



# 5MS & GS Program Consultative Forum #16

Friday, 1 November 2019

# Agenda

No	Time (AEST)	Agenda item	Presenter
<b>Preliminary matters</b>			
1	10:00 – 10:05	Welcome, introduction and apologies	Peter Carruthers
2	10:05 – 10:20	Meeting notes and actions - Industry Risks and Issues Register	Peter Carruthers
<b>Matters for noting</b>			
3	10:20 – 10:30	Program update	Sonja Nigmann
4	10:30 – 10:35	Systems Workstream update	Graeme Windley
5	10:35 – 10:50	Readiness Workstream update	Greg Minney
6	10:50 – 11:00	Change Request update	Chris Muffett
<b>Matters for discussion</b>			
7	11:00 – 11:10	Vendor Engagement Session feedback	Graeme Windley
<b>Break 11:10 – 11:20am</b>			
8	11:20 – 11:40	Industry Readiness Reporting Plan	Greg Minney
9	11:40 – 12:00	Staging Environment update	Graeme Windley
12	12:00 – 12:15	Future Engagement Structure and Approach	Monica Morona
13	12:15 – 12:20	Cost recovery consultation update	Chris Muffett
<b>Other business</b>			
14	12:20 – 12:25	Forward meeting plan	Peter Carruthers
15	12:25 – 12:30	General questions	Peter Carruthers

# Welcome and apologies

Peter Carruthers

# Minutes and actions

Peter Carruthers

# Actions

Item	Topic	Action required	Responsible	Status
15.3.1	Program Update	AEMO to include the accreditation plan milestone in the timeline.	AEMO	Update for PCF #16
15.4.1	Systems Workstream Update	Participants to provide feedback regarding the following matters by 24 October: <ul style="list-style-type: none"> <li>• RM reports Change Request – please provide more information re Participant Business Benefit for Continuation of 30-minute RM and Settlement reports.</li> <li>• An indication as to which RM reports are most critical, for AEMO to consider aligning drops into the 5MS Staging environment (noting constraints within our internal delivery).</li> </ul>	PCF Members	Responses due 24 October 2019
15.5.1	Readiness Workstream update	AEMO to facilitate discussion at the October RWG to finalise the approach and position in relation to cut-over and market roll-back.	AEMO	RWG #5 – 22 October 2019
15.7.1	Industry Risks & Issues Register	AEMO to hold discussion with and seek feedback from the Dispatch Focus Group on Pre-dispatch CR04	AEMO	Update – Change Request agenda item
15.7.2	Industry Risks & Issues Register	AEMO to work with the SWG to seek information and direction in relation to the proposed 30-minute trading information CR.	AEMO	No feedback received
15.7.3	Industry Risks & Issues Register	PCF Members to provide feedback in relation to AEMO assumption that there are no impacts from Global Settlement to generators, participants to provide alternative views	PCF Members	No responses received as at 24 October 2019

# Actions

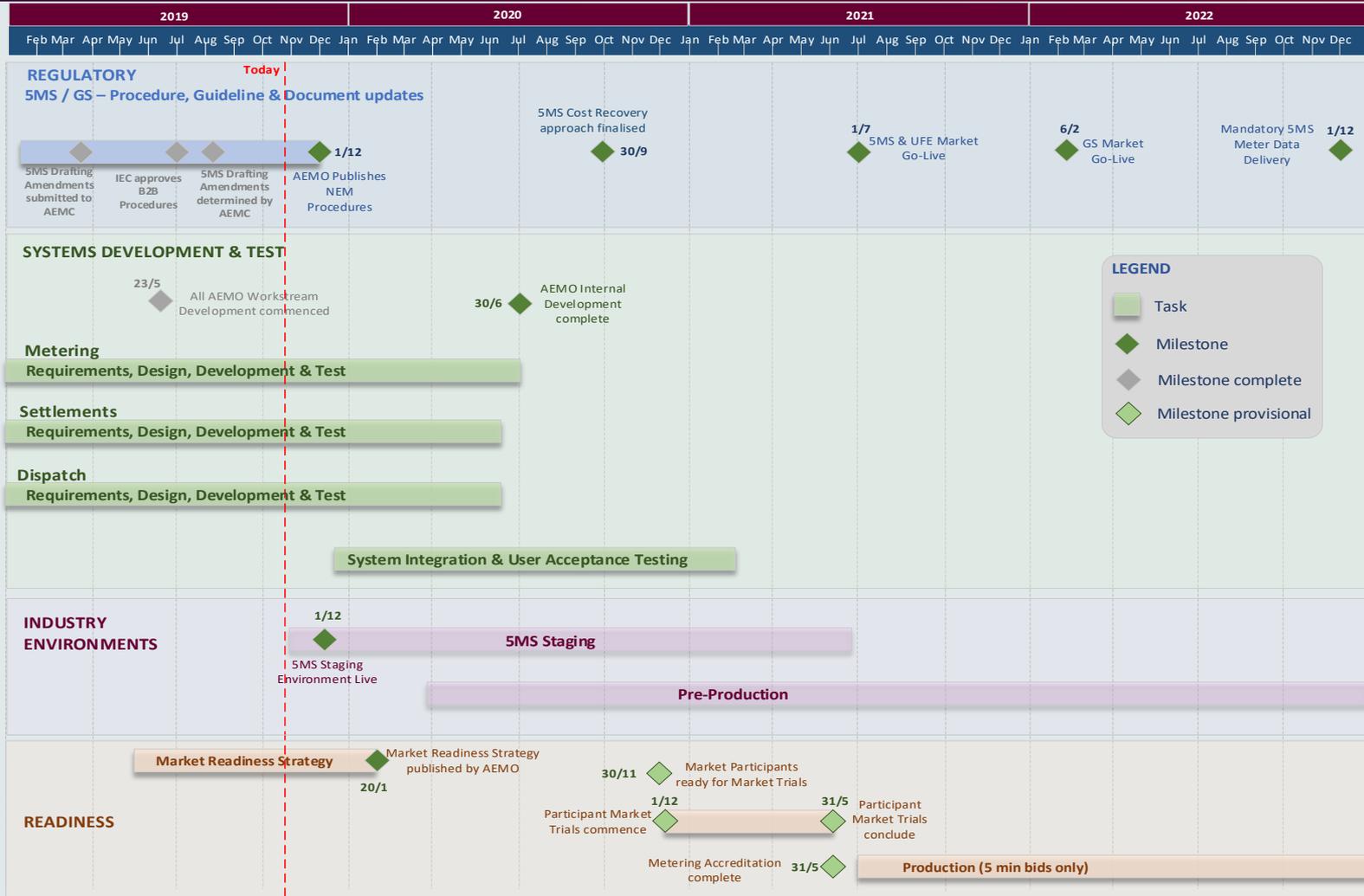
Item	Topic	Action required	Responsible	Status
15.7.4	Industry Risks & Issues Register	AEMO to review how to better present multiple timeframes in a consolidated form.	AEMO	Verbal update proposed approach
15.7.5	Industry Risks & Issues Register	SWG to provide feedback on the clarity of technical specifications at draft and final stages.	SWG	SWG #15 – 21 October 2019
15.7.6	Industry Risks & Issues Register	OOS RWG meeting/s to discuss the Industry Risks and Issue Register.	RWG	RWG #5 – 22 October 2019
15.7.7	Industry Risks & Issues Register	AEMO to provide an update as to how it will include non-PCF industry participants, particularly small participants, in the Readiness Reporting commencing in 2020.	AEMO	Update – Industry Risks and Issues Register
15.7.8	Industry Risks & Issues Register	Review the small participant action plan to ensure that transitional provisions are visible and linked to procedures.	AEMO	Update – Industry Risks and Issues Register
15.7.9	Industry Risks & Issues Register	AEMO to update to reflect revised terminology from UAT to Industry Test and Market Trial.	AEMO	Update – Industry Risks and Issues Register
15.7.10	Industry Risks & Issues Register	AEMO to review risk and issue actions for significant items to ensure that they are more clear and “actionable” activities, to enable improved tracking and reported.	AEMO	Update – Industry Risks and Issues Register
15.11.1	Staging Environment	AEMO to provide confirmation of an approach to communicating Staging Environment defects to participants.	AEMO	Update – Industry Risks and Issues Register
14.10.1	Vendor Engagement	PCF Members to provide AEMO with a list of all relevant vendors to ensure that they are able to be included in the October 2019 vendor information session.	PCF Members	Closed
14.11.1	Industry Engagement Structure	PCF Participants to provide views and comments on the future of AEMO’s engagement.	PCF Members	Closed

