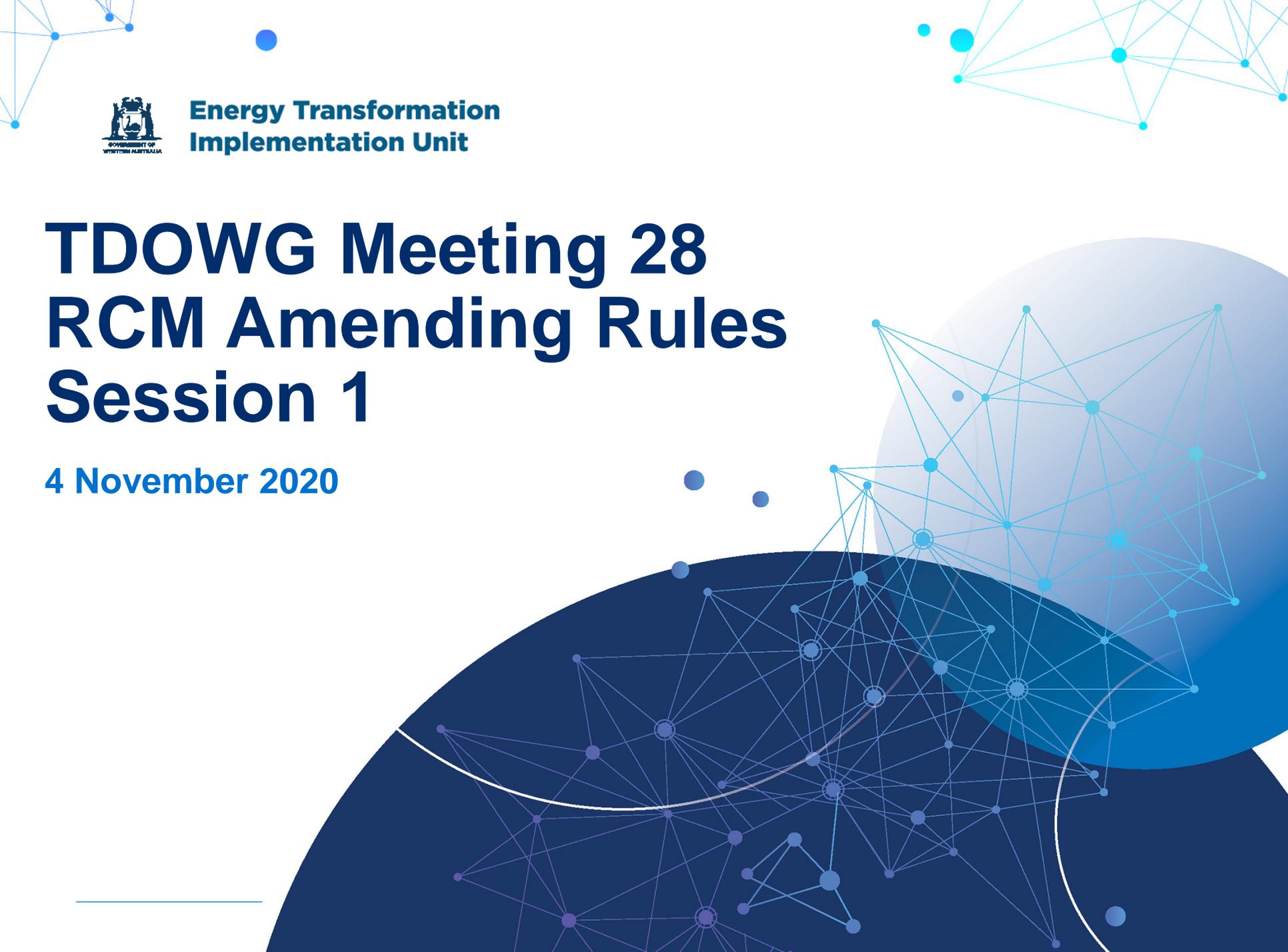




**Energy Transformation
Implementation Unit**

TDOWG Meeting 28 RCM Amending Rules Session 1

4 November 2020





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- Please place your microphone on mute, unless you are asking a question or making a comment.
- Please keep questions relevant to the agenda item being discussed.
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Agenda

