

WEM Reform Market Readiness Report No.6

Jan 2022



About this report

- The Market Readiness Report is intended to monitor WEM participant preparedness for the start of new market arrangements in the WEM, in accordance with the [Market Readiness Engagement and Reporting Strategy](#)

Prior to July 2022

Readiness reporting focused on:

- Measuring the extent to which respondents have established and commenced internal readiness work programs
- Identifying the areas where respondents anticipate the most significant effort and challenges.

From July 2022 onward

Readiness reporting now measures progress and status against Specific Readiness Criteria

- The Specific Readiness Criteria allow stakeholders to gauge each respondent's progress in delivering outcomes of relevance to their particular business and facilities
- Different sets of criteria apply to different types of entity; market participant, network operator, system operator and regulatory authority.

- Previous Market Readiness Surveys:
 - Specific: [Survey No. 5](#): Released 30 Sept 2022; Reported 4 Nov 2022; [Survey No. 4](#): Released 31 July 2022, Reported 9 Sept 2022
 - General: [Survey No. 3](#): Released 29 April 2022, Reported 7 June 2022; [Survey No. 2](#): Rel. 31 Jan 2022, Rep. 11 March 2022; [Survey No. 1](#): Rel. 30 June 2021, Rep. 31 July 2021
- The sixth Market Readiness Survey was released on 30 Nov 2022 and supported by an updated [Survey User Guide](#) (Version 3).
- Survey invitees were identified as follows.
 - All registered market participants, noting AEMO excluded market participants known to no longer be active.
 - Prospective participants intending to commission new facilities before or shortly after go-live were included.
 - Where a common organisation is affiliated with multiple market participants, a single invitation in respect of that organisation was issued.
- Participation in the survey is voluntary and the results reported here have been aggregated and anonymised, with the exception of those for AEMO, Western Power and the ERA. Some of Synergy's results have also been reported in additional detail, relative to other market participants.
- This Market Readiness Report will be published on AEMO's website.
- For any queries or suggestions related to the report or survey, please contact wa.ets@aemo.com.au.

Key Insights



Survey coverage has improved since No.5

- Survey coverage by energy and capacity improved this round
- Large market participants (MPs) remain strongly engaged; smaller participants less so
- Additional readiness measures from Market Trial identified



Improved response quality

- AEMO provided feedback to participants on interpretation of response options
- Responses are more consistent in their treatment of progress and status compared to earlier surveys



Overall, High Risk MP capabilities are On Track

- MC-1-MP-02 - RTMS: awaiting final release (Jan '23); dependency on WEMDE UI publishing solution to complete MP trading systems
- MC-1-MP-03 - WEMDE (DIs): On Track
- MC-1-MP-04 - WEMDE (ESS): On Track



Some issues with Moderate Risk MP capabilities, being addressed

- MC-1-MP-06 - WEMDE (data): see "WEMDE UI publishing solution is urgently required". Release planned Jan '23.
- MC-3-MP-01 - Outages: overall tracking okay
- MC-3-MP-03 – Comm Test: MPs waiting on AEMO - details to be available in March.
- MC-4-MP-04 – Reg'n (Facility): overall tracking okay



Need WEMDE UI publishing solution urgently

- Participants need guidance on the WEMDE UI solution for publishing dispatch outcome info.
- Critical for development and testing of trading systems and logic. One MP says its full RTMS implementation is dependant on WEMDE UI.
- AEMO on track for First Release end Jan '23



Participants seeking faster progress on specifications and procedures

- AEMO's system documentation still a key bottleneck
- Some key API documentation published Dec '22 and Jan '23 (RTMS, WEMDE UI)



Externals seeking test opportunities

- Rule participants are eager to test integrated systems and seek details on cutover
- AEMO has published draft approach for Market Trial in Industry Testing and Transition Strategy
- Commenced developing Cutover Plan



Western Power highlights dependency on AEMO for Outages documentation

- Western Power highlights outage management as its key dependency on AEMO
- AEMO to deliver remaining Outages WEMP WRIG presentations and draft for consultation through Jan to March '23



ERA dependent on AEMO for data solutions for monitoring and surveillance functions

- ERA has multiple regulatory functions for which it depends on AEMO for data
- AEMO negotiating an approach that allows it to focus on tasks critical for Go Live success.

How to read this report

New in Survey 6: Aggregated Results for Market Participants

- Individual participant responses have been aggregated to generate high-level summary results for each Market Capability
- Mock sample shown at right
- Aggregation of individual participant responses requires additional calculations

Aggregate "Progress" calculation:

- Substitute the band midpoint for each progress score
- Capacity weight each response, then average

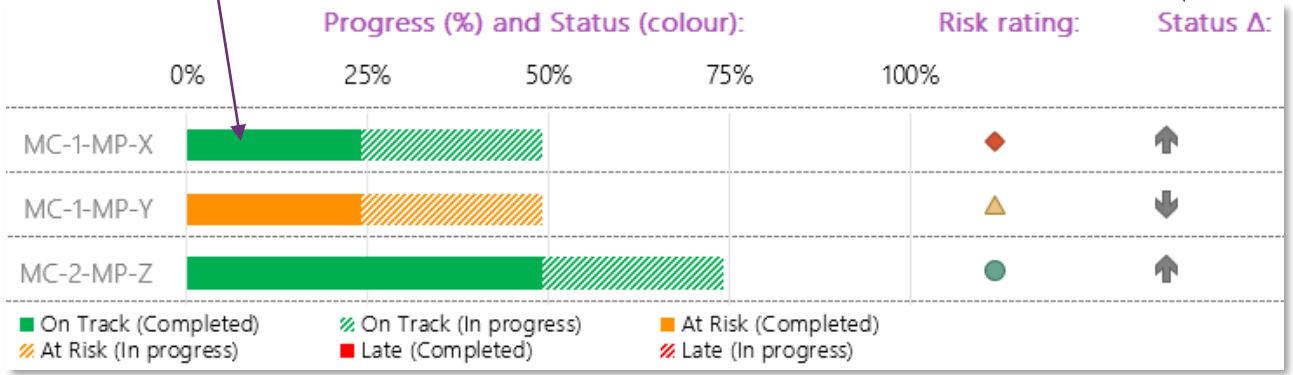
Aggregate "Status" calculation:

- Convert status responses into numeric data: **On Track** (1), **At Risk** (0.5), **Late** (0),
- Capacity weight each response, then average
- Convert numeric result back into Status categories based on bands:
 - On Track: averaged value above 0.8
 - At Risk: averaged value between 0.6 and 0.8
 - Late: averaged value below 0.6

AEMO risk rated each market capability, asking: "What is the intrinsic risk to go-live if participants aren't ready against this market capability?" Reasoning tabulated at end of this report.

Status is compared against previous survey: "Did aggregated status reports result in a change in status category?"

Progress and status of readiness work is reported in same visual form as for AEMO, Western Power and ERA.



- ### Legend
- MC has low intrinsic risk
 - ▲ MC has medium intrinsic risk
 - ◆ MC has high intrinsic risk
 - ➡ Status - no change since prev survey
 - ⬇ Status - worse since prev survey
 - ⬆ Status - improved since prev survey

Note: Intrinsic risk rating of each MC is independent of the status of that MC. For example, a high-risk MC (red diamond) may have a status of On Track (green progress bars). The latter rating reflects the status of a piece of work, whereas the former indicates the degree to which success or failure in executing that work could affect Go Live.

How to read this report

Results for Market Participants (cont)

New in Survey 6: capacity weighting and reordered MCs

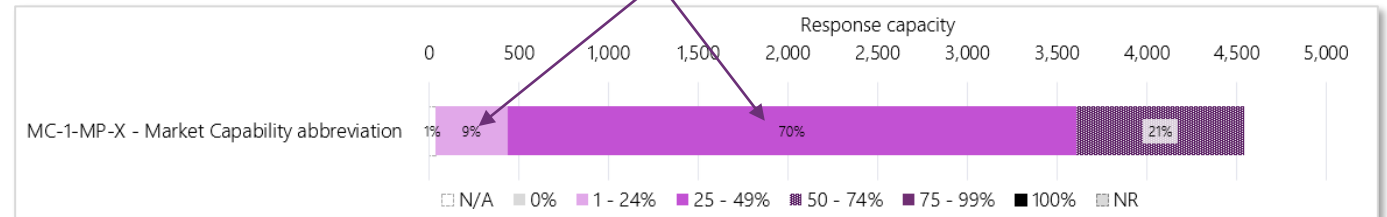
- We continue to report the spread of responses to each market capability.
- “Response capacity” replaces simple response counts

- measured by capacity credits awarded to each respondent for 2023-24 RC year
- this was necessary to aggregate the responses
- Charts now arrange market capabilities into high, medium and low risk – replacing Level 1 groupings (SCED, RCM, Sys Planning etc)

Progress Charts

- Possible values:
 - “N/A” – respondent considers market capability not applicable to them
 - Percentage progress of 0%, four equal bands, or 100%
 - “NR” – no response provided to this question
- Measuring the counts of each value among all responses
- Colour scheme shifts away from red as progress approaches 100%

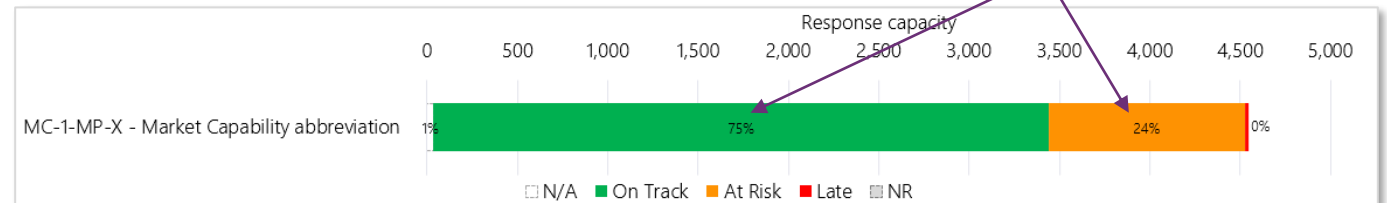
Percentage share of surveyed capacity reporting progress in this band



