
Five-minute settlement and global settlement

February 2021

Market Readiness Report - Round 6

Summary Report

5MS GS Market Readiness Report - Round 6

- The sixth readiness survey was administered in February 2021, allowing a period of three months after the previous survey conducted in November 2020.
- There has been consistent progress with participants project delivery, with more than half of participants at least 50-74% progressed with their overall program. The industry is generally on track with capability development and metering transition activities. Follow up is required with some participants to confirm activity status and adequacy of remediation plans.
- Confirmation of readiness status from one MP/MC with responsibility of essential meters is required for the reporting criteria of all essential industry capabilities to be satisfied.
- No major program risks were raised, and no major issues were identified on participant programs due to the AEMO retail platform delay. It was noted that the risk profile is now heightened and issues may arise if the retail platform go-live moves beyond May 2021.
- The AEMO Retail Platform deployment was rescheduled to May 2021, impacting dependent activities such as industry testing and activities in the Metering Transition Plan. The AEMO Settlement platform go-live was also rescheduled to May 2021. The rescheduling of platform deliveries is not expected to impact 5MS commencement or 5MS Market Trial, but a heightened risk profile is noted. The AEMO Bidding Platform was deployed for industry test on schedule.
- The next round of readiness reporting will commence on 6 April 2021, with the final report released on 29 April 2021.

5MS GS Essential Industry Capabilities

| Essential capability | Relevant participants | Reporting criteria met | Number of participants | | | | | |
|---|-----------------------|------------------------|------------------------|---------|------|---------------|-------------------|----------------------|
| | | | On Track | At Risk | Late | Not responded | Remediation Plan? | Escalation Required? |
| Generators and MNSPs are able to submit 5-min offers | Generators / MNSPs | Yes | 16 | 0 | 1 | 3 | No | No |
| All essential meters* are able to produce and store 5-min data | MPs | No | 9 | 0 | 1 | 0 | Yes | No |
| All essential meters* are able to produce and store 5-min data | MCs | No | 12 | 0 | 1 | 0 | Yes | No |
| All essential meters* are able to deliver 5-min metering data | MDPs | Yes | 3 | 0 | 0 | 0 | No | No |
| The 5-minute bidding and dispatch solution is deployed, including the web bidding interface | AEMO | Yes | 1 | 0 | 0 | 0 | No | No |
| The Metering Data Management (MDM) solution is deployed | AEMO | No | 0 | 1 | 0 | 0 | No | No |
| The 5-minute settlements solution is deployed | AEMO | Yes | 1 | 0 | 0 | 0 | No | No |

* Essential meters are defined as transmission connected types 1-4 meters

* Please see background section at the start of this report for more information on the reporting criteria for essential industry capabilities

| # | Status | Action | Comments |
|-----|--------|---|--|
| 6.1 | Open | AEMO to confirm progress and status of non-responding TNSP's readiness activities | One TNSP did not respond as a TNSP in this round of reporting, however provided readiness responses for the other participant types they represent. |
| 6.2 | Open | AEMO to seek clarification from generator reporting 'late' and if remediation action is successful | Participant is reporting that they expect to be on track by March 2021, and intend to commence 5-minute bidding as soon as possible during the transition period after April 2021. |
| 6.3 | Open | AEMO to monitor status of MDP reporting that their overall program is 'at risk' in round 7 of readiness reporting | AEMO to provide update in the next readiness report |
| 6.4 | Open | AEMO to follow up with TNSP reporting 'at risk' to understand timing of remediation | AEMO to provide update in the next readiness report |
| 6.5 | Open | RWG to consider if risks raised by respondents in readiness reporting should be captured as industry risks | AEMO to facilitate discussion at RWG 18 on 2 March 2021 |

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| Actions log - Round 6 | | | |
|-----------------------|--------|--|--|
| # | Status | Action | Comments |
| 6.6 | Open | AEMO to follow up with MP/MC with essential meters reporting a 'late' status to confirm timing of remediation | AEMO to follow up with participant and provide update in the next readiness report |
| 6.7 | Open | AEMO to clarify 5-minute bidding go-live approach with generators that are not planning to utilise the bidding transition period, and establish level of industry risk | AEMO to follow up with participants and provide update in the next readiness report |
| 6.8 | Open | AEMO to follow up with MP responding that 'S09 - New and replacement SAMPLE meters' is 'at risk' to confirm status and if remediation is required. | AEMO to follow up with participant and provide update in the next readiness report |
| 6.9 | Open | AEMO to follow up with MP responding that 'S01 - BULK/ Wholesale Meters', 'S02 - Type 1 - 3 Meters', and 'S03 - Subset of type 4 meters - TNI, Market Generator or SGA' is late to confirm timing on remediation and if escalation is required | Participant has noted remediation activities are underway. AEMO to follow up and provide update in the next readiness report |
| 6.10 | Open | AEMO to follow up with MP responding that 'S15 - Cross Boundary meters (KNOWN)' and 'S20 - New and replacement SAMPLE Meters' is 'at risk' to confirm status and if remediation is required. | AEMO to follow up with participant and provide update in the next readiness report |
| 6.11 | Open | AEMO to follow up with MP responding that 'S41 - MP accreditation update (for 1 Oct 2021)' is 'late' to confirm remediation and consider if escalation is required | AEMO to follow up with participant and provide update in the next readiness report |
| 6.12 | Open | AEMO to follow up with MDP responding that 'S24 - Tier 1 basic metering data' is 'late' to confirm delivery timing | AEMO met with participant, and confirmed that activities will be completed before 1 October 2021 |
| 6.13 | Open | AEMO to follow up with MDP responding that 'S14 - Type 1-3, subset of Type 4' is 'at risk' to confirm status and if remediation is required. | Participant advised that program has been delayed by two weeks. AEMO to follow up with participant and provide update in the next readiness report |
| 6.14 | Open | AEMO to follow up with MDP responding that 'S37 - Interval meter datastreams' is 'at risk' to confirm status and if remediation is required | AEMO to follow up with participant and provide update in the next readiness report |
| 6.15 | Open | AEMO to follow up with MDP responding that 'S36 - Tier 1 basic meter datastreams' is 'late' to confirm status and if remediation is required | AEMO met with participant, and confirmed late status. RWG to consider impact on UFE accuracy for distribution area. |
| 6.16 | Open | AEMO to follow up with MDP responding that 'S27 - Non-contestable metered loads' is 'late' to confirm status and if remediation is required | AEMO met with participant, and confirmed that activities will be completed before 1 October 2021 |
| 6.17 | Open | AEMO to follow up with MC responding that 'S01 - BULK/Wholesale Meters', 'S02 - Type 1-3 Meters', 'S03 - Subset of type 4 meters, TNI, Market Generator or SGA' is 'late' to confirm remediation plans and if escalation is required | Participant has noted remediation activities are underway. AEMO to follow up and provide update in the next readiness report |
| 6.18 | Open | AEMO to follow up with MC responding that 'S02 - Type 1-3 Meters' is 'at risk' to confirm remediation plans and if escalation is required | AEMO to follow up with participant and provide update in the next readiness report |

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Actions log - Round 5

| # | Status | Action | Comments |
|-----|--------|---|---|
| 5.1 | Closed | AEMO to follow up with non-responding MP/MC with essential meters to confirm program status and if remediation is required | AEMO followed up and relevant MP/MC is now responding to the latest readiness survey |
| 5.2 | Closed | AEMO to establish with generator reporting 'late' if a remediation plan or escalation is required | Generator continues to report a 'late' status and has noted they expect to be on track in March 2021. AEMO will continue to monitor the readiness responses of this participant |
| 5.3 | Closed | RWG to consider risk of cross boundary meters not appropriately configured by transition end date | Risk discussed at RWG 18 |
| 5.4 | Closed | AEMO to follow up with relevant DNSP on potential risk to delivery timelines on MTP subcategories 'S26 - Cross boundary supplies' and 'S29 - NCONUML' | Initial meeting held, with follow up meeting pending |
| 5.5 | Closed | Participants to consider impact of late delivery of MTP subcategory 'S39 – Meter installation type code', and flow on impact to overall programs | As presented at the TFG, considering that S39 is a preliminary activity in the MTP, with its transition end date now past due, AEMO considers this activity to be complete. |

Actions log - Round 4

| # | Status | Action | Comments |
|-----|--------|--|---|
| 4.1 | Closed | AEMO to follow up with relevant MPS and MCs with essential meters to confirm program status and if remediation is required | Followed up with all relevant MPs and MCs. No remediation was required on participant programs. All except one MP/MC responded appropriately in the latest reporting round |
| 4.2 | Closed | AEMO to follow up to understand generators responding with a 'late' or 'at risk' status and establish level of remediation expected | Generator that responded with a 'at risk' status reported as 'on track' in the latest round of reporting. Generator that responded with a 'late' status noted that they expect to be on track in Q1 2021 |
| 4.3 | Closed | RWG to consider impact of potential industry risks (Customer switching go-live, unknown cross boundary meters, vendor access to testing environment) | Risks discussed at RWG 17. AEMO continuing to monitor these risks |
| 4.4 | Closed | AEMO to follow up with relevant MC and confirm expected completion date of activity | Meeting held with relevant MC. Now responding as 'on track' in latest round of reporting |
| 4.5 | Closed | RWG to consider risk of cross boundary meters not appropriately configured by transition end date | Risks discussed at RWG 17. Discussion continued at RWG 18. |
| 4.6 | Closed | Participants to consider impact of late delivery of MTP S39, and flow on impact to overall programs | Relevant participants were asked at the RWG to provide further details when responding to the next survey. Four participants are still responding that they are 'late' to complete this activity, however no major impact to programs have been flagged |
| 4.7 | Closed | Participants to schedule address accreditation requirements and suitable remediation approach | All participants are reporting as 'on track' for accreditation requirements in the latest round of reporting |

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Supplementary Information

Background

To monitor the industry's level of readiness for the various SMS and GS transitional activities and commencements, AEMO will co-ordinate readiness reporting across the industry in accordance with the Readiness Reporting Plan.¹ NEM participants are invited to submit readiness information on a periodic basis through a Readiness Assessment Questionnaire. The results from these surveys are presented in this Market Readiness Report.

