



# 5MS & GS Readiness Working Group #25 (incl. Systems Working Group)

Tuesday, 6 July 2021

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# 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

#	Time	Topic	Presenter
1	10:00 – 10:05	Welcome and Agenda	Greg Minney
2	10:05 - 10:15	Minutes/Actions	Greg Minney
3	10:15 – 10:25	5MS Program Update	Greg Minney
4	10:25 – 10:40	Retail debrief and Participant input to PIR	Graeme Windley
5	10:40 – 10:50	Market trial and industry testing update	Tui Grant
6	10:50 – 10:55	NCONUML compliance and progress	Greg Minney
7	10:55 – 11:15	Readiness reporting and Actions	Greg Minney / Blaine Miner
8	11:15 – 11:30	MTP Update	Blaine Miner
9	11:30 – 11:45	Contingency plans and triggers - metering and bidding	Greg and Blaine
10	11:45 – 11:50	Dispatch & Bidding Update	Ian Devaney
11	11:50 – 12:15	Industry Risks and Issues Review	Greg Minney
12	12:15 – 12:30	Forward Plan and Other Business - procedure update	Greg Minney
13	13:00	Meeting Close	Greg Minney



# Minutes & Actions

Anne-Marie McCague

# RWG Actions (1/2)

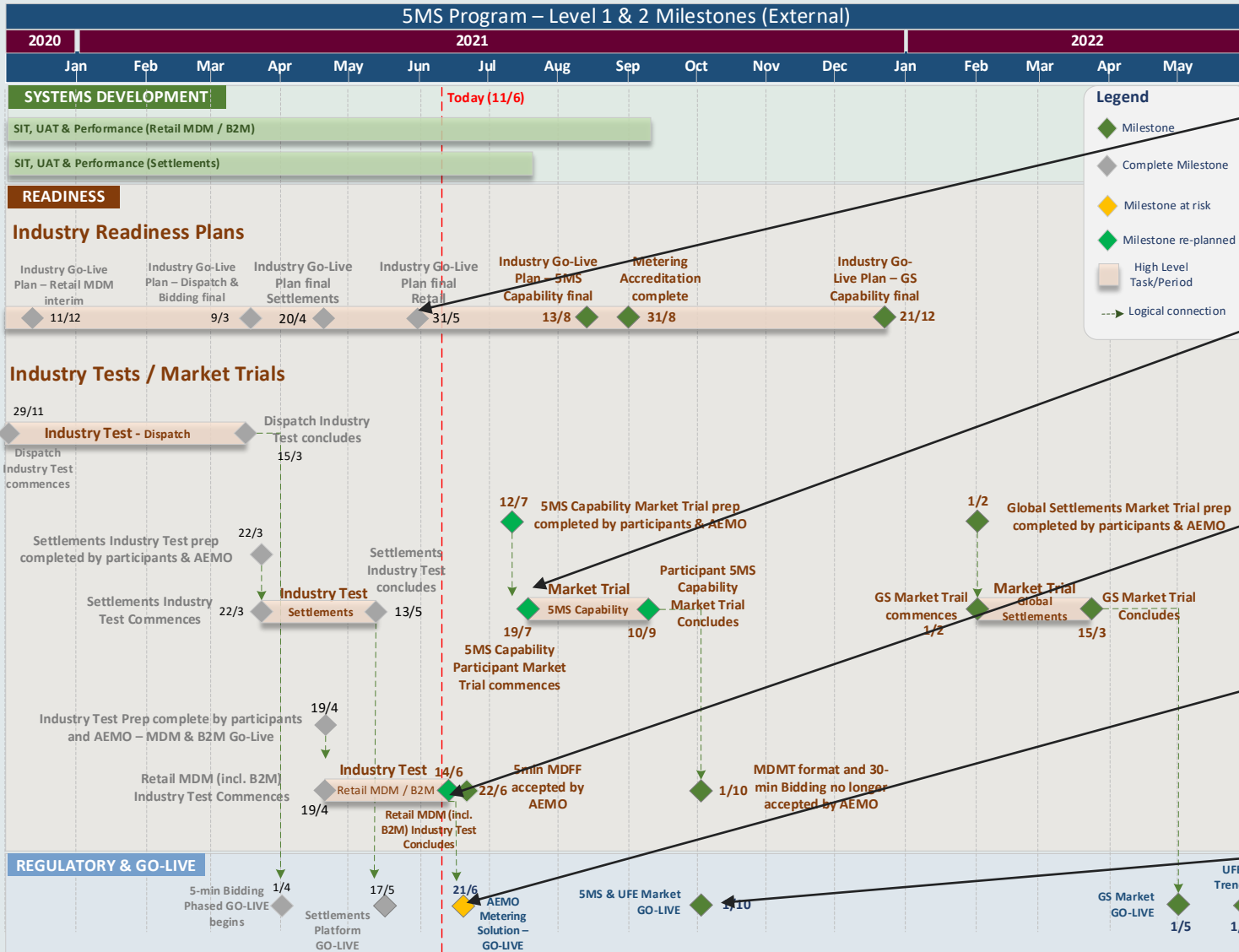
No.	Status	Action	Comment
24.5.1	Closed	AEMO to publish the updated Metering Transition Plan as version 1.9.	Available on the 5MS website.
23.2.1	Closed	AEMO to reword Risk R02 in advance of next risk review.	Included in the risk review section for feedback.



# 5MS Program Update

Greg Minney & Graeme Windley

# 5MS Program Timeline Readiness and Go-Live



Retail Industry Go-Live Plan finalised.

Market Trial preparation ongoing. Over 30 participants have registered to date. Registration closed 25 June.

Retail Industry Testing complete. Test report will be circulated.

5MS Retail IT Platform Go-Live completed on 21 June. This milestone is now grey.

