

# Five-Minute Settlement Program: Program Consultative Forum 9

**AEMO 5MS Program Team** 

THURSDAY 4 APRIL 2019

**AEMO OFFICES:** 

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# Agenda

NO	TIME	AGENDA ITEM	RESPONSIBLE						
Prelin	ninary Matters								
1	10:00am – 10:10am	Welcome, introduction and apologies	Chris Muffett (AEMO)						
2	10:10am – 10:20am	Minutes and actions from previous meeting	Chris Muffett (AEMO)						
Matte	Matters for Noting								
3	10:20am – 10:40am	Program update	Graeme Windley (AEMO)						
4	10:40am – 10:50am	Industry risks & issues	Graeme Windley (AEMO)						
5	10:50am – 11:00am	Procedures workstream update	Emily Brodie (AEMO)						
6	11:00am – 11:10am	Systems workstream update	Mal Borschman (AEMO)						
7	11:10am – 11:20am	Readiness workstream update	Peter Carruthers (AEMO)						
8	11:20am – 11:30am	Stakeholder Update	Chris Muffett (AEMO)						
Matte	ers for Discussion								
9	11:30am – 12:00pm	Industry timelines	Graeme Windley (AEMO)						
Othe	Business								
10	12:00pm – 12:10pm	General questions	Chris Muffett (AEMO)						
11	12:10pm – 12:20pm	Forward meeting plan	Chris Muffett (AEMO)						



# Minutes and actions from previous meeting

**Chris Muffett** 

# **AEMO DER Program**

	H0 (F	Y 18/19)		H1 (FY	19/20)			H2 (FY	20/21)			H3 (FY	21/22)
-	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4 1	Q2
Pilots/trial s		Launch of VPP Trial			VPP Tr	ial concluded			VPP Trial pos	sible extension			
Markets	Open Energy	esale Demand rule change y Networks – Cost benefit tworks recommendations		lesale Demand res	utcomes Rule cl	change process hange proposal			Wholesale D			VPP changes delive	red
		es submitted to Standards Australia les and standards for DER		ss standards ed from gap analysis	recom	r review and progress mendations			recom	review and progress mendations			Yearly review and progress recommendations
Operations	DER Mo Emergency frequ	disturbance; high speed monitoring odel – initial assessment ency control – Initial SA n options & Queensland assessment	EF	CS – SA short-terr	Load model tics Collaborati	odel complete lling complete on completed tions finalised			Review DER Ope	rational tools and amend			Ongoing testing
Comms & Education	Commence execution	ations and Engagement Strategy on of Comms. Strategy EIP group collaboration		Continue	regular stakehol	lder engagement		Continue i	regular stakehold	er engagement		Continue regul	ar stakeholder engagemei
Data	Complete	DER Register guideline	DER Registe	er - Deployed									



# Program update

**Graeme Windley** 

### Program Update

- Procedures Workstream
  - Overall Green, a couple of documents delayed but no overall impact.
  - Currently three consultations out for review.
- Metering Workstream
  - AEMO Internal Design work on schedule to deliver by 31 May, 2019.
  - Metering Focus Group Monday 4 March: Package 1 submission, participant feedback aligned; MDFF data approach agreed.
  - Stage-Gated approach of AEMO internal Metering solution progress communicated to the PCF on Thursday 4 April.
- Settlements Workstream
  - Billing (invoices and SR reports) and Data Interchange design for 1 July 2021 presented at the Settlements Focus Group on Wednesday 20 March. Awaiting feedback from participants.
- Dispatch Workstream
  - Final version of EMMS Tech Spec was distributed to participants by Tuesday 2 April.
- Readiness Workstream
  - Market Trials proposal to be presented to the PCF on Friday 10 May.
  - Level 1 / 2 Milestones to be agreed with the PCF today (noting the Market Trials work)



# Industry risks & issues

**Graeme Windley** 

### Summary

- Latest risk/issue register distributed along with meeting pack
  - Updates discussed at PCF #8:
    - R02: Additional actions added
    - R03: Rating changed from Low to Medium
    - R05: Likelihood/consequence changed (rating still Low)
    - R06: Rating changed from Medium to High
    - R08: Rating changed from Low to Medium
    - R09: Rating changed from Medium to High, and additional action added
    - R10: Rating changed from Medium to High
    - R11: New risk added for AEMO's internal project not being ready for go-live
- Risk/issue register is published on 5MS PCF page: <a href="http://www.aemo.com.au/Electricity/National-">http://www.aemo.com.au/Electricity/National-</a>