Readiness criteria

Participants' level of readiness will be assessed through general readiness criteria, specific readiness criteria, and also their status against the Metering Transition Plan (MTP).²

| Criteria | Overview | Response options | Results presentation |
|---------------------------------|--|---|---|
| General Readiness Criteria | Criteria related to the level of program establishment of participant programs. | Participants are asked to provide Yes / No responses to a set of program establishment questions e.g. if funding is secured. | All Yes and No responses are presented in a bar chart. All responses are unweighted. |
| Specific Readiness Criteria | Criteria that tracks the implementation of specific market commencement requirements for each participant type. Hence, each participant type will have their own set of specific readiness criteria e.g. generators' ability to submit 5 min bids by 1 October 2021, retailers ability to receive and reconcile 5 minute data. | Participants (including AEMO) are asked to report their status towards fulfilling these requirements by market commencement (on track, at risk or late), and also report on progress in 25% increments. | Participants' status and progression towards specific criteria are illustrated in a bar chart. Each segment of the bar represents 25% progress. The bar will progressively fill with solid colours as the criteria is completed. The bar chart will be coloured red, amber or green based on if the criteria is on track, at risk or late. All responses are unweighted. |
| Metering Transition Plan Status | Status monitoring of defined activities in the MTP. The MTP outlines the expected activities, responsibilities, timeframes, as well as other necessary elements required for completion of the SMS and GS metering transition. | Participants are asked to provide their status towards completing activities by the transition end date for each defined sub-category in the MTP (Complete, On track (started), On track (not started), At risk, Late, n/a). Given that a sub-category has multiple activities supported by various participant types, respondents were only expected to provide status reporting for activities that were relevant to their participant type. | All responses are presented in a bar chart. All responses are unweighted. |

Participant industry coverage

The approach to gauging industry coverage for each readiness report is described below for each participant type.

| Participant type | Industry coverage methodology | Data source |
|------------------|---|--|
| Generator | Generator respondents' capacity / NEM capacity | AER 2019 state of the market report - generation capacity data |
| Retailer | Retailer respondents' settlement vol. / NEM vol. | AEMO settlement data - 2019 calendar year |
| MP | MP respondents' total type 1-4 NMIs/ total type 1-4 NMIs | AEMO metering data |
| MDP | MDP respondents' total type 1-4 NMIs/ total type 1-4 NMIs | AEMO metering data |
| MC | MC respondents' total type 1-4 NMIs/ total type 1-4 NMIs | AEMO metering data |
| DNBP | Number of DNBP survey respondents / Total DNBP | AER 2019 state of the market report - DNBP data |
| TNSP | Number of TNSPs survey respondents / Total TNSPs | AER 2019 state of the market report - TNSP data |

¹ Readiness documents, including the Industry Readiness Reporting Plan, and Metering Transition Plan can be accessed at: <https://www.aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/readiness-workstream/key-readiness-documents>

² Ibid

Essential industry capabilities for SMS and GS commencements

The essential minimum capabilities for SMS and GS commencements are described below for each relevant participant type.

| Essential capability | Relevant participant | Reporting Criteria |
|---|----------------------|---|
| Generators and MNSPs are able to submit 5-min offers | Generators / MNSPs | a) Generators representing >80% of regional load are responding to Industry Readiness Surveys, and; b) Generators representing >80% of regional load are reporting 'On-track' to be able to submit 5-minute granularity offers |
| All essential meters* are able to produce and store 5-min data | MPs | a) 100% of MPs associated to essential metering are responding to Industry Readiness Surveys, and; b) 100% of MPs associated to essential metering are reporting 'On-track' for all applicable MTP activities |
| All essential meters* are able to produce and store 5-min data | MCs | a) 100% of MCs associated to essential metering are responding to Industry Readiness Surveys, and; b) 100% of MCs associated to essential metering are reporting 'On-track' for all applicable MTP activities |
| All essential meters* are able to deliver 5-min metering data | MDPs | a) 100% of MDPs associated to essential metering are responding to Industry Readiness Surveys, and; b) 100% of MDPs associated to essential metering are reporting 'On-track' for all applicable MTP activities (S01) |
| The 5-minute bidding and dispatch solution, including the web bidding interface is deployed | AEMO | a) AEMO reporting 'On-track' for all Bidding/Dispatch reporting criteria and milestones |
| The Metering Data Management (MDM) solution is deployed | AEMO | a) AEMO reporting 'On-track' for all MDM Milestones |
| The 5-minute settlements solution is deployed | AEMO | a) AEMO reporting 'On-track' for all Settlement Milestones |

* Essential meters are defined as transmission connected types 1-4 meters

Disclaimer

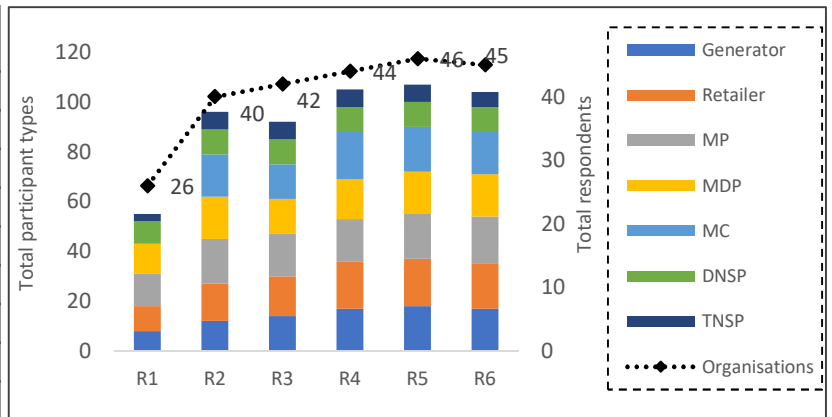
This market readiness report has been prepared by AEMO at the request of the industry for the purpose of tracking and monitoring the industry's level of readiness for SMS and GS. This report contains self-reported readiness information provided by participants, and may not be free from errors or omissions. Accordingly, to the maximum extent permitted by law, AEMO makes no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information published here; and are not liable (whether by reason of negligence or otherwise) for any statements, opinions or other matters contained in or derived from this information, or any omissions from it, or in respect of a person's use of the information.

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Submissions

Strong survey coverage, with 45 respondents representing 86 -100% of the industry. Response rate across all participant types provides representative industry coverage.

| | This round | Prev. round | Δ (#) | Trend |
|-------------------|------------|-------------|-------|-------|
| Respondents | 45 | 46 | -1 | ↓ |
| Participant types | 104 | 107 | -3 | ↓ |
| Generator | 17 | 18 | -1 | ↓ |
| Retailer | 18 | 19 | -1 | ↓ |
| MP | 19 | 18 | 1 | ↑ |
| MDP | 17 | 17 | 0 | - |
| MC | 17 | 18 | -1 | ↓ |
| DNSP | 10 | 10 | 0 | - |
| TNSP | 6 | 7 | -1 | ↓ |



Industry coverage

| | % Industry coverage | Industry coverage methodology |
|-----------|---------------------|---|
| Generator | 95.2% | Generator respondents' capacity / NEM capacity |
| Retailer | 93.5% | Retailer respondents' settlement vol. / NEM vol. |
| MP | 99.9% | MP respondents' total type 1-4 NMIs/ total type 1-4 NMIs |
| MDP | 100.0% | MDP respondents' total type 1-4 NMIs/ total type 1-4 NMIs |
| MC | 99.8% | MC respondents' total type 1-4 NMIs/ total type 1-4 NMIs |
| DNSP | 100% | Number of DNSP survey respondents / Total DNSPs |
| TNSP | 86% | Number of TNSP survey respondents / Total TNSPs |

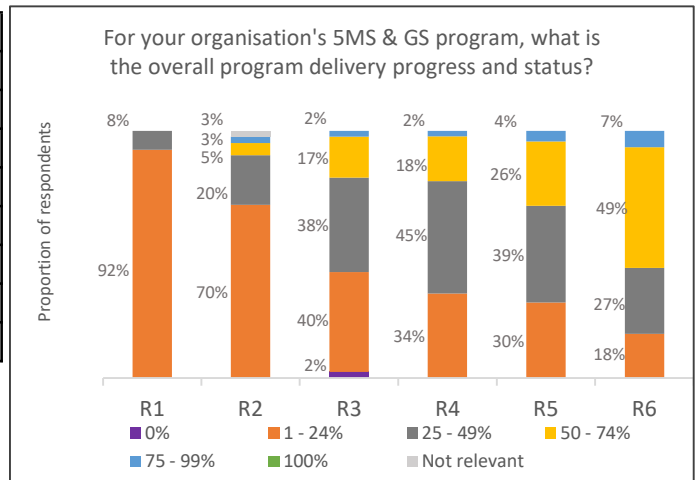
| # | Topic | Observation / Actions |
|---|--------------------------------------|---|
| 1 | Response rate, All participant types | A total of 45 organisations responded to the sixth round of readiness reporting, representing a minor drop in the response rate. Response rate across all participant types provides representative industry coverage. |
| 2 | Response rate, All participant types | Coverage across the industry for all participant types ranges from 86% to 100%. This exceeds the 80% coverage threshold for reporting against essential criteria. |
| 3 | Response rate, TNSP | One TNSP did not respond as a TNSP in this round of reporting, however provided readiness responses for the other participant types they represent. Action 6.1: AEMO to confirm progress and status of non-responding TNSP's readiness activities |

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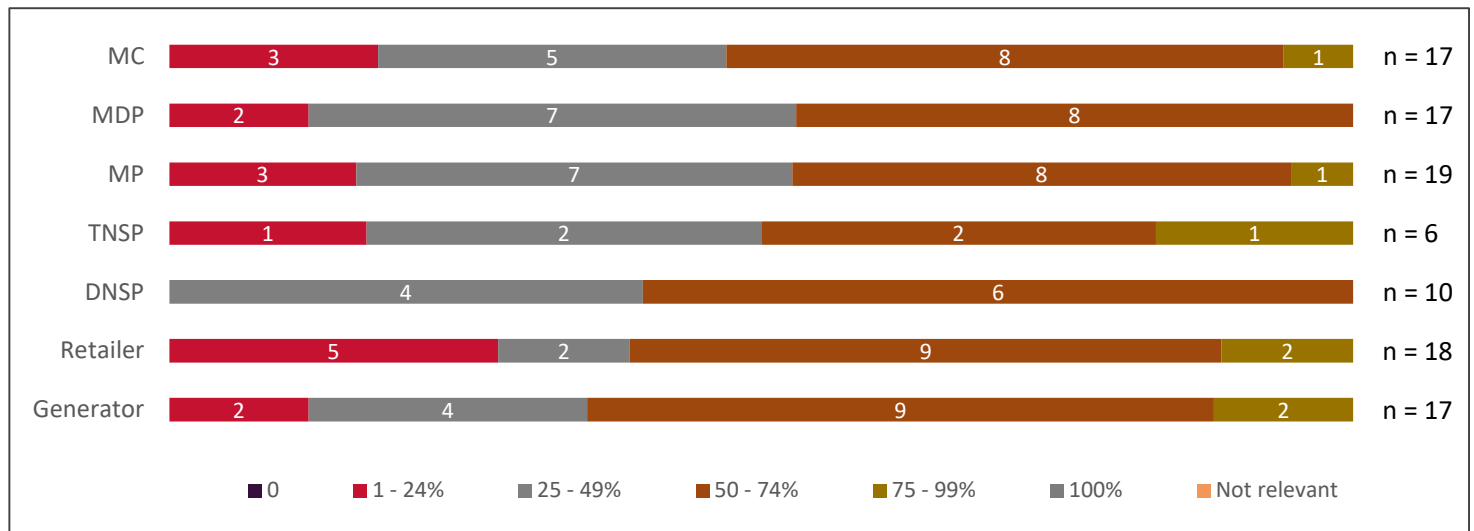
Overall program delivery progression, by reporting round

