

5MS & GS Readiness Working Group #14 (incl. Systems Working Group)

Monday 17th August 2020

**WebEx only: **Please disconnect from your workplace VPN
for the WebEx call****

**PLEASE NOTE THIS MEETING WILL BE RECORDED FOR THE
PURPOSE OF PREPARING MINUTES**

AEMO Competition Law Meeting Protocol

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO regarding proposed reforms or other initiatives, all participants agree to adhere to the CCA at all times and to comply with this Protocol.

Participants must arrange for their representatives to be briefed on competition law risks and obligations.

Participants in AEMO discussions **must**:

1. Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
2. Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
3. Immediately and clearly raise an objection with AEMO or the Chair of the meeting if a matter is discussed that the participant is concerned may give rise to competition law risks or a breach of this Protocol.

Participants in AEMO meetings **must not** discuss or agree on the following topics:

1. Which customers they will supply or market to
2. The price or other terms at which Participants will supply
3. Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
4. Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
5. Refusing to supply a person or company access to any products, services or inputs they require.

Under no circumstances must Participants share Competitively Sensitive Information. Competitively Sensitive Information means confidential information relating to a Participant which if disclosed to a competitor could affect its current or future commercial strategies, such as pricing information, customer terms and conditions, supply terms and conditions, sales, marketing or procurement strategies, product development, margins, costs, capacity or production planning.

Agenda

Greg Minney

Agenda (1/2) ****Please disconnect from your workplace VPN for the WebEx call****

#	TIME	AGENDA ITEM	RESPONSIBLE
1	10:00 – 10:05	Welcome, introduction and apologies	Greg Minney
2	10:05 – 10:10	Agenda	Greg Minney
3	10:10-10:20	Minutes/Actions	Greg Minney
4	10:20 – 10:25	Revised RWG scope	Greg Minney
General Update			
5	10:25 – 10:30	5MS Program Update	Greg Minney
6	10:30 – 10:35	Regulatory Roadmap update	Anne-Marie McCague
7	10:35 – 10:50	Procedure update	Simon Tu & Anne-Marie McCague
8	10:50 – 11:05	Industry readiness reporting	Austin Tan
9	11:05 – 11:15	Testing Update	Tui Grant
Dispatch / Bidding Readiness			
10	11:15 – 11:20	Dispatch / Bidding Update	Ian Devaney
11	11:20 – 11:25	Bidding Transition Plan Update	Emily Brodie

Agenda (2/2)

#	TIME	AGENDA ITEM	RESPONSIBLE
Settlements Readiness			
12	11:25 – 11:30	Settlements Update	Mark Hillaby
Retail / Metering Readiness			
13	11:30 – 11:35	Retail / Metering Update	Jim Agelopolous
14	11:35 – 11:45	Metering Transition Plan Proposed Changes	Blaine Miner
15	11:45 – 11:55	Retail Documentation and System Updates	Simon Tu & Paul Lyttle
16	11:55 – 12:05	Retail platform go-live plan	Austin Tan & Greg Minney
Meeting Closing Items			
17	12:05 – 12:10	Forward Plan and Other Business	Greg Minney
18	12:10 – 12:15	Upcoming meetings/focus groups	Anne-Marie McCague
19	12:15	Meeting Close	Greg Minney

List of Appendices

A1: L2 Readiness Milestones

A2: Dispatch Workstream Status

A3: Settlements Workstream Status

A4: Retail / Metering Workstream Status

A5: Reporting changes

A6: Standing Data Changes

A7: CATS CR Validations

Minutes & Actions

Greg Minney

RWG Actions

No.	Status	Action	Comment
12.6.1	Open	RWG to provide feedback on proposal for RWG to be expanded to include SWG members, and for the working group to take an end-to-end systems and readiness view.	Three responses. All supportive. New meeting invites for combined working group have been sent.
12.7.1	Closed	AEMO to update industry testing slides with clarifications	Complete
12.7.2	Open	AEMO to provide more details on the testing scope (e.g. test objective, key participants, key scenarios)	Included in updated Test Strategy
12.7.3	Open	RWG to provide feedback on their testing requirements for Dispatch, Settlement and Retail systems in pre-production	Three responses. One noted they will provide more details after the final determination.
12.8.1	Open	RWG to provide feedback on the readiness reporting approach if there is a delay to the 5MS and GS commencement dates	Three responses. No issues raised. Discussed at PCF/RWG on 17 July.
12.8.2	Open	RWG to provide feedback on the proposed bar chart format for readiness reporting results	Three responses. All supportive. Future readiness reports will be presented in bar chart format.
12.8.3	Open	RWG to provide suggestions on any changes to the readiness reporting plan	Feedback discussed at previous RWG will be implemented in this round of reporting
12.8.4	Open	AEMO and the RWG to consider how readiness reporting results can be used to consider if the industry is tracking to plan for 5MS and GS	Update included in this pack

SWG Actions

23.4.1	Closed	AEMO to add the risk of participants not having an appropriate environment to test capability to the Industry Risks and Issues Register if a 12-month deferral is approved.	This risk was discussed at the PCF/RWG on 17 July and has been added to the Industry Risks and Issues Register.
23.4.2	Open	AEMO to provide more detail on what will be excluded from Pre-Prod and the timing on when these excluded items will be available in Pre-Prod and Prod (to be merged with Action 23.16.1).	The Functionality Deployment Matrix has been developed and circulated to participants. A discussion took place with RWG, SWG and ITWG on 23 July. This is a working document and will be updated as needed. A testing webpage is being developed and the most recent version of the matrix will be maintained here. Links will be sent to all working groups.
23.4.3	Closed	AEMO to add the risk the 5MS Staging Environment not reflecting other market changes during the 12-month transitional period to the Industry Risks and Issues Register if a 12-month deferral is approved.	This risk was discussed at the PCF/RWG on 17 July and has been added to the Industry Risks and Issues Register.
23.7.1	Open	AEMO to confirm that all the items on the Procedure table on slide 29 of SWG#23 will be available in the 5MS Staging Environment from 31-Aug-20 and update the slide with the system functionality that is going into different environments.	This slide has been updated to include this information and is included in this pack.
23.7.2	Open	AEMO to redevelop the '5MS/GS Procedures update' slide to highlight the functional impacts to the 5MS systems stream for each ERCF and B2B Working Group 5MS/GS-related procedure change.	This slide has been updated to include this information and is included in this pack.
23.8.1	Open	SWG to liaise with internal RWG reps and provide feedback on AEMO proposal to combine SWG and RWG by 26-Jun-20.	Complete.
23.15.1	Closed	AEMO to clarify that for B2M MTRD messages, these must be delivered to the B2B outbox file share	<u>A B2B or B2M MTRD must be placed in the /B2B/Inbox folder to be processed by the batch handler. Requirement is described here in 5.2.6 Submit B2M MTRD Meter Data Notifications via FTP. AEMO shall update this section to make this point unambiguous</u>
23.16.1	Open	AEMO to develop spreadsheet providing detail on the functionality available in each drop into the 5MS Staging Environment and into Pre-production environment.	As for 23.4.2

Revised RWG scope

Greg Minney

Revised RWG scope

The objective of expanding the RWG to include SWG members was to provide an end-to-end systems / readiness view at the working groups to better inform and equip participants with their readiness, streamline information and reduce duplication.

The following topics will be covered:

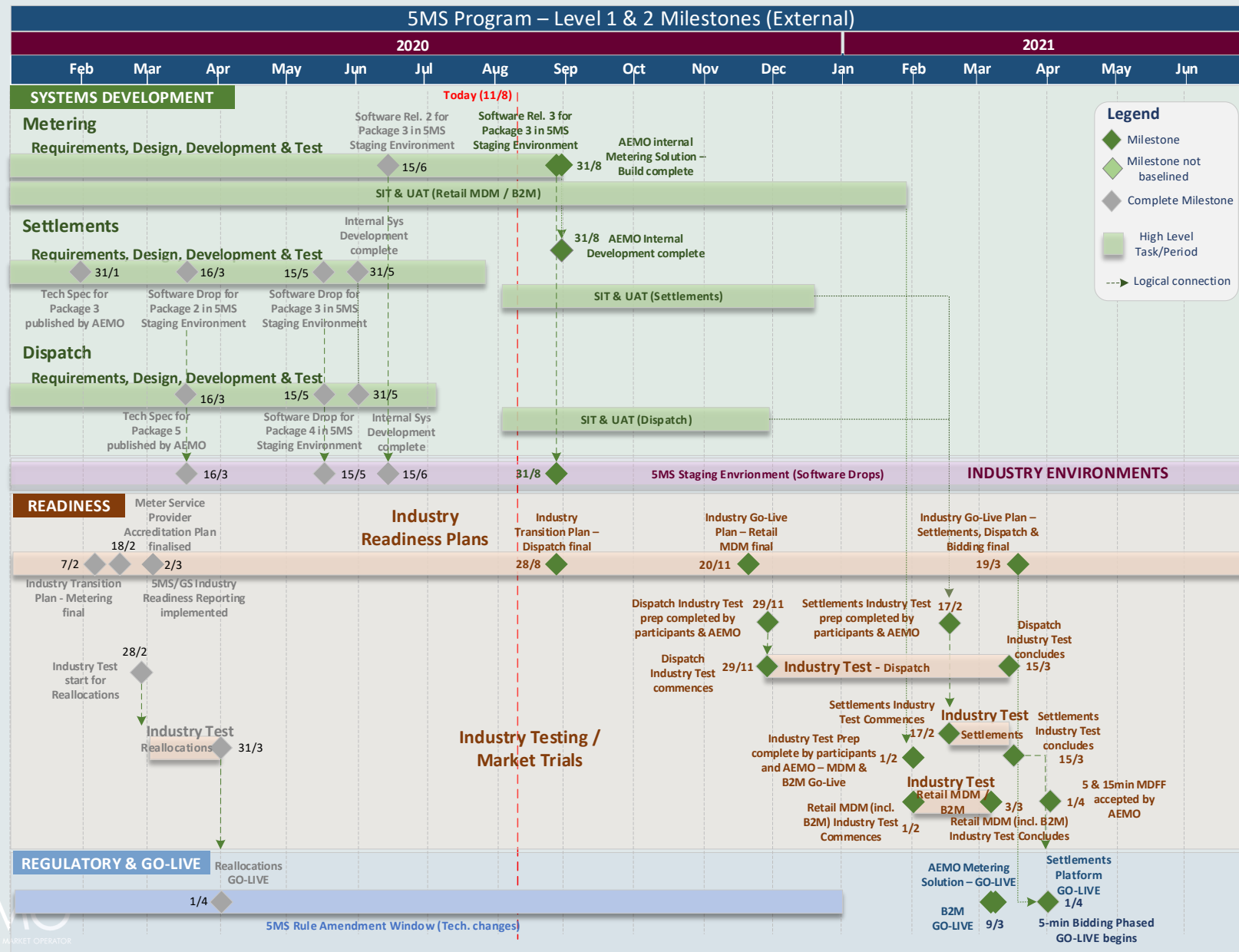
- Update on AEMO program including **systems developments** (until complete)
 - Reporting on milestones by exception
- AEMO and Participant preparation for **industry** and **market testing** incorporating:
 - Staging releases and updates
 - Industry and Market trial preparation and management
- AEMO and Participant preparation for **go-live**
- AEMO and Participant **transition** activities
- Industry and AEMO **readiness monitoring** and issues / risk management

