



Government of Western Australia  
Energy Policy WA

# TDOWG Meeting # 41

7 April 2022

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

# Ground rules

- 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.
- If there is no break in discussion and you would like to say something, you can 'raise your hand' by typing 'question' or 'comment' in the meeting chat. Questions and comments can also be emailed to [energymarkets@energy.wa.gov.au](mailto:energymarkets@energy.wa.gov.au) after the meeting.
- If you are having connection/bandwidth issues, you may want to disable the incoming and/or outgoing video.

# Agenda

- **Tranche 6 overview**
- **Exposure Draft 1**
  - Reserve Capacity Mechanism (RCM) – Certification and Network Access Quantities
  - Scheduling Day processes and STEM obligations
  - Outage quantity calculations
  - Supplementary Essential System Service Mechanism (SESSM) – Market Participant Obligations
  - Non-Co-optimised Essential System Service (NCESS) – submission of requests to the Coordinator of Energy
  - Reporting on the effectiveness of the market
- **Exposure Draft 2 overview**
- **Next steps**

# Tranche 6 overview

- **Two exposure drafts**
  - Exposure Draft 1 – consultation period closes 12 May 2022
  - Exposure Draft 2 – consultation August 2022
- **Tranche 6 expected to also include Market Power Mitigation (separate consultation process)**
- **Proposed gazettal late November/early December 2022**

# Reserve Capacity Mechanism (RCM) Certification and Network Access Quantities

# RCM – Certification and Network Access Quantities

Amending Rules to commence on gazettal (1)

## Clause 4.4.1(d) – new information requirements for an Expression of Interest for a Reserve Capacity Cycle

- **If an application for an Access Proposal has been submitted for a Facility, require**
  - The application reference number provided by the Network Operator
  - The date the application was submitted to the Network Operator
- **Allows Western Power to accurately identify the list of new Facilities for which an Expression of Interest has been submitted**

Clause 4.5.10 – capitalise defined term ‘Energy Producing System’

Clause 4.9.8(b) – correct clause reference (should be clause 4.1.12)

# RCM – Certification and Network Access Quantities

Amending Rules to commence on gazettal (2)

## Clause 4.10.1 – certification application requirements

- **Clarify which requirements under clause 4.10.1(e) relate to a Non-Intermittent Generating System rather than its parent Facility**
- **Remove unnecessary repetition by combining clauses 4.10.1(fA), 4.10.1(fB) and 4.10.1(fC) into a single clause 4.10.1(fA)**
- **Extend clause 4.10.1(fD)(ii) to require provision of maximum Charge Level capabilities and temperature dependence information for Non-Scheduled Facilities that comprise only Electric Storage Resources**
- **Clarify that the test in clause 4.10.1(k) should only use configuration information provided under clause 4.10.1(dA) that applies to the components being assigned Certified Reserve Capacity using the Relevant Level Methodology**
- For example, for a Semi-Scheduled Facility comprising an Electric Storage Resource and an Intermittent Generating System, only the configuration information provided under clause 4.10.1(dA) for the Intermittent Generating System should be considered

# RCM – Certification and Network Access Quantities

Amending Rules to commence on gazettal (3)

## Clause 4.10.3 – requirement to provide an expert report

- Clarify that the test in clause 4.10.3(d) should only use configuration information provided under clause 4.10.1(dA) that applies to the part of the Facility being assessed under the Relevant Level Methodology

## Clause 4.15.5 – requirements for the facility dispatch scenarios used in NAQ Model

- Ensure that the facility dispatch scenarios consider Facilities with Early Certified Reserve Capacity

## Clause 4.15.16 – NAQ publication requirements

- Require AEMO to publish Indicative NAQs at the same time as it publishes NAQs



# RCM – Certification and Network Access Quantities

Amending Rules to commence on gazettal (4)

## Clause 5.2A.2 – 5.2A.3

- **Currently require a Market Participant to apply for Certified Reserve Capacity (CRC) if it has entered into a Network Control Service Contract or Dispatch Support Service Contract prior to the close of the CRC application window**
- **May force AEMO or Market Participant into non-compliance if contract signed shortly before CRC application window close**
- **To resolve this issue, propose to shift the relevant deadline to the opening of the CRC application window (as specified under clause 4.1.7)**

