



# 5MS & GS Program Consultative Forum #17

Wednesday, 4 December 2019

# Agenda

No	Time (AEST)	Agenda item	Presenter
<b>Preliminary matters</b>			
1	10:00 – 10:05	Welcome and Apologies	Peter Carruthers
2	10:05 – 10:20	Meeting Notes and Actions	Peter Carruthers
<b>Matters for noting</b>			
3	10:20 – 10:30	Program Update	Graeme Windley
4	10:30 – 10:50	Systems Workstream Update	Graeme Windley
5	10:50 – 11:00	Readiness Workstream Update	Greg Minney
6	11:00 – 11:10	Change Request Update	Peter Carruthers
7	11:10 – 11:20	Managing Emerging Procedures Issues	Emily Brodie
<b>Break 11:20 – 11:30am</b>			
<b>Matters for discussion</b>			
8	11:30 – 11:45	Readiness Strategies Update	Greg Minney
9	11:45 – 11:50	Cost Recovery Consultation Update	Peter Carruthers
<b>Other business</b>			
10	11:50 – 12:00	General Questions	Peter Carruthers
11	12:00 – 12:05	Forward Meeting Plan	Peter Carruthers

# Welcome and apologies

Peter Carruthers

# Meeting Notes and Actions

Peter Carruthers

# Actions

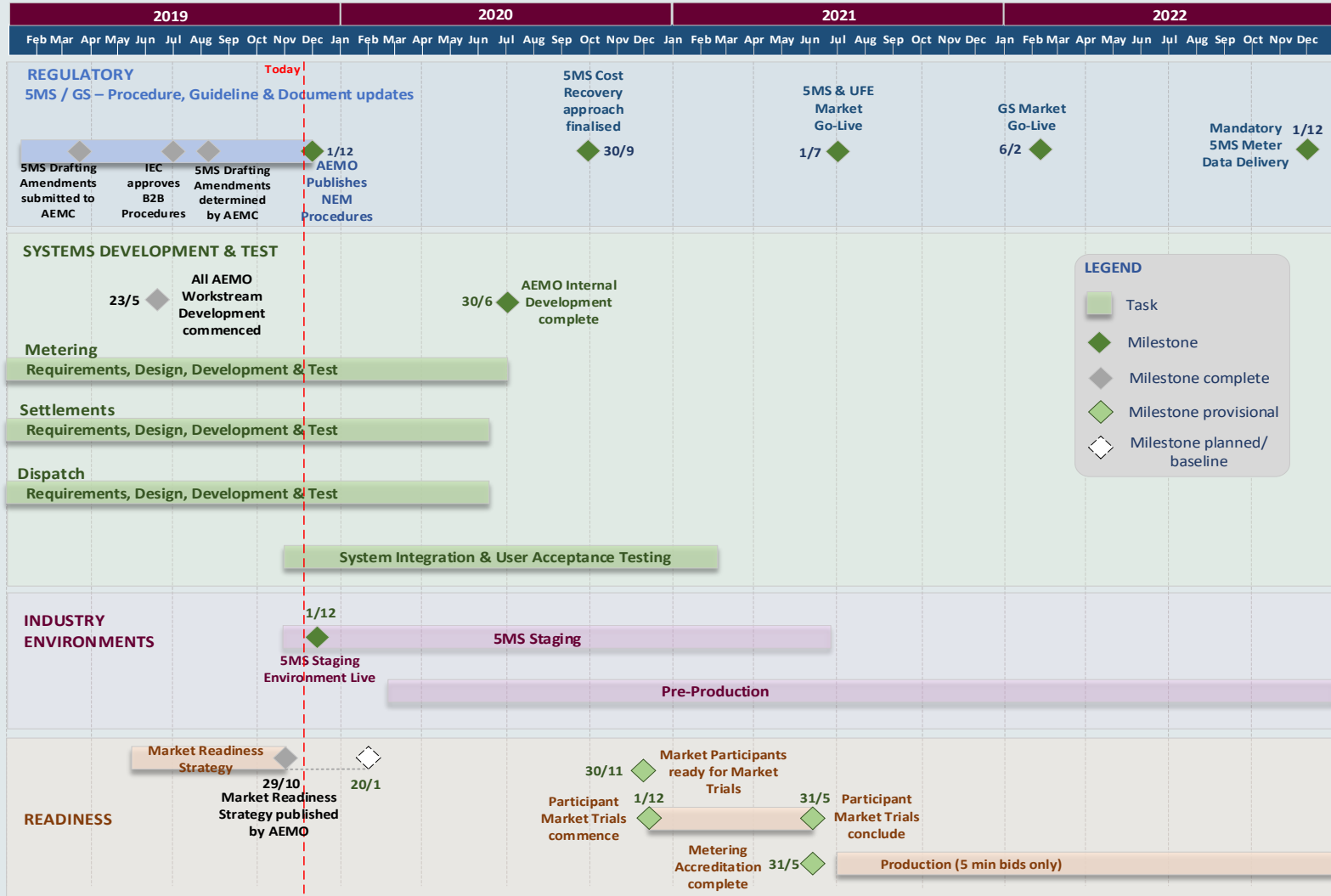
Item	Topic	Action required	Responsible	Status
16.3.1	Program Update	AEMO to provide a report of Readiness results, with the results across business that reported across Round 1 and 2, to the Readiness Working Group.	AEMO	Completed at RWG#4 (24 Sep)
16.4.1	Systems Update	AEMO to provide WebUI screen slide pack by 8 November 2019.	AEMO	Completed
16.5.1	Readiness Working Group Update	AEMO to facilitate further discussion at the Transition Focus Group, regarding the agreement process for meter reads to communicate and periods less than the trading interval prior to 1 July 2021.	AEMO	Discussion took place at TFG 06/11. Agreed position has been incorporated into the Metering Transition Plan which will be subject to consultation.
16.6.1	Change Requests	AEMO to provide an update on CR19 to the Reconciliation Focus Group and seek for the Reconciliation Focus Group to provide information on the potential benefits on adopting CR19 and setting a timeframe for response from the PCF/SWG.	AEMO	Update to be provided in agenda item 6 PCF#17.
16.10.1	Future Engagement Structure and Approach	AEMO to back to the MDPWG, B2BWG and SMWG to seek clarification as to the process that will be followed where procedures that relate to and may impact the 5MS Program.	AEMO	Update to this PCF#17
16.10.2	Future Engagement Structure and Approach	Participants will also monitor relevant matters and provide updates to the PCF.	AEMO	Closed

