



# 5MS & GS Executive Forum #14

Monday, 30 August 2021

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# AEMO

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2. Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
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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

#	Time	Topic	Presenter
1	15:30 – 15:35	Welcome	Violette Mouchaileh
2	15:35 – 15:50	5MS Start Notice Recommendation	Peter Carruthers
3	15:50 – 16:20	Key Risks	Greg Minney & Peter Carruthers
4	16:20 – 16:40	General Discussion	Violette Mouchaileh
5	16:40	Meeting Close	
		Appendix 1: 5MS Market Trial Key Issues	
		Appendix 2: 5MS Market Trial Status Report	
		Appendix 3: Readiness Dashboard – Other Capability	
		Appendix 4: Essential Meters Status	
		Appendix 5: Support Arrangements for Participants	



# Welcome

Violette Mouchaileh

# 5MS Start Notice Recommendation

# Executive Input Sought

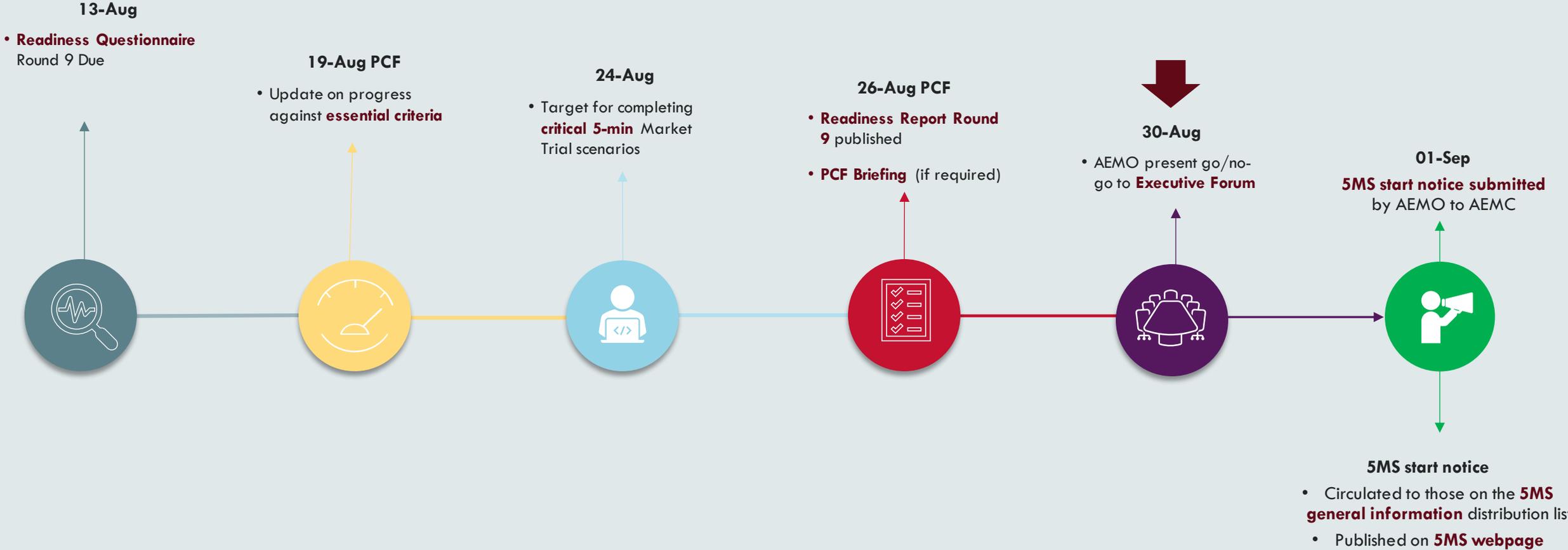
## Input sought from Executive Forum members

- Any objections to AEMO's proposed recommendation to commence on 1 October as scheduled.
  - Reasons why 1 Dec is better (industry perspective).
- General feedback on the proposed recommendation.
- Advice/suggestions on industry actions to mitigate risks for 1 October go-live.

## Decision-Making Process

- AEMO to prepare 5MS start notice based on a Go/No-Go readiness and risk assessment.
- Informed by engagement and input from stakeholders.
- AEMO to provide 5MS start notice to industry and the AEMC by 1 September.
- AEMC to make a decision on "*Contingency arrangements for five minute settlement implementation*" rule change request by 30 September.