# RCM – Certification and Network Access Quantities

Amending Rules to commence on gazettal (5)

## Network Access Quantity Model Inputs

- Definition amended to require AEMO to publish adjusted Indicative Network Access Quantities for each applicable step in Appendix 3

## Network Augmentation Funding Facility

- Definition amended to ensure that it is aligned with section 4.10A (Network Augmentation Funding Facility)

# RCM – Certification and Network Access Quantities

Amending Rules expected to commence on New WEM Commencement Day

## Clause 4.11.3BA

- Consequential amendment – remove references to deleted clauses 4.10.1(fB) and 4.10.1(fC)

## Clause 5.2A.3

- Clause is being replaced by the Tranche 5 Amending Rules
- Need to reapply the change to shift the relevant deadline to the opening of the CRC application window

# Scheduling Day processes and STEM obligations

# Scheduling Day processes and STEM obligations

- **Amending Rules implement changes proposed at TDOWG Meeting #40**
- **Proposed changes**
  - Reduce implementation cost/time
  - Increase certainty and transparency for Market Participants
  - Address manifest errors
  - Align Scheduling Day processes with RCOQ and Net STEM Shortfall changes
- **Rationale for changes in TDOWG Meeting #40 slide pack**
- **Commence on New WEM Commencement Day**

# Scheduling Day processes and STEM obligations

## Bilateral Submission timetable and process

- **Clauses 6.2.1, 6.2.2, 6.2.2A, 6.2.3, 6.2.4B – restore current window for Bilateral Submissions**
- **Clause 6.2.3 (provision of Bilateral Submission quantities to Market Participants)**
- Retaining requirement for continuous updates
- Updated list of events that trigger an update of Bilateral Submission quantities
- Bilateral Submission quantities provided for each Trading Interval in the Bilateral Submission Results Window
- **Bilateral Submission Results Window:** For a point in time in the 24-hour period starting at 8:00 AM on a Scheduling Day, the period of eight consecutive Trading Days starting with the Trading Day for the Scheduling Day.
- Example: On 1 July Scheduling Day
  - Before 8:00 AM: 8:00 AM on 1 July to 8:00 AM on 9 July
  - From 8:00 AM: 8:00 AM on 2 July to 8:00 AM on 10 July

# Scheduling Day processes and STEM obligations

## Standing Bilateral Submission timetable and process

- **Clause 6.2A.2A – Standing Bilateral Submission data accepted by AEMO under clause 6.2A.2 will apply from the next time AEMO is required to use Standing Bilateral Submissions to make Bilateral Submissions under clause 6.2.2**
- **Clause 6.7.1(b)(ii) – remove the requirement to provide an effective date for Standing Bilateral Submission data**

# Scheduling Day processes and STEM obligations

## Electric Storage Resource (ESR) Obligation Intervals

- **Clause 6.2.8 removed**
- **Clause 6.3.1 – AEMO required to determine and record the following information by 8:00 AM on each Scheduling Day**
  - The ESR Obligation Intervals that will apply during the Trading Day for the Scheduling Day
  - The ESR Obligation Intervals that AEMO expects will apply during each of the seven following Trading Days
- **Clauses 6.3A.2(b) and 6.3A.2(c) require AEMO to make this information available to each Market Participant by 8:00 AM**



# Scheduling Day processes and STEM obligations

## Information to support the Bilateral and STEM Submission process (1)

- **Clause 6.3A.1 (total energy scheduled under bilateral contracts by Trading Interval)**
- AEMO required to publish for each Trading Interval in the Bilateral Submission Results Window
- Retaining requirement for continuous updates
- Updated list of events that trigger an update
- **Clause 6.3A.2(a) (demand forecast)**
- AEMO required to make available to each Market Participant by 8:00 AM on each Scheduling Day a demand forecast for each Trading Interval in the Trading Day
- Based on information published in the most recent Pre-Dispatch Schedule - sum of Forecast Operational Demand and scheduled Loss Factor adjusted Withdrawals for Registered Facilities
- Provided in MW and MWh
- **Other information provided for the STEM Submission Information Window (SSIW): For a Scheduling Day, the period of eight consecutive Trading Days starting with the Trading Day for the Scheduling Day**

