

## 1 EXECUTIVE SUMMARY

Synergy would like to thank Energy Policy WA (EPWA) for the opportunity to provide feedback on the *Exposure Draft Tranche 4B Proposed WEM Amending Rules (Tranche 4B Rules)*. Synergy notes that the proposed amendments for the treatment for Not In-Service Capacity cannot be considered in isolation and needs to be addressed alongside Market Power Mitigation measures to ensure that appropriate information is available at the time of unit commitment decisions. This is discussed in more detail, along with other suggested amendments, in the following sections.

## 2 TRANCHE 4B AMENDING RULES – UNDER FREQUENCY LOAD SHEDDING

1) Tranche 4B Amending Rules – Under Frequency Load Shedding (Section 3.6)				
#	Rule ref.	Classification	Issue	Suggestion
1	3.6.6	Typographical	'UFLS Requirements Document' is not a specified glossary term.	<b>3.6.6.</b> A Network Operator that has obligations under the UFLS Requirements document, must develop and maintain an UFLS Specification document setting out how the Network Operator will design and implement its schemes to meet the requirements outlined in the UFLS Requirements <del>document</del> .
2	3.6.7	Minor	In accordance with clause 3.6.8, AEMO is responsible for reviewing and approval the Network Operator's UFLS Specification document. Suggestion to amend clause 3.6.7 for alignment.	<b>3.6.7.</b> Each Network Operator's UFLS Specification document must be submitted to AEMO for review <del>and approval</del> , including when changes are initiated by the Network Operator, or as a result of a change to the UFLS Requirements document.
3	3.6.8	Typographical	Usage of 'a' Network Operator suggests that AEMO may agree on a reasonable timeframe with any Network Operator.	<b>3.6.8</b> Within a reasonable timeframe agreed with <del>a</del> the relevant Network Operator, AEMO must review and approve the Network Operator's UFLS Specification document once any reasonable amendments suggested by AEMO have been agreed and incorporated.
4	Existing clause 3.6.5(b)	Minor	Synergy notes that existing clause 3.6.5(b) requires the Network Operator to maintain the equipment which will implement the automatic under frequency load shedding in good order, however, there is no similar clause in the proposed replacement of section 3.6. Synergy queries whether the intention is to include this explicit obligation under the UFLS Requirements Document.	<b>N/A</b>

### 3 TRANCHE 4B AMENDING RULES – CHANGE MANAGEMENT FRAMEWORK FOR WEM TECHNICAL STANDARDS

2) Tranche 4B Amending Rules – Framework for WEM Technical Standards (Various Chapter 2)				
#	Rule ref.	Classification	Issue	Suggestion
5	2.4.3 to 2.7.8	Minor	Amendments have been made to several clauses relating to the Change Management Framework for WEM Technical Standards to enable the Coordinator to seek advice from AEMO and Western Power. Synergy suggests consideration to replace all references to Western Power with the 'Network Operator' to allow consistency with the WEM Rules.	N/A
6	2.4.3B	Typographical	Suggested typographical amendments	<b>2.4.3B.</b> Where the Coordinator considers that making Amending Rules will affect a WEM Technical Standard, the Coordinator must request advice and/or information from AEMO and/or Western Power to assist in assessing the relevant Rule Change Proposal. The following applies to the request: (a) <del>t</del> The Coordinator must consult <b>with</b> AEMO and/or Western Power, as applicable, on the requirements and the timeframes applicable to the request; and (b) <del>t</del> The Coordinator may, at her or his discretion, require AEMO and Western Power to provide advice jointly or independently.
7	2.8.14	Typographical	Suggested typographical amendments	<b>2.8.14.</b> The following clauses are WEM Technical Standards: ... (g) chapter 3B;.