# Program Update

Sonja Nigmann

# 5MS & GS Program Timeline

Current as at 25-10-2019



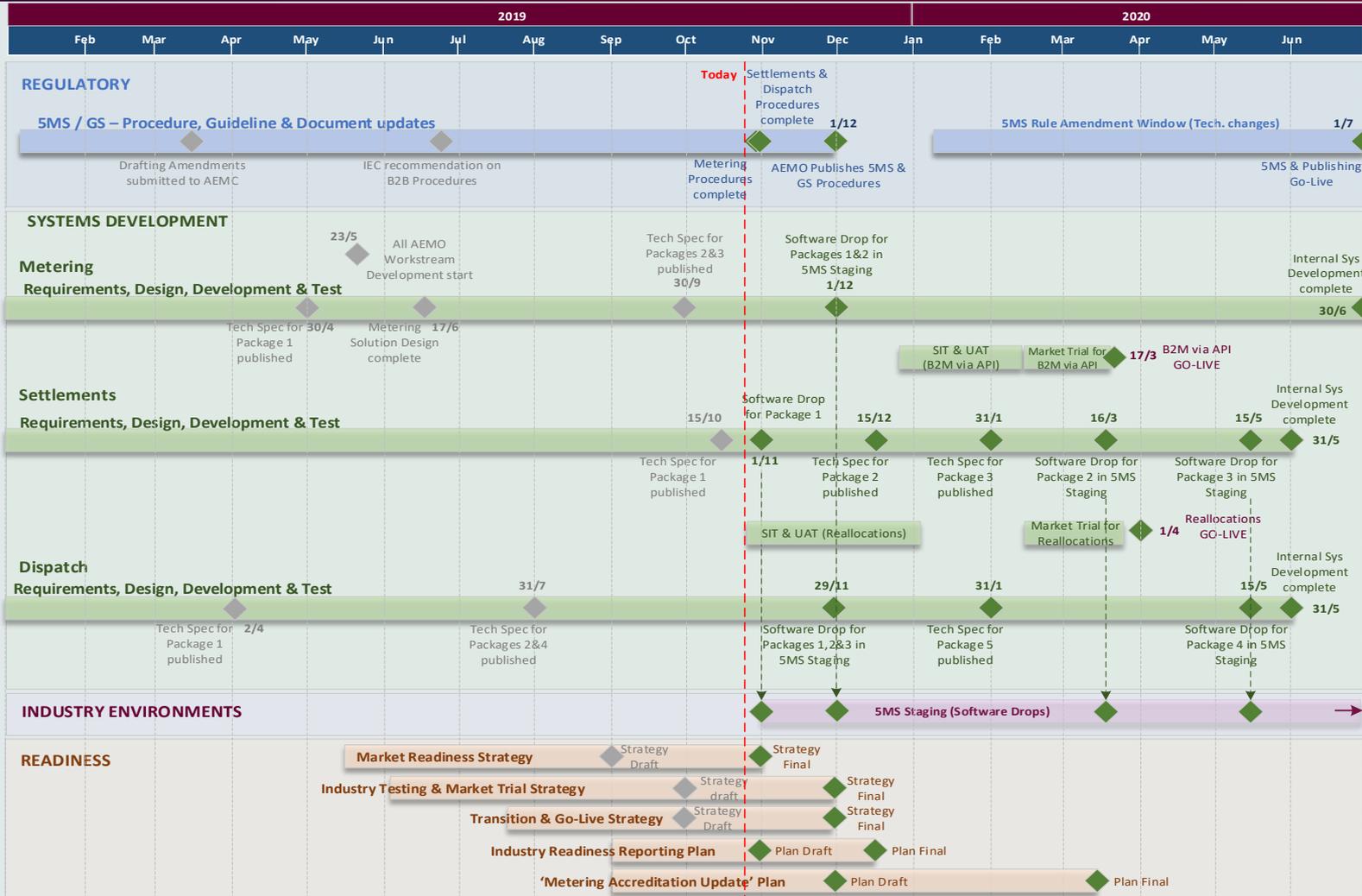
**LEGEND**

- Task
- Milestone
- Milestone complete
- Milestone provisional

# 5MS Program Timeline (to July '20)

## Level 1 and External Level 2 Milestones

Current as at 25-10-2019



# Level 1 Milestones - Status Report

Current as at 25-10-2019

Domain	Initiative	2019				2020				2021															
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
Program		L1-1	L1-11	L1-2 L1-15	L1-12 L1-3	L1-7	L1-13	L1-16	L1-14 L1-8	L1-9 L1-10	L1-4														
		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	Status
L1-1	5MS Drafting Amendments submitted to AEMC	20-Mar-2019	15-Mar-2019	Complete
L1-11	All AEMO workstream development commenced	23-May-2019	23-May-2019	Complete
L1-2	IEC Approves B2B Procedures	01-Jul-2019	01-Jul-2019	Complete
L1-15	5MS Drafting Amendments determined by AEMC	31-Aug-2019	08-Aug-2019	Complete
L1-12	5MS Staging Environment live	01-Dec-2019	01-Dec-2019	On track
L1-3	AEMO publishes NEM Procedures	01-Dec-2019	01-Dec-2019	On track
L1-7	Market Readiness Strategy published by AEMO	20-Jan-2020	20-Jan-2020	
L1-13	AEMO internal development completed	30-Jun-2020	30-Jun-2020	
L1-14	Market participants readiness for Market Trials	30-Nov-2020	[30-Nov-2020]	
L1-16	5MS cost recovery approach communicated	30-Sep-2020	30-Sep-2020	
L1-8	Participant Market Trials commence	01-Dec-2020	[01-Dec-2020]	
L1-9	Participant Market Trials conclude	31-May-2021	[31-May-2021]	
L1-10	Metering accreditation complete	31-May-2021	[31-May-2021]	
L1-4	5MS & UFE Market go Live	01-Jul-2021	01-Jul-2021	
L1-5	GS Market go live	06-Feb-2022	06-Feb-2022	
L1-6	Mandatory 5MS meter data delivery	01-Dec-2022	01-Dec-2022	

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

# Level 2 Milestones Exceptions (External) Current as at 25-10-2019

(This is to be updated monthly to explain any variation on Level 2 Milestones (External))

- No Level 2 (External) milestone exceptions

# Program update and current activities



## *AEMO program*

- Overall green, as development & system testing progresses across all workstreams and industry engagement increases.
- Growing volume and detail of questions from industry participants; Program taking action to reduce wait times, with new resources allocated to managing incoming inquiries.



## *Procedures*

- Workstream remains on track to deliver nearly all work by end October.
- Overall workstream will complete ahead of December deadline.



## *Systems*

- On track to open 5MS Staging Environment for participants on 1-Nov-19; deployments from Reallocations, Dispatch and Metering by 1-Dec-19.
- Tech Specs delivered for Reallocations (15-Oct-19) and Retail packages 2 & 3 (30-Sept-19) (*Standing data, B2M via ehub, MSATS browser + report changes*).
- Vendor briefing held 16-Oct-19, with strong attendance (100+) and positive feedback.



## *Readiness*

- Draft strategies released for *Transition and Go-Live* and *Industry Testing and Market Trial*, participant feedback by 28-Oct-19. Final dates to be discussed at Dec PCF.
- Second Market Readiness survey had slightly fewer responses compared to the first; Meter Data Providers now advanced in planning or establishing their projects.
- Next Interim Readiness report to be released 3-Dec-19 to RWG for feedback.
- Transition Focus Group #3 held 18-Oct-19, #4 to be held 6-Nov-19.

# Procedures workstream status

Current as at 25-10-2019

	Pre-consultation		Consultation			
5 MINUTE SETTLEMENT PROCEDURES TRACKING			TIMING			CONTENT
	HLIA	PWG Engagement	Consultation paper	Draft documents	Final documents	Package content
<b>METERING</b>						
1. Metering - Metering Data & Metrology	Jul-18	Jul-18	Sep-18	Jan-19	Mar-19	
2. Metering - MSATS and SLPs	Jul-18	Dec-18 & Mar-19	Apr-19	Aug-19	Oct-19	
3. Metering - Miscellaneous*	Jul-18	Feb-19	n/a	Jun-19	Oct-19	
B2B Procedures - B2B file size	n/a	Feb-19	n/a	n/a	n/a	n/a
<b>SETTLEMENTS</b>						
SRA	Jun-18	Jul-18	n/a	Jul-18	Aug-18	
SRA round #2	Jun-18	Feb-19	Mar-19	Jun-19	Aug-19	
TNSP	Feb-19	Feb-19	n/a	Apr-19	Jun-19	
Estimation	Aug-18	Aug-18	Nov-18	Feb-19	Apr-19	
Reallocations	Dec-18	Dec-18	n/a	Dec-18	Feb-19	
Miscellaneous	Oct-18	Oct-18	Dec-18	Mar-19	May-19	
Prudentials	Aug-18	Sep-18	Apr-19	Jun-19	Aug-19	
<b>DISPATCH</b>						
2. Dispatch - Spot market - Rules consultation	Sep-18	Oct 18 ongoing	Jan-19	Jun-19	Aug-19	
2. Dispatch - Spot market - For comment**	Sep-18	Oct 18 ongoing	n/a	Jul-19	Oct-19	
3. Dispatch - Pricing - Rules consultation	Aug-18	Aug 18 ongoing	Aug-18	Sep-18	Nov-18	
3. Dispatch - Pricing - For comment**	Aug-18	Aug 18 ongoing	n/a	May-19	Jul-19	
4. Dispatch - Miscellaneous*, release 1	Jan-19	Feb-19	n/a	May-19	Jul-19	
4. Dispatch - Miscellaneous*, release 2	Jan-19	Feb-19	n/a	May-19	Oct-19	
<b>POWER SYSTEM OPS</b>						
1. Operations	TBA	Apr 19 ongoing	Aug-19	Oct-19	Nov-19	