# Program Update

Graeme Windley

# 5MS & GS Program Timeline

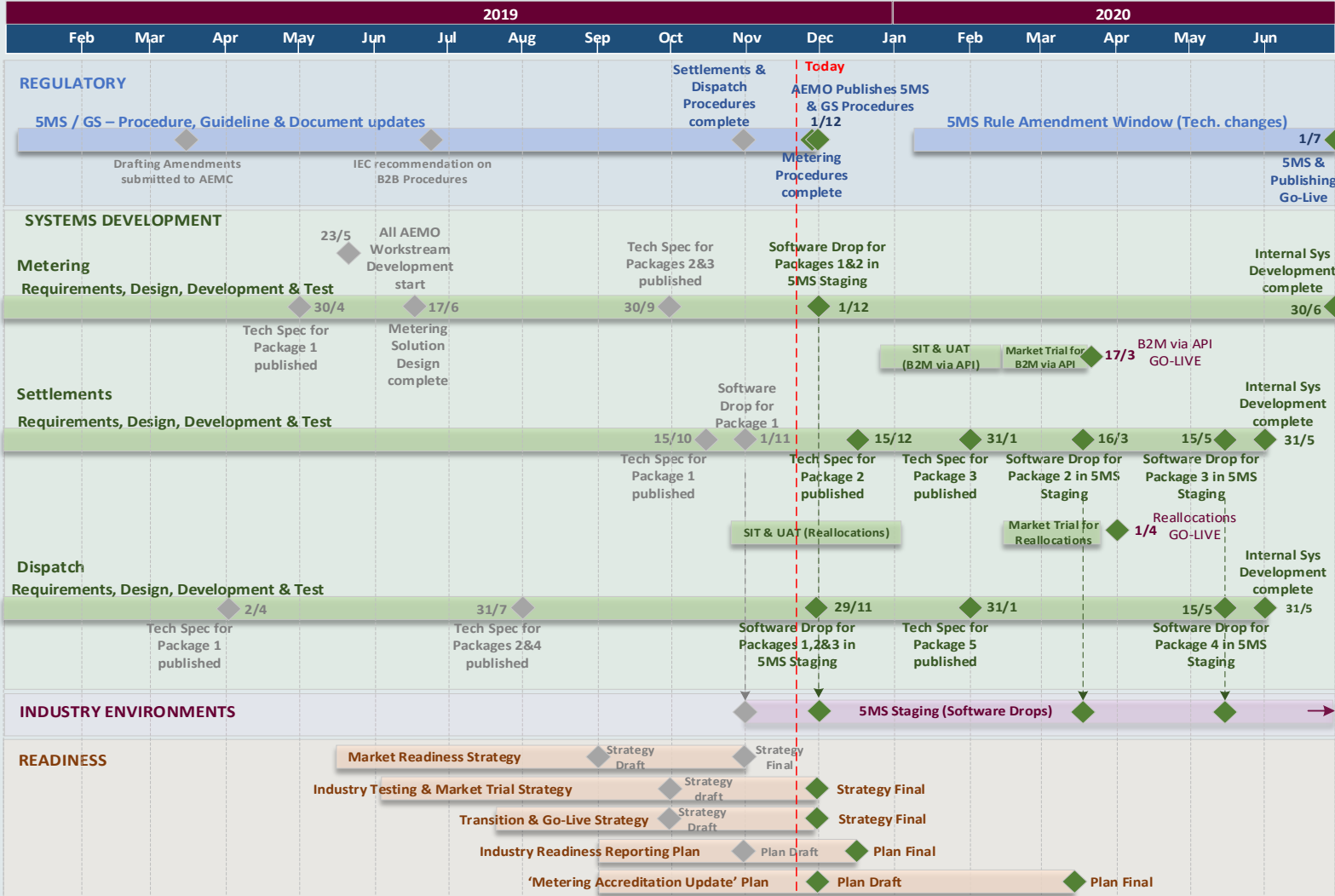
Current as at 29-11-2019



# 5MS Program Timeline (to July '20)

## Level 1 and External Level 2 Milestones

Current as at 29-11-2019

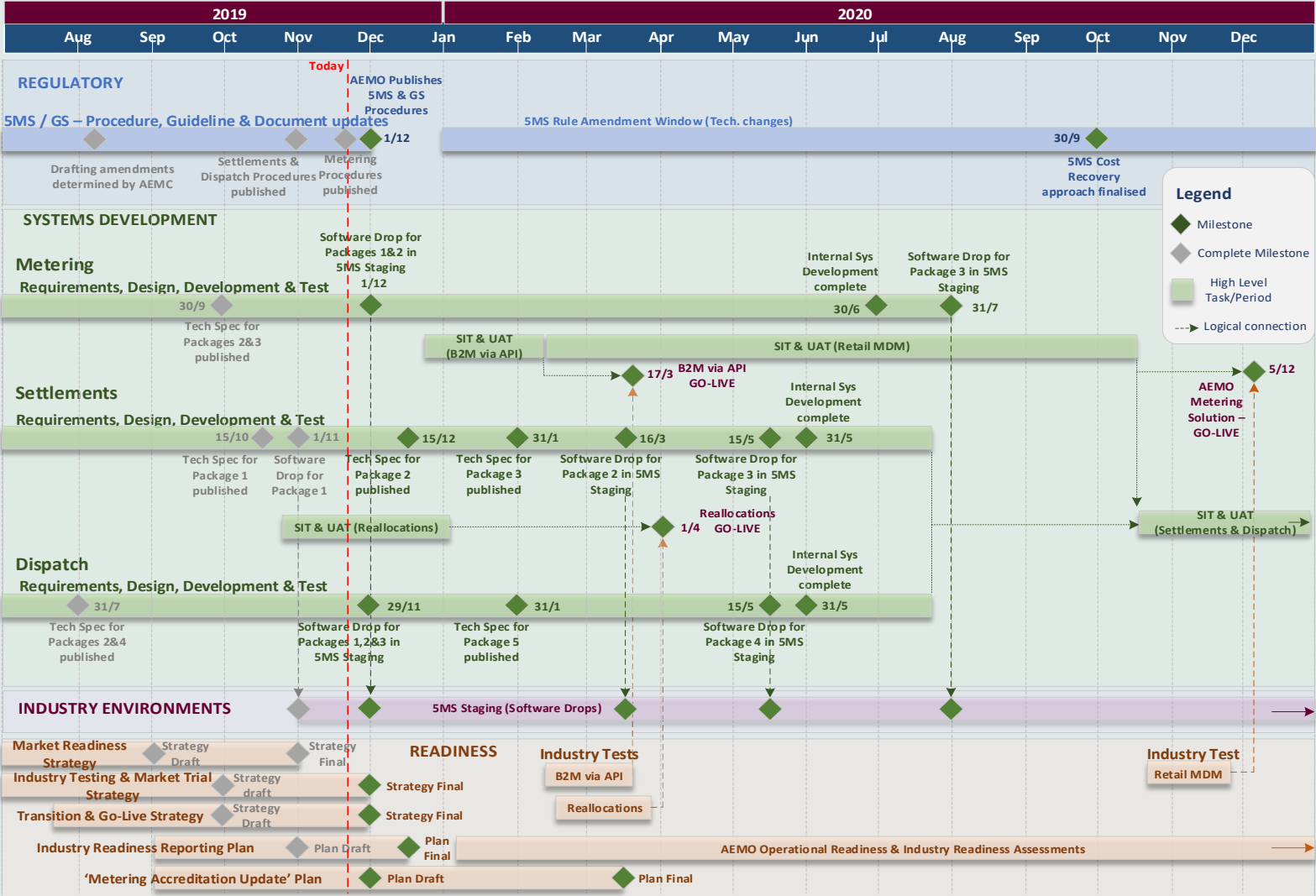




# 5MS Program Timeline (to Dec '20)

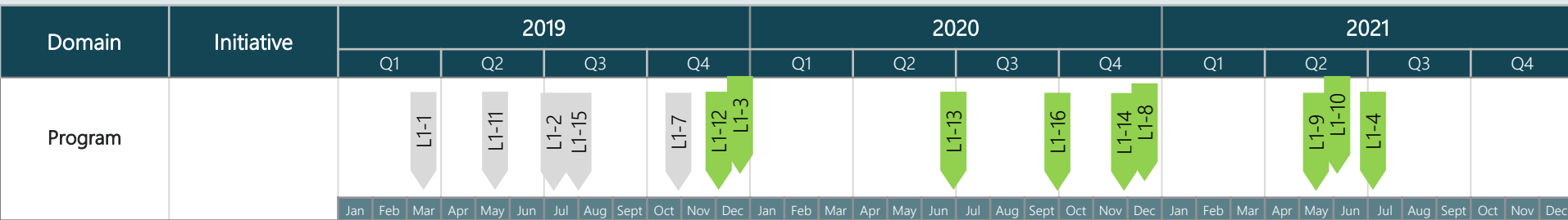
## Level 1 and External Level 2 Milestones Current as at 29-11-2019

- Completed (prior to 1 Jul '19)**
- Drafting amendments submitted to AEMC (15/3/19)
  - All AEMO workstream development commenced (23/5/19)
  - IEC approves B2B Procedures (1/7/19)
  - Metering – Tech Spec for package 1 published (30/4/19)
  - Metering – Solution Design complete (17/6/19)
  - Dispatch – Tech Specs for package 1 published (2/4/19)



# Level 1 Milestones - Status Report

Current as at 29-11-2019



## 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	29-Oct-2019	Complete
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	

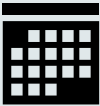
-  Milestone complete
-  Milestone on track
-  Milestone at risk
-  Milestone not achieved

# Level 2 Milestones Exceptions (External) Current as at 29-11-2019

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

ID	Stream	Milestone	Planned Date	Expected Date	%	Comments
New L2-M14	Metering	B2M via API Go Live	17-Mar-20	17-Mar-20	20%	AEMO has experienced delays establishing the MarketNet link to AEMOs new API Gateway in conjunction with the legacy SMP e-Hub API Gateway. The 17 <sup>th</sup> of March remains an achievable target however we are highlighting this is currently at risk. Request participants impacted by a delay to this date contact the 5MS program via the mailbox to set up a discussion.