Program Update

Greg Minney

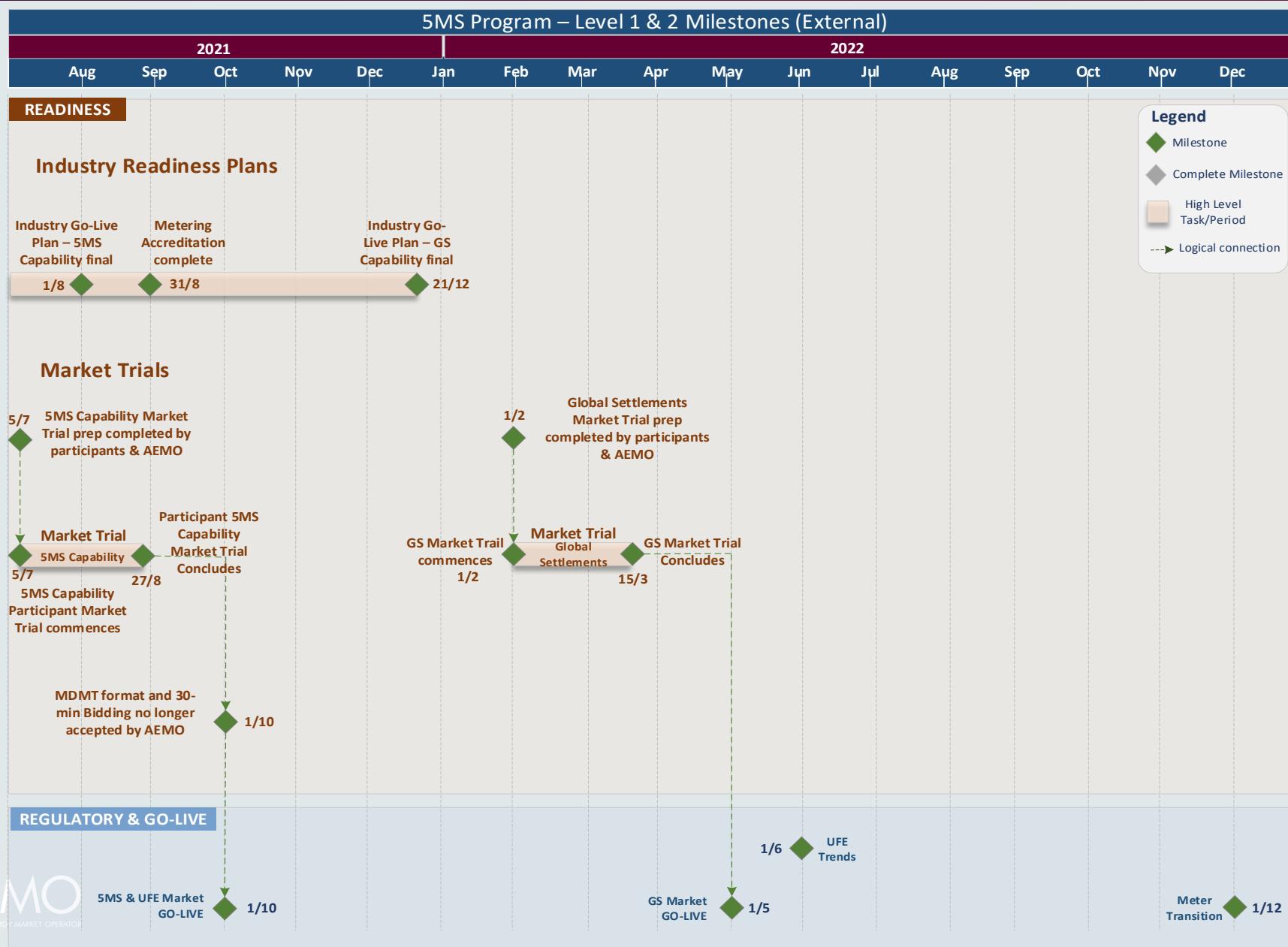
5MS Program Timeline

Level 1 and External Level 2 Milestones 1/2



5MS Program Timeline

Level 1 and External Level 2 Milestones 2/2



Regulatory roadmap update

Anne-Marie McCague

Summary of Proposed Changes to Roadmap

- AEMO held a regulatory roadmap workshop on 10-Aug-20 to present proposed changes to the roadmap that was published in mid-May
- Changes include (but not limited to):
 - The 3-month deferral to 5MS and GS rules
 - Wholesale Demand Response (WDR) Mechanism – 24-Oct-21 go-live date
 - Metering Coordinator Planned Interruptions – AEMO standing data and procedural changes no later than 30-Mar-22
- Proposed changes:

Customer Switching

- Mid-July go-live to allow for some 'breathing space' ahead of WDR and 5MS commencements

MC Planned Interruptions & NSATS Standing Data Review

- Proposing bundle Metering Coordinator Planned Interruptions (MCPI) and MSATS standing data review implementation and defer until no later than 30 March 2022

B2B Changes

- Seeking feedback on whether industry would prefer to defer gas and/or electricity B2B changes to Q1 or Q2 2022

Next Steps

- AEMO requested feedback on the proposed changes by 17-Aug-20
- AEMO will review feedback and publish the revised regulatory roadmap by end of August 2020
- AEMO intends to update the roadmap two – three times a year depending on the extent and implications of regulatory change and implementation
- For questions or comments please contact StakeholderRelations@aemo.com.au

Procedure update

Simon Tu

5MS/GS-related procedure change log

Procedure issue	Status	Final Determination Date
MDFF file size and transaction limit in file*	Final report published	22 July 2020
New NCONUML NMI Class codes available in list for SORD.	To become part of broader requirements for the changes to the SORDs (v3.5 of the procedures) currently scheduled for Nov 2021.	22 July 2020
Proposed procedural change to MDFF quality flag (N flag)*	Consultation commenced 6 August, anticipated to be concluded early December.	
Proposal for RWD	Part of MSATS Standing Data Review. Final Determination is being prepared.	7 September 2020
Removal of end user details from inventory table	Consultation commenced 6 August, anticipated to be concluded early December.	
TNI 2 for cross-boundary meters*	Part of MSATS Standing Data Review. Final Determination is being prepared.	7 September 2020
Obligation for MC to provide updated or substitution data in the cases of theft or fraud	This has been closed in the ERCF as the compliance issues may take a while to be worked through. A new request and further details would be needed to re-raise this.	
Removal of register ID = suffix requirement	ICF lodged by AusNet discussed at ERCF May meeting. Survey underway to scope materiality.	7 December 2020
NCONUML objections to CR 2000/2001	Rejected.	
5MS Procedures washup	Consolidation to open for comment 1 May 2021.	1 July 2021

5MS/GS-related procedure change log

Procedure issue	AEMO Retail Systems Impact	Available in Staging	Readiness Considerations
MDFF file size and transaction limit in file*	<ul style="list-style-type: none"> 10MB file size supported for B2M MTRD for Mkt Settlements. 10MB file size supported for B2B MTRD for B2B Mkt Activities. 	R30 - 31-Aug-20 - Staging environment supports B2B Transaction (SORD, CUST, MTRD etc) exchange between Participants.	Participant Mkt Systems must be capable of accepting 10MB B2B MTRD files unless a bilateral agreement is in place,
New NCONUML NMI Class codes available in list for SORD.	<ul style="list-style-type: none"> System impacts are yet to be identified. 	TBD: Dependant on evaluation of system impacts and finalisations of v3.5 of the B2B Procedures: Service Order Process.	
Proposed procedural change to MDFF quality flag (N flag)*	<ul style="list-style-type: none"> Rejection of B2M MTRD MDFF meter reads where quality flag is 'N'. Results in B2M MTRD Transactions with the status of 'Partial' or 'Rejected'. 	R1 - 1-Dec-19 - Support for new B2M MTRD validations.	Participant Mkt Systems must not send 'N' for B2B or B2M MTRDs.
Proposal for RWD	<ul style="list-style-type: none"> No impact to 5MS Retail systems. 	N/A	Draft Determination is proposing to make the 4th character population 'REQUIRED'. If not explicit in the Final Determination, RWG to consider other population considerations e.g. population of existing Registers.
Removal of end user details from inventory table	No impact to 5MS Retail systems.	N/A	N/A
TNI 2 for cross-boundary meters*	<ul style="list-style-type: none"> CATS CR support for TNI2 field. MSATS Browser to support display TNI2 for NMI Discovery Transactions. 	R18 and R19 - 31-Aug-20 - Support for TNI2 for CATS CRs.	Generation of associated CR2xxx transactions, to register a cross boundary meter using TNI 2.
Obligation for MC to provide updated or substitution data in the cases of theft or fraud	<ul style="list-style-type: none"> No impact to 5MS Retail systems. 	N/A	N/A
Removal of register ID = suffix requirement	<ul style="list-style-type: none"> No impact to 5MS Retail systems. 	N/A	Material participant readiness activity impact if existing requirement retained.

*raised by the 5MS Program

Changes to effective dates for 5MS and GS rules

- The table is the current estimates on when the necessary updates to the procedures as a result of the three-month deferral will take place.
- The updates will take place through the BAU channels.
- As per AEMC final determination, AEMO is not required to consult on these changes.

Procedure area	Indicative timing
Settlements	Q2 2021
Prudentials	Q2 2021
Metering	1 July 2021
Dispatch	31 January 2021
System operations	June 2021

Industry readiness reporting

Austin Tan

Special survey participation rate

- There was a strong survey response rate and coverage across most participant types. This provides reasonable assurance that the results are likely reflective of the overall industry position.
- A total of 37 organisations representing 79 participant types responded, with industry coverage ranging from 85% to 100% for all participant types except TNSPs.
- TNSPs were underrepresented in the survey, with 3 out of 6 not providing a response to the survey.

Figure 2: Survey respondents by participant type (%)

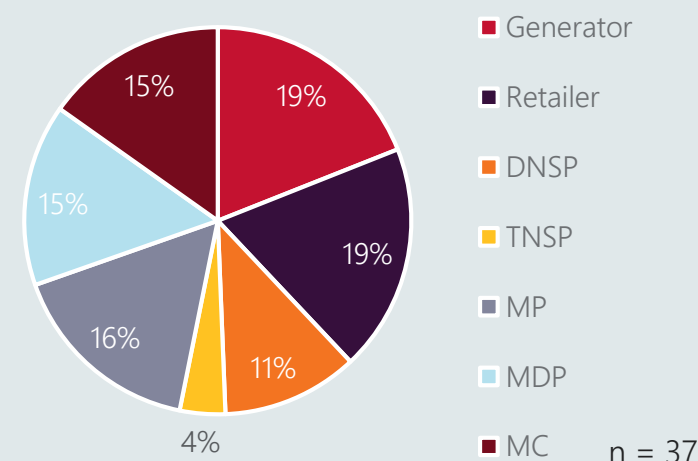


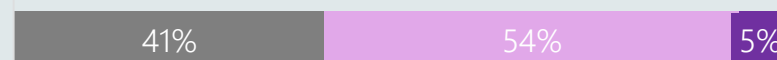
Table 1: Industry coverage by participant type (%)

Industry coverage		
Participant type	% Industry coverage	Industry coverage methodology
Generator	91.4%	Generator respondents' capacity / NEM capacity
Retailer	94.6%	Retailer respondents' settlement vol. / NEM vol.
MP	99.8%	MP respondents' total type 1-4 NEMs/ total type 1-4 NEMs
MDP	99.8%	MDP respondents' total type 1-4 NEMs/ total type 1-4 NEMs
MC	85.4%	MC respondents' total type 1-4 NEMs/ total type 1-4 NEMs
DNSP	90%	Number of DNSP survey respondents / Total DNSPs
TNSP	50%	Number of TNSP survey respondents / Total TNSPs

Special survey key findings

Figure 1: Participant impacts from delayed implementation of five minute and global settlement

To what extent has your organisation's delivery of 5MS and GS changed as a result of the AEMC's decision to defer the rule commencement dates by 3 months?