Electricity-Market-NEM/Five-Minute-Settlement/Program-Management/Program-Consultative-Forum



# Procedures workstream update

**Emily Brodie** 

### Procedures workstream status

	Pre-consultation Consultation			1		
5 MINUTE SETTLEMENT			TIMING			CONTENT
	HLIA	PWG	Consultation	Draft	Final	Package
PROCEDURES TRACKING		Engagement	paper	documents	documents	content
METERING						
1. Metering - Metering Data & Metrology	Jul-18	Jul-18	Sep-18	Jan-19	Mar-19	
2. Metering - MSATS and SLPs	Jul-18	Dec-18 & Mar-19	Apr-19	Jun-19	Aug-19	
3. Metering - Miscellaneous*	Jul-18	Feb-19	n/a	Jun-19	Jul-19	
B2B Procedures - B2B file size	n/a	Feb-19	n/a	n/a	n/a	
SETTLEMENTS						
SRA	Jun-18	Jul-18	n/a	Jul-18	Aug-18	
SRA round #2	Jun-18	Feb-19	Mar-19	Jun-19	Aug-19	
TNSP	Feb-19	Feb-19	n/a	Apr-19	Jun-19	
Estimation	Aug-18	Aug-18	Nov-18	Feb-19	Apr-19	
Reallocations	Dec-18	Dec-18	n/a	Dec-18	Feb-19	
Miscellaneous	Oct-18	Oct-18	Dec-18	Mar-19	May-19	
Prudentials	Aug-18	Sep-18	Apr-19	Jun-19	Aug-19	
DISPATCH						
2. Dispatch - Spot market	Sep-18	Oct 18	Jan-19	Jun-19	Aug-19	
2. Dispatch - Spot market	2eh-10	ongoing	Jan-19	Juli-19	Aug-19	
3. Dispatch - Pricing - Rules consultation	Aug-18	Aug 18	Aug-18	Sep-18	Nov-18	
3. Dispatch - Fricing - Rules consultation	Aug-10	ongoing	Aug-10	3ep-18	1101-10	
3. Dispatch - Pricing - For comment*	Aug-18	Aug 18	n/a	May-19	Jun-19	
, ,		ongoing	11, 0	Way 13	3411 13	
4. Dispatch - Miscellaneous*	Jan-19	Feb-19	n/a	May-19	Jun-19	
POWER SYSTEM OPS						
1. Operations - Miscellaneous*	TBA	Apr 19 ongoing	n/a	n/a	Jul-19	

TIMING
Started and on track
Started late
Overdue

CONTENT
No issues
Issues

Severe issues

### Procedures workstream meetings

- Next PWG scheduled for Friday 12<sup>th</sup> April:
  - Settlements debrief on settlements focus group meeting
  - Metering procedures approach to co-consultation
  - Power systems operations approach to 5MS procedure development

#### Focus groups:

#### **Past**

- Settlements focus group Wednesday 20<sup>th</sup> March, Melbourne
- Metering focus group Friday 29<sup>th</sup> March, WebEx

#### **Future**

- Expect to hold further metering focus group meetings in the coming months as we work through metering procedures package #2
- Reconciliation support workshop TBA, May 2019, likely Melbourne

### **Current Consultations**

#### 5MS Metering package 1

- Final report published 22 March 2019
- <a href="http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes-Package-1?Convenor=AEMO%20NEM">http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes-Package-1?Convenor=AEMO%20NEM</a>

#### **Settlements Estimates Policy**

- Final report published 4 April 2019
- <a href="http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-Settlement-Estimates-Policy?Convenor=AEMO%20NEM">http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-Settlement-Estimates-Policy?Convenor=AEMO%20NEM</a>

#### **NEM Settlements Revisions Policy**

- Draft report and draft procedures published 22 March 2019
- Submissions due 8 April 2019
- http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-Settlement-Revisions-Policy?Convenor=AEMO%20NEM

#### **Auction Participation Agreement**

- Issues Paper published 22 March 2019
- Submissions due 27th May 2019
- http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Auction-Participation-Agreement?Convenor=AEMO%20NEM

#### **TNSP Negative Settlements Residue Procedure**

- Notice published 1 April 2019, single round of consultation (proposed changes are administrative in nature)
- Targeted consultation with TNSPs, submissions due Monday, 3 June 2019
- <a href="http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-TNSP-Negative-Settlements-Residue-Procedure?Convenor=AEMO%20NEM">http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-TNSP-Negative-Settlements-Residue-Procedure?Convenor=AEMO%20NEM</a>