AEMO's readiness for 5MS commencement on 1 October 2021 remains Green



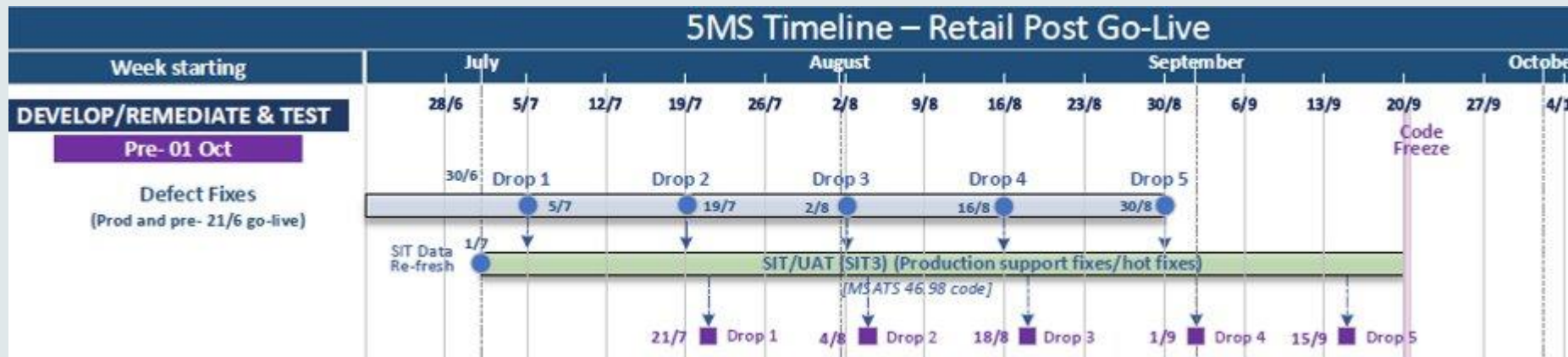
# Retail Debrief

# Retail IT Platform Go-Live - Cutover weekend debrief

- The new Retail MDM IT solution was **successfully migrated to production** on 21 June 2021.
  - A number of minor internal facing issues were encountered on Sunday that caused delays to the cutover process. These were successfully remediated by the team and the time was recovered to allow the B2M restart to complete ahead of schedule.
- One major issue was identified – **Profile Area Update**. A workaround was established for this issue which allowed the team to progress with the cutover. The participant impacts of this workaround will be discussed during this session.
- The **system is operating as expected**, noting a performance issue with internal solution messaging queues, which is impacting report requests and distribution.
- Please raise Incidents with the Support Hub and / or attend the 3 x weekly Retail Production Support meetings for latest information on Incidents and Production defects.

# Retail Production Support: Approach to Defect Resolution

- The 5MS Retail Production Support team is planning on Releasing defect fixes on the following schedule:

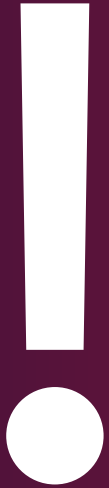


- Five Drops into Production are planned up until the 1 October 2021 market go live. Drop 1 (keep process free for immediate Production urgent defects) and Drop 5 (any final market trial defects) will be kept as small as possible.
- We will not be communicating a full list of defect fixes in advance, but when we are clear on delivery due to testing success. We will be prioritising the delivery order based on your feedback.

# Post Implementation Review

- AEMO is seeking Feedback from participants to progress a Post Implementation Review (PIR) of the Retail platform cutover
- Feedback is sort in relation to performance and communication:
  - Leading up to the cutover weekend, including availability of Industry Test opportunities, briefing sessions etc
  - During the Cutover
  - Immediate Post Cutover
  - Post cutover support
- Feedback requested by 13th July – to [5ms@aemo.com.au](mailto:5ms@aemo.com.au)
- Consolidated feedback, with responses where appropriate, to be provided to RWG
- AEMO 5MS program to provide consolidated feedback to AEMO ePMO as basis for Implementation of future major systems upgrades and provide RWG with the summary of PIR

# Notice



Please note the following excerpt from the AEMO MDM Procedure:

*“The purpose of the RM26 MDP Substitution and Estimation Report is to allow AEMO and MDPs to obtain details of Substitutions and Estimations that are still current in MDM for a specified settlement week.”*

This is to ensure the report covers Net readings that are calculated using E and B datastreams where the NMI datastream is N the report will also include E, B, A and D datastreams.



# Market Trial & Industry Testing Update

Tui Grant

# 5MS Market Trial

## 5MS Market Trial:

- 5MS Market Trial Plan was circulated on 24 May
- 30 participants have registered for Market Trial through the Workbook
- This includes identifying the test scenarios that will be executed and participant pairing
- Registration was required by 25 June. Any participant that hasn't registered but is intending to participate should contact [5MS@aemo.com.au](mailto:5MS@aemo.com.au) to discuss.



## Market trial schedule reflects transition from 30 to 5 minute settlement

- Requires alignment of bidding capability with Market trial schedule
  - Full 5 minute capability to take effect in pre-prod on 30 Jul
- 30-Jul will reflect operating conditions for 1 Oct
  - 5 minute bidding profiles
  - Rejection of MDMT for interval meters
  - Customer switching capability



# Preparing for Market Trial

## Pre-production Refresh:

- Wholesale refresh will take place on 12 July.
- Retail refresh will take place on 12 July
- Outage for both refreshes will be approx. 5 days

## Practitest Training:

- Three opportunities to attend – agenda identical for all three. Participants are welcome to attend one or multiple.
- Invitations will be sent to ITWG – forward as required
- Monday 5 July 10:00, Friday 9 July 10:00, Wednesday 14 July 10:30
- Restricted to 2 Practitest licences per organisation – provide 2 user IDs after attending training

## Next Steps for Registered Participants – Entry Criteria:

- Confirm access to pre-prod
- Confirm in/out boxes are clean
- Confirm you are on the right Schema version for your testing and/or correct data model for wholesale
- Check any security access your test team may require to execute their tests i.e. folder access or only MSATS folder access etc.
- Confirm NMI lists with paired participants
- Confirm subscriptions in pre-prod wholesale to ensure you get all the reports you are expecting
- Confirm FTP and/or API access for your defined test scope





# Preparing for Market Trial

## Workbook and Preparation:

- Twice Weekly (Tuesday and Thursday) Market Trial Planning Session
- Scenario nomination and Participant pairing
- NMI data selection with nominated pairs
- Additional Scenarios to be bi-laterally arranged



# 5MS Market Capability Test Schedule

## From 25 to 31 July

### LEGEND:

- Green text represents data in 30-min granularity
- Yellow text represents data that will replicate the transition week i.e. 5 days of 30-min data plus 2 days of 5-min data
- Purple text represents data in 5-min granularity

*Version: Draft 0.1 published 24 May 2021 for discussion with ITWG*

	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul
	30 min	30 min	30 min	30 min	30 min	5 min	5 min
<b>METERING ESTIMATION FILE</b>							
Estimate settlement billing run		25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul
<b>INVOICES and Associated METER DATA</b>							
Preliminary						2021Wk30	
Final				2021Wk27			
First Revision			2021Wk11				
Second Revision					2021Wk01		
<b>Bidding</b>							
Verify unable to submit varied 5 minute bids	*	*	*	*	*		
Verify successful submission of varied bids						*	*
<b>Retail</b>							
Verify rejection of MTMD meter data files for interval meters						*	*
Verify production of RM settlement reports in 5 minute increment							





# NCONUML Compliance

# NCONUML Issue

ID	Description	Rating
I13	<p><b><u>Delay to NCONUML Functionality in Production</u></b></p> <p>The delay to the release on the NCONUML functionality in production has resulted in some participants reporting activity “Population and activation of NCONUML NMIs and Associated Metering Data Delivery from 1 Oct” as at risk/ late for a number of participants. This may cause a compliance risk for those participants.</p>	High

