

WEM Reform Market Readiness Report No.5

4 Nov 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. 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 fifth Market Readiness Survey was released on 30 Sept 2022 and supported by an updated [Survey User Guide](#).
- 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.4

- Survey coverage by energy and capacity improved this round
- Large market participants remain strongly engaged; smaller participants less so
- AEMO's strategy for Market Trial to consider further measurement tools



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 Survey 4



Better guidance for work planning

- Participants need high-level guidance on the systems to be built against – to inform their work and resource planning
- AEMO to provide better guidance on development priorities, types of interfaces and timings



Status concerns cluster on a few topics

- “At Risk” and “Late” more frequent for market capabilities re SCED, outages, PASA and GPS
- AEMO to prioritise market-facing releases and information concerning SCED and outages
- AEMO to improve forward guidance on PASA
- AEMO to continue monitoring GPS progress



Externals seeking test opportunities

- External stakeholders are eager for opportunity to test interfaces
- AEMO to prioritise build out and consultation on strategy for Market Trial



Participants seeking faster progress on specifications and procedures

- AEMO's system documentation still a key bottleneck
- Some API documentation published October; more to follow Dec '22 through Feb '23



Participants report most facilities “On Track”

- Large majority of facility capacity is reported “On Track” for dispatch and ESS
- Key ESS providers submitted FCESS Transitional Accreditation requests to AEMO



AEMO has revised its delivery approach

- Facing pressure on schedule and budget, AEMO has modified its delivery approach (in particular, changes to scope and phasing)
- AEMO to communicate flow-on effects for market in terms of systems and the phasing of tests and Market Trial



Western Power dependent on AEMO for several key artifacts

- Western Power highlights important areas in which it is dependent on AEMO deliverables
- Outages and Commissioning Test WEM Procedures, Transition Plan
- AEMO to continue collaboration with WP



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

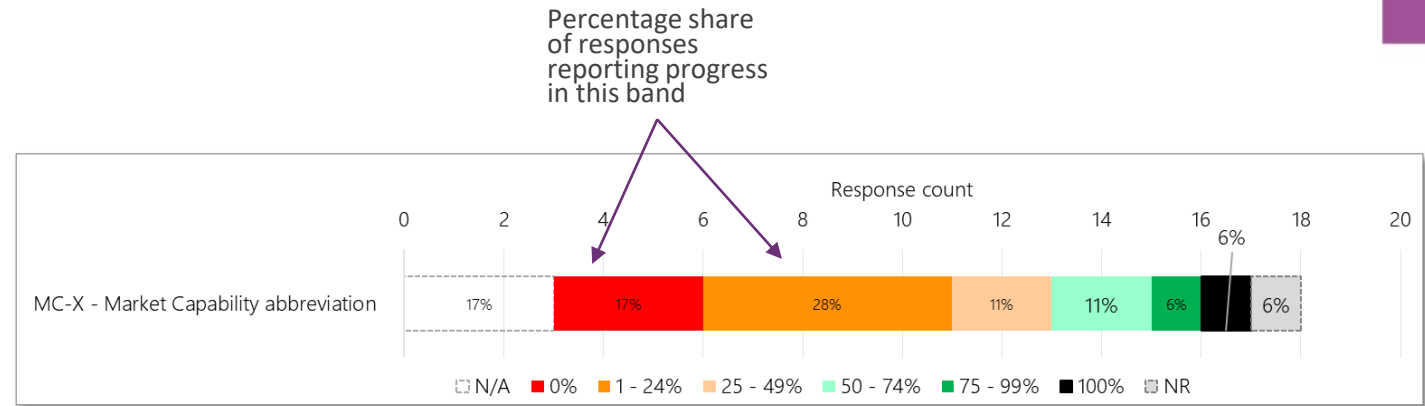
- ERA has multiple regulatory functions for which it depends on AEMO for data
- ERA & AEMO continue to work together on business requirements and to align this with EPWA's requirements

How to read this report

Results for Market Participants

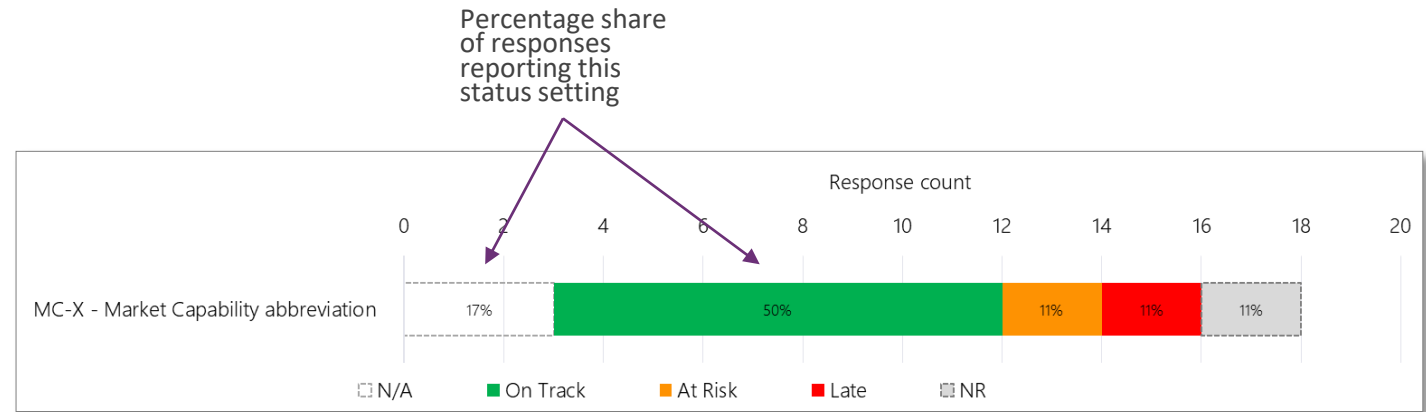
Progress Charts

- 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 counts of each value among all responses
- Colour scheme shifts away from red as progress approaches 100%



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 counts of each value among all responses

