5MS Systems Working Group

SWG#10 - Monday, 20th May 2019

AEMO Offices:

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Level 2, 20 Bond Street, Sydney

WebEx: http://aemo.webex.com

ACCESS CODE: 574 891 539 PASSWORD: 7Ar79353 (72779353 from phones)

PLEASE NOTE THIS MEETING WILL BE RECORDED FOR THE PREPARING MINUTES

Agenda (Melbourne Time)

NO	TIME	AGENDA ITEM	RESPONSIBLE
Preliminary Matters			
	10:00am - 10:05am	Welcome, introduction and apologies	Mal Borschman (AEMO)
Matters for Noting			
	10:05am – 10:15am	Minutes and Actions from last meeting	Mal Borschman (AEMO)
		Systems Workstream Updates	
	10:15am – 10:25am	Retail Stream update	Jim Agelopoulos (AEMO)
	10:25am – 10:35am	Settlements Stream update	Bhanu Rajan (AEMO)
	10:35am – 10:45am	Dispatch Stream update	Ian Devaney (AEMO)
Matters for Discussion			
	10:45am – 11.00am	SWG Website and Consultation Update	Monica Morona / Hamish McNeish (AEMO)
	11:00am – 11:15am	5MS Staging Environment (formerly sandbox)	Mal Borschman (AEMO)
Other Business			
	11:15am – 11:25am	General questions	Mal Borschman (AEMO)
	11:25am – 11:30am	Forward meeting plan	Mal Borschman (AEMO)

Matters for Noting

Mal Borschman

Open Actions

Item	Topic	Action required	Action Update	Responsible	By
1.6	Participant bandwidth implications	AEMO to provide assessment on bandwidth/networking impacts. Internally there have been some changes to AEMO's proposed network architecture with additional cloud deployments. We are working on sizing the expected network traffic first, once this is completed we will be able to review the bandwidth allocations. Design work continuing – next update moved to end June 2019	Pending	AEMO	June 2019 (previously May-19)
7.6	Request for change password API	AEMO to investigate adding an API to allow resetting of a URM user account password (as used by API's) AEMO is progressing an API for this, outside of the 5MS project. The timeline is still to be confirmed. The proposal is to provide an API allowing a URM account to reset its own password. This work is in now in design	Pending	AEMO	May 2019
9.7.3	Metering – Meter Data Delivery	Participant feedback regarding the proposed approach to revised MSATS error codes	Pending	Participants	May 2019
9.7.5	Metering – Meter Data Delivery	Participant feedback required in regard to RM reports identified to be retired; are any of these reports utilised or business critical.	Pending	Participants	May 2019
9.7.6	Metering – Meter Data Delivery	AEMO to provide clarification for reporting in the cutover period, where the reports go across the 30min and 5min intervals, will reports display data for both 48 and 288 intervals.	Pending	AEMO	May 2019

Actions to Close

| Item	Topic	Action required	Action Update	Responsible	By
9.2.1	Matters for Noting – Item 7.9	AEMO to respond to sub-domain support in its API gateway RESPONSE: When a domain is registered as the end-point, sub-domains are not automatically supported. Participants would need to present a single domain name to AEMO.	Complete	AEMO	May 2019
9.3.1	Retail Stream Update	Pushing out MSATS browser HLIA update to May.	Complete	AEMO	May 2019
9.7.1	Metering – Meter Data Delivery	AEMO to provide link to MSATS error codes	Complete – refer Appendix A	AEMO	May 2019
9.7.2	Metering – Meter Data Delivery	AEMO to provide B2B Procedures link regarding the approach to handling error, event codes, free text explanations, etc., along with examples by 31 May	Complete – refer Appendix A	AEMO	May 2019
9.7.4	Metering – Meter Data Delivery	AEMO to confirm that RM report "pull" function will be maintained	Complete	AEMO	May 2019
9.7.7	Settlements – reconciliation support workshop	AEMO to provide Some information on what the proposed reconciliation support workshop in May will cover .	Complete – email provided	Simon	May 19

System Workstream – Metering

Jim Agelopoulos

System Workstream - Metering

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
METERING										
PACKAGE 1 - Metering Data & Metrology										
MDFF • MDFF Specification NEM12 NEM13 v20	Aug-18	Oct-18	Oct-18	Nov-18	Jan-19	Apr-19	-	Dec-19	Sep-20	Nov-20
PACKAGE 2 - MSATS & SLPs										
Transition • MSATS Release Schedule & Technical Specification	Aug-18	Sep-18	Aug-18	Nov-18	May-19	Jul-19	-	Dec-19	-	-
Meter Data - MDFF and MDMF • MDM File Format and Load Process • MSATS Release Schedule & Technical Specification	Aug-18	Oct-18	Sep-18	Nov-18	May-19	Jul-19	-	Dec-19	Sep-20	Nov-20
B2M via API • Update "Guide to AEMO e-Hub" for B2M APIs (AEMO website content updates)	Oct-18	-	Apr-19	May-19	-	-	Aug-19 TBC	-	Feb-20 TBC	Mar-20 TBC
PACKAGE 3 - Miscellaneous										
MSATS Browser (LVI) changes • MSATS Release Schedule & Technical Specification	Aug-18	-	May-19	May-19	Jun-19 TBC	Aug-19 TBC	TBC	Jul-20 TBC	Sep-20	Nov-20
MSATS Report changes • MSATS Procedures MDM Procedure • MDM File Format and Load Process • MSATS Release Schedule & Technical Specification General Process & Document Clean-up	Oct-18	-	Apr-19	Apr-19	Jun-19 TBC	Aug-19 TBC	-	Jul-20 TBC	Sep-20	Nov-20