More than half of participants are now at least 50-74% progressed with their overall program, increasing from 30% to 56% between rounds. One participant is reporting that their overall program is 'late', and two participants are reporting 'at risk'. All three participants that are not on-track have noted recovery actions.

| | Round 1 | Round 2 | Round 3 | Round 4 | Round 5 | Round 6 |
|--------------|---------|---------|---------|---------|---------|---------|
| 0% | 0% | 0% | 2% | 0% | 0% | 0% |
| 1 - 24% | 92% | 70% | 40% | 34% | 30% | 18% |
| 25 - 49% | 8% | 20% | 38% | 45% | 39% | 27% |
| 50 - 74% | 0% | 5% | 17% | 18% | 26% | 49% |
| 75 - 99% | 0% | 3% | 2% | 2% | 4% | 7% |
| 100% | 0% | 0% | 0% | 0% | 0% | 0% |
| n/a | 0% | 3% | 0% | 0% | 0% | 0% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |



Participants' overall program delivery progression, by participant type - Round 6



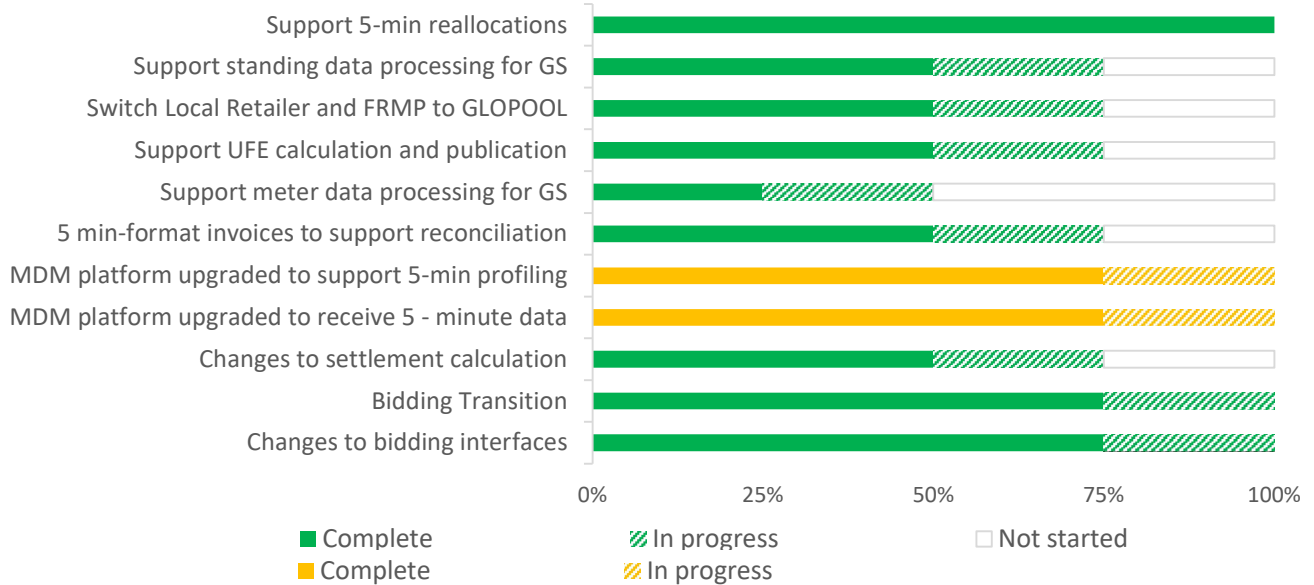
| # | Topic | Observation / Actions |
|---|--------------------------------------|--|
| 4 | Overall Participant Program Progress | More than half of participants are now at least 50-74% progressed with their overall program, increasing from 30% to 56% between rounds. Majority of participants are on track to participate in market trials. |
| 5 | Overall Participant Program Status | <p>Almost all participants are reporting that their overall program is on track. One generator continued to flag that their overall program is 'late', noting that they expect to be on track by March 2021 and intend to commence transition to 5-minute bidding in April.</p> <p>Action 6.2: AEMO to seek clarification from generator reporting 'late' and if remediation action is successful</p> |
| 6 | Overall Participant Program Status | <p>One MDP with no essential meters reported that their program 'at risk', noting a two week delay and action taken to ensure further delay is avoided.</p> <p>Action 6.3: AEMO to monitor status of MDP reporting that their overall program is 'at risk' in round 7 of readiness reporting</p> |
| 7 | Overall Participant Program Status | <p>One TNSP with essential meters reported that their overall program is 'at risk', noting that a recovery plan is in place.</p> <p>Action 6.4: AEMO to follow up with TNSP reporting 'at risk' to understand timing of remediation</p> |

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| # | Topic | Observation / Actions |
|----|--------------|---|
| 8 | Raised risks | <p>Two participants noted that their program will be at risk if Option 1 of AEMO's retail platform deferral is not realised, and also highlighted that the reduced timeline between platform go-live and 5MS Market Trials allows for less time to resolve any issues.</p> <p>Action 6.5: RWG to consider if risks raised by respondents in readiness reporting should be captured as industry risks</p> |
| 9 | Raised risks | <p>One participant noted that there is an increased risk that the of quantum of UFE is not being fully understood due to the retail platform go-live delay.</p> <p>Action 6.5: RWG to consider if risks raised by respondents in readiness reporting should be captured as industry risks</p> |
| 10 | Raised risks | <p>One participant noted that there is a risk that many participants will leave the initiation of many transition activities to the last possible moment leading to congestion in market / participant system.</p> <p>Action 6.5: RWG to consider if risks raised by respondents in readiness reporting should be captured as industry risks</p> |
| 11 | Raised risks | <p>One participant raised a risk of not having a single source of truth for Metering Rollout Plans, and requested that AEMO share rollout plans from consenting participants.</p> <p>Action 6.5: RWG to consider if risks raised by respondents in readiness reporting should be captured as industry risks</p> |
| 12 | Raised risks | <p>One participant noted that there is confusion among the industry regarding the methodology and timeline of updating Meter Read Type Codes</p> <p>Action 6.5: RWG to consider if risks raised by respondents in readiness reporting should be captured as industry risks</p> |

5MS GS Market Readiness Report - Round 6

AEMO Readiness Criteria



| # | Topic | Observation / Actions |
|---|-------------------------|---|
| 7 | AEMO Readiness Criteria | The AEMO Retail Platform deployment was rescheduled to May 2021, impacting dependent activities such as industry testing and activities in the Metering Transition Plan. The AEMO Settlement platform go-live was also rescheduled to May 2021. The rescheduling of platform deliveries is not expected to impact 5MS commencement or 5MS market trial but a heightened risk profile is noted. The AEMO Bidding Platform was deployed for industry testing on schedule. |

5MS GS Essential Industry Capabilities

| Essential capability | Relevant participants | Reporting criteria met | Number of participants | | | | | |
|---|-----------------------|------------------------|------------------------|---------|------|---------------|-------------------|----------------------|
| | | | On Track | At Risk | Late | Not responded | Remediation Plan? | Escalation Required? |
| Generators and MNSPs are able to submit 5-min offers | Generators / MNSPs | Yes | 16 | 0 | 1 | 3 | No | No |
| All essential meters* are able to produce and store 5-min data | MPs | No | 9 | 0 | 1 | 0 | Yes | No |
| All essential meters* are able to produce and store 5-min data | MCs | No | 12 | 0 | 1 | 0 | Yes | No |
| All essential meters* are able to deliver 5-min metering data | MDPs | Yes | 3 | 0 | 0 | 0 | No | No |
| The 5-minute bidding and dispatch solution is deployed, including the web bidding interface | AEMO | Yes | 1 | 0 | 0 | 0 | No | No |
| The Metering Data Management (MDM) solution is deployed | AEMO | No | 0 | 1 | 0 | 0 | No | No |
| The 5-minute settlements solution is deployed | AEMO | Yes | 1 | 0 | 0 | 0 | No | No |

* Essential meters are defined as transmission connected types 1-4 meters

* Please see background section at the start of this report for more information on the reporting criteria for essential industry capabilities

| # | Topic | Observation / Actions |
|----|---------------------------------|--|
| 13 | Submit 5 min offers, Generators | One generator reported a 'late' status for their readiness to submit 5-min offers, noting that they expect to be on track by March 2021 and intend to commence transition to 5-minute bidding in April. |
| 14 | Submit 5 min offers, Generators | Three generators that contribute materially (>1%) to the NEM did not respond to the survey, including one generator in Queensland that contributes over 10% of load. However, generators that responded in Round 5 represent over 80% of capacity and load in each NEM region (using 2019 data), therefore satisfying the coverage criteria. |
| 15 | Essential meters, MP, MC | One MP/MC reported a late status for MTP activities relating to essential meters, however it was noted that there is a plan to deliver by the target dates. Action 6.6: AEMO to follow up with MP/MC with essential meters reporting a 'late' status to confirm timing of remediation |

5MS GS Market Readiness Report - Round 6

COVID-19 Response

Compared to your response in the previous reporting round (November 2020), have recent developments in the COVID-19 situation or your program's response changed your ability to implement 5MS and GS?

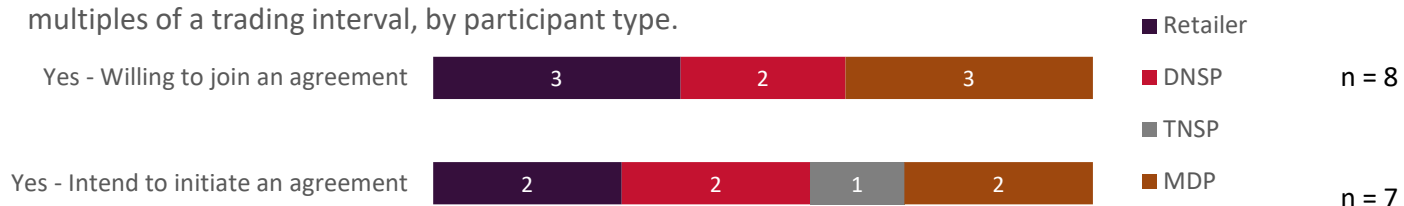


Early Delivery of 5-minute Data

Are you intending to enter into agreements to deliver or receive metering data in sub-multiples of a trading interval (NER Chapter 7.10.5)?