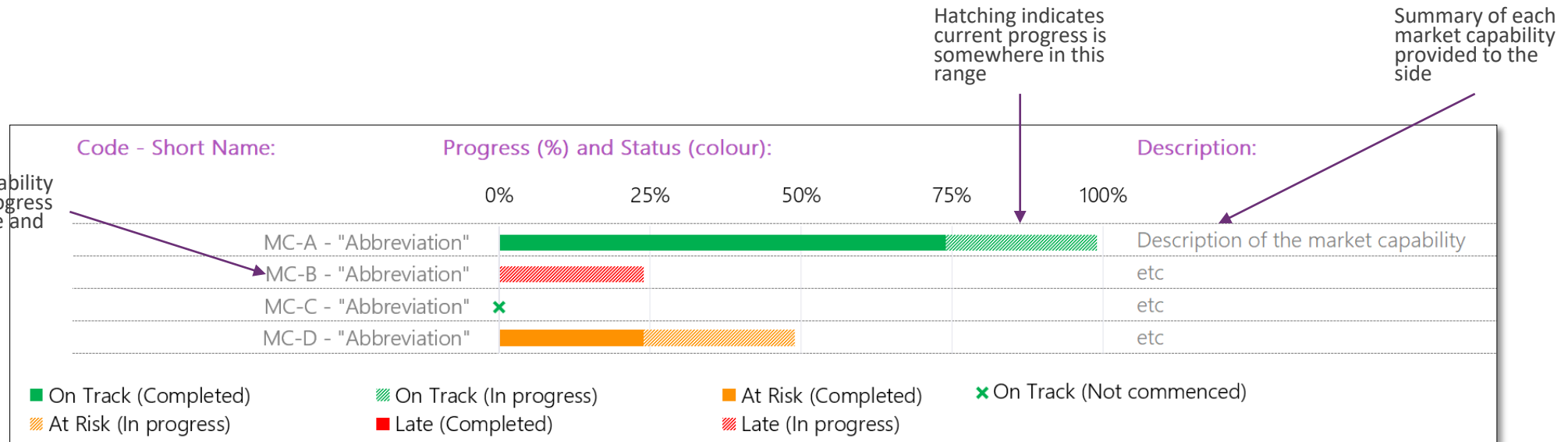


How to read this report (cont.)

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

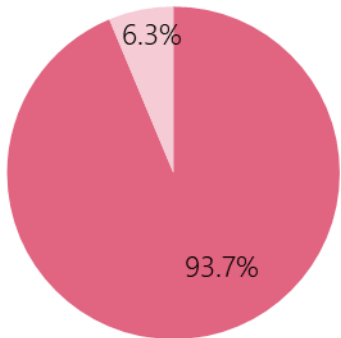


Participation

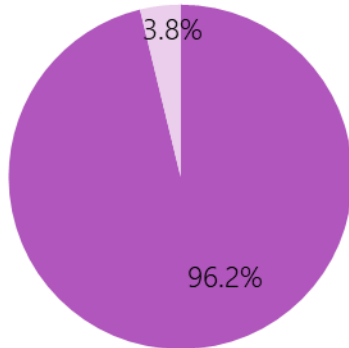


- 40% of survey invitees responded (compared to 43% from Survey 4)
- 1 new respondent, 7 respondents to Survey 4 did not respond to Survey 5
- Responses covered most of the energy generated, capacity credits and energy consumed in the market
 - Market Generator coverage by capacity up (93.7% compared to 92.5% in Survey 4)
 - Market Generator coverage by energy up (96.2% compared to 91.4% in Survey 4)
 - Market Customer coverage up (90% compared to 82% in Survey 4)
- A small number of responses not received
 - Survey participation by number continues to be low despite additional outreach to invited respondents
 - 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 summary of non-responding invitees is included in this report

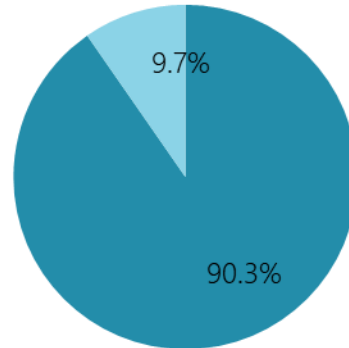
Capacity



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	47	Note multiple participantIDs aggregated in one invitation where appropriate (62 participantIDs covered by an invitation)
Completed responses	19 (40%)	Response rate based on completion of unique invitations.
Generation coverage	94% or better	Share of portfolio measured either by energy (10/2021 to 09/2022) or capacity (2023 RC Year)
Consumption coverage	90%	Aggregated consumption metered across all NMI's assigned to Survey respondents as share of total energy supplied (2021).

Respondent types

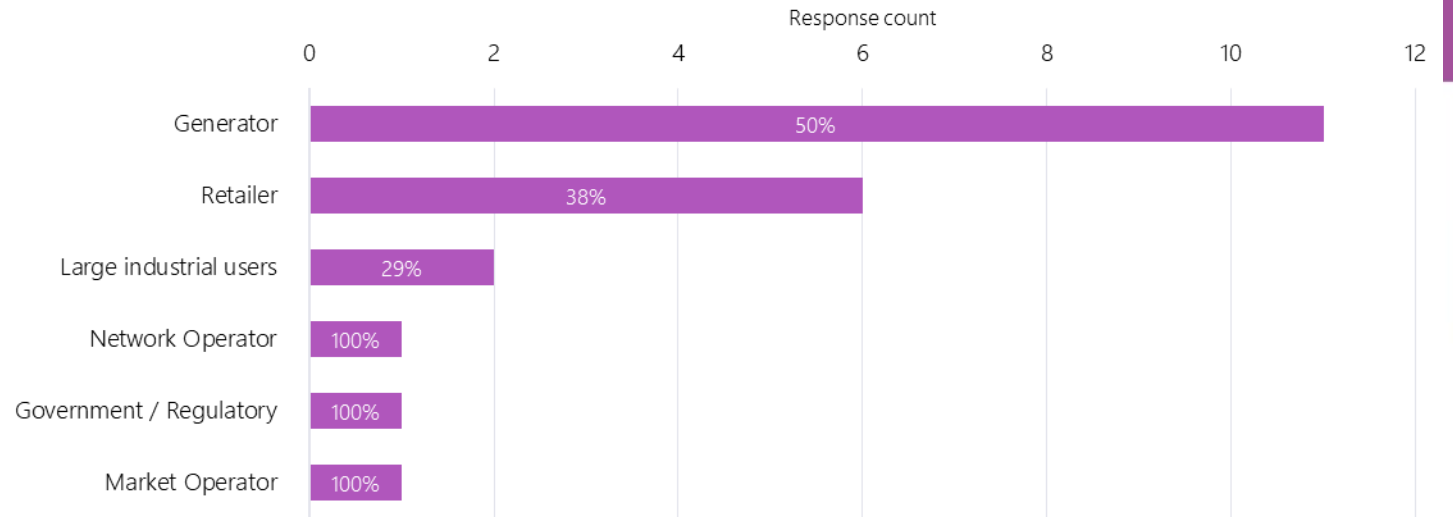
Market Generators

- 11 of 22 generators polled responded
- 18 facilities assumed operational at Go-Live are not covered by a response:
 - These facilities account for around 6% of capacity or 4% of energy.
 - All of these facilities are covered by 14 participants, of which 8 account for >95% of the capacity and >90% of the energy

Market Customers

- 8 of 23 Market Customers polled responded, covering around 90% of traded energy load.
- 6 of 16 retailers responded
- 2 of 7 large industrial users responded (market customers that are not retailers)

Western Power, ERA and AEMO have all responded



Results for Market Participants



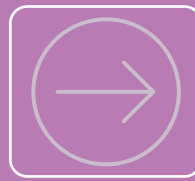
Participant and Facility level market capabilities

Capabilities may relate to the participant or specific facilities



Participant-level market capabilities

MC-1-MP-01 - Constraint Management	MC-1-MP-02 - RTMS	MC-1-MP-05 - Commercially prepared for SCED.	MC-1-MP-06 - WEMDE (consuming other data)
MC-2-MP-01 - RCM - Year 1	MC-2-MP-02 - RCM - Year 2	MC-2-MP-03 - RCM - Year 3	
MC-3-MP-01 - Outage Management	MC-3-MP-02 - PASA (MT & ST)	MC-3-MP-03 - Commissioning Test	MC-3-MP-04 - GPS
MC-4-MP-01 - Settlements Reform	MC-4-MP-02 - STEM	MC-4-MP-03 - Registration (Participant-level)	MC-4-MP-05 - Miscellaneous transitional activities



MC-1-MP-03 - WEMDE (Dispatch instructions)

- Able to receive, understand and act on dispatch instructions.