TIMING
Started and on track
Started late
Overdue
Complete

CONTENT
No issues
Issues
Severe issues
Complete

# Systems Workstream update

Graeme Windley

# Level 2 Milestones – Metering

Current as at 25-10-2019



## Key Milestones (Program)

ID	Milestone	Target Date	Expected Date	Status
L2-M1	AEMO internal metering solution – solution design complete (internal)	31-May-2019	17-Jun-2019	Complete
L2-M2	Final technical specifications for Package 1 published by AEMO	30-Jun-2019	30-Apr-2019	Complete
L2-M3	Final technical specifications for Package 2 published by AEMO	30-Sep-2019	30-Sep-2019	Complete
L2-M4	Final technical specifications for Package 3 published by AEMO	30-Sep-2019	30-Sep-2019	Complete
L2-M5	Software drop for Packages 1 & 2 in 5MS Staging Environment	01-Dec-2019	01-Dec-2019	On Track
L2-M6	Agreement on requirements for accreditation & Market Trial	31-Mar-2020	[31-Mar-2020]	
L2-M7	AEMO internal metering solution – build complete (internal)	30-Jun-2020	30-Jun-2020	
L2-M8	Software drop for Package 3 in 5MS Staging Environment	31-Jul-2020	31-Jul-2020	
L2-M9	AEMO internal metering solution – go live complete (internal)	31-Oct-2020	[31-Oct-2020]	
L2-M10	New MDFF format accepted by AEMO	01-Nov-2020	[01-Nov-2020]	
L2-M11	Market Trial preparation completed by participants	30-Nov-2020	[30-Nov-2020]	
L2-M12	Market Trial preparation completed by AEMO	30-Nov-2020	[30-Nov-2020]	
L2-M13	Market Trials conclude	31-May-2021	[31-May-2021]	

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

# Level 2 Milestones - Dispatch

Current as at 25-10-2019



## Key Milestones (Program)

ID	Milestone	Target Date	Expected Date	Status
L2-D1	Final technical specifications for Package 1 published by AEMO	2-Apr-2019	2-Apr-2019	Complete
L2-D2	Final technical specifications for Package 2 published by AEMO	31-Jul-2019	31-Jul-2019	Complete
L2-D12	Final technical specifications for Package 4 published by AEMO	31-Jul-2019	31-Jul-2019	Complete
L2-D3	Software drop for Packages 1,2 & 3 in 5MS Staging Environment	29-Nov-2019	29-Nov-2019	On track
L2-D13	Final technical specifications for Package 5 published by AEMO	31-Jan-2020	31-Jan-2020*	On track
L2-D5	Software drop for Package 4 in 5MS Staging Environment	15-May-2020	15-May-2020	
L2-D4	Development completed (internal)	31-May-2020	31-May-2020	
L2-D6	UAT completed (internal)	30-Nov-2020	30-Nov-2020	
L2-D7	Market Trial preparation completed by participants	30-Nov-2020	[30-Nov-2020]	
L2-D8	Market Trial preparation completed by AEMO	30-Nov-2020	[30-Nov-2020]	
L2-D9	5-min bidding phased go live begins	01-Apr-2021	[01-Apr-2021]	
L2-D10	Market Trial concludes	31-May-2021	[31-May-2021]	
L2-D11	30-min bidding no longer accepted by AEMO	01-Jul-2021	01-Jul-2021	

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



# Update from SWG

- Provided access details for Staging
- Presented Bidding Web UI:
  - Initial feedback good
  - Numerous requests for further information; differences between current and new
  - User Guide due out 29 November
- N Data Quality Flag – Proposed Removal
  - Discussion to be held at SWG 16 on 22 November 2019
  - Used for old 'meter-churn' scenario (i.e. 20 days when now 1 day)
- Procedural change
- Questions around what we are presenting at both forums
  - If unsure, AEMO presents at both to ensure the wider audience is captured

# Systems Workstream - Metering

Current as at 25-10-2019

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>METERING</b>										
<b>PACKAGE 1 - Metering Data &amp; Metrology</b>										
MDFF • MDFF Specification NEM12 NEM13 v20	Aug-18	Oct-18	Oct-18	Nov-18	Jan-19	Apr-19	-	1 Dec 19	Sep-20	Nov-20
<b>PACKAGE 2 - MSATS &amp; SLPs</b>										
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	Sep-20	Nov-20
<b>PACKAGE 3 - Miscellaneous</b>										
B2M via API • MSATS Release Schedule & Technical Specification	Oct-18	-	Apr-19	9-May-19	31-May-19	30-Sep-19	17-Feb-20	N/A	17-Feb-20	17-Mar-20
MSATS Browser (LVI) changes • MSATS Technical Specification	Aug-18	-	May-19	9-May-19	28-Jun-19	30-Sep-19	31-Jul-20	31-Jul-20	Sep-20	Nov-20
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	-	Jul-20	Sep-20	Nov-20

Title adjustment, release schedule dates removed from MSATS Tech Spec and to be finalised via RWG

**Change to 17 Feb 2020**  
API documentation will be published via API portal. Swagger files to be released prior than this date. Key information that participants is available via MSATS Tech Spec.

# Systems Workstream – Dispatch and Operations

Current as at 25-10-2019

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	Nov-20	Mar-21
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-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	29-Nov-19	29-Nov-19	Nov-20	Mar-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	Nov-20	Mar-21
Predispatch P30/7DAY	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	Nov-20	Mar-21
Predispatch P5	Nov-18	Oct-18	Nov-18	TBC	TBC	TBC	-	TBC	Nov-20	May-21
ST and PD PASA	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-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	Nov-20	May-21
Administered Pricing and CPT	Aug-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	Nov-20	May-21
Suspension Pricing	Sep-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	Nov-20	May-21
Negative Residue Management	Sep-18	-	Feb-19	Dec-18	Jun-19	31-Jul-19	-	15-May-20	Nov-20	May-21
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	Nov-20	May-21

Web Bidding  
User Guide  
delayed

# Systems Workstream - Settlements

Current as at 25-10-2019

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>SETTLEMENTS</b>										
<b>PACKAGE 1 - Reallocations</b>										
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
<b>PACKAGE 2 - Settlements and Billing</b>										
Settlements	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	15-Dec-19	-	16-Mar-20	Nov-20	May-21
Billing	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	15-Dec-19	-	16-Mar-20	Nov-20	May-21
<b>PACKAGE 3 - Prudentials and Estimation</b>										
Prudentials	Sep-18	Nov-18	Dec-18	Mar-19	31-Oct-19	31-Jan-20	15-May-20	15-May-20	Nov-20	May-21
Estimation	Oct-18	Nov-18	Dec-18	Mar-19	31-Oct-19	31-Jan-20	-	15-May-20	Nov-20	May-21
Full Data Model	Refer DISPATCH									