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- **Today we are going to cover proposed RCM rules for:**
 - Storage and hybrid facilities, and Non-scheduled facilities
 - Governance of future WOSP
 - Changes to the Reserve Capacity Auction
 - Settlement changes
 - **Options for RCM implementation timeframes will be discussed tomorrow**
 - **The implementation of the Network Access Quantities (NAQ) regime will be discussed on Friday**



First Some Terminology...

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- We've introduced the following new facility types:
 - a Scheduled Facility containing **only** an Electric Storage Resource
 - a Scheduled Facility containing an Electric Storage Resource
 - a Semi-Scheduled facility containing an Electric Storage Resource
 - a Non-Scheduled Facility containing **only** an Electric Storage Resource, including Small Aggregation of aggregated Electric Storage Resources
 - a Non-Scheduled Facility containing an Electric Storage Resource

Note: A Facility, containing an ESR component, which is determined to be “controllable” by AEMO that would otherwise, but for its “controllability”, be semi-scheduled will be required to register its ESR component separately from its semi-scheduled component.

Chapter 1





Section 1.AA – Transitional Provisions

Clauses 1.AA.1 – 1.AA.5

- 1.AA.1 Amendments Commencement dates and Transitional Provisions are to be finalised (following the discussion tomorrow and approval processes)
 - Note: Rules related to Year 1 of the Reserve Capacity Cycle will commence before Year 1 of the Reserve Capacity Cycle, the rest – at the start of the corresponding Year 3
- 1.AA.2 provides for a grandfathered Intermittent Load to be treated by AEMO as an Intermittent Load under the current WEM Rules, as 1.AA.5 would prevent the certification of new Intermittent Loads
- Proposed clause 1.AA.3 requires AEMO to document the new WEM Procedure for how it will determine the Electric Storage Resource Obligation Intervals
- 1.AA.4 relates to the NAQ mechanism (to be covered on Friday)

Chapter 2





Section 2 – Functions and Governance

Clauses 2.29.5BA – 2.30B

- Electric Storage Resources co-located with a Facility must have a separate meter installed for the Electric Storage Resource and all associated Parasitic Loads for the purposes of Reserve Capacity Certification and Testing only.
- The separate meter must comply with the requirements specified in the WEM Procedure referred to in clause 2.29.5BC, including:
 - (a) the characteristics and requirements, including accuracy requirements, for the meter;
 - (b) the procedures to be followed by Market Participants for auditing of the meter;
 - (c) the communication requirements and protocols between a Market Participant and AEMO;
 - (d) the processes to be followed by a Market Participant for providing meter information to AEMO; and
 - (e) any other matters which AEMO considers relevant.
- Section 2.30B is amended to reflect that Market Participants will not be able to apply for certification of Reserve Capacity for new Intermittent Loads after a prescribed date.

Chapter 4





Section 4.2 – Expression of Interest

Clause 4.2.1

- Clause 4.2.1 - it is proposed that a Market Participant must submit an Expression of Interest as a condition of being eligible to seek certification of Reserve Capacity for any new capacity
- Note: This is to ensure Western Power provides the AEMO with accurate and complete thermal limit advice



Section 4.5A – Whole of System Plan

Clause 4.5A

It is proposed that:

- the Coordinator publishes a WOSP at least once in every five years in accordance with the WEM Rules.
- The Coordinator is able to publish updates to the WOSP at any time if it considers that there have been material changes to the inputs, assumptions and scenarios used in the most recent published WOSP.
- The WOSP is a plan over a planning horizon of at least 20 years for the efficient development of the SWIS to meet the power system needs in the long-term interests of the consumers of electricity.
- An obligation is created for the Coordinator to publish an approach for the development of the WOSP.
- The Coordinator consults on a draft WOSP before publishing the final WOSP.
- It is proposed that certain types of projects in the WOSP would become “priority projects” for the purpose the Electricity Network Access Code.