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

- Facilities are ready to provide Frequency Co-optimised ESS and /or Non Co-optimised ESS



MC-4-MP-04 - Registration (Facility level)

- Comply with all facility registration requirements



Facility-level market capabilities

The results for participant-level MCs are reported separately to facility-level MCs.

Results for Market Participants – Part 1



Participant-level
market capabilities

MC1: Ready for SCED

MC-1-MP-01 - Constraint Management:

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

- 2 of 16 respondents report progress of more than 50% with 11 of 16 reporting less than 25% - a modest improvement on Survey 4
- More than half reporting “On Track” with 3 of 16 reporting “Not Applicable”
- About a quarter reporting “At risk” or “Late” – a similar results for Survey 4
- Comments point to impacts on new investment and participation decisions.

MC-1-MP-02 - RTMS:

Able to make real time market submissions.

- 13 of 16 respondents report progress of less than 50% with majority amongst them are reporting between 1% and 24% - a modest improvement on Survey 4
- 3 of 16 respondents report progress of 50% to 74% - modest improvement on Survey 4
- One respondent down-graded progress from 75 - 99% to 50 - 74% - likely reflecting better understanding of the work involved.
- Half reported status as “On Track” with 5 of 16 reporting “At risk” – a modest increase in perceived risk compared to Survey 4
- Comments highlight delays in AEMO finalising API specifications

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

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

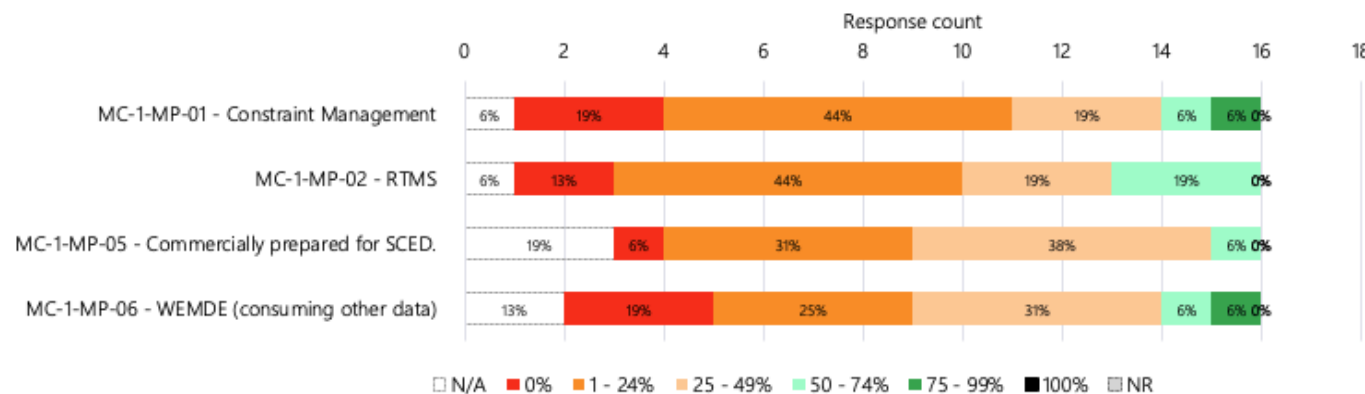
- Except N/As most responses are showing progress with just one respondent showing 0% progress
- 12 of 16 respondents report progress between 1% and 49% progress and 3 of 16 reporting as “N/A”. Similar to Survey 4.
- A quarter indicates status “At risk” and one respondent reporting ‘Late’
- Comments highlight delays in AEMO finalising API specifications

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

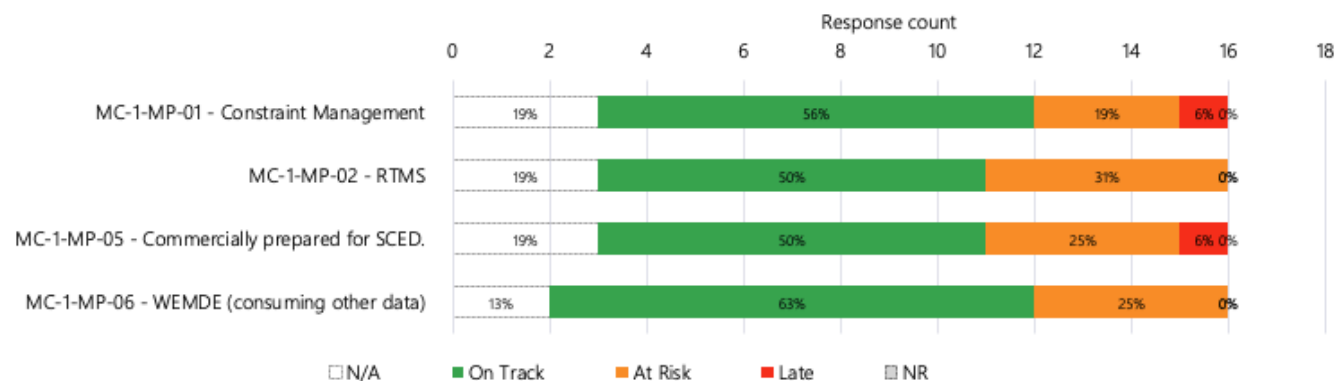
Can consume and act on continuously published market information.

- More than half of respondents report progress between 1% and 49%, and 2 of 16 respondents report progress of more than 50%
- Three quarters report status as either “N/A” or “On Track” with remaining quarter reporting “At Risk”
- Notable increase in share of respondents reporting “On track” compared to Survey 4 with no respondent reporting status as “Late”

MC1 – SCED: Progress



MC1 – SCED: Status



MC2: Ready for evolved RCM

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

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

- More than half respondents still reporting less than 50% progress.
- 2 of 16 respondents report 0% progress compared to none in Survey 4
- Yet more than 4 out of 5 report this area to be “On-Track”, with just one respondent reporting “At Risk”
- Comments highlight known unknowns and a view that these are manageable.