# 5MS start notice process



# Recommendation

AEMO recommends that 5MS commencement proceed on 1 October as scheduled

- Based on no known show-stoppers for any essential capability category, and a risk management plan to manage outstanding risks
- Offers a superior option to either delay option

Short delay (1 Dec go-live) costs outweigh the benefits and is not recommended

	Benefits of Short Delay	Costs of Short Delay
\$	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• Industry wide project extension costs: \$10-\$15m per month i.e. \$20-\$30m</li> <li>• Delayed reform benefits for 5MS &amp; CS: \$ hard to quantify</li> <li>• Devalued open 5m cap or other financial contracts: \$ hard to quantify</li> <li>• Delays to other projects leading to delayed benefits: \$ hard to quantify</li> </ul>
Risk	<ul style="list-style-type: none"> <li>• Reduction in risk of defects requiring workarounds that lead to operational inefficiencies/costs post go-live (note risk is not removed but is reduced)</li> <li>• Risk of commercial impacts through settlements/prudentials error is low and not impacted</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in 1 Dec go-live risk as (i) different go-live configuration for participants and AEMO creates risks, and (ii) loss of IP as resources leave/move, leading to increase in risk of defects requiring workarounds, leading to operational inefficiencies</li> <li>• Risk that participants divert resources to other priorities, and advantage is not taken of the opportunity created by the delay</li> </ul>

Extended delay (1 Feb 22 or 1 Apr 22) option is ruled out

- Current project status provides no justification for an extended delay, and the costs/delayed benefits associated with such a delay

# Essential Capability Dashboard

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

Responsible Participant	Essential Criteria	Status	Comments
<b>Generator</b>	Generators and MNSPs are able to submit 5-min offers	On-track	<ul style="list-style-type: none"> <li>Criteria adequately met.</li> <li>Evidence provided through Participant Readiness Reporting, observations through Market Trial and observations of Transition Bidding.</li> <li>Contingency plan exists through web bidding interface.</li> </ul>
<b>MP, MC, MDP</b>	All essential meters* are able to produce and store and deliver 5-min data	At-risk	<ul style="list-style-type: none"> <li>No show-stoppers exist and criteria is adequately met.</li> <li>Risks exist. Contingency plans are necessary and have been, or are being, established.</li> <li>Monitoring will continue throughout September and activation of contingency plans will be discussed with MSPs where necessary.</li> <li>Evidence provided through Participant Readiness Reporting, Metering Transition Plan Reporting, observations of production operation and explicit readiness confirmation from MSPs.</li> </ul>
<b>AEMO</b>	The 5-minute bidding and dispatch solution, including the web bidding interface is deployed	On-track	<ul style="list-style-type: none"> <li>Criteria adequately met.</li> <li>Evidence provided through Production operation and Market Trial operation.</li> </ul>
	The Metering Data Management (MDM) solution is deployed	At-Risk	<ul style="list-style-type: none"> <li>No significant capability issues identified to date and no show-stoppers exist. No outstanding defects that have a material compliance or participant impact that cannot be remedied prior to 1 Oct. Criteria is adequately met.</li> <li>Risks exist. Risk management plan necessary.</li> <li>Evidence through Production operation and Market Trial critical business functions</li> </ul>
	The 5-minute settlements solution is deployed	On-track	<ul style="list-style-type: none"> <li>Criteria adequately met.</li> <li>Evidence provided through Production operation, Market Trial operation and independent certification</li> </ul>
<b>Readiness Assessment status</b>		At-Risk	<p>Key Risks:</p> <ol style="list-style-type: none"> <li>Metering Service Provider readiness</li> <li>AEMO readiness</li> <li>Participant readiness</li> </ol>

# Risk Management

# Key Risk Areas

- Metering Service Provider readiness
- AEMO Readiness
- Participant Readiness
  
- In reviewing readiness, two key issues were identified with the PCF in relation to Market Trial
  1. RM report distribution timing and accuracy
  2. Low level of test execution by participants through Market Trial, especially in the critical business functionsThese issues are addressed in AEMO and Participant readiness slides.

# 1. Essential Meter Capability

Category	NMI Class	# of meters	5min Capable	Scheduled for Aug	Scheduled for Sept	TBC
Essential	Bulk	2,158	2,106	51	1	
	Interconnector	12	12			
	Market Generators	871	841	29	1	
	NREG	892	750	123	19	
	Market Customers	51	51			
	Cross Boundary	18	17		1	
	Large	1	1			
	Small	1	1			
	<b>Essential Totals</b>	<b>4,004</b>	<b>3,779 (94.38%)</b>	<b>203</b>	<b>22</b>	
Non-essential	Large	14,695	13,160	211	155	1,169
	Small	357	294	14	9	40
	<b>Non-essential Totals</b>	<b>15,052</b>	<b>13,454 (89.38%)</b>	<b>225</b>	<b>164</b>	<b>1,209</b>
	<b>Tranche 1 Grand Total</b>	<b>19,056</b>	<b>17,233 (90.43%)</b>	<b>428</b>	<b>186</b>	<b>1,209</b>

## MP Status (27 August)

Further MP progress made over the past week for essential meters and Tranche 1 meters, with:

- 111 (~3%) more **essential** meters being reported as being 5min capable by MPs
- 388 (~3%) more **non-essential** meters being reported as being 5min capable
- 17 additional essential meters scheduled for September will require contingency plans

TBC metering schedule needs to be finalised and monitored (current week's movements not included in this report).

## MDP Status

- 5/6 MDPs scheduled to deliver essential metering data by end August
- 3/6 MDPs have already delivered 5 minute data to AEMO
- Key risk exists for 3/6 MDPs delivering in September, successful delivery and suitable contingency plan is imperative.