# Scheduling Day processes and STEM obligations

## Information to support the Bilateral and STEM Submission process (2)

### Clause 6.3A.3 – Between 8:00 AM and 8:30 AM each Scheduling Day, AEMO required to

- a) record a snapshot of relevant approved Commissioning Tests
- b) record a snapshot of relevant Planned Outages and Forced Outages
- c) determine the Maximum Facility Supply Capability for each Scheduled Facility, Semi-Scheduled Facility and Non-Scheduled Facility (Energy Facility) for each Dispatch Interval in the SSIW
  - $MFSC(f,DI) = \text{MinAvail}(f,DI) \times LF(f,DI) / 12$
- d) determine the Maximum Facility Supply Capability for each Energy Facility for each Trading Interval in the SSIW
  - Sum of the relevant Dispatch Interval values from (c)
- e) determine the Maximum Supply Capability for each Market Participant for each Trading Interval in the SSIW
  - Maximum of 0.001 MWh and the sum of the Maximum Facility Supply Capabilities for the Market Participant's Energy Facilities
- f) determine the Maximum Consumption Capability for each Market Participant for each Trading Interval in the SSIW
  - Maximum of 0.001 MWh and the relevant Standing Data value
- g) determine and record CAFO and CAPO estimates for each Separately Certified Component (SSC) for each Dispatch Interval and Trading Interval in the SSIW
- h) determine and record an estimate of RCOQ for each SSC for each Dispatch Interval in the SSIW

# Scheduling Day processes and STEM obligations

Information to support the Bilateral and STEM Submission process (3)

## Clause 6.3A.4 – lists assumptions for determining CAPO, CAFO and RCOQ estimates

- a) ESR Obligation Intervals as determined under clause 6.3.1
- b) Commissioning Test Plans as per clause 6.3A.3(a) snapshot
- c) Outages as per clause 6.3A.3(b) snapshot
- d) Site temperatures do not exceed 41 degrees Celsius
- e) ESR RCOQs not reduced under clause 4.12.5(g) because of a direction

## Clause 6.3A.3 estimates used in Net STEM Shortfall calculations

- **STEM Reserve Capacity Obligation Quantity - clause 6.3A.3(h)**
- **Clause 4.26.2AD uses STEMCAFO(f,DI) – clause 6.3A.3(g)**
- **Clause 4.26.2AH uses STEMCAPO(f,DI) – clause 6.3A.3(g)**

# Scheduling Day processes and STEM obligations

Information to support the Bilateral and STEM Submission process (4)

**Clause 6.3A.5 requires AEMO to make available to each Market Participant by 8:30 AM on each Scheduling Day**

- **For each Trading Interval in the SSIW**
  - Maximum Facility Supply Capability for each Energy Facility registered to the Market Participant
  - Maximum Supply Capability
  - Maximum Consumption Capability
- **For each Trading Interval in the SSIW for each SSC of the Market Participant**
  - CAPO and CAFO estimates
- **For each Dispatch Interval in the SSIW for each SSC of the Market Participant**
  - CAPO and CAFO estimates
  - RCOQ estimates

# Scheduling Day processes and STEM obligations

## STEM Submissions timetable and process (1)

- **Clauses 6.3B.1, 6.3B.5 – make STEM Submission window like Bilateral Submission window**
- Example: on 1 July Scheduling Day
- Before 8:30 AM, window is 8:00 AM on 2 July to 8:00 AM on 9 July (7 Trading Days)
- At 8:30 AM the 9 July Trading Day is added - window is 8:00 AM 2 July to 8:00 AM 10 July
- After 10:50 AM (STEM Submission Cutoff for 2 July Trading Day), window is 8:00 AM on 3 July to 8:00 AM 10 July
- **Clause 6.3B.1A – restore current arrangements for processing of Standing STEM Submissions**
- AEMO generates STEM Submissions for a Trading Day from Standing STEM Submissions when the Trading Day is added to the STEM Submission window