Status Charts

- Possible values:
 - “N/A” – respondent considers market capability not applicable to them
 - Status of work as “On Track”, “At Risk” or “Late”
 - “NR” – no response provided to this question
- Measuring the counts of each value among all responses

Percentage share of surveyed capacity reporting this status setting

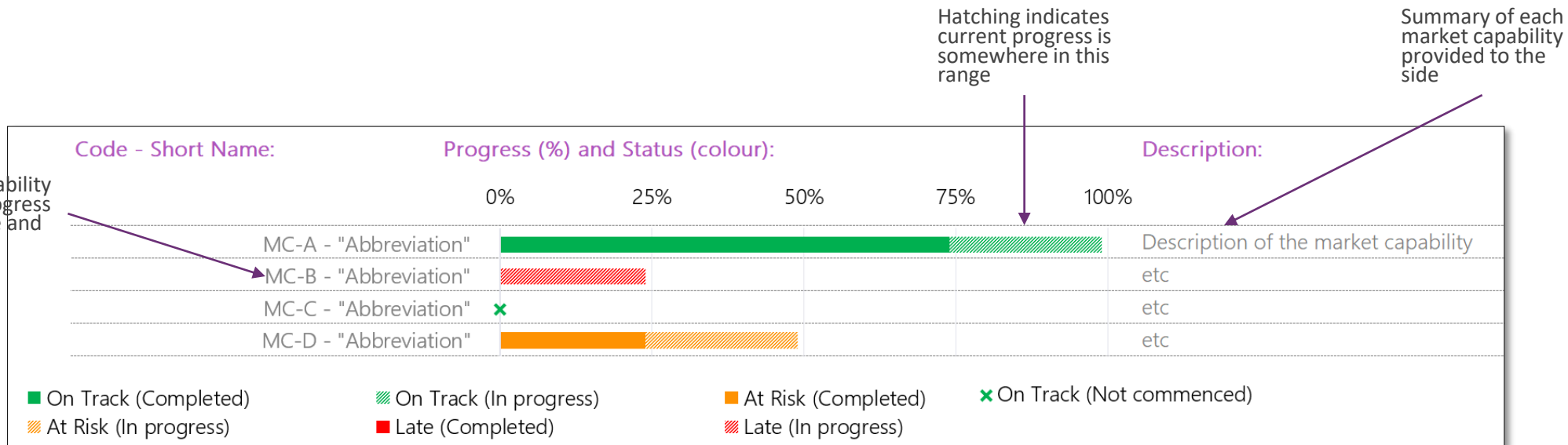


How to read this report (cont.)

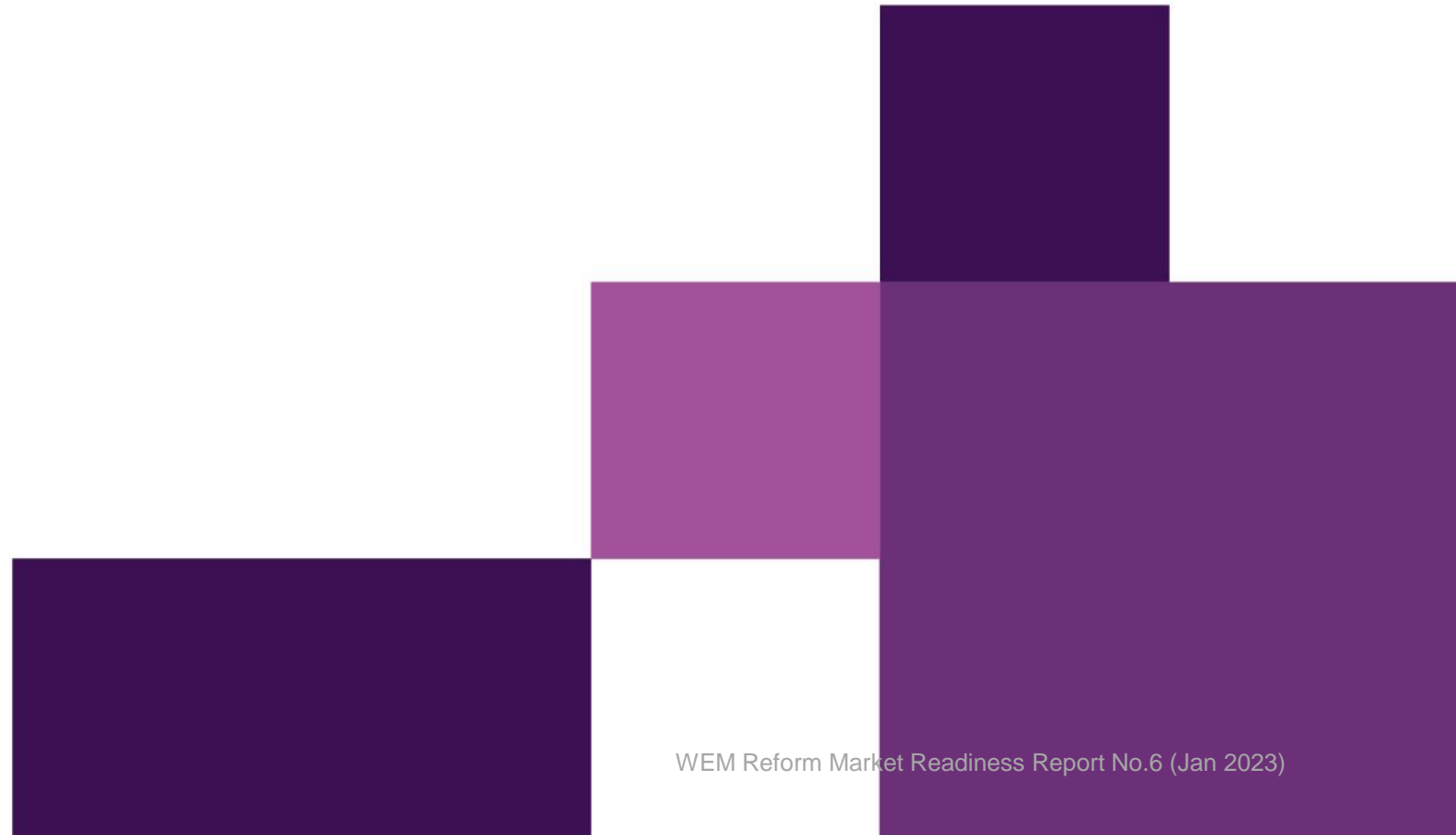
Results for Other Reporting Entities (ERA, Western Power, AEMO)

- All results for a given entity presented on a single chart
- Chart scale measures percentage progress of four equal bands, or 100%
- X used to mark projects yet to commence.
- Currently in progress portion of work indicated by hatching
- “N/A” and “NR” options not used.
- Colour reflects status of work as “On Track”, “At Risk” or “Late”

Example Market Capability MC-B is reporting progress in the 0 – 24% range and status of “Late”



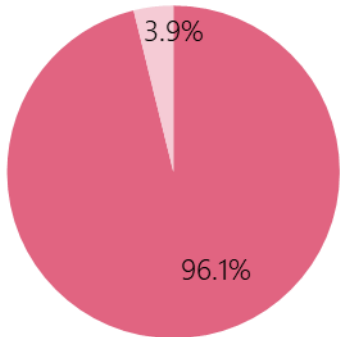
Response rates and coverage



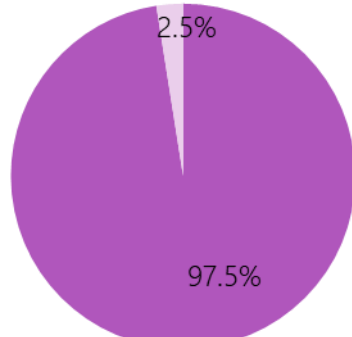
Participation

- 56% of survey invitees responded (compared to 40% from Survey 5)
- 2 first time respondents, 8 Survey 6 respondents hadn't responded to Survey 5, 2 respondents to Survey 5 did not respond to Survey 6
- Responses covered most of the energy generated, capacity credits and energy consumed in the market
 - Market Generator coverage by capacity up (96.1% compared to 93.7 % in Survey 5)
 - Market Generator coverage by energy up (97.5% compared to 96.2 % in Survey 5)
 - Market Customer coverage up (93% compared to 90% in Survey 5)
- Participation improved
 - Survey participation by number has improved appreciably (25 responses compared to 19 responses to Survey 5)
 - In some instances, non-respondents will be consistent with intention to NOT participate in the new market and hence not a concern
 - In other instances, further effort is required to promote participation and hence identify readiness issues
 - A table of responses since Survey 4 is included at the end of this report for all invited entities

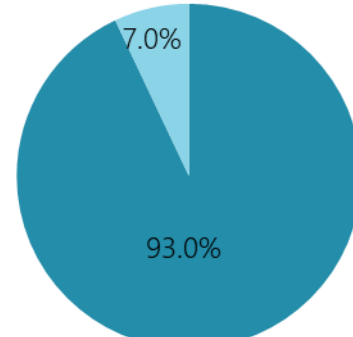
Capacity



Generation



Load



■ Capacity credits held by respondents
 ■ Capacity credits held by non-respondents

■ Energy generated by respondents
 ■ Energy generated by non-respondents

■ Energy purchased by respondents
 ■ Energy purchased by non-respondents

Statistic	Value	Comment
Survey invitations issued	42	Note multiple participantIDs aggregated in one invitation where appropriate (61 participantIDs covered by an invitation)
Completed responses	25 (56%)	Response rate based on completion of unique invitations.
Generation coverage	96% or better	Share of portfolio measured either by energy (10/2021 to 09/2022) or capacity (2023 RC Year)
Consumption coverage	93%	Aggregated consumption metered across all NMI's assigned to Survey respondents as share of total energy supplied (2022).