## Assurance

Explicit confirmation on readiness and contingency plans received from (as at COB 27/8):

- 8 Metering Providers out of 8 (5 already complete)
- 5 Metering Data Providers out of 6, 1 noting medium risk
- 4 MSPs will need to confirm contingency arrangements

# 2. AEMO essential capability readiness

## ESSENTIAL CAPABILITY

### AEMO Capability

**Metering Platform:** Is deployed and has stable business operation

**Settlements Platform:** Is deployed and has stable business operation

**Bidding Platform:** The 5-minute bidding and dispatch solution, including the web bidding interface is deployed and has stable business operation.

## CRITERIA

### Metering Platform:

- Receive and process 5 minute metering data.
- Support 5 Minute Profiling / UFE

### Settlements Platform:

- Support 5 Minute Settlement processes

### Bidding Platform:

- Support 5 Minute Bidding Services
- Provide 5 Minute Bidding interface

## ASSESSMENT

### Metering & Settlements

- AEMO's new Metering and Settlement platforms are both in Prod since May and June respectively, and operating effectively.
- Settlement is reliable in production for 30m operations
- AEMO already accepting 5m granularity & register level metering data from MDPs, and processing this successfully to 30m outcomes.
- Independent certification of the settlements engine
- AEMO cutover for 1 Oct is a configuration and defect release only.
- AEMO internal testing process.
- Market Trial process.

### Bidding

- AEMO's Bidding platform upgrades have been in Prod since April, and operating effectively.
- Participants have been able to bid at 5m in transition mode since April, and some participants have been doing so.
- AEMO internal testing process.
- No AEMO cutover for 1 Oct.
- Market Trial process.

# Market Trial Insights

## AEMO Essential Capability Market Trial Scenarios

Essential Capability	Scheduled	Available	Comment
Transition Week 31 Prelim	6-Aug	9-Aug	Content ok, estimates delay
5m Preliminary Wk 32	13-Aug	13-Aug	Content not ok, data quality issues
5m Preliminary Wk 33	20-Aug	22-Aug	Content ok, RM report delays
Transition Week 31 Final	25-Aug	25-Aug	Content ok, RM report delays
5m Preliminary Wk 34	27-Aug	27/28 Aug	Content ok, timing ok

- All scheduled scenarios complete and available to be consumed.
- Early issues encountered with metering data quality and preparation.
- Where data input has been reasonable, AEMO is satisfied with commercial outcomes of settlements runs.
- Defects have been encountered. No show-stoppers exist. Where not already resolved, AEMO has scheduled defect fixes for pre-go live resolution. Small number of defects outstanding (refer Appendix).
- Smooth operation has not yet been fully achieved. Settlements runs in Market Trial will be extended by 2 weeks.

## Participant Readiness to Receive/Consume 5m Data

Function	Pass	Fail	No Run
Transition Week 31 Prelim	4	4	9
5m Preliminary Wk 32	5	2	10
5m Preliminary Wk 33	2	2	1
Transition Week 31 Final	No Data	No Data	No Data
5m Preliminary Wk 34	No Data	No Data	No Data

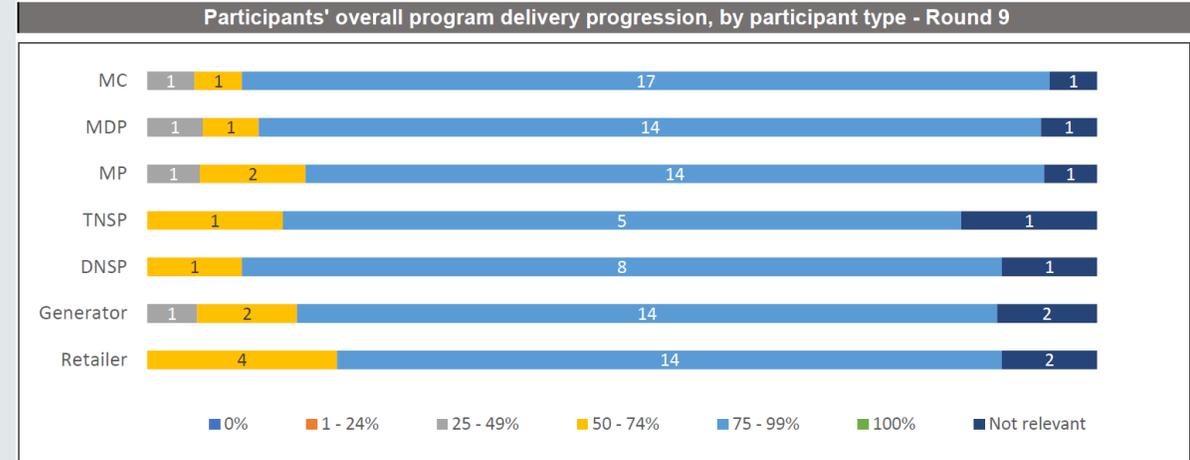
- Pass: Participants have successfully consumed outcomes from each run.
- Fail: Participants have identified defects or issues (AEMO or participant). Key issues raised related to receipt of RM Reports to support reconciliation (see Defects). Re-test is up to participants individually.
- No-Run:
  - Delays updating/working independently of Practitest (multiple)
  - Lack of resources to be involved
  - Issues with settlements testing.
- Risk associated with no-run is that it could signal a lack of participant capability to receive and consume 5m reconciliation information.