## Issue:

Population and activation of NCONUML NMIs and Associated Metering Data Delivery from 1 Oct identified as at risk/ late for a number of participants in readiness reporting:

- Dependency on Capability to create NCONUML NMI in Retail Platform
- Scheduling and Resource conflicts for population and data delivery given other regulatory programs and Local Retailer impacts

NCONUML capability will not be included in the June 21 retail release

- Capability planned to be available from 26 July, with AEMO confirmation on 12th July

2 Participants have currently identified impact to their delivery as a result of dependency on timing of market capability

- 4 participant have indicated activities at risk, not dependent on retail capability timing

## Impacts:

- For period of non-delivery post 1 October UFE values reported will not reflect the contribution of NCONUML in the profile area
- Potential impacts to LR processes for processing of NCONUML
- Potential compliance breach risk for participants that have not completed activities by 1 Oct

## Mitigation / Remediation Process:

- The obligation on participants to complete this action is governed by the AEMO procedures
- **ACTION:** Impacted participants should contact AEMO and provide consolidated reporting of timing and volume impacts to assist UFE understanding



# Readiness Survey Round 8

Blaine Miner

# Industry Readiness – Round 8

(as at 22 June)

On track	On track for commencement date
Risk 1 – Risk to major milestones or deliveries	Remediation or contingency activation required to ensure on track delivery for Rule Commencement
Risk 2 – Risk to rule commencement	Cannot be addressed with available contingencies to be on track for commencement date

Activity	Status	Trend	Comments
AEMO Business Readiness for 5MS and GS (Part A)	On-track	↑	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>All AEMO platforms are now in Production operating at 30 minute Settlement, Retail Platform Deployed 21 June</li> <li>Market Trial scheduled for 19<sup>th</sup> July commencement</li> </ul> </li> <li>Trend: Up                             <ul style="list-style-type: none"> <li>AEMO’s last platform (Retail) went live on the 21<sup>st</sup> June</li> </ul> </li> </ul>
Essential Industry Capabilities for 5MS commencement (Part A)	At-risk	↓	<ul style="list-style-type: none"> <li>Status: At-risk                             <ul style="list-style-type: none"> <li>Multiple MSPs plans reflect 10% tranche 1 meters made 5-minute capable in September, with no schedule contingency for Metering Data delivery                                     <ul style="list-style-type: none"> <li>AEMO to engage the RWG to conduct detailed contingency planning</li> </ul> </li> <li>Generators “on-track” with individual program risks reported</li> </ul> </li> <li>Trend: Down                             <ul style="list-style-type: none"> <li>Multiple MSPs with limited contingency for meter capability upgrade and metering delivery</li> </ul> </li> </ul>
<b>Summary: Part A 5MS Rule Commencement Essential Industry Capability</b>	On-track	→	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>AEMO’s last platform (Retail) went live on the 21<sup>st</sup> June</li> <li>Tranche 1 meters still on-track for 1 October</li> </ul> </li> <li>Trend: Neutral                             <ul style="list-style-type: none"> <li>Offsetting outcomes, AEMO’s Retail platform is now live, however, MSP time contingency has reduced</li> </ul> </li> </ul>
Other industry capabilities for 5MS and GS (Part B)	On-track	↓	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>Majority of Participants reporting their overall programs as on-track, but some Participants are now reporting some non-essential capabilities as at-risk or late</li> <li>Metering transition activities have heightened risk profile</li> </ul> </li> <li>Trend: Down                             <ul style="list-style-type: none"> <li>Increase in Participants reporting items at-risk or late compared to the previous readiness reporting round</li> </ul> </li> </ul>



# Part A 5MS Essential Capability

(as at 22 June)

On track	On track for commencement date
Risk 1 – Risk to major milestones or deliveries	Remediation or contingency activation required to ensure on track delivery for Rule Commencement
Risk 2 – Risk to rule commencement	Cannot be addressed with available contingencies to be on track for commencement date

Responsible Participant	Essential Criteria	Status	Trend	Comments
Generator	Generators and MNSPs are able to submit 5-min offers	On-track	➡	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>18 Generators and MNSPs representing 93% of NEM volume reporting on-track                                     <ul style="list-style-type: none"> <li>Coverage marginally achieved in one jurisdiction due to one key participant not provided a readiness response</li> <li>Major participant previous not reporting status has commenced reporting</li> </ul> </li> </ul> </li> <li>Trend: Neutral                             <ul style="list-style-type: none"> <li>All respondents intend to participate in 5MS Market Trials</li> <li>2 participants have now implemented their 5-minute bidding service, with 13 out of 16 generators intending to commence their implementations within the bidding transition period</li> </ul> </li> </ul>
MP, MC, MDP	All essential meters* are able to produce and store and deliver 5-min data	At-risk	⬇	<ul style="list-style-type: none"> <li>Status: At-risk                             <ul style="list-style-type: none"> <li>4 MSPs are reporting late against MTP transition end dates regarding the installation and delivery of essential metering data, however on track for meeting compliance requirements</li> </ul> </li> <li>Trend: Down                             <ul style="list-style-type: none"> <li>Reduced time contingency associated to the installation and metering data delivery of essential meters</li> </ul> </li> </ul>
AEMO	The 5-minute bidding and dispatch solution, including the web bidding interface is deployed	On-track	➡	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>Platform deployed in 'Bidding Transition' configuration</li> <li>Additional capability on track for implementation prior to 1 October</li> </ul> </li> <li>Trend: Neutral</li> </ul>
	The Metering Data Management (MDM) solution is deployed	On-track	⬆	<ul style="list-style-type: none"> <li>Status:                             <ul style="list-style-type: none"> <li>Retail Platform deployed into Production on 21<sup>st</sup> June</li> <li>5-minute metering processes to be verified during 5MS Market trial</li> </ul> </li> <li>Trend: Up                             <ul style="list-style-type: none"> <li>Retailer platform deployed</li> </ul> </li> </ul>
	The 5-minute settlements solution is deployed	On-track	➡	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>AEMO's Settlement Platform successfully deployed 17<sup>th</sup> May, to support 30-minute settlement</li> <li>5-minute settlement processes to be verified during the 5MS Market trial</li> </ul> </li> <li>Trend: Neutral</li> </ul>
<b>Summary - Essential Criteria</b>		On-track	➡	<ul style="list-style-type: none"> <li>Overall, essential criteria to support the 5MS rule commencement is considered to be on track.                             <ul style="list-style-type: none"> <li>Noting the reduced time contingencies for the installation and delivery of Tranche 1 5-minute metering data</li> </ul> </li> </ul>

# Part B – Other Industry Capabilities

(as at 22 June)

On track	On track for commencement date
Risk 1 – Risk to major milestones or deliveries	Remediation or contingency activation required to ensure on track delivery for Rule Commencement
Risk 2 – Risk to rule commencement	Cannot be addressed with available contingencies to be on track for commencement date