Level Two Milestones – Metering (External)

#ID	Level	Workstream	Milestone	Description	Date	Status	Notes
L2-M1	2	Retail	*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	[Firm]	On Track
L2-M2	2	Retail	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-Apr-2019	Complete	
L2-M3	2	Retail	Final Technical Specifications for Packages 2 published by AEMO	Technical Specification for changes to Transition, Meter Data Load – MDFF, B2M via API as a result of 5MS and GS available to participants.	31-Jul-2019	[Firm]	On Track, revised dates published in March SWG
L2-M4	2	Retail	Final Technical Specifications for Package 3 published by AEMO	Technical Specification for changes to the MSATS Browser (LVI) and MSATS Report changes as a result of 5MS and GS available to participants.	31-Aug-2019	[Firm]	On Track, revised dates published in March SWG
L2-M5	2	Retail	Software Drop for Packages 1 & 2 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Meter Data Load – MDFF and B2M via API available for participant testing.	01-Dec-2019	[Firm]	On Track
L2-M6	2	Retail	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	Provisional	Aligned with the MSP Accreditation Plan document
L2-M7	2	Retail	*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	[Firm]	On Track
L2-M8	2	Retail	Software Drop for Package 3 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for MSATS Browser (LVI) and MSATS Report enhancements and available for participant testing.	31-Jul-2020	[Firm]	On Track
L2-M9	2	Retail	*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	Provisional	On Track
L2-M10	2	Retail	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	Provisional	Dependent upon readiness strategy
L2-M11	2	Retail	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	Provisional	Content and timing of Market Trials TBD
L2-M12	2	Retail	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	Provisional	Content and timing of Market Trials TBD
L2-M13	2	Retail	Market Trials conclude	All relevant Market Participants have completed Market Trials to submit five-minute read data.	31-May-2021	Provisional	Content and timing of Market Trials TBD

