



5MS & GS Program Consultative Forum #13

THURSDAY 8 AUGUST 2019

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

Agenda

No.	TIME	AGENDA ITEM	PRESENTER
1	10:00am – 10:15am	Welcome, introductions and apologies	Peter Carruthers
2	10:15am – 10:25am	Minutes and actions from previous meeting	Peter Carruthers
3	10:25am – 10:30am	Risks and Issues Register	Sonja Nigmann
Matters for Noting			
4	10:30am – 10:45am	Program update	Sonja Nigmann
5	10:45am – 10:50am	Systems Workstream update	Hamish McNeish
6	10:50am – 10:55am	Readiness Workstream update	Greg Minney
7	10:55am – 11:00am	Procedures Workstream update	Emily Brodie
8	11:00am – 11:05am	Change request update	Chris Muffett
9	11:05am – 11:10am	Cost recovery consultation update	Peter Carruthers
10	11:10am – 11:20am	Executive Forum no. 6 update	Peter Carruthers
BREAK : 11:20am – 11:30am			
Matters for Discussion			
11	11:30am – 12:15pm	Industry interim readiness reporting	Emily Brodie
12	12:15pm – 12:30pm	Transition principles and industry testing approach	Greg Minney
13	12:30pm – 12:45pm	Industry testing phases	Tui Grant
Other Business			
14	12:45pm – 12:55pm	General questions	Peter Carruthers
15	12:55pm – 1:00pm	Forward meeting plan	Peter Carruthers

Minutes and Actions

Peter Carruthers

Actions

Item	Topic	Action required	Responsible	Status
12.3.1	Program update	AEMO to highlight areas within draft Technical Specifications that are at risk of changing as a result of Metering Package 2 consultation.	AEMO Hamish McNeish	Completed Ongoing review as technical specification drafts are developed.
12.3.2	Program update	AEMO to discuss with Stanwell to seek further information on including more detail in MPP files.	AEMO Graeme Windley	Completed
12.3.3	Program update	AEMO to include details of milestone descriptions as an appendix to PCF meeting packs.	AEMO Graeme Windley	Completed See Appendix 1
12.4.1	Systems Workstream update	AEMO to review milestones with "TBC" dates and confirm if these have been made firm.	AEMO Hamish McNeish	Ongoing Updated as dates confirmed.

Actions

Item	Topic	Action required	Responsible	Status
12.4.2	Systems Workstream update	AEMO will confirm availability and support of the testing environments, including any shutdown periods over Christmas/New Year.	AEMO Graeme Windley	Ongoing Verbal Update
12.8.1	Industry Risks & Issues review	AEMO to update the Industry Risks & Issues Register based on proposed changes and member feedback.	AEMO Graeme Windley	Complete Agenda Item 3
12.8.2	Industry Risks & Issues Review	PCF members to provide out-of-session comments and feedback on remaining risks (R12-13) and issues (I06-7) and any additional risks or issues.	PCF Members	Complete
12.9.1	Market Readiness Reporting	PCF members to provide feedback to AEMO regarding the interim readiness reporting questionnaire via 5ms@aemo.com.au by Thursday 11 July 2019.	PCF Members	Complete

Industry Risks and Issues Register

Sonja Nigmann

Risks & Issue: Review and Update (1)

ID	TITLE	LIKELIHOOD	CONSEQUENCE	RISK RATING	CURRENT ACTIONS / APPROACH	UPDATES FROM PCF REVIEW
R02	Risk that there is one or more participants that aren't 'ready' at go-live	High	High	High	<ul style="list-style-type: none"> AEMO will facilitate the development of a testing plan through the Readiness workstream. AEMO will engage through the PCF and 1 on 1 meetings to ensure that participants have adequate transition plans in place. AEMO will provide reports of test outcomes and progress against planned milestones. Participants to provide regular and accurate readiness reports via the process being facilitated by AEMO. AEMO will develop a Market Readiness strategy to provide clarity and certainty that will assist participant planning. AEMO will prepare an Industry Readiness Reporting Plan, to provide a clear picture on participant readiness at key milestones throughout the program (which can feed into management actions that can be addressed through the PCF and EF). 	<ul style="list-style-type: none"> Update actions to reflect commencement of AEMO Readiness workstream activities Note commencement of Interim Readiness Reporting based on PCF discussion and recommendation
R06	Interaction with other industry changes that have already been adopted through rule changes	High	High	High	<ul style="list-style-type: none"> Engage broadly internally and externally to understand other industry priorities. Plan engagement with consideration of these priorities AEMO to report at EF on any timeline slippage AEMO to internally align where other program procedure and system impacts overlap 1 on 1 meetings to discuss this risk Consider how other forums (e.g. NEMWCF) can be utilised to address 	<ul style="list-style-type: none"> Participants to consider opportunities to raise concerns regarding the pace of regulatory change with AEMC

Risks & Issue: Review and Update

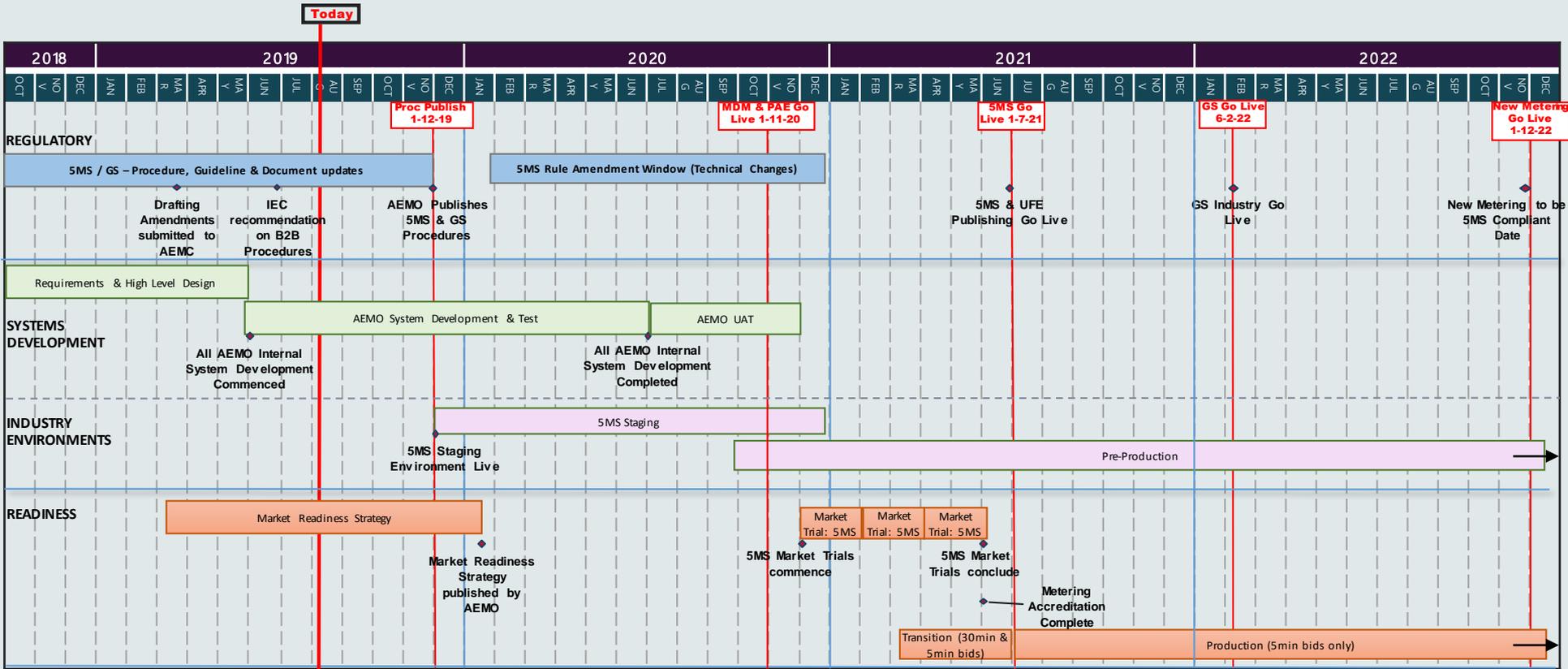
ID	TITLE	LIKELIHOOD	CONSEQUENCE	RISK RATING	CURRENT ACTIONS / APPROACH	UPDATES FROM PCF REVIEW
R07	Potential implications for financial markets	Medium	High	High	<ul style="list-style-type: none"> AEMO to engage with AFMA, ASX and other trading platforms, and update PCF on interactions as required. 	<ul style="list-style-type: none"> Participants to provide updates of interaction with AFMA and ASX in lead up to establishing effective 5MS.
R09	Impact to 5MS from other rule changes that are being considered	Medium	High	High	<ul style="list-style-type: none"> AEMO and industry to participate in rule change processes and to advise AEMC of potential 5MS implications Escalate to EF should road blocks or slippage occur. Participants to engage through the AEC and the ENA. 	<ul style="list-style-type: none"> Related to R06
R10	Vendor contract negotiation timelines	Medium	High	High	<ul style="list-style-type: none"> Build negotiation time into program timelines AEMO to engage with participants to identify issues AEMO to hold a vendor briefing session end of November AEMO to maintain a collated list of vendors, with participants asked to supply vendor details Participants to provide updates to the PCF regarding vendor performance 	<ul style="list-style-type: none"> AEMO to hold a second vendor briefing session in October 2019. Participants to provide updates to vendor delivery as part of Readiness reporting.

