



# 5MS & GS Systems Working Group #15

21 October 2019

# Agenda

No	Time (AEST)	Agenda item	Presenter
1	10:00 – 10:05	Welcome, introduction and apologies	Hamish McNeish
2	10:05 – 10:15	<a href="#">Minutes and actions from last meeting</a>	Hamish McNeish
3	10:15 – 10:20	<a href="#">Retail Stream update</a>	Jim Agelopoulos
4	10:20 – 10:40	<a href="#">Updated Metering Documents</a>	Simon Tu
5	10:40 – 10:45	<a href="#">‘N’ Quality Flag</a>	Simon Tu
6	10:45 – 10:50	<a href="#">Settlements Stream update</a>	Mark Hillaby
7	10:50 – 10:55	<a href="#">Dispatch Stream update</a>	Ian Devaney
8	10:55 – 11:30	<a href="#">Bidding Web UI presentation</a>	Madhuri Malhotra
Break 11:30 – 11:40			
9	11:40 – 12:00	<a href="#">Staging Environment</a>	Hamish McNeish
10	12:00 – 12:10	<a href="#">Readiness Working Group Update</a>	Greg Minney
11	12:20 – 12:30	<a href="#">Vendor Engagement Session (verbal)</a>	Monica Morona
Other business			
12	12:30 – 12:35	<a href="#">Forward meeting plan</a>	Hamish McNeish
13	12:35 – 12:45	General questions	Hamish McNeish

# Open actions

Item	Action required	Responsible	Action Update	By
1.6	AEMO to provide assessment on bandwidth/networking impacts.	AEMO	<b>Pending</b> Networking impact analysis is ongoing and an update to SWG will be provided no later than November 2019	November 2019
12.12.1	AEMO to advise SWG of first Testing Focus Group when details available.	AEMO	<b>Ongoing</b> Details will be provided when TFG activities commence.	Ongoing
12.13.1	AEMO to present predictions to SWG on volume of meters capturing 5-minute data by the end of 2022.	AEMO	<b>Pending</b> An update will be provided during the meeting	17 September 2019
13.10.1	AEMO to confirm if an additional VPN is required to connect to the Staging Environment.	AEMO	<b>Pending</b> An update will be provided during the meeting	November 2019
13.12.3	AEMO will confirm that the HLIA and Technical Specification are consistent in regard to the fixed load fields.	AEMO	<b>Pending</b> An update will be provided during the meeting	21 October 2019

# Open actions

Item	Action required	Responsible	Action Update	By
14.3.1	Participants to provide feedback on the approach, including reasons for not providing support	SWG Participants	Ongoing	1 November 2019
14.5.1	Participants to provide feedback on the proposed CR19.	SWG Participants	Ongoing	1 November 2019
14.7.1	AEMO to request feedback on the Settlements and Billing Technical Specification to the SWG.	AEMO  SWG Participants	Ongoing	1 November 2019
14.7.2	AEMO to confirm approach to including Interval Length field.	AEMO	Ongoing	25 October 2019
14.7.3	Provide AEMO with any feedback on the engagement structure and potential improvements.	SWG Participants	Ongoing	23 October 2019