5MS Participant Timeline – Metering
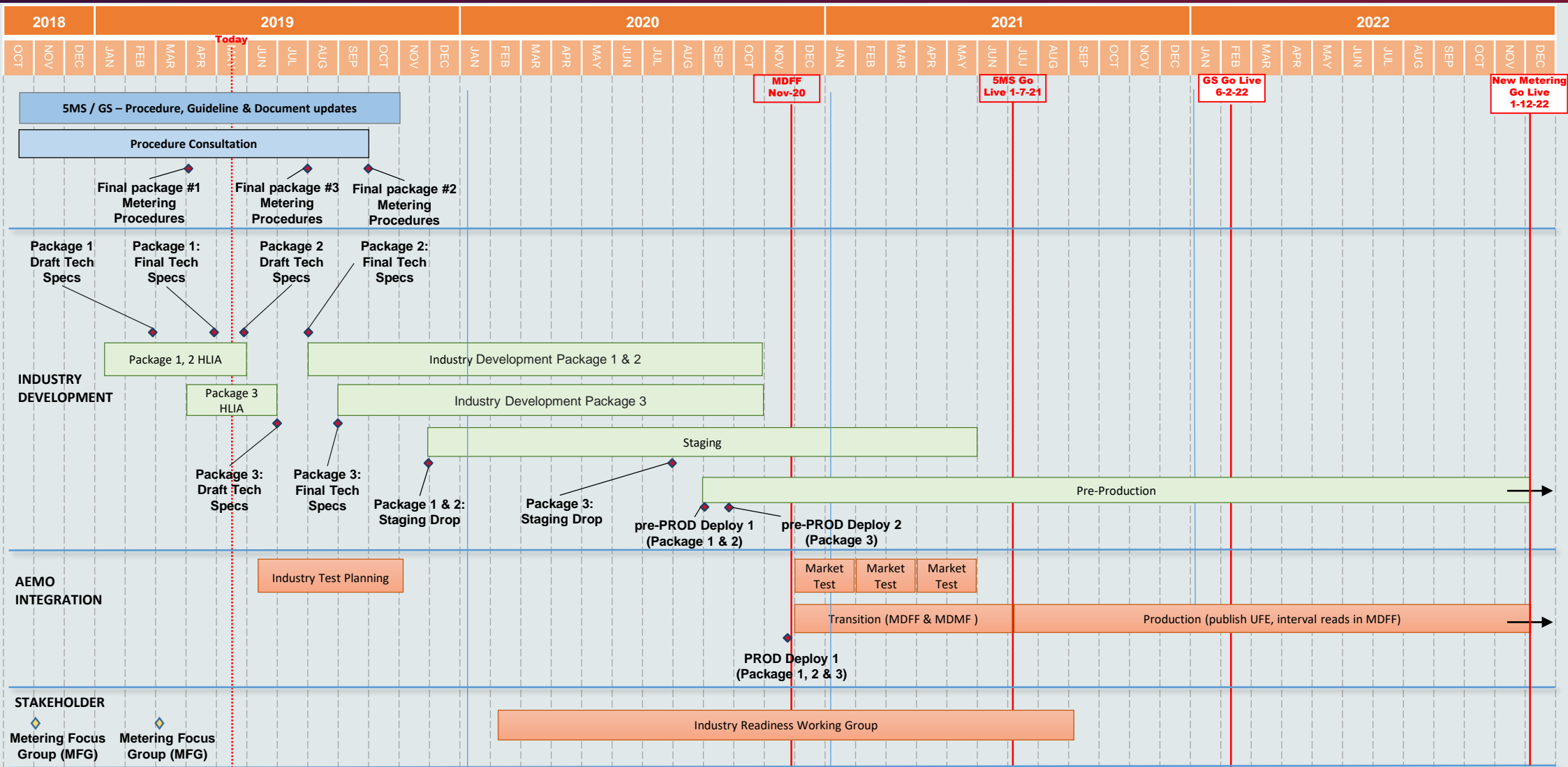
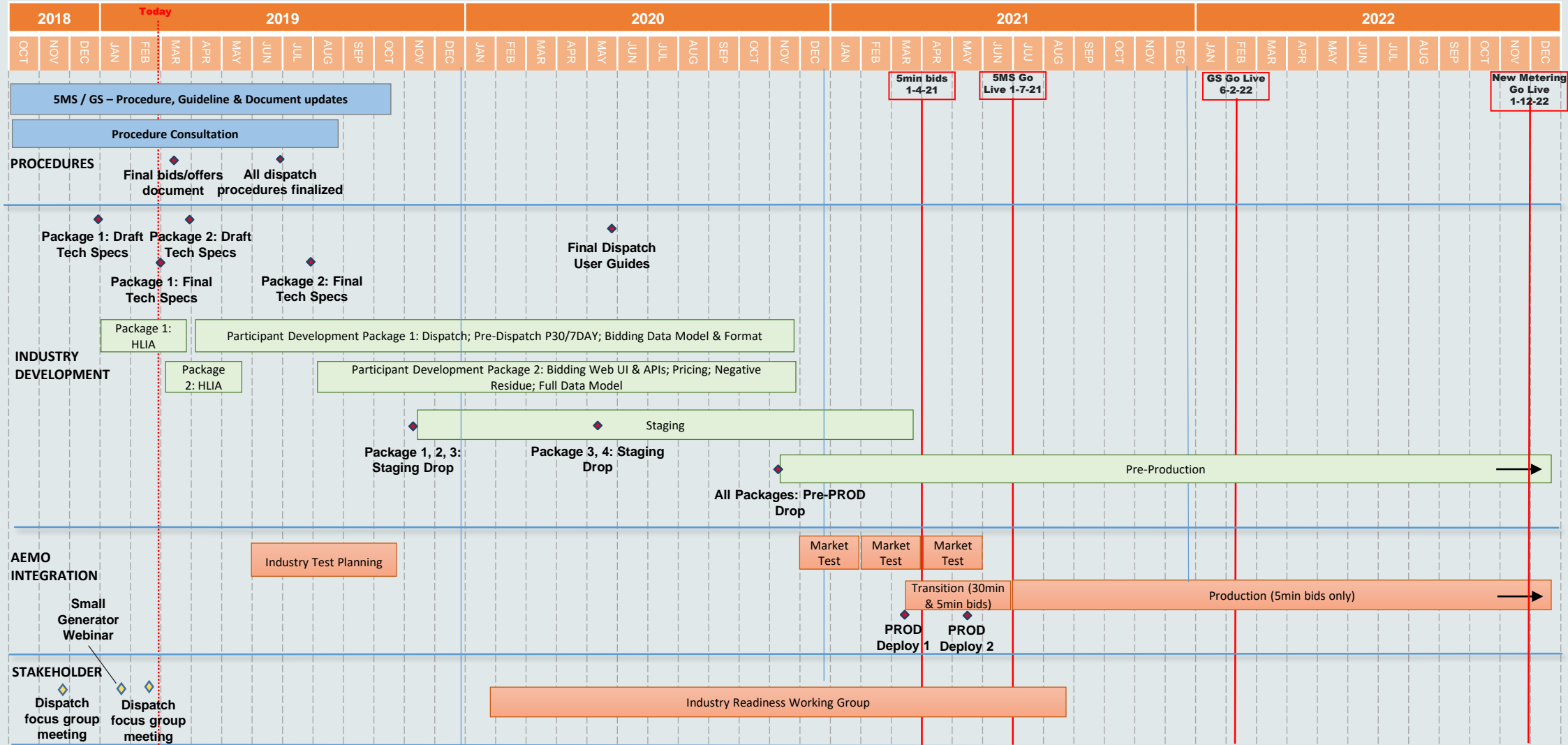# System Workstream – Dispatch

Ian Davaney

System Workstream - Dispatch

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	2-Apr-19	Oct-19	29-Nov-19	Nov-20	**Mar-21**
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	2-Apr-19	Oct-19	29-Nov-19	Nov-20	**Mar-21**
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	2-Apr-19	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	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	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	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	TBC	TBC		TBC	TBC	TBC	-	Nov-20	May-21
PACKAGE 5 - Full Data Model										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan-20	Oct-20	TBC	Nov-20	May-21