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

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

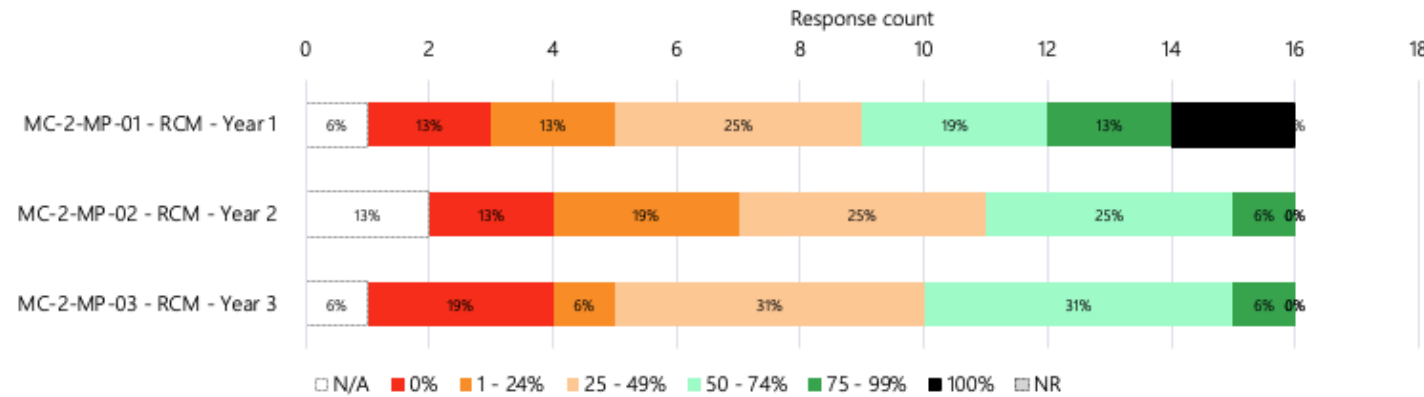
- More than half respondents report less than 50% progress
- 5 of 16 respondents report more than 50% progress
- Unlike last survey, no respondent has reported 100% progress
- 11 of 16 respondents report as “On Track” and only two report as “At Risk”
- Comments highlight known unknowns and a view that participants are largely passive receivers of this change.

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

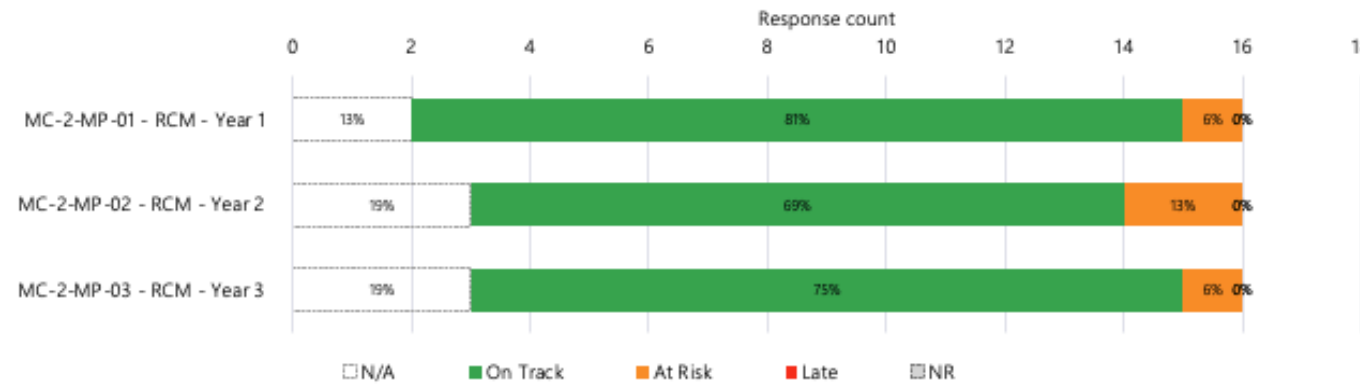
Understand new obligations for Year 3 of 2021 Reserve Capacity Cycle, including settlements.

- More than half report less than 50% progress
- 3 of 16 respondents report work not-commenced compared to zero reporting non commencement of work in previous survey
- 6 of 16 respondents report progress of more than 50%
- Three quarters report as “On Track” while 3 of 16 respondents report “N/A”
- One respondent reports as “At Risk” compared to three in previous survey
- One “At Risk” response suggests availability of AEMO’s procedures is the key risk factor.

MC2 – RCM: Progress



MC2 – RCM: Status



MC3: Ready for more robust System Planning processes

MC-3-MP-01 - Outage Management:

Able to submit and update equipment outages

- 12 of 16 respondents report less than 50% progress, of which 25 – 49% was the most commonly reported band.
- Number of respondents reporting project as “N/A” is halved compared to Survey 4
- 13 of 16 respondents report status as “On Track” or “N/A”
- One respondent report “Late” compared to zero for Survey 4. This respondent highlighted the outstanding API Specifications (Note: these were released shortly after the Survey closed)

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

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

- A quarter of respondents report progress of 0%, another quarter in the 25 - 49% band and around one third report progress above 50%.
- A quarter report status “At Risk” with about half reporting status “On Track”
- Reduction in responses marking it “N/A” in both progress and status compared to previous survey
- Responses suggest slightly better awareness and slightly higher concern compared to Survey 4.

MC-3-MP-03 - Commissioning Test:

Ready to manage facility commissioning testing.

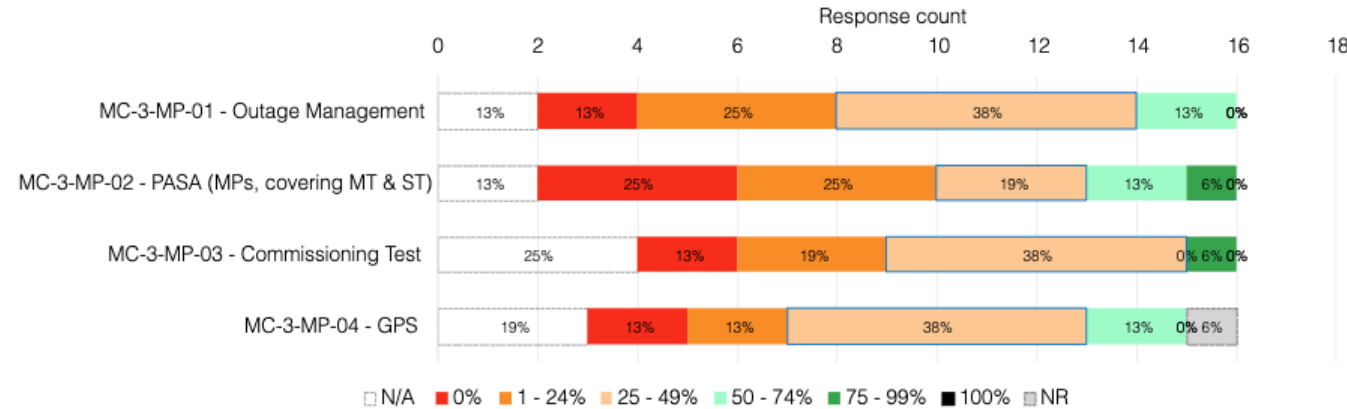
- 7 of 16 respondents report progress of 25% or more – a slight improvement compared to Survey 4
- Responses reporting progress of more than 50% have reduced slightly since Survey 4 (consistent with AEMO not having published significant guidance on this change yet)
- 13 of 16 report status as “On Track” or “N/A”, with 3 respondents reporting "at risk" – similar to Survey 4