■ No change
■ Minor change
■ Major change

Has your organisation previously decided to defer its project resources or activities in anticipation of the rule change determination?

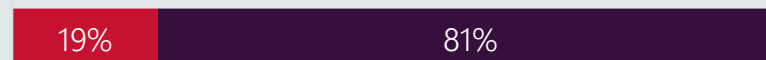


■ Yes
■ No

Considering your organisation's 5MS project current status, is your organisation on track to deliver against the new commencement dates?



If your organisation's delivery of 5MS and GS has been impacted by the AEMC decision, is there any additional support that AEMO can provide to help mitigate this impact?



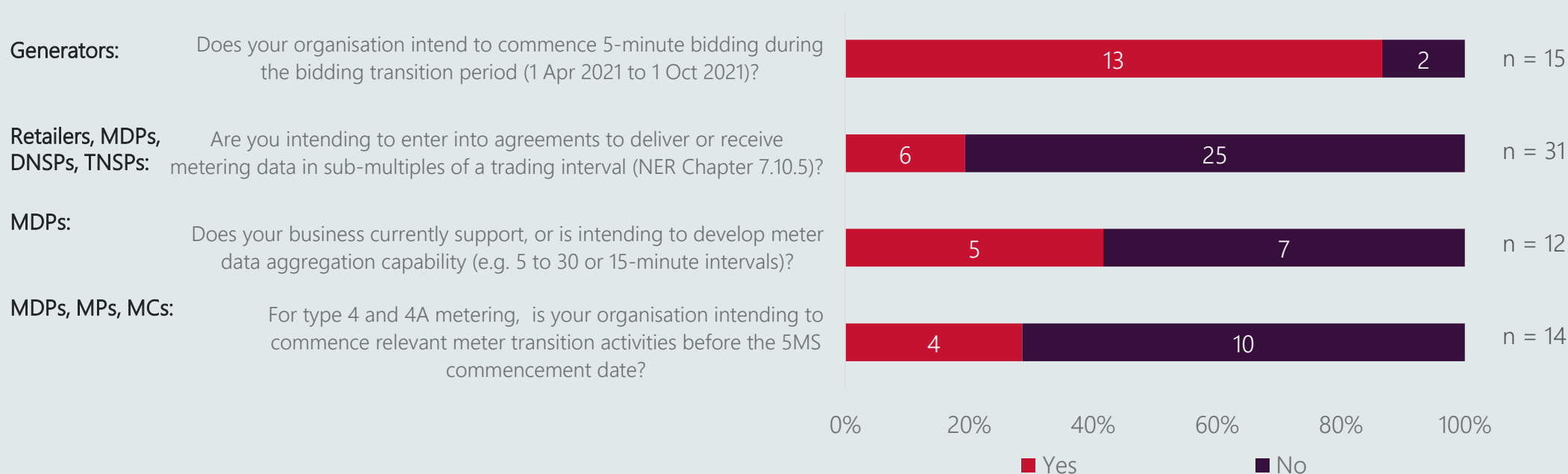
n = 37

Observations:

- One in three respondents (35%) decided to defer their project resources or activities in anticipation of the determination.
- All respondents, including those who deferred projects noted that they are on track to deliver against the new commencement dates.
- Participants are focused on re-mobilisation and re-planning activities, with a majority (81%) not requiring any additional support from AEMO. Suggestions of additional support include providing more flexibility around participant engagement and transition activities.
- Only 5% of respondents were making major changes to their program in response to the rule change determination. Approximately half (54%) had minor changes to their program, with 41% not making any changes to their program.

Participant transition activities

Figure 7: Participant transition activities



Observations:

- 13 out of 15 generators (87%) responded that they intend to commence 5-minute bidding during the bidding transition period.
- Six out of 31 (19%) organisations representing Retailers, MDPs, DNSPs and TNSPs intend to enter into agreements to deliver or receive metering data in sub-multiples of a trading interval. All respondents that noted timeframes for these agreements reported delivery and receipt of sub-multiples within 6 months of 5MS commencement.
- Five out of 12 (42%) MDPs currently support or intend to develop meter data aggregation capability.
- Four out of 14 MDPs, MPs and MCs intend to commence meter transition activities for type 4 and 4A meters before the 5MS commencement date. Out of the four MDPs, three intend to have metering data aggregation as a component of their operations.

Transition risks from increased transition window (1)

At RWG 9 and RWG 10, the following risks were identified in anticipation of a 12 month deferral of commencement dates. These risks are reassessed based on the new deferral timeline of 3 months and also results from the special readiness survey and will be presented to the PCF for consideration.

#	Identified risk (assuming 12 month delay)	Likelihood	Consequence	Current assessment of risk	Actions
1	Risk of a 'two speed' transition - A delay in the Rule commencements may result in varying expectations/approaches between Participants (e.g. Participant 'A' wanting to proceed on the basis of the current timelines whereas Participant 'B' wants to defer activity for 12mths.)	Rare	Moderate	<ul style="list-style-type: none"> A 3-month deferral does not substantially increase the transition window. 95% of survey respondents indicated that they are making no changes or minor changes to their delivery of 5MS and GS. 	<ul style="list-style-type: none"> Manage with existing controls as per MTP
2	"Big bang" transition of meter changes - Risk that all retailers, MDPs and DNSPs will start sending and receiving 5-minute metering data for the first tranche of meters on 1 October 2021.	Possible	Moderate	<ul style="list-style-type: none"> Currently participants are indicating limited intention to send/receive 5-minute metering data, with a limited number of participants (6) representing 19% of all survey respondents noted that they intend to enter into agreements to deliver or receive metering data in sub-multiples of a trading interval. 	<ul style="list-style-type: none"> AEMO to continue survey participants intention to initiate agreements to send or receive 5-minute metering data before 1 October 2021 Confirm Industry position on risk response

Participant position on the potential for "big bang" impact for 5 minute B2B metering data delivery

Risk ratings

Likelihood

Consequence

Rare

Unlikely

Possible

Likely

Almost Certain

Immaterial

Minor

Moderate

Major

Extreme

Transition risks from increased transition window (1)

Participants position on the assessment of the exposure of LR to early metering data transition

#	Identified risk (assuming 12 month delay)	Likelihood	Consequence	Current assessment of risk	Actions
3	<p>Exposure of LR's to early delivery of 5-minute data – MDPs, FRMPs, NSPs and AEMO may enter into agreements to deliver sub-multiples of a trading interval (NER Chapter 7.10.5).</p> <p>This agreement may be used for the delivery of 5-minute data before 5MS commencement, and is more likely to be used if the 5MS commencement date is delayed. As LRs are not a party to this agreement, they may be unable to process metering data in sub-multiples for NMI's under this agreement.</p>	Unlikely	Moderate	<ul style="list-style-type: none"> A 3 month deferral does not substantially increase the transition window. A limited number of participants (6) representing 19% of all survey respondents noted that they intend to enter into agreements to deliver or receive metering data in sub-multiples of a trading interval. A limited number of MDPs indicated intention to process 5 minute reads early. 	<ul style="list-style-type: none"> AEMO to continue survey participants if they intend to initiate agreements to send or receive 5-minute metering data before 1 October 2021 Confirm Industry position on LR perceived risk Manage under existing MTP approach

Risk ratings

Likelihood

Consequence

Rare

Unlikely

Possible

Likely

Almost Certain

Immaterial

Minor

Moderate

Major

Extreme

Tracking and reporting on capabilities for 5MS and GS commencements

- AEMO sought feedback from the RWG and took an action to investigate how to track and monitor if the industry is 'on track' for 5MS and GS commencements. As a result, the following critical path criteria was developed to highlight critical activities at an industry level in line with commencement criteria.
- In future readiness reports, AEMO will be providing the following analysis on essential industry capabilities that are on the critical path for minimum viable 5MS and GS operations. Each criteria is related to contingency scenarios highlighted in the Industry Contingency Plan.
- Participant participation and responses to the readiness surveys, including reporting on the status of relevant MTP activities are key inputs into the critical path criteria outlined below. Outputs from this reporting will also help to identify whether contingency responses need to be triggered.

Essential capability	Relevant participants	Critical Path Criteria
Generators and MNSPs are able to submit 5-min offers (i.e. over FTP, API or web bidding interface)	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, MCs, MDPs	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 (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

Readiness reporting – Round 3

- Round 3 of industry readiness reporting commenced on Tuesday 11 August 2020. Survey responses are due by COB Thursday 20 August 2020.
- Survey results will be distributed on Thursday 3 September 2020, and discussed at the next RWG on Monday 14 September 2020.
- When responding to survey questions, participants should consider their readiness against the new Rule Commencement dates, and the metering transition end dates as outlined in the new Metering Transition Plan (v 1.5).
- AEMO will continue to survey and monitor the impact of COVID-19 on the industry.



Testing Update

Tui Grant

5MS Staging Environment Defects Identified

Issue ID	Description	Status	Action
NCR0155236	Dispatch and Bidding - Missing 5MS Trading Price data since the 18/07/2020	Closed	Defect Identified and data populated
NCR0154924	Dispatch and Bidding - Gap identified in the market data Trading price, Averageprice30 and Dispatchload for the 1st and 2nd July.	In Progress	Defect Identified and fix in progress
1581	Settlements - Missing files from 2 June – 8 June including transition week (settlement week preliminary files 2020Wk14 and 2020Wk15) data	Closed	Deployed defect fix and regenerated
1582	Settlements - Missing data in SetLocalAreaTNI and SETLocalAreaEnergy	Closed	Deployed defect fix and regenerated
1583	Meter data such as data interchange table (e.g METERDATA_INDIVIDUAL_READS and METERDATA_AGGREGATE_READS) before transition, during transition and after transition week data missing	Closed	Deployed fix and reloaded data
1585	Settlements - Missing transition week and 5minute files	Closed	Regenerated for 2020Wk1 and 2020Wk2 identified a further issue with 2 tables resulting in a patch being applied to resolve issues with these tables
1584	Missing files from 25 June – 30 June (settlement week final 2020Wk14 and 2020Wk15) data	Closed	Unable to repair ran for 2020Wk1 and 2020Wk2
1696	Retail - SetParticipant no longer works in MSATS	Closed	Fix expected in Staging 07/08

5MS Staging Environment – Retail Functionality (1/2)

MSATS will be refreshed and the data will be aged as at 30th July 2020.

