



Government of Western Australia
Energy Policy WA

TDOWG # 40

18 November 2021

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Ground rules

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- 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 after the meeting.
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Agenda

- **Scheduling Day processes and STEM obligations**
- **Other outstanding Amending Rules**
- **Next Steps**

Scheduling Day processes and STEM obligations

Scheduling Day processes and STEM obligations

Proposed changes to Chapter 6 and Appendix 6 to

- 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

Consequential changes to

- Clauses 3.21.7-3.21.8C (capacity adjusted outage quantity calculations)
- Section 4.12 (Setting Reserve Capacity Obligations) – STEM RCOQ definition
- Clauses 4.26.2AD, 4.26.2AG, 4.26.2AH (Net STEM Shortfall calculations)
- Related Glossary definitions

T2&3 Amending Rules – Bilateral Submission timing

Bilateral Submissions

- Submit any time before Bilateral Submission Cutoff (8:50am on Scheduling Day)

Standing Bilateral Submissions

- Submit any time
- Effective date no more than 4 weeks in the future
- Converted at Bilateral Submission Cutoff if no Bilateral Submission for the Trading Day

Bilateral Submission feedback

- Feedback provided for Trading Intervals in Week-Ahead Schedule Horizon (WASH) and updated whenever source data changes

T2&3 Amending Rules – STEM timing

STEM Submissions

- Submit for any Trading Interval covered by a published Week-Ahead Schedule before STEM Submission Cutoff (10:50am on Scheduling Day)

Standing STEM Submissions

- Submit any time
- Effective date (any Trading Day with STEM Submission Cutoff in the future)
- Converted at STEM Submission Cutoff if no STEM Submission

STEM Submission feedback and supporting information

- Feedback and supporting information provided for Trading Intervals in the WASH and updated whenever source data changes

T2&3 Amending Rules – timing issues

Provision of supporting information for STEM

- Scheduling Day processes completed for some WASH Trading Intervals
- High cost to continuously update STEM information
- AEMO has suggested daily updates (except for feedback on submissions)

Submission windows and standing submission rules

- No fixed publication time for Week-Ahead Schedules – STEM Submission window uncertain
- How to cancel a standing submission for a single Trading Day?
- Complexities around effective dated standing submission data – AEMO's systems do not manage more than one standing submission for a day of week at a time

Scheduling Day timing – proposed changes

Supporting information

- Move to daily information updates, except for feedback on Bilateral and STEM Submissions

Submissions

- Bilateral Submissions - revert to current rules
 - Can submit for a Trading Day from 8:00am on the day seven days prior to the start of the Scheduling Day for the Trading Day, up to Bilateral Submission Cutoff
- STEM Submissions – similar to Bilateral Submissions
 - Can submit for a Trading Day from 8:30am on the day seven days prior to the start of the Scheduling Day for the Trading Day, up to STEM Submission Cutoff

Standing Submissions

- Standing submissions converted to submissions when window extends to cover a new Trading Day
- Can submit standing submission data at any time
- If accepted, the updated standing submission is used for all future conversions

Proposed Scheduling Day timing – example

Sunday 1 July Scheduling Day

- **Before 8:00am** – Can submit Bilateral and STEM Submissions for the seven Trading Days starting at 8:00am on 2 July (2 July TD – 8 July TD)
- **8:00am** – Bilateral Submission window extends to allow Bilateral Submissions for the 9 July TD
 - AEMO generates Bilateral Submission for 9 July TD if a Standing Bilateral Submission for a Monday Trading Day exists
- **8:30am** – STEM Submission window extends to allow STEM Submissions for the 9 July TD
 - AEMO generates STEM Submission for 9 July TD if a Standing STEM Submission for a Monday Trading Day exists
- **8:50am** – Bilateral Submission Cutoff for 2 July TD
- **10:50am** – STEM Submission Cutoff for 2 July TD

Information provision – submission feedback

Bilateral Submission feedback to Market Participants

- Provided for 'next' eight Trading Days – window shifts at 8:00am
- Bilateral Submission quantities (clause 6.2.3)
- Total quantities scheduled by AEMO (clause 6.3A.1)

STEM Submission feedback to Market Participants

- Provided for 'next' eight Trading Days – window shifts at 8:30am
 - Accepted Portfolio Supply Curves – showing any AEMO price/quantity adjustments
 - Accepted Portfolio Demand Curves – showing any AEMO price/quantity adjustments
 - Accepted Fuel Declarations

Submission feedback information kept up to date at all times

Information provision – ESR Obligation Intervals

- **T2&3 Amending Rules – only Market Participants with ESRs notified of changes to the ESR Obligation Intervals**
- **Propose making ESR Obligation Intervals available to all Market Participants**
- **AEMO to provide to all Market Participants by 8:00am each Scheduling Day**
 - **ESR Obligation Intervals for the Trading Day**
 - **Expected ESR Obligation Intervals for the following seven Trading Days**