AEMO Program Update

Sonja Nigmann

5MS & GS Program Timeline

We're now coming to the end of the procedures stage and moving into readiness planning. Systems development & testing is well underway.



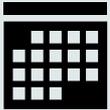
Level 1 Milestones - Status Report



Key Milestones (Program)				
ID	Milestone	Target Date	Expected Date	Status
L1-1	5MS Drafting Amendments submitted to AEM C	20-Mar-2019	15-Mar-2019	Completed, however recent procedure work identified additional changes required. A further milestone will be defined.
L1-11	All AEM O workstream development commenced	23-May-2019	23-May-2019	Completed
L1-2	IEC Approves B2B Procedures	01-Jul-2019	01-Jul-2019	Completed
L1-15	5MS Drafting Amendments determined by AEM C	31-Aug-2019	08-Aug-2019	On target for early completion
L1-12	5MS Staging Environment live	01-Dec-2019	01-Dec-2019	
L1-3	AEM O publishes NEM Procedures	01-Dec-2019	01-Dec-2019	
L1-7	Market Readiness Strategy published by AEM O	20-Jan-2020	20-Jan-2020	
L1-13	AEM O 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 & UFEMarket 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

Program update and current activities



AEMO program

- Delivery – overall green.
- Progressing integration and dependency management of project plans across development, testing and readiness activities.
- Milestone management and reporting framework fully operational and providing transparency against progress.



Procedures

- Workstream overall on track to deliver in October, work remains well ahead of December completion deadline.
- Participants requested 2 weeks additional time to consider metering package #2.
- Does not impact the delivery of the metering technical specifications.



Systems

- Development and market testing progressing for Settlements and Dispatch
- Build activities have commenced for Metering, following confirmation of the design.



Readiness

- Workstream activities have commenced.
- Objective is to plan and prepare industry-related testing and implementation activities, and assess the preparedness of industry participants for go live.
- Readiness and Industry Testing Strategies currently under development.
- Responses to the first Interim Readiness Report have been received.

Level 2 Milestones Exceptions

ID	Milestone	Planned Date	Expected/ Actual Date	%	Comments
L2-M3	Final Technical Specifications for Package 2 published by AEMO*	30-Jul-19	30-Sep-19	90%	Alignment with Metering Procedures Package 2. Technical Specifications released and not expected to change unless Procedures in consultation have material feedback from participants. Delay agreed at PCF based on AEMO proposal and industry feedback.
L2-M4	Final Technical Specifications for Package 3 published by AEMO*	30-Aug-19	30-Sep-19	90%	Alignment with Metering Procedures Package 2. Technical Specifications released and not expected to change unless Procedures in consultation have material feedback from participants. Delay agreed at PCF based on AEMO proposal and industry feedback.
L2-RE04	Industry Test Strategy Industry Draft Released	30-Aug-19	30-Sept - 19	30%	To be combined with Market Test Strategy and aligned with Transition Strategy Draft. (Note, industry milestones still reporting as draft.)

* Metering Procedures Work Package 2 targeted at 30 Sep, may run 2 weeks late to allow for extra participant consultation time, no impact to technical specs date

Systems Workstream Update

Hamish McNeish

Systems Workstream - Metering

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
METERING										
PACKAGE 1 - Metering Data & Metrology										
MDFF • MDFF Specification NEM12 NEM13 v20	Aug-18	Oct-18	Oct-18	Nov-18	Jan-19	Apr-19	-	1-Dec-2019	Sep-20	Nov-20
PACKAGE 2 - MSATS & SLPs										
Transition • MSATS Release Schedule & 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 (Technical Specification) • MSATS Release Schedule & Technical Specification	Aug-18	Oct-18	Sep-18	Nov-18	31-May-19	30-Sep-19	-	1-Dec-2019	Sep-20	Nov-20
PACKAGE 3 - Miscellaneous										
B2M via API • MSATS Release Schedule & Technical Specification	Oct-18	-	Apr-19	09-May-19	31-May-19	30-Sep-19	30-Aug-19 TBC	30-Dec-19 TBC	Feb-20 TBC	Mar-20 TBC
MSATS Browser (LVI) changes • MSATS Release Schedule & Technical Specification	Aug-18	-	May-19	09-May-19	28-Jun-19	30-Aug-19	TBC	31-Jul-20	Sep-20	Nov-20
MSATS Report changes • MSATS Procedures MDM Procedure • MDM File Format and Load Process (Technical Specification) • MSATS Release Schedule & Technical Specification General Process & Document Clean-up	Oct-18	-	Apr-19	Apr-19	28-Jun-19	30-Sep-19	-	31-Jul-20	Sep-20	Nov-20

There are no RM Report User Guides

Updated to align to L2 milestones

Systems Workstream – Dispatch and Operations

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	5MS Staging	Preprod	Production
DISPATCH AND OPERATIONS										
PACKAGE 1 - Bidding FTP and API										
Transition	Aug-18	Oct-18	Aug-18	Nov-18	Dec-18	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
PACKAGE 2 - Bidding Web UI										
Bidding Web UI and APIs	Aug-18	Nov-18	Dec-18	Jan-19	Mar-19	31-Jul-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
PACKAGE 3 - Dispatch, Pre-dispatch and PASA										
Dispatch	Aug-18	-	Oct-18	Nov-18	Oct-18	02-Apr-19	-	29-Nov-19	Nov-20	Mar-21
Predispatch P30/7DAY	Aug-18	-	Oct-18	Nov-18	Oct-18	02-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	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
PACKAGE 4 - Pricing and Miscellaneous										
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	-	-	-	-	-	-	-	-	-
PACKAGE 5 - Full Data Model										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan-20	30-Oct-20	29-Nov-19	Nov-20	May-21

No RERT changes due to 5MS

Added calendar day date

Systems Workstream - Settlements

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	5MS Staging	Preprod	Production
SETTLEMENTS										
PACKAGE 1 - Reallocations										
Reallocation	Dec-18	Nov-18	Dec-18	Mar-19	31-Jul-19	15-Oct-19	01-Nov-19	01-Nov-19	Mar-20	Apr-20
PACKAGE 2 - Settlements and Billing										
Settlements	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	20-Dec-19	-	16-Mar-20	Nov-20	May-21
Billing	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	20-Dec-19	-	16-Mar-20	Nov-20	May-21
PACKAGE 3 - Prudentials and Estimation										
Prudentials	Sep-18	Nov-18	Dec-18	Mar-19	31-Oct-19	31-Jan-20	01-Nov-19	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									

Updated to align to L2 milestones

Technical Specifications

- Due to the different timelines, the **EMMS Technical Specifications** have been split into separate documents:
 - Dispatch and Operations
 - Reallocations
 - Settlements and Billing
 - Prudential's and Estimation
- The intention is to reduce confusion about content – what is draft versus final state technical specs.
- The **MDM File Format and Load process document** has been decoupled from the Procedures consultation and is now managed as a technical document.