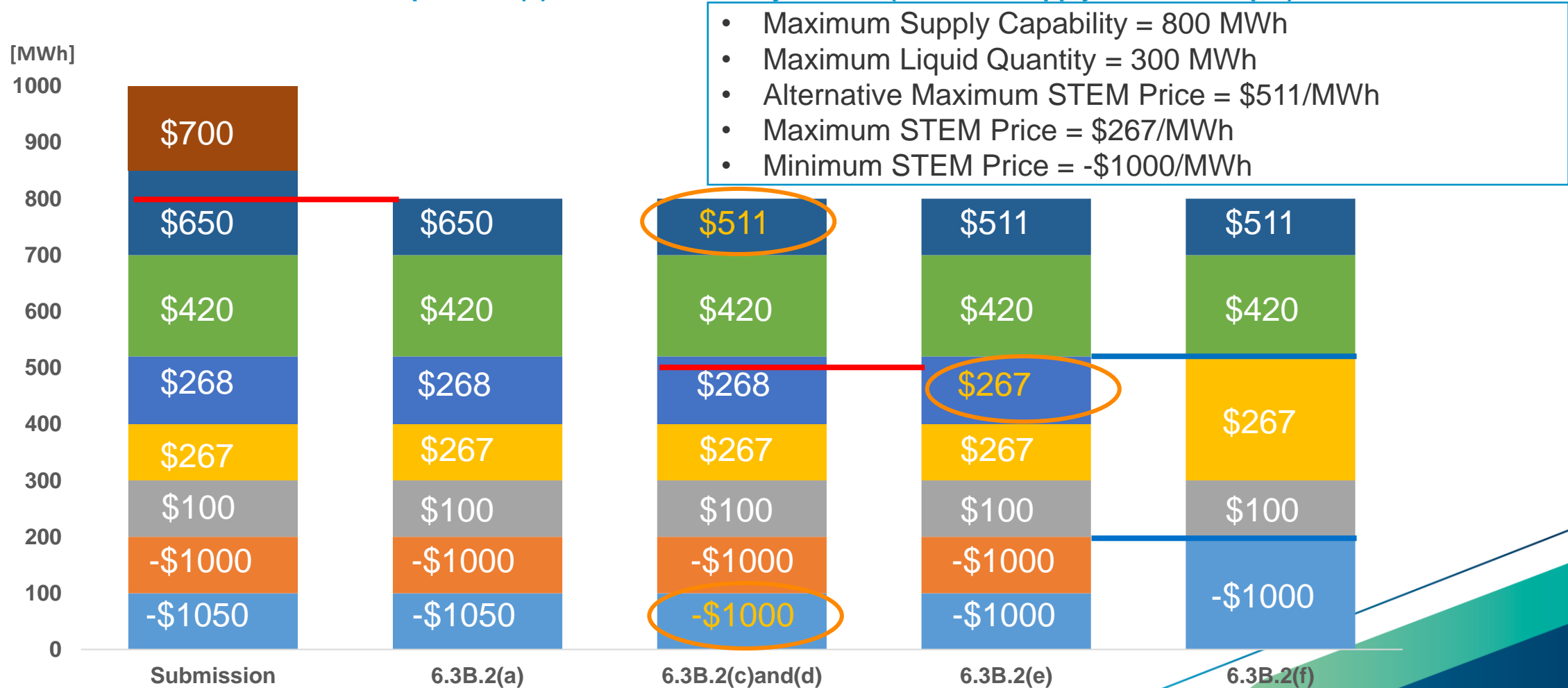
# Scheduling Day processes and STEM obligations

## STEM Submissions timetable and process (2)

- **Clause 6.3B.1B – AEMO required to adjust Portfolio Supply Curve and Portfolio Demand Curve Price-Quantity Pairs (if necessary) when it generates STEM Submissions from Standing STEM Submissions**
- **Clause 6.3B.1C – Each Scheduling Day between 8:30 AM and 9:00 AM, AEMO required to adjust Price-Quantity Pairs in existing STEM Submissions (if necessary)**
- **Clause 6.3B.2 – specifies the Price-Quantity Pair adjustment process used in clauses 6.3B.1B and 6.3B.1C**