Responsible Participant	Criteria	Status	Trend	Comments
<b>Retailer</b>	Receive and process 5-minute metering data. Receive and process 5-minute settlement data.	On-track	↓	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>18 out of 20 retailers reporting their overall programs as on-track</li> <li>17 out of 20 retailers planning on participating in the 5MS Market Trial, with 2 reporting participation at risk</li> </ul> </li> <li>Trend: Down                             <ul style="list-style-type: none"> <li>2 retailers reporting late for the processing of 5-minute metering data and 2 for the processing of 5-minute settlement data</li> </ul> </li> </ul>
<b>DNSP</b>	Receive and process 5-minute metering data. Provide GS metering and standing data updates (incl. NCONUML).	At-risk	↓	<ul style="list-style-type: none"> <li>Status: At-risk                             <ul style="list-style-type: none"> <li>Multiple DNSPs are reporting at risk or late for numerous GS related items, including:                                     <ul style="list-style-type: none"> <li>Cross boundary supplies, 2 reporting at-risk or late</li> <li>NCONUML, 3 reporting at-risk or late</li> <li>If not addressed, there would be an impact on the UFE values published for those profile areas</li> </ul> </li> </ul> </li> <li>Trend: Down                             <ul style="list-style-type: none"> <li>Increased occurrence of at-risk or late items being reported</li> </ul> </li> </ul>
<b>TNSP</b>	Receive and process 5-minute metering data Provide GS metering and standing data updates	On-track	→	<ul style="list-style-type: none"> <li>All TNSPs reporting their overall programs as on track</li> <li>2 out of 6 have the intention to receive 5-minute metering data prior to the Rule commencement date</li> <li>5 out of 6 reporting as on-track, 1 response not received (noting that their Round 7 response showed them as on-track)</li> </ul>
<b>MDP</b>	Provide 5-minute metering data <b>T1-3 distribution connected meters, type 7 meters.</b> Provide type 4, 4A, Vic Ami metering data at 5-minute granularity by 1 December 2022 Provide basic metering data for tier 1 NMIs to AEMO.	On-track	→	<ul style="list-style-type: none"> <li>Status: On-track                             <ul style="list-style-type: none"> <li>13 out of 16 MDPs reporting as on-track, representing approx. 95% coverage of Tranche 1 meters</li> <li>16 out of 16 MDPs reporting on-track for the delivery of 5-minute metering data by 1 October</li> </ul> </li> <li>Trend: Neutral</li> </ul>
<b>MP, MC</b>	All T1-3,4* meters are able to produce and store 5-minute data.	On-track	↓	<ul style="list-style-type: none"> <li>19 MPs servicing tranche 1 meters reporting as on-track</li> <li>Approx. 40% of tranche 1 meters currently 5-minute capable, expecting a large increase in this percentage once rollout plan updates, due 1 July, are provided by Participants</li> </ul>
<b>Summary – Other Industry Capabilities</b>		On-track	↓	<ul style="list-style-type: none"> <li>Overall, on-track for 5MS rule commencement.</li> <li>Trending down due to the increased number of at-risk and late activities being reported</li> </ul>

# Readiness reporting – 2021 schedule

Action ID	Action	Comment	Action Owner
8.1	AEMO to follow up with the applicable Participants, to confirm their remediation and contingency approaches, regarding their potential inability to process and reconcile 5min metering data by 1 Oct 2021	Multiple Participants have reported their ability to process and reconcile 5min settlements data by 1 Oct 2021 as 'late'	AEMO
8.2	AEMO to follow up with the applicable Participants, to confirm their remediation and contingency approaches, regarding their potential inability to process and reconcile 5min settlements data by 1 Oct 2021.	Multiple Participants have reported their ability to process and reconcile 5min metering data by 1 Oct 2021 as 'late' or 'at-risk'	AEMO
8.3	Applicable DNSPs to provide additional information to help assess the potential consequences of NCONUML 5min metering data not being delivered by 1 Oct 2021.	Multiple Participants have reported their ability to deliver 5min NCONUML metering data as 'late' or 'at-risk'	DNSPs
8.4	AEMO to discuss with applicable DNSPs, impacts associated to the delay in AEMO's NCONUML capability	AEMO's NCONUML capability has been delayed until late July 2021	AEMO
8.5	Applicable DNSPs/MPs/MCs to provide additional information to help assess the potential consequences of cross boundary supplies not being installed by 1 Oct 2021.	Multiple Participants have reported the installation of cross boundary meters as 'late' or 'at-risk'	DNSPs
8.6	AEMO to engage the RWG to confirm the contingency approaches for scenarios where an essential meter is not 5min capable or where an MDP is not be able to deliver 5min metering data for essential meters by 1 Oct 2021.	Multiple Participants servicing essential meters have reported that they will not be able to meet the MTP transition end dates associated to the installation/reconfiguration of tranche 1 meters, the delivery of tranche 1 5-min metering data and the delivery of 5-min Type 7 metering installation loads	AEMO

# Readiness reporting – 2021 schedule

Action ID	Action	Comment	Action Owner
8.7	Applicable MDPs to provide additional information to help assess the potential consequences of NCONUML 5min metering data not being delivered by 1 Oct 2021.	Multiple Participants have reported the delivery of 5-min Non-Contestable Unmetered Load as 'late' or 'at-risk'	MDPs
8.8	AEMO to follow up with the applicable Participants to confirm their remediation approach regarding their potential inability to deliver Type 7 5min metering data by 1 Oct 2021.	Multiple Participants have reported the delivery of Type 7 metering data as 'late' or 'at-risk'	AEMO
8.9	Applicable MDPs to provide additional information to help assess the potential consequences of Tier 1 basic 5min metering data not being delivered by 1 Oct 2021.	Multiple Participants have reported the delivery of Tier 1 basic metering data as 'late'	MDPs

# Readiness reporting – 2021 schedule

Readiness reporting	Survey released	Survey responses due	Distribute results	Discuss at RWG meeting	Discuss at PCF	Discuss at EF
Round #9	04-Aug-21	13-Aug-21	27-Aug-21	07-Sep-21	19-Aug-21	02-Sep-21

- The next readiness survey will be released on Wednesday 4<sup>th</sup> August, with the final report being distributed on Friday 27<sup>th</sup> August
- Based on the current schedule, this will be the **final readiness survey prior to the Rule commencement date.**

# MTP Update

Blaine Miner

# MTP Update

## Proposed Changes

Type	Activity Description	Proposed Date
Amendment to Transition Start Date	<ul style="list-style-type: none"> <li>• Create NCONUML NMIs in MSATS (A99)</li> <li>• Create Datastreams (A100) and Registers (A101) in MSATS</li> </ul>	From 26 July 2021