MC-3-MP-04 - GPS

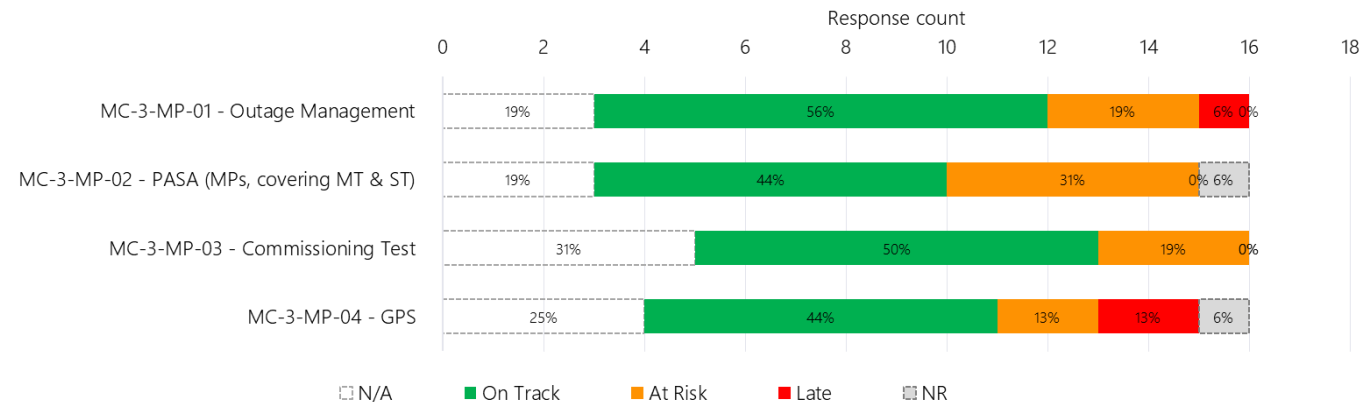
Compliant with generator performance standards framework

- Half respondents report progress of 25% or more and a quarter report progress below 25%
- A quarter respondents report status as "At risk" or "Late" compared to zero in Survey 4 – a notable increase
- 7 of 16 respondents report "On Track" and 4 of 16 report "N/A"

MC3 – System Planning: Progress



MC3 – System Planning: Status



MC4: Ready for evolved Market Operations & Admin

MC-4-MP-01 - Settlements Reform:

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

- 13 of 16 respondents report progress in the 1% to 50% range. One reports no progress and one other reports 100% (reflecting minimal requirements) – overall a modest improvement since Survey 4
- 12 of 16 respondents report status as “On Track” and 3 report “At Risk” – similar to Survey 4.

MC-4-MP-02 - STEM:

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

- 2 of 16 respondents report 0% progress, one third report progress of 0 – 24% and more than four in ten report progress of 25% or more – similar to Survey 4
- 11 of 16 respondents report status as “On Track”. Two reports of “At Risk” – similar to Survey 4
- The single report of “Late” has comments highlighting bilateral negotiations, as distinct from system/process readiness concerns.

MC-4-MP-03 - Registrations:

Comply with all participant registration requirements.

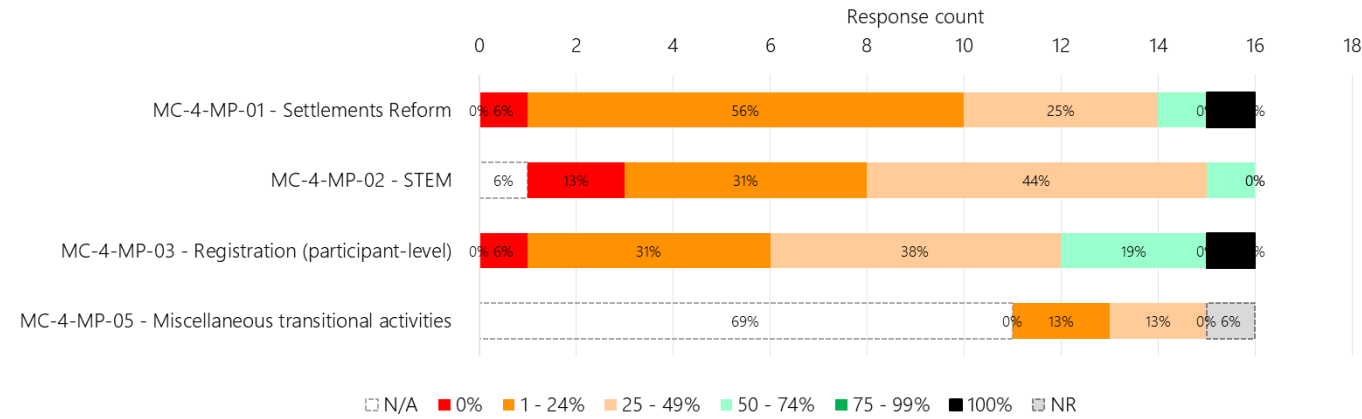
- 5 of 16 respondents report early progress (1 – 24%), 9 report mid progress (25 – 74%) and 1 reports higher progress (between 75% and complete).
- 13 of 16 respondents report status as “On Track” and 2 report status as “At Risk”
- Comments indicate some participants are comfortable with leaving this work in abeyance¹⁸.

MC-4-MP-05 - Miscellaneous transitional:

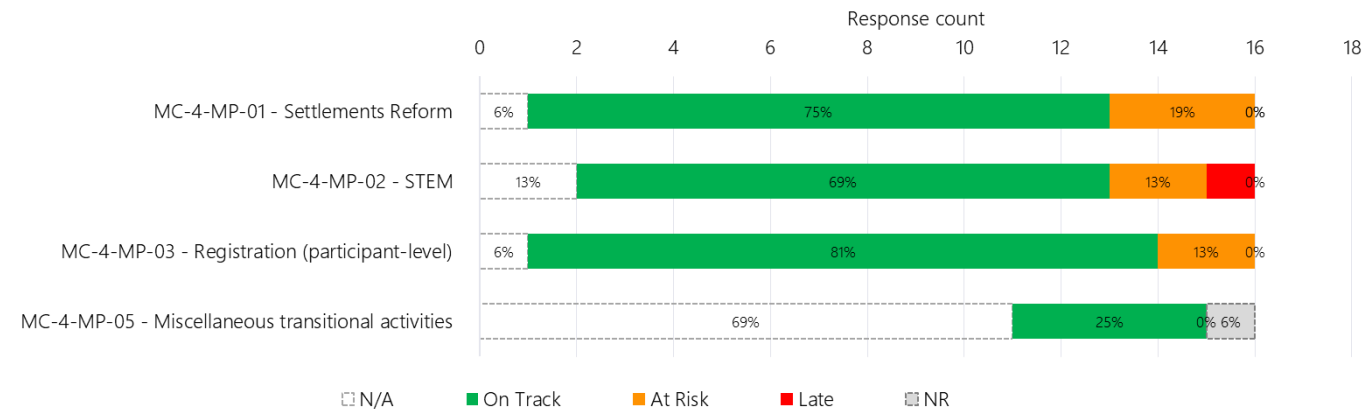
Miscellaneous transitional requirements – a catchall for other miscellaneous readiness requirements not covered by other capabilities.