Participants intending to enter into agreement to deliver or receive metering data in sub-multiples of a trading interval, by participant type.



Bidding Transition Period

Does your organisation plan to commence 5-minute bidding during the bidding transition period (1 Apr 2021 to 30 Sep 2021) ?



Does your organisation plan to utilise the 5MS Bidding Service pre-production environment for industry testing?



Early Delivery of 5-minute Data

| # | Topic | Observation / Actions |
|----|--|--|
| 16 | COVID-19 Response, All participants | Compared to the previous round of reporting, two participants were experiencing minor changes in their ability to implement 5MS and GS due to COVID-19. One participant noted major changes and impact on resources. The remaining participants reported no change. No impact was noted against overall program progression. |
| 17 | Early delivery of 5-minute data, (Retailers, DNSPs, TNSPs, MDPs) | One MDP that previously was not intending to join agreements to deliver 5-minute metering data before 1 October 2021 is now willing to enter into agreements, increasing the number of MDPs willing to deliver 5-minute data early to five. The number of participants that intend to initiate an agreement in this round of reporting decreased, due to three participants that previously reported they would initiate agreements in round 5 of reporting not responding in round 6 of reporting. |
| 18 | Bidding Transition Period, Generators | Majority of generators plan to participate in the bidding transition, with 12 out of 17 generators reporting that they will commence bidding during the bidding transition period. 14 out of 17 generators plan to utilise the pre-production environment for industry testing. However, there are critical generators that are not intending to participate in the bidding transition and/or utilise the pre-production environment for testing. Action 6.7: AEMO to clarify 5-minute bidding go-live approach with generators that are not planning to utilise the bidding transition period, and establish level of industry risk |

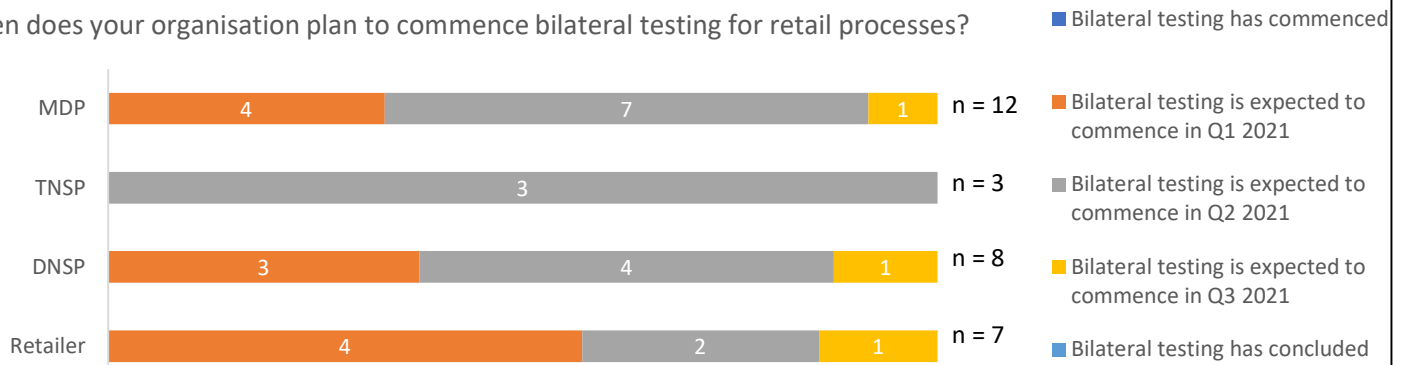
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Bilateral testing for retail processes

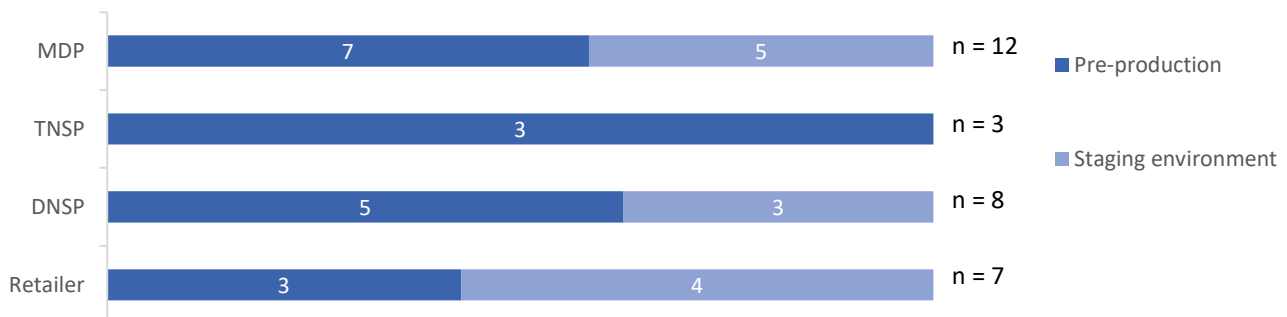
Does your organisation intend to conduct bilateral testing for retail processes?



When does your organisation plan to commence bilateral testing for retail processes?



In which environment does your organisation plan to conduct bilateral testing for retail processes?



| # | Topic | Observation / Actions |
|----|--|--|
| 19 | Bilateral testing, (Retailer, DNSP, TNSP, MDP) | Majority of MDPs (12/17) and DNSPs (8/10) intend to conduct bilateral testing for retail processes. Half of TNSPs (3/6) and just under half (7/18) of retailers intend to conduct bilateral testing for retail processes. |
| 20 | Bilateral testing, (Retailer, DNSP, TNSP, MDP) | No participant has commenced bilateral testing for retail processes, with most participants commencing in Q2 2021, some commencing in Q1 2021, and only two participants planning to commence bilateral testing in Q3 2021. |
| 21 | Bilateral testing, (Retailer, DNSP, TNSP, MDP) | There is a generally even split in the number of participants that plan to use the staging environment or pre-production environment for bilateral testing of retail processes. All TNSPs that intend to conduct bilateral testing plan to use the pre-production environment. |

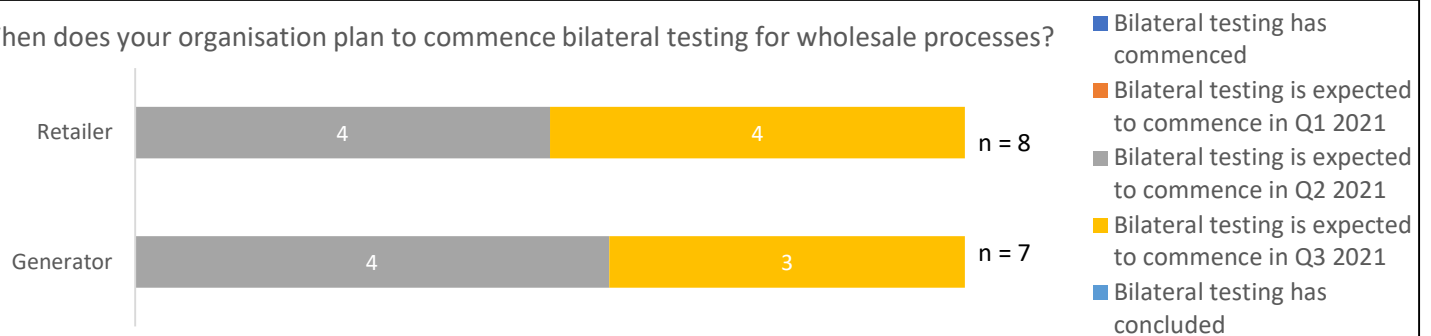
5MS GS Market Readiness Report - Round 6

Bilateral testing for wholesale processes

Does your organisation intend to conduct bilateral testing for wholesale processes (e.g. bidding, settlements)?



When does your organisation plan to commence bilateral testing for wholesale processes?



In which environment does your organisation plan to conduct bilateral testing for wholesale processes?



| # | Topic | Observation / Actions |
|----|--|---|
| 22 | Bilateral testing, (Retailer, Generator) | Just under half of generators (7/17) and retailers (8/18) intend to conduct bilateral testing for wholesale processes. |
| 23 | Bilateral testing, (Retailer, Generator) | No participant has commenced bilateral testing for wholesale processes, with an even split of participants commencing in Q2 2021 and Q3 2021. |
| 24 | Bilateral testing, (Retailer, Generator) | Most retailers (6/8) and generators (6/7) conducting bilateral testing for wholesale processes plan to use the pre-production environment. |

5MS GS Market Readiness Report - Round 6

Retailers

Number of respondents

18

% Industry coverage

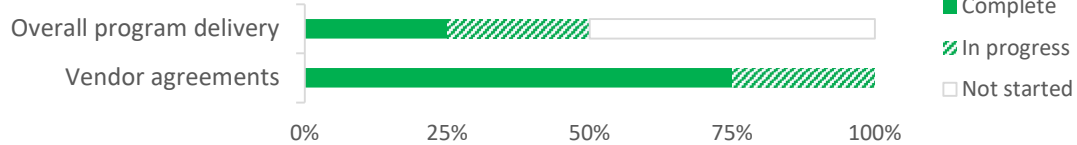
93%

Overall Progress and Status

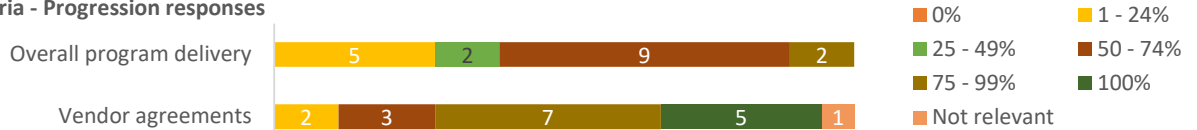
Retailers are reporting as on track, with their overall programs on average 25-49% complete.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