## Activities Now Deemed Completed

Description	Date	Activity ID
Agreement to allow the delivery of 5min metering data pre 1 Oct 2021 between NSP, Retailer, MDP and AEMO	By 31 May 2021	A89
MDPs to provide AEMO estimated number of NMIs and associated energy volumes for each Unmetered Device category within calculation methodology	By 1 May 2021	A32, A37, A42, A47, A53, A59, A65, A71, A84, A88
Delivery of tier 1 basic meter metering data (Actuals, Subs and Forward Estimates) to AEMO	By 30 June 2021	A93
Convert 'SASCALE NMI': Make existing 'Bulk' NMI extinct in MSATS and create individual controlled load datastreams and registers	By 30 June 2021	A101a, A101b, A101c
Ensure capability to receive and process new NMI classification codes	By 30 May 2021	A102, A104, A106, A108, A110, A112, A114
Tier 1 basic meter datastreams	By 30 June 2021	A117, A118

# Upcoming MTP Transition End Dates

Description	Date	Activity ID
MPs to install or reconfigure meters as required (tranche 1)	By 31 July 2021	A4, A9, A14, A20
MPs to update the Meter Read Type codes with RWDA	By 31 July 2021	A4a, A9a, A14a, A20a
MPs to apply for data storage exemptions as required	By 31 July 2021	A5, A10, A15, A21
DNSPs to provide cross boundary information to AEMO to enable the determination of TNI2 values	By 31 July 2021	A97c
MCs, for any registered 'Special Site' (as defined in the 'Special Sites and Technology Related conditions within the National Electricity Market Version 1.2) or any Logical NMI, update and distribute algorithms adjusted for introduction of 5 minute interval length to AEMO, FRMP and LNSP for approval.	By 31 August 2021	A31
MDPs to create/activate export and import (active (kWh) and reactive (kVarh)) energy datastreams in CNDS table	By 31 August 2021	A36, A40, A45, A51
MPs to complete data cleanse to ensure, the RegisterID matches the content of the 'Suffix' within the CATS_REGISTER_IDENTIFIER table. E.g. 'E1', 'B1', 'Q1', 'K1', etc.	By 31 August 2021	A36a, A40a, A45a
MDPs to update Type 7 datastreams in MSATS	By 31 August 2021	A83



# Upcoming MTP Transition End Dates

Description	Date	Activity ID
DNSPs and AEMO - Cross boundary supplies: create cross boundary NMIs, datastreams and registers; DNSPs to provide cross boundary information to AEMO; AEMO to provide TNI2 values; DNSPs to update TNI fields with TNI2 values	By 31 August 2021	A95, A96, A97, A95b, A97a, A97b
DNSPs, MDPs and MPs - Create NCONUML NMIs, datastreams and registers	By 31 Aug 2021	A99, A100, A101
DNSPs and AEMO - Update NMIs with new NMI Classification codes	By 31 August 2021	A103, A105, A107, A109, A111, A113, A115
MDPs to ensure all Sample meters have a Datastream type code of 'P' and are attached to a Profile	By 31 August 2021	A119
MDPs to update VIC TUoS Datastream type codes from 1-4 to 'I' or 'N' as required	By 31 August 2021	A120



# Contingency Plan

Greg Minney and Blaine Miner

# Contingency Plan

- In June 2020, AEMO published the ‘Final Industry Readiness Contingency Plan (spreadsheet)’
  - <https://www.aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/industry-working-groups-and-readiness/industry-readiness-strategy>
- As we approach the 5MS Rule commencement date, it would be prudent for the RWG to confirm that the triggers, monitoring response and contingency responses associated to the following scenarios are still ‘fit for purpose’

Scenario	Current Trigger(s)	Current Monitoring	Current Responses
C2 - Essential meter(s) installation and reconfiguration not fully compliant at 5MS commencement	Final round of Industry Readiness Reporting (May 2021) shows that applicable MTP activities are running late resulting in a number of Essential meters not being fully compliant at 5MS Rule commencement	Industry Readiness report	<ul style="list-style-type: none"><li>• MDPs to provide 5 minute subs until affected meters are compliant or</li><li>• MDPs do not send through reads and AEMO profiled supported substitutes until affected meters are complaint</li><li>• Escalate issue, recommend actions and seek guidance from the PCF and EF as appropriate</li></ul>

# Contingency Plan

Scenario	Current Trigger(s)	Current Monitoring	Current Responses
<p>C3 - MDP(s) not providing 5-minute data for Essential meter(s) as required at 5MS commencement resulting in short term financial volatility</p>	<p>Ongoing monitoring of Industry Readiness Reporting shows that applicable MTP activities are running late resulting in 5min metering data not being provided for a number of Essential meters at 5MS Rule commencement</p>	<p>Industry Readiness report</p>	<ul style="list-style-type: none"> <li>• Response dependent on the underlying issues (consider duration and materiality)</li> <li>• MDP to confirm rectification plan</li> <li>• BAU MDP processes, including manually loading data into MSATS or finding alternative pathways to MSATS using different sites</li> <li>• AEMO to generate subs at time of Settlement until issue resolved (BAU process)</li> <li>• AEMO and Participants to provide support as required (alternative mechanism to provide data)</li> <li>• Escalate issue, recommend actions and seek guidance from the PCF and EF as appropriate</li> <li>• As a last resort, MC to transfer NMIs to alternative MDP</li> </ul>

# Contingency Approach – Generators capable of submitting 5 minute bids

## Generators not able to provide valid 5 minute bids From 1 October

- Current trigger
  - Participant readiness reporting against critical population of generators in each jurisdiction
- Current monitoring mechanism
  - Industry Readiness report, supplemented by Market TRial
- Current responses
  - Utilisation of AEMO supplied Web Bidding interface as contingency approach to submission of bids as required

# Contingency Actions - Discussion

- Validation of appropriateness and effectiveness of identified contingency
- Participants to confirm readiness to implement suitable contingency included in their programs
- Understanding of the impacts to participant operations should contingency actions be required