### 4 TRANCHE 4B AMENDING RULES – TRANSITIONAL RULES FOR AGC DISPATCH

3) Tranche 4B Amending Rules – Transitional Rules for AGC Dispatch (Section 1.49)				
#	Rule ref.	Classification	Issue	Suggestion
8	1.49.1	Typographical	The term “ <i>Tranches 2 and 3 Amending Rules</i> ” may not be a defined term currently or in the gazetted Amending Rules awaiting commencement.	N/A
9	1.49.3	Typographical	Suggested typographical amendments	<b>1.49.3.</b> Where AEMO has operational control of a Facility under clause 1.49.1: (a) AEMO is not required to issue a Dispatch Instruction to the Facility where the adjustments relate to implementation of a previously recorded Dispatch Instruction; <b>and</b> (b) AEMO must operate the Registered Facility in compliance with Dispatch Instructions recorded for the Registered Facility.

## 5 TRANCHE 4B AMENDING RULES – AMENDMENTS TO APPENDIX 12

4) Tranche 4B Amending Rules – Generator Performance Standards, Amendments to Appendix 12 (Appendix 12)				
#	Rule ref.	Classification	Issue	Suggestion
10	Glossary	Moderate	Synergy supports the amendment to the glossary definition of 'Credible Contingency Event' for alignment with the Technical Rules. However, notes that this term has been referred to quite frequently throughout the WEM Rules. Synergy requests that all existing references to the current term 'Credible Contingency Event' are appropriately amended at the time of commencement (1 August 2021).	N/A
11	Appendix 12	Request for clarification	Synergy seeks clarification on whether the minimum requirements takes precedent over common requirements, or vice versa.	N/A
12	A.12.6.1.8	Moderate	<p>Clause A12.6.1.8 does not cater for circumstances where the Market Participant may wish to seek approval from AEMO to alter its Active Power output for testing purposes, or seek long term arrangements in an operating protocol such that in certain modes, it is waived from needing to provide frequency response.</p> <p>Synergy suggests the addition of 'and/or approved' to enable added flexibility.</p>	<p><b>A12.6.1.8</b></p> <p>All Generating Units, or the Generating System as applicable, capable of operating in a mode in which it will automatically alter its Active Power output to arrest and correct to changes in power system frequency, with all Generating Units operating in this mode unless instructed otherwise <b>and/or previously approved</b> by AEMO.</p>
13	A12.6.1.10(a)	Major	<p>Synergy does not consider A12.6.1.10 should be a common requirement as the obligation for 'frequency dead band for any initial output up to Rated Maximum Active Power output' under clause A12.6.1.10 requires provision up to 100%.</p> <p>This directly conflicts with, and is more onerous than, the minimum requirement, which requires provision up to 85%. Synergy requests this requirement be moved under the ideal requirements and removed from the common requirements.</p> <p>Further, Synergy recommends the minimum standards be amended to 'any initial output above Rated Minimum Active Power' to cater for technology types that may not be able to respond during start-ups.</p> <p>Synergy also seeks clarification on whether a solar inverter should be based off the Rated Maximum Active Power instead of the Rated Active Power.</p> <p>Additionally, clause A12.6.1.10(b) should finish off with a full stop, instead of a semi-colon.</p>	N/A
14	A12.6.1.11	Typographical	Correction of clause reference and grammar.	<p><b>A12.6.1.11</b></p> <p>The frequency response capability described in section A12.6.1<del>6</del>.10:</p> <p>...</p> <p>(d) must not decrease Active Power output in response to a decrease in power system frequency<del>;</del></p>

**4) Tranche 4B Amending Rules – Generator Performance Standards, Amendments to Appendix 12 (Appendix 12)**

#	Rule ref.	Classification	Issue	Suggestion
15	A12.6.2.1(d)(vii)	Typographical	Suggested typographical amendments	<b>A12.6.2.1</b> (vii) ... Generator Performance Standard <del>;</del>
16	A12.6.3.2	Typographical	Synergy notes that A12.6.3.2(b) and (d) have been deleted, however, as they have been replaced by [Blank], the (b) and (d) should be retained.  Further, clause A12.6.3.2(h) should finish with a full stop, rather than semi-colon.	<b>A12.6.3.2</b> Subject to energy source availability, a Generating System is required to have control ranges and response times for each Generating Unit, or Generating Systems as applicable, such that:  (a) ... ; (b) [Blank] (c) ....; (d) [Blank];  ... (h) ... Generator Performance Standard <del>;</del>
17	Comment	Request for clarification	Synergy seeks clarity on what the expectation is if/when a conflict arises between Generation Performance Standards and ESS requirements. For instance, during an UFLS event, a Facility is required to provide 20MW droop response and it also receives a separate instruction to provide 20MW of ESS response, is the expectation to provide 40MW, or is the 20MW of ESS response already accounted for under the 20MW droop response?	<b>N/A</b>