Section 4.9 – Applying for CRC

Clause 4.9.10

- AEMO must document the processes it will follow when assessing the capacity of an Electric Storage Resource to account for degradation of the Electric Storage Resource.
 - The WEM Procedure is proposed to include the following for an Electric Storage Resource :
 - how Certified Reserve Capacity is assigned;
 - how Reserve Capacity Obligation Quantities are set; and
 - how AEMO will account for any degradation of an Electric Storage Resource, based on:
 - the performance standards and specifications for the Electric Storage Resource provided by the relevant manufacturer; and
 - the performance of the Electric Storage Resource in the current Capacity Year, where available
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Section 4.10 – Information Required for CRC

Clause 4.10.1(fA) – 4.10.1(fD)

- New Clause 4.10.1(fA) is proposed to set the information provisions for a Scheduled Facility containing **only** an Electric Storage Resource.
- New Clause 4.10.1(fB) is proposed to set the information provisions for a Scheduled Facility containing an Electric Storage Resource.
- New Clause 4.10.1(fC) is proposed to set the information provisions for a Semi-Scheduled facility containing an Electric Storage Resource.
- New Clause 4.10.1(fD) is proposed to set the information provisions for a Non-Scheduled Facility containing **only** an Electric Storage Resource, including a Small Aggregation comprising aggregated Electric Storage Resources.

Section 4.10 – Information Required for CRC

Clauses 4.10.1(i), 4.10.1(l), 4.10.2

- Clause 4.10.1(i) is proposed to be amended to clarify that Market Participants can only nominate the use of the Relevant Level Methodology for determining the quantity of Certified Reserve Capacity for Non-Scheduled Facilities and Semi-Scheduled Facilities, excluding any storage component of the Facility.
- Clause 4.10.1(l) is proposed to be amended to remove the reference to the ‘Balancing Facility Requirements’ and replace it with a reference to the Market Participant being required to provide evidence of the extent to which its Facility will be able to receive, confirm and respond to Dispatch Instructions in accordance with the WEM Procedures: Communications and Control Systems, and Dispatch.
- Clause 4.10.2 is proposed to be added to clarify the types of Facilities eligible to be nominated by a Market Participant for use of the Relevant Level Methodology for determining the quantity of Certified Reserve Capacity for the Facility.



Section 4.11 – Setting Reserve Capacity

Sections 4.11.1 and 4.11.3

- New proposed clauses 4.11.1(bC), (bD) and (bE) clarify the basis on which the Certified Reserve Capacity will be determined for Facilities comprising only of, or containing, an Electric Storage Resource
- Clause 4.11.1(j) is proposed to be amended to require that a Demand Side Programme must only consist of Associated Loads at the same Transmission Node
- New proposed clause 4.11.1DA clarifies that outage values are to be aggregated to Trading Intervals for the purposes of calculations involving outage quantities.
- New proposed clause 4.11.3 specify the use of the Linear Derating Method by the AEMO for determining the Certified Reserve Capacity of Electric Storage Resources.



Section 4.11 – Setting Reserve Capacity

Sections 4.11.3A and 4.11.3B

- New proposed clause 4.11.3A will require AEMO to:
 - determine and publish the Trading Intervals in each Trading Day that are Electric Storage Resource Obligation Intervals
 - document the methodology and processes it will use to determine Electric Storage Resource Obligation Intervals
- A new proposed transitional provision requires AEMO to document the WEM Procedure prior to the date the window for applications for certification of Reserve Capacity, for the first Reserve Capacity Cycle to which these Amending Rules apply, opens under clause 4.1.7.
- A Market Participant for an Electric Storage Resource, or a Facility containing an Electric Storage Resource, will have Reserve Capacity Obligations in respect of the Electric Storage Resource in each Electric Storage Resource Obligation Interval.
- Clause 4.11.3B is proposed to be amended to specify the Required Level for Facilities containing an Electric Storage Resource.