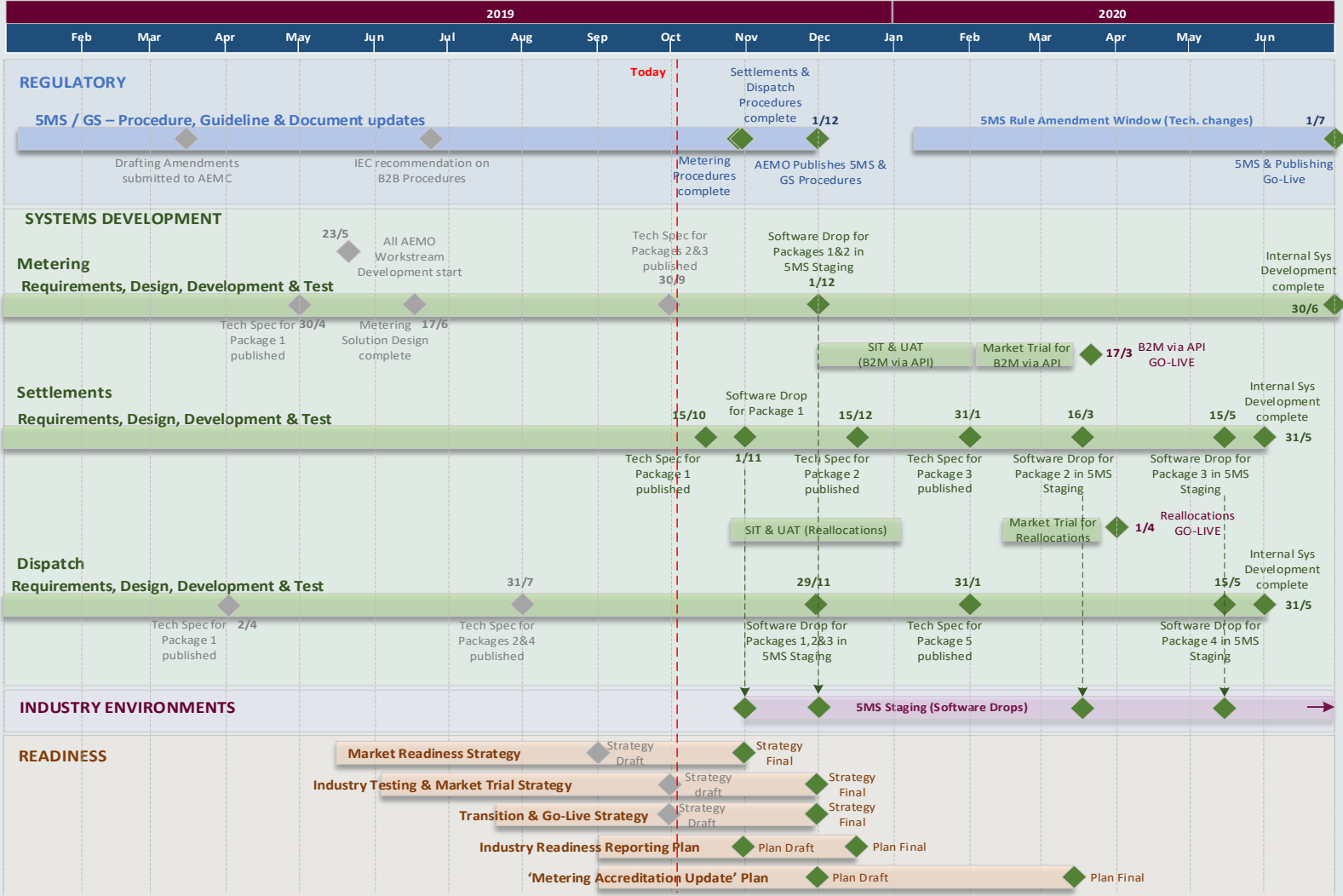
# Level 1 and 2 Milestones – timeline

Hamish McNeish

# 5MS & GS Program timeline to July 20

## Level 1 and External Level 2 Milestones

Current as at 30 08 2019



# Retail Stream update

Jim Agelopoulos

# Systems Workstream - Metering

Current as at 30-09-2019

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
<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 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 (User Guide) • MSATS Release Schedule & 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	31-Oct-19	N/A	17-Feb-20	17-Mar-20
MSATS Browser (LVI) changes • MSATS Release Schedule & Technical Specification	Aug-18	-	May-19	9-May-19	28-Jun-19	30-Sep-19	31-Jul	31-Jul-20	Sep-20	Nov-20
MSATS Report changes • MSATS Procedures MDM Procedure • MDM File Format and Load Process (User Guide) • MSATS Release Schedule & Technical Specification General Process & Document Clean-up	Oct-18	-	Apr-19	Apr-19	28-Jun-19	30-Sep-19	-	Jul-20	Sep-20	Nov-20