AEMO Functional Matrix ID	AEMO Workstream	AEMO 5MS Programme: Function	Available for Participant testing	Functional Testing Considerations
R1	Retail	MDFF NEM12 at any data interval via FTP	01-Dec-19	Once implemented, no future functional change. Valid for 5, 15 & 30 minute intervals.
R2	Retail	B2M MTRD MDFF NEM12 at any data interval via MSATS Browser 'B2B Browser > Upload File' pg	01-Dec-19	Once implemented, no future functional change. Valid for 5, 15 & 30 minute intervals.
R3	Retail	MDFF NEM13 via FTP	15-Jun-20	None.
R4	Retail	B2M MTRD MDFF NEM13 via MSATS Browser 'B2B Browser > Upload File' pg	15-Jun-20	None.
R5	Retail	MDMT MDMF Interval and Basic meter data files	15-Jun-20	None.
R6	Retail	API Push Functionality for B2M MTRD and MDMT, CATS, NMID	15-Jun-20	AEMO will update a NEM Participants Push/Pull API functionality on request. This will be available until 31st August 2020 when Participants can directly update Push/Pull functionality via MSATS Browser
R7	Retail	MSATS Browser 'Metering Data > Data Search' pg	15-Jun-20	Once implemented, no future functional change. Valid for 5, 15 & 30 minute intervals.
R8	Retail	MSATS Browser 'B2B Browser > Transforms and Protocols' pg	31-Aug-20	None.
R9	Retail	aseXML Schema r39 available	15-Jun-20	AEMO will update a NEM Participants aseXML schema functionality on request. This will be validate until the 31st August 2020 when Participants can directly update aseXML schema via MSATS Browser.
R10	Retail	MSATS Browser 'Participants > Participant Schema' pg	31-Aug-20	None.

5MS Staging Environment – Retail Functionality (2/2)

AEMO Functional Matrix ID	AEMO Workstream	AEMO 5MS Programme: Function	Available for Participant testing	Functional Testing Considerations
R11	Retail	MSATS Browser 'B2B Browser > B2B Hub Queue' pg	31-Aug-20	None.
R12	Retail	MSATS Browser 'Reports and Alerts > Queue Monitoring' pg	31-Aug-20	None.
R13	Retail	Retirement of RM reports: RM7, RM8, RM10, RM12, RM14, RM15, RM18, RM19, SDD and SDR	31-Aug-20	The retired RM reports will not be visible in the MSATS report menus. AEMO will generate a rejection for a retired RM report where requested (API/FTP).
R14	Retail	CATS report changes : C1, C4, C7, C10, C11	31-Aug-20	None.
R15	Retail	API Pull Functionality for B2M MTRD and MDMT, CATS, NMID	31-Aug-20	None.
R16	Retail	CATS CR changes to support new NMI classification codes	31-Aug-20	None.
R17	Retail	New Standing Data - Meter Installation Type Codes (MITC), Datastream Type 'N'	31-Aug-20	There will be no new MITC's in MSATS until LNSP's create them. DataStreamType = 'N' values should be used upon creation of new CNDIS records.
R18	Retail	MSATS NMI discovery Display of TNI2 and Vic TUoS	31-Aug-20	None.
R19	Retail	MSATS NMI Master/Summary display of TNI2 and VIC TUoS	31-Aug-20	None.
R20	Retail	MSATS Browser 'Settlement Data' pg	31-Aug-20	None.
R21	Retail	New RM Report Requests: RM37, RM38, RM39	31-Aug-20	New RM reports will not be automatically pushed to Participants. Update to aseXML is required for the new RM Reports.
R22	Retail	Historic Settlement Runs @ 30 minutes	31-Aug-20	Participants will be able to verify existing NEM Settlement Runs.
R25	Retail	Existing Meter Data Reports: RM9, RM11, RM13, RM26	31-Aug-20	Existing and new meter data will be reported in the existing RM reports (reflecting the interval length received by AEMO).
R26	Retail	Existing Settlements Reports @30-min: RM16, RM17, RM20, RM21, RM22, RM25	31-Aug-20	Regardless of the granularity of the interval length received by AEMO, the data will be represented in 30 minute intervals.
R29	Retail	Access to MSATS Browser via Markets Portal	31-Aug-20	None.
R30	Retail	B2B Transaction (SORD, CUST, MTRD etc) exchange supported between Participants	31-Aug-20	None.

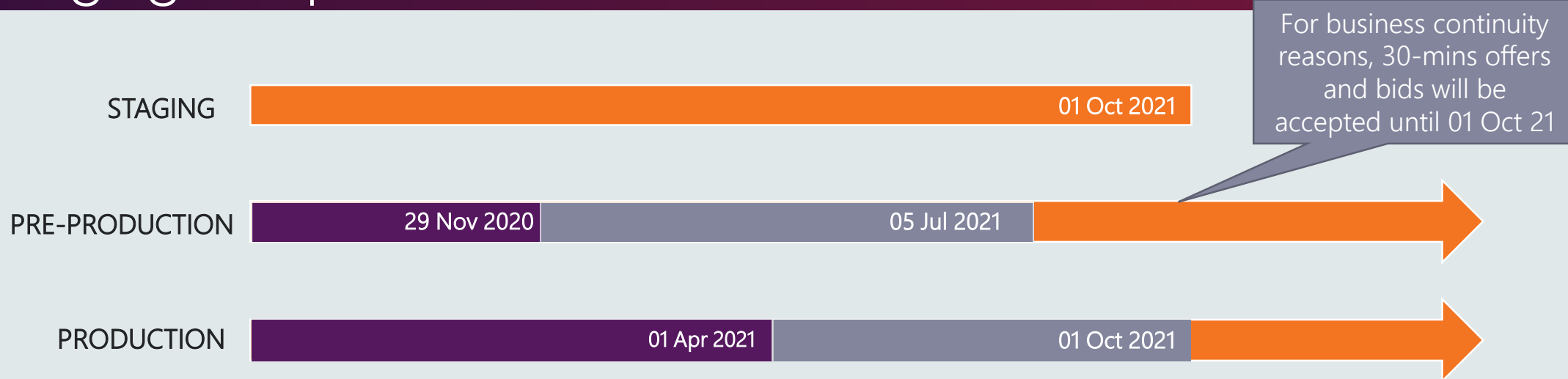
Dispatch/Bidding readiness

Dispatch / Bidding Update

Ian Devaney

Bidding / Dispatch

Staging, Pre-production & Production timelines



LEGEND

LEGACY	BIDDING TRANSITION	5MS RULE
30-minute bidding only via: <ul style="list-style-type: none"> FTP (txt) Web Bidding (Legacy) 	30-minute bidding via: <ul style="list-style-type: none"> FTP (txt) Web Bidding (Legacy) 5-minute bidding* via: <ul style="list-style-type: none"> FTP (JSON) Web Bidding (5MS) API <i>*Each 5-minute bid within each half hour must be identical, giving the same effect as the submission of a 30-minute bid.</i>	5-minute bidding* only via: <ul style="list-style-type: none"> FTP (JSON) Web Bidding API <i>*30-minute bid emulation restriction lifted</i>

Bidding Transition Plan Update

Emily Brodie

Feedback on Draft Bidding Transition Plan

- Seven responses, of which three had no further comment
- Most feedback was seeking clarification
- Some participants were seeking information on aspects of dispatch that are outside the scope of the BTP. AEMO has/will follow up individually with these participants.
- Overall, only a few areas where further description is required
- On track to publish this month



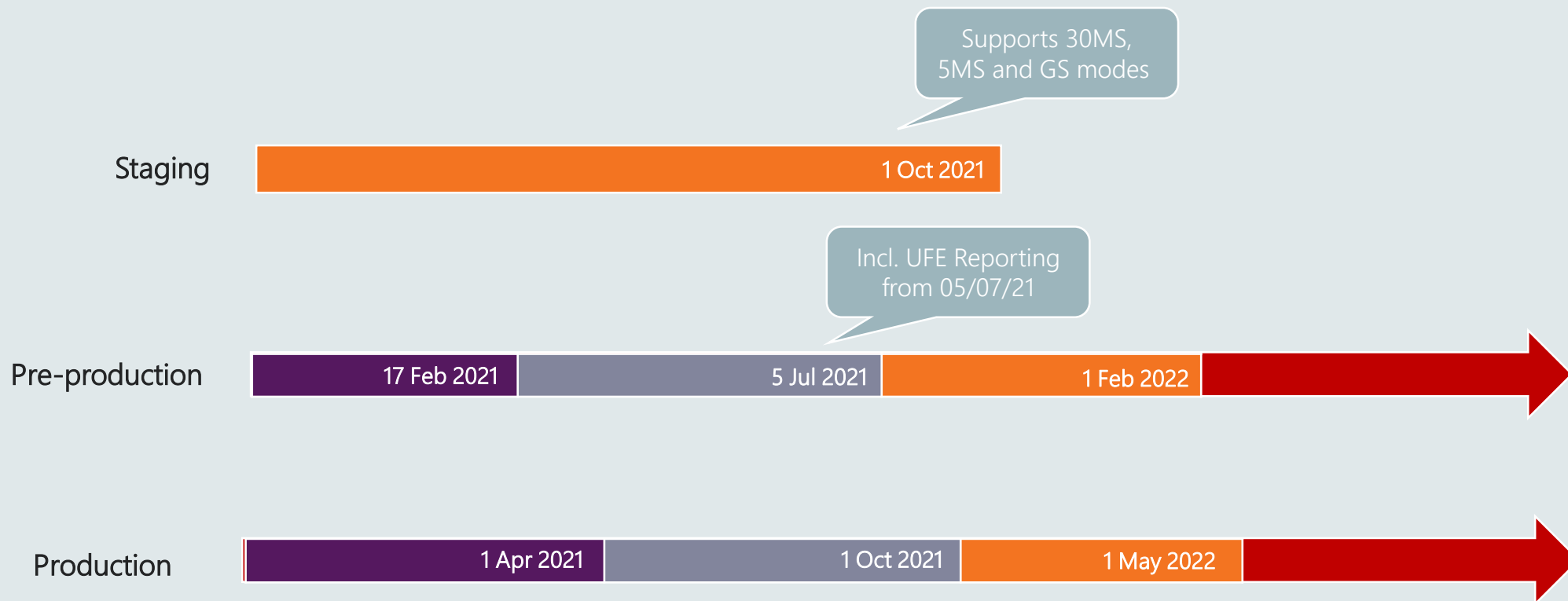
Settlements Readiness

Settlements Update

Mark Hillaby

Settlements

Staging, Pre-production & Production timelines



Legend

Legacy	New Settlement Platform	5MS Rule	GS Rule
30-minute Settlements	30-minutes settlement to 1 October 2021	Five-minute settlement and Global Settlement soft-start - UFE Reporting	All Retailers become liable for UFE

5-mis Reallocations Functionality Available

- **Reallocations in Production:** The reallocations system which is in production has been updated to now accept 5-Minute reallocations from 1 October 2021 in line with the rule change
- Software delivered and in staging
- SIT testing has commenced
- Certification activities are now underway