Technical Specifications – Retail/Metering

Technical Document	Description	DRAFT	FINAL
Meter Data File Format (MDFF) - B2B and B2M Meter Data Format	Changes to support 5-minute meter data	25 Jan 19	30 Apr 19
MDM File Format and Load Process - Processing/loading meter data into AEMOs MDM	Changes to support loading and processing MDFF	20 May 19 5 Aug 19	30 Sep 19
MSATS 5MS Technical Specification - B2M via API	Changes to introduce APIs for existing B2M messages	31 May 19	30 Sep 19
MSATS 5MS Technical Specification - MSATS browser and RM reports	Changes in MSATS MDM functionality for 5-minute meter data	28 Jun 19	30 Sep 19

Technical Specifications - Dispatch and Operations

Technical Document	Description	DRAFT	FINAL
EMMS 5MS Technical Specification <ul style="list-style-type: none"> - Bidding Format and submitting - Dispatch/Pre-dispatch/PASA 	Changes related to bidding shifting to 5-minute intervals	28 Dec 18	2 Apr 19
EMMS 5MS Technical Specification <ul style="list-style-type: none"> - Bidding Web UI/APIs/Upload - Mandatory Restrictions - Pricing and Miscellaneous 	Changes to support Web Bidding interface, and changes related to pricing shift to 5-minutes	28 Jun 19	31 Jul 19

Technical Specifications – Settlements

Technical Content	Description	DRAFT	FINAL
EMMS 5MS Technical Specification - Reallocations	Changes to support reallocations at 5-minute resolution	31 Jul 19	31 Oct 19
EMMS 5MS Technical Specification - Settlements and Billing	Changes to support Settlements at 5-minutes and Global Settlement	30 Aug 19	27 Dec 19
EMMS 5MS Technical Specification - Prudentials and Estimation	Changes required due to changes in Settlement and Billing	30 Oct 19	31 Jan 20

Readiness Workstream Update

Greg Minney

Readiness Deliverables

NOTE: dates to be confirmed and included in Program Milestones

Item	Engagement Commences	Draft Paper Released	Final Paper Released
Market Readiness Strategy	Jun 19	30 Aug 19	29 Nov 19
Industry Test Strategy	Jul 19	<i>30 Sept 19</i>	31 Oct 19
Transition & Go-Live Strategy	Jul 19	30 Sep 19	31 Jan 20
Market Trial Strategy	Jul 19	<i>30 Sept 19</i>	28 Feb 20
Metering Service Provider Accreditation Update Plan	Oct 19	29 Nov 19	31 Mar 20
Industry Readiness Reporting Plan	Sept 19	29 Nov 19	31 Jan 20

Workstream Update and Market Readiness Deliverables

- AEMO is tracking to release the *draft* Market Readiness Strategy for RWG comment ahead of the indicative date of 30 August:
 - Timeframe for feedback is 3 weeks from issue.
- Industry Test and Market Trial Strategies:
 - AEMO is considering merging the documents
- Transition Approach
- Interim Readiness Reporting - 42 responses received.
- Testing Principles

Procedures Workstream Update

Emily Brodie

Procedures workstream status

5 MINUTE SETTLEMENT PROCEDURES TRACKING	Pre-consultation		Consultation			CONTENT
			TIMING			
	HLIA	PWG Engagement	Consultation paper	Draft documents	Final documents	
METERING						
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	Sep-19	
3. Metering - Miscellaneous*	Jul-18	Feb-19	n/a	Jun-19	Aug-19	
B2B Procedures - B2B file size	n/a	Feb-19	n/a	n/a	n/a	n/a
SETTLEMENTS						
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	
DISPATCH						
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	
POWER SYSTEM OPS						
1. Operations - Miscellaneous*	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

* Formal rules consultation not required, for comment only

Procedures workstream and consultation update

- Metering package 2
 - Draft report and draft procedures published on Monday 5 August 2019
 - Submissions due Monday 2 September
 - **additional 2 weeks provided for submissions after feedback from metering focus group**
- Credit Limit Procedures
 - On track to publish final report and procedures on Friday 16 August
- Settlement Residue Auctions: Auction Participation Agreement
 - Final report and agreement published Monday 5 August
 - Next PWG meeting scheduled for Thursday 12 August (expected to be penultimate meeting as previously advised)

For further details see Appendix

Change Requests

Chris Muffett

Change Requests under consideration (1)

CR#	Title	Objective	Status
CR04	Pre-Dispatch	Enhancements to 5-minute Pre-dispatch, to provide improved market information in response to 5MS and the changing generation mix	Approach discussed with Dispatch Focus Group – action to consider price sensitivities and daily energy constraints, with feedback to be provided shortly
CR14	Enhancements to RERT	Implement changes to accommodate rule change for settlement of RERT	Minimal impact to program – change requests have been accepted
CR15	Mandatory Restrictions	Reducing scope of changes in light of review	
CR16	Intervention Compensation Settlement	Implement changes to accommodate rule change for Intervention Compensation	

Change Requests under consideration (2)

CR#	Title	Objective	Status
CR18	Additional reconciliation data in RM reports	Reconciliation workshop #1: Consider provision of additional data to improve participant reconciliation of metering and settlement data	Scoping work currently underway – AEMO will be looking to engage with stakeholders shortly on quantifying potential benefits
CR19	Continuation of 30-minute RM and settlement reports	Reconciliation workshop #2: Consider continued delivery of reports in simulated 30-minute format to reduce transition impact to participant reconciliation	

Change Requests under consideration (3)

CR#	Title	Objective	Status
CR20	Provision of raw profiled data	Reconciliation workshop #3: Consider provision of raw profiled data to participants to improve reconciliation processes	Scoping work currently underway – AEMO will be looking to engage with stakeholders shortly on quantifying potential benefits
CR21	Delivery of retail standing data through data interchange	Reconciliation workshop #4: Consider provision of retail standing data via DI to improve efficiency/quality of synchronising data	

Cost Recovery Consultation Update

Peter Carruthers

Cost Recovery consultation

- Two stage consultation process required under the Rules
 - Stage 1: The Project meets the criteria to be classified as a 'declared NEM Project' (sect 2.11).
 - Stage 2: The Participant fees, including the structure, start date and duration of recovery.
- AEMO has commenced consultation on determination of the 5MS Program as a declared NEM project
- Current consultation relates only to establishing whether the 5MS Program should be determined to be a declared NEM project.
 - Consultation information: <https://www.aemo.com.au/Stakeholder-Consultation/Consultations/Declared-NEM-Project---5MS-Program>

Stage 1 Consultation Process	Indicative 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