- Of the minority accepting this item as relevant, all report it to be “On Track”.

MC4 – Mkt Ops & Admin: Progress



MC4 – Mkt Ops & Admin: Status



Results for Market Participants – Part 2



Facility-level market capabilities

MC1 and MC4: Facility-level readiness

Note: charts presented here are scaled by facility capacity. System and market-wide risks to Go-Live map closely to the readiness of adequate fleet capacity

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

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

- More than two thirds of facility capacity reports progress of 25% or greater.
- More than 1000MW capacity reported progress compared to Survey 4, while similar quantities were obviously re-assessed and reported lower progress
- Still, more than four fifths of facility capacity reports status of “On Track”
- AEMO to investigate the drivers of progress downgrades

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

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

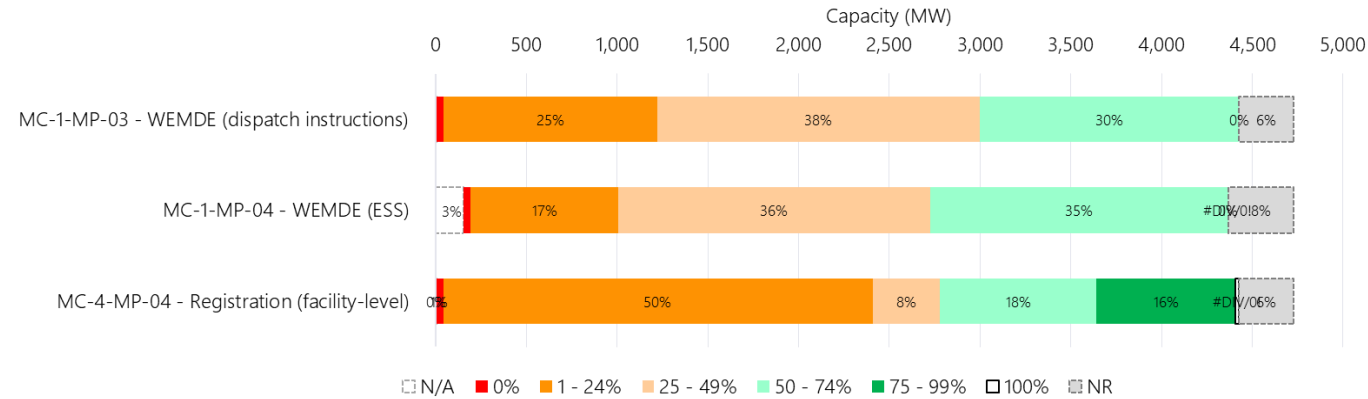
- More than two thirds of facility capacity reports progress between 25 and 74% - substantially improved since Survey 4
- This likely reflects progress made on FCESS Transitional Accreditation requests.
- Only 3 percent of facility capacity reports ESS as “N/A”.
- More than two thirds of facility capacity reports status as “On Track” – slightly down since Survey 4

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

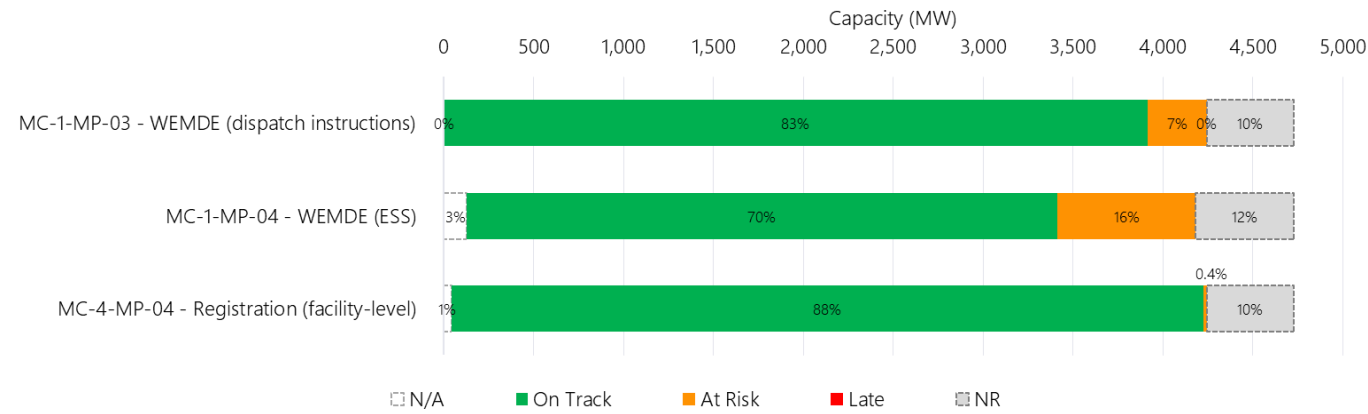
Comply with all facility registration requirements.

- Around half of facility capacity reports progress of less than 25% on this item – small improvement since Survey 4
- Almost all capacity covered by a response report status as “On Track”
- Results suggests participants believe this requirement will be straight-forward to satisfy (though some may under-estimate complexity, especially for edge cases).