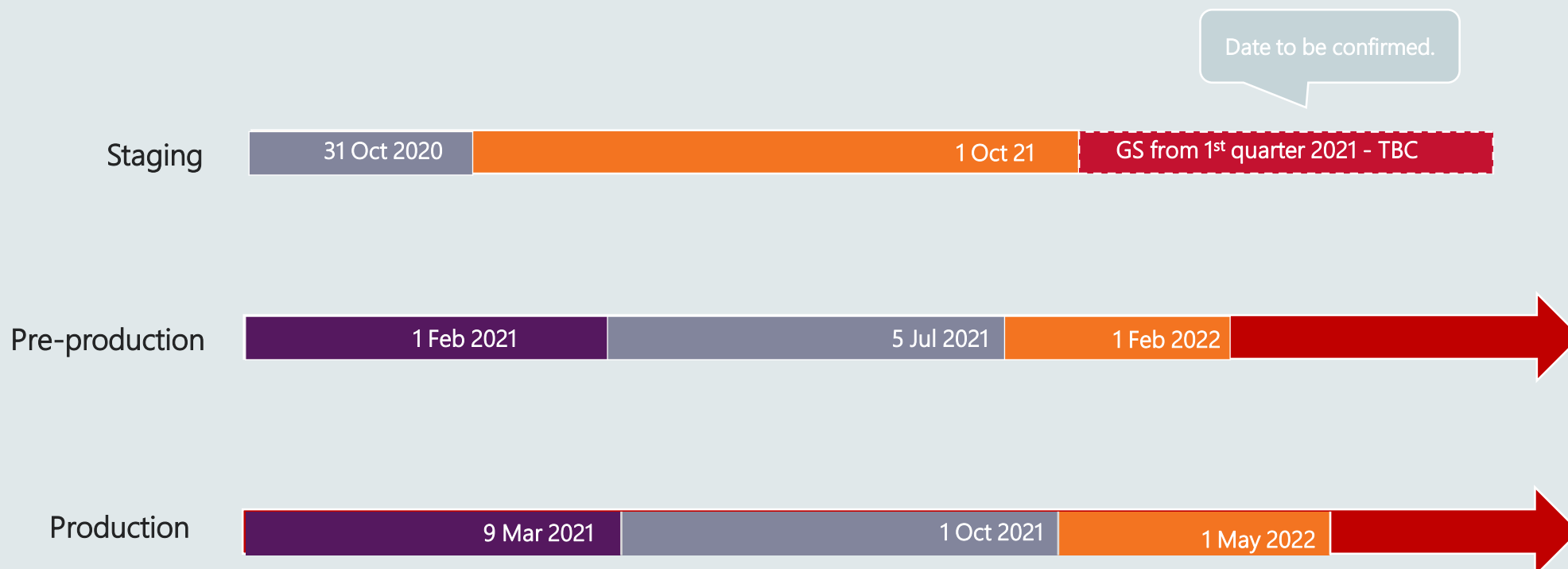
Retail/Metering readiness

Retail/Metering Update

Jim Agelopolous

Retail Metering

Staging, Pre-production & Production timelines



Legend

Legacy	30MS with new platform	5MS Rule	GS Rule
30-minute meter reads	30-min settlement 5-min reads supported Standing data updates for GS	UFE calculation and 5-min settlement	LR updated to GLOPOOL

Metering Transition Plan Proposed Changes

Blaine Miner

Context

Background

- The Transition Focus Group (TFG) reviewed the MTP at its 29th July meeting to consider what changes should be recommended to the RWG due to the AEMC's deferral decision
- Broadly speaking, most MTP activities have shifted 3mths, in line with the AEMC's deferral decision

Key Inputs/Assumptions

- Final determination timings
 - 5MS commencement date – 1 Oct 2021 (3mth deferral)
 - GS "soft" start date – 1 Oct 2021 (3mth deferral)
 - GS "hard" start – 1 May 2022 (3mth deferral)
 - 5-min data delivery for new and replacement type 4/4A meters – 1 Dec 2022 (no change)
- AEMO internal program continues to its current milestones i.e. staged platform deployments

Request to the RWG

- To review the recommended amendments to v1.4 of the MTP
- To endorse the publishing of a new version of the MTP (v1.5) which reflects the agreed changes

TFG Proposed Changes to the MTP (Current

MTP version 1.4 – Proposed version 1.5)

Category	Act #	Activity Description	Current Start Date	Current End Date	Proposed Start Date	Proposed End Date
Meter Installation & Reconfiguration	A3a, A8a, A13a	Provide progress and amendments to forward plans to AEMO every 2mths	New activity	New activity	15-Aug-2020	31-July-2021
	A4, A9, A14, A20	Install or reconfigure meters as required	Participant's Discretion	30-Apr-21	Participant's Discretion	31-July-2021 (3mths extension)
	A5, A10, A15, A21	Apply for data storage exemptions as required	Participant's Discretion	30-Apr-21	Participant's Discretion	31-July-2021 (3mths extension)
	A24	Install or reconfigure meters as required (Cross boundary meters (Unknown))	Participant's Discretion	30-Jun-21	Participant's Discretion	30-Sept-2021 (3mths extension)
	A30	Creation of 5-min metering data based on SCADA data	AEMO's Discretion	1-Apr-21	1-Apr-2021	1-Oct-2021 (5MS start)
	A31	For any registered 'Special Site'	Participant's Discretion	31-May-21	Participant's Discretion	31-Aug-2021 (3mths extension)

TFG Proposed Changes to the MTP (Current

MTP version 1.4 – Proposed version 1.5)

Category	Act #	Activity Description	Current Start Date	Current End Date	Proposed Start Date	Proposed End Date
Meter Data Delivery	A32, A37, A42, A47, A53, A59, A65, A71, A84, A88	Agreement to allow the delivery of 5min metering data pre 1 July 2022 between NSP, Retailer, MDP and AEMO	Participants' Discretion	28-Feb-21	Participants' Discretion	31-May-21 (3mths extension)
	A33, A38, A43, A48	5min metering data delivered to Participants (B2B)	As per Agreements	31-May-21	As per Agreements	31-Aug-21 (3mths extension)
	A82, A90	5min metering data delivered to Participants (B2B) – Type 7 and NCONUML	As per Agreements	30-Jun-21	As per Agreements	30-Sep-21 (3mths extension)
	A34, A39, A44, A49, A55, A61, A67, A73, A85, A91	Agreement to allow the delivery of 5min metering data pre 1 July 2022 for B2M purposes	AEMO and MDPs Discretion	28-Feb-21	AEMO and MDPs Discretion	31-May-21 (3mths extension)
	A35, A41, A46, A50	5min metering data delivered to AEMO (MDFF)	As per Agreements	31-May-21	As per Agreements	31-Aug-21 (3mths extension)
	A86, A92	5min metering data delivered to AEMO (MDFF) – Type 7 and NCONUML	As per Agreements	30-Jun-21	As per Agreements	30-Sep-21 (3mths extension)
	A36, A40, A45, A51	Create/activate export and import (active (kWh) and reactive (kVARh)) energy datastreams in CNDS table	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
	A36a, A40a, A45a	Complete data cleanse to ensure, the RegisterID matches the content of the 'Suffix'	Participant's Discretion	31-May-21	Participant's Discretion	31-Aug-21 (3mths extension)
	A36b, A40b, A45b, A51a, A57b, A63b, A69b, A75b	Update Meter Read Type code with RWDA (if approved via AEMO consultation)	New activity	New activity	9-Mar-2021	31-Aug-2021 30-Nov-22
	A52a, A58a, A64a, A70a	Provide progress and amendments to forward plans to AEMO and industry every 3mths	New activity	New activity	1-Dec-2020	1-Dec-2022
	A83	Updating Type 7 Datastreams in MSATS	Participant's Discretion	31-May-21	Participant's Discretion	31-Aug-21 (3mths extension)
	A93	Delivery of tier 1 basic meter metering data (Actuals, Subs and Forward Estimates) to AEMO	Participant's Discretion	31-Mar-21	Participant's Discretion	30-Jun-21 (3mths extension)

TFG Proposed Changes to the MTP

(Current MTP version 1.4 – Proposed version 1.5)

Category	Act #	Activity Description	Current Start Date	Current End Date	Proposed Start Date	Proposed End Date
MSATS Standing Data Creation & Maintenance	A95-A97 A99-A101	Create Cross Boundary and NCONUML NMI, including associated datastreams and registers	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
	A101a-A101c	Convert 'SASCALE NMI' - Create individual controlled load NMIs in MSATS	Participant's Discretion	31-Mar-21	Participant's Discretion	30-Jun-21 (3mths extension)
	A102, A104, A106, A108, A110, A112, A114	Ensure capability to receive and process new NMI classification codes	Participant's Discretion	30-Apr-21	Participant's Discretion	30-Apr-21 (No change)
	A103, A105, A107, A109, A111, A113, A115	Update NMI Class Codes for existing NMIs as required	1-May-21	31-May-21	1-May-21	31-Aug-21 (3mths extension)
	A116	Update LR and FRMP to GLOPOOL for existing NMIs as required	6-Feb-22	6-Feb-22	1-May-22 (3mths extension)	1-May-22 (3mths extension)
	A117, A118	Create/activate tier 1 basic meter datastreams as required	Participant's Discretion	31-Mar-21	Participant's Discretion	30-Jun-21 (3mths extension)
	A119	Update Datastream type codes from 'P' to 'N' as required	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
	A120	Update VIC TUoS Datastream type codes from 1-4 to 'I' or 'N' as required	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
Metering Accreditation Updates	A125, A126, A133, A134	Apply and gain accreditation update approval as required	In accordance with Roadmap agreed with AEMO	In accordance with Roadmap agreed with AEMO	In accordance with Roadmap agreed with AEMO	In accordance with Roadmap agreed with AEMO

Outcomes

- RWG endorsement of TFG recommended amendments
- Publish, execute, monitor and report on version 1.5 of the MTP

Retail Documentation and System Updates

Simon Tu & Paul Lyttle

Retail Documentation Updates

Document	Meter Data Validation Matrix
Link	https://aemo.com.au/-/media/files/electricity/nem/5ms/systems-workstream/2020/meter-data-validation-matrix.xlsx
General	All updates tracked on the 'Change Log' tab.
Document	MSATS 46.98 Technical Specification
Link	https://aemo.com.au/-/media/files/electricity/nem/5ms/systems-workstream/2020/msats-release-schedule-and-technical-specification-5ms-meter-data.pdf
General	The version number changes to 46.98 to incorporate the B2M via API release (46.96) and the EMDM release (46.98).
	Removal of explicit date references for the effective date of the 5MS and GS rule date.
B2M via API	Updates to Resource and URM names to from Retrieve to Get.
	Push-Push protocol, a Pushed message must be responded to with a MACK payload.
	The HubMessageManagement API version changes to v2: NEMRetail/HubMessageManagement/v2/getAlerts to support both B2M and B2B Alerts.
	The B2BMessagingPull and B2MMessagingAsync /queues resource to support both B2M and B2B MTRD by the introduction of a new optional parameter 'B2M'.

Retail Documentation Updates

Document	MSATS 46.98 Technical Specification
B2M MTRD	Details of schema version of B2M MTRD MACKs and TACKs sent by AEMO where MACKs in same version as the sending transaction, TACKs in preferred schema where Participant's on 'r_any' shall receive in CURRENT schema.
	Added clarity around where to place your B2M MTRD Meter Data Notifications via FTP dependent of the folder structure of your existing Participant file share.
Report Reports	Changes detailed in 'Report Changes', 'Pushing of New RM Report' and 'Pushing of New RM Report' slides in this pack.
MSATS Standing Data Changes	Changes detailed in 'MSATS Standing Data Changes' slides in this pack.
CATS Validations	Changes detailed in 'CATS CR Changes' slides in this pack.

Report Changes

With the introduction of 5MS & GS introduces the following report changes will be applied:

Change	Impact
CATS Reports	C1 - Data Replication Resynchronisation Report C4 – NMI Master Report C7 – New Participant Data Access Report <i>Inclusion of TNI2 field when populated</i> C10 – RoLR Reports <i>Addition of ADL</i> C11 – Monthly Retail Statistics Report <i>Include Total Number of NMIs table</i>
RM Reports (existing)	RM11 to be pushed to MDPs RM13 to be Increased to 4 decimal places RM17 & RM21 to include MDPVersionDT RM20, RM25 to include New Profile Name “5MLP”
PMS Reports	Update and addition of new Service Level checks

For implementation dates or more information refer to the reporting change in the appendix

MSATS Standing Data Changes

The introduction of 5MS & GS introduces the following new standing data values.