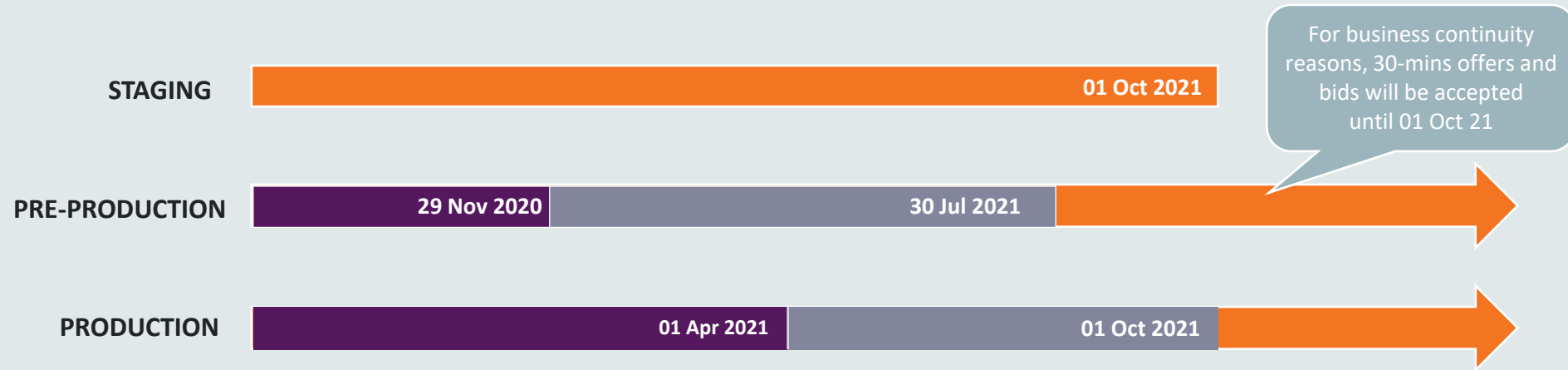
# Dispatch & Bidding Update

Ian Devaney

# Bidding / Dispatch

## Staging, Pre-production & Production timelines

No Change



### LEGEND

LEGACY	BIDDING TRANSITION	5MS RULE
<b>30-minute bidding only via:</b> <ul style="list-style-type: none"> <li>FTP (txt)</li> <li>Web Bidding (Legacy)</li> </ul>	<b>30-minute bidding via:</b> <ul style="list-style-type: none"> <li>FTP (txt)</li> <li>Web Bidding (Legacy)</li> </ul> <b>5-minute bidding* via:</b> <ul style="list-style-type: none"> <li>FTP (JSON)</li> <li>Web Bidding (5MS)</li> <li>API</li> </ul> <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>	<b>5-minute bidding* only via:</b> <ul style="list-style-type: none"> <li>FTP (JSON)</li> <li>Web Bidding</li> <li>API</li> </ul> <i>*30-minute bid emulation restriction lifted</i>



# Systems Workstream – Dispatch & Operations

Current as at 29-06-2021

Changes Highlighted

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
<b>DISPATCH and OPERATIONS</b>										
<b>PACKAGE 1 - Bidding FTP and API</b>										
Transition	Aug-18	Oct-18	Aug-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	30-Nov-20	01-Apr-21
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	30-Nov-20	01-Apr-21
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	30-Nov-20	01-Apr-21
<b>PACKAGE 2 - Bidding Web UI</b>										
Bidding Web UI and APIs	Aug-18	Nov-18	Dec-18	Jan-19	Mar-19	31-Jul-19	16-Dec-19	29-Nov-19	30-Nov-20	01-Apr-21
<b>PACKAGE 3 - Dispatch, Pre-dispatch and PASA</b>										
Dispatch	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	30-Nov-20	01-Apr-21
Predispatch P30/7DAY	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	30-Nov-20	01-Apr-21
Pre-dispatch P5 - Fast Start Inflexibility Profile	Nov-18	Jan-20	Nov-18	Jan-20	May-20	10-Nov-20	-	-	01-Apr-21	<b>07-Jul-21</b>
SMPD - Price Sensitivities	-	Jan-20	Nov-18	Jan-20	May-20	10-Nov-20	-	-	16-Jun-21	<b>07-Jul-21</b>
ST and PD PASA	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	31-Oct-19	29-Nov-19	30-Nov-20	01-Apr-21
<b>PACKAGE 4 - Pricing and Miscellaneous</b>										
Trading Price / Price Revision	Aug-18	-	Feb-19	Nov-18	Mar-19	31-Jul-19	-	15-May-20	<b>30-Jul-21</b>	01-Oct-21
Administered Pricing and CPT	Aug-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	<b>30-Jul-21</b>	01-Oct-21
Suspension Pricing	Sep-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	<b>30-Jul-21</b>	01-Oct-21
Negative Residue Management	Sep-18	-	Feb-19	Dec-18	Jun-19	31-Jul-19	-	15-May-20	-	-
RERT	Oct-18	-	-	-	-	-	-	-	-	-
<b>PACKAGE 5 - Full Data Model</b>										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan-20	16-Mar-20	29-Nov-19	30-Nov-20	01-Apr-21

1/07/2021



# Industry Risks and Issues

Greg Minney

# Purpose of this risk review

1. Review open issues
2. Review risks that have changed as a result of the 5MS Retail IT Platform Go-Live
3. Review risks relating to AEMO and Industry readiness

# Open Issues

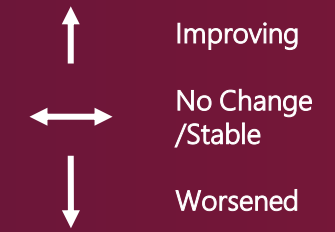
ID	Description	Rating	Mitigations
I12	<p><b><u>No Remaining Contingency for Retail Deployment</u></b></p> <p>Issues identified during Dress Rehearsal 2 and Azure migration coupled with existing Retail timeline challenges mean that delays have occurred within the SMS Retail workstream.</p> <p>There is no schedule contingency within this workstream to compensate for the time needed to remediate these issues therefore the scheduled go-live of 31-May-21 will not be met.</p>	Closed	<ul style="list-style-type: none"> <li>Issue can be closed due to Retail IT Platform go-live on 21 June.</li> </ul>
I13 NEW	<p><b><u>Delay to NCONUML Functionality in Production</u></b></p> <p>The delay to the release on the NCONUML functionality in production has resulted in some participants reporting activity “Population and activation of NCONUML NMIs and Associated Metering Data Delivery from 1 Oct” as at risk/ late. This may cause a compliance risk for those participants.</p>	High	<ul style="list-style-type: none"> <li>The obligation on participants to complete this action is governed by the AEMO procedures</li> <li>Impacted participants to assess their plans for population and communication with other dependent parties</li> <li>Impacted participants should contact AEMO and provide consolidated reporting of timing and volume impacts of any delivery post 1 October to assist understanding of the impacts on UFE reported for the profile area</li> </ul>