# Program update and current activities



## *AEMO program*

- Overall green, development & system testing progresses across all workstreams, targeted System Integration Testing commencing.
- Action plan to respond to increased volume of participant requests largely successful.
- Staffing for Christmas break confirmed, with testing continuing ahead of upcoming milestones. Support Hub available over the break re 5MS Staging Environment issues.

## *AEMO program (cont.)*

- Independent health check of AEMO 5MS Program underway



## *Procedures*

- All Procedures works have been completed as per L1-3.
- Any procedural changes will go through the BAU channels.



## *Systems*

- 5MS Staging Environment opened for participants on 1-Nov-19; dispatch, bids and offers functionality released 29-Nov-19; MDFF functionality on track for release 2-Dec-19.
- Tech Specs delivered for Prudentials (31-Oct-19) and Guide to Electricity Reallocations (1-Oct-19).
- Internal retail, dispatch and settlements workstreams systems development on track to meet 30-Jun-20 development completion date.



## *Readiness*

- Finalised Transition and Go-Live and Industry Testing and Market Trial strategies to be released 29-Nov-19.
- Draft Metering Transition Plan and Draft MSP Accreditation Update Plan to be released for consultation on 29-Nov-19.
- Feedback received for Industry Readiness Reporting Plan, with finalised plan due for release 13-Dec-19.
- Initial Contingency Planning Workshop conducted 28-Nov-19.

# Procedures workstream status

Current as at 29-11-2019

5 MINUTE SETTLEMENT PROCEDURES TRACKING	Pre-consultation		Consultation			CONTENT Package content
	HLIA	PWG Engagement	TIMING			
			Consultation paper	Draft documents	Final documents	
<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	Nov-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

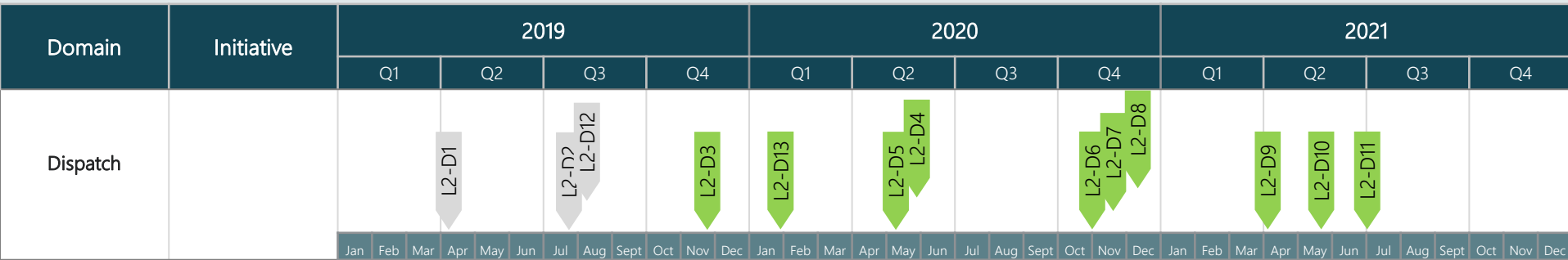
Graeme Windley

# 5MS Staging Environment Update

- Dispatch
  - 29-Nov-19 Target Functionality: Submit 5-Min Bids, via new web interface, API and/or FTP; Bidding Data Model changes as per technical specifications released July 2019; Case Loaders for PASA, Dispatch, 5-minute Pre-Dispatch & 30-minute Pre-Dispatch data
  - Status: Functionality is now available in 5MS Staging Environment
- Retail
  - 01-Dec-19 Target Functionality: Test connection to Staging; Test MDFF validations; Validate data exchange.
  - Status: Functionality is on track to be available in 5MS Staging Environment by 01-Dec-19.
- Settlements
  - 01-Nov-19 Target Functionality: Reallocations at both 30 and 5-min intervals; new Web UI; Calendar selection, alerts
  - Status: Solution is available in 5MS Staging Environment. A few participants have reported end-to-end reallocations submissions. No defects raised by industry participants
- Please feedback to the Support Hub any issues with connectivity / defects found