# Procedure co-ordination: Metering co-consultation

- 5MS program and AEMO's Market Change team about to co-consult on matters which affect various Metering procedures, including:
  - introduction of 5MS Rule
  - introduction of GS Rule
  - changes to the delivery of metering data to AEMO
  - changes (ICFs) associated with the NMI Standing Data Review
  - changes (ICFs) associated with the Electricity Retail Consultative Forum (ERCF)
- Co-consulting to mitigate potential stakeholder resourcing impacts.
- Affected procedures will need to consider multiple substantive commencement dates.
- Approach to co-consultation will be discussed at the April PWG.

## Update: 5MS implementation rule change request

- Rule change request was submitted to the AEMC on 15 March 2019 and is now available at: <a href="https://www.aemc.gov.au/rule-changes/5-minute-settlement-and-global-settlement-implementation">https://www.aemc.gov.au/rule-changes/5-minute-settlement-implementation</a>
- Six areas of change:
  - 1. Determining marginal loss factors (MLFs) at 30-minute or shorter intervals
  - 2. Accommodating fast-start plant in pre-dispatch
  - 3. Process for amending the spot market operations timetable
  - 4. Correction to list of AEMO procedures for 5MS
  - 5. Timing for AEMO to publish unaccounted for energy (UFE) data
  - 6. Clarification around assigning non-market unmetered loads to a transmission node identifier TNI or VTN.
- AEMO considers the proposed changes to be non-controversial seeking 'expedited' rule change process.
- AEMO has identified further aspects of the GS Rule that may need amending to facilitate implementation. Once analysis complete, will advise PCF/PWG on preferred approach to any further changes.

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# Systems workstream update

Malcolm Borschman

### Systems workstream update

- Completion of key artefacts such as Draft Tech specs and HLIA to published dates are progressing well.
  - SWG Industry participants are being formally engaged for feedback on the Tech Specs as requested
- SWG meeting was held on 18<sup>th</sup> March. Key Topics included;
  - Debrief on Dispatch Focus group held on 15-Feb
  - Debrief on Metering Focus group held on 4-March
  - Detailed summary of feedback received on the Dispatch Draft Tech spec

#### **Next SWG**

Scheduled for Monday 15<sup>th</sup> April



# Readiness workstream update

**Peter Carruthers** 

#### 5MS/GS Readiness

Market Readiness
Strategy

Overarching document which articulates the various Market Readiness phases and artefacts supporting the Market Readiness stream

#### Industry Readiness Reporting Plan

Details the Readiness reporting requirements which enables an accurate assessment of AEMO's and Industry's readiness.

# Market Trial / Industry Testing Strategy

Sets out the high level approach and principles associated to testing activities.

#### Market Trial / Industry Test Plan

Sets out the detailed activities associated to various test phases.

#### Industry Transition and Cutover Strategy

Sets out the high level approach and principles associated to transition and cutover activities.

# Industry Transition and Cutover Plan

Sets out the detailed elements associated to the transition and cutover activities.

#### Metering Service Provider Accreditation Plan

Details the required accreditation activities for Metering Service Providers.

#### Document preparation approach

- AEMO prepares initial draft
- Discuss/consult with industry
- AEMO prepares final draft

### **Document Preparation Approach**

- Standard approach
  - Engage via working group, to explore issues and test proposals
  - Draft Paper for written consultation feedback, approx. 4 weeks allowed
  - Final Paper representing final position
- Working groups anticipated
  - Readiness Working Group
  - Testing Working Group (subordinate to the RWG)
- Timing
  - Terms of Reference for May PCF
  - Nominations from Industry following May PCF
  - First meeting(s) June

### **Draft Timelines**

Item	Engagement Commences	Draft Paper Released	Final Paper Released
Market Readiness Strategy	June 19	30 August 19	29 Nov 19
Industry Test Strategy	June 19	30 August 19	31 Oct 19
Transition & Go-Live Strategy	July 19	30 Sept 19	31 Jan 20
Market Trial Strategy	August 19	29 Nov 19	28 Feb 20
Metering Service Provider Accreditation Plan	August 19	29 Nov 19	31 Mar 20
Industry Readiness Reporting Plan	Sept 19	29 Nov 19	31 Jan 20