# Risks that have changed as a result of the 5MS Retail IT Platform Go-Live



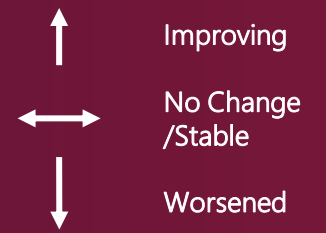
Risk ID	Description	Residual Rating	Comments
R04	<b><u>AEMO Big bang approach</u></b> AEMO systems for bids/offers and meter data all going live at once on 1 October 2021, results in a failure of go live.	Closed	<ul style="list-style-type: none"> <li>AEMO is proposing to close this risk as the four major releases have been deployed</li> </ul>
R20	<b><u>Risk of AEMO cutover failure</u></b> There is a risk that AEMO systems will not go-live as scheduled with the planned cutover window (MDM cutover) resulting in an impact to participants' processes and market operations	Closed	AEMO is proposing to close this risk as the Retail IT Platform (MDM cutover) was executed successfully.
R21	<b><u>Risk of degraded operational performance at <del>go-live</del> 5MS Rule Commencement</u></b> Risk of degraded operational performance at <del>go-live</del> 5MS Rule Commencement	Medium ↔	<ul style="list-style-type: none"> <li>Residual Likelihood – unlikely</li> <li>Residual Consequence –major</li> <li>Residual rating – medium</li> <li>Trend: redefined - neutral</li> <li>Proposing that this risk is no longer open for the systems cutover, however may still exist for the cutover to 5MS on the rule commencement date.</li> <li>This risk is mitigated through performance and volume testing</li> </ul>
R23	<b><u>Major event occurs at cutover to <del>go-live</del> 5MS Rule Commencement</u></b> Risk that a major market event (e.g. load shedding) occurs at the timeframe scheduled for <del>go-live</del> 5MS Rule Commencement resulting in increased risk or impact to planned activity	Medium ↔	<ul style="list-style-type: none"> <li>Residual Likelihood – unlikely</li> <li>Residual Consequence –major</li> <li>Residual rating – medium</li> <li>Trend: redefined - neutral</li> <li>Proposing that this risk is no longer open for the systems cutover, however may still exist for the cutover to 5MS on the rule commencement date.</li> <li>AEMO has mitigated this risk through early systems cutover</li> <li>This risk is mitigated through following AEMO BAU procedures for managing major events.</li> </ul>

# Risks that have changed as a result of the 5MS Retail IT Platform Go-Live



Risk ID	Description	Residual Rating	Comments
R28	<p><b><u>AEMO Systems Deployment Cutover Risk</u></b>                      The current approach to the AEMO systems deployments elements of the cutover has the Retail stream (the most complex and riskiest) going first on 9 March, then both the Dispatch and Settlements systems deployments together 3 weeks later on 1 April. There is a risk that the Retail deployment could lead to push back on the following deliveries from the 5MS program, the AEMO business and/or market participants.</p>	Closed	<ul style="list-style-type: none"> <li>AEMO is proposing to close this risk as all three deployments referenced have been completed</li> </ul>
R22	<p><b><u>Introduction of 5MS capability and architecture increases risk of system unavailability post cutover</u></b>                      There is a risk that subsequent to the deployment or upgrade the market system becomes unavailable for an extended period due to malfunction</p>	Medium ↑	<ul style="list-style-type: none"> <li>Residual Likelihood – reducing from unlikely to rare since two weeks have passed since Retail Go-Live without significant event.</li> <li>Residual Consequence – major – no change</li> <li>Residual rating – Reduces from significant to medium</li> <li>Trend: Changing from neutral to improving</li> </ul>
R33	<p><b><u>Further delays to AEMO Retail Systems impact 5MS rule commencement critical path</u></b>                      There is a risk that <b>cutover issues or post go-live issues cause delays that impact on Market Trial execution impacting the critical path to further delays beyond those identified put the critical path through market trial to 5MS rule commencement (01-Oct-21) at risk</b></p>	Significant ↔	<ul style="list-style-type: none"> <li>Residual Likelihood – unlikely</li> <li>Residual Consequence – extreme</li> <li>Residual rating – significant</li> <li>Trend: redefined, therefore neutral</li> <li>As discussed with PCF, risk description has been updated to reflect the 21 June go-live of Retail Platform, rather than closing risk, update to reflect the ongoing risk for the remainder of the program.</li> <li>Refer to Contingency Plan.</li> </ul>
R34	<p><b><u>Delay to AEMO 5MS Retail impacts participants readiness</u></b>                      There is a risk that the delayed availability of the 5MS Retail solution impacts participants readiness programs resulting in delays in some participants programs.</p>	Significant ↓	<ul style="list-style-type: none"> <li>Residual Likelihood – possible</li> <li>Residual Consequence – major</li> <li>Residual rating – significant</li> <li>Trend: worsened</li> <li>Readiness Reporting round 8 highlighted impact on the delivery of NCONUML for some participants but no overall shift in participant readiness as result of the</li> </ul>

# AEMO & Industry Readiness



Risk ID	Description	Residual Rating	Comments
R02	<p><b><u>Risk that there is one or more participants that are not considered critical mass aren't 'ready' at go-live</u></b>            Participants that are not considered critical mass e.g. retailers and DNSPs may not be ready at rule commencement dates resulting in inadequate systems to operate within new market conditions and an inability to fully or effectively participate in the market. Impact is to the participant rather than compromising a critical capability required for market go-live.</p>	Medium ↓	<ul style="list-style-type: none"> <li>Residual Likelihood – possible</li> <li>Residual Consequence – major – reduce to minor as market stability will be achieved with critical mass of participants</li> <li>Residual rating – changes from significant to medium</li> <li>Trend: Worsened reflecting an increase in at risk and late activities for GS Population and in specific criteria for both retailer and generator participant categories</li> </ul>
R19	<p><b><u>Risk of a critical mass of participants not being ready at identified critical path milestones</u></b>            Critical capability of participants fail to meet expected industry Readiness critical path milestones, resulting in failure to be ready for go-live and impacting the proper functioning of the market.</p>	Medium ↓	<ul style="list-style-type: none"> <li>Residual Likelihood – remains as unlikely, key</li> <li>Residual Consequence – remains as major</li> <li>Residual rating – remains as medium</li> <li>Trend: worsened – multiple MSPs are reporting metering transition activities with minimal schedule contingency to compliance obligations</li> </ul>
R11	<p><b><u>The AEMO business and operations are not ready for 5MS Rule Commencement on 1 Oct 21</u></b>            The AEMO business may not be ready to deliver the full extent of the 5MS deliverables by 5MS and GS rule commencement including business processes and resource training, results in failure of Go Live for 5MS and GS Program</p>	Medium ↑	<ul style="list-style-type: none"> <li>Residual Likelihood – remains as unlikely</li> <li>Residual Consequence – remains as major</li> <li>Residual rating – remains as medium</li> <li>Trend: improving as AEMO progresses with Retail releases and preparation for 5MS operation is in progress</li> </ul>
R19	<p><b><u>Risk of a critical mass of participants not being ready at identified critical path milestones</u></b>            Critical capability of participants fail to meet expected industry Readiness critical path milestones, resulting in failure to be ready for go-live and impacting the proper functioning of the market.</p>	Medium ↓	<ul style="list-style-type: none"> <li>Residual Likelihood – remains as unlikely</li> <li>Residual Consequence – remains as major</li> <li>Residual rating – remains as medium</li> <li>Trend: worsened – reflecting reduced time for participant defect resolution post market trial</li> </ul>
R24	<p><b><u>Not enough participants for Market Trials</u></b>            Risk that there is not enough critical mass of participants, or differentiation in participant types to complete Market Trials</p>	Medium ↑	<ul style="list-style-type: none"> <li>Residual Likelihood – unlikely</li> <li>Residual Consequence – Major</li> <li>Residual rating – Medium</li> <li>Trend: Changing from neutral to improving as 30 participants are registered for Market Trials across all major participant groups</li> </ul>

Any other  
risks or issues  
to raise?