# Level 2 Milestones - Dispatch

Current as at 29-11-2019



## 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	

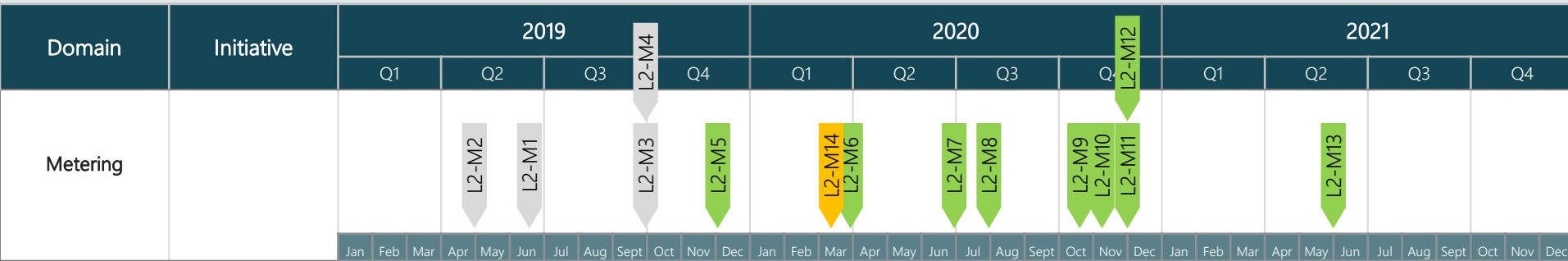
- Milestone complete
- Milestone on track
- Milestone at risk
- Milestone not achieved

\* Data available in Tech Specs now and in 5MS Staging from 29-Nov-2019



# Level 2 Milestones – Metering

Current as at 29-11-2019

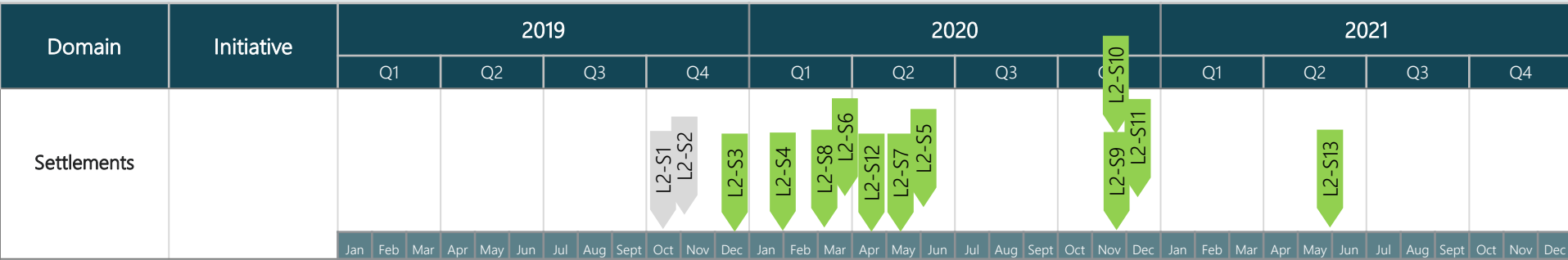


-  Milestone complete
-  Milestone on track
-  Milestone at risk
-  Milestone not achieved

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-M14	B2M via API Go-Live	17-Mar-2019	17-Mar-2019	At Risk
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]	





# Level 2 Milestones – Settlements

Current as at 29-11-2019



## Key Milestones (Program)

ID	Milestone	Target Date	Expected Date	Status
L2-S1	Final technical specifications for Package 1 published by AEMO	15-Oct-2019	15-Oct-2019	Complete
L2-S2	Software drop for Package 1	01-Nov-2019	01-Nov-2019	Complete
L2-S3	Final technical specifications for Package 2 published by AEMO	15-Dec-2019	15-Dec-2019	On track
L2-S4	Final technical specifications for Package 3 published by AEMO	31-Jan-2020	31-Jan-2020	On track
L2-S8	Market Trials for reallocations	13-Mar-2020	[13-Mar-2020]	
L2-S6	Software drop for Package 2 in 5MS Staging Environment	16-Mar-2020	16-Mar-2020	
L2-S12	Reallocations go Live	01-Apr-2020	[01-Apr-2020]	
L2-S7	Software drop for Package 3 in 5MS Staging Environment	15-May-2020	15-May-2020	
L2-S5	Development completed (internal)	31-May-2020	31-May-2020	
L2-S9	UAT completed (internal)	30-Nov-2020	30-Nov-2020	
L2-S10	Market Trial preparation completed by participants	30-Nov-2020	[30-Nov-2020]	
L2-S11	Market Trial preparation completed by AEMO	30-Nov-2020	[30-Nov-2020]	
L2-S13	Market Trials conclude	31-May-2021	[31-May-2021]	

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

# SWG #16 Update

## Functionality in Staging for Dispatch and Retail (metering)

- Walkthrough of the functionality that is released into Staging for Nov & Dec for Bidding service and verification (Dispatch) & MDFF meter reads (Retail).

## aseXML schema changes

- New field will be introduced into MSATS: TNI2. AEMO & LNSP responsible for populating this field; New reporting types to be added; 'x of y' messages to be introduced with RM reports.
- SWG Feedback: none received via SWG, or via 5MS inbox.
- The 5MS team is working with AEMO Architecture and Customer Switching project to consolidate all aseXML schema changes into a proposal/design which will be presented to the ASWG for approval in Jan 2020.

## N quality flag removal

- Discussion held; no objections to the removal of the flag both in the SWG or via other communication route.
- SWG Feedback: none received via SWG, an approval received via 5MS inbox.
- Any required procedure changes will be raised as part of BAU procedure change process. Timing is to be determined.

## Future agenda topics

- A call was made for Participants to suggest agenda topics they'd like to have discussed. None have been received yet.