Standing Data Item	New Values - Descriptions	MTP Reference
NMI Classification Codes	BULK - Bulk Supply Point	S28
	DWHOLSAL – Distribution Wholesale NMI purchasing from Spot Market	S30
	NCONUML - Non-contestable unmetered load	S27
	NREG – Non-registered embedded generator	S31
	XBOUNDRY – Distribution to Distribution Cross boundary connection point	S32
Meter Installation Type Code (MITC)	NCONUML - Non-contestable unmetered load	S23
Transmission Node Identifier 2 (TNI2)	The connected TNI Code receiving (or supplying) energy from an adjoining distribution network	S32
NMI Data Stream Type	N – NonSettlement – for registering NMI data streams that are not to be used for settlements purposes.	A40

For more information refer to the standing data changes in the appendix

CATS CR Changes

With the introduction of 5MS & GS introduces the following CATS CR changes will be applied;

Change	Impact	Implementation
NMI Classification Codes	Update of CRs to support new NMI Classification Codes	MDM go live
NMI Datastream validations	NMI Suffix validation rejecting incorrect values Profile Name validation reject Basic = NOPROF or Interval <> NOPROF NMI Datastream Type reject incompatible values	5MS go live
LR Changes	Remove CR objection rules Remove CR notifications Remove "Change LR" Change requests (CR6400/CR6401)	GS go live
GLOPOOL participant	Rejection of GLOPOOL transfer CRs	GS go live

For more information refer to the CATS CR Validations in the appendix or the CATS & WIGS Procedures

Reports with different CSV interval lengths

- Where a report produces reads with different interval resolutions a separate report result message will be supplied for each interval granularity.
- This means if a meter is changed over time from 48 intervals (30 minute) to 96 intervals (15 minute), then to 288 intervals (5 minute) and,
 - A RM13 NMI Datastream History Report is requested that covers readings for all interval types.
- Then three report messages will be receive, one for each interval length.
- This is a change to section 7.7 of the MSATS 46.96 Technical Specification - 5MS - Meter Data, where it indicates there would be multiple CSV payloads within a single message report results

Pushing of New RM Reports

Investigation:

Investigation into the aseXML schema transformation has been highlighted an issue with pushing new reports to participants on the Superseded schema.

Issue:

If a new report is pushed to a participant on a superseded schema that does not support the new report, the transformation process is unable to change the report in the participants schema preference, therefore the report is send to the participant in the new schema format.

This generally results in a negative acknowledgement from the participants and leaves the participant with a file they cannot automatically process.

Resolution:

To reduce the impact of this occurring, AEMO will not automate the publishing of the new reports (RM37, RM38, RM39, RM43, RM46) until after 5MS go live.

Impact:

The reports will still be available to request via the MSATS Browser, FTP or API for participants on the r39 schema

Participants requiring the reports from 5MS go live will have to update to r39 schema

GLOPOOL Participant ID Update

To support the Global Settlement (GS) the GLOPOOL Participant code will be assigned. Below are a list of the changes that will be managed to support this change:

- AEMO will update the LR participant ID on Distribution Network Connection Points.
 - A reconciliation report will be provided to FRMP participants only, after all updates are completed
 - Testing of the update process has not commenced at this time.
 - Participants will need to update their own systems to support day one operation.
- AEMO will update the FRMP participant ID on BULK and XBOUNDARY connection points.
 - Notification will be sent to participants for these changes.
 - Testing of the update process has not commenced at this time.
- AEMO will validate the ability to process retrospective CRs after the GS go live date.
 - However this will require the creation of a CR from GS Go Live, and
 - A Second CR for the prior to GS up to the GS Go Live date.

Retail platform go-live plan

Austin Tan & Greg Minney

Background

- The AEMO retail platform is scheduled to go-live on **9 March 2021**
- AEMO will develop a **Retail platform go-live plan** in consultation with the RWG, and may establish a Cutover Focus Group (CFG) for detailed technical discussion
- This session will outline the **high-level structure** of the plan.



Proposed objectives

- The proposed objective for the Retail platform go-live plan is:

To provide guidance to NEM participants on the transition and go-live of AEMO's retail platform for 5MS and GS.

This objective supports, and is consistent with, the market readiness objective set out in the overarching 5MS and GS Market readiness strategy.

- The Retail platform go-live plan will:
 - Describe the high-level retail platform **transition approach**
 - Outline industry expectations and responsibilities
 - Outline the platform **go-live decision criteria** and **timeframes**
 - Detail the **cutover schedule** including preparatory and post go-live activities
 - Detail the **communication** and **notification plan** during the cutover period
 - Describe any **contingencies** that may be implemented, their communication requirements and criteria for implementing those criteria

Proposed scope - draft

In scope

- High level transition and cutover approach
- Industry responsibilities and expectations, including PVT
- AEMO Platform Go/no-go decision criteria and timeframes
- Industry Cutover schedule
- Communication and notification plan
- Contingency and restart process and notification

Out of scope

- Participant deployment approaches
- Participant roll-back plans



Industry transition and go-live principles

The Industry transition and go-live strategy principles are the foundational principles of the Retail platform go-live plan:

1. Mandated 5MS and GS commencement dates should be met
2. NEM operations should be uninterrupted during periods of transition and go-live
3. Market system go-lives and 5MS and GS commencement risks should be minimised
4. More certainty for participants' project planning should be introduced
5. Participants should be provided with implementation flexibility where possible
6. Participants and AEMO are responsible for their own transition and go-live planning



Note that these transition principles apply to the approach under which the Go-live plan will be developed

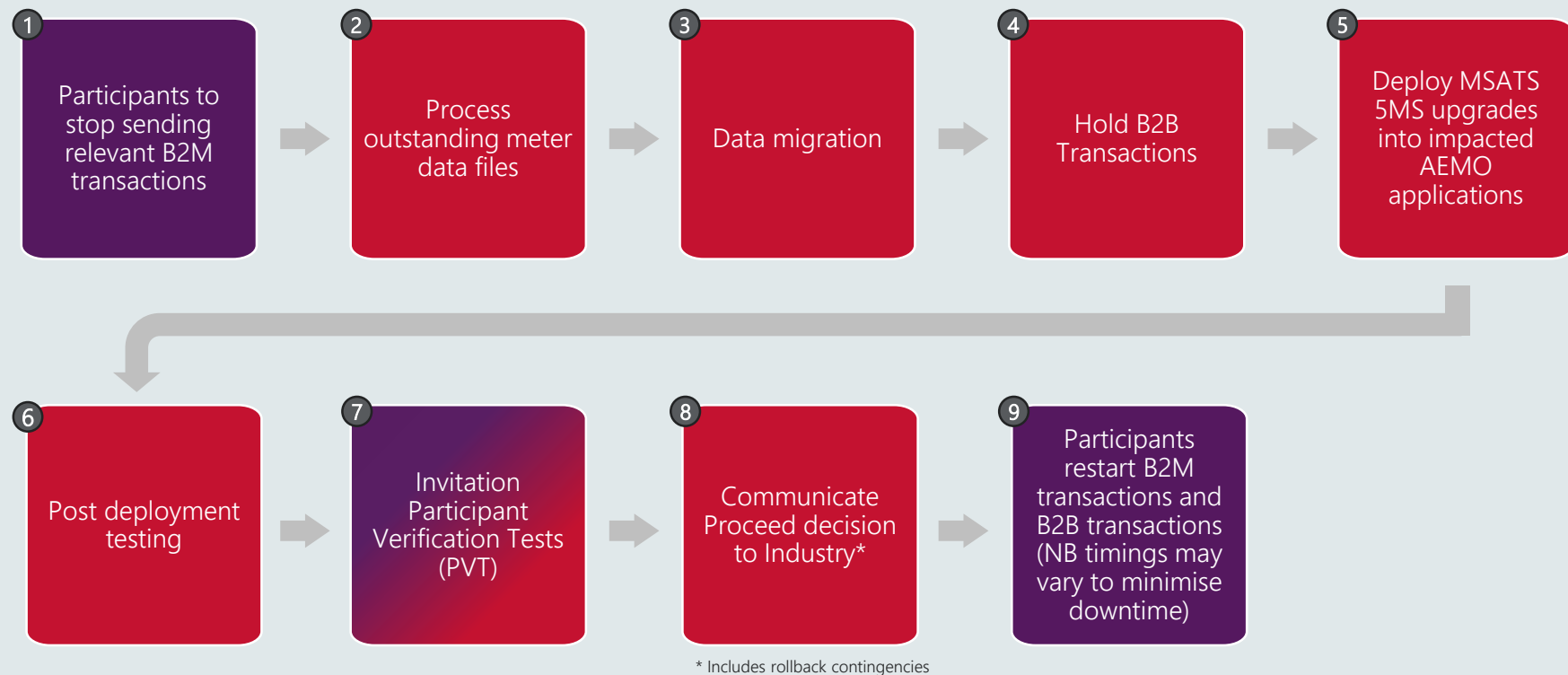
Retail platform go-live plan principles

The following principles are specific to the retail platform go-live plan:

1. Impact on participant operations will be minimised to the extent possible
2. AEMO will independently assess and inform the industry on the go-live decision for AEMO's retail platform and communicate status during the cutover process
3. Participants will comply with the cutover plan to facilitate the cutover
4. Participants will develop their individual plans that have regard to the key activities and dates set out in the Retail platform go-live plan
5. Must continue to fulfil all regulatory and compliance obligations during the system cutover