Information provision – Demand forecast

- **T2&3 Amending Rules (clause 6.3A.3(g)) – for each Trading Interval in the WASH, the sum of the Forecast Operational Demand and scheduled Loss Factor adjusted Withdrawals for Registered Facilities as published in the most recent Pre-Dispatch Schedule or Week-Ahead Schedule, in both MW and MWh**
- **Timing of Week-Ahead Schedule uncertain**
 - Demand forecast may not be available for more than five Trading Days of the STEM Submission window
 - Demand forecasts from Week-Ahead Schedule may not be up to date
- **Propose to publish demand forecast based on Pre-Dispatch Schedule by 8:00am on the Scheduling Day - only for the Trading Day**
- **Ensures up to date forecast for the Trading Day**

Information provision – STEM quantity limits

- **Issues with basing Maximum Supply Capability limits on Real-Time Market Submissions (total In-Service and Available Capacity)**
 - Outstanding Opportunistic Maintenance requests
 - No strong benefit from using Real-Time Market Submissions
- **Propose Maximum Facility Supply Capability based on**
 - Minimum Remaining Available Capacity from approved outages snapshot
 - Maximum sent out capacity (Standing Data) if no outages
- **Maximum Consumption Capability from Standing Data (no outages)**

Information provision – STEM liquid fuel limits

- **Existing manifest error in clause 6.6.2A(d)(iii) – ignores capacity from liquid-only facilities**
- **Accuracy of STEM maximum liquid fuel supply capability limited because of**
 - Hybrid facilities
 - Remaining Available Capacities not being recorded by fuel
- **Market power mitigation work stream considering move to a single maximum energy price**
- **Propose simple approach**
 - AEMO provides Maximum Facility Supply Capability for each facility (fuel-independent)
 - Market Participant includes all facilities it assumes will run on liquid fuel in its STEM Fuel Declaration (including liquid-only facilities)
 - Maximum Liquid Supply Capability is the sum of Maximum Facility Supply Capabilities of the liquid capable facilities listed in the Market Participant's Fuel Declaration

STEM Submission limits and Reserve Capacity Obligations

Each Scheduling Day between 8:00am and 8:30am AEMO determines the following for the upcoming STEM Window (next eight Trading Days)

- 'snapshot' of approved Commissioning Test Plans, Forced Outages and Planned Outages
- Maximum Facility Supply Capability for each Trading Interval for each Scheduled Facility, Semi-Scheduled Facility and Non-Scheduled Facility
- Market Participant Maximum Supply Capabilities and Maximum Consumption Capabilities
- Capacity Adjusted Forced Outage Quantity (CAFO) and Capacity Adjusted Planned Outage Quantity (CAPO) estimates by Separately Certified Component and Dispatch Interval/Trading Interval
- Estimates of RCOQ by Separately Certified Component and Dispatch Interval (STEM RCOQ)

CAPO/CAFO estimates and STEM RCOQ assume

- No changes to the snapshots
- Published ESR Obligation Intervals, ≤ 41 degrees, no ESR directions

Information provision - Submission limits and RCOQs

Each Scheduling Day by 8:30am, AEMO provides to each Market Participant

- For each Trading Interval in the STEM Window
 - Maximum Facility Supply Capabilities for the Market Participant's Scheduled Facilities, Semi-Scheduled Facilities and Non-Scheduled Facilities
 - Maximum Supply Capability and Maximum Consumption Capability
 - CAPO and CAFO estimates for each Separately Certified Component of the Market Participants Scheduled Facilities and Semi-Scheduled Facilities (in Commercial Operation)
- For each Dispatch Interval in the STEM Window
 - CAPO, CAFO and STEM RCOQ for each Separately Certified Component of the Market Participant's Scheduled Facilities and Semi-Scheduled Facilities (in Commercial Operation)