## 6 TRANCHE 4B AMENDING RULES – NOT-IN SERVICE CAPACITY, REFUNDS AND RELATED CAPACITY AMENDMENTS

5) Tranche 4B Amending Rules – Not-In Service Capacity, Refunds and Related Capacity Amendments (Section 7.13, Various Chapter 4, Section 3.21, Various Chapter 7)				
#	Rule ref.	Classification	Issue	Suggestion
18	7.13.1I, 7.13.1J and 7.13.1K	Major	<p>These clauses can impose a financial penalty on a facility based on the bidding information available at the time of the unit commitment decision. As such there is a requirement that, at the Start Decision Cutoff time applicable to the facility, the bidding information is appropriate and reflective of the likely outcomes in the real-time. If the available information is not reflective, it does not seem appropriate to impose a financial penalty based on unreliable information.</p> <p>Increasingly low daytime loads combined with high levels of cheap non-scheduled generation are crowding out base load coal plant to an extent not seen before on the SWIS. Once out of service, base load coal plant have high start costs, long recall times and inflexible and lengthy start profiles. Where additional scheduled energy is required for short periods, it is often more economic to service peak load periods with fast start, predominantly gas fired scheduled generation. Indeed, the role of fast start scheduled generation in the SWIS has changed from ‘peaking’ energy above intermittent and coal capacity to displacing out of service coal capacity where additional scheduled energy is required for short durations.</p> <p>Synergy notes that commitment decisions for coal plant with long recall times are heavily reliant on representative bidding by all market participants, and especially fast start plant, at the Start Decision Cutoff time applicable to those facilities. Commitment decisions for slow start plant are made well ahead of the unit becoming dispatchable and cannot be reversed without incurring costs.</p> <p>As such there needs to be appropriate measures in place to ensure that any bidding information available at these longer lead times is made in good faith and systematic biases, particularly those arising from late bidding from fast start scheduled generation or from AEMO load forecasts, are minimised.</p> <p>Synergy suggests that the application and appropriateness of these clauses are reviewed in line with the Market Power Mitigation consultation scheduled for Tranche 5. Synergy recognises the difficult balancing act required to ensure that any good faith bidding provisions are not overly burdensome and allow participants to be able to respond and react appropriately to changes in market conditions, however there is also a requirement for accurate information at time of unit commitment for slower start facilities.</p>	N/A

5) Tranche 4B Amending Rules – Not-In Service Capacity, Refunds and Related Capacity Amendments (Section 7.13, Various Chapter 4, Section 3.21, Various Chapter 7)