Respondent types

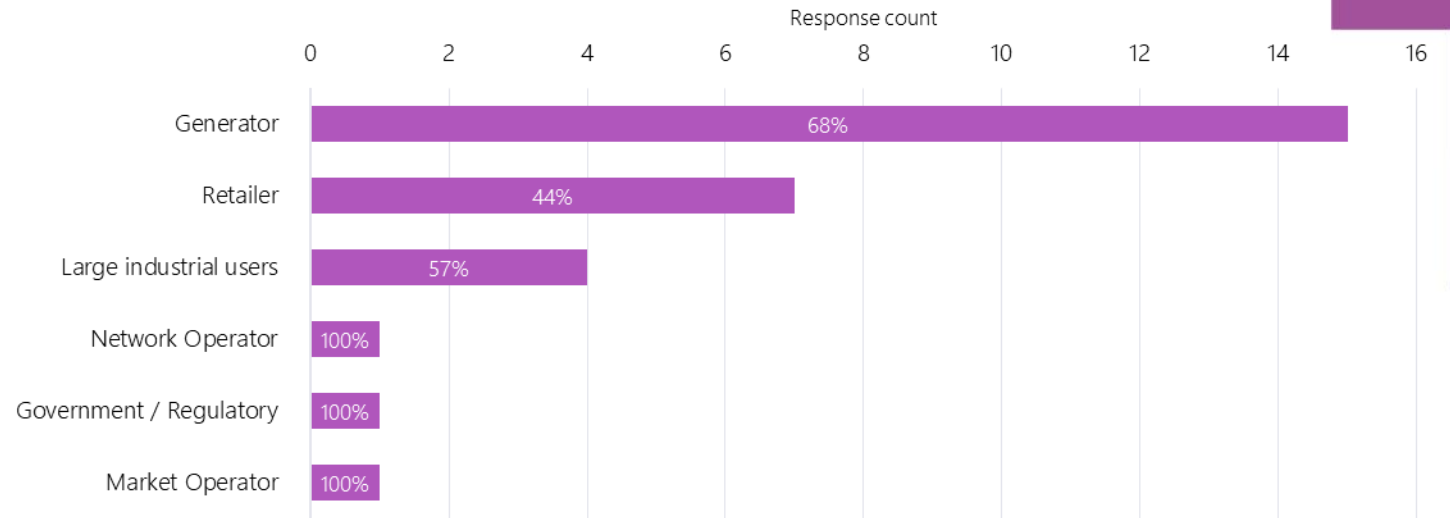
Market Generators

- 15 of 22 generators polled responded
- 14 facilities assumed operational at Go-Live are not covered by a response:
 - These facilities account for around 4% of capacity or 2.5% of energy.
 - All of these facilities are covered by 9 participants (accounting for multi-ID cases), of which 6 account for >98% of the capacity and >93% of the energy

Market Customers

- 11 of 23 Market Customers polled responded, covering around 93% of traded energy load.
- 7 of 16 retailers responded
- 4 of 7 large industrial users responded (market customers that are not retailers)

Western Power, ERA and AEMO have all responded



Results for Market Participants

Market Participant Readiness

Progress and status against all level 2 market capabilities

Code - Short Name:

Progress (%) and Status (colour):

Risk rating:

Status Δ:

Description:

0% 25% 50% 75% 100%

Code - Short Name	Progress (%) and Status (colour)	Risk rating	Status Δ	Description
MC-1-MP-01 - Constraint Management		●	➔	Able to retrieve and assess constraint information
MC-1-MP-02 - RTMS		◆	➔	Able to make real time market submissions.
MC-1-MP-03 - WEMDE (dispatch instructions)		◆	➔	Able to receive, understand and act on dispatch instructions at all facilities.
MC-1-MP-04 - WEMDE (ESS)		◆	➔	Ready to provide Frequency Co-optimised ESS and /or Non Co-optimised ESS
MC-1-MP-05 - Commercially prepared for SCED.		●	⬇	Commercially prepared for SCED.
MC-1-MP-06 - WEMDE (consuming other data)		▲	⬇	Can consume and act on continuously published market information.
MC-2-MP-01 - RCM - Year 1		●	➔	Understand new obligations and submission changes for Year 1 of 2021 and 2022 RCC
MC-2-MP-02 - RCM - Year 2		●	➔	Understand NAQ impacts and process changes for the 2022 Reserve Capacity Cycle
MC-2-MP-03 - RCM - Year 3		●	➔	Understand new obligations for Year 3 of 2021 Reserve Capacity Cycle, including settlements
MC-3-MP-01 - Outage Management		▲	➔	Able to submit and update equipment outages
MC-3-MP-02 - PASA (MPs, covering MT & ST)		●	➔	Understand and respond to ST & MT PASA outcomes and provide info
MC-3-MP-03 - Commissioning Test		▲	⬇	Ready to manage facility commissioning testing
MC-3-MP-04 - GPS		●	➔	Compliant with generator performance standards framework
MC-4-MP-01 - Settlements Reform		●	➔	Able to complete settlement under new arrangements
MC-4-MP-02 - STEM		●	⬇	Able to participate in STEM, following consequential modifications to this market
MC-4-MP-03 - Registration (participant-level)		●	➔	Comply with all participant registration requirements
MC-4-MP-04 - Registration (facility-level)		▲	➔	Comply with all facility registration requirements
MC-4-MP-05 - Miscellaneous transitional activities		●	⬆	Miscellaneous transitional requirements

■ On Track (Completed)

▨ On Track (In progress)

■ At Risk (Completed)

▨ At Risk (In progress)

■ Late (Completed)

▨ Late (In progress)

● MC has low intrinsic risk

▲ MC has medium intrinsic risk

◆ MC has high intrinsic risk

➔ Status - no change since prev survey

⬇ Status - worse since prev survey

⬆ Status - improved since prev survey

Market Participant Market Capabilities – Items with **high** intrinsic risk

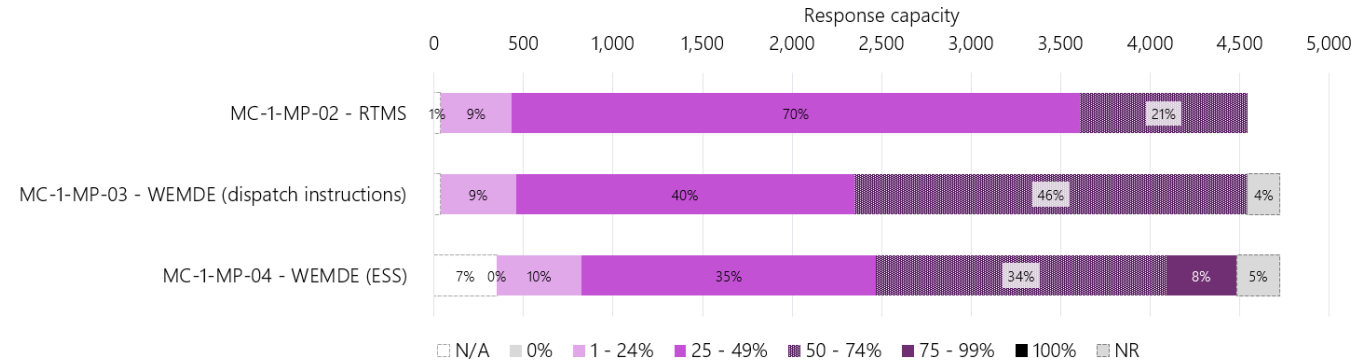


MC-1-MP-02 - RTMS:

Able to make real time market submissions.

- Weighted by facility capacity, most participants report RTMS work is less than half completed.
- A small share (1MW in 10) reports progress in the 1-24% range.
- AEMO notes that participants are yet to see the final RTMS release and hence may be cautious in recording increased progress.
- While three quarters of capacity is reporting **On Track**, more capacity started to report this item as **At Risk**
- Overall, while there has been some progress against this item, a material share of respondents are indicating concern.
- Participants need guidance on the WEMDE UI solution for publishing dispatch outcome info.
- One MP says its full RTMS implementation is dependant on WEMDE UI publishing solution (due to trading system linkages).
- AEMO anticipates completing RTMS Release 3 and WEMDE UI Release 1 in January 2023 will resolve some of these concerns.

High Risk Items: Progress

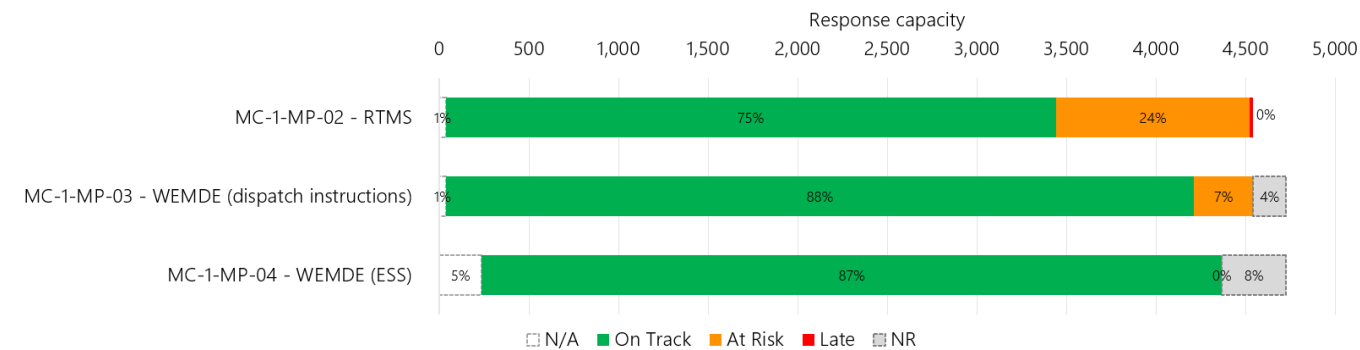


MC-1-MP-03 - WEMDE (Dispatch Instructions):

Able to receive, understand and act on dispatch instructions at facilities.