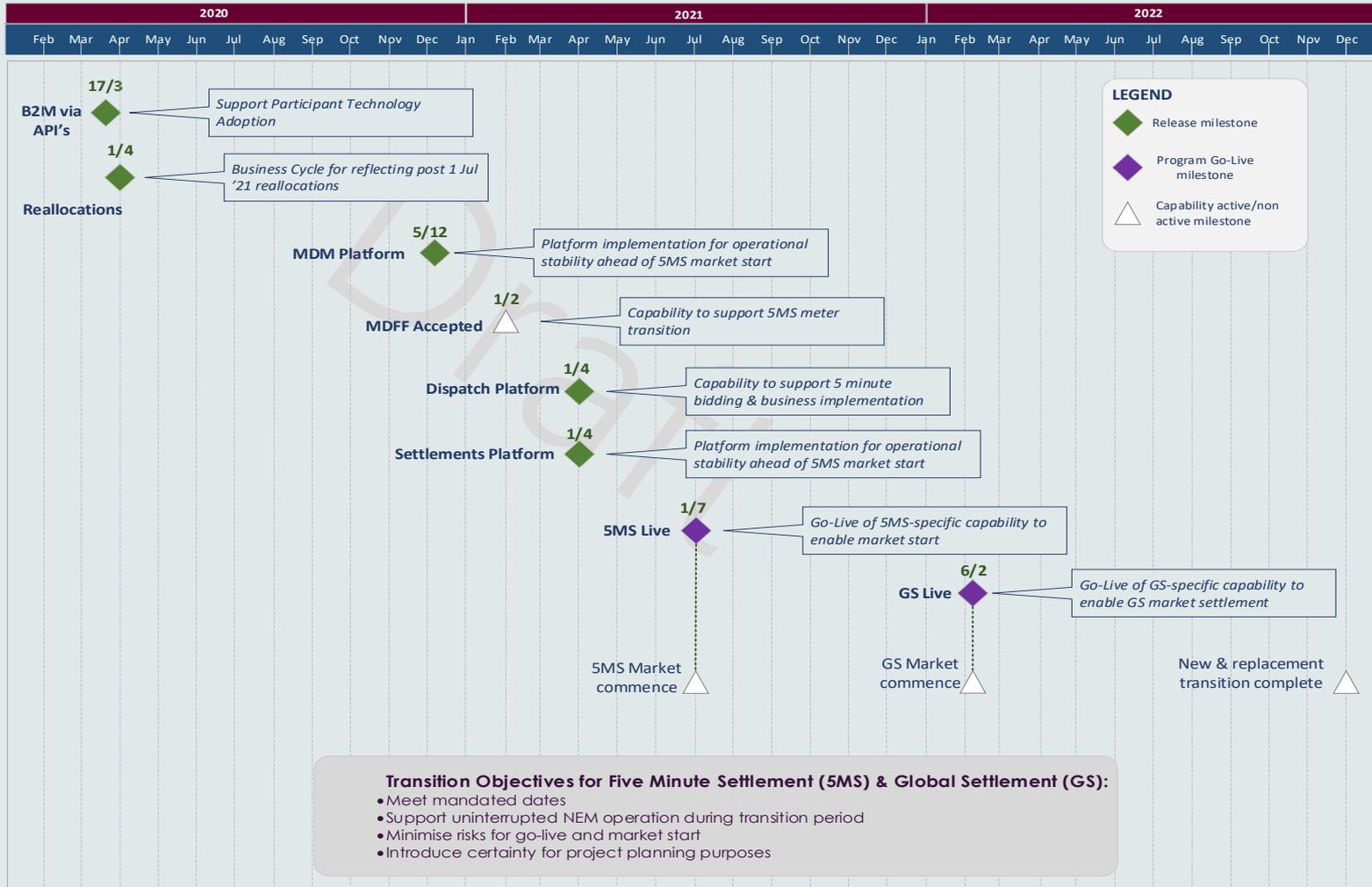
# Readiness Workstream update

Greg Minney



# Staged Transition – system implementations

Draft as at 25-10-2019



# Workstream Update

- Market Readiness Strategy
  - Final document to be released 31<sup>st</sup> October incorporating feedback from participants
- Metering Transition plan
  - Key issues
    - Agreement on data delivery timing to support initial tranche of meters that are required to communicate at 5 minute level by 1/7/21 given change to trading interval on 1/7/21
    - Confirmation of transition windows for Standing and Metering Data establishment activity
    - Completion of GS updates prior to 1/7/21
  - Completion criteria to be reflected in Readiness Reporting
- Industry Test and Market Trial Strategy and Transition and Go-live Strategy
  - Participant feedback received 28<sup>th</sup> October
  - Intention to run feedback session for testing strategy prior to release of final strategy
- Risk management
  - Risk workshop to be established with RWG during November to agree impacts and mitigations for Readiness risks
  - R14 (Transitional data delivery) to be included
  - R15 (Resource and timing constraints for Accreditation) will be managed as 2 risks (AEMO and Participant).
    - Draft Accreditation Update plan due for release 29<sup>th</sup> Nov to outline planned approach and timings for accreditation updates

# Proposed contingency planning scope

## In scope:

- Development of a **5MS/GS Industry contingency plan** underpinned by:
  - System implementation contingencies e.g. system rollback, staged deployments
  - Non-system contingencies e.g. interim operational processes, metering substitutions availability
  - Applicability of BAU processes to address identified 5MS scenarios , e.g. settlement revisions
- Confirmation of position re Market Rollback post 1/7/21. Going in position is that under the NER the market must operate on a 5 minute basis from 1/7/21, with operational procedures to manage issues encountered.
- Interactions between the Industry contingency plan and:
  - Transition and Cutover Plans
  - Readiness reporting

## Out of scope:

- Commercial issues that do not affect 5MS/GS implementation\*
- NER compliance matters that are the responsibility of individual market participants or AEMO\*
- Operational or BAU issues that do not affect 5MS/GS commencements or system' go-lives\*

\* to the extent these issues do not have an impact on overall market operation

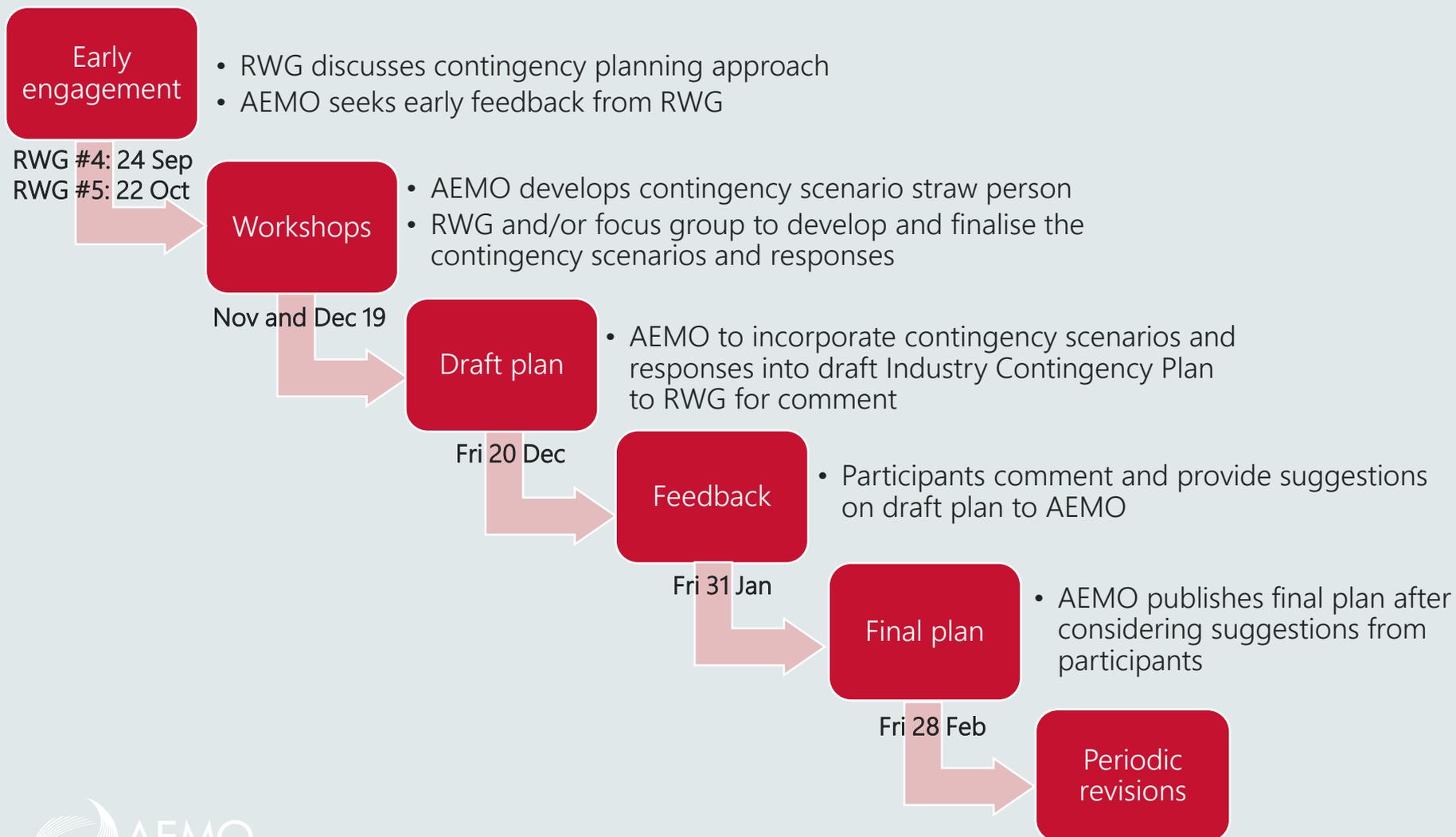
# Proposed contingency planning approach (1)

- AEMO to provide participants with a straw person list of contingency scenarios required for the 5MS and GS commencements and systems go-lives
- RWG focus group/s to develop and finalise the contingency scenarios, AEMO will use the contingency scenarios and responses as the basis of the 5MS/GS Industry Contingency Plan that will be published and maintained on the 5MS/GS website.
- Agreed contingency scenarios will be incorporated into relevant transition and cutover plans
- Industry contingency planning does not remove the need for individual participants to develop and maintain their own internal contingency plans.