Executive Forum no. 6 Update

Peter Carruthers



BREAK

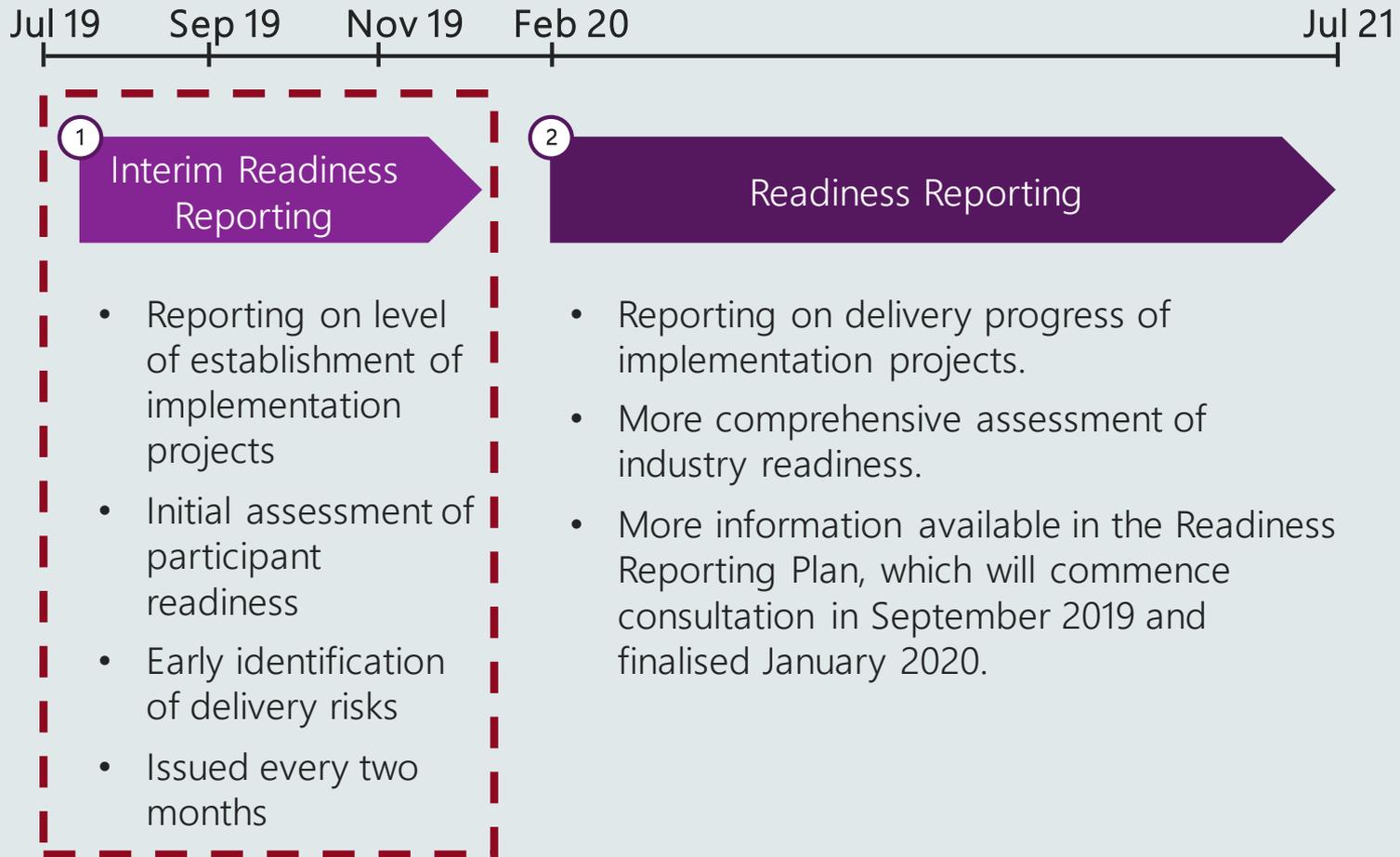
Interim Readiness Reporting – Overall Summary

Greg Minney

Interim Readiness Reporting - Background

- Participants' request via PCF for AEMO to investigate an approach to Interim Readiness Reporting ahead of full Market Readiness Reporting to establish general level of participant preparedness (baseline).
- Interim Readiness Reporting focuses on the level of establishment of implementation projects. Subsequently, Readiness Reporting will focus on the progress of these delivery projects.
- AEMO will collate information and ensure that participant information remains anonymous and reported only at an aggregated level
- Reports will be provided to RWG, PCF and also published on AEMO's website.
- Full readiness reporting is planned to commence February 2020.

Interim Readiness Reporting



Interim Readiness Reporting – survey response rate

Figure 1: Interim Readiness Reporting - Response rate (%)

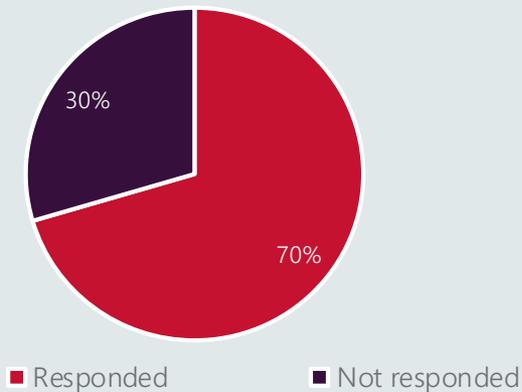
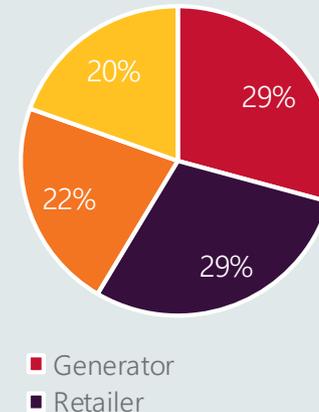


Figure 2: Interim Readiness Reporting – Participant respondent type (%)



Response summary:

- Invitations to complete the survey were sent out to 44 organisations, with 41 submissions received from 31 unique respondents, representing a 70% response rate
- Responses were received from an even mix of participant types, with generators, retailers, NSPs and MSPs each representing approximately a quarter of survey responses.
- Based on the response rate and mix of respondents, the survey responses represents a reasonable cross-section of the industry

Observations (1)

- Majority of respondents are tracking well with their 5MS programs, with GS programs slightly less progressed compared to 5MS
- Almost all respondents are in the early stages of developing project plans and commencing activities to establish a project team
- All respondents have commenced considering funding for their respective programs. However only a handful have fully considered funding
- MDPs have the least established 5MS and GS programs relative to other participants types
- Uncertainty with GS changes. Some participants noted that they are waiting on MP2 to be finalised to progress some elements of their program.
- Just under half of respondents have fully combined IT programs for 5MS and GS, with retailers most likely to have combined programs

Observations (2)

- Most respondents have commenced engagement with vendors, however this engagement is not well advanced
- Majority of respondents have commenced impact assessments on Market Procedures, Commercial Operations and Agreements, Internal Business Processes and Standing Data/Meter Transition. Market Procedures is the most progressed category, with almost half of respondents already reasonably considering procedure impacts
- Respondents noted that it is still too early to be able to commit to testing, with more information required. There was some confusion on whether intention of question was on willingness or readiness status to participate in industry testing and market trials.

Key risks

- Internal resourcing and systems
 - Availability and capacity of internal resources
 - Complexity of upgrading systems
 - Ability to secure resources to complete program implementation
- AEMO Procedures and Technical Specifications delivery
 - Challenges to progressing without final documentation
 - Dependencies between AEMO artefacts and industry program design
 - Potential for AEMO delays
- Early phases of project planning
 - Details to be provided following detailed impact assessment and project development
- Vendor capacity
 - Availability and resourcing capacity

Other risks identified

- Short testing and market trial period
- New rules changes / projects impacting capacity to deliver
- AEMO readiness and transition planning
 - Increased focus on industry issues required
- Impact of increased data on internal systems
- Physical meter / meter software upgrades

These risks have been raised through reporting, will be reviewed at the next RWG and escalated as required

Project establishment – Project plan and project team establishment

Figure 8: To what extent has a project plan been developed by your organisation for 5MS & GS:

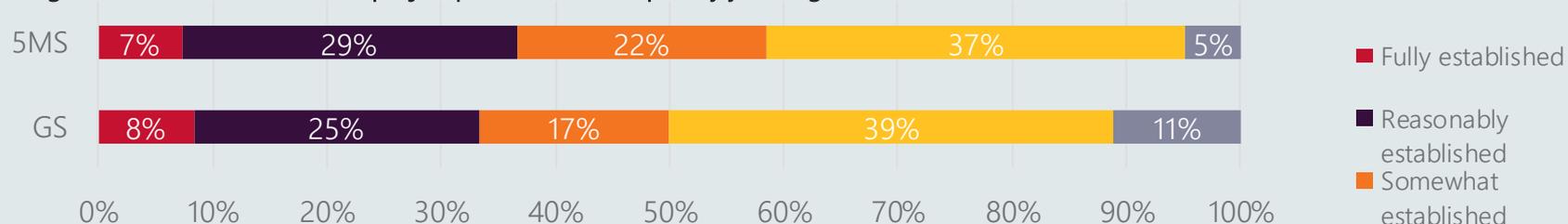
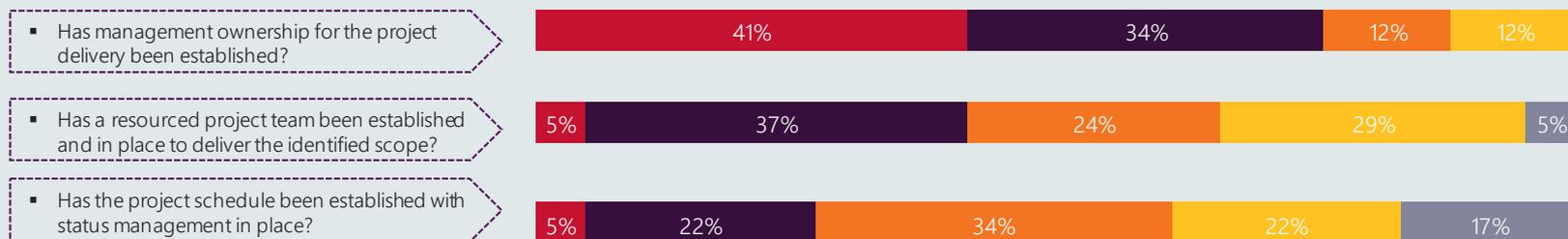