- Almost half of facility capacity is reporting progress of 50-74%, with a similar share (4MW in 10) reporting progress of 25-49%
- Compared to Survey 5, just under 1000MW reported additional progress.
- A significant majority of facility capacity (~9MW in 10) reports status of **On Track** while only a small share (<1MW in 10) reports it **At Risk**
- Compared to Survey 5, **At Risk** reports remained stable, but some capacity (~1MW in 20) replaced previous “NR” responses with **On Track**
- Overall, AEMO is comfortable with how this item is tracking.

High Risk Items: Status



MC-1-MP-04 - WEMDE (ESS):

Relevant facilities are ready to provide Frequency Co-optimised ESS and /or Non Co-optimised ESS.

- A share of more than 4 in 10 of facility capacity is reporting progress 50% or better, with slightly less reporting progress of 25-49%
- Compared to Survey 5, more than 1200MW reported additional progress
- A large majority of facility capacity (~9MW in 10) reports status of **On Track** and a small share (<1MW in 10) reports it **At Risk**
- One major facility downgraded its progress assessment, but retained a status of **On Track**.
- Since Survey 5 the share of facility capacity that identifies ESS as “N/A” has increased suggesting more considered responses by these participants.
- Overall, AEMO is comfortable with how this item is tracking.

Market Participant Market Capabilities – Items with moderate intrinsic risk



MC-1-MP-06 - WEMDE (Consuming other data)

Can consume and act on continuously published market information.

- Most capacity (7MW in 10), reports progress in the 25-49% range with most of the remaining capacity reporting progress of 1-24% range
- Most capacity (6MW in 10) reports status as **On Track** with almost all the remaining capacity (4MW in 10) reporting status as **At Risk**
- Participants reporting this item as **At Risk** highlight their dependency on receiving technical specifications from AEMO for the WEMDE UI publishing solution.
- AEMO aims to address some of these concerns with a documentation release in January 2023.

MC-3-MP-01 - Outage Management:

Able to submit and update equipment outages

- Most capacity (nearly 8MW in 10), reports progress in the 25-49% range with most of the remaining capacity reporting progress of 1-24% range
- Almost two thirds of capacity reports status as **On Track** while another third reports status as being **At Risk**.
- Respondent comments pointed to gaps in documentation. On further investigation, many of these gaps appear to have been addressed through API specifications already published. AEMO will work with participants on remaining information gaps.
- Overall, AEMO is comfortable with how this item is tracking.

MC-3-MP-03 - Commissioning Test:

Ready to manage facility commissioning testing.

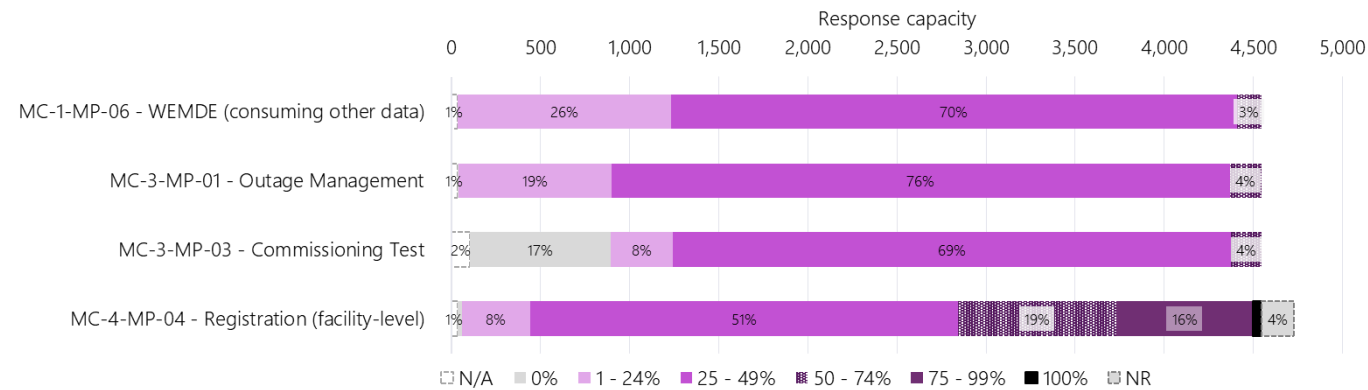
- Most capacity (7MW in 10), reports progress in the 25-49% range and most of the remainder (around a quarter) reports progress below 25%.
- Most capacity (almost 6MW in 10) reports status as **On Track** with almost all the remaining capacity (4MW in 10) reporting status as **At Risk**
- AEMO will provide additional details on the process, template and user interface for submitting a Commissioning Test Plan (CTP) in the consultation version of the CTP WEM Procedure (~late March 2023).

MC-4-MP-04 – Registrations (Facility-level)

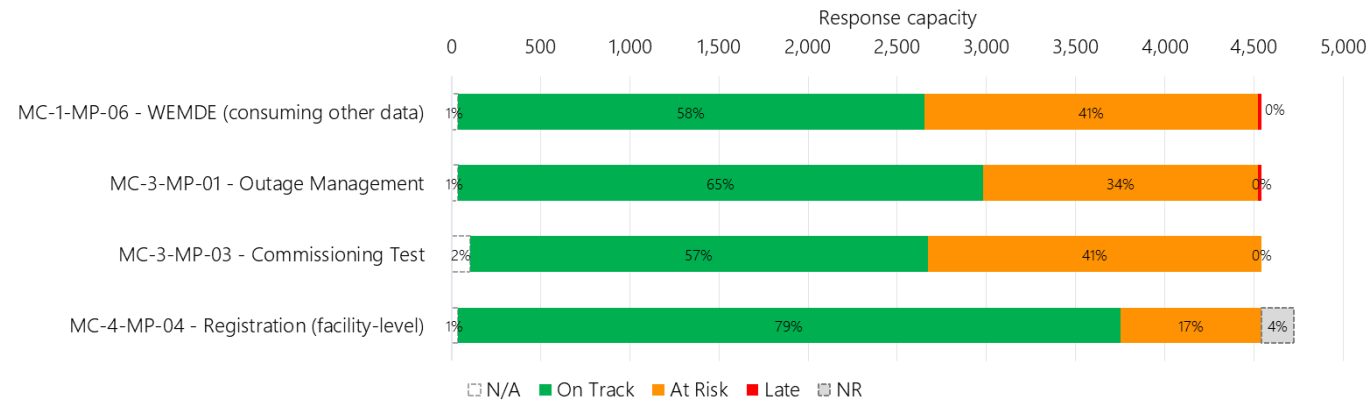
Comply with all facility registration requirements.

- Around half of facility capacity reports progress of 25-50%, while most remaining capacity (more than 3MW in 10) is reporting progress above 50%.
- A significant majority of capacity (8MW in 10) reports status as **On Track**, while most of the remainder reports it as **At Risk**.
- Whereas in Survey 5, the capacity share reported as being **At Risk** was close to zero, in Survey 6 nearly 2MW in 10 reported it as **At Risk**.
- Overall, AEMO is comfortable with how this item is tracking.

Mod. Risk Items: Progress



Mod. Risk Items: Status



Market Participant Market Capabilities – Items with low intrinsic risk



MC-1-MP-01 - Constraint Management:

Able to retrieve and assess constraint information to inform trading and investment decisions

- Participant responses for this item suggest three basic perspectives, namely:
 - Eager to get constraint data asap for use in modelling to inform investment decisions
 - Not interested because they aren't planning investments or because they don't consider the constraint data useful to inform investment decisions
 - Unclear about how they'll consume and use constraint information in trading.
- AEMO comfortable with how this item is tracking for Go-Live purposes.

MC-1-MP-05 - Commercially prepared for SCED

Participant-specific, but may include revision of contracts, trading practices, financial arrangements.

- Overall, AEMO is encouraged that most capacity is reporting some progress.
- At Risk reports point to technical specifications for market schedules (WEMDE UI project) being a key dependency – See [MC-1-MP-06](#)

MC-2-MP-01 - RCM - Year 1:

Understand new obligations and submission changes for Year 1 of 2021 and 2022 Reserve Capacity Cycle

- This change has been implemented and presents limited intrinsic risk
- One respondent flagged concerns with recent changes to the WEM Procedure: Certification of Certification of Reserve Capacity for the 2022 and 2023 Reserve Capacity Cycles (AEPC_2022_01).
- While acknowledging that those changes could have commercial implications for some participants, AEMO is comfortable with how MC-2-MP-01 tracking from the perspective of participants being ready for Go-Live.

MC-2-MP-02 - RCM - Year 2:

Understand NAQ impacts and process changes for the 2022 Reserve Capacity Cycle.

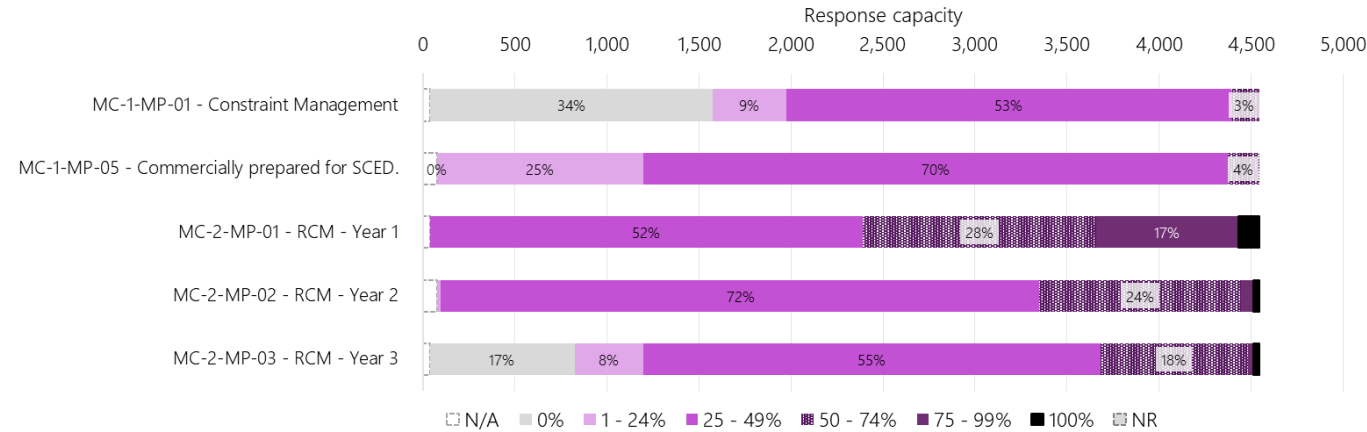
- Overall, AEMO is comfortable with how this item is tracking.