#	Rule ref.	Classification	Issue	Suggestion
19	7.13.1I	Typographical	Suggested typographical amendments and layout amendment to improve readability and clarity	<p><b>7.13.1I.</b></p> <p>AEMO must determine the Not In-Service Capacity for each Registered Facility f for which a Market Participant holds Capacity Credits, excluding Demand Side Programmes, in the Dispatch Interval DI as either:</p> <p>(a) <math>NISCap(f,DI) = \text{Max}(0, \text{EstDispEnergy}(f,DI) - \text{Max}(\text{ISSDCEnergy}(f,DI), \text{ISDispEnergy}(f,DI)))</math>;</p> <p>or</p> <p>(b) where AEMO has directed a Registered Facility to offer its capacity as In Service:</p> <p><math>NISCap(f,DI) = \text{Max}(0, \text{ReqDispEnergy}(f,DI) - \text{Max}(\text{ISSDCEnergy}(f,DI), \text{ISDispEnergy}(f,DI)))</math></p> <p>where:</p> <p>(c) <del>(a)</del> <math>NISCap(f,DI)</math> is the Not In-Service Capacity quantity for the Registered Facility f in Dispatch Interval DI;</p> <p>(d) <del>(b)</del> <math>\text{EstDispEnergy}(f,DI)</math> is the quantity of estimated energy dispatch just prior to the Start Decision Cutoff time for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 7.13.1J;</p> <p>(e) <del>(c)</del> <math>\text{ISSDCEnergy}(f,DI)</math> is the quantity of <del>in-service capacity</del> In-Service Capacity offered just after the Start Decision Cutoff time for Registered Facility f in Dispatch Interval DI, calculated in accordance with clause 7.13.1K;</p> <p>(f) <del>(d)</del> <math>\text{ISDispEnergy}(f,DI)</math> is the total MW quantity of In-Service Capacity for Registered Facility f included in the Real-Time Market Offers for energy that were used to calculate Dispatch Instructions and Market Clearing Prices for that Dispatch Interval DI; and</p> <p>(g) <del>(e)</del> <math>\text{ReqDispEnergy}(f,DI)</math> is the quantity of <del>in-service capacity</del> In-Service Capacity for Registered Facility f required <del>In-Service</del> by AEMO in Dispatch Interval DI;</p>
20	7.13.1K(c)	Typographical	Suggested typographical amendments	<p><b>7.13.1K.</b></p> <p>(c) ... Start Decision Cutoff; or</p>
21	7.13.1B	Typographical	Suggested typographical amendments	<p><b>7.13.1B.</b></p> <p>...</p> <p>(j) the Contingency Lower Factor; and</p> <p>(k) Facility Performance Factors; and</p> <p>(l) <del>the</del> the quantity of Not In-Service Capacity for each Registered Facility for which a Market Participant holds Capacity Credits, excluding Demand Side Programmes, in each Dispatch Interval.</p>

5) Tranche 4B Amending Rules – Not-In Service Capacity, Refunds and Related Capacity Amendments (Section 7.13, Various Chapter 4, Section 3.21, Various Chapter 7)

#	Rule ref.	Classification	Issue	Suggestion
22	Glossary	Typographical	The term “Real Time” should be hyphenated within the definitions to align with the glossary definition of “Real-Time”	<p><b>Start Decision Cutoff:</b> ... Real-Time Market Submission.</p> <p><b>Available Capacity:</b> ... Real-Time Market Submission.</p>
23	4.26.1D, 3.21.7, 3.21.7A, 3.21.7B, 3.21.7C	Moderate	<p>The clauses may possibly be double counting refunds in some circumstances (such as partial outages).</p> <p>Synergy suggests the calculations within these clauses are thoroughly reviewed to ensure that this does not occur.</p>	N/A
24	4.26.1D	Typographical	Typographical amendments suggested. Noting that RCOQ is not a glossary defined term. The terms ‘f’, and ‘DI’ should be specified within the formula definitions.	<p><b>4.26.1D</b> ...</p> <p>(a) NISRefund(f,t) is the Not In-Service Capacity Refund for the Registered Facility f in the Trading Interval t;</p> <p>(b) RCOQ(f,DI) is the <del>RCOQ</del> Reserve Capacity Obligation Quantity for the Registered Facility f in the Dispatch Interval DI;</p> <p>(c) CAFO(f,DI) is the Capacity Adjusted Forced Outage Quantity for the Registered Facility f in the Dispatch Interval DI as determined under clause 3.21.7C;</p> <p>(d) NISCap(f,DI) is the Not In-Service Capacity quantity for facility f in Dispatch Interval DI as <del>AEMO has</del> determined by AEMO under clause 7.13.1i;</p> <p>(e) DI<math>\in</math>t is the set of all Dispatch Intervals in Trading Interval t; and</p> <p>(f) TIRR(f,t) is the Trading Interval Refund Rate for the Facility f in Trading Interval t.</p>

5) Tranche 4B Amending Rules – Not-In Service Capacity, Refunds and Related Capacity Amendments (Section 7.13, Various Chapter 4, Section 3.21, Various Chapter 7)