### Conclusions:

- Essential capability has been demonstrated by AEMO.
- Smooth operation not fully demonstrated, further test runs required. Remaining defects require resolution.
- Participant engagement/readiness requires assessment – see next slide.

# 3. Participant Readiness

- 78% of participants reporting they are 75-99% complete.
- Of Remainder 12% of participants are at 50-74%, and 4% are at 25-49%, with 6% N/A
- 49 participants responded. 9 Participants are reporting their overall programs are 'at-risk' and 1 'late', primarily due to vendor and/or testing delays.
- 100% of participants report they are 'confident' or 'very confident' of being able to undertake core functions post 5MS rule commencement.
- Over 80% of respondents report they have contingencies in place to address residual risks.
- No systemic issues reported by participants. Covid-19 impacts generally managed effectively by all participants, although some recent challenges experienced for Metering Service Providers with extent of lockdowns.
- Industry "other capability" dashboard (see Appendix 2) shows readiness for 5MS generally rated as high. Areas that are amber relate to (i) activation of non-essential Tranche 1 meters – with consequent potential Customer / FRMP inaccuracy and (ii) accuracy of UFE – with no financial implications for participants at 5MS rule commencement.
- High number of Market Trial 'no-run' cases may mean readiness is not as strong as reported.
- Opportunities for bilateral testing have been available since March 2021 in Pre-Prod, a small number of participants have leveraged this opportunity and report this effort is still continuing.



Recommend that market commencement is not delayed on the basis of some participants being not quite ready, given the confidence expressed by all participants and the existence of contingency plans.

# Residual Risk Assessment

Inherent Rating			Low	Medium	Significant	Critical	Residual Rating			
L	C	R	Description	Owner	Resolution Due Date	Mitigation	Action Update/Comments	L	C	R
Unlikely	Major	High	<b>Inaccurate commercial outcomes for Participants</b> Error in AEMO Prudentials or Settlements calculations leads to commercial outcome errors for participants, including credit limit management or financial settlement outcomes.	AEMO	Continuous	<ul style="list-style-type: none"> <li>Production operation and reliability of settlement outcomes for 30m</li> <li>AEMO already accepting 5m granularity &amp; register level metering data from MDPs, and processing this successfully to 30m outcomes</li> <li>Independent certification of the settlements engine</li> <li>AEMO internal testing process</li> <li>Market Trial process</li> <li>AEMO Contingency Plan: pre-emptive data checks, internal tools for secondary prudentials assessments, BAU processes for settlement including prelim/final/reviced, established and tested for the Retail go-live on 21 June</li> </ul>	<ul style="list-style-type: none"> <li>Re-calculate MCLs prior to 1-Oct</li> <li>Continue to monitor market trial outcomes</li> </ul>	Rare	Major	Medium
Possible	Major	High	<b>Operational inefficiencies for Participants</b> Unresolved defects require participant workarounds that lead to operational inefficiencies/costs post go-live for participants.	AEMO	Continuous	<ul style="list-style-type: none"> <li>AEMO's new Metering and Settlement platforms are both in Prod and operating effectively. Prod is a more robust environment than Pre-Prod.</li> <li>AEMO cutover for 1 Oct is a configuration and defect release only, all major deployments completed earlier in 2021</li> <li>Market trial process is highlighting issues enabling these to be resolved prior to go-live</li> <li>Focus from AEMO 5MS team prior to go-live on RM report distribution performance and resolution of any issues that arise</li> <li>Ensure suitable support in place to resolve issues in a timely and effective way</li> </ul>	<ul style="list-style-type: none"> <li>Continue Settlements runs in Market Trial to achieve smooth operation</li> <li>Establish support arrangements per position agreed with PCF</li> <li>Resolve key defects prior to go-live</li> </ul>	Unlikely	Major	Medium
Likely	Minor	Medium	<b>Participant inability to consume/process 5m data</b> High "No-Run" statistics and 'at-risk/late' status may mean some participants are not ready to receive, consume and process 5m reports or data, impacting internal participant business or customer operations.	Partic.	Ongoing	<ul style="list-style-type: none"> <li>Conduct Market Trial test cases as soon as practicable</li> <li>Update Practitest to provide an accurate view on test runs</li> <li>Seek support from AEMO 5MS team if blockers/issues exist in understanding 5MS changes, conducting test cases or managing Practitest updates</li> <li>Complete internal readiness activities</li> <li>Activate internal contingency plans where testing incomplete and risks exist</li> <li>AEMO to extend Market Trial to provide further opportunities for testing</li> </ul>	<ul style="list-style-type: none"> <li>Actions depend on individual participant status</li> <li>AEMO extend Market Trial</li> </ul>	Unlikely	Minor	Low