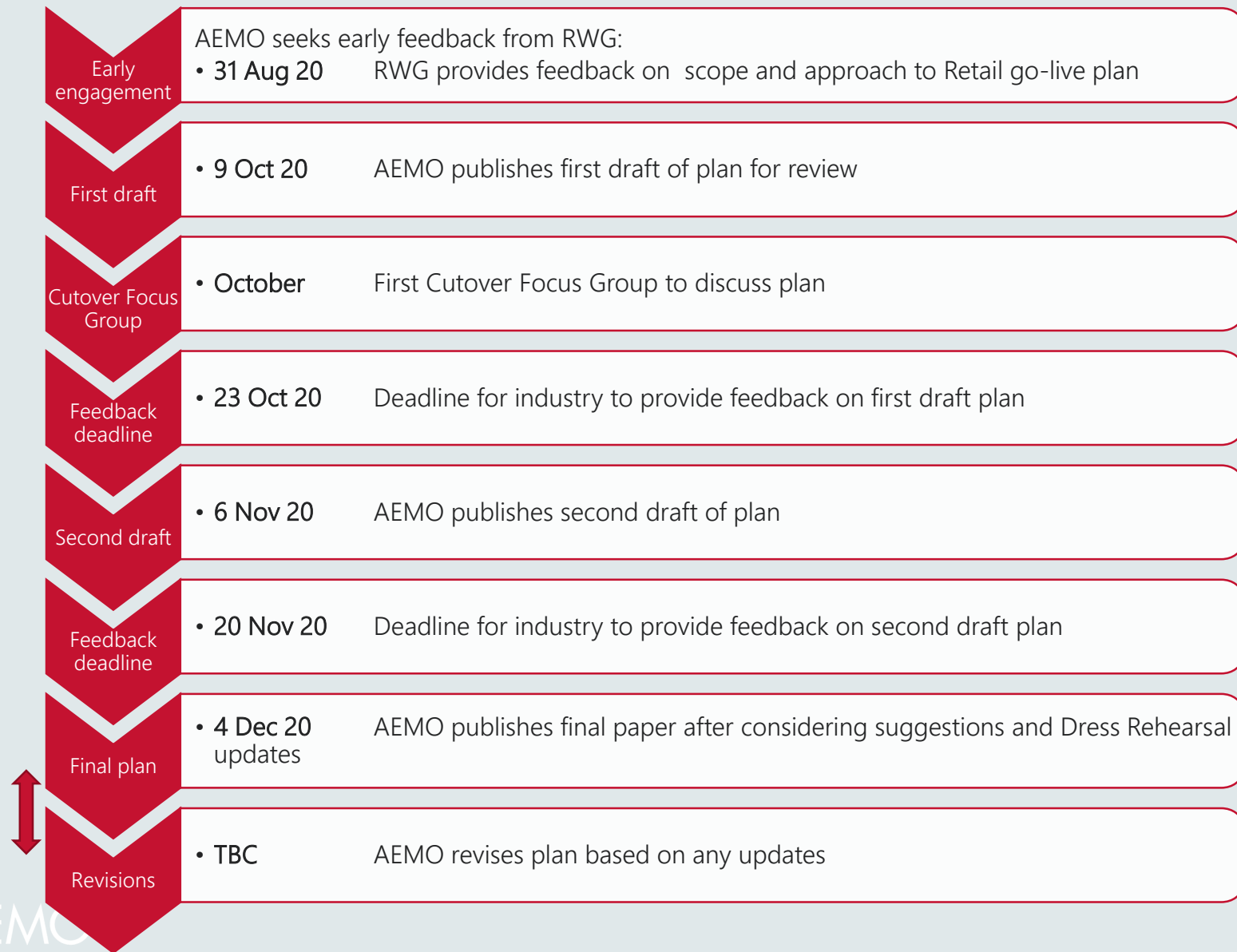
High level cutover approach

The following is an indicative high-level cutover approach, to be confirmed with the RWG and CFG. Please note that timings and detail approach will be confirmed in the cutover schedule provided in the Retail platform go-live plan.



Steps 2 – 8 are being developed as part of the AEMO program Cutover planning and testing

Consultation approach for Retail platform go-live plan



Next steps

- Feedback from RWG on proposed Retail platform go-live plan structure by 31 August 2020
- AEMO to publish first draft of plan on 9 October 2020
- AEMO to establish cutover group in mid-October to discuss draft plan

Forward Plan and Other Business

Greg Minney

Next RWG Meeting

- Readiness Survey #3
- Update on Retail Staging deployment
- Readiness Risks
- Dispatch platform go-live plan

Upcoming meetings/focus groups

Anne-Marie McCague

Upcoming meetings

<https://aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement>

Current as 7 Aug 2020

AUGUST

Su	Mo	Tu	We	Th	Fr	Sa
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

SEPTEMBER

Su	Mo	Tu	We	Th	Fr	Sa
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

OCTOBER

Su	Mo	Tu	We	Th	Fr	Sa
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

Forums/Working Groups

Executive (EF)
Program Consult. (PCF)
Procedures (PWG)
Systems (SWG)
Readiness (RWG)
Industry Testing (ITWG)

Focus Groups

Dispatch
Metering
Settlements
Transition
Reconciliation
Contingency
Industry Testing

Other

Information sessions
Q&A session
National Public Holiday
State Public Holiday*

*Relevant state has been marked in a comment. WA, NT, TAS, ACT holidays have not been

Questions



Appendices

Appendix Contents

A1: L2 Readiness Milestones

A2: Dispatch Workstream Status

A3: Settlements Workstream Status

A4: Retail / Metering Workstream Status

A5: Reporting changes

A6: Standing Data Changes





A7: CATS CR Validations

A1: L2 Readiness Milestones

Level 2 Milestones – Readiness

Domain	Initiative	2019												2020												2021											
		Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			L2-M12 L2-RE29 L2-D8 L2-RE30			Q2			Q3			Q4		
Readiness																																					
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

Key Milestones (Program)

-  Milestone complete
-  Milestone on track
-  Milestone at risk
-  Milestone not achieved

ID	Milestone	Target Date	Expected Date	Owner	Status
L2-RE11	Metering Service Provider Accreditation Plan Finalised	13-Mar-2020	18-Feb-2020	AEMO	Completed
L2-S12	Reallocations Go-Live	01-Apr-2020	01-Apr-2020	AEMO	Completed
L2-RE32	Industry Test for Reallocations Concludes	31-Mar-2020	31-Mar-2020	AEMO	Completed
L2-RE22	Industry Transition Plan – Dispatch final complete	28-Aug-2020	28-Aug-2020	AEMO	
L2-M11	Industry Test preparation completed by participants for MDM and B2M Go-Live	01-Feb-2021	01-Feb-2021	Participants	
L2-M12	Industry Test preparation completed by AEMO for MDM and B2M Go-Live	01-Feb-2021	01-Feb-2021	AEMO	
L2-RE29	Retail MDM (incl. B2M) Industry Test Commences	01-Feb-2021	01-Feb-2021	AEMO	
L2-RE30	Retail MDM (incl. B2M) Industry Test Concludes	03-Mar-2021	03-Mar-2021	AEMO	
L2-RE18	Industry Go-Live Plan Retail MDM finalised	20-Nov-2020	20-Nov-2020	AEMO	
L2-M24	B2M Go-Live	09-Mar-2021	09-Mar-2021	AEMO	
L2-M10	5 minute files in MDFF accepted by AEMO	01-Apr-2021	01-Apr-2021	AEMO	
L2-D7	Dispatch Industry Test preparation completed by participants	29-Nov-2020	29-Nov-2020	Participants	
L2-D8	Dispatch Industry Test preparation completed by AEMO	29-Nov-2020	29-Nov-2020	AEMO	

Level 2 Milestones – Readiness

Domain	Initiative	2019												2020												2021											
		Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
Readiness																																					
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

Key Milestones (Program)

ID	Milestone	Target Date	Expected Date	Owner	Status
L2-S10	Settlements Industry Test preparation completed by participants	17-Feb-2021	17-Feb-2021	Participants	
L2-S11	Settlements Industry Test preparation completed by AEMO	17-Feb-2021	17-Feb-2021	AEMO	
L2-RE28	Dispatch Industry Test concludes	15-Mar-2021	15-Mar-2021	AEMO	
L2-RE32	Settlements Industry Test concludes	15-Mar-2021	15-Mar-2021	AEMO	
L2-RE19	Industry Go-Live Plan Settlements, Dispatch & Bidding finalised	19-Mar-2021	19-Mar-2021	AEMO	
L2-RE23	5MS Capability Market Trial preparation completed by participants	05-Jul-2021	05-Jul-2021	Participants	
L2-RE24	5MS Capability Market Trial preparation completed by AEMO	05-Jul-2021	05-Jul-2021	AEMO	
L2-RE31	5MS Capability Market Trial commences	05-Jul-2021	05-Jul-2021	AEMO	
L2-RE20	Industry Go-Live Plan – 5MS Capability final complete	01-Aug-2021	01-Aug-2021	AEMO	
L2-D10	5MS Capability Market Trial concludes	27-Aug-2021	27-Aug-2021	AEMO	
L2-D11	30-min Bidding no longer accepted by AEMO	01-Oct-2021	01-Oct-2021	AEMO	
L2-RE25	MDMT format no longer accepted by AEMO for interval meters	01-Oct-2021	01-Oct-2021	AEMO	
L2-RE26	GS Market Trial preparation completed by participants	01-Feb-2022	01-Feb-2022	Participants	
L2-RE27	GS Market Trial preparation completed by AEMO	01-Feb-2022	01-Feb-2022	AEMO	
L2-RE21	Industry Go-Live Plan – GS Capability final complete	21-Dec-2021	21-Dec-2021	AEMO	

- Milestone complete
- Milestone on track
- Milestone deferred
- Milestone at risk
- Milestone not achieved

A2: Dispatch Workstream Status

Systems Workstream – Dispatch & Operations

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
DISPATCH and OPERATIONS										
PACKAGE 1 - Bidding FTP and API										
Transition	Aug-18	Oct-18	Aug-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
PACKAGE 2 - Bidding Web UI										
Bidding Web UI and APIs	Aug-18	Nov-18	Dec-18	Jan-19	Mar-19	31-Jul-19	16-Dec-19	29-Nov-19	29-Nov-20	1-Apr-21
PACKAGE 3 - Dispatch, Pre-dispatch and PASA										
Dispatch	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	29-Nov-20	1-Apr-21
Predispatch P30/7DAY	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	29-Nov-20	1-Apr-21
Predispatch P5	Nov-18	Oct-18	Nov-18	TBC	TBC	TBC	-	TBC	29-Nov-20	1-Apr-21
ST and PD PASA	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
PACKAGE 4 - Pricing and Miscellaneous										
Trading Price / Price Revision	Aug-18	-	Feb-19	Nov-18	Mar-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
Administered Pricing and CPT	Aug-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
Suspension Pricing	Sep-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
Negative Residue Management	Sep-18	-	Feb-19	Dec-18	Jun-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
RERT	Oct-18	-	-	-	-	-	-	-	-	-
PACKAGE 5 - Full Data Model										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan-20	16-Mar-20	29-Nov-19	29-Nov-20	1-Apr-21

A3: Settlements Workstream Status

Systems Workstream - Settlements

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
SETTLEMENTS										
PACKAGE 1 - Reallocations										
Reallocations	Dec-18	Nov-18	Dec-18	Mar-19	31-Jul-19	15-Oct-19	1-Nov-19	1-Nov-19	1-Mar-20	1-Apr-20
PACKAGE 2 - Settlements and Billing										
Settlements	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	15-Dec-19	-	16-Mar-20	Feb-21	Apr-21
Billing	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	15-Dec-19	-	16-Mar-20	Feb-21	Apr-21
PACKAGE 3 - Prudential's and Estimation										
Prudentials	Sep-18	Nov-18	Dec-18	Mar-19	31-Oct-19	31-Jan-20	15-May-20	15-May-20	Feb-21	Apr-21
Estimation	Oct-18	Nov-18	Dec-18	Mar-19	31-Oct-19	31-Jan-20	-	15-May-20	Feb-21	Apr-21
Full Data Model	Refer DISPATCH									

A4: Retail / Metering Workstream Status

Systems Workstream - Metering

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
METERING										
PACKAGE 1 - Metering Data & Metrology										
MDFF • MDFF Specification NEM12 NEM13 v20	Aug-18	Oct-18	Oct-18	Nov-18	Jan-19	Apr-19	-	1-Dec-19	01-Feb-21	09-Mar-21
PACKAGE 2 - MSATS & SLPs										
Transition • MSATS Technical Specification	Aug-18	Sep-18	Aug-18	Nov-18	31-May-19	30-Sep-19	-	-	-	-
Meter Data - MDFF and MDMF • MDM File Format and Load Process (User Guide) • MSATS Technical Specification	Aug-18	Oct-18	Sep-18	Nov-18	31-May-19	30-Sep-19	-	1-Dec-19	01-Feb-21	09-Mar-21
PACKAGE 3 – Miscellaneous										
B2M via API • MSATS Technical Specification	Oct-18	-	Apr-19	9-May-19	31-May-19	30-Sep-19	31-Jul-20	N/A	01-Feb-21	09-Mar-21
MSATS Browser (LVI) changes • MSATS Technical Specification	Aug-18	-	May-19	9-May-19	28-Jun-19	30-Sep-19	31-Jul-20	15-Jun-20	01-Feb-21	09-Mar-21
MSATS Report changes • MSATS Procedures MDM Procedure • MDM File Format and Load Process (User Guide) • MSATS Technical Specification General Process & Document Clean-up	Oct-18	-	Apr-19	Apr-19	28-Jun-19	30-Sep-19	-	31-Aug-20	01-Feb-21	09-Mar-21