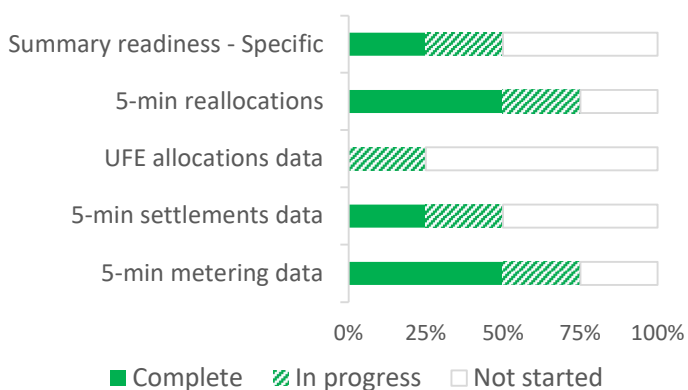


General criteria - Yes/No responses

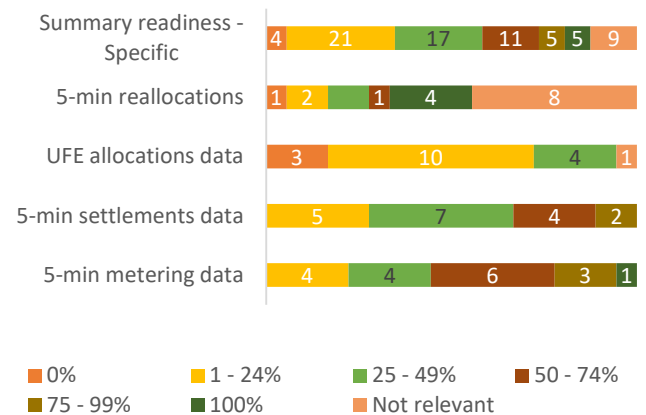


Specific Readiness Criteria

Specific criteria - Average progression



Specific criteria - Progression responses



| # | Topic | Observation / Actions |
|----|--|---|
| 25 | General criteria (Overall program delivery), Retailers | Retailers are on average 25-49% progressed with their overall 5MS and GS program, with nine out of 18 retailers now 50-74% progressed. |
| 26 | Specific criteria, Retailers | Retailers are reporting a wide range of responses when reporting on progression towards developing specific capabilities for 5MS and GS. They are 25-49% progressed on average, and are generally on track. Retailers are reporting that they are most progressed with developing capabilities for 5-min metering data and 5-min reallocations, and the least progressed with developing capabilities for UFE allocations data. |

5MS GS Market Readiness Report - Round 6

Generators

Number of respondents

17

% Industry coverage

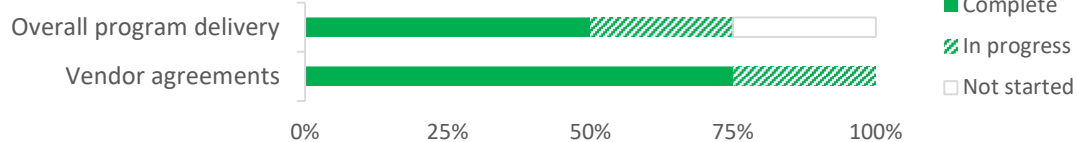
95%

Overall Progress and Status

Generators are generally reporting as on track, with their overall programs on average 50-74% complete and progressing by one quartile compared to the previous round of reporting. One generator reported a 'late' status, noting that they expect to be on track in March 2021.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

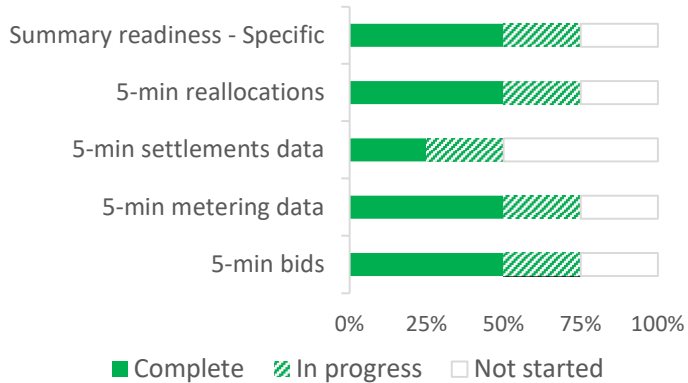


General criteria - Yes/No responses

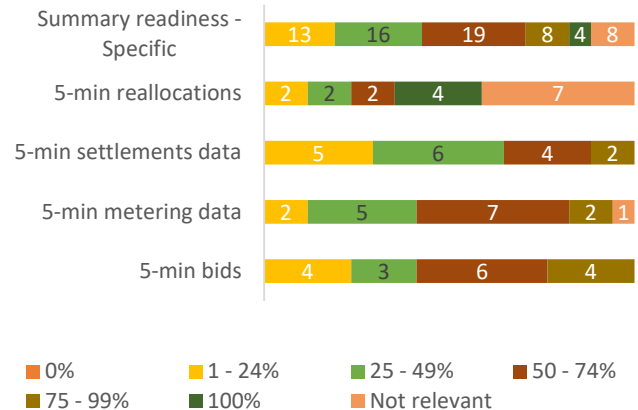


Specific Readiness Criteria

Specific criteria - Average progression



Specific criteria - Progression responses



| # | Topic | Observation / Actions |
|----|-------------------------------|--|
| 27 | Specific criteria, Generators | <p>Generators are reporting a wide range of responses when reporting on progression towards developing specific capabilities for 5MS and GS. They are 50-74% progressed on average, progressing by one quartile compared to the previous round of reporting. One generator continued to flag that their overall program is 'late', noting that they expect to be on track by March 2021 and intend to commence transition to 5-minute bidding in April.</p> <p>Action 6.1: AEMO to seek clarification from generator reporting 'late' and if remediation action is successful</p> |
| 28 | Specific criteria, Generators | <p>The average reported progression on 5-minute bids and 5-minute metering data increased by one quadrant, from an average of 25-49% progressed to 50%-74% progressed.</p> |

5MS GS Market Readiness Report - Round 6

TNSPs

Number of respondents

6

% Industry coverage

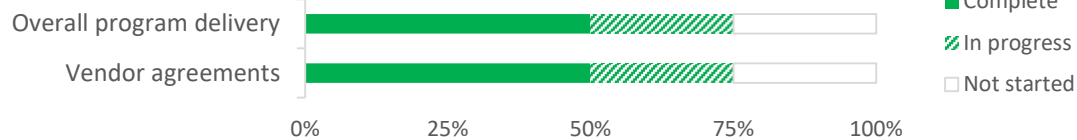
86%

Overall Progress and Status

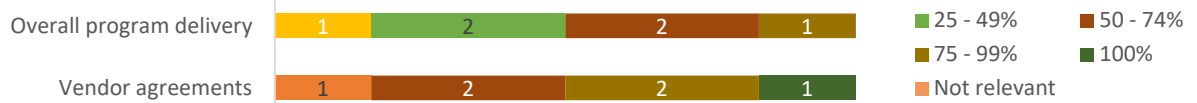
TNSPs are generally reporting as on track, with their overall programs on average 50-74% complete and progressing by one quartile compared to the previous round of reporting. One TNSP reported that their program is 'at risk', and noted that a recovery plan is in place.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

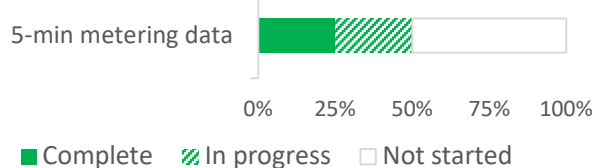


General criteria - Yes/No responses

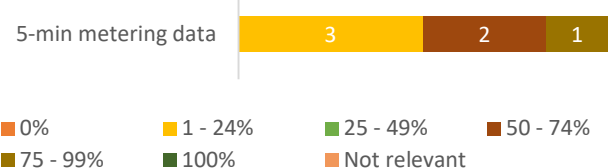


Specific Readiness Criteria

Specific criteria - Average progression



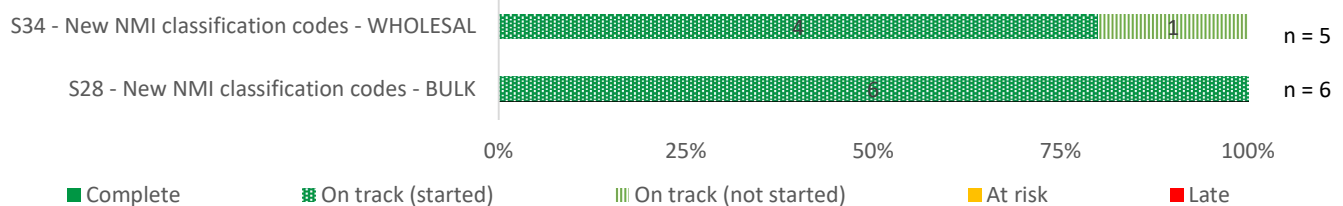
Specific criteria - Progression responses



Metering Transition Plan Criteria

MSATS Standing Data Creation and Maintenance

MTP criteria summary - TNSP



| # | Topic | Observation / Actions |
|----|--------------------------|---|
| 29 | Specific Criteria, TNSPs | TNSPs are on average 50-74% progressed with their overall program, progressing by one quartile compared to the previous round of reporting. One TNSP reported that their program is 'at risk', noting that a recovery plan is in place. Action 6.3: AEMO to follow up with TNSP reporting 'at risk' to understand timing of remediation |
| 30 | MTP Criteria, TNSPs | TNSPs are reporting that MTP activities are all on track. Note if a TNSP responded that a MTP sub-category is not relevant to them their response is omitted from the results. |
| 31 | Vendor agreements, TNSP | One TNSP reported that vendor agreements were not relevant to them, reflecting a 0% progression rate. |
| 32 | Response rate, TNSP | One TNSP did not respond as a TNSP in this round of reporting, however provided readiness responses for the other participant types they represent. Action 6.1: AEMO to confirm progress and status of non-responding TNSP's readiness activities |

5MS GS Market Readiness Report - Round 6

DNSPs

Number of respondents

10

% Industry coverage

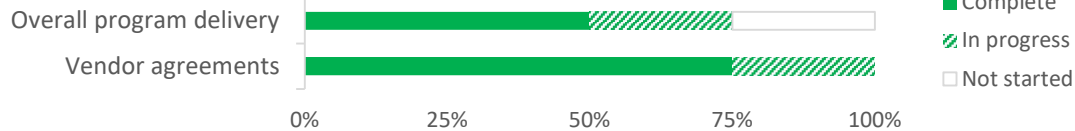
100%

Overall Progress and Status

DNSPs are reporting as on track, with programs on average 50-74% complete and progressing by one quartile compared to the previous round of reporting. All DNSPs are reporting as on track.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