# Systems Workstream – Dispatch and Operations

Current as at 29-11-2019

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	16-Dec-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	-	5-May-20	Nov-20	May-21
Negative Residue Management	Sep-18	-	Feb-19	Dec-18	Jun-19	31-Jul-19	-	5-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	Nov-19	Nov-20	May-21

Includes Settlements Data Model. Dispatch Data Tables available from Staging Go Live 29-Nov-19

Delay to Bidding Web UI, new date 16-Dec-19

# Systems Workstream - Metering

Current as at 29-11-2019

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	-	31-Jul-20	Sep-20	Nov-20

AEMO has experienced delays establishing the MarketNet link to AEMOs new API Gateway in conjunction with the legacy SMP e-Hub API Gateway. Please contact the 5MS mailbox with further concerns.

# Systems Workstream - Settlements

Current as at 29-11-2019

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

# Readiness Papers - Timelines

Item	RWG/FG engagement	Draft paper	Consultation	Comments due	Final paper
<b>Market readiness strategy</b>	Jun-19	30-Aug	3 weeks	20-Sep	30-Oct
<b>Industry test and market trial strategy</b>	Jul-19	30-Sep	4 weeks	28-Oct	29-Nov
<b>Transition and go-live strategy</b>	Jul-19	30-Sep	4 weeks	28-Oct	29-Nov
<b>Metering transition plan</b>	Aug-19 onwards	29-Nov	3 weeks	20-Dec	7-Feb-20
<b>Industry contingency plan</b>	Nov-19	20-Dec	6 weeks	31-Jan-20	13-Mar-20
<b>Industry readiness reporting plan</b>	Sep-19	31-Oct	3 weeks	21-Nov	13-Dec
<b>MSP accreditation update plan</b>	Oct-19	29-Nov	11 weeks	31-Jan-20	13-Mar-20



# Workstream Engagement

- Contingency Planning
  - Workshop #1 28-Nov-19
  - Establish industry contingency scenarios and linkages to Industry risks
  - Key Scenario's agreed, workshop #2 13-Dec-19 to progress trigger points, responses
  - Draft plan to be issued 20-Dec-19
- Readiness Reporting
  - Industry responses received from 12 participants
  - Feedback includes:
    - Greater granularity of reporting and metering criteria
    - Presentation of aggregate data and weighting approach
    - Clarification of participation expectations
- MSP Accreditation Update Plan
  - Issued for consultation 29-Nov-19
  - Aim to align timeframes and scope of MSP accreditation updates to support transition approach
- Industry Test Focus Group
  - Nominations received
  - First meeting scheduled for 12-Dec-19
  - Development of detailed test scenarios, and alignment with test strategy

# Change Request Update

5MS Team Members

# Change Requests Under Consideration

CR#	Title	Objective	Status
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>Feedback requested at Reconciliation workshop 18-Nov.</li> </ul>
CR32	5MPD Price Sensitivities	Consider publishing 5-minute price sensitivities as part of 5-minute Predispach (5MPD)	<ul style="list-style-type: none"> <li>Endorsed by 5MS CAB for Steering Committee approval on 17-Dec.</li> </ul>

# Managing Emerging Procedures Issues

Emily Brodie

# Managing Emerging 5MS/GS Procedures Issues (1)

- Anticipate that procedure changes will emerge as Participants' and AEMO's 5MS/GS implementations and testing ramp-up
- As 5MS/GS procedures workstream in hibernation, approach to managing procedures issues is to:
  - Use AEMO's BAU processes to:
    - consider procedure change requests
    - process these changes where appropriate
  - Communicate AEMO's responses to procedure change requests via 5MS/GS engagement channels in addition to BAU channels
  - 5MS program to track 5MS/GS procedures issues/changes via an action log. For transparency, log will be shared at RWG, SWG, ERCF and B2B meetings.

# Managing Emerging 5MS/GS Procedures Issues (2)

- Benefit of BAU, *especially for metering*, is that AEMO coordinates across all other projects and changes:
  - Consults with the industry e.g. via ERCF and IEC/B2BWG
  - Establishes optimal approach to bundling procedure changes and IT changes
  - Considers timelines, including statutory and project milestones.
- 5MS procedures workstream can be reactivated on an ad hoc basis to respond to *material* procedures issues if need be