Section 4.12 – Reserve Capacity Obligations

Section 4.12

- Clause 4.12.1(a)(iv) is proposed to be deleted as the ‘Remaining Available Capacity’ referred to in new clause 4.12.1(a)(vi) includes the effects of any Outages affecting, or likely to affect, the Facility in the Trading Interval.
- Projected Essential System Services quantities (currently Ancillary Service quantities) will no longer be deducted from Reserve Capacity Obligation Quantities. All of a Market Participant’s non-Demand Side Programme RCOQ must be offered into STEM, regardless of whether the Registered Facility may be dispatched for Essential System Service.
- New clause 4.12.4(aB) will clarify that for Semi-Scheduled Facilities containing Electric Storage Resource the RCOQ is the Electric Storage Resource Obligation Quantity during the Electric Storage Resource Obligation Duration Intervals, otherwise zero
 - Note: as for other facility types the Electric Storage Resource Obligation Quantity will be adjusted for planned outages, etc
- Clause 4.12.4(d) is proposed to be amended to clarify that the RCOQ is zero for all Non-Scheduled Facilities, including those containing a storage component.
- New proposed clause 4.12.4A clarifies the circumstances in which the RCOQ for a storage component of a Facility will be reduced to zero i.e. where the Facility is directed to provide an Essential System Service in accordance with clause 7.7.5 (when AEMO has issued a Low Reserve Condition Declaration relating to an actual or projected shortfall in Essential System Service).



Section 4.13B – Coordinator Review of Effectiveness of Certification of Reserve Capacity for Electric Storage Resources

Clause 4.13B

- New proposed section 4.13B requires the Coordinator to undertake a periodic review to assess the continuing effectiveness of the approach for certification of Reserve Capacity for Electric Storage Resources.
- Under clause 4.13B.2 the Coordinator must complete the first review, within five years of the commencement of section 4.13B.
- Amongst other things, the review must examine whether the methodology for rating the capacity of Electric Storage Resources for the purposes of setting Certified Reserve Capacity remains consistent with the Wholesale Market Objectives.
- The Coordinator must consult on a draft report before it publishes a final report.



Sections 4.14 and 4.19 – Bilateral Trade Declaration and Reserve Capacity Auction Clearing

Clauses 4.14.1 – 4.14.1A, Section 4.19

- New proposed clause 4.14.1(e) requires Market Participants to specify in their bilateral trade declaration the minimum number of Capacity Credits to be assigned to a proposed Facility for it to participate in the RCM.
- Clause 4.14.1A is proposed to be deleted because of the Reserve Capacity Auction being deleted.
- New replacement clause 4.14.1A requires Market Participants with Facilities containing a storage component to separately nominate the amount of Certified Reserve Capacity assigned to the Facility that it intends to trade bilaterally for the storage component and the rest of the Facility.
- Section 4.19, and other related sections, are proposed to be deleted as a consequence of the Reserve Capacity Auction being deleted.



Section 4.20 – Capacity Credits

Clauses 4.20.5A – 4.20.17

- Clause 4.20.5A is amended to require that the AEMO records the Capacity Credits associated with each component of a Facility.
- New proposed clause 4.20.16 requires a Market Participant to nominate the number of Capacity Credits to be associated with the Facility's storage component (not exceeding its level of Certified Reserve Capacity), provided the Capacity Credits assigned to the Facility is less than the Facility's total Certified Reserve Capacity (including the storage component).
- New proposed clause 4.20.17 requires AEMO to set the number of Capacity Credits associated with the Electric Storage Resource component of a Facility for a Capacity Year.