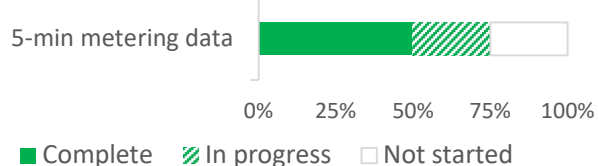


General criteria - Yes/No responses

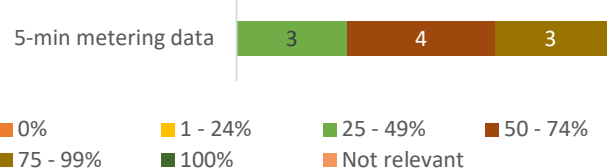


Specific Readiness Criteria

Specific criteria - Average progression

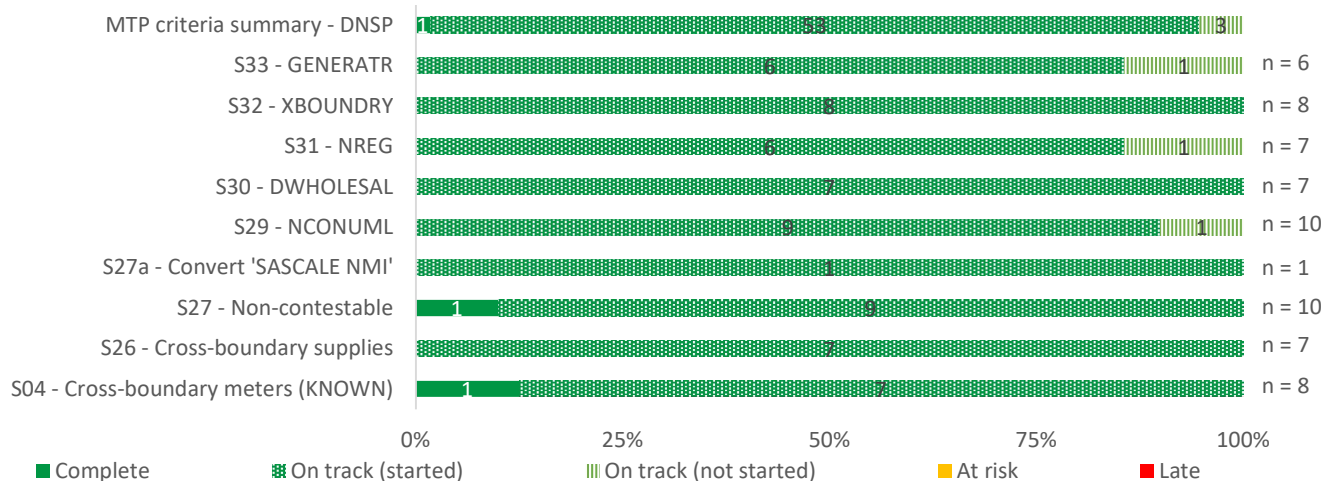


Specific criteria - Progression responses



Metering Transition Plan Criteria

MSATS Standing Data Creation and Maintenance



| # | Topic | Observation / Actions |
|----|--------------------------|--|
| 33 | Specific Criteria, DNSPs | DNSPs are 50-74% progressed on average with their overall program, progressing by one quadrant compared to the previous round. All DNSPs are all reporting on track. |
| 34 | MTP Criteria, DNSPs | <p>DNSPs are reporting that MSATS Standing Data Creation and Maintenance activities in the MTP are on track.</p> <p>Note if a DNSP responded that a MTP sub-category is not relevant to them their response is omitted from the results.</p> |

5MS GS Market Readiness Report - Round 6

MPs

Number of respondents

19

% Industry coverage

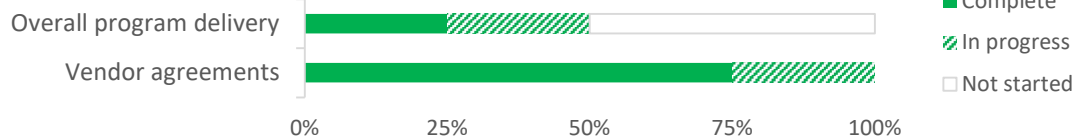
100%

Overall Progress and Status

MPs are generally reporting as on track, with programs on average 25-49% complete. Two MPs are reporting 'at risk' and 'late' statuses for some MTP activities. One MP reported that they have completed all MP related MTP activities for Tranche 1 meters.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

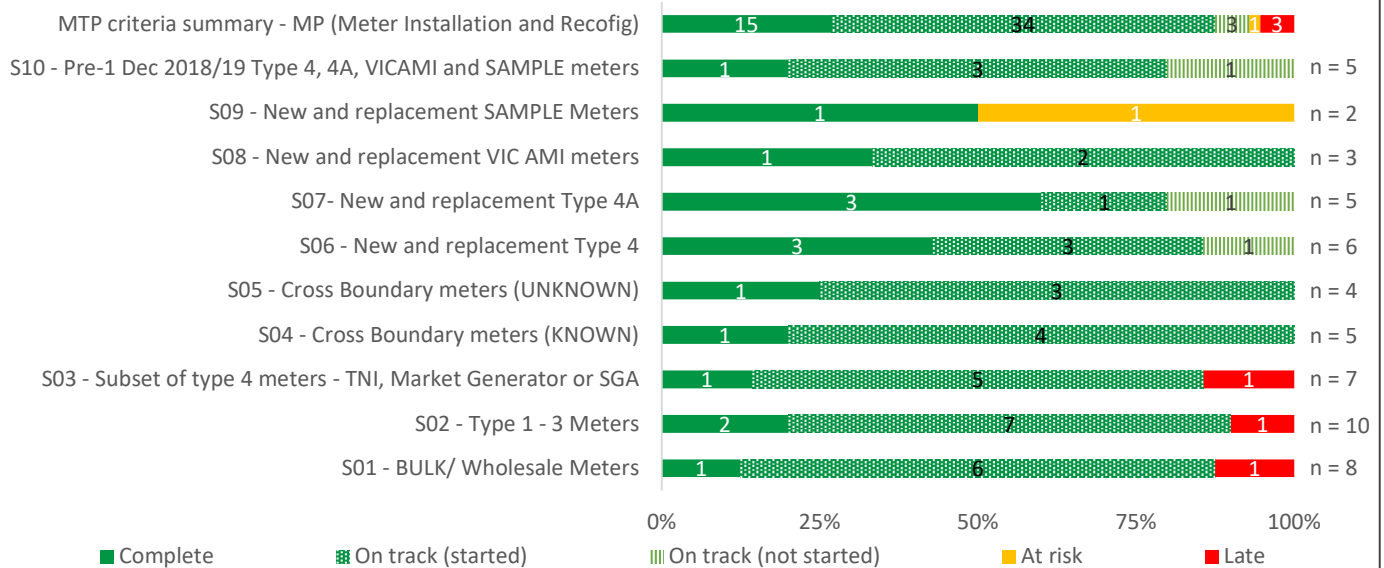


General criteria - Yes/No responses



Metering Transition Plan Criteria

Meter Installation and Reconfiguration



| # | Topic | Observation / Actions |
|----|--|---|
| 35 | MTP Criteria (Meter Installation and reconfiguration), MPs | One MP reported an 'at risk' status for MTP activities relating to S09 - New and replacement SAMPLE meters. Action 6.8: AEMO to follow up with MP responding that 'S09 - New and replacement SAMPLE meters' is 'at risk' to confirm if remediation is required. |
| 36 | MTP Criteria (Meter Installation and reconfiguration), MPs | One MP reported that they have completed all MP related MTP transition activities for Tranche 1 meters (S01, S02, S03) |
| 37 | MTP Criteria (Meter Installation and reconfiguration), MPs | One MP reported an 'late' status for MTP activities relating to S01 - BULK/ Wholesale Meters, S02 - Type 1 - 3 Meters, and S03 - Subset of type 4 meters - TNI, Market Generator or SGA. It was noted that a remediation plan is in place. Action 6.9: AEMO to follow up with MP responding that 'S01 - BULK/ Wholesale Meters', 'S02 - Type 1 - 3 Meters', and 'S03 - Subset of type 4 meters - TNI, Market Generator or SGA' is late to confirm timing on remediation |

MPs

Number of respondents

19

% Industry coverage

100%

Metering Transition Plan Criteria

Meter Data Delivery

MTP criteria summary - MP (Meter Data Delivery)

S22 - Type 7 metering installations

S20 - New and replacement SAMPLE Meters

S19 - New and replacement VIC AMI meters

S18 - New and replacement Type 4A

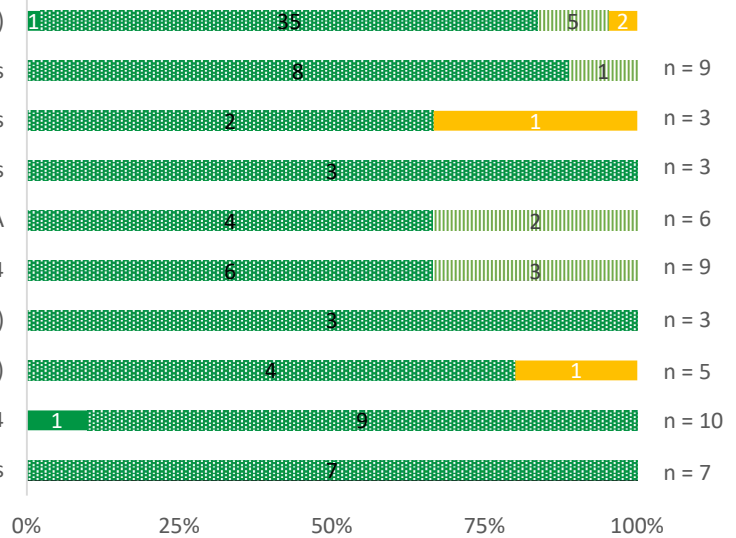
S17 - New and replacement Type 4

S16 - Cross Boundary meters (UNKNOWN)

S15 - Cross Boundary meters (KNOWN)

S14 - Type 1-3, subset of 4

S13 - BULK/Wholesale Meters



MSATS Standing Data Creation and Maintenance

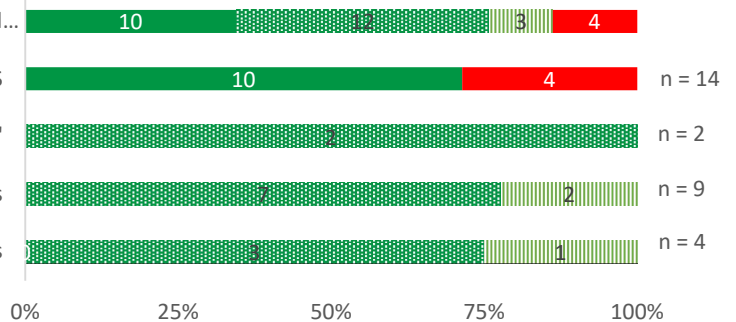
MTP criteria summary - MP (MSATS Standing Data Creation and...