Level Two Milestones - Dispatch

#ID	Level	Workstream	Milestone	Description	Date	Status	Notes
L2-D1	2	Dispatch	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	[Firm]	Final now published. Delay of 2 days due with confirmation of API naming standard taking longer than expected.
L2-D2	2	Dispatch	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	[Firm]	Package 2, not 4.
L2-D3	2	Dispatch	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	[Firm]	On Track
L2-D5	2	Dispatch	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	[Firm]	
L2-D4	2	Dispatch	*Development completed (internal)*	All AEMO internal development work has completed for the Dispatch stream	31-May-2020	[Firm]	On Track
L2-D6	2	Dispatch	*UAT completed (internal)*	All AEMO internal UAT has completed for the Dispatch stream	16-Oct-2020	[Firm]	
L2-D7	2	Dispatch	Market Trial preparation completed	All market participants who are required to submit 5MS bids and offers are ready for market trials	30-Nov 2020	Tentative	Content and timing of Market Trials TBD
L2-D8	2	Dispatch	Market Trial preparation completed	AEMO has software deployed to pre-production environment and is ready to deliver the agreed Market Trail scenarios	30-Nov 2020	Tentative	Content and timing of Market Trials TBD
L2-D9	2	Dispatch	5-min Bidding Phased Go Live Begins	Participants can begin submitting 5-min bids to the market	01-Apr-2021	Provisional	
L2-D10	2	Dispatch	Market Trial conclude	Market Trial scenarios related to dispatch have been completed	31-May-2021	Tentative	Content and timing of Market Trials TBD

5MS Participant Timeline - Dispatch

2018	Today	2019	2020	2021	2022

5min bids 1-4-21

5MS Go Live 1-7-21

GS Go Live 6-2-22

New Metering Go Live 1-12-22

PROCEDURES

5MS / GS – Procedure, Guideline & Document updates

Procedure Consultation

Final bids/offers document ◆

All dispatch procedures finalized ◆

INDUSTRY DEVELOPMENT

◆ Package 1: Draft Tech Specs

◆ Package 2: Draft Tech Specs

◆ Package 1: Final Tech Specs

◆ Package 2: Final Tech Specs

◆ Final Dispatch User Guides

Package 1: HLIA

Participant Development Package 1: Dispatch; Pre-Dispatch P30/7DAY; Bidding Data Model & Format

Package 2: HLIA

Participant Development Package 2: Bidding Web UI & APIs; Pricing; Negative Residue; Full Data Model

Staging

Package 1, 2, 3: Staging Drop

Package 3, 4: Staging Drop

All Packages: Pre-PROD Drop

Pre-Production

AEMO INTEGRATION

Industry Test Planning

Market Test | Market Test | Market Test

Transition (30min & 5min bids)

Production (5min bids only)

PROD Deploy 1

PROD Deploy 2

STAKEHOLDER

Small Generator Webinar

◇ Dispatch focus group meeting

◇ Dispatch focus group meeting

Industry Readiness Working Group

System Workstream – Settlements & Operations

Bhanu Rajan

System Workstream – Settlement 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
SETTLEMENTS										
Estimation	Oct-18	Nov-18	Dec-18	Mar-19	Oct-19	Jan-20	-	May-20	Nov-20	May-21
Settlements	Oct-18	Nov-18	Dec-18	Mar-19	Aug-19	Dec-19	-	Mar-20	Nov-20	May-21
Reallocation	Dec-18	Nov-18	Dec-18	Mar-19	Jul-19	Oct-19	Nov-19	Nov-19	Mar-20	Apr-20
Billing	Oct-18	Nov-18	Dec-18	Mar-19	Aug-19	Dec-19	-	Mar-20	Nov-20	May-21
Prudentials	Sep-18	Nov-18	Dec-18	Mar-19	Oct-19	Jan-20	Nov-19	May-20	Nov-20	May-21
Full Data Model	Refer DISPATCH									

Level Two Milestones - Settlements

#ID	Level	Workstream	Milestone	Description	Date	Status	Notes
L2-D1	2	Settlements	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	[Firm]	On Track
L2-D2	2	Settlements	Software Drop for Package 1	Software deployed into the 5MS Staging environment for Reallocations.	01-Nov-2019	[Firm]	On Track
L2-D3	2	Settlements	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	[Firm]	On Track
L2-D4	2	Settlements	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	[Firm]	On Track
L2-D5	2	Settlements	*Development completed (internal)*	All AEMO internal development work has completed for Settlements stream	31-May-2020	[Firm]	On Track
L2-D6	2	Settlements	Software Drop for Package 2 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Settlements and Billing.	16-Mar-2020	[Firm]	On Track
L2-D7	2	Settlements	Software Drop for Package 3 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Estimations and Prudentials.	15-May-2020	[Firm]	On Track
L2-D8	2	Settlements	Market Trials for reallocations	Market participants pass UAT for the upgraded reallocations web portal.	13-Mar-2020	Provisional	Content of Market Trials TBD
L2-D9	2	Settlements	*UAT completed (internal)*	All AEMO internal UAT has completed for Settlements stream	16-Oct-2020	[Firm]	
L2-D10	2	Settlements	Market Trial preparation completed by participants	All market participants who will receive Wholesale settlement invoicing are ready for market trials.	30-Nov 2020	Tentative	Content and timing of Market Trials TBD
L2-D11	2	Settlements	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 Trail scenarios.	30-Nov-2020	Tentative	Content and timing of Market Trials TBD
L2-D12	2	Settlements	Reallocations Go Live	AEMO has deployed reallocation software to the PROD environment and 5-minute reallocation requests are enabled.	01-Apr-2020	Tentative	