# Scheduling Day processes and STEM obligations

## STEM Submissions timetable and process (3) - clause 6.3B.2 adjustment (Portfolio Supply Curve example)



# Scheduling Day processes and STEM obligations

## STEM Submissions timetable and process (4)

**Clause 6.3B.4 – AEMO required to provide each Market Participant with up to date details of their ‘effective’ STEM Submissions**

- **Updated list of events that will trigger an update of STEM Submission details**
- **Details provided for each Trading Interval in the STEM Submission Results Window: “For a point in time in the 24-hour period starting at 8:30 AM on a Scheduling Day, the period of eight consecutive Trading Days starting with the Trading Day for the Scheduling Day”**
- **Example: on 1 July Scheduling Day, STEM Submission Results Window is**
  - Before 8:30 AM: 8:00 AM on 1 July to 8:00 AM on 9 July
  - From 8:30 AM: 8:00 AM on 2 July to 8:00 AM on 10 July
- **STEM Submission details include adjustments made under clauses 6.3B.1B and 6.3B.1C**



# Scheduling Day processes and STEM obligations

## Standing STEM Submission timetable and process

- **Clause 6.3C.4 – Standing STEM Submission data accepted by AEMO under clause 6.3C.3 will apply from the next time that AEMO is required to use Standing STEM Submissions to make STEM Submissions under clause 6.3B.1A**
- **Clause 6.6.1(c)(v) – remove the requirement to provide an effective date for Standing STEM Submission data**

# Scheduling Day processes and STEM obligations

## Extensions of Bilateral and STEM timeframes

### Clauses 6.4.6, 6.4.6A, 6.4.6A and 6.4.6C

- **Updated lists of information preparation and provision clauses**
- **Included all the timelines that may need to be extended**
- **Refined the list of requirements that an extension must meet**
- No timeline delayed by more than 2 hours
- Bilateral Submission Cutoff at least 50 minutes after publication of demand forecast and ESR Obligation Intervals
- Bilateral Submission Cutoff at least 20 minutes after publication of STEM limits, CAFO/CAPO and RCOQ estimates
- **STEM Submission Cutoff at least 110 minutes after**
  - First Pre-Dispatch Schedule that includes all Trading Intervals in the next Trading Day
  - Provision of 'final' Bilateral Submission quantities (i.e. after Bilateral Submission Cutoff for the next Trading Day)
  - Provision of demand forecast, ESR Obligation Intervals, STEM limits, CAFO/CAPO and RCOQ estimates

# Scheduling Day processes and STEM obligations

## STEM Liquid Fuel limits

- **Changes to address existing manifest error in clause 6.6.2A(d)(iii)(1) – excludes liquid-only Facilities when calculating the maximum cumulative quantity that can be included in a Portfolio Supply Curve at prices above the Maximum STEM Price**
- **Clause 6.6.2A(a) – Market Participant declares which of its Liquid Fuel capable Registered Facilities (including liquid-only Facilities) are assumed to be operating on Liquid Fuel**
- **Clause 6.6.2A(d)(iii) – the maximum cumulative quantity that can be included in the Portfolio Supply Curve at prices above the Maximum STEM Price is the sum of the Maximum Facility Supply Capabilities of the Facilities listed in the Fuel Declaration**

# Scheduling Day processes and STEM obligations

## Removal of Participant Interval Minimum and Maximum STEM Prices (1)

- **Example of problem:**
  - Market Generator with a single Scheduled Facility that suffers a Forced Outage
  - Maximum Supply Capability = 0 MWh, Net Bilateral Position = 100 MWh
  - Portfolio Supply Curve is empty
  - Appendix 6(c) and (d) create a STEM Bid for 100 MWh at the Alternative Maximum STEM Price
- **Original solution (Tranches 2 and 3 Amending Rules)**
  - Market Participant nominates Participant Interval Minimum and Maximum STEM Prices in STEM Submission
  - Appendix 6(c) and (d) create a STEM Bid for 100 MWh at the Participant Interval Maximum STEM Price
- **Problem with original solution – high IT implementation cost**