S39 - Meter installation type code in MSATS

S27a - Convert 'SASCALE NMI'

S27 - Non-contestable unmetered loads

S26 - Cross-boundary supplies

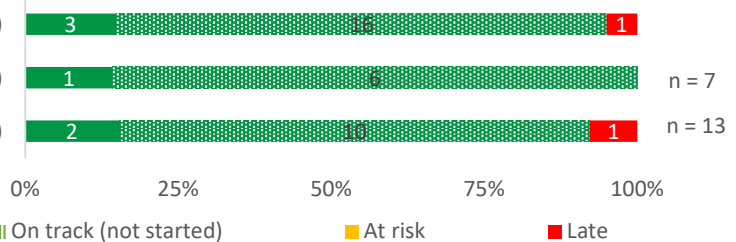


Metering Accreditation Updates

MTP criteria summary - MP (Metering Accreditation Updates)

S42 - MP accreditation update (for 1 Dec 2022)

S41 - MP accreditation update (for 1 Oct 2021)



■ Complete

■ On track (started)

■ On track (not started)

■ At risk

■ Late

| # | Topic | Observation / Actions |
|----|--|--|
| 38 | MTP Criteria (Meter Data Delivery), MPs | One MP reported an 'at risk' status for MTP activities relating to S15 - Cross Boundary meters (KNOWN), and S20 - New and replacement SAMPLE Meters. Action 6.10: AEMO to follow up with MP responding that 'S15 - Cross Boundary meters (KNOWN)' and 'S20 - New and replacement SAMPLE Meters' is 'at risk' to confirm status and if remediation is required. |
| 39 | MTP Criteria (MSATS Standing Data Creation and Maintenance), MPs | Four MPs reported a 'late' status for MTP activities relating to S39 - Meter installation type code in MSATS. AEMO considers S39 as a preliminary activity, and considers this activity to be complete given that the transition end date has past. |
| 40 | MTP Criteria (Metering Accreditation Updates), MPs | One MP reported a 'late' status for MTP activities relating to S41 - MP accreditation update (for 1 Oct 2021). Action 6.11: AEMO to follow up with MP responding that 'S41 - MP accreditation update (for 1 Oct 2021)' is 'late' to confirm remediation and consider if escalation is required |
| 41 | MTP Criteria, MPs | Note that if a MP responded that a MTP sub-category is not relevant to them their response is omitted from the results. AEMO also intends to cross reference MP responses with provided 1 March 21 rollout plans and present finding at the next TFG and RWG. |

5MS GS Market Readiness Report - Round 6

MDPs

Number of respondents

17

% Industry coverage

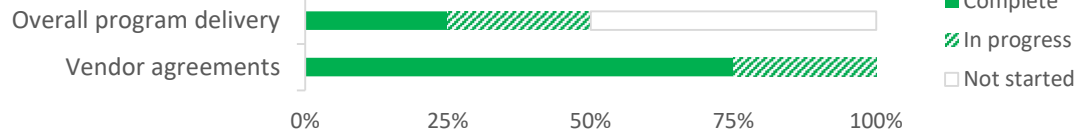
100%

Overall Progress and Status

MDPs are generally reporting as on track, with programs on average 25-49% complete. Three MDPs are reporting 'at risk' and 'late' statuses for some MTP activities.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

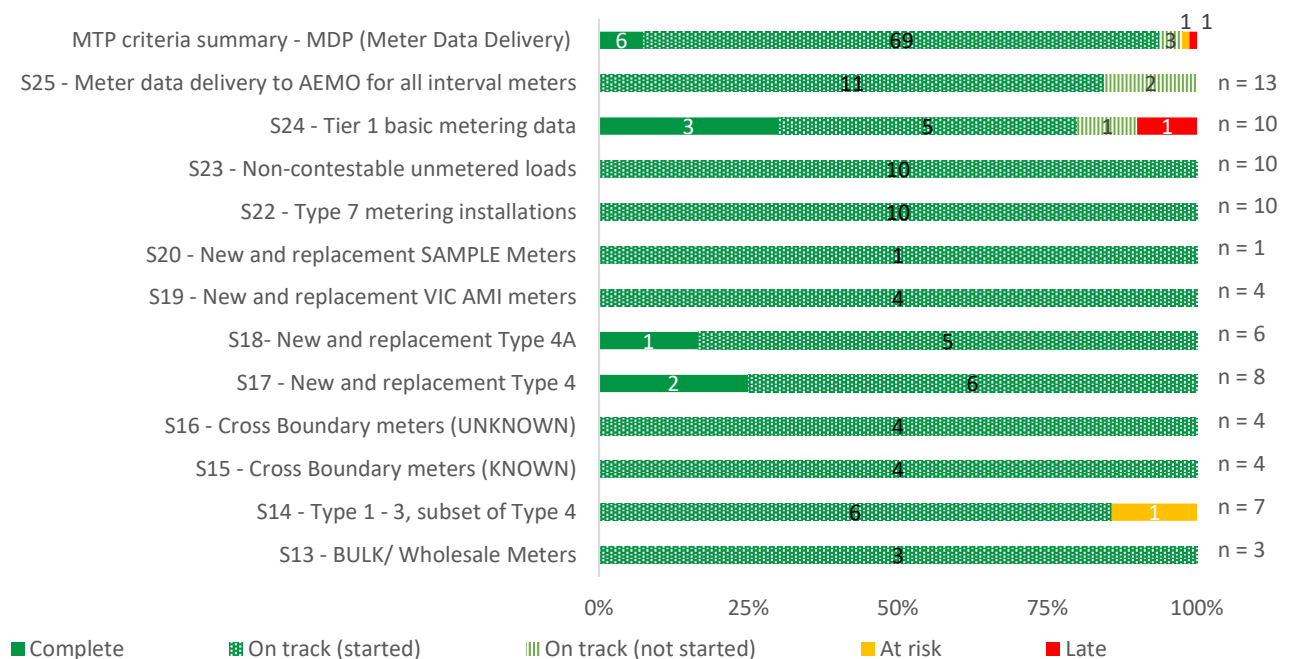


General criteria - Yes/No responses



Metering Transition Plan Criteria

Meter Data Delivery



| # | Topic | Observation / Actions |
|----|--|---|
| 42 | MTP Criteria (Meter Data Delivery), MDPs | <p>One MDP reported a 'late' status for MTP activities relating to S24 - Tier 1 basic metering data.</p> <p>Action 6.12: AEMO to follow up with MDP responding that 'S24 - Tier 1 basic metering data' is 'late' to confirm delivery timing</p> |
| 43 | MTP Criteria (Meter Data Delivery), MDPs | <p>One MDP reported an 'at risk' status for MTP activities relating to S14 - Type 1-3, subset of Type 4, noting a delay of two weeks.</p> <p>Action 6.13: AEMO to follow up with MDP responding that 'S14 - Type 1-3, subset of Type 4' is 'at risk' to confirm status and if remediation is required.</p> |

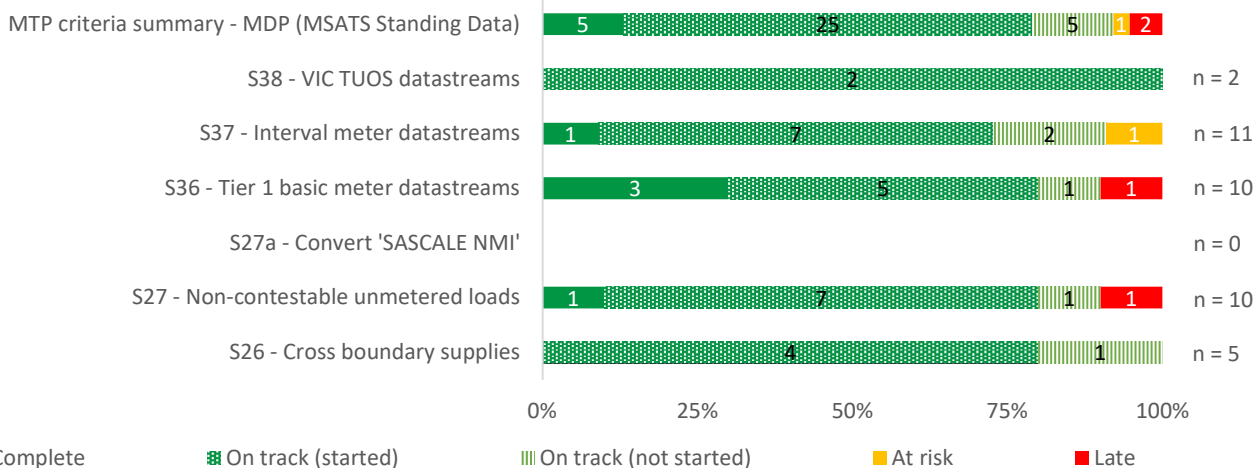
5MS GS Market Readiness Report - Round 6

MDPs

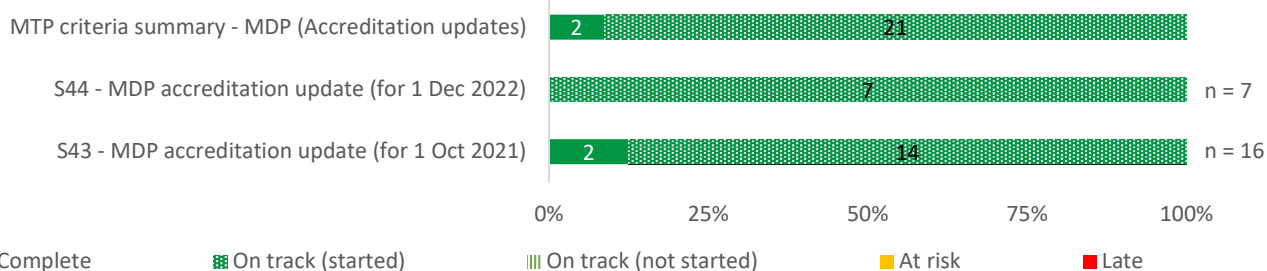
| | | | |
|-----------------------|----|---------------------|------|
| Number of respondents | 17 | % Industry coverage | 100% |
|-----------------------|----|---------------------|------|