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

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



# Systems Workstream - Metering

Revised as at 16-10-2019

5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
<b>METERING</b>										
<b>PACKAGE 1 - Metering Data &amp; Metrology</b>										
<b>MDFF</b> • 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>										
<b>Transition</b> • MSATS <del>Release Schedule</del> & Technical Specification	Aug-18	Sep-18	Aug-18	Nov-18	31-May-19	30-Sep-19	-	-	-	-
<b>Meter Data - MDFF and MDMF</b> • MDM File Format and Load Process (User Guide) • MSATS <del>Release Schedule</del> & 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>										
<b>B2M via API</b> • 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
<b>MSATS Browser (LVI) changes</b> • MSATS <del>Release Schedule</del> & 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
<b>MSATS Report changes</b> • MSATS Procedures MDM Procedure • MDM File Format and Load Process (User Guide) • MSATS <del>Release Schedule</del> & Technical Specification	Oct-18	-	Apr-19	Apr-19	28-Jun-19	30-Sep-19	-	31-Jul-20	Sep-20	Nov-20

# Systems Workstream - Metering

Current as at 30-08-2019

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

# Updated Metering Documents and 'N' Quality Flag

Simon Tu

# Updated Metering Documents

- [MDM File Format and Load Process](#)
- [MSATS 46.96 Technical Specification](#)
- [Meter Data Validation Matrix](#)

# MSATS 46.96 Technical Specification

<https://www.aemo.com.au/-/media/Files/Electricity/NEM/IT-Systems-and-Change/2019/MSATS-Release-Schedule-and-Technical-Specification---5MS---Meter-Data.pdf>

## Changes of Note:

- Removal of the proposed timeline until the dates are confirmed by the Readiness Working Group (RWG).
- Pg. 4-8: Additional Transition information.
- Pg. 15 & Appendix: Clarification of updated logic for RM11 and worked examples of how RM11/37, RM38 and RM39 can be used to identify missing data.
- Pg. 28: Details changes to MDMT ReportResponse to send all data and how Participants can identify when all files have been received.
- Pg. 45-51: Addition of details related to the finalised consultation on Global Settlements:
  - New NMI classification codes,
  - Distribution Network connection points to have the Local Retailer of GLOPOOL,
  - Information about Unaccounted for Energy (UFE).
- Pg. 92-94: Addition of User Rights Access details for APIs and MSATS Web Portal pages.

# MDM File Format and Load Process

<https://www.aemo.com.au/-/media/Files/Electricity/NEM/5MS/Systems-Workstream/2019/MDM-File-Format-and-Load-Process.pdf>

Changes of Note:

- Pg. 1: *"The UserID identified in the <SecurityContext> element in the XML message must have the permission to do batch transactions contained in the XML message (e.g. allocation of a right allowing submission of MDM Metering Data)."* <SecurityContext> **must** be provided for MTRD MeterDataNotification transactions intended for market settlements. This is an optional aseXML element for B2B MTRD for B2B Retail, Network, and other Market Participant activities.
- Pg. 14: Correction related to the available of the 'N' quality flag for the MDMT Metering Data. This flag is not support for the transaction type under the Metrology Procedure: Part B.
- Pg. 33 : *"The UpdateDateTime for the new data record must be greater the UpdateDateTime of the existing record in MDM"* Where a new read has UpdateDateTime (MDP version date) equal to an existing read the metering data will be rejected

# Meter Data Validation Matrix

<https://www.aemo.com.au/-/media/Files/Electricity/NEM/5MS/Systems-Workstream/2019/Meter-Data-Validation-Matrix.xlsx>

## Changes of Note:

- Added new validation to ensure <SecurityContext> is provided in the header for a MTRD or MDMT MeterDataNotification intended for Market Settlements
- Added new validation to ensure <SecurityContext> and basic authorisation user account must match for API submitted MTRD's
- Updated error code for header/message aseXML validations to align with SMP error codes
- Where a new read has UpdateDateTime (MDP version date) equal to an existing read record the
- Undertake validation reject read if the file is MDMF Basic or Interval.
- Removed the validation to support Status Flag of 'N' as this Status flag is not to be supported under MDMF (basic and interval)