MC-2-MP-03 - RCM - Year 3:

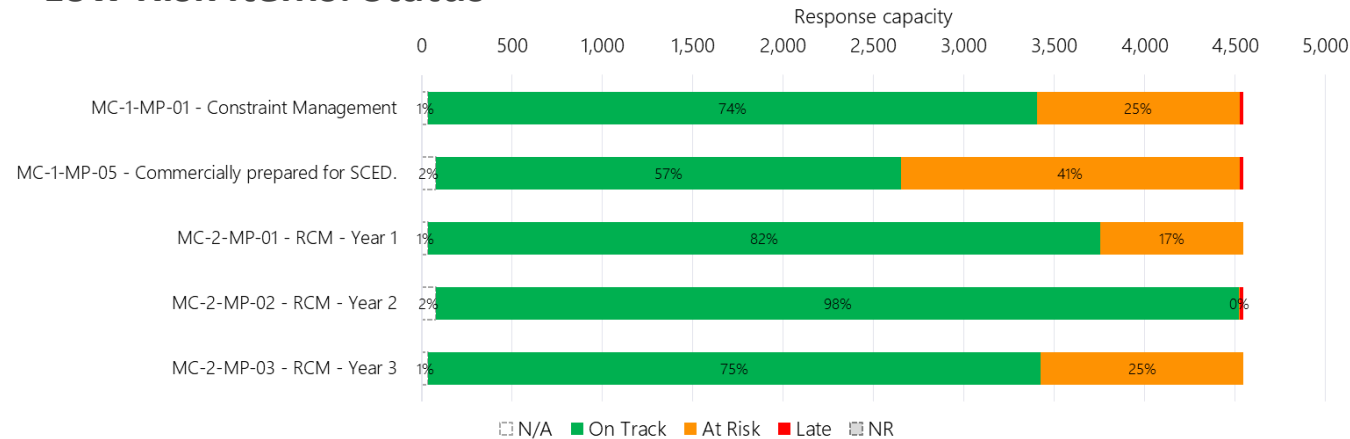
Understand new obligations for Year 3 of 2021 Reserve Capacity Cycle, including settlements.

- Three quarters of capacity is reported as On Track for this item, with the balance reporting At Risk.
- AEMO aims to provide more information on this change in Feb 2023, but remains comfortable with how the item is tracking.

Low Risk Items: Progress



Low Risk Items: Status



Market Participant Market Capabilities – Items with low intrinsic risk (cont'd)



MC-3-MP-02 - PASA (MT & ST):

Understand and respond to ST & MT PASA outcomes and comply with information provision requirements.

- Most capacity reporting **On Track** (6MW in 10) but a significant minority reports as **At Risk**, some citing limited information from AEMO.
- Continuing schedule challenges may make it difficult for AEMO to provide the information early enough for participants to develop systems and processes to consume and use these reports in time for Go Live. AEMO considers the impact of this will be limited in view of alternative data sources.

MC-3-MP-04 - GPS

Compliant with generator performance standards framework

- Around three quarters of capacity reports this item as **On Track** and the remaining quarter **At Risk** or **Late**.
- AEMO and Western Power continue to progress their GPS workloads. AEMO recognises that all tasks may not complete prior to Go-Live, but this shouldn't jeopardise the transition.
- AEMO comfortable with how this item is tracking for Go-Live purposes.

MC-4-MP-01 - Settlements Reform:

Able to complete settlement under new arrangements (including prudentials, CCA, IRCR)

- Three quarters of all capacity reports this item **On Track**.
- While API specifications have been available since September, participants do not appear to have prioritised this area of work. AEMO anticipates engagement with this item will increase in the coming quarter.
- AEMO comfortable with how this item is tracking for Go-Live purposes.

MC-4-MP-02 - STEM:

Able to participate in STEM, following consequential modifications to this market.

- Most capacity reporting **On Track** (6MW in 10) but a significant minority reports as **At Risk**, some citing limited information from AEMO.
- AEMO plans to provide the market with more detailed information early in 2023.

MC-4-MP-03 - Registrations:

Comply with all participant registration requirements.

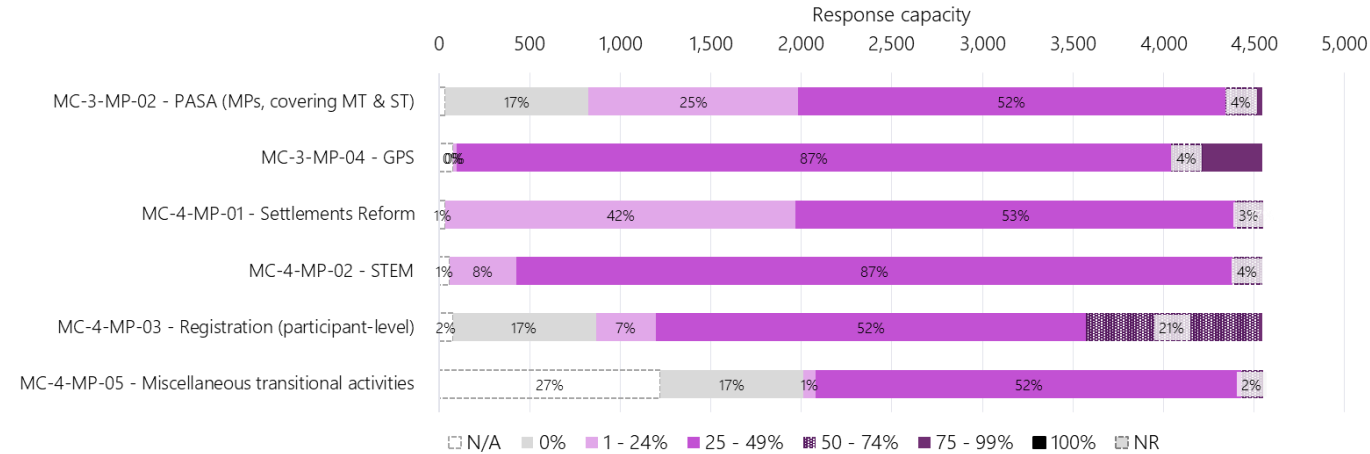
- Most capacity reporting **On Track** (8MW in 10) and substantial progress.
- AEMO comfortable with how this item is tracking for Go-Live purposes.

MC-4-MP-05 - Miscellaneous transitional:

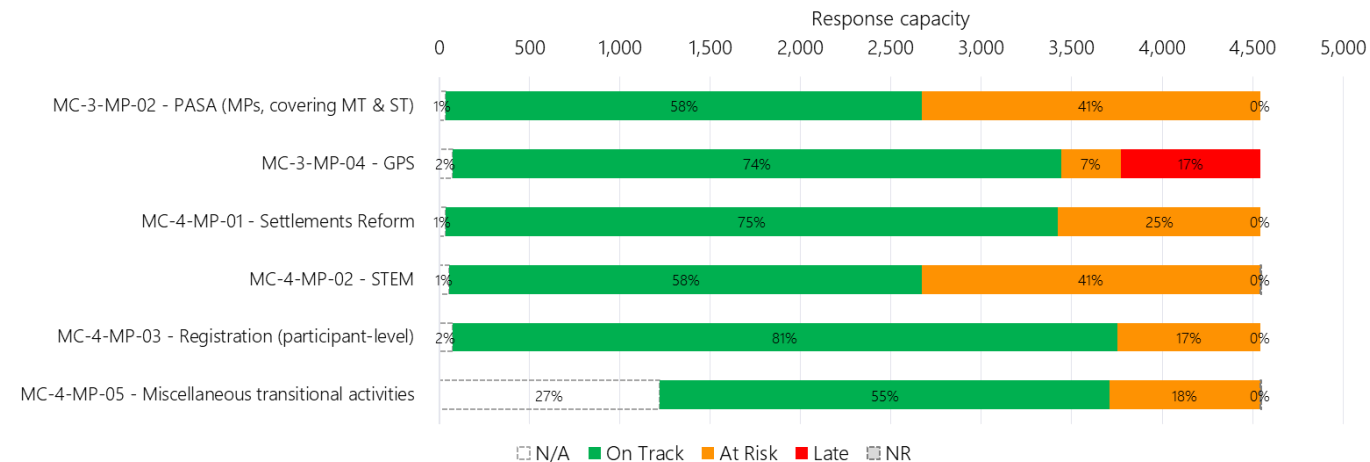
Miscellaneous transitional requirements – a catchall for other miscellaneous readiness requirements not covered by other capabilities.

- One participant requests more information on the plan for cutover.
- AEMO has commenced development of a Cutover Plan to be published in April 2023.