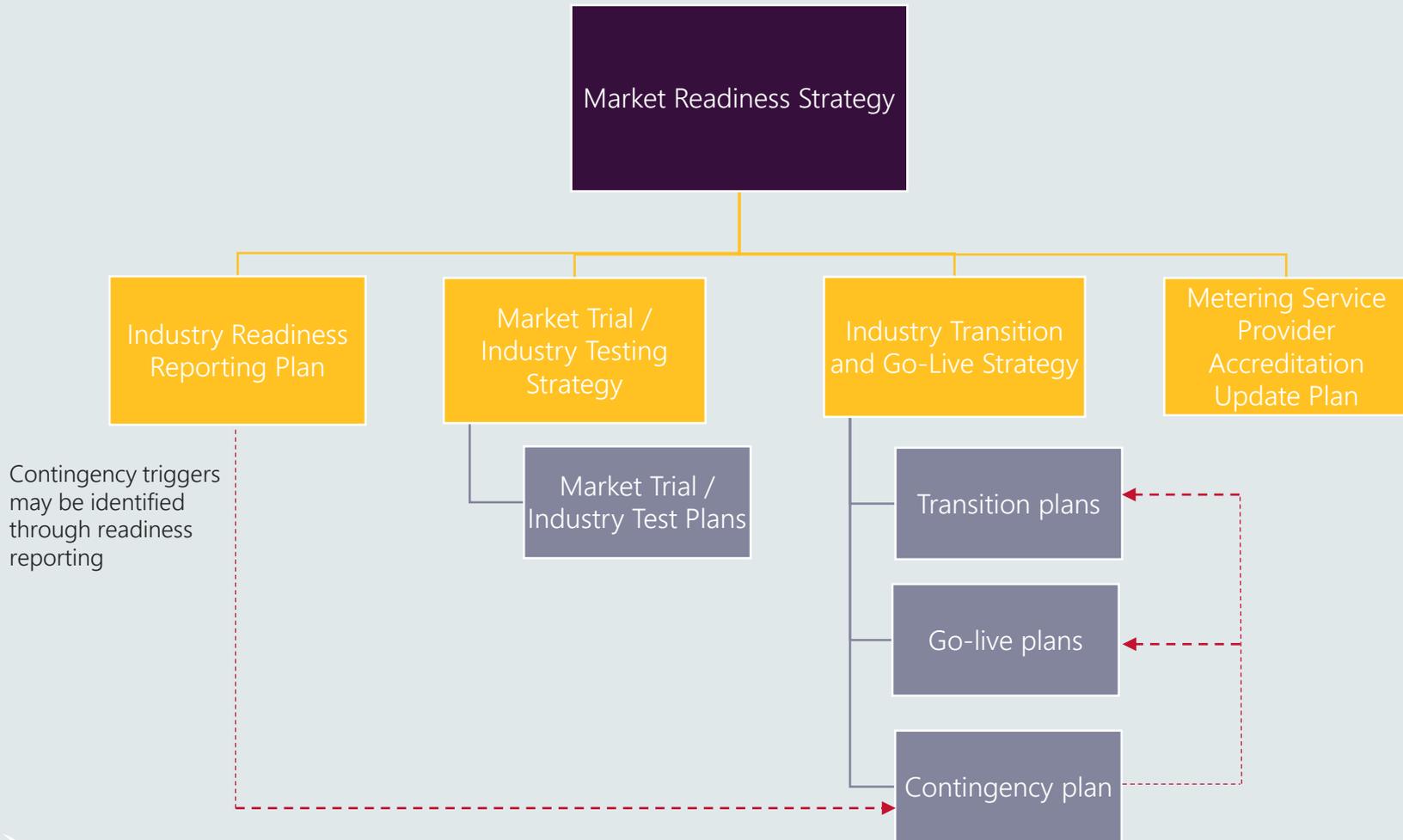
Scenario	Likelihood H/M/L	Impact H/M/L	Priority H/M/L	Area Impact (e.g. metering dispatch, settlement, other)	Impacted Stakeholder	Actions	Timing/ Trigger/ Criteria	Reporting mechanism	Responsibilities

Draft contingency scenario format

# Developing the Industry contingency plan



# Integrating the Industry contingency plan into the Market readiness strategy



# Change Request update

Chris Muffett

# Change Requests under consideration (1)

CR#	Title	Objective	Status
CR18	Additional reconciliation data in RM reports	<b>Reconciliation workshop #1:</b> Consider provision of additional data to improve participant reconciliation of metering and settlement data	<ul style="list-style-type: none"> <li>Change request has been approved, and has been incorporated into work program.</li> </ul>
CR19	Continuation of 30-minute RM and settlement reports	<b>Reconciliation workshop #2:</b> Consider continued delivery of reports in simulated 30-minute format to reduce transition impact to participant reconciliation	<ul style="list-style-type: none"> <li>Change request impact has been assessed, and feedback on potential benefit being sought through SWG.</li> </ul>
CR26	Defer Mandatory Restrictions	Change to work program to defer activities relating to Mandatory Restrictions in light of review outcomes	<ul style="list-style-type: none"> <li>Change request has been approved - mandatory restrictions work deferred until clarity obtained on AEMC process.</li> </ul>

# Change Requests under consideration (2)

CR#	Title	Objective	Status
CR32	5MPD Price Sensitivities	Consider publishing 5-minute price sensitivities as part of 5-minute Predispatch (5MPD)	<ul style="list-style-type: none"><li>• Related to CR04, which adopted FSIP changes to 5MPD</li><li>• AEMO has identified a tactical solution to deliver 5-minute price sensitivities without impacting existing 5MPD cycle, and is currently assessing the impact to project cost and timing</li></ul>

Note: As per update on action item 15.7.2, a change request to continue publishing 30-minute trading information is not being pursued

# Vendor Engagement Session Feedback

Graeme Windley

# Vendor Engagement

- Session held Wednesday 16 October:
  - 2 hours – pack covering Dispatch, Metering and Settlements streams, plus Program & Readiness information
  - >100 personnel on the call
  - 43 Vendors reported their participation
- Feedback (from 16 respondents):
  - 85.71% positive feedback, comments
    - 'we found it very informative'
    - 'session was at a good level and gave the Vendors a great summary'
  - Requested improvements, comments
    - 'more technical detail preferred'
    - 'a little heavy on the acronyms'
    - 'add topics that are frequently asked questions (FAQs) to support content'
- Going Forward:
  - Schedule Q&A sessions to answer questions vendors & participants may have.
  - Focus on: Program timeline, release dates, best practice, highlight key changes & alternatives.

# Industry Readiness Reporting Plan

Greg Minney

# Industry readiness reporting plan – Proposed objective and scope

## Proposed 5MS/GS industry readiness reporting objective

*To facilitate readiness reporting throughout the implementation phase of the 5MS/GS program so that AEMO, NEM participants and other interested stakeholders have an accurate assessment of industry's readiness for the various 5MS and GS system "go-lives", transitional activities and commencements.*

## Proposed readiness reporting scope

Readiness activities related to the various 5MS and GS system "go-lives", transitional activities and rule commencements.

# Recap of market readiness principles

Readiness reporting principles builds on the market readiness principles defined in the *draft* market readiness strategy.