Metering Transition Plan Criteria

MSATS Standing Data Creation and Maintenance



Metering Accreditation Updates



| # | Topic | Observation / Actions |
|----|---|---|
| 44 | MTP Criteria (MSATS Standing Data Creation and Maintenance), MDPs | One MDP reported an 'at risk' status for MTP activities relating to S37 - Interval meter datastreams. Action 6.14: AEMO to follow up with MDP responding that 'S37 - Interval meter datastreams' is 'at risk' to confirm status and if remediation is required |
| 45 | MTP Criteria (MSATS Standing Data Creation and Maintenance), MDPs | One MDP reported a 'late' status for MTP activities relating to S36 - Tier 1 basic meter datastreams. Action 6.15: AEMO to follow up with MDP responding that 'S36 - Tier 1 basic meter datastreams' is 'late' to confirm status and if remediation is required |
| 46 | MTP Criteria (MSATS Standing Data Creation and Maintenance), MDPs | One MDP reported a 'late' status for MTP activities relating to S27 - Non-contestable metered loads, however noted that they expect to deliver before Rule commencement. Action 6.16: AEMO to follow up with MDP responding that 'S27 - Non-contestable metered loads' is 'late' to confirm status and if remediation is required |
| 47 | MTP Criteria (Metering Accreditation Updates), MDPs | MDPs are reporting that all MDP related metering accreditation update activities are on track. |
| 48 | MTP Criteria, MDPs | Note that if a MDP responded that a MTP sub-category is not relevant to them their response is omitted from the results. AEMO also intends to cross reference MP responses with provided 1 March 21 rollout plans and present finding at the next TFG and RWG. |

5MS GS Market Readiness Report - Round 6

MCs

Number of respondents

17

% Industry coverage

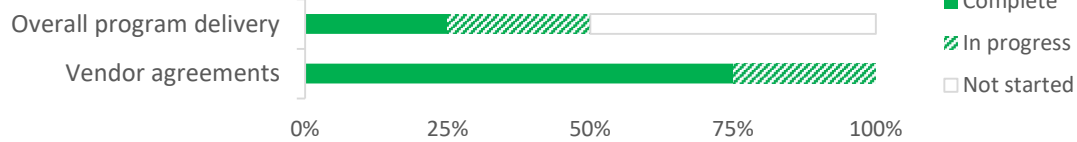
100%

Overall Progress and Status

MCs are generally reporting on track, with programs on average 25-49% complete. Two MCs are reporting 'at risk' and 'late' statuses for some MTP activities.

General Readiness Criteria

General criteria - Average progression



General criteria - Progression responses

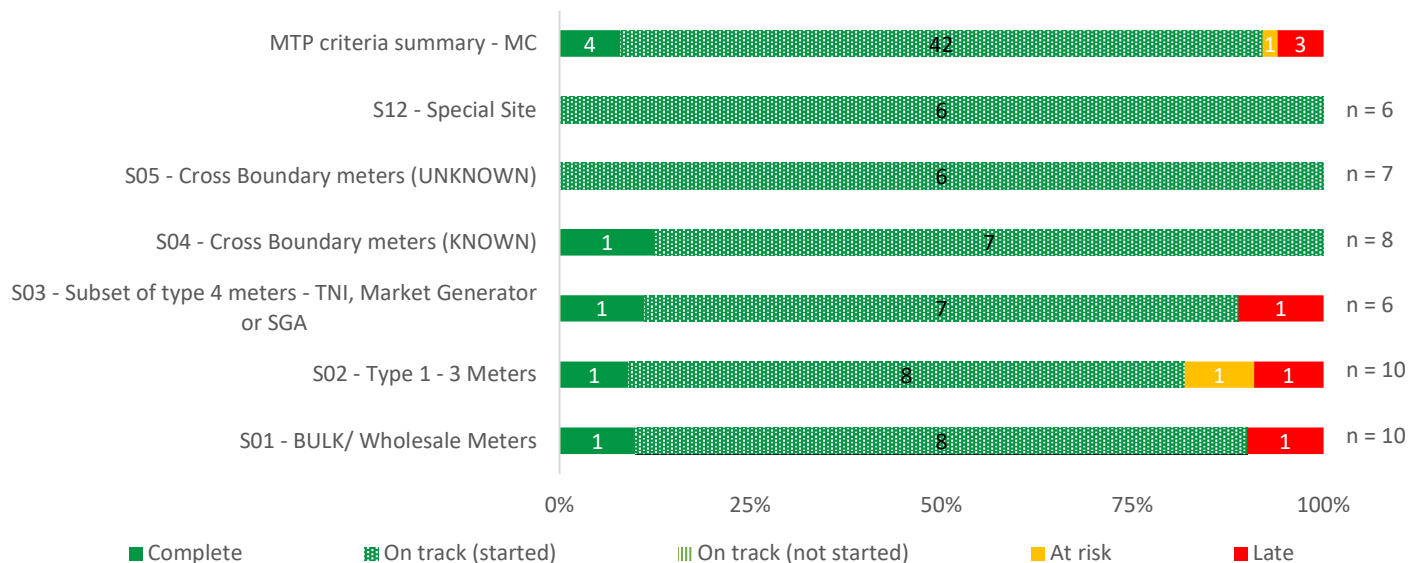


General criteria - Yes/No responses



Metering Transition Plan Criteria

Meter Installation and Reconfiguration



| # | Topic | Observation / Actions |
|----|--|--|
| 49 | MTP Criteria (Meter Installation and reconfiguration), MCs | One MC reported a 'late' status for MTP activities relating to S01 - BULK/Wholesale Meters, S02 - Type 1-3 Meters, S03 - Subset of type 4 meters, TNI, Market Generator or SGA Action 6.17: AEMO to follow up with MC responding that 'S01 - BULK/Wholesale Meters', 'S02 - Type 1-3 Meters', 'S03 - Subset of type 4 meters, TNI, Market Generator or SGA' is 'late' to confirm status and if remediation is required |
| 50 | MTP Criteria (Meter Installation and reconfiguration), MCs | One MC reported an 'at risk' status for MTP activities relating to S02 - Type 1-3 Meters. Action 6.18: AEMO to follow up with MC responding that 'S02 - Type 1-3 Meters' is 'at risk' to confirm status and if remediation is required. |
| 51 | MTP Criteria, MCs | Note that if a MC responded that a MTP sub-category is not relevant to them their response is omitted from the results. AEMO also intends to cross reference MP responses with provided 1 March 21 rollout plans and present finding at the next TFG and RWG. |

Survey Respondents

All organisations - 45

| Organisation |
|-------------------------------------|
| AGL |
| Alcoa Portland |
| Alinta Energy |
| APA |
| Arrow Energy |
| Aurora Energy |
| Ausgrid |
| AusNet Services |
| CitiPower Powercor United Energy |
| CS Energy |
| Delta Electricity |
| Electranet |
| Endeavour Energy |
| Energex and Ergon Energy |
| Energy Australia |
| Enerven Energy Infrastructure |
| ENGIE ANZ |
| ERM Power |
| Essential Energy |
| Evoenergy |
| Flow Power |
| Hydro Tasmania |
| Infigen Energy |
| Intellihub |
| Jemena |
| Macquarie Bank Limited |
| Meridian Energy |
| Metropolis Metering |
| Mondo |
| Origin Energy |
| PLUS ES |
| Powerlink Queensland |
| Powermetric |
| Red Energy and Lumo Energy |
| SA Power Networks |
| SA Water |
| Secure Meters |
| Shell Energy Australia |
| Snowy Hydro |
| Stanwell Corporation |
| TasNetworks (DNSP) |
| TasNetworks (TNSP) |
| TransGrid |
| Vector Metering |
| Yurika Metering (Metering Dynamics) |

Generators - 17

| Organisation |
|------------------------|
| AGL |
| Alinta Energy |
| APA |
| Arrow Energy |
| CS Energy |
| Delta Electricity |
| Energy Australia |
| ENGIE ANZ |
| ERM Power |
| Hydro Tasmania |
| Infigen Energy |
| Meridian Energy |
| Origin Energy |
| SA Water |
| Shell Energy Australia |
| Snowy Hydro |
| Stanwell Corporation |

Retailers - 18

| Organisation |
|----------------------------|
| AGL |
| Alcoa Portland |
| Alinta Energy |
| Aurora Energy |
| CS Energy |
| Delta Electricity |
| Energy Australia |
| ENGIE ANZ |
| ERM Power |
| Flow Power |
| Hydro Tasmania |
| Infigen Energy |
| Macquarie Bank Limited |
| Meridian Energy |
| Origin Energy |
| Red Energy and Lumo Energy |
| SA Water |
| Stanwell Corporation |

Survey Respondents

MPs - 19

| Organisation |
|-------------------------------------|
| AusNet Services |
| CitiPower Powercor United Energy |
| Endeavour Energy |
| Energex and Ergon Energy |
| Enerven Energy Infrastructure |
| Essential Energy |
| Evoenergy |
| Intellihub |
| Jemena |
| Metropolis Metering |
| Mondo |
| PLUS ES |
| Powerlink Queensland |
| Powermetric |
| SA Power Networks |
| TasNetworks (TNSP) |
| TransGrid |
| Vector Metering |
| Yurika Metering (Metering Dynamics) |

MCs - 17

| Organisation |
|-------------------------------------|
| Ausgrid |
| AusNet Services |
| CitiPower Powercor United Energy |
| Electranet |
| Evoenergy |
| Intellihub |
| Jemena |
| Metropolis Metering |
| Mondo |
| Origin Energy |
| PLUS ES |
| Powerlink Queensland |
| Powermetric |
| TasNetworks (TNSP) |
| TransGrid |
| Vector Metering |
| Yurika Metering (Metering Dynamics) |

MDPs - 17

| Organisation |
|-------------------------------------|
| AusNet Services |
| CitiPower Powercor United Energy |
| Endeavour Energy |
| Energex and Ergon Energy |
| Essential Energy |
| Evoenergy |
| Intellihub |
| Jemena |
| Metropolis Metering |
| Mondo |
| PLUS ES |
| Powermetric |
| SA Power Networks |
| Secure Meters |
| TasNetworks (DNSP) |
| Vector Metering |
| Yurika Metering (Metering Dynamics) |

TNSPs - 6

| Organisation |
|----------------------|
| AusNet Services |
| Electranet |
| Evoenergy |
| Powerlink Queensland |
| TasNetworks (TNSP) |
| TransGrid |

DNSPs - 10

| Organisation |
|----------------------------------|
| Ausgrid |
| AusNet Services |
| Citipower Powercor United Energy |
| Endeavour Energy |
| Energex and Ergon Energy |
| Essential Energy |
| Evoenergy |
| Jemena |
| SA Power Networks |
| TasNetworks (DNSP) |