# Stakeholder update

**Chris Muffett** 

### Stakeholder engagement status

- Resourcing changes:
  - Bree Jeffreys has joined the program, taking over from Jenny Fikret.
  - A new team member will be starting shortly, focusing on coordinating all of our stakeholder activities
- Calendars:
  - A new meeting calendar is being published, providing an overview of all meetings for 2019
  - The monthly calendar is now being updated
  - Calendars are published at: <a href="http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement">http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement</a>
- Status updates:
  - Re-established and will be sent on a fortnightly basis



# Industry timelines

**Graeme Windley** 

### 5MS – AEMO Internal Program Transparency

- Industry Risk #11 raised: The AEMO internal project is not ready for 5MS Go Live.
- AEMO are building a new metering solution as part of 5MS, which adds risk to the overall program timelines.
- AEMO has timelines which it is contracted and committed to, to ensure successful delivery of the program within the 5MS.
- Transparency to the PCF:
  - Internal AEMO milestones are added for the Retail (Metering) Dispatch and Settlements internal workstreams.
  - AEMO to present on progress quarterly at the PCF, beginning June 2019 (after the Metering design phase is due to complete) through to March 2021.
- Status of the Milestones:
  - Agreement in progress, awaiting confirmation from industry.
  - Steering Committee endorsement to follow (dates bracketed i.e. "[Firm]" until approval).
  - Updates made today include addition of internal milestones.
  - Date adjustments are included and to be talked through.

# Level One Milestones - Description

replacement meters.

Initial Market Trial commences.

Final Market Trial completes.

deliver the 5MS and GS solutions.

can interact with deployed 5MS and GS code.

All AEMO internal system development completed.

AEMO website.

Delivery

commence

conclude

Complete

Completed

Market Readiness Strategy

**Participant Market Trials** 

**Participant Market Trials** 

Metering Accreditation

All AEMO workstream

development commenced

5MS Staging environment live

**AEMO Internal Development** 

Published by AEMO

Readiness

Readiness

Readiness

Readiness

System Delivery

System Delivery

Systems Delivery

L1-7

L1-8

L1-9

L1-10

L1-11

L1-12

L1-13

#ID	Milestone		Description	Date	Status	Notes				
L1-1	5MS Drafting Amendments submitted to AEMC	Regulatory	Issues with current drafting collated and submitted back to the AEMC by AEMO.	20-Mar-2019	On Track					
L1-2	IEC Approves B2B Procedures	Regulatory	The IEC must have consulted and recommended to AEMO any	01-Jul-2019	Completed	The IEC advised AEMO in Fel				

	Submitted to ALIVIC		ALIVIC DY ALIVIO.			
L1-2	IEC Approves B2B Procedures	Regulatory	The IEC must have consulted and recommended to AEMO any changes to the B2B procedures.	01-Jul-2019	Completed	The IEC advised AEMO in February 2019 that <i>no changes</i> to the B2B procedures are required as a direct result of the 5MS Rule.
11-3	AFMO publishes NFM	Regulatory	The approved 5MS and GS changes to NFM Procedures are	01-Dec-2019	Mandated	On Track

			changes to the B2B procedures.			2019 that <b>no changes</b> to the B2B procedures are required as a direct result of the 5MS Rule.
L1-3	AEMO publishes NEM Procedures	Regulatory	The approved 5MS and GS changes to NEM Procedures are completed and published on the AEMO website.	01-Dec-2019	Mandated	On Track
11-4	5MS & LIFE Market Go Live	Regulatory	Industry sattles electricity at five-minute intervals LIFF	01-101-2021	Mandated	

L1-3	AEMO publishes NEM Procedures	Regulatory	The approved 5MS and GS changes to NEM Procedures are completed and published on the AEMO website.	01-Dec-2019	Mandated	On Track
L1-4	5MS & UFE Market Go Live	Regulatory	Industry settles electricity at five-minute intervals. UFE reported to market.	01-Jul-2021	Mandated	

L1-4	5MS & UFE Market Go Live	Regulatory	Industry settles electricity at five-minute intervals. UFE reported to market.	01-Jul-2021	Mandated	
L1-5	GS Market Go Live	Regulatory	NEM Market Settlements operation commences using Global Settlements.	06-Feb-2022	Mandated	
L1-6	Mandatory 5MS Meter Data	Regulatory	Five-minute reads are mandatory from all new and	01-Dec-2022	Mandated	

A completed Market Readiness strategy is published on the

MPs and MDPs who are delivering 5-min data for 1 July 2021

have been accredited as part of the market readiness process.