Section 4.25 – Reserve Capacity Testing

Clauses 4.25.1 – 4.25.2C

- Clause 4.25.1 is proposed to be amended to set out the requirements for Reserve Capacity testing of Facilities containing storage components
 - 4.25.1(d) - an Electric Storage Resource is proposed to be required to demonstrate operation during the Electric Storage Resource Obligation Intervals, at least once during 1 October to 31 March and 1 April to 30 September.
- Clause 4.25.2 is proposed to be amended to prescribe how AEMO will conduct the Reserve Capacity testing for Electric Storage Resources (by observation or testing)
 - 4.25.2(d) relates to a Scheduled Facility containing an Electric Storage Resource; and
 - 4.25.2(e) relates to a Semi Scheduled Facility containing an Electric Storage Resource.
- Clause 4.25.2A would allow a Market Participant for Facility containing an Electric Storage Resource to provide AEMO with meter data, recorded by Electric Storage Resource Metering, by 31 January, so that AEMO can confirm the Electric Storage Resource has achieved the level of its Capacity Credits
- Clause 4.25.2B provides that AEMO must only subject a Facility containing an Electric Storage Resource to a test if the Market Participant has not provided meter data or AEMO has determined that the Facility has not met its Required Level on the basis of the meter data provided
- Clause 4.25.2C would require a Market Participant for a Facility containing an Electric Storage Resource to provide meter data, recorded by Electric Storage Resource Metering, for the Reserve Capacity Test period within two Business Days of a Reserve Capacity Test.

Section 4.25 – Reserve Capacity Testing

Clauses 4.25.3A – 4.25.8

- Clause 4.25.3A is proposed to be amended as a consequence of Consequential Outages being removed from the Outages framework, and to correct an existing drafting with respect to the reference to ‘Opportunistic Outage’, which is not a term used in the current (or proposed) Outages frameworks.
- Clauses 4.25.4 and 4.25.4B are proposed to be amended to set out how the reduction of Capacity Credits where a storage facility or the storage component of a facility fails a Reserve Capacity Test is to be determined.
- Amendments are proposed to clause 4.25.4CA to provide for weekly settlement.
- Clause 4.25.4E is amended to clarify that the Capacity Credit Refund to be made by a Market Participant for a voluntary reduction in Capacity Credits associated with a Demand Side Programme is to be paid by the Market Participant that effected that reduction. This manages an uncertainty which may in the circumstance where a Demand Side Programme is transferred and the transferee effects the voluntary reduction in Capacity Credits associated with that Demand Side Programme.
- New proposed clause 4.25.5A requires a Market Participant to provide meter data to AEMO and specifies the time by when it is to be provided, where the Market Participant has requested a re-test of a Facility containing a storage component.
- New proposed replacement clause 4.25.8 sets out the requirements with respect to setting the level of Capacity Credits for a Facility containing a storage component following a re-test of the Facility.

Section 4.26 – Financial Implications of Failure to Satisfy Reserve Capacity Obligations

Clauses 4.26.1 – 4.26.1F

- 4.26.1(b)(i) is proposed to be amended to prescribe when a Semi-Scheduled Facility that contains an Electric Storage Resource has met its Required Level and when it has its ‘Y’ set to zero.
 - Y is the trading interval refund price which is then multiplied by the Refund Factor
- 4.26.1(b)(iiB) is proposed to set the calculation of ‘Y’ for a stand-alone Electric Storage Resource.
- 4.26.1(b)(iiC) is proposed to set the calculation of ‘Y’ for a Scheduled Facility containing an Electric Storage Resource as a ‘blended’ price based on the proportion of Capacity Credits associated with each sub-component and each sub-component’s ‘Y’.
- 4.26.1(b)(iiD) is proposed to set the calculation of ‘Y’ for a Semi-Scheduled Facility containing an Electric Storage Resource when a Reserve Capacity Obligation applies.
- 4.26.1(e)(iA) is proposed to be included to set out the calculation of ‘Y’ for a Scheduled Facility that contains only an Electric Storage Resource when a Reserve Capacity Obligation applies.
- New proposed clause 4.26.1CA sets out the requirements for classifying Planned Outages of storage facilities or Facilities containing a storage component as liable or exempt from refunds.
- New proposed clause 4.26.1F contains a requirement for a Market Participant to submit a Forced Outage where a Scheduled Facility (with an RCOQ greater than zero) has not complied with a Dispatch Instruction.