#	Rule ref.	Classification	Issue	Suggestion
25	4.26.1E	Typographical	<p>Synergy notes that:</p> <ul style="list-style-type: none"> <li>- f should be defined after reference to Registered Facility</li> <li>- t should be defined after reference to Trading Interval</li> <li>- DI should be defined after reference to a Dispatch Interval</li> <li>- c should be defined after reference to a Separately Certified Component</li> <li>- subclause (b)(iii) should have an 'and' at the end</li> <li>- 'charge level' should be capitalised in subclause (b)(iv)</li> </ul>	<p><b>4.26.1E</b></p> <p>Where a Separately Certified Component <b>c</b> of a Scheduled Facility or a Semi-Scheduled Facility <b>f</b> which is an Electric Storage Resource has inadequate Charge Level to satisfy its Reserve Capacity Obligation Quantity determined for the Electric Storage Resource, AEMO must determine the shortfall in Reserve Capacity as:</p> $ESRChargeShortfall(f,t) = \sum (ESRRCOQShortfall(c,DI))DI \in t \times TIRR(f,t)$ <p>where:</p> <p>(a) ESRChargeShortfall (f,t) is the total MW shortfall determined for the Registered Facility <b>f</b> in the Trading Interval <b>t</b>;</p> <p>(b) ESRRCOQShortfall(c,DI) is the capacity shortfall in MW determined as:</p> $ESRRCOQShortfall(c,DI) = \text{MAX}(0, RCOQ(c,DI) - CAFO(c,DI) - 12 \times (\text{ChargeLevel}(c,DI) - \text{minChargeLvl}(c,DI)))$ <p>Where:</p> <ul style="list-style-type: none"> <li>i. RCOQ(c,DI) is the Reserve Capacity Obligation Quantity for the Separately Certified Component <b>c</b> which is an Electric Storage Resource, in the Dispatch Interval <b>DI</b>;</li> <li>ii. CAFO(c,DI) is the Capacity Adjusted Forced Outage Quantity for the Separately Certified Component <b>c</b> which is an Electric Storage Resource in the Dispatch Interval <b>DI</b> as determined under clause 3.21.7;</li> <li>iii. ChargeLevel(c,DI) is the Charge Level in MWh, or alternative estimate from AEMO where not available, of the Separately Certified Component <b>c</b> which is an Electric Storage Resource, in the Dispatch Interval <b>DI</b>; and</li> <li>iv. minChargeLvl(c,DI) is the minimum <b>c</b>Charge <b>L</b>Level capability in MWh as specified in Standing Data for the Separately Certified Component <b>c</b> which is an Electric Storage Resource, in the Dispatch Interval <b>DI</b>; and</li> </ul> <p>(c) <math>DI \in t</math> is the set of all Dispatch Intervals in Trading Interval <b>t</b>; and</p> <p>(d) TIRR(f,t) is the Trading Interval Refund Rate for the Facility <b>f</b> in Trading Interval <b>t</b>.</p>
26	4.9.10(b)	Typographical	Suggested typographical amendments	<p><b>4.9.10</b></p> <p>...</p> <p>(b) the methodology AEMO uses for determining Planned Outage rates and Forced Outage rates, which must treat Electric Storage Resource Charge Level shortfalls as calculated under clause 4.26.1E as Forced Outages; and</p> <p>...</p>



**5) Tranche 4B Amending Rules – Not-In Service Capacity, Refunds and Related Capacity Amendments (Section 7.13, Various Chapter 4, Section 3.21, Various Chapter 7)**

#	Rule ref.	Classification	Issue	Suggestion
27	3.21.7C	Typographical	It appears that all references to Dispatch Intervals has been incorrectly replaced with Trading Intervals.	<p><b>3.21.7C</b></p> <p>...</p> <p>Where:</p> <p>CAFO(f,DI) is the Capacity Adjusted Forced Outage Quantity for Facility f in TradingDispatch Interval tDI</p> <p>c in f denotes all Separately Certified Components of Facility f</p> <p>CAFO(c,DI) is the Capacity Adjusted Forced Outage Quantity for Separately Certified Component c in TradingDispatch Interval tDI as calculated in clause 3.21.7</p>
28	4.25.4E	Major	Clause 4.25.4E allows for capacity payments to be refunded from Demand Side Programs (DSPs) when granted a voluntary capacity reduction. Synergy is of the view that the return of capacity payments under these circumstances is appropriate and suggests the clause is retained.	<b>N/A</b>