# Scheduling Day processes and STEM obligations

## Removal of Participant Interval Minimum and Maximum STEM Prices (2)

### Revised solution

- **Clauses 6.3A.3(e) and 6.3A.3(f) – Maximum Supply Capability and Maximum Consumption Capability both at least 0.001 MWh**
- **References to Participant Interval Minimum and Maximum STEM Prices removed (clauses 6.6.1, 6.6.1A, 6.6.7, the Glossary, Appendix 1(I)(iii)6), Appendix 6(b) and (c))**
- **Appendix 6(b) uses**
  - Minimum STEM Price if the STEM Price Curve is empty
  - Otherwise, the lowest price with a non-zero quantity in the STEM Price Curve
- **Appendix 6(c) uses**
  - Alternative Maximum STEM Price if the STEM Price Curve is empty
  - Otherwise, the highest price with a non-zero quantity in the STEM Price Curve

# Scheduling Day processes and STEM obligations

## Removal of Participant Interval Minimum and Maximum STEM Prices (3)

### Example - revised solution

- **If the Market Participant includes 0.001 MWh at \$50/MWh in its Portfolio Supply Curve**
  - Appendix 6 will generate a STEM Bid for 100 MWh at \$50/MWh
- **If the Market Participant does not include any quantities in its Portfolio Supply Curve or Portfolio Demand Curve**
  - Appendix 6 will generate a STEM Bid for 100 MWh at the Alternative Maximum STEM Price

# Outage quantity calculations

# Outage quantity calculations

Changes to clauses 3.21.7 – 3.21.8B and new clause 3.21.8C (CAPO(f,DI)) to

- Improve clarity
- Apply standard formatting
- Ensure all required capacity adjusted outage quantities are defined

No changes to the basic calculation approach



# Supplementary Essential System Services Mechanism (SESSM) – Market Participant obligations

# SESSM – Market Participant obligations

## Clause 7.4.5 – Real-Time Market Submission obligations for a SESSM Award holder (1)

### Two issues

- **When the Pre-Dispatch Schedule projects a shortfall in an FCESS, clause 7.4.5(b) requires SESSM Award holders to update their Real-Time Market Submissions to offer all the available accredited capacity of their awarded Facilities as In-Service Capacity - this could result in more capacity being offered as In-Service Capacity than is necessary or desirable**
- **The clause does not correctly account for a Facility that is not subject to any Outage in a Dispatch Interval, e.g. clause 7.4.5(a) would require the Market Participant to offer the maximum accredited quantity of the relevant FCESS instead of the contracted quantity**

# SESSM – Market Participant obligations

## Clause 7.4.5 – Real-Time Market Submission obligations for a SESSM Award holder (2)

Proposed amendments will require a Market Participant holding a SESSM Award to

- under normal conditions, offer (at least) the lower of their contracted quantity and available accredited capacity in the relevant FCESS, as either Available or In-Service Capacity (clause 7.4.5(a))
- if the Reference Scenario for a Pre-Dispatch Interval projects a shortfall in the FCESS, ensure that they are offering all their available accredited capacity in the FCESS, as either Available or In-Service Capacity (clause 7.4.5(b))
- if the Reference Scenario for a Pre-Dispatch Interval or Dispatch Interval projects that the relevant Facility will be enabled to provide the FCESS, ensure that they are offering the relevant Essential System Service Enablement Quantity as In-Service Capacity, as well as sufficient In-Service energy capacity to facilitate the FCESS enablement (clause 7.4.5(c))

# SESSM – Market Participant obligations

Clause 7.4.5 – Real-Time Market Submission obligations for a SESSM Award holder (3)

The available accredited capacity of the Facility in the relevant FCESS is

- The lowest Remaining Available Capacity for the FCES under any applicable Outage for the Facility

OR

- If there are no applicable Outages, the maximum accredited quantity of the Facility for the FCESS