5MS Participant Timeline – Settlements

2018			Today	2019									2020												2021												2022											
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Reallocations Live 01-04-20

5MS Go Live 1-7-21

GS Go Live 6-2-22

New Metering Go Live 1-12-22

5MS / GS – Procedure, Guideline & Document updates

Procedure Consultation

All settlements procedures finalised

INDUSTRY DEVELOPMENT

External HLIA

Package 1: Draft Tech Spec

Package 1: Final Tech Spec

Final Updates Settlements User Guides

Package 2: Draft Tech Specs

Package 2: Final Tech Specs

Package 3: Draft Tech Specs

Package 3: Final Tech Specs

Package 1: HLIA

Participant Development, Package 1: Reallocations

Package 2: HLIA

Participant Development, Package 2: Settlements; Billing

Package 3: HLIA

Participant Development, Package 3: Est. & Prud.

5MS Staging

Package 1: Staging Drop

Package 2: Staging Drop

Package 3: Staging Drop

Pre-Production

pre-PROD Deploy: Package 1

pre-PROD Deploy: Package 2 & 3

AEMO INTEGRATION

Industry Test Planning

M.T. Reallocations

Market Test

Market Test

Market Test

Transition

Production (publish UFE, 5-min settlement)

PROD Deploy (Package 1)

PROD Deploy (Packages 2 & 3)

STAKEHOLDER

Settlement Focus Group (MFG)

Settlement Focus Group (MFG)

Industry Readiness Working Group

Matters for Discussion

Mal Borschman

SWG Webpage & Consultation Update

Monica Morona & Hamish McNeish

Stakeholder Engagement Update

Stakeholder resources

- **Calendar:** An annual and monthly calendar has now been published and will be regularly updated, providing an overview of all meetings for 2019.
    - Calendar available online: https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement

- **Consultation status updates:** The consultation status update has been re-established, with the first email update sent 24 April.
    - The update will be sent each fortnight.

- **Program newsletter:** The 5MS team will be sending out a regular Program overview email
    - The update will cover general 5MS & GS implementation activities and Program milestones/delivery.

Resources – Update

5MS team are working to improve the information provided to industry as the Systems workstream moves towards finalisation and the Program transitions to Readiness and Implementation.

This includes:

- Stakeholder feedback surveys to understand industry needs

- Update Stakeholder Engagement and Communications Plan – version 2.0

- Review of small participant engagement approach

- 5MS website review and update – Systems Workstream main focus

Resources – Webpage Update

Systems workstream update to improve clarity regarding:

- Technical documentation and specification updates
- Consultation requirement and timeframes
- Linkages to milestones and other 5MS Program deliverables

5MS Staging Environment

Mal Borschman

5MS Staging Environment – Purpose

Purpose

This environment is intended to help support participants development and testing activities prior to market trials.

Initially proposed as a sandbox environment, participants requested an end-2-end environment that is more reflective of preproduction, to better facilitate testing of market system interfaces.

Status:

AEMO is working on the design of the staging environment, and reviewing what end-2-end processes are feasible to provide.

5MS Staging Environment – Scope

The currently proposed scope is provided in the SWG schedule.

To enable release of changes early to industry an iterative release process is planned.

Current Proposed Scope:

- Dispatch/Operations
  - Bidding FTP, API and Web interfaces
  - Dispatch, pre-dispatch, PASA, Pricing
  - Data Model
- Settlements
  - Estimation, Settlements, Reallocation, Billing, Prudentials
  - Data Model
- Retail
  - MDFF and MDMF interfaces, FTP and API
  - MSATS Web Browser
  - MSATS RM Reports

Note: Data is expected to be a copy of production data and participants will be advised of this date and data refresh dates via the TWG (Testing Working Group) - dates TBC.

5MS Staging Environment – Limitations

The 5MS Staging is not expected to fully mirror the production or pre-production environments.

Limitations:

- System performance is not expected to match pre-production
- Input data may be static, such as demand forecasts, SCADA inputs
- Not all processes may be run, or may be run infrequently, for example 7-day pre-dispatch
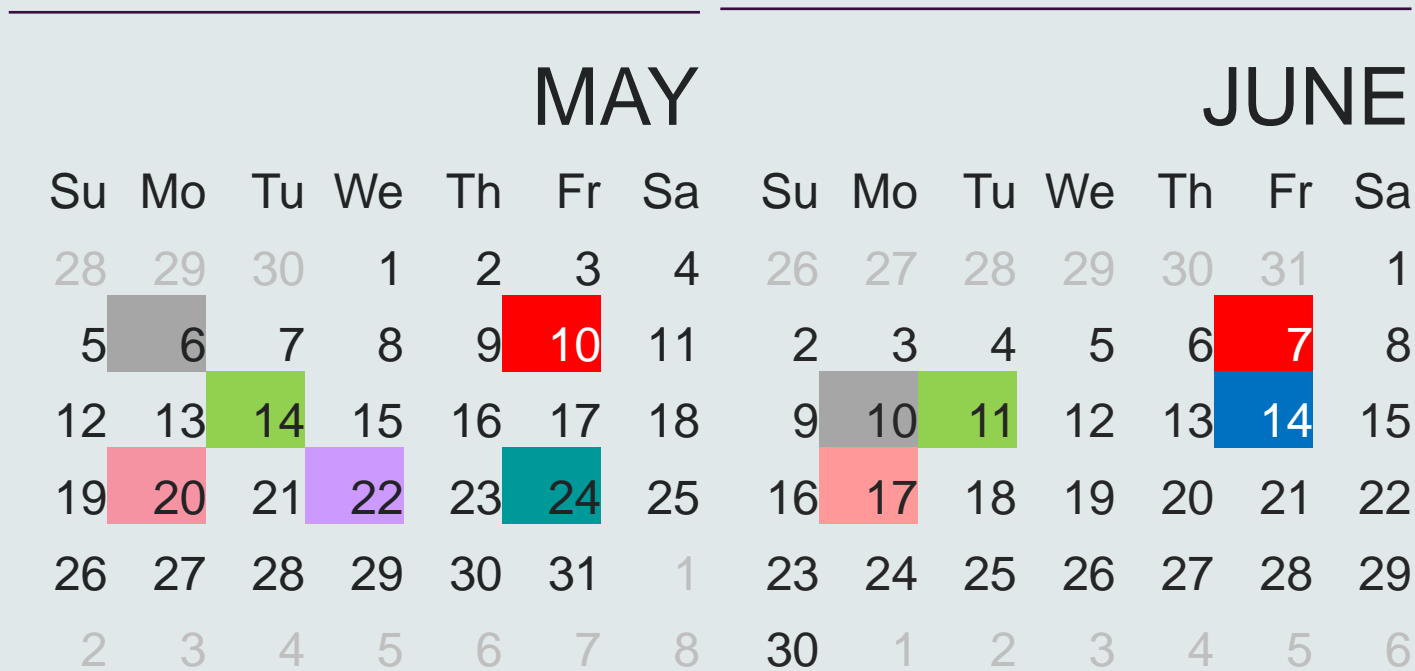- Some functions may not work, for example if not impacted in 5MS then there may be low value providing these

General Questions

Mal Borschman

Forward Meeting Plan

Mal Borschman

Upcoming meetings

Meetings and forum dates:
http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement

MAY

Su	Mo	Tu	We	Th	Fr	Sa
28	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	3	4	5	6	7	8

JUNE

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
30	1	2	3	4	5	6

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

Focus Groups
- Dispatch
- Metering
- Settlements
- Reconciliation
- Other
- Information Sessions

National Public Holiday
State Public Holiday

Upcoming Meetings

- Systems Working Group

  - SWG #11 - Mon, 17 June 2019

- Focus groups:

  - Reconciliation support workshop – Wednesday 22 May

  - Metering & systems focus group #6 - metering procedures package #2 – Friday 14 June

- Other AEMO IT Meetings

  - None

- 5MS Meetings and Forum Dates:

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

Further information

- AEMO 5MS Program contacts:
  - Mal Borschman   -   Wholesale Lead
    - Bhanu Rajan   -   Settlements
    - Ian Devaney   -   Dispatch & Bidding
    - Grant Collins   -   Infrastructure
  - Hamish McNeish   -   Technical Advisor
  - Jim Agelopoulos   -   Retail Lead
  - Monica Morona   -   Stakeholder Engagement

- Contact details:
  - 5MS email: 5ms@aemo.com.au
  - 5MS webpage: http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement

Appendix A (Action items 9.7.1 & 9.7.2)
Metering – Meter Data Delivery

Simon Tu

MTRD Meter Data Delivery

AEMO Proposal

- The MTRD shall support three distinct purposes:
  - B2B MTRD Meter Data Notifications – For Retail Settlements
  - B2M MTRD Meter Data Notifications – For Transmission Use of System (TUoS) billing
  - B2M MTRD Meter Data Notifications – For Market Settlements

- MDPs to identify MTRD Meter Data for Market Settlements
  - 'NEMMCO' as the *To* Party Identifier in the aseXML Header record
  - 'NEMMCO' as the Participant ID in the MDFF Header record (100) *ToParticipant*

- Message patterns for MTRD B2M Market Settlements shall mirror that described in the B2B Procedure Technical Delivery Specification

- AEMO is not proposing to use Provide Meter Data (PMD) or Verify Meter Data (VMD) processes for requesting missing meter data reads.