# Forward Plan and Other Business

Greg Minney

# 5MS Go-Live Plan

- 5MS Go-live plan to address approach and timing of changes to take effect from 5MS Rule Commencement 1 October 2021
- In Scope:
  - Market System implementation activities to take effect
  - Interaction with decisions and issue of Market Start Notice
- Out of Scope
  - Participant implementation activities to meet 1 October changes and obligations
- Timeline:
  - Draft plan for comment – 30<sup>th</sup> July
  - Plan finalisation – 13<sup>th</sup> August

# Upcoming Meetings

## AEMO | Program Calendar and Timelines

Current as at 15/06/2021



**JUNE**

Su	Mo	Tu	We	Th	Fr	Sa
		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			

**JULY**

Su	Mo	Tu	We	Th	Fr	Sa
				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

**AUGUST**

Su	Mo	Tu	We	Th	Fr	Sa
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				

Forums/Working Groups
Executive (EF)
Program Consult. (PCF)
Systems (SWG)
Readiness (RWG)
Industry Testing (ITWG)

Focus Groups
Transition (TFG)
Market Trial (MTFG)

Other
Information sessions
Q&A session
Industry Testing
Training Session
National Public Holiday
State Public Holiday*

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

# 5MS/GS-related procedure change log

■ Changes since April RWG  
\* raised by the 5MS Program  
# aseXML schema impact

Procedure issue	AEMO Retail Systems Impact	Available in Staging	Readiness Considerations
Consolidation of Retail Electricity Procedures.	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	N/A
Update to published settlement formulas*	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	N/A
Cross Boundary (CB) connections, inclusion of cross boundary energy formulas*	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	N/A
MDFF Specification NEM12 & NEM13 update to clarify MDP obligation where a NULL exists in their systems.	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	N/A
Clarification on existing requirements for the 5 minute load profile and RM reports	<ul style="list-style-type: none"> <li>5MLP included in RM20 and RM25 reports</li> </ul>	<b>R27</b> - 31-Oct-20 - Existing Settlements Reports @5-min: RM16, RM17, RM20, RM21, RM22, RM26	N/A
Proposed procedural change to MDFF quality flag (N flag)*	<ul style="list-style-type: none"> <li>Rejection of B2M MTRD MDFF meter reads where quality flag is 'N'.</li> <li>Results in B2M MTRD Transactions with the status of 'Partial' or 'Rejected'.</li> </ul>	<b>R1</b> - 1-Dec-19 - Support for new B2M MTRD validations.	Participant Mkt Systems must not send 'N' for B2B or B2M MTRDs.
Removal of end user details from inventory table	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	N/A
Removal of register ID = suffix requirement	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	Material participant readiness activity impact as the existing requirement is to be retained.

# 5MS/GS-related procedure change log

## – no change

Procedure issue	AEMO Retail Systems Impact	Available in Staging	Readiness Considerations
Proposal for RWD	<ul style="list-style-type: none"> <li>No impact to 5MS Retail systems.</li> </ul>	N/A	<p>ReadTypeCode amended from 'Optional' to 'Required'. Fourth character added to identify whether a meter is capable of reading at five-minute granularity.</p> <p>4th char field is already avail for data updates in PROD</p>
TNI 2 for cross-boundary meters *#	<ul style="list-style-type: none"> <li>CATS CR support for TNI2 field.</li> <li>MSATS Browser to support display TNI2 for NMI Discovery Transactions.</li> <li>aseXML schema support extension to support TNI2 inclusion (r39).</li> </ul>	R18 and R19 - 31-Aug-20 - Support for TNI2 for CATS CRs.	<p>TNI Code assigned, by AEMO, however Participants to undertake the generation of associated CR2xxx transactions, to register a cross boundary meter using TNI 2. Migration to r39 aseXML necessitated.</p>
New NCONUML NMI Class codes available in list for SORD #	<ul style="list-style-type: none"> <li>Likely B2B schema change.</li> <li>AEMO confirms that the Electricity B2B changes for v3.5 will be made available in pre-production in September or early October 2021. The changes will be in pre-production for a minimum of 4 weeks.</li> <li>5MS will have to merge the changes from Electricity B2B for the GS May 2022 release.</li> </ul>	TBD	<p>10-Nov-2021 effective date decided as part of the regulator implementation roadmap.</p>

\*raised by the 5MS Program

# aseXML schema impact

# 5MS/GS-Related Procedure Change Log

Procedure issue	Status	Final Determination Date
Consolidation of Retail Electricity Procedures Phase 1	<p>AEMO published the Final Report on 28 June.</p> <p>Focusing on Oct-2021 requirements</p> <p>The consolidation of Procedures will not be a full consultation as the Procedures (BAU and 5MS/GS) have already gone through their respective formal consultations.</p>	28-Jun-2021
Consolidation of Retail Electricity Procedures Phase 2	<p>Expected to be published late 2021</p> <p>Focusing on May-2022 requirements</p>	31-Jan-2022

■ Changes since April RWG  
\* raised by the 5MS Program  
# aseXML schema impact

# Document tracker updates – in June 2021

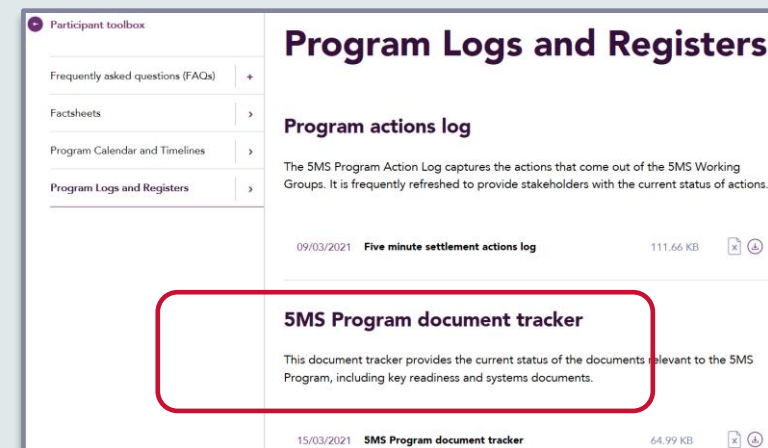


- This page will appear in all RWG packs moving forward to represent the updates that were made to 5MS and GS documents for the month.
- This information is also captured within the **document tracker**, with recently updated documents highlighted in **yellow**.

Document/ Item	Version	Status	Type
Metering transition plan (Spreadsheet)	1.90	Final	Readiness
MSATS 46.98 Technical Specification	4.00	Final	Systems - Metering

## Where is the document tracker located?

The document tracker is located in the [Participant toolbox](#) under the [Program Logs & Register](#) menu option.



# Questions