# MDFF – ‘N’ Quality Flag removal

- Current:
  - Quality Flag of ‘N’ is only utilised within the interval metering data file (MDFF NEM12) for instances where no metering data exists in the metering data services database for the periods concerned.
  - It is not a valid value for Quality Flag for MDMF.
- Future:
  - ‘N’ Quality Flag will not be allowed for use in MDFF (NEM12).
- Rationale:
  - AEMO believes the provision for ‘N’ quality reads is no longer needed, as MDPs have the requirement to provide substitute data instead, and have confirmed with a number of MDPs that it can be removed.
  - Consistency with current AEMO substitution process
- Next Steps:
  - Updates to various Procedures/documents required (Metrology Part B, MDFF Spec, MDM File Format & Upload Process, Validation Matrix, MSATS Tech Spec)



# Settlements Stream update

Mark Hillaby

# Systems Workstream - Settlements

Current as at 16 Oct 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	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
<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									

# Level 2 Milestones – Settlements

Current as at 30-08-2019

## 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	On Track	
L2-S2	Software drop for Package 1	Software deployed into the 5MS Staging environment for Reallocations.	01-Nov-2019	01-Nov-2019	On Track	
L2-S3	Final technical specifications for Package 2 published by AEMO	Technical Specification for changes to Settlements and Billing as a result of 5MS and GS available to Participants.	15-Dec-2019	15-Dec-2019	On Track	
L2-S4	Final technical specifications for Package 3 published by AEMO	Technical Specification for changes to Prudentials as a result of 5MS and GS available to Participants.	31-Jan-2020	31-Jan-2020	On Track	
L2-S5	Development completed (internal)	All AEMO internal UAT has completed for Settlements stream	31-May-2020	31-May-2020	Firm	
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-S7	Software drop for Package 3 in 5MS Staging Environment	Required Market Participants have completed industry testing for the upgraded reallocations web portal.	15-May-2020	15-May-2020	Provisional	Content of Market Trials TBD
L2-S8	Market Trials for reallocations	All AEMO internal development work has completed for Settlements stream	13-Mar-2020	[13-Mar-2020]	Firm	
L2-S9	UAT completed (internal)	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-S10	Market Trial preparation completed by participants	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-S11	Market Trial preparation completed by AEMO	AEMO has deployed reallocation software to the PROD environment and 5-minute reallocation requests are enabled.	30-Nov-2020	[30-Nov-2020]	Provisional	
L2-S12	Reallocations go Live	Software deployed into the 5MS Staging environment for Estimations and Prudentials.	01-Apr-2020	[01-Apr-2020]	Firm	
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

# Dispatch Stream update

Ian Devaney

# Systems Workstream – Dispatch and Operations

Current as at 30-09-2019

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	31-Oct-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	1-Oct-19	29-Nov-19	Nov-20	Mar-21
<b>PACKAGE 4 - Pricing and Miscellaneous</b>										
Trading Price / Price Revision	Aug-18	-	Feb-19	Nov-18	Mar-19	31-Jul-19	-	15-May-20	Nov-20	May-21
Administered Pricing and CPT	Aug-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	Nov-20	May-21
Suspension Pricing	Sep-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	Nov-20	May-21
Negative Residue Management	Sep-18	-	Feb-19	Dec-18	Jun-19	31-Jul-19	-	15-May-20	Nov-20	May-21
RERT	Oct-18	-	-	-	-	-	-	-	-	-
<b>PACKAGE 5 - Full Data Model</b>										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan	16 Mar 20	29-Nov-19	Nov-20	May-21