- AEMO to provide MDFF validations in the Transaction Acknowledgement based on error codes defined in the Service Level Procedure: Metering Data Providers

MTRD Meter Data Delivery
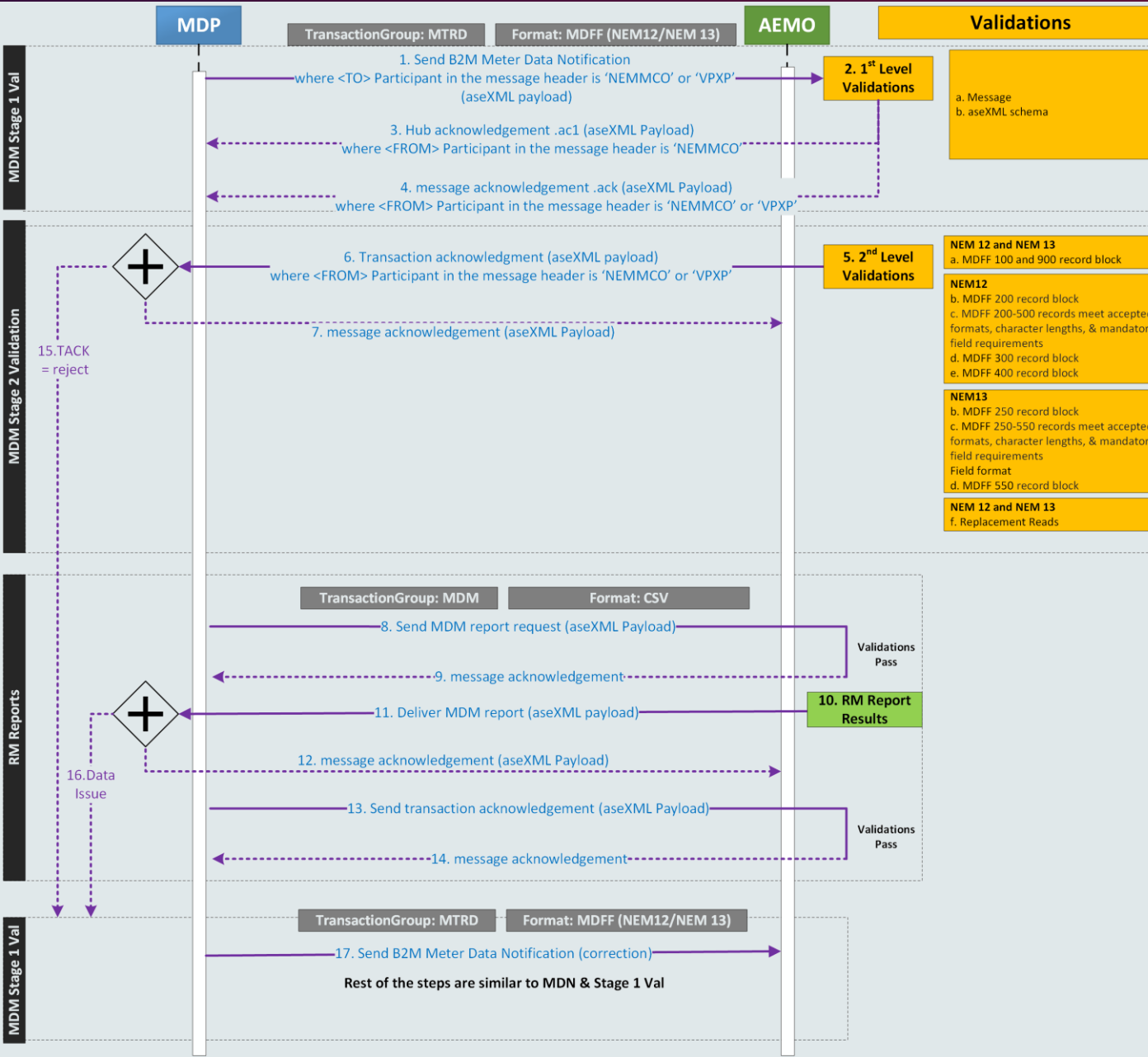
AEMO Proposal

MTRD Message Exchange
1. MDP sends MTRD message with 'NEMMCO' as *To*
2. AEMO performs 1st level validation of message & aseXML schema
3. AEMO sends Hub Ack
4. AEMO sends Message Ack with validation results
5. AEMO performs 2nd level validation of MDFF & replacement reads
6. AEMO sends Trans Ack with validation results
7. MDP to send Message Ack

After the Fact Reporting Message Exchange
8. MDP requests MDM report
9. AEMO sends Message Ack for the MDM report request
10. RM report generated
11. AEMO delivers MDM report message
12. MDP to send Message Ack for the MDM report
13. MDP to send Trans Ack for the MDM report
14. AEMO sends Message Ack for the Trans Ack

Resend MTRD Message Exchange
17. In response to a (15.) Trans Ack reject or (16.) after the fact identified meter data issues the MDP resends MTRD message with 'NEMMCO' as *To*