Figure 9: In relation to Project Establishment, to what extent:

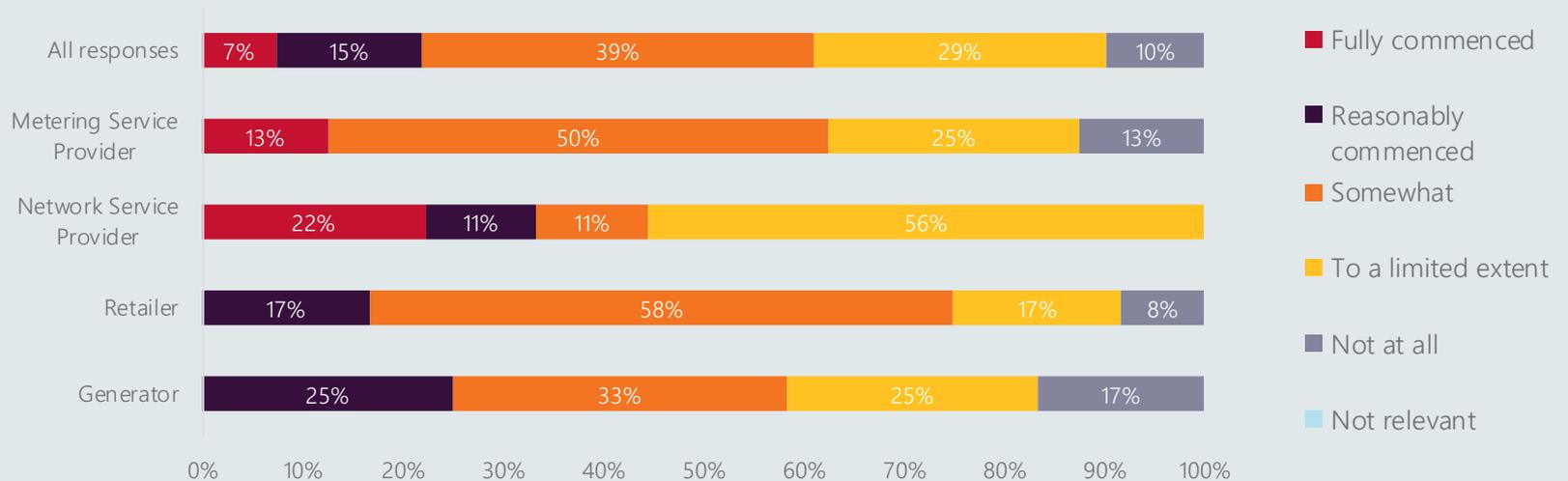


Observations:

- Almost all respondents have started developing project plans for 5MS (95%) and GS (89%).
- Management ownership for project delivery has been fully established by almost half of respondents (41%) and at least reasonably established by three quarters of respondents (75%).
- Most participants have commenced activities to establish a project team (95%) and project schedule with status management (83%), however only a select few have fully established teams and plans (5%).

IT Delivery Approach – Extent that project has commenced activities

Figure 13 : In relation to your IT delivery approach, to what extent has the project commenced activities:

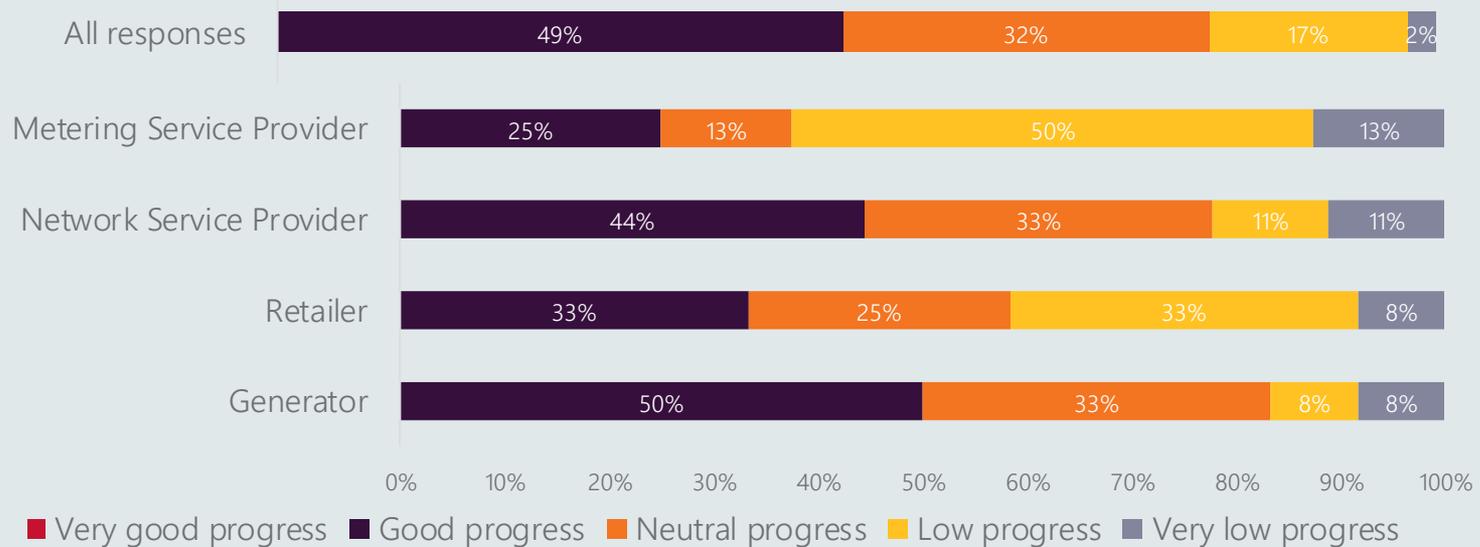


Observations:

- Almost all respondents have commenced activities (90%) to a limited extent, however progress in the early stages, with 22% reasonably commenced activities, and only 7% have fully commenced activities
- Wide spread of responses, with the proportion of Generator and MSPs yet to commence activities representing the same proportion as those that have fully commenced activities.

Overall program status – 5MS

Figure 3: What is the overall status of your organisation's Program, taking into account planning, budget, resourcing, issue and risk management, and governance etc. for 5MS:

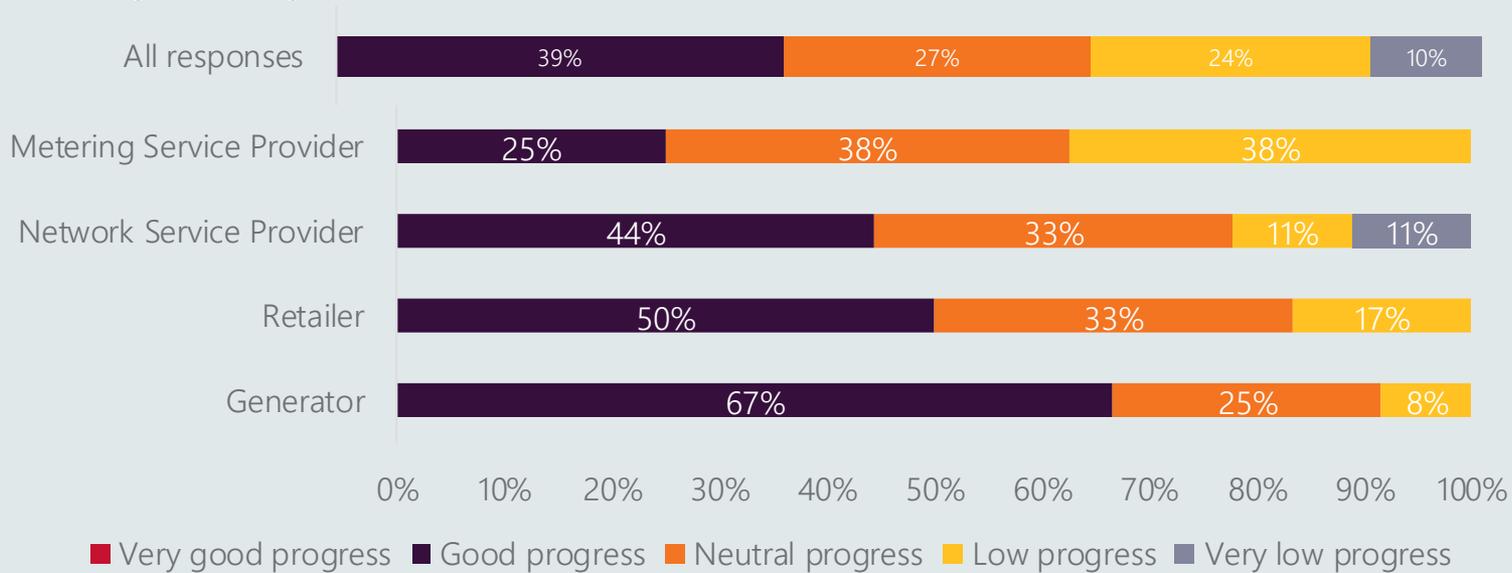


Observations:

- 81% of respondents reported at least Neutral or Good progress on their over 5MS. Only 20% reported either Low or Very Low progress on their 5MS program.
- MSPs are slightly less progressed, with 63% Neutral to Good progress, compared to an average of 84% for other categories.