## Market readiness principles (draft):

1. Shared commitment to readiness for 'go-live'
2. Collaborative approach to market readiness planning and execution
3. Each party is responsible for their own readiness
4. Communicate readiness issues and risks as early as possible in writing
5. Open and honest readiness reporting
6. Appropriate handling of confidential and commercially sensitive information by AEMO
7. AEMO to explain readiness decisions to NEM participants

# Readiness Reporting Criteria

- Different approach to 5MS/GS readiness reporting as compared with Power of Choice:
  - Fewer questions that are more targeted to overall market readiness requirements rather than the process stages required to achieve market readiness requirements:
    - Each organisation has its own program but the same overall 5MS/GS obligations
    - Reduces reporting effort
  - Tailored to each participant type based on market readiness requirements
  - Readiness reporting plan, including the readiness criteria, will be reviewed periodically

Power of Choice – Example criteria	5MS & GS – Example criteria
<ul style="list-style-type: none"><li>• Updated, validated and approved business processes in place</li><li>• Successfully validated critical business processes during industry testing</li><li>• Process work arounds in place for any issues identified during industry testing</li><li>• Operational roles specified, assigned to staff and training delivered</li></ul>	<ul style="list-style-type: none"><li>• Generators ability to submit 5 minute bids</li><li>• Generators ability to receive and reconcile 5-min settlements data</li><li>• Generators ability to support 5 minute reallocations</li></ul>

# 5MS/GS Market Readiness Criteria – Specific criteria (2)

Participant type	Specific Criteria (Examples)	Comments
Retailers	<b>Capabilities</b> <ul style="list-style-type: none"> <li>• Receive and reconcile 5-min settlements data</li> <li>• Receive and reconcile global settlements data</li> <li>• Receive 5 minute meter data</li> <li>• Receive and reconcile UFE allocation data (from 6 Feb 2022)</li> <li>• Support 5-min reallocations (if relevant)</li> </ul>	<ul style="list-style-type: none"> <li>• Industry will report on progress, status and expected completion date for each criteria</li> <li>• Criteria for each participant type is different based on how they are affected by 5MS and GS</li> <li>• There might be other criteria that the industry will need to report on to monitor potential readiness issues</li> <li>• Draft criteria will be available for comment in the readiness reporting plan</li> </ul>
Generators	<b>Market commencement requirements</b> <ul style="list-style-type: none"> <li>• Submit 5-min bids</li> </ul> <b>Capabilities</b> <ul style="list-style-type: none"> <li>• Receive and reconcile 5-min settlements data</li> <li>• Support 5-min reallocations (if relevant)</li> </ul>	
Distribution Network Service Provider	<b>Market commencement requirements</b> <ul style="list-style-type: none"> <li>• Ensure that type 7 unmetered loads are calculated on a 5-min basis</li> <li>• Create NMI in MSATS for non-contestable unmetered loads (so that these loads can be excluded from UFE calculations)</li> <li>• Ensure that cross-boundary meters are updated in MSATs (to support UFE calculation)</li> <li>• NMI reclassifications</li> </ul>	

# 5MS/GS Market Readiness Criteria – Specific criteria (1)

Participant type	Specific Criteria (Examples)	Comments
AEMO	<p><b>Market commencement requirements</b></p> <ul style="list-style-type: none"> <li>• Support 5-min bids and offers               <ul style="list-style-type: none"> <li>• Changes to dispatch interfaces</li> <li>• Bidding transition</li> </ul> </li> <li>• Support 5-min settlement               <ul style="list-style-type: none"> <li>• Changes to settlement calculation</li> <li>• MDM platform supporting 5 minute data delivery and 5-min profiling</li> <li>• Settlement platform to produce 5-min format invoices to support reconciliation</li> </ul> </li> <li>• Support UFE publication (from 1 July 2021)               <ul style="list-style-type: none"> <li>• Support meter data processing for GS</li> <li>• Support UFE calculation and publication</li> </ul> </li> <li>• Support Global Settlement (From 6 Feb 2022)               <ul style="list-style-type: none"> <li>• Switching Local Retailer field to "GLOPOOL" to support financial settlement of UFE</li> </ul> </li> </ul> <p><b>Additional capabilities</b></p> <ul style="list-style-type: none"> <li>• Support 5-min reallocations</li> <li>• Introduction of B2M APIs</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting criteria will be aligned to AEMO program updates at the PCF level</li> <li>• Draft criteria will be available for comment in the readiness reporting plan</li> </ul>

# 5MS/GS Market Readiness Criteria – Specific criteria (3)

Participant type	Specific Criteria (Examples)	Comments
<p>Metering Data Providers (MDPs) / Metering Providers (MPs)</p>	<p><b>Market commencement requirements</b></p> <ul style="list-style-type: none"> <li>• Ensure Relevant meters are producing and communicating 5-min data by 1 July 2021:               <ul style="list-style-type: none"> <li>○ Wholesale meters (Bulk supply point meters)</li> <li>○ Type 1-3 meters</li> <li>○ Subset of type 4 meters - TNI, Market Generator or SGA, Cross Boundary meters, Type 7 metering installations</li> </ul> </li> <li>• Ensure New and replacement Type 4, 4A, VIC AMI and SAMPLE meters are producing and communicating 5-min data by 1 December 2022.</li> <li>• Ensure Non-contestable unmetered loads are producing 5-min data by [date tbc via TFG]</li> <li>• Deliver Tier 1 basic metering data to AEMO [date tbc via TFG]</li> <li>• Ensure meter data delivery to AEMO for all interval meters is in MDFF by 1 July 2021</li> <li>• Ensure meter data delivery to AEMO is at register level if applicable by 1 July 2021</li> <li>• Ensure datastream type codes associated with VIC TUOS are updated by 1 July 2021</li> <li>• Ensure new NMI classification codes (BULK, NCUL, DWHOLESALE, NREG, XBOUNDARY, GENERATR, WHOLESALE) are updated in MSATs by 1 July 2021</li> <li>• Complete necessary MP/ MDP accreditation updates in-line with metering transition plan and accreditation update plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Industry will report on progress, status and expected completion date for each criteria</li> <li>• Each criteria is linked to activities defined in the Metering Transition Plan</li> <li>• Transition Focus Group to advise the <i>transition</i> due dates of some criteria (as distinct from the dates that are NER obligations)</li> <li>• Draft criteria will be available for comment in the readiness reporting plan</li> </ul>

# Metrics to score criteria

Participants will be asked to provide information for each criteria following the below metrics:

- Progression(%)
  - Progression towards completion will be tracked in 25% increments
  - Scale to guide level of progression will be provided for each criteria
- Status (On track, At risk, Late)
- Expected completion date as per transition plans
- Support from AEMO / industry required to address issues

If any criteria is 'at risk' or 'late', the following information is also required:

- Explanation of variance in status / explanation of change in schedule
- Mitigation actions

# Readiness reporting process

## Key dates and milestones

- Readiness reporting is scheduled to commence in February 2020
- The last survey before 5MS market commencement (1 July 2021) will be released at the end of May 2021
- The readiness reporting plan will include the full schedule of readiness reporting dates
- Periodic revisions of the readiness reporting plan will also be defined in the schedule

## Frequency and timing

- **For discussion:** Proposing quarterly reporting until mid-2020, then every 2 months until market commencement
- Survey will be released on a Wednesday, participants will be given until the following Friday to submit results (7 business days)
- AEMO will aim to publish reporting results within 7 business days

## Input format

- SurveyMonkey (Excel template provided for internal consolidation of Responses)
  - SurveyMonkey will have in-built logic to only present questions relevant for each participant type

# Developing the Industry readiness reporting plan



# Staging Environment update

Graeme Windley

# Reallocations verification in Staging

- Reallocations will be available on the 1<sup>st</sup> of November.
- 5MS will perform basic shakeout of the environment prior to this date to confirm access.
- Release notes will be available the morning of the 1<sup>st</sup> detailing the known defects (if any) of the release.

# Access to Staging –including Accounts/Certificates

- Access will be available from 1<sup>st</sup> November
- URM accounts have been copied from Preprod
  - AEMO recommends Staging URM account passwords are reset by participants
- Staging FTP accounts must be requested from the AEMO Support Hub
- Staging API access must be requested from the AEMO Support Hub (this includes certificates)
- AEMO will publish an information pack on the 5MS webpage, including url details

# Providing Feedback

- Questions regarding the program will continue to be directed to the 5MS mailbox and will be addressed as per the current process.
- 5MS Staging support questions received in the 5MS mailbox will be transferred to the support queue for resolution.
- Questions related to 5MS staging can be directed to the AEMO Support Desk.
- The support desk will log all calls received and assigned to them 5MS program support queue.
- The program will be actively monitoring the queue and respond to all tickets.

# Future Engagement Structure and Approach

Monica Morona

# Snapshot of Feedback

- Lack of clarity regarding the governance structure and purpose of Forums, Working and Focus Groups,
- Overlap in content between meetings,
- The time commitment for businesses to attend all meetings,
- Challenges and costs associated with attending in-person Focus Groups and the restriction to member only meetings;
- Lack of clarity regarding tracking of issues moved between Forums, Working and Focus Groups,
- Requirement for some increased directions / proposals from AEMO (rather than “by committee”), and
- The need for more detailed or targeted discussion opportunities.

# Objectives for Engagement

Objectives for refining the engagement structure include:

- Delivering a transparent structure for AEMO engagement and consultation of stakeholders,
- Ensuring clarity of the roles of various forums and working groups, and
- Providing a clear process for the management and escalation of industry implementation issues.