# Recommendation

AEMO recommends that 5MS commencement proceed on 1 October as scheduled

- Based on no known show-stoppers for any essential capability category, and a risk management plan to manage outstanding risks
- Offers a superior option to either delay option

Short delay (1 Dec go-live) costs outweigh the benefits and is not recommended

	Benefits of Short Delay	Costs of Short Delay
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Risk	<ul style="list-style-type: none"> <li>• Reduction in risk of defects requiring workarounds that lead to operational inefficiencies/costs post go-live (note risk is not removed but is reduced)</li> <li>• Risk of commercial impacts through settlements/prudentials error is low and not impacted</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in 1 Dec go-live risk as (i) different go-live configuration for participants and AEMO creates risks, and (ii) loss of IP as resources leave/move, leading to increase in risk of defects requiring workarounds, leading to operational inefficiencies</li> <li>• Risk that participants divert resources to other priorities, and advantage is not taken of the opportunity created by the delay</li> </ul>

Extended delay (1 Feb 22 or 1 Apr 22) option is ruled out

- Current project status provides no justification for an extended delay, and the costs/delayed benefits associated with such a delay

# General Discussion

## **Recap – Input sought from Executive Forum members**

- Any objections to AEMO's proposed recommendation to commence on 1 October as scheduled
  - Reasons why (industry perspective) and rationale why 1 Dec is better.
- General feedback on the proposed recommendation.
- Advice/suggestions on industry actions to mitigate risks for 1 October go-live.

## **Next Steps**

- AEMO considers Executive Forum stakeholder input.
- 5MS start notice issued 1 September.
- AEMC rule change decision by 30 September.



# Meeting Close

# Appendix 1: 5MS Market Trial Key Issues

# Market Trial Defect Status

## Open Issues as at 27/8 – All Areas

Mkt Systems Area	1-Critical	2-High	3-Medium	Grand Total
Bidding		3	4	7
CATS		1	3	4
Meter Data	1		5	6
Mkt Trial		1	1	2
RM Reports - Distribution	1	1	7	9
RM Reports			7	7
Settlements		1	7	8
<b>Grand Total</b>	<b>2</b>	<b>7</b>	<b>34</b>	<b>43</b>

- No Show Stopper issues identified
- Impact assessment based on Participant rating at time of raising
- Two Sev-1 defects are open:
  - Fix for RM Report Distribution Issues has been deployed into Pre-prod 27/8, with delayed reports re-triggered 28/8
  - Meter Data Issues is for Subset of NMs for single participant
- All Participant Rated Sev. 1 & 2 defects expected to be addressed prior to 1 Oct and capacity exists within AEMO to address

# Key Issues Impacting Participants: Market Trials

## Daily Estimates Not Available

- Desc: For approx. 2.5 weeks, Daily Estimates were not present in Pre-Production for Market Trials.
- RCA: Due to the inaction of the zero-demand (ZD) feature, read values of  $<0$  were preventing files from passing validation.
- Path Forward: The ZD feature is now activated, and Daily Estimates are set on an automated schedule. Participant feedback confirmed successful resolution.
- Note: A code error is causing some errors in values. The fix for this has passed testing in SIT and will be deployed into Pre-Production the evening of 27-Aug.

## Report Distribution Delays

- Desc: Invoice production from Settlements are now being successfully produced, internal report generation is running successfully (3 minutes) however the RM Report distribution has taken up to 8 hours.
- RCA:
  - 1) The Distribution code is poorly interacting with the pods, causing them to crash and grinding jobs to a halt (#5026).
  - 2) The delivery status gets stuck in pending (#5547).
- Path Forward:
  - 1) immediate manual intervention to restart the pods at key times; by Tuesday an interim fix to automate pod restarts is to be delivered into Pre-Prod; the enduring defensive code fix is to be resolved by 15-Sep.
  - 2) This issue has been resolved into Production (report distribution is taking approx. 1h to 1h20m in Prod), and now the hotfix has been deployed in Pre-Prod. The distribution of the reports on 27-Aug took approx. 30 mins.
- Note: An issue, as in Production, caused a delay generating the RM16 reports post the hotfix. This is under investigation. In Pre-Prod the behaviour will be monitored after the next Release – due Tuesday 31-Aug evening.

# Key Issues Impacting Participants: RM Reports

A key concern around the 5-min Market Start is the ability of participants to reconcile volumes on invoices.

## **RM Report volume mismatch (#5616)**

- Desc: RM27/RM17/RM21 Reports are presenting various volume summations to participants (RM16 is ok).
- RCA: Reports omitting datastreams with suffixes having a nonnumeric second character.
- Path Forward: A fix is in progress. Potential date 23-Sep into Production, to be confirmed after initial testing.

## **RM13 mismatch (#5670)**

- Desc: RM13 verifying the MDP with SD and MD only where the requesting participant is an MDP.
- RCA: Issue is in linking the Role with the Access required.
- Path Forward: Fix is in progress, target date of 15-Sep into Production.