Section 4.26 – Financial Implications of Failure to Satisfy Reserve Capacity Obligations

Clauses 4.26.2AA

- Clause 4.26.2 is deleted and replaced with clause 4.26.2AA. Clause 4.26.2 has already been published as part of Tranche 2 Amending Rules, including to cater for weekly settlement.
- Incremental changes have been made to bring this clause in line with the way capacity availability will be declared in the new market in order to replicate the capacity refund outcomes in the current market. The clause has also been set out in a different form for clarity.
- The numbering of this replacement clause, namely clause 4.26.2AA, is a placeholder numbering only to show the intent of the amendments and will be revised in the final version of these Amending Rules in accordance with the usual conventions.



Section 4.28 – Funding Reserve Capacity

Clauses 4.28.1 – 4.28.10A

- Amendments are proposed to section 4.28 for weekly settlement.
- Amendments are proposed to clause 4.28.1 for weekly settlement and because the Special Price Arrangement concept is no longer applicable. Amendments made to clause 4.28.2 for weekly settlement, the new registration taxonomy and the moving of the capacity credit allocations from Chapter 9 to Chapter 4.
- Amendments are proposed to clause 4.28.8 and 4.28.8C for changes in taxonomy and to remove clause 4.28.8(b) (this clause was deleted due to it never being operationalised).
- Clause 4.28.10 is also proposed to be deleted because it has never been operationalised.



Section 4.28B – Treatment of Small Generators

Section 4.28B

- Section 4.28B is proposed to be deleted. Section 4.28B enabled new small generators (i.e. with a nameplate capacity of ≤ 1 MW) to apply for Capacity Credits outside the standard process and timelines for a Reserve Capacity Cycle.
- As a result, new small generators will be required to comply with the standard processes and timelines for certification of Reserve Capacity and assignment of Capacity Credits and Network Access Quantities set out in Chapter 4.
- These facilities are likely to be aggregated in the future, and similarly to DSPs, they are expected to apply for Capacity Credits as part of the normal Reserve Capacity Cycle process and timeframes.
- As their number increases, accommodating the assignment of Capacity Credits to these facilities outside the standard processes would have market consequences.

Section 4.28C – Early CRC

Section 4.28C

- Section 4.28C enables some Market Participants with new facilities to apply to AEMO for early certification of Reserve Capacity. Currently, an application may be made for eligible facilities for a Capacity Year at any time prior to 1 January of Year 1 of the Reserve Capacity Cycle relating to that Capacity Year.
- The ability for a Market Participant to make an application for early certification of Reserve Capacity will continue subject to the following key changes:
 - Market Participants will need to demonstrate to AEMO that the project requires a lead time longer than the start of the Reserve Capacity Cycle in which Capacity Credits are being sought for the facility (clause 4.28C.1(d)); and
 - applications may only be made up to two years before the start of the relevant Reserve Capacity Cycle (clause 4.28C.2).
- New proposed clause 4.28C.7A requires AEMO to set Early Certified Reserve Capacity for the Facility at the time AEMO next processes applications for Certified Reserve Capacity.
- New proposed clause 4.28C.7C requires AEMO to notify the applicant of any revised Indicative Network Access Quantity determined for the Facility by 31 October of the year in which the assessment is undertaken by AEMO.
- Applicants for early Certified Reserve Capacity will continue not to be eligible for a fixed reserve capacity price for their facility (clause 4.28C.15) .
- Clause 4.28C.15 is proposed to be amended to provide for AEMO to publish details of the matters AEMO will have regard to in forming its opinion under clause 4.28C.1(d) in a WEM Procedure.