MDMT Meter Data Delivery
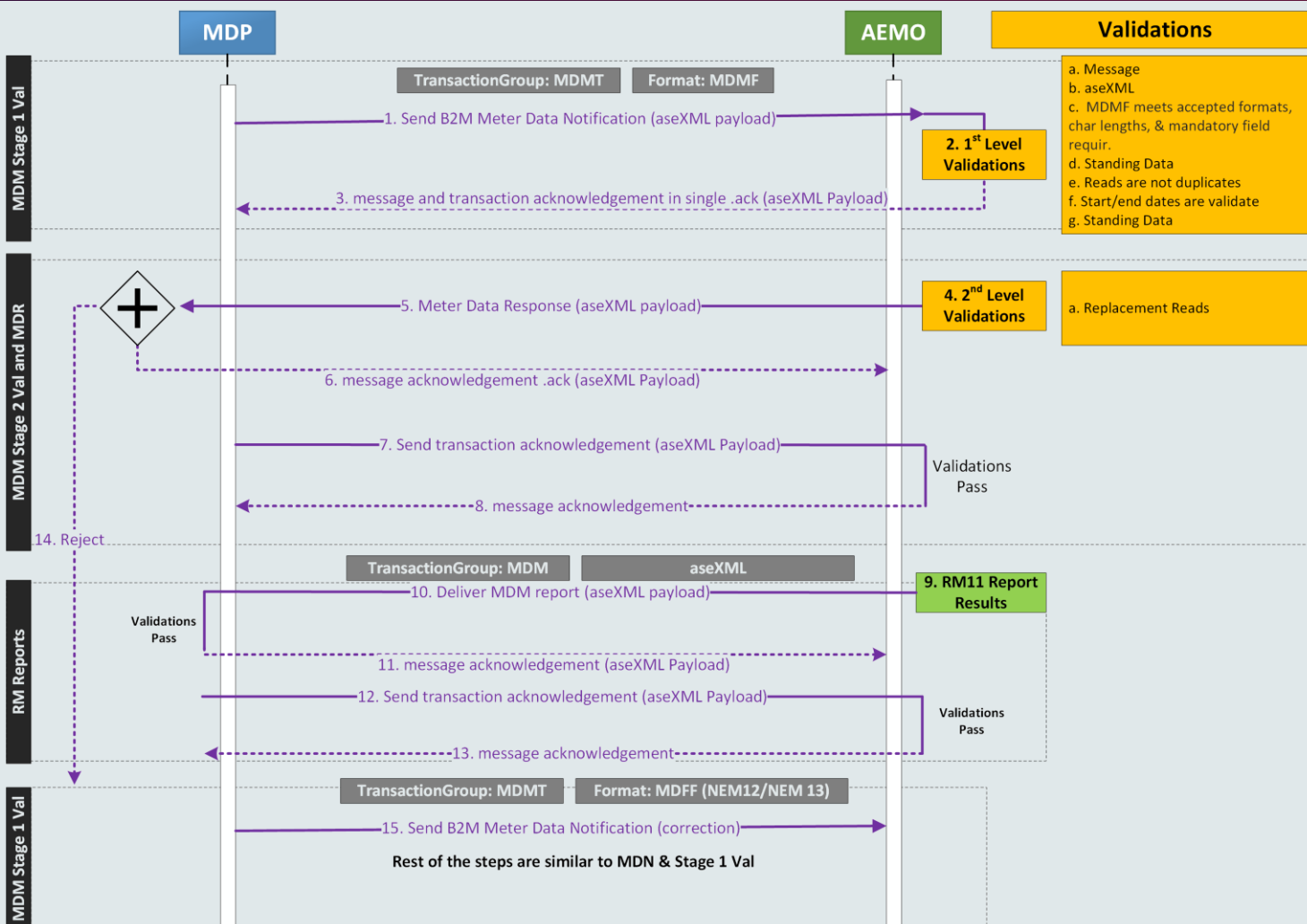
AEMO Proposal

- 1 July 2021
  - AEMO will stop accepting new MDMF interval reads
  - AEMO will continue to accept MDMF consumption reads
- Existing MDMT Message Exchange pattern to be supported
- Existing error codes to be supported
- New facility for 'PUSH' RM11 reports

RM Reports

AEMO Proposal	Discussion
Reports to be Retired • RM07 – MDP Data Delivery Report • RM08 – Date PPS BMP Generated Report • RM10 – Load Aggregation Error Report • RM12 – Wholesale Maximum Value Report • RM14 – MDP Data Version Comparison Report • RM15 – Multiple Version Report • RM18 – Electricity Interval Data Report • RM19 – Aggregated Actual vs Estimate Report	List of retired reports have been reviewed and agreed at a previous Joint Working Group (JWG).
Existing Report Updates • Existing Reports will be updated to display 5 minute intervals from 1 July 2021 • Existing Reports will include Tier 1 and Tier 2 meter data	Reports that display Interval Data will increase from the 48 interval periods to 288 interval periods All tier1 and Tier 2 data will be included in existing reports to support Global Settlements.

RM Reports

AEMO Proposal	Discussion
New Meter Reading Reports • RM37 – High Priority Missing Data Report – for Wholesale, generator and interconnector NMI's • RM38 – DataStream Missing Data Report – DataStream level (NEM12) missing readings • RM39 – Mismatch Data Report – identifies where AEMO has received readings that do not match the standing data.	Focus on Delivery of Reading to support Settlements. • RM37 1 day prior to "Prelim" Settlement • RM38 2 days prior to "Final Settlement • RM39 2 days prior to "Final" Settlement
New UFE Report • RM43 – UFE Factors by Profile Area – profile area data used to calculate UFE.	AEMO to publish a Guide to Retail Reporting
Performance Monitoring Report • Investigation into additional participant obligations may included additional categories into the RM30 report	AEMO to investigate Performance Monitoring Requirements

Report Delivery
• All new report will be reports will be pushed to Participants to allow:
    Delivery prior to settlement
    Information to support settlement run
	New reports will not be available for request only, each report can be subscribed too by affected participants.