## **AEMO Substitution Estimation Report Response including All Data Types (#5216)**

- Desc: RM26 - AEMO Substitution Estimation Report Response showing DataType value – “All” in xml report Output for both INTERVAL and CONSUMPTION Report which was generated for a single report request.
- RCA: New Requirement / not in Production today
- Path Forward: Build and System Test complete, now in internal AEMO SIT testing. It will be rolled out with the 5-min Release to be deployed before the 01-Oct go live.

# Appendix 2: 5MS Market Trial Status Report

# Overall Status as at 26 August 2021

[Click here for PractiTest Dashboard](#)

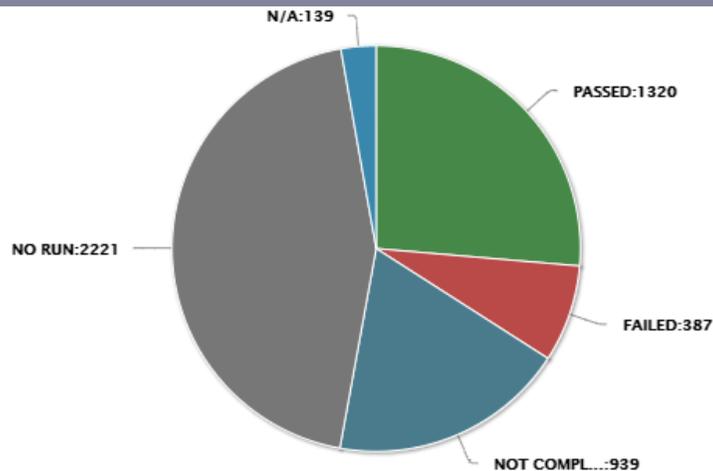
## Overall RAG Status



Schedule is on track however open issues and extension required by participants for further testing

- 50% of total scenarios are either completed or in progress.
- 5-min profiled bids continue to be submitted.
- Final invoice for transition week delivered on 25 Aug.
- Steps are being taken by AEMO to support participants to execute tests and update PractiTest to provide a clearer picture of progression
- Two Intervention Pricing tests have been completed.
- AEMO will run 2 additional weeks of settlements runs and will facilitate participant end-to-end testing in September.
- 5MPD was deployed on 25 Aug

## Test Case Summary

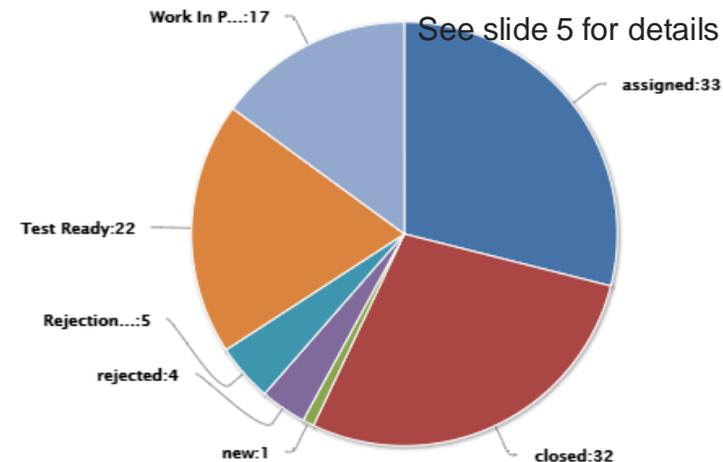


## Key Risks – no change

Heightened risk of issues occurring early in the Market Trial as a result of:

- Testing of production defects in pre-prod
- Unexpected data/environment issues encountered following the refresh has required time to resolve
- Conflicting resource demands based on production support, Market Trial preparations and completion of testing including edge case

## Defects Summary



## Key Issues – see slide 4

- No critical capability issues for market start have been identified
- Uses of estimated meter read data and participant input test data may impact data quality which will be reflected in Market Trial outcomes (Issue 5)
- Delays in distributing RM reports – fix has been deployed. AEMO is assessing which reports need to be reissued. (Issue 8)
- Participant test execution is lower than expected – participants are asked to ensure PractiTest is up to date to provide an accurate view of test progress. (Issue 9)

# Key Market Trial Business Functions

\* TS unique # reference to Market Trial Workbook

Stream	Action	Owner	TS #*	Status	Comment
Bidding	Verify successful submission of 5-min bids with varying underlying values	Generators	BD02, BD03		Participants have been submitting 5-min varied bids. Open issues have resolution path.
Retail	Verify 5-min settlement (RM reporting)	Generators and Retailers	S02, S03		Distribution issues have ben identified and fix is being progressed. 5-min RM reports have been issued and are available for participant verification. There are a few open investigations.
Retail	Verify RM reports for UFE	Generators and Retailers	S02, S03		UFE reports produced. Two issues have been raised and are under investigation.
Settlements	Verify transition invoice – prelim and final	AEMO to send and Gens and Retailers to receive	S08, S02, S03		The transition week preliminary invoice was produced and available for participant verification. Final transition invoice scheduled was produced 25 August.
Settlements	Verify prelim for full 5-min week	AEMO to send and Gens and Retailers to receive	S02		Issued on 20 August. Once the wholesale reads were corrected the settlement run ran successfully.
Overall status					Overall status is amber and improving. Settlement scenario execution will be extended to support participant process verification. No showstoppers issues identified to date. Delay in updating PractiTest is not providing an accurate view of participant success/failure.