All internal workstreams will have commenced development to

The 5MS Staging environment is available to Participants, who

20-Jan-2020

01-Dec-2020

31-May-2021

31-May-2021

23-May-2019

01-Dec-2019

30-Jun-2020

[Firm]

Provisional

Provisional

Tentative

On Track

Provisional

Provisional

Details of Market Trails will be

Details of Market Trails will be

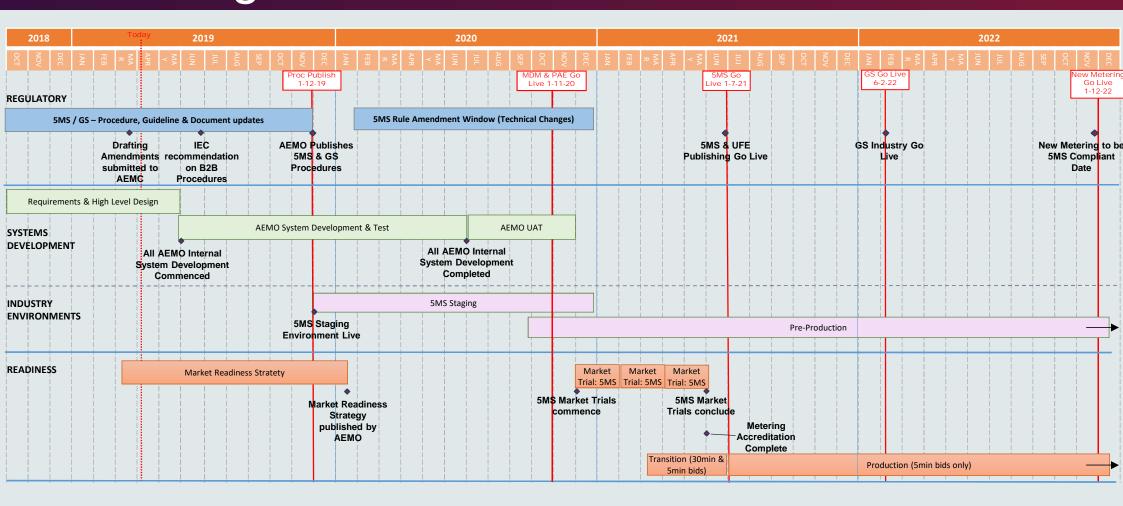
developed throughout 2019.

Functionality to be deployed

throughout 2020

developed throughout 2019.

# 5MS Program Timeline – Level 1 Milestones



# Ovol Two Milostopos - Dispatch

**Final Technical Specifications** 

for Package 4 published by

Software Drop for Packages

Software Drop for Package 4

in 5MS Staging Environment

**Development completed** 

*UAT completed (internal)* 

Market Trial preparation

Market Trial preparation

Market Trial conclude

accepted by AEMO

30-min Bidding no longer

5-min Bidding Phased Go Live

1,2 & 3 in 5MS Staging

Environment

(internal)

completed

completed

**Begins** 

**AFMO** 

L2-I

L2-D2

L2-D3

L2-D5

12-D4

12-D6

L2-D7

L2-D8

L2-D9

L2-D10

L2-D11

2

2

2

2

2

Dispatch

L	Level I wo milestones - Dispatch										
D	Level	Workstream	Milestone	Description	Date	Status					
-D1	2	Dispatch	Final Technical Specifications for Package 1 published by	Technical Specification for changes to Dispatch, Pre- dispatch P30/7DAY, ST PASA, Bidding Data Model and	2-Apr-2019	[Firm]					

participants.

participants.

Predispatch P5.

the Dispatch stream

stream

Trail scenarios

market

completed

Technical Specification for changes to the Bidding Web

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

Software deployed into the 5MS Staging environment for

RERT, Trading Price / Price Revision, Administrated

Management, data model for Dispatch

bids and offers are ready for market trials

minute bids and offers to AEMO

AEMO has software deployed to pre-production

Pricing and CPT, Suspension Pricing, Negative Residue

All AEMO internal development work has completed for

All AEMO internal UAT has completed for the Dispatch

All market participants who are required to submit 5MS

environment and is ready to deliver the agreed Market

Participants can begin submitting 5-min bids to the

Market Trial scenarios related to dispatch have been

All Wholesale market Participants now submitting five-

UI and APIs as a result of 5MS and GS available to

Bidding Format as a result of 5MS and GS available to **AEMO** 

31-Jul-2019

29-Nov-2019

15-May-2020

31-May-2020

16-Oct-2020

30-Nov 2020

30-Nov 2020

01-Apr-2021

31-May-2021

01-Jul-2021

[Firm]

[Firm]

[Firm]

[Firm]

[Firm]

Tentative

Tentative

Provisional

Tentative

Mandatory

**Notes** 

Final now published. Delay of

2 days due with confirmation

taking longer than expected.

of API naming standard

Package 4, not 2.