Web Bidding User Guide delayed

# Systems Workstream – Dispatch and Operations

Revised as at 16 Oct 2019

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

# Level 2 Milestones - Dispatch

Current as at 30-08-2019

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	[Firm]	
L2-D4	Development completed (internal)	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	31-May-2020	31-May-2020	[Firm]	
L2-D5	Software drop for Package 4 in 5MS Staging Environment	All AEMO internal development work has completed for the Dispatch stream	15-May-2020	15-May-2020	[Firm]	
L2-D6	UAT completed (internal)	All AEMO internal UAT has completed for the Dispatch stream	30-Nov-2020	30-Nov-2020	[Firm]	
L2-D7	Market Trial preparation completed by participants	All Market Participants who are required to submit 5MS bids and offers are ready for market trials	30-Nov-2020	[30-Nov 2020]	Provisional	Content and timing of Market Trials TBD
L2-D8	Market Trial preparation completed by AEMO	AEMO has software deployed to pre-production environment and is ready to deliver the agreed Market Trail scenarios	30-Nov-2020	[30-Nov 2020]	Provisional	Content and timing of Market Trials TBD
L2-D9	5-min bidding phased go live begins	Participants can begin submitting 5-min bids to the market	01-Apr-2021	[01-Apr-2021]	Provisional	
L2-D10	Market Trial concludes	Market Trial scenarios related to dispatch have been completed	31-May-2021	[31-May-2021]	Provisional	Content and timing of Market Trials TBD
L2-D11	30-min bidding no longer accepted by AEMO	All Wholesale Market Participants now submitting five-minute bids and offers to AEMO	01-Jul-2021	01-Jul-2021	Mandatory	
L2-D12	Final technical specifications for Package 4 published by AEMO	Technical Specification for changes to Pricing (and Miscellaneous) as a result of 5MS and GS available to Participants.	31-Jul-2019	31-Jul-2019	Complete	
L2-D13	Final technical specifications for Package 5 published by AEMO	Technical Specification for changes to the full data model as a result of 5MS and GS available to Participants.	31-Jan-2020	31-Jan-2020*	[Firm]	

# Bidding Web UI - Presentation

Madhuri Malhotra



Break (10 mins)

# Staging environment

Hamish McNeish

# Reallocations verification in Staging

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

# Access to Staging – Accounts/Certificates

- Access will be available from 1<sup>st</sup> November
- URM accounts have been copied from Preprod
  - AEMO recommends Staging URM account passwords are reset by participants
- Staging FTP accounts must be requested from the AEMO Support Hub
- Staging API access must be requested from the AEMO Support Hub (this includes certificates)

# Access to Staging - Addresses

Staging Available Components from 1 Nov 2019	Address	MarketNet/Internet
AEMO Web Portal Menu Page	<a href="https://menu.5ms.staging.test.marketnet.net.au">https://menu.5ms.staging.test.marketnet.net.au</a>	MarketNet
MSATS Web Portal/URM	<a href="https://msats.5ms.staging.test.marketnet.net.au">https://msats.5ms.staging.test.marketnet.net.au</a>	MarketNet
EMMS Web Portal / Reallocations Web UI	<a href="https://portal.5ms.staging.test.marketnet.net.au">https://portal.5ms.staging.test.marketnet.net.au</a>	MarketNet
API Gateway / external Reallocation APIs access	<a href="https://apis.5ms.staging.test.aemo.com.au">https://apis.5ms.staging.test.aemo.com.au</a>	Internet
API Portal	<a href="https://staging.apiportal.aemo.com.au">https://staging.apiportal.aemo.com.au</a>	Internet
FTP	146.178.211.226 - (MSATS) 146.178.211.26 - (MMS)	MarketNet

# Access to Staging

- AEMO will publish an information pack on the 5MS webpage including these details

# Providing Feedback

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

# Background – 5MS Staging Environment

## What is the Purpose of the 5MS Staging Environment?

- Assist participants building and testing their 5MS-related system changes.
- Provide test environment for participants' 5MS system testing:
  - enable participants to test their interfaces with AEMO, and
  - assist their development by being able to access early versions of screens, reports etc.
- Supports AEMO in assessing product quality before it is released into pre-PROD & Market Trials.