Overall program status – GS

Figure 4 : What is the overall status of your organisation's Program, taking into account planning, budget, resourcing, issue and risk management, and governance etc. for GS:



Observations:

- 66% of respondents reported at least Neutral or Good progress on their GS program status. This is slightly lower compared to the progress on 5MS.
- Generators also responded to this question, which may have biased the results. A 'not relevant' response will be available in the next survey.
- MSPs again slightly less progressed, with 38% Neutral to Good progress, compared to an average of 73% for other categories.

Summary of Industry Position

- There is good visibility of the 5MS/ GS project within executive management and delivery ownership has been established.
- Delivery Programs are being established and funded, IT Programs being stood up with level of Vendor Engagement
- Level of Risk and Uncertainty exists:
 - Internal resourcing, capacity and conflicting priorities
 - AEMO Dependencies and Delivery
 - Emergent issues as programs become established
 - Vendor Delivery
- However, overall progress reported is in line with programs being delivered in line with Market timelines

Readiness Areas for Discussion

- Approx. 50% of respondents listed internal resourcing and systems as potential risk
- MSP participants as a group appear to be the least advanced in their preparations, with metering and standing data impacts reasonably considered by 25% of respondents
- Vendor Engagement remains an area for concern with the potential to increase as project timelines become locked down
- Resolution of uncertainty in key areas (transition, Global Settlement scope, procedure finalisation, AEMO delivery dependencies) will assist in firming delivery requirements

Interim Readiness Reporting

Interim reporting	Survey released	Survey responses due	Distribute results	Discuss at RWG meeting	Discuss at PCF meeting
Round 1	18 Jul	31 Jul	6 Aug	6 Aug / 27 Aug	8 Aug
Round 2	2 Sep 19	13 Sep	23 Sep	24 Sep	3 Oct
Round 3	4 Nov 19	15 Nov	26 Nov	28 Nov	4 Dec

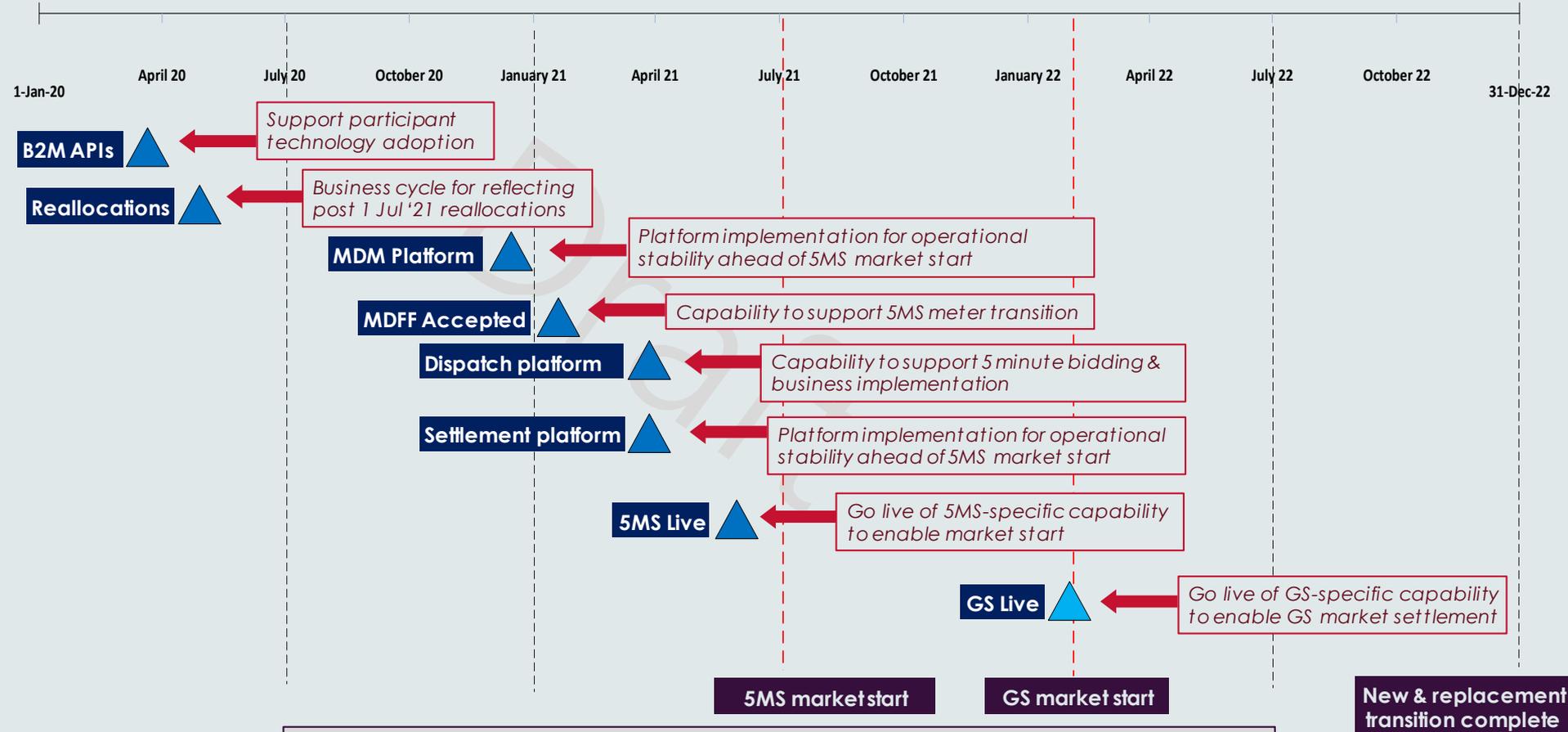
Transition Principles

Greg Minney

Objectives and approach

- Establish common understanding of transition scope.
- Develop framework for collaborative approach to move from strawperson to adopted transition approach.
- Define key transition strategy principles.
- Establish strawperson of overall transition approach:
 - In collaboration with RWG;
 - Document in *Draft Transition and Go-live Strategy*;
 - Consolidate feedback with RWG input;
 - Publish *Transition and Go Live Strategy*.

Staged Transition – system implementations



Transition Objectives for Five Minute Settlement (5MS) & Global Settlement (GS):

- Meet mandated dates
- Support uninterrupted NEM operation during transition period
- Minimise risks for go-live and market start
- Introduce certainty for project planning purposes

Next steps and Transition Focus Group

- Participants to consider transition strategy in-line with their own implementation programs (2 weeks)
 - Develop and document key issues to be addressed, and any alternative approach(es) to resolve
- AEMO continues working through internal AEMO details that affect transition.
- Transition Focus Group scheduled for late August.
- Draft Transition and Go Live Strategy deliverable target 30 September – Industry consultation.

Industry Testing Phases

Tui Grant

5MS AEMO Testing Approach – Program overview

- When changes are introduced into Production, AEMO currently conducts three main types of testing with the Industry, in addition to making the Pre-Production system available for participants to perform bi-lateral testing at any time.
- AEMO testing will use the following approaches:
 - Industry Testing
 - Invitation Industry Testing
 - Market Trials
- AEMO will provide support and defects investigation during this period to any participant requiring assistance.