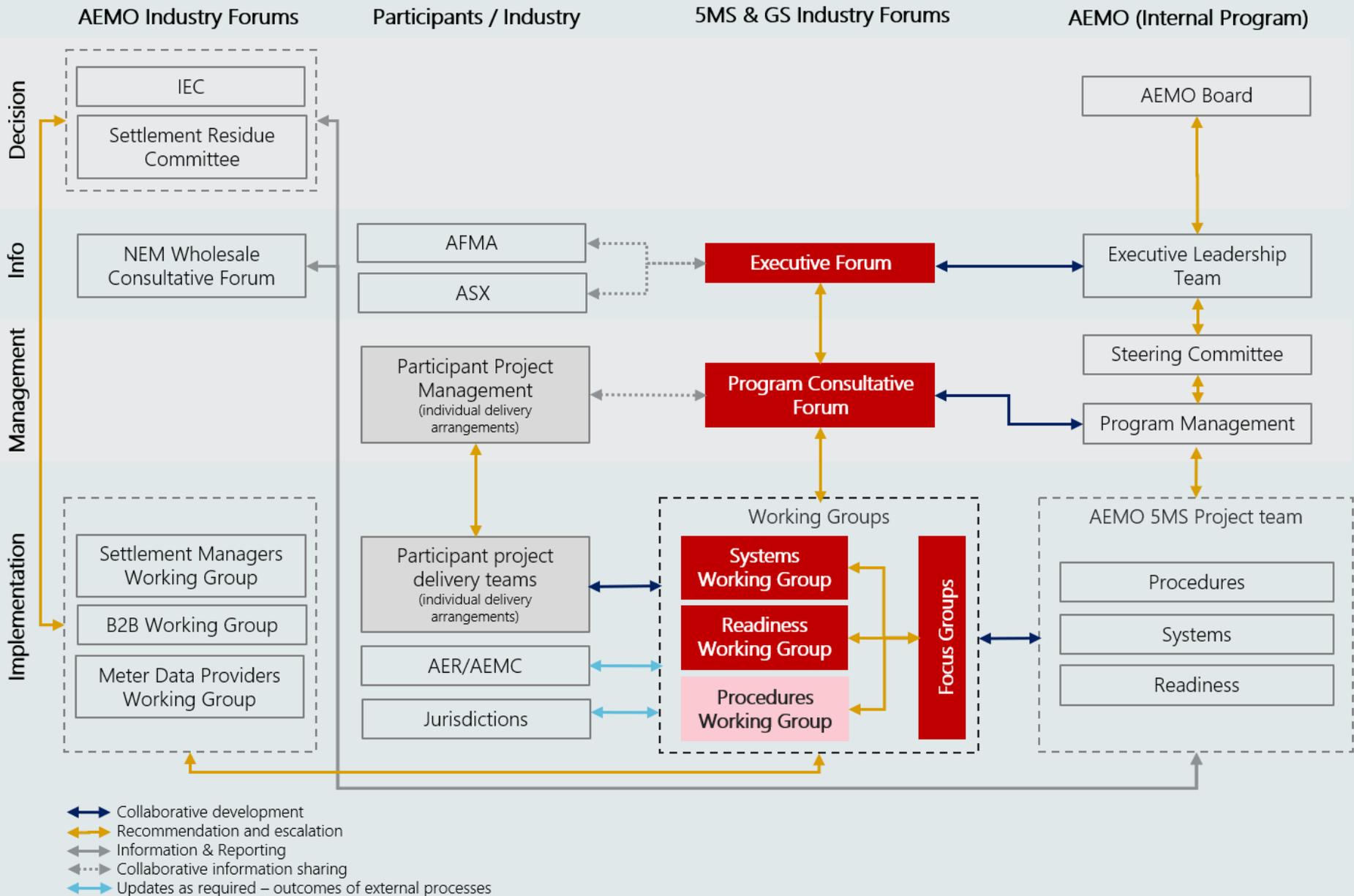
# Forum and Working Group Approach

## Executive Forum and Program Consultative Forum

- Meetings to remain quarterly and monthly (respectively),
- Focus on strategic issues management and overall risk management,
- Updates from the Working Groups,
- Clear accountability for actions through central action log, and
- Review and update the PCF Terms of Reference in line with the engagement objectives.

## Working Groups and Focus Groups

- Procedures Working Group in abeyance,
- Continue with monthly SWG and RWG meetings, due to the heavy workload in finalising the Readiness strategy's and other documentation, and the commencement of the Staging Environment,
- Streamline regular meetings to reduce time commitments – clear delineation between the Working and Focus Groups,
- Discussion with Working Groups to prioritise face-to-face Focus Groups and provide options for in-person (at AEMO offices) video-conference, etc.
- Increased use of Focus Groups for targeted and detailed development and implementation discussions,
- Utilise Focus Sessions for increased opportunities for detailed discussions outside of Working Group meetings, and
- Review and update the SWG and RWG Terms of Reference in line with the engagement objectives (as required).



# Cost recovery consultation update

Chris Muffett

# Declared NEM project consultation

- Current consultation is considering whether 5MS & GS meet the criteria of a declared NEM project:  
<https://www.aemo.com.au/Stakeholder-Consultation/Consultations/Declared-NEM-Project---5MS-Program>
- AEMO received 3 submissions in the 1<sup>st</sup> round, and 1 submission in the 2<sup>nd</sup> round
  - Broadly supportive that criteria are met
- The final report is expected to be published shortly before 20 November 2019

Process Stage	Date
5MS Program Consultation Forum Presentation	8 August 2019
Closing date for submissions in response to this Notice and Consultation Paper	27 August 2019
Publication of Draft Report and Determination	24 September 2019
Closing date for submissions in response to the Draft Report	9 October 2019
Publication of Final Report and Determination	20 November 2019 (indicative)

# Forward Meeting Plan

Peter Carruthers

# Forward Agenda

## December Agenda

- Staging Environment – update
- Interim Readiness Reporting Round #3
- Transition and Go-Live Strategy – submissions and final paper update
- Industry Test and Market Trial Strategy – submissions and final paper update
- Metering Service Provider Accreditation Plan – update

Next meeting to be scheduled for 6 February 2020

# Upcoming meetings

Meetings and forum dates

<http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement>

## OCTOBER

Su	Mo	Tu	We	Th	Fr	Sa
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

## NOVEMBER

Su	Mo	Tu	We	Th	Fr	Sa
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

## DECEMBER

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	1	2	3	4

Focus Groups
Dispatch
Metering
Settlements
Reconciliation
Transition
Other
Information Sessions

Forums/Working Groups
Executive (EF)
Program Consult. (PCF)
Procedures (PWG)
Systems (SWG)
Readiness (RWG)

National Public Holiday
State Public Holiday

# General Questions

Peter Carruthers



# Appendix 1

## Milestone Descriptions

# Level One Milestones – Description

Current as at 25-10-2019

Key Milestones (Program)					
ID	Milestone	Description	Target Date	Expected Date	Status
L1-1	5MS Drafting Amendments submitted to AEMC	Issues with current drafting collated and submitted back to the AEMC by AEMO.	20-Mar-2019	15-Mar-2019	Complete
L1-2	IEC Approves B2B Procedures	The IEC must have consulted and recommended to AEMO any changes to the B2B procedures.	01-Jul-2019	01-Jul-2019	Complete
L1-3	AEMO publishes NEM Procedures	The approved 5MS and GS changes to NEM Procedures are completed and published on the AEMO website.	01-Dec-2019	01-Dec-2019	Mandated
L1-4	5MS & UFE Market go Live	Industry settles electricity at five-minute intervals. UFE reported to market.	01-Jul-2021	01-Jul-2021	Mandated
L1-5	GS Market go live	NEM Market Settlements operation commences using Global Settlements.	06-Feb-2022	06-Feb-2022	Mandated
L1-6	Mandatory 5MS meter data delivery	Five-minute reads are mandatory from all new and replacement meters.	01-Dec-2022	01-Dec-2022	Mandated
L1-7	Market Readiness Strategy published by AEMO	A completed Market Readiness strategy is published on the AEMO website.	20-Jan-2020	20-Jan-2020	Firm
L1-8	Participant Market Trials commence	Initial 5MS Market Trial commences.	01-Dec-2020	[01-Dec-2020]	Provisional
L1-9	Participant Market Trials conclude	Final Market Trial completes.	31-May-2021	[31-May-2021]	Provisional
L1-10	Metering accreditation complete	MPs and MDPs who are delivering 5-min data for 1 July 2021 have been accredited as part of the market readiness process.	31-May-2021	[31-May-2021]	Provisional
L1-11	All AEMO workstream development commenced	All internal workstreams will have commenced development to deliver the 5MS and GS solutions.	23-May-2019	23-May-2019	Complete
L1-12	5MS Staging Environment live	The 5MS Staging environment is available to Participants, who can interact with deployed 5MS and GS code.	01-Dec-2019	01-Dec-2019	Firm
L1-13	AEMO internal development completed	All AEMO internal system development completed.	30-Jun-2020	30-Jun-2020	Provisional
L1-14	Market participants readiness for Market Trials	All Market Participants are ready for the commencement of 5MS Market Trials.	30-Nov-2020	[30-Nov-2020]	Provisional
L1-15	5MS Drafting Amendments determined by AEMC	AEMC publish final determination and rule on 5MS & GS implementation	31-Aug-2019	08-Aug-2019	Complete
L1-16	5MS cost recovery approach communicated	AEMO is to have finalised and published the cost recovery approach for the 5MS & GS rule changes.	30-Sep-2020	30-Sep-2020	Provisional