# Appendix 3: Readiness Dashboard – Other Capability

# Part B – Other Industry Capabilities

(as at 13 August)

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	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>All 20 reporting Retailers confident or very confident of being able to operate core capabilities post 1 October</li> <li>18 “on track”, 2 “at risk” to be able to receive and process 5-min metering data</li> <li>16 “on track” and 4 “at risk” to be able to receive and reconcile 5-min settlement data</li> <li>Outstanding scenario execution in Market Trial reflected in level of at risk activities</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>All DNSPs report "on track" for receive and process 5-min metering data</li> <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, 4 reporting at-risk or late</li> <li>NCONUML, 2 reporting at-risk or late</li> </ul> </li> <li>NMI reclassification required for GS has commenced, 1 DNSP reporting "late" for this activity</li> <li>There will be an impact on the UFE values initially published for those profile areas, likely to be mainly confined to initial months of UFE reporting</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>5/7 TNSPs reporting their overall programs as on track, 2 "At risk" in regards ability to receive and process 5-min metering data</li> <li>2 out of 7 have the intention to receive 5-min metering data prior to the Rule commencement date</li> <li>1 TNSP reporting "at risk" for establishment of new NMI classification codes</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>98,000 Tier 1 basic meters do not have active datastreams (as at 8/8) indicating that basic reads may not be available for inclusion in UFE calculations, 93,000 relate to a single distribution area. Majority of impact will be confined to that area, all relevant MDPs reporting activity "on track"</li> <li>Delivery of 5-minute metering data for T1-3 distribution connected meters dependent on MP upgrades in addition to MDP delivery capability</li> <li>2 MDPs reporting "late" for delivery of type 7 data, with rectification plan for October</li> <li>All MDPs report "on track" for delivery of interval metering data via MDFF</li> </ul>
<b>MP, MC</b>	All T1-3,4* meters are able to produce and store 5-minute data.	At-risk	<ul style="list-style-type: none"> <li>14% of T1 non-essential meters yet to be 5 minute capable (based on RTC update), with all scheduled to be compliant by 1 Oct,</li> <li>Potential impact to accuracy of 5 minute readings when profiled with FRMP exposure for non-compliant meters, if late</li> </ul>
<b>Summary – Other Industry Capabilities</b>		On-track	<ul style="list-style-type: none"> <li>Based on participant reports – no issues that would prevent rule commencement</li> <li>Noted Risk re tranche 1 metering completion that has potential impact to FRMP</li> <li>Impacts of late and at-risk activity relate to GS Soft start</li> </ul>

# Appendix 4: Essential Meters Status

# Tranche 1 Meters Overview

(As at 23 August 2021)

- **Total Tranche 1 meters – 19,056**
- **Essential Meters** (Transmission connected)
  - Total number of meters – 4,004
    - # of meters 5min capable, after MP updates applied - 3,657 (91.33%)
      - 574 (~13%) more essential meters confirmed as being 5min capable compared to last week
    - # of meters not 5min capable, after MP updates applied – 347 (8.67%)
- **Non-essential Meters** (Distribution Connected)
  - Total number of meters - 15,052
    - # of meters 5min capable, after MP updates applied - 13,066 (86.81%)
      - 1,420 (~9%) more non-essential meter confirmed as being 5min capable compared to last week

# Tranche 1 Overview

(Based on MSATS RTCs Only )

As at 23<sup>rd</sup> August

Category	NMI Class	# of meters	With 5min RTC	% with 5min RTC	RTC still to be updated
Essential	Bulk	2,158	1,776		382
	Interconnector	12	10		2
	Market Generators	871	716		155
	NREG	892	638		254
	Market Customers	51	43		8
	Cross Boundary	18	14		4
	Large	1	1		0
	Small	1	1		0
	<b>Essential Totals</b>	<b>4,004</b>	<b>3,199</b>	<b>79.9%</b>	<b>805</b>
Non-essential	Large	14,695	12,779		1,916
	Small	357	275		82
	<b>Non-essential Totals</b>	<b>15,052</b>	<b>13,054</b>	<b>86.73%</b>	<b>1,998</b>
	<b>Tranche 1 Grand Total</b>	<b>19,056</b>	<b>16,253</b>	<b>85.29%</b>	<b>2,803</b>

Note: Updates to NMI Classification Codes and meter statuses in MSATS will change reported volumes week to week

# Tranche 1 Overview

(Post MP Update)