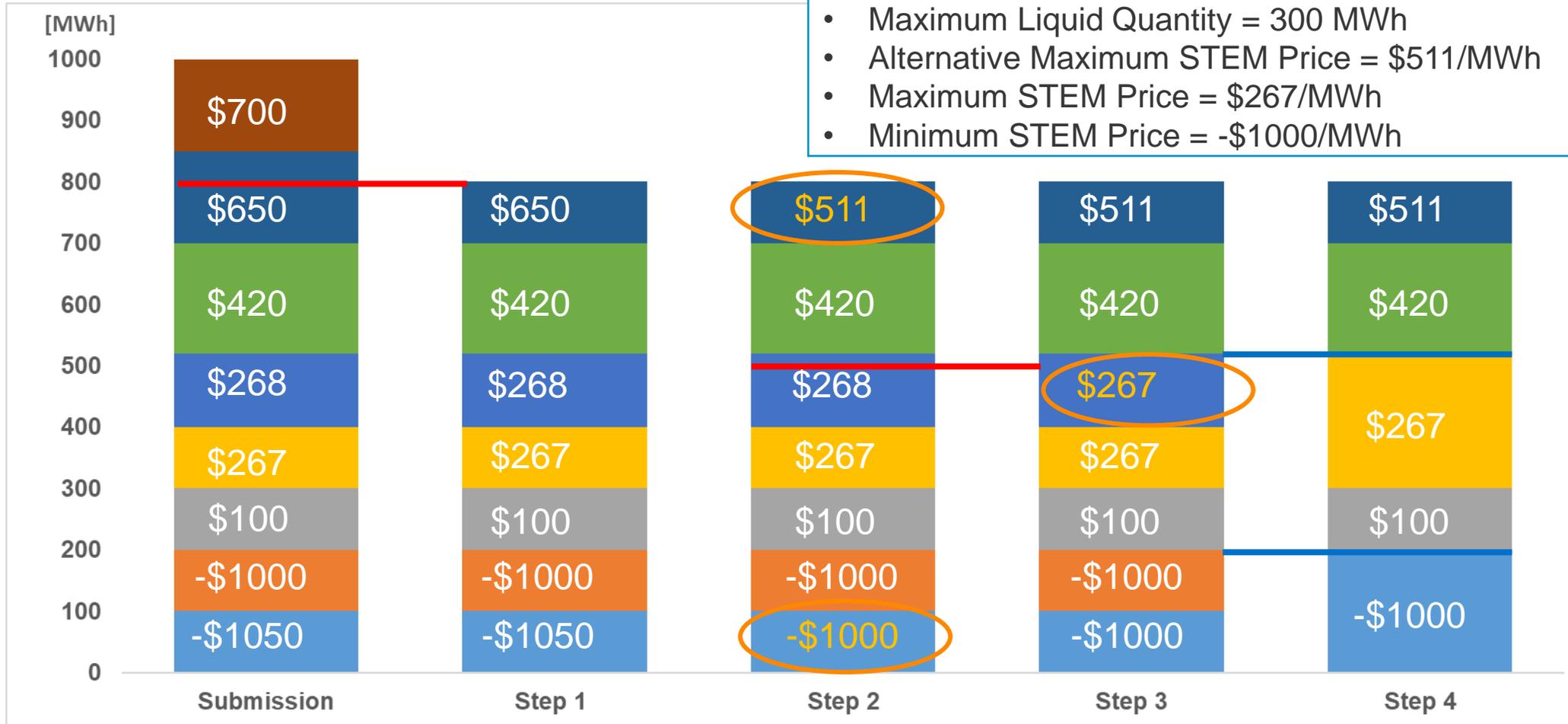
STEM Submission price/quantity adjustment

- **Longer STEM Window increases likelihood of invalid quantities and prices in previously accepted submissions**
 - Want to avoid rejecting a previously accepted STEM Submission
- **Propose a requirement for AEMO to review and adjust STEM Submissions each Scheduling Day at 8:30am, including**
 - Any STEM Submission AEMO has just generated from a Standing STEM Submission
 - Any other STEM Submission that AEMO has already accepted/generated for a Trading Day in the STEM Window
- **Review and adjustment process uses the latest quantity limits, Energy Price Limit information and Standing Data**
- **AEMO's systems will still reject STEM Submission data received for a Trading Day that does not meet the price and quantity validation requirements**

STEM Submission price/quantity adjustment

Portfolio Supply Curve example

- Maximum Supply Capability = 800 MWh
- Maximum Liquid Quantity = 300 MWh
- Alternative Maximum STEM Price = \$511/MWh
- Maximum STEM Price = \$267/MWh
- Minimum STEM Price = -\$1000/MWh



Participant Interval Maximum/Minimum STEM Prices

- **Participant Interval Maximum STEM Price and Participant Interval Minimum STEM Price allow Market Participants to choose not to buy/sell in the STEM to meet their Net Bilateral Positions**
- **AEMO has raised concerns about implementation cost of additional STEM submission elements**
- **Alternative solution proposed**
 - Remove proposed new elements from STEM Submissions
 - Maximum Supply Capability set to at least 0.001 MWh
 - Maximum Consumption Capability set to at least 0.001 MWh
 - Ensures Market Participant can include at least two prices in STEM Price Curve
 - Appendix 6 uses
 - Highest price in STEM Price Curve instead of Participant Interval Maximum STEM Price
 - Lowest price in STEM Price Curve instead of Participant Interval Minimum STEM Price

Outstanding Issues and Next Steps

- **STEM Changes discussed today will be circulated for comments once drafted**
- **Currently drafting some changes to integrate NCESS contracts into the RCM**
- **Other outstanding issues:**
 - **Review of Outage provisions, in particular for hybrid facilities**
 - **Potential amendments to dispatch of Demand Side Programmes**
 - **Additional transitional issues**
- **Draft rules will be issued for comment once ready**

Meeting close

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