# Level Two Milestones – Metering (External)

Current as at 25-10-2019

Key Milestones (Program)						
ID	Milestone	Description	Target Date	Expected Date	Status	Comments
L2-M1	AEMO internal metering solution – solution design complete (internal)	Solution Design phase for new AEMO Meter Data Management (MDM) and Profiling Allocation Engine (PAE) complete.	31-May-2019	17-Jun-2019	Complete	
L2-M2	Final technical specifications for Package 1 published by AEMO	Technical Specification for changes to MDFF NEM12 NEM13 as a result of 5MS and GS available to Participants.	30-Jun-2019	30-Apr-2019	Complete	
L2-M3	Final technical specifications for Package 2 published by AEMO	Technical Specification for changes to Transition, Meter Data Load – MDFF as a result of 5MS and GS available to Participants.	30-Sep-2019	30-Sep-2019	Complete	
L2-M4	Final technical specifications for Package 3 published by AEMO	Technical Specification for introduction of B2M via API as well as changes to the MSATS Browser (LVI) and MSATS Report changes as a result of 5MS and GS available to Participants.	30-Sep-2019	30-Sep-2019	Complete	
L2-M5	Software drop for Packages 1 & 2 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Meter Data Load – MDFF available for Participant testing.	01-Dec-2019	01-Dec-2019	On Track	
L2-M6	Agreement on requirements for accreditation & Market Trial	Program agreement of the Accreditation requirements and process, and on market testing requirements and process.	31-Mar-2020	[31-Mar-2020]		Aligned with the MSP Accreditation Plan document
L2-M7	AEMO internal metering solution – build complete (internal)	Build phase for new AEMO Meter Data Management (MDM) and Profiling Allocation Engine (PAE) complete	30-Jun-2020	30-Jun-2020	On Track	
L2-M8	Software drop for Package 3 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for B2M via API, MSATS Browser (LVI) and MSATS Report enhancements and available for Participant testing.	31-Jul-2020	31-Jul-2020	On Track	
L2-M9	AEMO internal metering solution – go live complete (internal)	Go Live date for new AEMO Meter Data Management (MDM) and Profiling Allocation Engine (PAE) complete	31-Oct-2020	[31-Oct-2020]	On Track	
L2-M10	New MDFF format accepted by AEMO	AEMO deploys MDFF capable software to PROD, and all Market Participants can begin submitting files in the new MDFF format.	01-Nov-2020	[01-Nov-2020]		Dependent upon readiness strategy
L2-M11	Market Trial preparation completed by participants	All Market Participants who are required to submit five-minute meter reads are ready for market trials	30-Nov-2020	[30-Nov-2020]		Content and timing of Market Trials TBD
L2-M12	Market Trial preparation completed by AEMO	AEMO has deployed all relevant software to the 5MS pre-Production environment and is ready to deliver the agreed Market Trial scenarios	30-Nov-2020	[30-Nov-2020]		Content and timing of Market Trials TBD
L2-M13	Market Trials conclude	All relevant Market Participants have completed Market Trials to submit five-minute read data.	31-May-2021	[31-May-2021]		Content and timing of Market Trials TBD

# Level Two Milestones – Dispatch (External)

Current as at 25-10-2019

Key Milestones (Program)						
ID	Milestone	Description	Target Date	Expected Date	Status	Comments
L2-D1	Final technical specifications for Package 1 published by AEMO	Technical Specification for changes to Dispatch, Pre-dispatch P30/7DAY, ST PASA, Bidding Data Model and Bidding Format as a result of 5MS and GS available to Participants.	2-Apr-2019	2-Apr-2019	Complete	
L2-D2	Final technical specifications for Package 2 published by AEMO	Technical Specification for changes to the Bidding Web UI and APIs as a result of 5MS and GS available to Participants.	31-Jul-2019	31-Jul-2019	Complete	
L2-D3	Software drop for Packages 1,2 & 3 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Dispatch, Predispatch P30/7DAY, ST PASA, Bidding Data Model and Bidding Format, Bidding Web UI and APIs and Predispatch P5.	29-Nov-2019	29-Nov-2019	On Track	
L2-D4	Development completed (internal)	All AEMO internal development has completed for the Dispatch stream	31-May-2020	31-May-2020	Firm	
L2-D5	Software drop for Package 4 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for RERT, Trading Price / Price Revision, Administrated Pricing and CPT, Suspension Pricing, Negative Residue Management, data model for Dispatch	15-May-2020	15-May-2020	Firm	
L2-D6	UAT completed (internal)	All AEMO internal UAT has completed for the Dispatch stream	30-Nov-2020	30-Nov-2020	Firm	
L2-D7	Market Trial preparation completed by participants	All Market Participants who are required to submit 5MS bids and offers are ready for market trials	30-Nov 2020	[30-Nov 2020]	Provisional	Content and timing of Market Trials TBD
L2-D8	Market Trial preparation completed by AEMO	AEMO has software deployed to pre-production environment and is ready to deliver the agreed Market Trail scenarios	30-Nov 2020	[30-Nov 2020]	Provisional	Content and timing of Market Trials TBD
L2-D9	5-min bidding phased go live begins	Participants can begin submitting 5-min bids to the market	01-Apr-2021	[01-Apr-2021]	Provisional	
L2-D10	Market Trial concludes	Market Trial scenarios related to dispatch have been completed	31-May-2021	[31-May-2021]	Provisional	Content and timing of Market Trials TBD
L2-D11	30-min bidding no longer accepted by AEMO	All Wholesale Market Participants now submitting five-minute bids and offers to AEMO	01-Jul-2021	01-Jul-2021	Mandatory	
L2-D12	Final technical specifications for Package 4 published by AEMO	Technical Specification for changes to Pricing (and Miscellaneous) as a result of 5MS and GS available to Participants.	31-Jul-2019	31-Jul-2019	Complete	
L2-D13	Final technical specifications for Package 5 published by AEMO	Technical Specification for changes to the full data model as a result of 5MS and GS available to Participants.	31-Jan-2020	31-Jan-2020*	Firm	

# Level Two Milestones – Settlements (External)

Current as at 25-10-2019

## Key Milestones (Program)

ID	Milestone	Description	Target Date	Expected Date	Status	Comments
L2-S1	Final technical specifications for Package 1 published by AEMO	Technical Specification for changes to Reallocation as a result of 5MS and GS available to Participants.	15-Oct-2019	15-Oct-2019	Complete	
L2-S2	Software drop for Package 1	Software deployed into the 5MS Staging environment for Reallocations.	01-Nov-2019	01-Nov-2019	On Track	
L2-S3	Final technical specifications for Package 2 published by AEMO	Technical Specification for changes to Settlements and Billing as a result of 5MS and GS available to Participants.	15-Dec-2019	15-Dec-2019	On Track	
L2-S4	Final technical specifications for Package 3 published by AEMO	Technical Specification for changes to Prudentials as a result of 5MS and GS available to Participants.	31-Jan-2020	31-Jan-2020	On Track	
L2-S8	Market Trials for reallocations	Required market participants have completed market trials for the upgraded reallocations web portal.	13-Mar-2020	[13-Mar-2020]	Provisional	Content and timing of Market Trials TBD
L2-S6	Software drop for Package 2 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Settlements and Billing.	16-Mar-2020	16-Mar-2020	Firm	
L2-S12	Reallocations go Live	AEMO has deployed reallocation software to the PROD environment and 5-minute reallocation requests are enabled	01-Apr-2020	01-Apr-2020	Firm	
L2-S7	Software drop for Package 3 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Estimations and Prudentials.	15-May-2020	15-May-2020	Firm	
L2-S5	Development completed (internal)	All AEMO internal development work has completed for Settlements stream	31-May-2020	31-May-2020	Firm	
L2-S9	UAT completed (internal)	All AEMO internal UAT has completed for Settlements Stream	30-Nov-2020	[30-Nov-2020]	Provisional	
L2-S10	Market Trial preparation completed by participants	All Market Participants who will receive Wholesale settlement invoicing are ready for market trials.	30-Nov-2020	[30-Nov-2020]	Provisional	Content and timing of Market Trials TBD
L2-S11	Market Trial preparation completed by AEMO	AEMO has deployed all relevant software to the 5MS Pre-Production environment and is ready to deliver the agreed Market Trial scenarios	30-Nov-2020	[30-Nov-2020]	Provisional	Content and timing of Market Trials TBD
L2-S13	Market Trials conclude	All relevant Market Participants have passed the Market Trial for Settlements	31-May-2021	[31-May-2021]	Provisional	Content and timing of Market Trials TBD