# BAU Channels for Procedures Issues

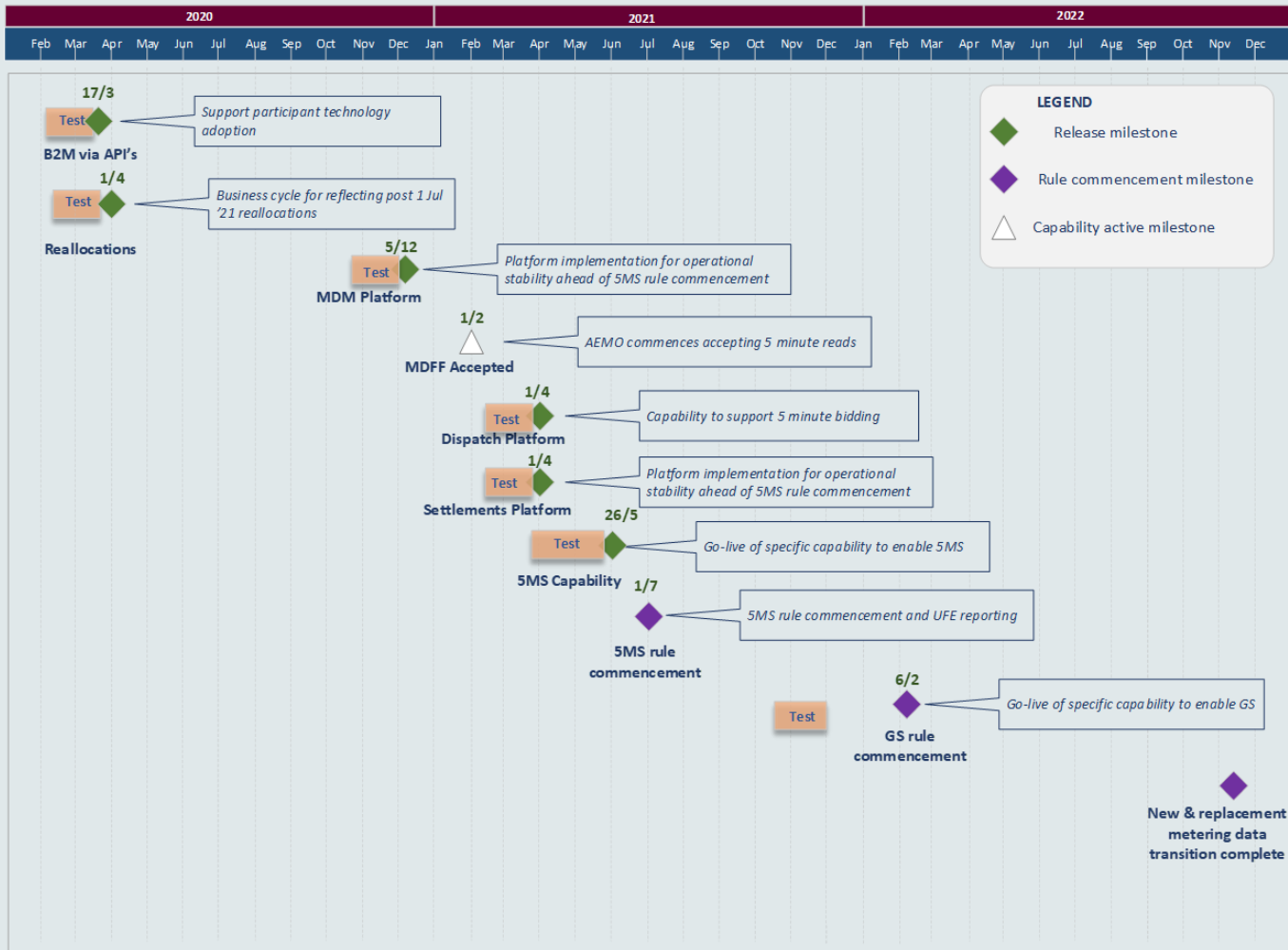
Area	Channel
Metering / metering data / standing data	<b>B2M</b> <u><a href="#">Electricity Retail Consultative Forum</a></u> (ERCF) <ul style="list-style-type: none"><li>Follow <u><a href="#">change process</a></u></li></ul> <b>B2B</b> <u><a href="#">Information Exchange Committee</a></u> <ul style="list-style-type: none"><li>Follow <u><a href="#">change process</a></u></li></ul>
Settlements	email: <u><a href="mailto:settlements@aemo.com.au">settlements@aemo.com.au</a></u>
Prudentials	email: <u><a href="mailto:prudentials@aemo.com.au">prudentials@aemo.com.au</a></u>
Dispatch	<u><a href="#">NEM Wholesale Consultative Forum</a></u> <ul style="list-style-type: none"><li>email: <u><a href="mailto:nemwcf@aemo.com.au">nemwcf@aemo.com.au</a></u></li></ul>