As at 23<sup>rd</sup> August

Category	NMI Class	# of meters	5min Capable	Scheduled for Aug	Scheduled for Sept	TBC
Essential	Bulk	2,158	2,099	58		1
	Interconnector	12	12			
	Market Generators	871	833	29		9
	NREG	892	646	224	4	18
	Market Customers	51	51			
	Cross Boundary	18	14	3	1	
	Large	1	1			
	Small	1	1			
	<b>Essential Totals</b>	<b>4,004</b>	<b>3,657</b> (91.33%)	<b>314</b>	<b>5</b>	<b>28</b>
Non-essential	Large	14,695	12,790	493	146	1,266
	Small	357	276	21	4	56
	<b>Non-essential Totals</b>	<b>15,052</b>	<b>13,066</b> (86.81%)	<b>514</b>	<b>150</b>	<b>1,322</b>
	<b>Tranche 1 Grand Total</b>	<b>19,056</b>	<b>16,723</b> (87.69%)	<b>828</b>	<b>155</b>	<b>1,350</b>

# MP Updates

As at 23<sup>rd</sup> August

- **The following MPs provided a Tranche 1 metering update this week:**
  - AusNet Transmission
  - Intellihub
  - Metropolis
  - Mondo
  - PlusES
  - Powermetric
  - TasNetworks - TNSP
  - Transgrid
  - Yurika

# Appendix 5: Support Arrangements for Participants

# Summary of Feedback Received

- AEMO requested feedback through the RWG PIR and the Retail Q&A sessions.
- Responses were received from Red Energy, PlusES, AGL, Origin and Intellihub.
- AEMO has reviewed feedback and identified three ways in which feedback can be taken into account: immediately through the Retail Support Process, putting in place processes for Rule Commencement and post commencement support, sharing the feedback with other AEMO programs through the Lesson Learned Log

## Retail Support Process

- Twice weekly Retail Q&A sessions and daily issues log are helpful
- Not including incident numbers against Issues makes it difficult for participants to track their own issues
  - AEMO has advised that incident numbers can be included with consent from participants
- Greater transparency for defect fixes / participant role in testing defect fixes
  - Further information on defect fix dates is included in the Retail Issues Log
  - Overview of defect fix is provided through the twice weekly Retail Q&A sessions
- Lack of visibility into the prioritisation of feedback and whether an issue impacts multiple participants
  - Prioritisation and impact have now been included in Log
- Defect release predictability
  - AEMO has committed to regular defect releases

## SMS Industry Go-Live Plan

- Frequent comms worked well and were clear and well structured
  - Comms scheduled will be included in the Go-Live Plan
- Preparation briefing sessions worked well – AEMO will schedule same in advance of 1 Oct
- Delay in scheduled comms can cause confusion
  - AEMO will avoid delays by issuing a status at scheduled time
- Greater transparency on go/no-go decision making
  - AEMO has provided PCF the approach to the go/no-go assessment including the criteria
- Two-way comms and transparency over industry facing incidents
  - AEMO will establish a Support Room for 1 Oct and will continue Q&A sessions during October
- Online Issues Log could provide greater flexibility and reduces risk of working from old version

## AEMO Lessons Learned Log

- AEMO should consider maintaining an environment for the purposes of participant testing of defect fixes
- System changes communicated through slide packs have resulted in discrepancy from consulted procedures.
- Failure to deliver projects to a schedule, impacting our resourcing and costs.
- Not enough time between first clean run of settlements left limited time for participant testing prior to Retail Go-Live
- Lack of performance testing prior to Go-Live
  - AEMO's approach to performance testing targeted the solution areas identified most at risk for performance challenges, that is metering data ingestion and profiling allocation/preparation.

# Overview of Support Arrangements for 5MS Commencement

## Pre- 1 October

- Go-Live Plan walkthrough with RWG 7 September
- Q&A sessions – dates TBD – approx. 17-Sep, 24-Sep, 29-Sep

## 1 October

- Q&A session on 1 October at 10:00
- Increased Support staff and SME availability

## 5MS Cutover Support

- It is expected that the Retail cutover will take approximately 3 hours and will commence at 17:00 on Thursday 30 September – final times TBD
- AEMO will send a commencement email, a mid-point update email (time to be included in go-live plan) and a completion email
- A ‘support-room’ will be available from outage finish until 03:00 on 1 October.
  - This will be in place to cover post cutover issues and queries/issues with 5-min bidding from 00:01
  - Can be used to check if an issue has already been identified
  - All issues should still be logged with Support Hub
  - Once the issue has been logged, the ‘support-room’ can be used to receive updates on progress
  - Note: Issues will be prioritised during this time.
  - Updates on key issues (high impact) will be displayed on a slide in the ‘support-room’
  - Participants may use the chat function or speak

## 5MS Commencement Weekend

- Increased Support Hub staffing over weekend
- SMEs will be available over the weekend

## Support post 1 October

- Daily Q&A Sessions
- Daily publication of Issues Log (medium under investigation)
- Extended Q&A session for preliminary and final settlements invoice days
- AEMO will assume that the consent provided to include incident numbers is still in place – please contact 5MS mailbox if you no longer wish to have your organisation’s incident numbers included
- If you have not already provided consent to include incident numbers, please contact the 5MS mailbox



**AEMO**

AUSTRALIAN ENERGY MARKET OPERATOR