On Track

On Track

Content and timing of

Content and timing of

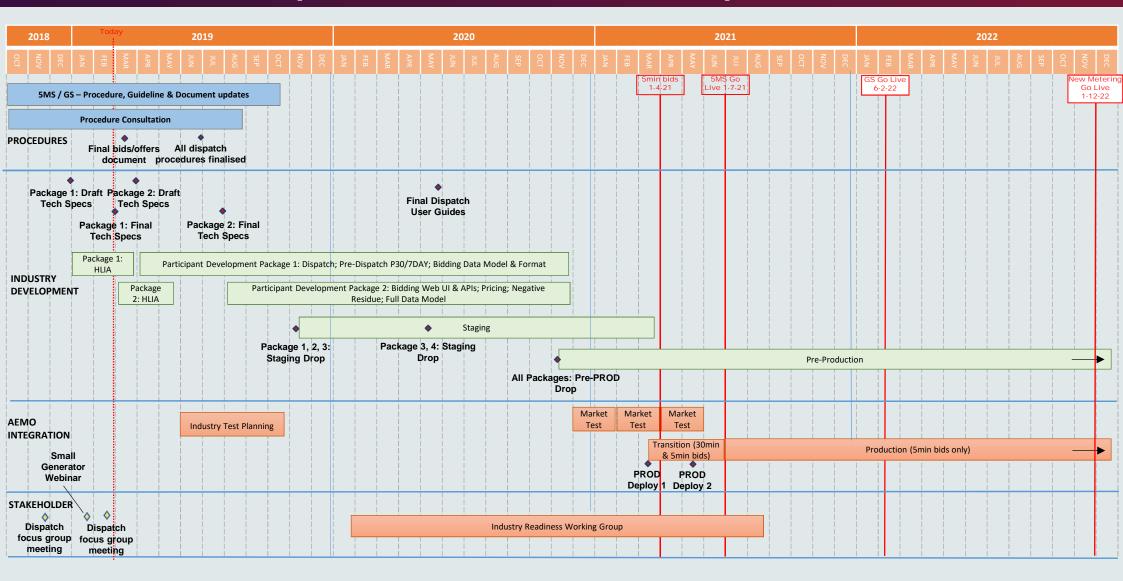
Content and timing of

Market Trials TBD

Market Trials TBD

Market Trials TBD

## 5MS Participant Timeline - Dispatch



# Level Two Milestones - Metering

Software Drop for Package 3 in

**AEMO internal Metering solution** 

- available for participant testing

**AEMO** internal Metering solution

Go Live complete (internal)

Market Trial preparation

Market Trial preparation

completed by AEMO

Market Trials conclude

completed by participants

**AFMO** 

New MDFF format accepted by

5MS Staging Environment

2

2

2

2

Metering

**Metering** 

Metering

Metering

Metering

Metering

Metering

L2-M8

L2-M9

L2-M10

L2-M11

L2-M12

L2-M13

33

#ID	Level	Workstream	Milestone	Description	Date	Status	Notes	
L2-M1	2	Metering	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	Metering	Final Technical Specifications for Package 1 published by AEMO	Technical Specification for changes to Transition, Meter Data – MDFF, B2M MDFF (API and FTP) as a result of 5MS and GS available to participants.	30-Jun-2019	[Firm]	On Track, revised dates published in March SWG	
L2-M3	2	Metering	Final Technical Specifications for	Technical Specification for changes to and Standing Data and validations, and	31-Jul-2019	[Firm]	On Track, revised dates	

L2-M2	2	Metering	Final Technical Specifications for Package 1 published by AEMO	Technical Specification for changes to Transition, Meter Data – MDFF, B2M MDFF (API and FTP) as a result of 5MS and GS available to participants.	30-Jun-2019	[Firm]	On Track, revised dates published in March SWG
L2-M3	2	Metering	Final Technical Specifications for Packages 2 published by AEMO	Technical Specification for changes to and Standing Data and validations, and B2M via eHub, 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	Metering	Final Technical Specifications for	Technical Specification for changes to the MSATS Browser (LVI) and MSATS	31-Aug-2019	[Firm]	On Track, revised dates

L2-M3	2	Metering	Final Technical Specifications for Packages 2 published by AEMO	Technical Specification for changes to and Standing Data and validations, and B2M via eHub, 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	Metering	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	Metering	Software Drop for Packages 1 & 2 in 5MS Staging Environment	Software deployed into the 5MS Staging environment for Transition, Meter Data – MDFF, B2M MDFF (API and FTP), Standing Data and validations, B2M	01-Dec-2019	[Firm]	On Track

via eHub and available for participant testing.