## What Functions will be Available in Staging?

- Releases of various functions are scheduled from November 2019 to July 2020.
- Relevant RM reports:
  - Will be provided in 5MS format throughout Q2 & Q3 2020.
  - Participants can request, via the 5MS Mailbox, reports that they would like to receive as early as possible. AEMO will consider what is feasible with respect to internal development constraints.



# Background – 5MS Staging Environment

## Expectation Setting:

- Staging is *not*
  - A Market Trial environment. There will be no co-ordination of Settlement Runs, Testing, Market Simulations, 7Day Pre-Dispatch, etc.
    - The Market Trial approach and timing will be communicated with the Readiness approach.
  - An end-to-End environment i.e. meter data information submitted won't be reflected in a Settlement Run.
  - A place to deploy functions that are not impacted by 5MS.
- Performance is not guaranteed.
- Defects can be raised, will be triaged and fixes scheduled into AEMO's 5MS development work. There are no SLAs for updating software in Staging.
- Input data (i.e. SCADA, demand forecasts) is likely

## Access & Support

- Participants arrange access to Staging by contacting AEMO Support Hub (5MS resolver group has been established in Service Now).
- We encourage Participants to log defects via the AEMO Support Hub process too.

# Readiness Working Group update

Greg Minney

# Readiness papers - timelines

Item	RWG 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>Industry readiness reporting plan</b>	Sep-19	31-Oct	3 weeks	21-Nov	13-Dec
<b>Metering service provider accreditation update plan</b>	Oct-19	30-Nov	over summer	31-Jan-20	13-Mar-20

\*The "final paper" dates have been endorsed by the PCF as level 2 program milestones and will be reflected in the next PCF meeting pack

# Workstream Update

## Market Readiness Strategy

- 9 responses to consultation request received
- AEMO to consider feedback and issue final deliverable

## Draft Transition and Go Live Strategy, Draft Industry Test and Market Trial Strategy issued for consultation

- Responses due 28 Oct
- Staged transition approach to introduction of 5MS/GS Capability
- Will continue with RWG/TFG input in parallel with consultation period

## Contingency Management approach under development

- Component / system go-live readiness
- Cutover Rollback and cutover planning
- Participant optionality
- Trigger points for implementation to be identified

# Workstream Update

## Transition Focus Group

- TFG #2 Conducted Monday 23<sup>rd</sup>
- Focus on Metering Transition for 5MS and GS
  - Identification of key activities and responsibilities
- Transition timeframes and impacts to be addressed in transition approaches
  - Transitional periods for procedure implementation, prior to 1/7/21
    - Metering activation for 5 minute settlement
    - Metering and standing data requirements for Global Settlement
  - B2B delivery of 5 minute data in period prior to 1/7/21 to ensure capability in place process effectively
- Next session to consider participant responses and confirmation of key metering transition milestones – TFG #3 scheduled for 18<sup>th</sup> Oct

## Industry readiness Reporting

- Reporting approach to focus on participant readiness criteria
- Draft paper to be issued 31 Oct
- Interim Readiness Report #2 issued

# Vendor Engagement Session

Monica Morona

# Forward meeting plan

Hamish McNeish

# Proposed upcoming SWG meeting content

Date	Meeting	Proposed content
Fri, 22 Nov	SWG #16	<ul style="list-style-type: none"><li>• Reallocations testing in Staging update</li><li>• Dispatch Bidding API set in Staging</li><li>• Settlements Package 3 – Prudentials &amp; Estimates Draft Tech Spec run through</li><li>• Dispatch Package 1, 2 &amp; 3 – user guides</li></ul>



# Upcoming information sessions calendar

Meetings and forum dates

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

## OCTOBER

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

## NOVEMBER

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

## DECEMBER

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

Focus Groups
Dispatch
Metering
Settlements
Reconciliation
Transition
Other
Information Sessions

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

National Public Holiday
State Public Holiday