Section 4.29 – Settlement Data

Clauses 4.29.1 – 4.29.5

- Clause 4.29.1(a) is proposed to be deleted as a consequence of the Reserve Capacity Auction being deleted, and to remove redundant references to previous Reserve Capacity Cycles
- Clauses 4.29.1A, 4.29.2 and 4.29.2A are proposed to be amended as a consequence of the Reserve Capacity Auction being deleted.
- Clause 4.29.2B(d) is proposed to be deleted as a consequence of the Reserve Capacity Auction being deleted and to enable weekly settlement. AEMO will now be required to calculate a daily Reserve Capacity Price applicable to each Facility.
- Clause 4.29.3(d) is proposed to be amended as a consequence of the Reserve Capacity Auction being deleted, to reflect the new registration taxonomy and for weekly settlement.
- Clause 4.29.3(e)(iii) has been moved to clause 4.24.18 with conforming amendments.
- New proposed clause 4.29.5 is being added to clarify that the Reserve Capacity Price to be paid for early entry facilities will be the Reserve Capacity Price for the Capacity Year immediately prior to the start of the relevant Capacity Year. This reflects the current practice.



Sections 4.30 to 4.32 – Capacity Allocation Process

Clauses 4.30 – 4.32

- New sections 4.30 and 4.31 are added moving capacity credit allocation from chapter 9 (sections 9.4 and 9.5) to chapter 4, changes in taxonomy, change to clause references in Chapter 9. Changes are also made to make sure Market Participants know what the cut off time is.
- The clause numbering in new sections 4.30 and 4.31 are consistent with the numbering in sections 9.4 and 9.5, and will be renumbered in the final version of these Amending Rules.

Chapter 6





Section 6.2 – Bilateral Submission Timetable and Process

- Proposed new clause 6.2.8 requires AEMO to notify Market Participants of any changes to the Electric Storage Resource Obligation Intervals for a Trading Day before the Bilateral Submission Cut off for a Trading Day.

Chapter 11





Section 11 – Glossary



The following new definitions have been included in the Glossary:

Electric Storage Resource Obligation Duration: The eight contiguous Electric Storage Resource Obligation Intervals which commence at the time published by AEMO in accordance with clause 4.11.3A each Trading Day.

Electric Storage Resource Obligation Quantity: The Capacity Credits associated with the Electric Storage Resource.

Electric Storage Resource Obligation Interval: A Trading Interval in which a Reserve Capacity Obligation Quantity for an Electric Storage Resource applies.

Electric Storage Resource Metering: A meter or meters that:

- (a) a Market Participant is required to install under clause 2.29.5BA; and
- (b) are to be used solely for the purpose of Reserve Capacity Certification and a Reserve Capacity Test under section 4.25 for a Facility containing an Electric Storage Resource.

Linear Derating Method: The method for determining the discharge capability, in MW, of an Electric Storage Resource, in accordance with clause 4.11.3, by multiplying its maximum discharge capability (in MW) by the lower of:

- (a) 1; and
- (b) the ratio of the discharge duration of the Electric Storage Resource and the Electric Storage Resource Obligation Duration.

Appendix 5





Appendix 5 – Individual Reserve Capacity Requirements

Appendix 5 is proposed to be amended so that the calculation of the IRCR for a Market Participant with an Electric Storage Resource does not include any Trading Intervals where AEMO has issued a direction under clause 7.7.5 in respect of the Electric Storage Resource.

Appendix 9





Appendix 9 – Relevant Level Determination

- Appendix 9 is proposed to be amended so that:
 - for a Candidate Facility containing an Electric Storage Resource, any generation or consumption measured by the Electric Storage Resource Metering required to be installed in accordance with clause 2.29.5BA must be excluded.
 - if AEMO made a revised estimate it must exclude any generation or consumption measured by the meter required to be installed in accordance with clause 2.29.5BA for a Candidate Facility containing an Electric Storage Resource.