2 Aligned with the MSP L2-M6 Metering Agreement on requirements for Program agreement of the Accreditation requirements and process, and on 31-Mar-2020 **Provisional Accreditation & Market Trails** market testing requirements and process.

Accreditation Plan document 30-Jun-2020 L2-M7 Metering **AEMO** internal Metering solution Build phase for new AEMO Meter Data Management (MDM) and Profiling [Firm] On Track Build complete (internal) Allocation Engine (PAE) complete

Participant regression testing on for new MDM build begins

can begin submitting files in the new MDFF format.

Allocation Engine (PAE) complete

are ready for market trials

Software deployed into the 5MS Staging environment for MSATS Browser

(LVI) and MSATS Report enhancements and available for participant testing.

Go Live date for new AEMO Meter Data Management (MDM) and Profiling

AEMO deploys MDFF capable software to PROD, and all market participants

All market participants who are required to submit five-minute meter reads

All relevant Market Participants have passed UAT to submit five-minute read

AEMO has deployed all relevant software to the 5MS pre-Production

environment and is ready to deliver the agreed Market Trail scenarios

31-Jul-2020

01-Sep-2020

31-Oct-2020

01-Nov-2020

30-Nov-2020

30-Nov-2020

31-May-2021

[Firm]

**Provisional** 

**Provisional** 

Provisional

Tentative

Tentative

Tentative

On Track

req'd On Track

strategy

Trials TBD

Trials TBD

Trials TBD

Detail TBC; full market not

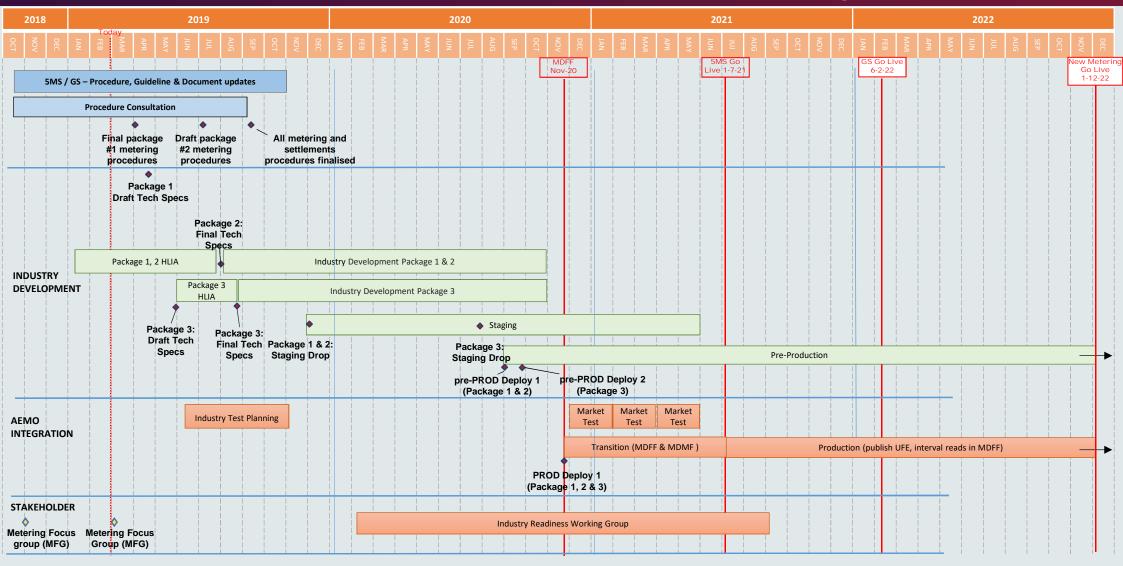
Dependent upon readiness

Content and timing of Market

Content and timing of Market

Content and timing of Market

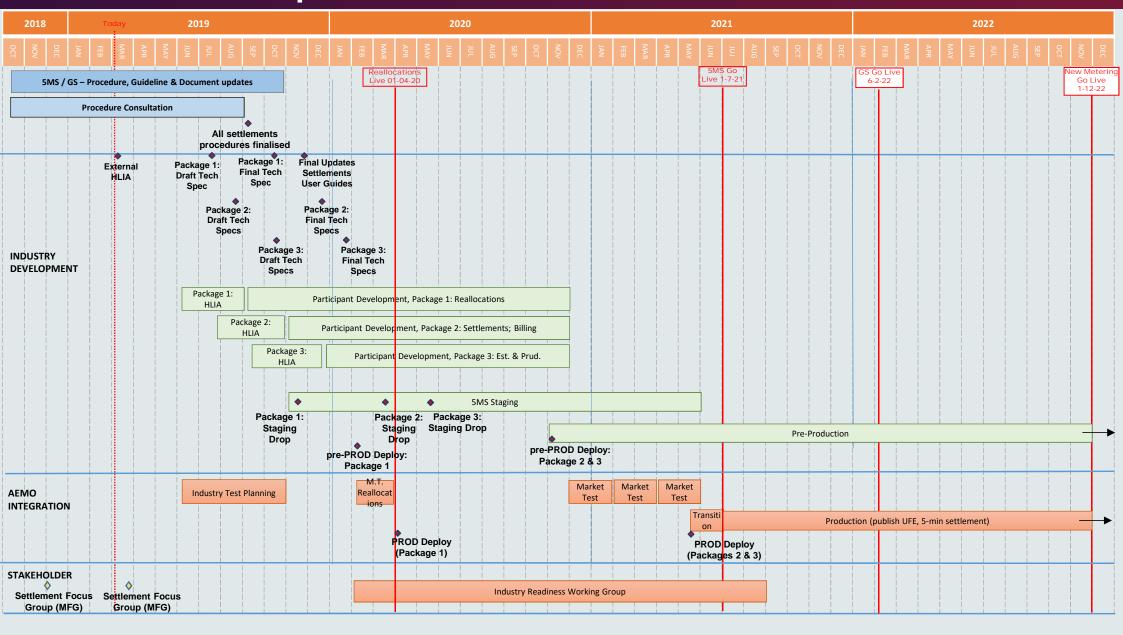
# 5MS Participant Timeline – Metering



## 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	
L2-D13	2	Settlements	Market Trials conclude	All relevant Market Participants have passed the Market	31-May-2021	Tentative	Content and timing

## 5MS Participant Timeline – Settlements



### 5MS Milestone Management Framework

- AEMO is proposing a Milestone Management Framework to:
  - Provide visibility over the 5MS program schedule and progress
  - Provide committed dates for key artefacts critical to participants
  - Provide a framework for managing in a controlled way any changes to dates
- Key elements of the framework
  - Defined milestones with committed dates
  - Reporting process
  - Change management and impact assessment
- Milestones
  - Level 1 milestones: key milestones that apply to the overall Program
  - Level 2 milestones: milestones by workstream that show key dates relevant for participants
  - Milestones will have an identifier, explicit dates and a description
  - Defined in Microsoft Project, available for sharing with participants
- Reporting process
  - Red, Amber, Green shown for each milestone, updated for presenting at each PCF
  - Where not Green, reason and remedial actions will be defined
- Change process
  - Milestone dates may not be achieved or may need to be moved, for a variety of reasons
  - Project will undertake impact analysis on proposed changes to L1 or L2 milestones
  - Participant views sought with response times as follows: 5 business days for urgent/low impact changes, 10 business days for major changes



# General questions

**Chris Muffett** 

# Further information

- AEMO 5MS Program contacts:
  - Graeme Windley, 5MS Program Manager
  - Chris Muffett, 5MS Business Lead
  - Emily Brodie, 5MS Procedure Lead
  - Malcolm Borschman, 5MS Systems Lead
  - Peter Carruthers, 5MS Business Advocate
- Contact details:
  - 5MS email: <u>5ms@aemo.com.au</u>
  - 5MS webpage:

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



# Forward meeting plan

**Chris Muffett** 

# Upcoming meetings

- Program Consultative Forums:
  - PCF #10: Friday 10 May
- Next Executive Forum:
  - TBA: targeting May
- Next Procedure Working Group:
  - Friday 12 April
- Next Systems Working Group:
  - Monday 15 April
- Meetings and forum dates: <u>http://www.aemo.com.au/Electricity/National-</u> Electricity-Market-NEM/Five-Minute-Settlement