Facilities Dispatch, ESS and Registration: Progress



Facilities Dispatch, ESS and Registration: Status

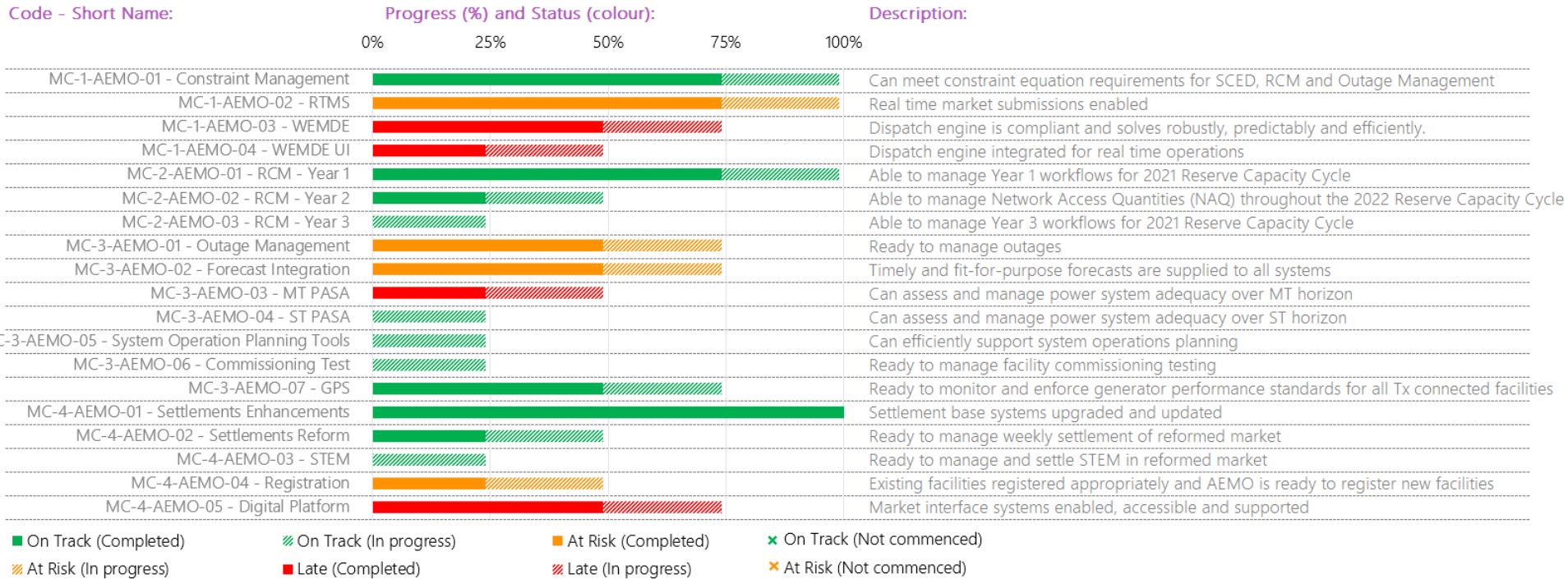


Results for Other Reporting Entities



AEMO's Readiness

Progress and status against all level 2 market capabilities



Comments cont.

MC-3-AEMO-03 - MT PASA: Development has commenced on several system integrations for input data. Start of execution phase for the final work package was delayed by the re-design of the technical solution. Status reflects the approved project milestones – AEMO believes this system will not be used in Market Trial and hence milestones should be re-planned.

MC-3-AEMO-04 - ST PASA: Project initiation phase is progressing.

MC-3-AEMO-05 - System Operation Planning Tools: Internal rescoping exercise has settled on a simpler solution in concept. A viable delivery approach has been settled. Work on detailed solution scope has been initiated.

MC-3-AEMO-06 - Commissioning Test: MVP approach to delivery has been settled and work to scope the solution has been initiated.

MC-3-AEMO-07 - GPS: System development work completed. The work to review and/or approve standards and Generator Monitoring Plans will continue.

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

MC-4-AEMO-02 - Settlements Reform: Settlement system development progressing well with CCA complete, IRCR almost complete, PASS and SPARTA work more than half completed and good progress on Metering Formulas.

MC-4-AEMO-03 - STEM: MVP approach to delivery has been settled and solution planning in progress.

MC-4-AEMO-04 - Registration: Work was delayed by resource contention, but execution is now progressing well and market has been briefed with an overview of delivery milestones. Market Trial can work with mock registration data if necessary.

MC-4-AEMO-05 - Digital Platform: Two Proofs of concept completed for infrastructure solutions. AEMO has completed comprehensive scope review to identify scope reductions to better manage cost and timing issues.

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: Development of Release 3 is in progress (which will implement rule changes from Tranche 6 Exposure Draft 2). AEMO's system performance testing also identified potential congestion issues which it plans to address with one or more additional API endpoint(s).

MC-1-AEMO-03 - WEMDE: Planning for integration of core functionality is progressing well. Delivery of the full suite of WEMDE functionality isn't possible in time for Market Trial. The timing issues are being managed by reorganising delivery

to ensure a core functionality is ready for Market Trials, with development of further functionality (e.g. edge case handling) to proceed in parallel for integration closer to Go Live.

MC-1-AEMO-04 - WEMDE UI: Specification of the market-facing interfaces has accelerated – planning an overview for the Market in late November. To address timing challenges within the project, delivery is being planned and staged to ensure market-facing functionality is delivered in time to support Market Trial.

MC-2-AEMO-01 - RCM - Year 1: Complete except for minor outstanding documentation.

MC-2-AEMO-02 - RCM - Year 2: Development work on NAQ system is progressing well. AEMO advised the market on the dependency of the NAQ WEMP on the Facility Dispatch

Scenario builder component - risk is being managed.

MC-2-AEMO-03 - RCM - Year 3: Preliminary planning and project setup activities are now commencing.

MC-3-AEMO-01 - Outage Management: API specification released in October. System functionalities and delivery schedule has been reviewed to ensure suitable releases in time for Market Trial.

MC-3-AEMO-02 - Forecast Integration: First release completed and tested. Releases 2 and 3 are in progress. Additional scope items have been identified, requiring more time than previously scheduled, but system is expected to be ready to support Market Trial.

AEMO's readiness overall

WEM Reform Program Status

- In late September 2022, the WEM Reform Steering Committee moved the Program status to **red** on the basis that there was schedule slippage and a forecast expenditure higher than the Board approved budget.
- A review of scope, schedule and budget over the past two months has resulted in increased confidence in the schedule but with remaining budget pressure yet to be resolved.
- The Program will continue to report red until budget is resolved.

Key drivers of overall status

- Cost inflation consistent with broader labour market and service sector patterns.
- Steps to increase velocity have been offset by increases in estimates of effort required, impacting schedule and budget.

Key Achievements

- Reserve Capacity Mechanism Release 2.1 implemented
- AEMO supported EPWA's delivery of Tranche 6 through extensive work on rules development and review – supporting AEMO's implementation activities and providing additional clarity to Participants
- Draft API specification published for Outage Management System
- First phase of planning for Market Trial completed