# Industry Readiness Strategies Update

Greg Minney



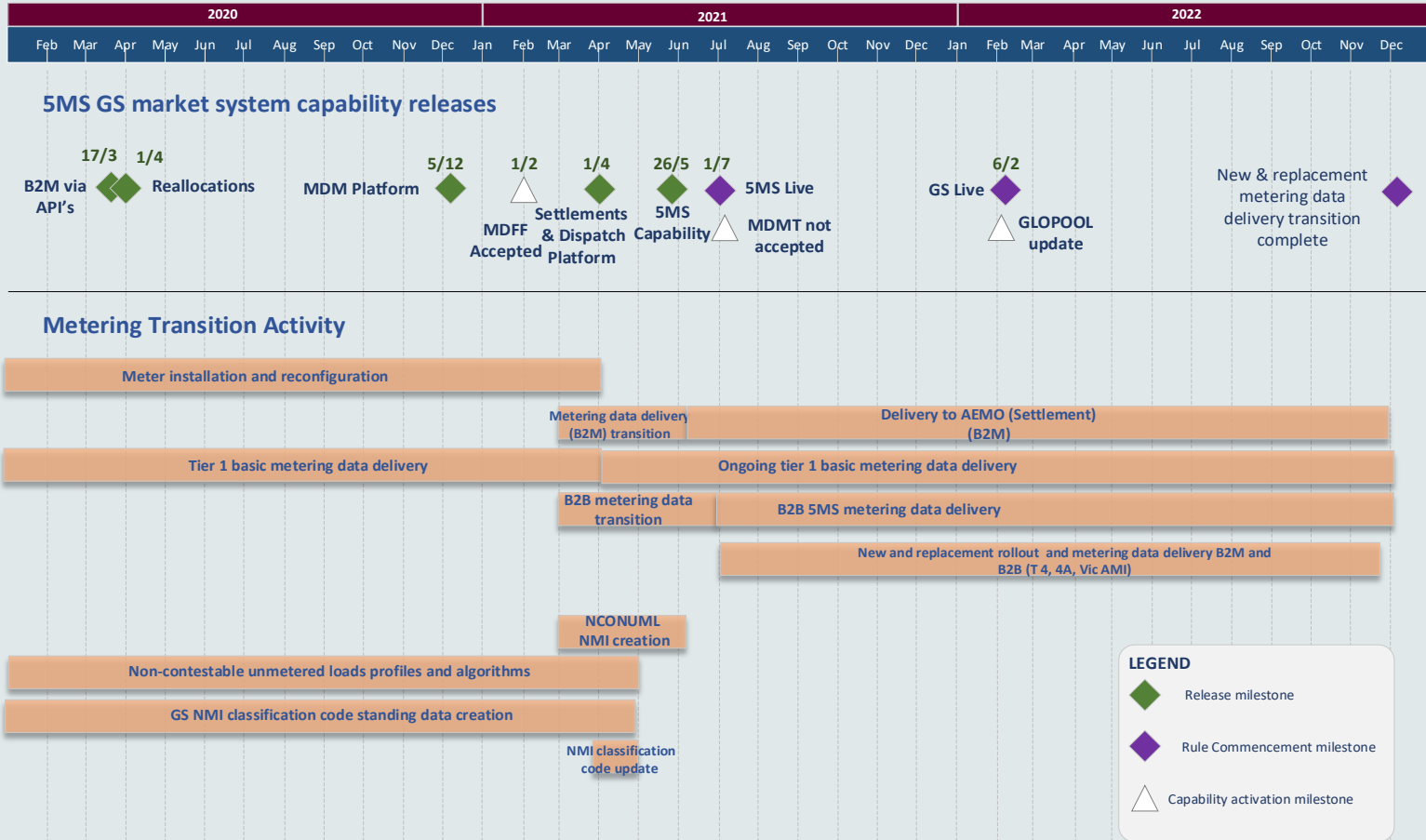
# Transition and Go Live Approach



# Transition Strategy

- Strategy finalised 29-Nov-19
- Confirms staged approach to deployment
- Release dates, Industry/Market trial dates will be reflected as Level 2 milestones
- Key updates from draft:
  - B2B metering flows incorporated into scope
  - Metering data delivery timeframes
  - Expected impact on participant at deployment
  - Updates to Contingency management approach

# Metering Transition - Draft



# Metering Transition Plan

- Draft circulated 29-Nov-19
- The MTP “Categories” are:
  - Meter installation and reconfiguration
  - Metering data delivery (B2M & B2B)
  - MSATS standing data creation and maintenance
  - MSP accreditation updates
- Responsibilities and expected timeframes for metering activities to support transition to 5MS and GS
- Covers requirements for:
  - 5MS rule commencement
  - GS updates to support UFE calculation and rule commencement
  - New & replacement rollout completion
- Alignment with participant capability and obligation to consume 5 minute metering data
- Comments due 20-Dec-19

# Cost Recovery Consultation Update

Peter Carruthers

# Declared NEM project consultation

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

- AEMO determined that the 5MS Program meets the criteria in the NER to be declared NEM project.
- Next steps - AEMO to consult on:
  - The actual fee structure for recovery of the costs of the project including start date
  - The period of recovery
  - The Registered Participants that will be charged the fees
- Timing will be confirmed in early 2020.

# General Questions

Peter Carruthers

# Forward Meeting Plan

Peter Carruthers



# General Information Session

- Purpose: to provide high-level information on the 5MS and GS Program to stakeholders that are not involved in the Working Groups
- Originally scheduled for 27-Nov-19
- Due to availability of staff, it was necessary to postpone
- Planned for third week of January 2020
- Draft agenda:
  - Welcome and Introductions
  - 5MS and Global Settlement Overview
  - 5MS Program Update
  - Procedures Update
  - Readiness Approach
  - 5MS Staging Environment
  - 5MS Web User Interface
  - Industry Readiness Reporting
  - Forward Engagement

# Forward Agenda

## February Agenda

- Industry Readiness Reporting
- Industry testing plans
- Cost Recovery consultation update

Next meeting to be scheduled for 4 February 2020

# Upcoming Meetings

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

2019

## 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
5	6	7	8	9	10	11

2020

## JANUARY

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

## FEBRUARY

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

## MARCH

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
5	6	7	8	9	10	11

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

Focus Groups	
Dispatch	Metering
Settlements	Transition
Contingency	Reconciliation

Other
Information Sessions

National Public Holiday
State Public Holiday*

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

Current as at 29-11-2019



# Appendix 1

## Milestone Descriptions

# Level One Milestones – Description

Current as at 29-11-2019

## 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	29-Oct-2019	Complete
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 29-11-2019

## 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	Firm	
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	Firm	
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]	Provisional	
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]	Provisional	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]	Provisional	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]	Provisional	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]	Provisional	Content and timing of Market Trials TBD

# Level Two Milestones – Dispatch (External)

Current as at 29-11-2019

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]	Provisional	
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 29-11-2019

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	Complete	
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