5MS Industry Testing

- Changes deployed into Pre Prod before deployment into Production will be communicated to participants and available for participants to test/verify on an informal basis.
- No formal tracking of testing or results will be provided prior to the changes being deployed to Production.
- Provides an opportunity for participants to perform basic testing and become familiar with new screens, APIs, verify ACKs on submission of 5 minute NEM12 files, etc.

5MS Invitation Industry Testing

- As with Industry Testing AEMO will make systems available to participants at various points in the development life cycle for participants to test with.
- AEMO will reach out to participants who are in a position to test their solutions with changes deployed into Pre-Prod.
- Specific testing will be agreed and executed during this period and reported between the parties involved and AEMO only.
- Any participant may use and test in Pre Prod during this period without formal communication to AEMO.

5MS Market Trials

- Market Trials are a series of scenarios that validate outcomes across all market participant's, including AEMO.
- Scenarios are defined, allocated and agreed between parties prior to execution and results are reported to all parties who are taking part in the market trials.
- Provides an opportunity for participants to test their changes with AEMO and verify outcomes.
- Provides an opportunity for participants to use data generated from other participants to test their changes and verify outcomes.
- Participants can test the new AEMO systems with existing market rules (i.e. 30 minute reads).
- Participants can also test the new AEMO systems with the new rules (i.e. 5 minute settlement).

5MS proposed testing (1)

- Reallocations
 - New reallocations screens supporting both current BAU and new 5MS functionality.
 - Recommendation to make this change available for industry testing only.
- B2M APIs
 - Introduction of API functionality for B2M transactions and providing the ability to access MSATS via the web market portal.
 - Recommendation to make this change available for invitation industry testing.
- MDM
 - Introduction of a new MDM capable of supporting BAU and 5MS functionality.
 - Recommendation to make this change available for invitation industry testing.
- Settlements
 - Introduction of a new settlement system capable of supporting BAU and 5MS functionality.
 - Recommendation to make this change available for Market Trials.

5MS proposed testing (2)

- Dispatch and Bidding
 - Introduction of a new bidding and dispatch system capable of supporting BAU and 5MS functionality.
 - Recommendation to make this change available for invitation industry testing.
- 5 Minute Settlements
 - The market go live of 5 minute settlement functionality.
 - Recommendation to make this change available for Market Trials.
- Global Settlements
 - The market go live of global settlements.
 - Recommendation to make this change available for Market Trials.

5MS Staging Environment

- Formal industry testing will be conducted in the Pre-Prod environment as per the current process.
 - After consideration of the length and number of changes, AEMO will be providing an additional test environment.
 - **5MS Staging will be made available by the 1st November** to allow participants who are ready to test/verify changes to their solutions prior to these changes being available in Pre-Prod and Production.
- Changes will be deployed into this environment:
 - as per the dates communicated to participants in the SWG and RWG, and
 - be limited to the scope defined by each AEMO Project Manager.
- Formal notifications will be sent after each deployment confirming scope of deployment and confirming support arrangements.
- This environment will have limited support available. Participants able to raise issues and defects, and these will be addressed in line with the internal testing with improvements and in line with scheduled updates.

General Questions

Peter Carruthers

Forward Agenda

Peter Carruthers

Upcoming Meetings



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

Focus Groups	
Dispatch	
Metering	
Settlements	
Reconciliation	
Transition	
Other	
Information Sessions	

National Public Holiday	
State Public Holiday	

Meetings and forum dates:

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



Appendix 1 – Risks and Issues Register; summary

Industry Risks & Issues: review and update (1)

ID	TITLE	LIKELIHOOD	CONSEQUENCE	RISK RATING	PREVIOUS ACTIONS / APPROACH	SUGGESTED CHANGES / UPDATE
R01	Small Participant Engagement	Medium	Medium	Medium	<ul style="list-style-type: none"> AEMO executing a plan for small participant engagement PCF members to make recommendations to AEMO to allow greater participation from resource constrained stakeholders AEMO to host seminars for small generators, the first being in Feb-2019. 	<ul style="list-style-type: none"> AEMO to host another seminar for small generators – Q4 2019
R02	Risk that there is one or more participants that aren't 'ready' at go-live	High	High	High	<ul style="list-style-type: none"> AEMO will facilitate the development of a testing plan through the Readiness workstream. AEMO will engage through the PCF and 1 on 1 meetings to ensure that participants have adequate transition plans in place. AEMO will provide reports of test outcomes and progress against planned milestones. Participants to provide regular and accurate readiness reports via the process being facilitated by AEMO. AEMO will develop a Market Readiness strategy to provide clarity and certainty that will assist participant planning. AEMO will prepare an Industry Readiness Reporting Plan, to provide a clear picture on participant readiness at key milestones throughout the program (which can feed into management actions that can be addressed through the PCF and EF). 	<ul style="list-style-type: none"> Update actions to reflect commencement of AEMO Readiness workstream activities Note commencement of Interim Readiness Reporting based on PCF discussion and recommendation
R03	Resource constraints over summer periods	High	Medium	Medium	<ul style="list-style-type: none"> AEMO will work with participants through the forums and working groups to ensure that the schedule is reasonable and understood with adequate advanced notice for consultation and testing requirements Participants to provide feedback on AEMO's program timeline and readiness proposals 	<ul style="list-style-type: none"> AEMO to provide feedback on summer 2019/20 with respect to support requirements for the industry-facing 5MS Staging environment. Target resolution date – 28 Feb 2021.

Industry Risks & Issues: review and update (2)

ID	TITLE	LIKELIHOOD	CONSEQUENCE	RISK RATING	CURRENT ACTIONS / APPROACH	SUGGESTED CHANGES
R04	Big bang approach	Low	Medium	Low	<ul style="list-style-type: none"> Staged approach to procedure implementation in preparation for Rule go-live. AEMO to begin distributing information on the readiness workstream from Mar-May 2019, with a more detailed view of industry testing and the cutover for the June 2019 PCF. AEMO system implementation to be completed in advance. Participants will be using the new systems prior to Rule go-live AEMO to consider limitations of current Rule drafting Procedure go-live action plans will be discussed and developed through the PWG and released as part of the consultation process 	<ul style="list-style-type: none"> Readiness workstream to deliver drafts of the industry test strategy and transition and cutover plan in Q3 2019. Ratings to be reassessed once Readiness strategy work has completed Target resolution date 20 January 2019
R05	Unintended consequences of Rule as drafted	Medium	Low	Low	<ul style="list-style-type: none"> Engage with the AEMC to rectify as inconsistencies identified AEMO to engage with participants to identify issues 	<ul style="list-style-type: none"> Industry to consider proposals AEMO has produced and uploaded Currently no issues raised which would be considered major or significant Target resolution date 30 November 2020
R06	Interaction with other industry changes that have already been adopted through rule changes	High	High	High	<ul style="list-style-type: none"> Engage broadly internally and externally to understand other industry priorities. Plan engagement with consideration of these priorities AEMO to report at EF on any timeline slippage AEMO to internally align where other program procedure and system impacts overlap 1 on 1 meetings to discuss this risk Consider how other forums (e.g. NEMWCF) can be utilised to address 	<ul style="list-style-type: none"> Participants to consider opportunities to raise concerns regarding the pace of regulatory change with AEMC

Industry Risks & Issues: review and update (3)

ID	TITLE	LIKELIHOOD	CONSEQUENCE	RISK RATING	CURRENT ACTIONS / APPROACH	SUGGESTED CHANGES
R07	Potential implications for financial markets	Medium	High	High	<ul style="list-style-type: none"> AEMO to engage with AFMA, ASX and other trading platforms, and update PCF on interactions as required. 	<ul style="list-style-type: none"> Participants to provide updates of interaction with AFMA and ASX in lead up to establishing effective 5MS.
R08	Procedure changes arising from IT activities	Medium	Medium	Medium	<ul style="list-style-type: none"> AEMO to consider including option of further round of procedure change prior to 5MS go live 	<ul style="list-style-type: none"> Update to reflect the potential Program-wide implications on procedures AEMO to provide ongoing updates via 5MS forums if/as required, when this scenario arises. Managed in accordance with the process outlined in Procedures transition update at PCF #11.
R09	Impact to 5MS from other rule changes that are being considered	Medium	High	High	<ul style="list-style-type: none"> AEMO and industry to participate in rule change processes and to advise AEMC of potential 5MS implications Escalate to EF should road blocks or slippage occur. Participants to engage through the AEC and the ENA. 	<ul style="list-style-type: none"> Related to R06
R10	Vendor contract negotiation timelines	Medium	High	High	<ul style="list-style-type: none"> Build negotiation time into program timelines AEMO to engage with participants to identify issues AEMO to hold a vendor briefing session end of November AEMO to maintain a collated list of vendors, with participants asked to supply vendor details Participants to provide updates to the PCF regarding vendor performance 	<ul style="list-style-type: none"> AEMO to hold a second vendor briefing session in October 2019. Participants to provide updates to vendor delivery as part of Readiness reporting.
R11	The AEMO internal project is not ready for 5MS Go Live	Low	High	Medium	<ul style="list-style-type: none"> Ensure transparency around AEMO's internal program deliverables, presenting to the PCF on an agreed basis Agree Level 1 and Level 2 Readiness milestones for the PCF. 	