Low Risk Items: Progress



Low Risk Items: Status



Results for Other Reporting Entities



AEMO's Readiness

Progress and status against all level 2 market capabilities

Code - Short Name:	Progress (%) and Status (colour):					Description:
	0%	25%	50%	75%	100%	
MC-1-AEMO-01 - Constraint Management						Can meet constraint equation requirements for SCED, RCM and Outage Management
MC-1-AEMO-02 - RTMS						Real time market submissions enabled
MC-1-AEMO-03 - WEMDE						Dispatch engine is compliant and solves robustly, predictably and efficiently.
MC-1-AEMO-04 - WEMDE UI						Dispatch engine integrated for real time operations
MC-2-AEMO-01 - RCM - Year 1						Able to manage Year 1 workflows for 2021 Reserve Capacity Cycle
MC-2-AEMO-02 - RCM - Year 2						Able to manage Network Access Quantities (NAQ) throughout the 2022 Reserve Capacity Cycle
MC-2-AEMO-03 - RCM - Year 3						Able to manage Year 3 workflows for 2021 Reserve Capacity Cycle
MC-3-AEMO-01 - Outage Management						Ready to manage outages
MC-3-AEMO-02 - Forecast Integration						Timely and fit-for-purpose forecasts are supplied to all systems
MC-3-AEMO-03 - MT PASA						Can assess and manage power system adequacy over MT horizon
MC-3-AEMO-04 - ST PASA						Can assess and manage power system adequacy over ST horizon
MC-3-AEMO-05 - System Operation Planning Tools						Can efficiently support system operations planning
MC-3-AEMO-06 - Commissioning Test						Ready to manage facility commissioning testing
MC-3-AEMO-07 - GPS						Ready to monitor and enforce generator performance standards for all Tx connected facilities
MC-4-AEMO-01 - Settlements Enhancements						Settlement base systems upgraded and updated
MC-4-AEMO-02 - Settlements Reform						Ready to manage weekly settlement of reformed market
MC-4-AEMO-03 - STEM						Ready to manage and settle STEM in reformed market
MC-4-AEMO-04 - Registration						Existing facilities registered appropriately and AEMO is ready to register new facilities
MC-4-AEMO-05 - Digital Platform						Market interface systems enabled, accessible and supported

■ On Track (Completed)
 ▨ On Track (In progress)
 ■ At Risk (Completed)
 ✘ On Track (Not commenced)

▨ At Risk (In progress)
 ■ Late (Completed)
 ▨ Late (In progress)
 ✘ At Risk (Not commenced)

Comments cont.

MC-3-AEMO-04 - ST PASA: Resource pressures are affecting initiation phase progress. AEMO expects to have the system available for internal training purposes during the transition period (July to Sept).

MC-3-AEMO-05 - System Operation Planning Tools: MVP delivery approach accepted and development has been deferred until after Go Live. In the meantime, planners and controllers will continue manual processes to update/manage relevant system studies.

MC-3-AEMO-06 - Commissioning Test: MVP delivery approach accepted. The planning phase and Scope Statement were approved and development will commence soon.

MC-3-AEMO-07 - GPS: The project development work is completed and the final closure procedures are in progress. Governance closure report and financial closure are been finalized.

MC-4-AEMO-01 - Settlements Enhancements: Completed

MC-4-AEMO-02 - Settlements Reform: Development is progressing well with CCA, IRCR, and SPARTA modules already completed. PASS and Metering Formulas work on track and close to completion.

MC-4-AEMO-03 - STEM: MVP delivery approach accepted. The planning phase and Scope Statement were approved and development will commence soon.

MC-4-AEMO-04 - Registration: Project Implementation Plan and Solution Architecture Document approved. Due to technical issues, a new development approach was proposed to make changes to the original database and is under evaluation.

MC-4-AEMO-05 - Digital Platform: Budget under pressure as program architecture, detailed design and infrastructure capacity requirements are reviewed to determine if additional infrastructure procurement is required. Schedule delays as RMQ delivery was postponed to late Dec-2022.

Overall Program commentary provided next page

Comments

MC-1-AEMO-01 - Constraint Management: System development work completed. The work to build all remaining constraint equations required for go-live will continue through to Go Live.

MC-1-AEMO-02 - RTMS: Release 3 is in progress (which will implement rule changes from Tranche 6 Exposure Draft 2). The project is on track to complete functional testing and Release 3.

MC-1-AEMO-03 - WEMDE: Market Trial Release 1 on track. Scope increase (addition of the integration components) is being reviewed. Further functionality (e.g. edge case handling) to proceed in parallel for integration closer to Go Live.

MC-1-AEMO-04 - WEMDE UI: Release 1 for Market Trial is on track. Development of Downstream API and DSP in progress.

MC-2-AEMO-01 - RCM - Year 1: Completed.

MC-2-AEMO-02 - RCM - Year 2: Development work on NAQ system is progressing well. CMS deployed to production. PowerBI report and third-party review of first formal release of preliminary constraint equations are both nearing completion.

MC-2-AEMO-03 - RCM - Year 3: Planning and project setup activities in progress.

MC-3-AEMO-01 - Outage Management: Delivery schedule

reviewed and prioritised to ensure suitable releases in time for Market Trial.

MC-3-AEMO-02 - Forecast Integration: Delivery schedule reviewed and prioritised to ensure suitable releases in time for Market Trial. Market Test 2, where Market Participants will be able to test their builds against the published APIs and UI enhancements) is in progress. Integration points delivered into the test environment for actual testing between system dependencies.

MC-3-AEMO-03 - MT PASA: Execution phase commences. Development on several system integrations for input data is in progress with a new technical approach that will reduce development efforts. AEMO believes this system will only be required when parallel operations commence.

AEMO's readiness overall

WEM Reform Program Status

- Following a full program review, AEMO has increased confidence in achieving the 01-Oct-2023 go-live date. Whilst scope and schedule have been resolved, the Program status remains in red until the budget is resolved.

Key Achievements

- Integrated systems Release 1 deployed into internal testing environment, underpins Market Trial Phase 1 (Jan 2023).
- WEMDE UI documentation completed (Scheduled for release 24 Jan 2023).
- RTMS third release and documentation completed (Jan 2023).
- Constraints Library Released for Reserve Capacity Mechanism Preliminary Constraint Equations (Dec 2022)
- Industry Testing and Transition Strategy released for consultation (Dec 2022)
- Reserve Capacity Mechanism Phase 2 Release 2.2 (RCM CMS) completed (Nov 2022).

Key risks and mitigations

- System development challenged by unforeseen complexity impacting Budget and/or Schedule. As mitigations AEMO:
 - continues to make minor adjustments to scope and release phasing
 - is sequencing work to allow earliest possible focus of internal and external preparations on critical elements
- Without adequate planning, the cutover of systems and processes could fail and/or raise risks to Go Live. Work on a Cutover Plan has commenced and a technical project manager has been appointed to implement.



Western Power's Readiness

Progress and status against all level 2 market capabilities

Code - Short Name:	Progress (%) and Status (colour):				Description:
	0%	25%	50%	75%	
MC-1-NOP-01 - Customer connections	<div style="width: 100%; height: 10px; background-color: green;"></div>				Customer connection policies and contracts are ready for new transmission generator access offers
MC-1-NOP-02 - Limit Advice	<div style="width: 50%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Able to provide non-thermal limit advice to AEMO for the development of network constraint equations.
MC-1-NOP-03 - SCADA	<div style="width: 100%; height: 10px; background-color: green;"></div>				SCADA and communications are established to support individual facility bidding etc
MC-1-NOP-04 - GIA	<div style="width: 25%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				GIA generators are transitioned to SCED.
MC-1-NOP-05 - Operational protocols	<div style="width: 75%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Synergy, Western Power and AEMO Control Rooms, activities, coordination and protocols are established.
MC-1-NOP-06 - NCESS	<div style="width: 50%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Can undertake NCESS Procurement to resolve network limitation issues.
MC-1-NOP-07 - RoCoF	<div style="width: 25%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Can demonstrate Rate of Change of Frequency (RoCoF) ride through capability.
MC-2-NOP-01 - Limit Advice for RCM	<div style="width: 75%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Able to provide thermal limit advice to AEMO for Reserve Capacity Cycles (2022 onwards).
MC-3-NOP-01 - Outage Intention Plans	<div style="width: 0%; height: 10px; background-color: red; text-align: center; font-size: 8px;">✘</div>				Able to submit an annual Outage Intention Plan to AEMO.
MC-3-NOP-02 - Equipment list	<div style="width: 25%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Able to submit the expanded Equipment List (including secondary equipment).
MC-3-NOP-03 - Outage plans	<div style="width: 50%; height: 10px; background-color: orange; border-right: 1px dashed black;"></div>				Able to plan and coordinate network outages with other participants, and submit network outages plans
MC-3-NOP-04 - Commissioning Test	<div style="width: 0%; height: 10px; background-color: red; text-align: center; font-size: 8px;">✘</div>				Able to support the assessment of Commissioning Test Plans.
MC-3-NOP-05 - GPS	<div style="width: 50%; height: 10px; background-color: red; border-right: 1px dashed black;"></div>				Existing Transmission connected generator systems are GPS registered.
MC-4-MDA-01 - Weekly meter data	<div style="width: 50%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				Can provide meter interval data on a weekly basis to enable Weekly Settlement.
MC-4-NOP-01 - Event and performance monitoring	<div style="width: 75%; height: 10px; background-color: green; border-right: 1px dashed black;"></div>				High resolution data provided to AEMO to enable event monitoring and monitoring of generator performance.
MC-4-NOP-02 - ERA review	<div style="width: 0%; height: 10px; background-color: red; text-align: center; font-size: 8px;">✘</div>				Able to support the periodic ERA Review and Study of the impact of Network Operator Outages on the market.
MC-4-NOP-03 - Coordinator of Energy review	<div style="width: 0%; height: 10px; background-color: red; text-align: center; font-size: 8px;">✘</div>				Able to support the periodic Coordinator of Energy review of the Outage Planning process.

On Track (Completed)
 On Track (In progress)
 At Risk (Completed)
 ✘ On Track (Not commenced)

 At Risk (In progress)
 Late (Completed)
 Late (In progress)

WP Comments (cont)

MC-3-NOP-01 - Outage Intention Plans: Work has not commenced on the Outage Intention Plan as this is dependant on AEMO to finalise the WEM Procedure Outages for industry consultation (Sep 2022). Western Power is required to submit its inaugural Outage Intention Plan in Mar 2024.

MC-3-NOP-02 - Equipment list: The Equipment List will be shared outside of structured system integration and will instead follow a semi-manual process to share on update. Internal semi-manual processes are now required to be developed support this transaction.