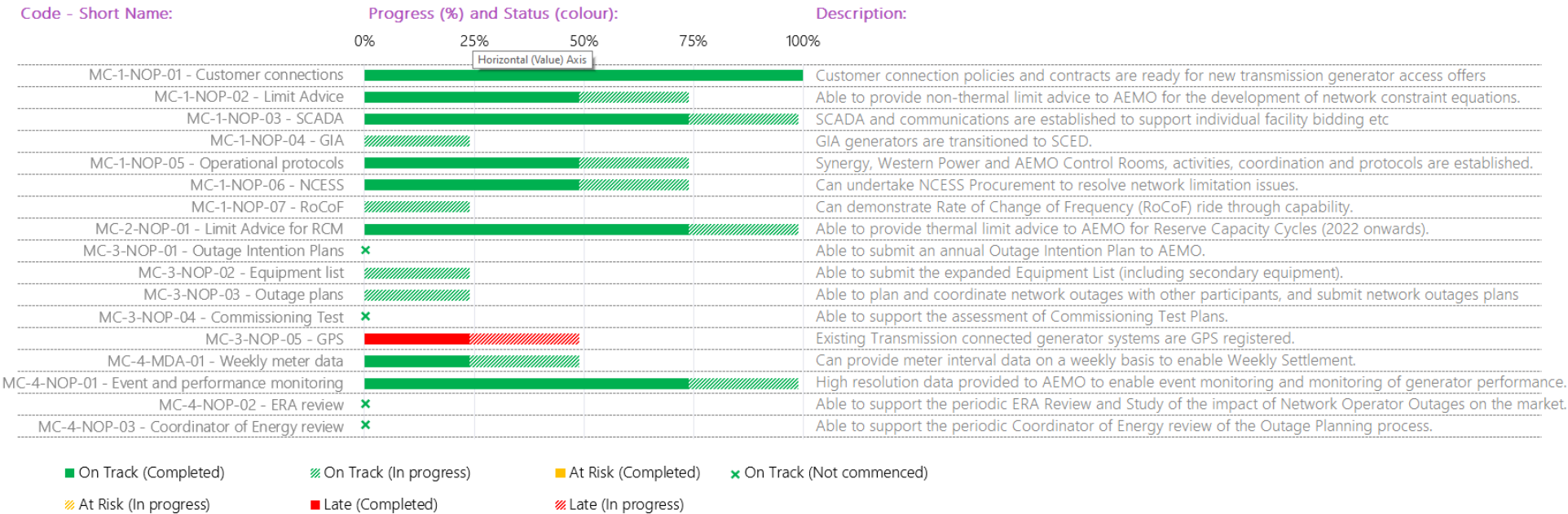
Key risks and mitigations

- System development challenged by unforeseen complexity impacting Budget and/or Schedule. AEMO has adjusted scope and is in the process of adjusting release phasing as mitigations
- If project delays continue to accumulate this would adversely impact Go-Live. AEMO will continue to actively manage this risk.
- Without adequate coordination, an effective preparation for Go-Live by all Rule Participants could be compromised. Market Trial & Transition Manager appointed and development of Market Trial Strategy is now accelerating.



Western Power's Readiness

Progress and status against all level 2 market capabilities



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: AEMO have provided Western Power with draft API (Technical Specification) to enable Western Power to commence design. Western Power are awaiting further collaboration and industry consultation from AEMO on the WEM Procedure Outages (Sep 2022), and for AEMO to finalise the API Technical Specification before scoping and design can complete.

MC-3-NOP-03 - Outage plans: AEMO have provided Western Power with draft API (Technical Specification) to enable Western Power to commence design. Western Power are awaiting further collaboration and industry consultation from AEMO on the WEM Procedure Outages (Sep 2022), and for AEMO to finalise the API Technical Specification before scoping and design can complete. 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 (Dec 2022). 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 commenced (September 2022) 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 pending AEMO provision of connection point (expected Sep 2022). Delays to the connection point information will impact project costs (stranded resources).

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. A request will be made to AEMO and Market Participants to advise Western Power of any remaining SCADA work required to enable an existing Market Participant facility to participate in the new market. New requests will be 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 ahead of Market Trials).

MC-1-NOP-05 - Operational protocols: Synergy, AEMO and Western Power Control Rooms have commenced engagement, AEMO will continue to lead this engagement. The update of the AEMO / Western Power Operating Protocol was completed by AEMO and Western Power and published on 1 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 both 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 include

potential non-network solutions that would be procured in accordance with NCESS. The existing Network Control Services (NCS) process and systems is being revised to align with the NCESS Framework. The revised process will be tested with the (first) next Western Power NCESS Trigger Event.

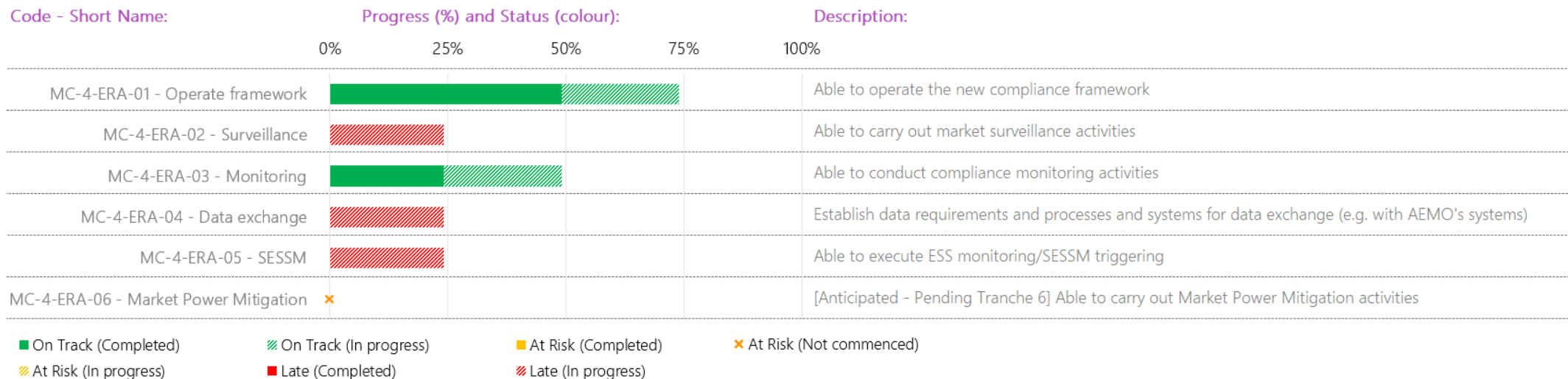
MC-1-NOP-07 - RoCoF: Western Power has commenced initial discussions with AEMO regarding the approach for accreditation of Western Power's RoCoF ride-through (minimum) for the transmission and distribution networks. Further discussions are required to understand the approach required to seek exemption.

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 further changes to the compliance framework that EPWA recently consulted on. The ERA understands that these recent changes are expected to be finalised early 2023. However, if these timelines are delayed then this could result in delays for this project.

MC-4-ERA-02 - Surveillance:

ERA will need to have data interfaces in place with AEMO's systems - refer to ERA-04. EPWA and ERA have recently commenced work on specifying data requirements for the new Market Surveillance Data Catalogue and this work will underpin the ERA's surveillance activities for the new market design.

MC-4-ERA-03 - Monitoring:

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. AEMO has recently provided its proposed options for the data sharing mechanism to the ERA and these are being considered by the ERA (and EPWA). ERA is currently working on identifying areas of focus for compliance monitoring in the new market. A high level overview of these focus areas will be presented at the ERA stakeholder forum in November 2022.

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. AEMO has

recently provided its proposed options for the data sharing mechanism to the ERA and these are being considered by the ERA (and EPWA).

MC-4-ERA-05 - SESSM:

Project is currently running late but is being prioritised and anticipated to be back on target over next quarter. There is also dependency on the requirement for ERA to have data interfaces in place with AEMO's systems as described above.

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

ERA is currently developing draft offer construction guidelines as required by the Market Power Mitigation framework that EPWA recently consulted on. It is anticipated that these guidelines will be subject to industry consultation prior to the end of 2022.

Key Activities Looking Forward

Key delivery activities for the next 3 months include:

- Continue system development across RTMS, WEMDE, WEMDE UI, Outage Management, MT PASA, Forecast Integration,
- Complete elaboration of deliverables for Commissioning Tests, STEM, System Operation Planning Tools and ST PASA
- Deliver documentation and/or testing opportunities as early as possible
- Publish and consult on draft strategy for Market Trial
- Progress system integration and integrated testing (to support first phase 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
6	End Nov 2022	End Jan 2023
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

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