Industry Risks & Issues: review and update (4)

ID	TITLE	LIKELIHOOD	CONSEQUENCE	RISK RATING	CURRENT ACTIONS / APPROACH	SUGGESTED CHANGES
R12	Unexpected impact to B2B Procedures	Low	Medium	Low	<ul style="list-style-type: none"> IEC and B2BWG to review all B2B procedures following the completion of the of the 5MS Procedures work (review expected in early 2020) 	
R13	Consequential impact from 5MS/GS implementation amendments	Low	Medium	Low	<ul style="list-style-type: none"> AEMO and industry personnel to discuss any procedural impacts at the time of analysing and validating all rule amendments. 	
I05	Visibility of 5MS implementation costs				<ul style="list-style-type: none"> AEMO to discuss internally and report back 	<ul style="list-style-type: none"> Note AEMO NEM Declared Project consultation process
I06	Support for metering transition activities throughout 2022				<ul style="list-style-type: none"> AEMO to discuss internally with Steering Committee on program approach. 	
I07	Support for Global Settlement go live				<ul style="list-style-type: none"> AEMO to discuss internally with Steering Committee on program approach. 	

Appendix 2 – Level 2 Milestones

Level 2 Milestones – Metering



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 Packages 2 published by AEMO	31-Jul-2019	30-Sep-2019	
L2-M4	Final technical specifications for Package 3 published by AEMO	31-Aug-2019	30-Sep-2019	
L2-M5	Software drop for Packages 1 & 2 in 5MS Staging Environment	01-Dec-2019	01-Dec-2019	
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



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
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	
L2-D13	Final technical specifications for Package 5 published by AEMO	31-Jan-2020	31-Jan-2020	
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

Appendix 3 – Systems workstream update (no annotations)

Systems Workstream - Metering

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
METERING										
PACKAGE 1 - Metering Data & Metrology										
MDFF • MDFF Specification NEM12 NEM13 v20	Aug-18	Oct-18	Oct-18	Nov-18	Jan-19	Apr-19	-	1-Dec-2019	Sep-20	Nov-20
PACKAGE 2 - MSATS & SLPs										
Transition • MSATS Release Schedule & 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 (Technical Specification) • MSATS Release Schedule & Technical Specification	Aug-18	Oct-18	Sep-18	Nov-18	31-May-19	30-Sep-19	-	1-Dec-2019	Sep-20	Nov-20
PACKAGE 3 - Miscellaneous										
B2M via API • MSATS Release Schedule & Technical Specification	Oct-18	-	Apr-19	09-May-19	31-May-19	30-Sep-19	30-Aug-19 TBC	30-Dec-19 TBC	Feb-20 TBC	Mar-20 TBC
MSATS Browser (LVI) changes • MSATS Release Schedule & Technical Specification	Aug-18	-	May-19	09-May-19	28-Jun-19	30-Aug-19	TBC	31-Jul-20	Sep-20	Nov-20
MSATS Report changes • MSATS Procedures MDM Procedure • MDM File Format and Load Process (Technical Specification) • MSATS Release Schedule & Technical Specification General Process & Document Clean-up	Oct-18	-	Apr-19	Apr-19	28-Jun-19	30-Sep-19	-	31-Jul-20	Sep-20	Nov-20

Systems Workstream – Dispatch and Operations

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
DISPATCH AND OPERATIONS										
PACKAGE 1 - Bidding FTP and API										
Transition	Aug-18	Oct-18	Aug-18	Nov-18	Dec-18	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
PACKAGE 2 - Bidding Web UI										
Bidding Web UI and APIs	Aug-18	Nov-18	Dec-18	Jan-19	Mar-19	31-Jul-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
PACKAGE 3 - Dispatch, Pre-dispatch and PASA										
Dispatch	Aug-18	-	Oct-18	Nov-18	Oct-18	02-Apr-19	-	29-Nov-19	Nov-20	Mar-21
Predispatch P30/7DAY	Aug-18	-	Oct-18	Nov-18	Oct-18	02-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	02-Apr-19	31-Oct-19	29-Nov-19	Nov-20	Mar-21
PACKAGE 4 - Pricing and Miscellaneous										
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	-	-	-	-	-	-	-	-	-
PACKAGE 5 - Full Data Model										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan-20	30-Oct-20	29-Nov-19	Nov-20	May-21

Systems Workstream – Settlements

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
SETTLEMENTS										
PACKAGE 1 - Reallocations										
Reallocation	Dec-18	Nov-18	Dec-18	Mar-19	31-Jul-19	15-Oct-19	01-Nov-19	01-Nov-19	Mar-20	Apr-20
PACKAGE 2 - Settlements and Billing										
Settlements	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	20-Dec-19	-	16-Mar-20	Nov-20	May-21
Billing	Oct-18	Nov-18	Dec-18	Mar-19	30-Aug-19	20-Dec-19	-	16-Mar-20	Nov-20	May-21
PACKAGE 3 - Prudentials and Estimation										
Prudentials	Sep-18	Nov-18	Dec-18	Mar-19	31-Oct-19	31-Jan-20	01-Nov-19	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									

Appendix 4: Procedures Consultation

Consultations - Metering

Metering package 2

- Draft report and draft procedures published on Monday 5 August 2019
- Submissions due Monday 2 September
 - additional 2 weeks provided for submissions after feedback from metering focus group
- Metering package 2 has been decoupled from:
 - 5MS/GS metering technical specifications and ICF metering consultation
- Aiming to publish final report and final procedures by 30 September 2019
 - additional time for industry consultation will likely impact AEMO's analysis and response time. **However, no impact on delivery of metering technical specifications and associated milestones.**
- <http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes---Package-2?Convenor=AEMO%20NEM>

Information sheet

- High level information on metering package #1 (complete) and progressive consultation approach for metering packages #2 and #3
- <http://aemo.com.au/-/media/Files/Electricity/NEM/5MS/Procedures-Workstream/Stakeholder-Consultation/Metering-package-2/5MS-GS---Metering-Fact-Sheet.pdf>

Consultations – Settlements & Procedures

<http://www.aemo.com.au/Stakeholder-Consultation>

- Dispatch Procedures (non-rules consultation)
 - Terminology updates and clarifications only
 - “Release 1” documents (6 in package) were published in July
 - Publication timeframe for remaining dispatch procedures to be discussed with PWG:
 - no impact on technical specifications
 - proposed completion date is end of October.
- Credit Limit Procedures
 - updates to support 5MS implementation
 - change to the season definitions
 - On track to publish final report and procedures on Friday 16 August.
- Settlement Residue Auctions: Auction Participation Agreement
 - minor update to clause 16.5 of the procedure
 - Final report and agreement published Monday 5 August

Procedures Workstream Meetings

- Next PWG meeting scheduled for Thursday 12th August (expected to be penultimate meeting as previously advised):
 - Debrief on Dispatch Focus Group
 - Debrief on Metering Focus Group
 - Metering consultations update
 - Power system operations consultations update
- Focus groups:
 - **Future:**
 - None planned
 - **Recent meetings:**
 - Dispatch focus group, Tuesday 16 July, AEMO offices and webinar
 - Metering focus group, Thursday 18 July, Sydney
 - Subset of Metering Focus Group (cross-boundary supplies), Wednesday 7 August, webinar