MC-3-NOP-03 - Outage plans: AEMO has provided Western Power with draft API (Technical Specification) to enable Western Power to commence design. Western Power is awaiting further collaboration and industry consultation from AEMO on the WEM Procedure Outages (Jan 2023), and for AEMO to finalise the API Technical Specification before scoping and design can complete. Western Power has paused development pending the later than planned consultation on the WEM Procedure and potential impacting changes to API's. Development will restart in January 2023 in readiness for Market Testing. (Further) delays to the WEM Procedure and Technical Specification finalisation will impact project costs (stranded resources).

MC-3-NOP-04 - Commissioning Test: Expected to commence in early 2023 when AEMO release the WEM Procedure Commissioning Test.

MC-3-NOP-05 - GPS: WEM Procedures published (Feb 2021). Generator Performance Standards: Relevant Generator Modification Guideline published (Jul 2022), Generator Performance Standards: Guideline for the Assessment of Technical Requirements published (Jul 2022), Final version of the Generator Performance Standards: Guideline for the Assessment of Technical Requirements to be published (Jan 2023). Assessment of Existing Transmission Connected Generators GPS assessments continue with engagement from Market Participants and AEMO (Aug 2023).

MC-4-MDA-01 - Weekly meter data: Execution in underway for the work required to provide weekly (contestable) meter data for the settlement of the Non-STEM.

MC-4-NOP-01 - Event and performance monitoring: Completed in October 2021 based on a manual process. Introduction of automation expected in Jan 2023 based on AEMO provided connection point (Nov 2022).

MC-4-NOP-02 - ERA review: Internal processes and systems are required to be developed to enable this capability.

MC-4-NOP-03 - Coordinator of Energy review: Internal processes and systems are required to be developed to enable this capability.

Western Power comments

MC-1-NOP-01 - Customer connections: Completed - August 2021. Internal processes implemented and are available via the Western Power website.

MC-1-NOP-02 - Limit Advice: WEM Procedure for Developing Limit Advice published (April 2021). Non-thermal Limit Advice for System Normal submitted to AEMO (Jun 2022) Non-thermal Limit Advice for System Abnormal (AEMO Priority Circuits) to be submitted to AEMO (Oct 2022). Non-thermal Limit Advice for planned outages for one year beyond market start to be submitted to AEMO (Jul 2023). Internal processes and systems and resource structure to be defined and implemented (ahead of July 2023).

MC-1-NOP-03 - SCADA: All SCADA and communications have been established for all Market Participants that have requested them. Requests have been made at the WRIG and to AEMO to advise Western Power of any remaining SCADA work required to enable an existing Market Participant facility to participate in the new market. One further Market Participant has been contacted by Western Power. Note: Requests are now subject to Western Power's Customer Project lead

times.

MC-1-NOP-04 - GIA: Western Power will commence the review of GIA generator contracts in late 2022. Western Power will need to develop a plan to support AEMO activities to transition GIA generators from the GIA tool to WEMDE. Development of this plan is dependant on AEMO sharing their Transition and Rollback Plan with Western Power (Required Jun 2023).

MC-1-NOP-05 - Operational protocols: Synergy, AEMO and Western Power Control Rooms have commenced engagement, AEMO will continue to lead this engagement. Western Power supported the update of the AEMO / Western Power Operating Protocol which was published in Oct 2022. Internal processes and systems specific to the control room will be reviewed for change based on the outcomes of the Operating Protocol update and wider WEM Rules amendments.

MC-1-NOP-06 - NCESS: The NCESS framework has been applied for in-progress Network Control Services (NCS) commercial events. The Network Opportunity Map (2022) and the inaugural Transmission System Plan were published in Oct 2022. The NOM and TSP included potential non-network solutions that would be procured in accordance

with NCESS. The existing Network Control Services (NCS) process and systems are being revised to align with the NCESS Framework. The revised process will be tested with the (first) next Western Power NCESS Trigger Event. Western Power has commenced discussions with Energy Policy WA on interpretation of Network Operator triggers.

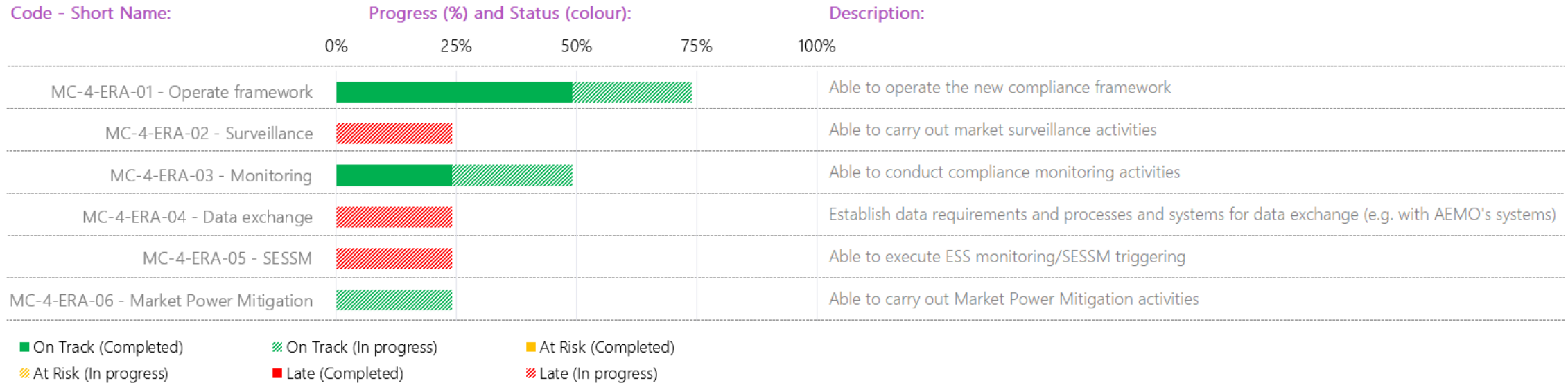
MC-1-NOP-07 - RoCoF: Western Power has commenced initial discussions with AEMO regarding the approach for accreditation of Western Power's RoCoF ride-through (minimum) for the transmission and distribution networks. Further discussions are required to understand the approach required to seek exemption. A desktop study will be initiated as to how Western Power will inform a potential exemption.

MC-2-NOP-01 - Limit Advice for RCM: Thermal Limit Advice to enable the 2022 Reserve Capacity Cycle has been provided to AEMO (Jul 2022). Internal process and system updates are in finalisation and are required to be implemented ahead of Mar 2023, to support the 2023 Reserve Capacity Cycle, and future annual cycles.



Economic Regulation Authority's Readiness

Progress and status against all level 2 market capabilities



ERA comments on all items

MC-4-ERA-01 - Operate framework:

There is interdependency for this project with the work that EPWA is currently doing in terms of updates to the Regulations and also further changes to the compliance framework to be included in the WEM Rules. The ERA is proceeding with the development of its WEM procedure and related process and system changes based on the information it currently has from EPWA for the most recent changes. The ERA intends to hold a workshop in early 2023 on the WEM procedure and compliance priorities in the new market. Consultation on the procedure is then intended to be held in March 2023 with the WEM procedure finalised by middle of 2023. However the exact timing for this will be dependent on the finalisation of EPWA's changes to the Regulations and WEM Rules. Associated internal process and system changes will be made concurrently.

MC-4-ERA-02 - Surveillance:

ERA will need to have data interfaces in place with AEMO's systems. EPWA and ERA are continuing work on specifying data requirements for the new Market Surveillance Data Catalogue with the view that this work will be completed by

March 2023. This work will underpin the ERA's surveillance activities for the new market design. EPWA and ERA are awaiting confirmation of resource commitment from AEMO for its side of this project.

MC-4-ERA-03 - Monitoring:

The ERA has prepared its draft focus areas for compliance monitoring in the new market and presented these at an ERA industry forum in November 2022. These focus areas will be further discussed with stakeholders in early 2023, with the intention that these areas will be formalised through the ERA's compliance strategy and published in the middle of 2023.

To enable the ERA to carry out compliance monitoring activities, it will need to have data interfaces in place with AEMO's systems. EPWA and ERA are continuing work on specifying data requirements for the new Market Surveillance Data Catalogue with the view that this work will be completed by March 2023. This work will underpin the ERA's compliance monitoring activities for the new market design. EPWA and ERA are awaiting confirmation of resource commitment from AEMO for its side of this project. EPWA, ERA and

AEMO have yet to agree on the data transfer mechanism.

MC-4-ERA-04 - Data exchange:

ERA will need to have data interfaces in place with AEMO's systems. This will be largely dependent on AEMO's intended design for data sharing arrangements with the ERA (and EPWA) for the new market. There has been no real progress since last survey - AEMO has recently presented a further option to ERA and EPWA for the data transfer mechanism but this option does not appear as sound as earlier options presented by AEMO.

MC-4-ERA-05 - SESSM:

Project team is currently working through requirements and process for ESS monitoring and in early stages of the development of ESS WEM Procedure.

MC-4-ERA-06 - Market Power Mitigation:

ERA is still in process of developing draft offer construction guidelines with the aim of being able to release these for consultation in early 2023.