Amending Rules to commence on New WEM Commencement Day

# SESSM – Market Participant obligations

## Appendix 2C: SESSM refund calculation method (1)

### Amendments to Appendix 2C to

- Reflect the changes made to SESSM Award holder obligations under clause 7.4.5
- Add missing variable definitions and remove an unused variable definition
- Correct typographical errors
- Apply standard formatting and clause number conventions

### Amending Rules to commence on New WEM Commencement Day

# SESSM – Market Participant obligations

## Appendix 2C: SESSM refund calculation method (2)

### Changes to calculation of the effective FCESS offer quantity in a Dispatch Interval ( $ESSOffer(f,c,DI)$ )

- By default,  $ESSOffer(f,c,DI)$  is equal to the total quantity offered by the Market Participant for Facility  $f$  and FCESS  $c$  in Dispatch Interval  $DI$  in its Real-Time Market Submission (clause 2.4(a))
- AEMO may estimate a lower quantity if the Facility is subject to an Outage during the Dispatch Interval and AEMO considers the quantities in the Real-Time Market Submission did not accurately reflect the actual capability of the Facility during that Dispatch Interval
- If the Market Participant fails to meet its obligations under new clause 7.4.5(c), i.e. it does not update its Real-Time Market Submission to offer FCESS capacity that is projected to be required as In-Service Capacity, then AEMO will set  $ESSOffer(f,c,DI)$  to its reasonable estimate of the actual In-Service capability of the Facility in the Dispatch Interval

# Non-Co-optimised Essential System Services (NCESS) Submission of requests to the Coordinator of Energy

# NCESS – Submission of requests to the Coordinator

## Notification of NCESS trigger events

Improve coordination between AEMO and Network Operators by requiring

- A Network Operator to notify AEMO before the Network Operator makes a submission to request the Coordinator to determine whether to trigger an NCESS procurement process
- AEMO to notify Western Power before AEMO makes a submission to request the Coordinator to determine whether to trigger an NCESS procurement process

Requires

- Amendments to clauses 3.11A.2 and 3.11A.2A that commence on gazettal
- Amendments to (replaced) clause 3.11A.2 that commence on New WEM Commencement Day



# NCESS – Submission of requests to the Coordinator

## Submission requirements

Remove potential compliance risk by amending clause 3.11A.3(b)

- Submissions must be made by a date that **the Network Operator or AEMO, as applicable, reasonably considers** allows sufficient time to enable the NCESS procurement process set out in section 3.11B to be conducted
- Amendments required on gazettal and again on New WEM Commencement Day

Extend the scope of clause 3.11A.3(c) to cover AEMO's trigger events (clause 3.11A.2A) as well as the Network Operator trigger events (clause 3.11A.2)

- Amendment required on gazettal only

# Reporting on the effectiveness of the market

# Reporting on the effectiveness of the market

- **Clause 2.16.13D amended to set an explicit deadline for the Coordinator's first report to the Minister on the effectiveness of the market**
- **Proposed deadline 1 July 2025**
- **Allows time for the new market arrangements to bed in after New WEM Commencement Day and provide sufficient historical data for a meaningful assessment and consultation with stakeholders**
- **Amending Rule expected to commence on gazettal**

# Tranche 6 – Exposure Draft 2 overview

# Exposure Draft 2 overview

Expected to include Amending Rules relating to

- **Market Information**
- **Transitional arrangements**
- **Standing Data**
- **Refinement of rules relating to**
  - Real-Time Market Submissions and dispatch
  - Registration
  - Generator Performance Standards
  - Outage management
  - Settlement
- **Minor amendments (e.g. typographical and clause reference errors)**

# Next steps

# Feedback period

- Consultation on Exposure Draft 1 until 12 May 2022
- Provide feedback to [energymarkets@energy.wa.gov.au](mailto:energymarkets@energy.wa.gov.au)
- EPWA available to meet as needed
- Next TDOWG – TBA

# Meeting close

Questions or feedback can be emailed to [energymarkets@energy.wa.gov.au](mailto:energymarkets@energy.wa.gov.au)