A5: Reporting changes

5MS/GS Existing RM Report changes

Report Name	Change
RM11 - Missing data report	<p>Report Purpose: The RM11 report is to allow AEMO and Participants to identify what metering data is missing from MDM</p> <p>Change: Automatically Push the report to MDP Participants Will Include all datastreams that have an active suffix in CATS NMI Datastream</p>
RM13 - NMI Datastreams History Report	<p>Report Purpose: The RM13 report is to allow AEMO and Participants to retrieve the history of a NMI DataStream's metering data for a specified period</p> <p>Change: Interval decimal places will be increased to 4 to support MDFF reads May receive multiple messages to support different interval granularities.</p>
RM17 - Level 3 Settlement Reconciliation for Non-Aggregated Data	<p>Report Purpose: The RM17 report provides interval data for all suffixes of a particular <i>NMI</i> that was used during a <i>settlements</i> run</p> <p>Change: Addition of the MDP Version Date used for settlements</p>
RM20 – Profile Shape Data Report	<p>Report Purpose: The RM20 is to allow AEMO and Participants to retrieve profile shape data</p> <p>Change: Addition of the new 5 minute profile for 15/30 minute interval reads</p>
RM21 - Level 2 Settlement Reconciliation Report	<p>Report Purpose: The report provides the daily totals of load data for each NMI with the supplied TNI</p> <p>Change: Addition of the MDP Version Date used for settlements</p>
RM25- Settlement - Profile Shape Data	<p>Report Purpose: The RM25 report provides the Settlement profile shape data for settlement week – 7 days for all Profiles in all profile areas when the profile is locked</p> <p>Change: Addition of the new 5 minute profile for 15/30 minute interval reads</p>

5MS/GS Existing CATS Report changes

Report Name	Change
C1 - Data Replication Resynchronisation Report	<p>Report Purpose: The C1 report is a synchronisation report that's designed to allow a Participant to replicate data if access to MSATS is lost for a short period and did not receive all notification</p> <p>Change: The <i>TransmissionNodeIdentifier2</i> field (TNI2) will be included at the end of the <i>ElectricityNMIMaster</i> replication block where populated*</p>
C4 – NMI Master Report	<p>Report Purpose: The C4 report is to provide master information for NMIs based on the parameters entered by a user</p> <p>Change: The <i>TransmissionNodeIdentifier2</i> field (TNI2) will be included at the end of the <i>ElectricityNMIMaster</i> replication block where populated*</p>
C7 – New Participant Data Access Report	<p>Report Purpose: The C7 report is to detail certain NMI Standing Data for a nominated new party in a proposed change request.</p> <p>Change: The <i>TransmissionNodeIdentifier2</i> field (TNI2) will be included at the end of the <i>MasterData</i> section of <i>ElectricityStandingData</i>*</p>
C10 – RoLR Reports	<p>Report Purpose: The C10 reports provides the ability to create the ROLR reports using different data methods</p> <p>Change: The ROLR_013 an ROLR_014 reports will include the NMI ADL value for each NMI within the RoLR event.</p>
C11 – Monthly Retail Statistics Report	<p>Report Purpose: The C11 report contains statistics providing trends of consumer transfers by jurisdiction</p> <p>Change: The PDF report output will include a table displaying the 'Total Number of NMIs' quantities to support the existing graph</p>

5MS/GS Existing PMS Report changes

Participant Role	Service Level Reporting Change	Change
LNSP	LRERR - Local Retailer Participant ID Error	Remove at GS go live
	NMIST3 - NMI Status not updated to 'N' within 5 business days error	Remove as "off-market child" NMIs are not relevant for LNSP participants
ENM	ADWNAN_INTERVAL2 – Active Datastream with a Non active NMI and metering data received is not zero	Addition of new service level check
	CTCERR2 – List of NMIs that do not have a Customer Threshold Code assigned	Addition of new service level check
FRMP	HIGHREAD2 - Type 6, MRIM and VICAMI NMI's that exceeds meter installation capacity	Addition of new service level check
MC	HIGHREADS - Type 6, MRIM and VICAMI NMI's that exceeds meter installation capacity	Addition of new service level check
MPB	METDET – Meter Installation details not update within 5 business days	Addition of new service level check

5MS/GS Existing PMS Report changes

Participant Role	Service Level Reporting Change	Change
MDP	DANDS – Duplicate active datastreams	Update to include duplicate active basic or interval datastream or basic and interval datastream during the same period.
	DAIDS – Duplicate active interval datastreams	Remove include in DANDS
	IPROFER - Interval datastream with incorrect profile	Remove once CR logic included to restrict errors
	ISUFER - Interval datastream with incorrect suffix	Remove once CR logic included to restrict errors
	MDPERR – Possible incorrect MDP assigned	Update to reflect Global Settlement changes
	NADL - Null ADL entry	Remove as ADL is a mandatory CR field.
	NIPROFER - Non-Interval datastream with incorrect profile	Remove once CR logic included to restrict errors
	NISUFER - Non-Interval datastream with incorrect suffix	Remove once CR logic included to restrict errors

A6: Standing Data Changes

5MS/GS New Standing Data Values

The introduction of 5MS & GS has introduced some new standing data values.

NMI Class Codes:

Code	Description
BULK	Connection point where a transmission network connects to a distribution network - also termed 'Bulk Supply Point'
DWHOLSAL	Distribution network connection point where energy is directly purchased from the spot market by a Market Customer
NCONUML	Non-contestable unmetered load
NREG	Connection point associated with a non-registered embedded generator at which: <ul style="list-style-type: none">the embedded generating unit is classified by a Market Small Generation Aggregator as a market generating unit; orthe output of the embedded generating unit is consumed by a market load at the same connection point.
XBOUNDRY	Connection point where a distribution network connects to another to distribution network

5MS/GS New Standing Data Values

Meter Installation Type Code (MITC):

Code	Description	Manually Read Flag
NCONUML	Non-contestable unmetered load	N

Transmission Node Identifier 2 (TNI2):

The TNI2 field will only be used to record the TNI code for the receiving local area.

This code will be created and assigned by AEMO for new cross boundary connection points, existing two NMI connection points will already have the receiving TNI (TNI2) registered.

It is the **responsibility of the LNSP** creating the connection point in MSATS to apply to AEMO for a new cross boundary connection point and advise the receiving LNSP participant id (NSP2).

It is the **responsibility of AEMO** to create a new receiving TNI code (TNI2) and register the NSP2 and TNI2 values against the cross boundary connection point after creation by the supplying LNSP.

5MS/GS New Standing Data Values

NMI Datastream Type Code:

Datastreamtype	Description	Datastream suffix (as per MSATS Procedures: National Metering Identifier Procedure)
I	Interval - Interval Datastream included in NEM Settlement process	A, D, B, E, N
C	Basic - Consumption Datastream is included in NEM Settlement Process	First character is 1 to 9
P	Profile - Profile Datastream included in NEM Profile calculations (Sample meters only)	E, N
N	NonSettlement - Interval Datastream is not to be included in the NEM Settlement process or NEM Profile calculations	J, P, S, K, Q, T, G, H, M, V, C, F, L, R, U, Y, W, Z, X A,D,B,E when not used for NEM Settlements (e.g. Vic TUOS)

'N' replaces codes 1, 2, 3, 4 for Vic TUoS where Datastreams will not be used for settlements.
Refer [CNDS and Meter](#) document for more information

A7: CATS CR Validations

5MS/GS CATS CR Validation

Changes to CR validation will be included to support 5MS & GS, below is a high level description of the changes:

These changes will go live with the MDM technical go live.

NMI Classification Codes:

to support the raising of CATS CRs the new NMI Classification codes will be assigned to CRs as documented in the CATS and WIGS Procedures

5MS/GS CATS CR Validations

Logic will be introduced to reject the creation of datastreams where an invalid datastream "Suffix", "Type" or "Profile Name" is assigned.
Below is a list of the valid values for each field:

These changes will go live with the 5MS Rule go live.

Suffix:

Interval suffix:

first character = A-H, J-N, P-Z

second character = 1-9, A-H, J-N, P-Z

Basic suffix:

first character = 1-9

second character = 1-9, A-H, J-N, P-Z

Profile Name:

Interval datastream:

Must equal 'NOPROF'

Basic datastream:

Must NOT equal 'NOPROF'

5MS/GS CATS CR Validation

Datastream Type:

Interval datastream types:

Net & Register Interval CNDS Records

	First character								2 nd character
	Ave	<i>DatastreamType</i>	Master	<i>DatastreamType</i>	Check	<i>DatastreamType</i>	Net	<i>DatastreamType</i>	Meter numbers or measuring elements are to be 1-9 then A-H, J-N, P-Z
IMPORT kWh	A	<i>I or N for Virtual NMI's</i>	B	<i>I or N for Virtual NMI's</i>	C	<i>N</i>	N	<i>I or P</i>	
EXPORT kWh	D	<i>I or N for Virtual NMI</i>	E	<i>I, P or N for Virtual NMI's</i>	F	<i>N</i>			
IMPORT kvarh	J	<i>N</i>	K	<i>N</i>	L	<i>N</i>	X	<i>N</i>	
EXPORT kvarh	P	<i>N</i>	Q	<i>N</i>	R	<i>N</i>			
KVAh	S	<i>N</i>	T	<i>N</i>	U	<i>N</i>			
Power Factor pF			G	<i>N</i>					
Q Metering Qh			H	<i>N</i>	Y	<i>N</i>			
Par Metering parh			M	<i>N</i>	W	<i>N</i>			
VOLTS (or V ² h) or Amps (A ² h)			V	<i>N</i>	Z	<i>N</i>			

Basic datastream types:

Accumulation Register Level CNDS Records	First Character		Second Character	Datastream Type
	1	First Datastream	Meter numbers are to be 1-9 then A-H, J-N, P-Z.	C
	2	Second Datastream		
	3	Third Datastream		
	4	First controlled load Datastream		
	5	Second controlled load Datastream		
	6	Third controlled load Datastream		
	7	First LNSP/ENM defined Datastream		
	8	Second LNSP/ENM defined Datastream		
	9	Third LNSP/ENM defined Datastream		

5MS/GS CATS CR Validation

Changes to CR validation will be included to support GS, below is a high level description of the changes:

These changes will go live with the GS Rule go live.

CATS CR Objection Rules:

The ability for LR to object to a CATS CR will be removed*

GLOPOOL Participant

Logic will be introduced to the transfer CRs to reject transfers where the FRMP Participant Id equals "GLOPOOL"

CATS CR - Change LR

The CR6400/CR6401 CRs will be removed*

CATS CR Notifications

Notifications to CR Status changes to LR participants will be removed*

**details of affected CRs are documented in the CATS and WIGS Procedures*