Key Activities Looking Forward

Key delivery activities for the next 3 months include:

- Complete application development of RTMS, Outage Management, Settlement, Registration, and Forecast Integration systems
- Continue development of WEMDE, WEMDE UI, and MT PASA systems
- Commence development of Commissioning Tests, STEM, System Operation Planning Tools and ST PASA systems
- Deliver documentation and/or testing opportunities as early as possible
- Progress system integration and integrated testing (complete for first release in time to support Phase 1 Market Trial)
- Commence Phase 1 of Market Trial
- Draft and consult on multiple WEM Procedures (refer latest WEM Procedures Timeline)
- Continue development of constraint equations noting dependency on Limit Advice and that AEMO's resource priority reflects a focus on readiness for real-time operations at Go Live

Next steps

- Continue with bi-monthly surveys and reporting cycle using the specific readiness criteria (market capabilities) reported against here.
- Release schedule:

Survey/Report Number	Market Readiness Survey	Market Readiness Report
7	End Jan 2023	End Feb 2023
8	End Mar 2023	End Apr 2023
9	End May 2023	End Jun 2023
10	End Jul 2023	End Aug 2023

Appendices

AEMO's reasoning for risk ratings against Participant Market Capabilities

Risk	Market Capability	Risk rating rationale
High	MC-1-MP-02 - RTMS	A facility cannot participate in the real-time market (RTM) unless the participant can make submissions, which could in turn prevent AEMO from having access to this generating capacity and jeopardise system security.
High	MC-1-MP-03 - WEMDE (dispatch instructions)	If a significant proportion of facilities cannot receive and respond to Dispatch Instructions, this could jeopardise system security.
High	MC-1-MP-04 - WEMDE (ESS)	If a sufficient fleet of facilities are not ready to provide FCESS, WEMDE will be unable to reliably dispatch enough FCESS to maintain system security.
Medium	MC-1-MP-06 - WEMDE (Consuming other data)	The ability to consume market information is important from the perspective of participants that intend to monitor and respond to market conditions - for instance making use of the Look aheads to make trading decisions. AEMO doesn't consider this capability to be essential for the operation of the real-time market, but accepts that it is important commercially and time consuming for participants to build.
Medium	MC-3-MP-01 - Outage Management	A participant that lacks the ability to submit/log planned and forced outages will face compliance challenges and/or impose additional administration burdens on AEMO. However, provided that participants reflect facility availability in their RTM Submissions, WEMDE will continue to be able to solve correctly.
Medium	MC-3-MP-03 - Commissioning Test	Shortly after Go Live, some facilities are expected to need to submit Commissioning Test Plans (CTPs). An inability to use the new systems and processes may raise compliance issues for participants and administrative overheads for AEMO, but risks to system security should be manageable.
Medium	MC-4-MP-04 - Registration (Facility-level)	Facility classification and facility standing data must be accurate and complete given the dependencies of downstream systems on this information, including RTMS and WEMDE. A failure among participants to be ready to use the new system and processes will impose an administrative burden on AEMO, but risks to system security should be manageable.
Low	MC-1-MP-01 - Constraint Management	The information provided via the Congestion Information Resource is not required by participants to support real-time operations. Further, information on invoked constraints will be published via WEMDE UI anyway.
Low	MC-1-MP-05 - Commercially prepared for SCED.	The collective system/market has limited stake in the commercial readiness of individual firms. Rather this is an important area of work from the perspective of individual firms.
Low	MC-2-MP-01 - RCM - Year 1	The Reserve Capacity Mechanism (RCM) doesn't strongly affect the RTM, thus this is similar to MC-1-MP-05.
Low	MC-2-MP-02 - RCM - Year 2	The RCM doesn't strongly affect the RTM, thus this is similar to MC-1-MP-05.
Low	MC-2-MP-03 - RCM - Year 3	The RCM doesn't strongly affect the RTM, thus this is similar to MC-1-MP-05. While participants may face unexpected refunds if they are not aware of their obligations around RTM that arise from RCM, AEMO does not consider this a systemic risk.
Low	MC-3-MP-02 - MT & ST PASA	The ability to consume PASA reports isn't required by participants to support real-time operations. While AEMO needs participants to provide the data necessary to support MT PASA, the risk of non-compliance is considered manageable.
Low	MC-3-MP-04 - GPS	Completing GPS will provide better information that improves planning and operational decision making and thus reduces risks. But the system/market can proceed without realising those benefits immediately (for instance because some generators haven't completed their GPS/GMPs).
Low	MC-4-MP-01 - Settlements Reform	Participants will vary in how sophisticated they wish to be in their systems to verify and reconcile settlement data, but provided they can download an invoice and pay it, the systemic risk posed by some firms not being ready in this area should be low.
Low	MC-4-MP-02 - STEM	Participants that need to participate in STEM face minimal changes to be ready and their participation in STEM is, in any case, optional. Similarly, submitting a bilateral submission should be straight forward. As in the case of settlement, the systemic risks should be low.
Low	MC-4-MP-03 - Registration (Participant-level)	Participant registration information should be straight-forward to update.
Low	MC-4-MP-05 - Miscellaneous transitional activities	At the moment, only one item is identified in this set and this item is considered to have a minimal impact on overall systemic risks (the item: Intermittent Loads, must have submitted all relevant information to support AEMO making a determination on contribution towards Contingency services).

Survey invitees and response record since Survey 4

Note: reporting against specific readiness criteria was introduced with Survey 4

Primary participant ID	Participant Name	All associated participant short codes	Survey 4	Survey 5	Survey 6	Survey 7	Survey 8	Survey 9	Survey 10
WPGENER	Synergy	WPGENER, WPRTL, MUMBIDA	TRUE	TRUE	TRUE				
ALINTA	Alinta Sales Pty Ltd	ALINTA, WALKAWAY	TRUE	TRUE	TRUE				
GRIFFINP	Bluwaters Power 1 Pty Ltd	GRIFFINP, GRIFFIN2	TRUE	TRUE	TRUE				
NGENEERP	NewGen Neerabup Partnership	NGENEERP, NGENNEER	TRUE	TRUE	TRUE				
NEWGEN	NewGen Power Kwinana Pty Ltd	NEWGEN	TRUE	TRUE	TRUE				
PERTHNRGY	Perth Energy Pty Ltd	PERTHNRGY, WENERGY	FALSE	TRUE	TRUE				
MERRREDIN	Merredin Energy	MERRREDIN	FALSE	FALSE	FALSE				
GLDFLDPW	Goldfields Power Pty Ltd	GLDFLDPW, STHRNCRS	TRUE	FALSE	FALSE				
WARADGE	Bright Energy Investments	WARADGE, ALBGRAS, GRENOUGH, GRNOUGH	TRUE	TRUE	TRUE				
TSLA_MGT	Tesla Corporation Pty Ltd	TSLA_MGT, TSLA_GER, TSLA_HLD, TSLA_KEM, TSLA_NOR,	FALSE	TRUE	TRUE				
PREMPWR	Wesfarmers Kleenheat Gas Pty Ltd	PREMPWR	FALSE	FALSE	FALSE				
SUNAU22	Merredin Solar Farm Nominee Pty Ltd	SUNAU22	FALSE	FALSE	FALSE				
EDWFMAN	EDWF Manager Pty Ltd	EDWFMAN	FALSE	TRUE	TRUE				
ALCOA	Alcoa	ALCOA	TRUE	FALSE	TRUE				
COLLGAR	Collgar Wind Farm	COLLGAR	FALSE	TRUE	TRUE				
LNDLFGP	Landfill Gas and Power Pty Ltd	LNDLFGP	TRUE	TRUE	FALSE				
NSFPTNRS	Northam Solar Project Partnership	NSFPTNRS	TRUE	FALSE	TRUE				
WGRES	Waste Gas Resources Pty Ltd	WGRES	FALSE	FALSE	FALSE				
CTE	CleanTech Energy	CTE	FALSE	FALSE	FALSE				
MBARKER	Mt.Barker Power Company Pty Ltd	MBARKER, DCWL, SKYFRM	FALSE	FALSE	FALSE				
BLAIRFOX	Blair Fox Pty Ltd AFT The Blair Fox Trust	BLAIRFOX	FALSE	FALSE	FALSE				
MPOWER	Metro Power Company Pty Ltd	MPOWER	TRUE	FALSE	TRUE				
TIWEST	Tronox	TIWEST	TRUE	FALSE	TRUE				
ADERRTL	A Star Electricity	ASTAR, ADERRTL, ADER	TRUE	FALSE	TRUE				
BLUESTAR	Blue Star Energy	BLUESTAR	FALSE	FALSE	FALSE				
CMTYELEC	Community Electricity	CMTYELEC	FALSE	FALSE	FALSE				
ENERNOC	Enel X Australia Pty Ltd	ENERNOC	FALSE	TRUE	FALSE				
ERRRF	East Rockingham RRF Project Co Pty Ltd	ERRRF	FALSE	FALSE	TRUE				
JASPELEC	Primary Growth Pty Ltd	JASPELEC	FALSE	FALSE	FALSE				
KARARA	Karara Energy	KARARA	TRUE	TRUE	TRUE				
SOUTHNGY	Southern Energy	SOUTHNGY	FALSE	FALSE	FALSE				
WADDI	Waddi Wind Farm Pty Ltd	WADDI	FALSE	FALSE	FALSE				
WATERCP	Water Corporation	WATERCP	FALSE	TRUE	TRUE				
SBSOLAR1	Sun Brilliance Cunderdin Solar Farm Pty Ltd	SBSOLAR1	FALSE	FALSE	FALSE				
CHANGENG	Change Energy	CHANGENG	FALSE	FALSE	FALSE				
CLENERGY	Clear Energy	CLENERGY	FALSE	FALSE	FALSE				
NWMNTMN	Newmont Power	NWMNTMN	TRUE	FALSE	FALSE				
SIMCOA	Simcoa Operations	SIMCOA	FALSE	FALSE	FALSE				
AMENERGY	Amanda Energy Pty Lt	AMENERGY, AMAUST	FALSE	FALSE	FALSE				
BYFORD1	Byford Solar Farm 1 Pty Ltd	BYFORD1, BYFORD2, BYFORD3	TRUE	TRUE	TRUE				
ERMPOWER	ERM Power Retail Pty Ltd	ERMPOWER	TRUE	TRUE	TRUE				
KWINWTE	Kwinana WTE Project Co Pty Ltd	KWINWTE	TRUE	FALSE	TRUE				
EGPA	Moonies Hill Energy	EGPA	FALSE	FALSE	TRUE				
PRD_SWIS	PRD SWIS Opts Pty Ltd	PRD_SWIS	FALSE	FALSE	FALSE				