



PCF#23: 5MS & GS Program Impact of AEMC Decision

Thursday, 16 July 2020

This meeting is recorded for the purpose of minute taking.

AEMO Competition Law Meeting Protocol

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO regarding proposed reforms or other initiatives, all participants agree to adhere to the CCA at all times and to comply with this Protocol. Participants must arrange for their representatives to be briefed on competition law risks and obligations.

Participants in AEMO discussions **must**:

1. Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
2. Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
3. Immediately and clearly raise an objection with AEMO or the Chair of the meeting if a matter is discussed that the participant is concerned may give rise to competition law risks or a breach of this Protocol

Participants in AEMO meetings **must not** discuss or agree on the following topics:

1. Which customers they will supply or market to
2. The price or other terms at which Participants will supply
3. Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
4. Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
5. Refusing to supply a person or company access to any products, services or inputs they require

Under no circumstances must Participants share Competitively Sensitive Information. Competitively Sensitive Information means confidential information relating to a Participant which if disclosed to a competitor could affect its current or future commercial strategies, such as pricing information, customer terms and conditions, supply terms and conditions, sales, marketing or procurement strategies, product development, margins, costs, capacity or production planning.

Agenda

#	Time	Topic	Presenter
1	10:00 – 10:05	Welcome	Peter Carruthers
2	10:05 – 10:10	Actions from previous meeting	Anne-Marie McCague
3	10:10 – 10:15	Purpose of this session	Peter Carruthers
5	10:15 – 10:25	AEMC Decision	AEMC
6	10:25 – 10:35	Impact on AEMO Program	Rowena Leung
7	10:35 – 10:40	Impact on Procedures	Emily Brodie
8	10:40 – 10:50	Impact on Industry Readiness	Greg Minney
9	10:50 – 10:55	Impact on Readiness Reporting	Austin Tan
10	10:55 – 11:05	Impact on Metering Transition Plan	Blaine Miner
11	11:05 – 11:15	Impact on Industry Test and Market Trial	Greg Minney
12	11:15 – 11:35	Industry Risks and Issues Review	Anne-Marie McCague
13	11:35 – 11:45	Interactions with other market changes	Simone Zawadski
14	11:45 – 11:50	Next Steps	Peter Carruthers
15	11:50 – 12:00	Program Update	Rowena Leung
16	12:00 -12:10	General Questions	Peter Carruthers
17	12:10	Meeting Close	Peter Carruthers

Welcome

Peter Carruthers

Actions from Previous Meetings

Anne-Marie McCague

PCF Actions

No.	Action	Comment
22.3.1	AEMO to update the Industry Risks and Issues Register with the risk of three go-lives in close succession.	Risk drafted for discussion during this meeting.
22.3.2	AEMO to add the risk of three go-lives in close succession to the PCF#23 agenda.	Completed
22.4.1	AEMO to reschedule the July PCF to after the AEMC decision on the proposed 12-month deferral.	Completed
22.5.1	AEMO to provide an update on time available for B2B testing.	In progress. Will be discussed with ITWG.
22.5.2	AEMO to postpone Executive Forum until after the AEMC decision the 12-month deferral on 9 July 2020.	Completed – rescheduled for 31 July.
22.6.1	AEMO to discuss approach for Readiness Reporting Round 3 with the RWG in light of the upcoming decision on the proposed 12-month deferral.	Complete – update on approach during this session
22.8.1	AEMO to provide a reference for the source of the information presented on slide 35 – systems deployment update.	See next slide.
22.9.1	AEMO to present results of working group structure review to PCF.	Proposal was presented to SWG and RWG. Many participants signaled their support during the session and through the 5MS mailbox during the feedback period. This approach has been implemented.

24/07/2020

Systems Deployment Update

Staging Environment

Pre-Production

Production Go-Live

Dispatch

SWG#23
Slide 43

- ✓ P1 – Bidding FTP & API – 29-Nov-19
- ✓ P2 – Bidding Web UI – 29-Nov-19
- ✓ P3 – Dispatch, Pre-dispatch and PASA - 29-Nov-19
- ✓ P4 – Pricing & Miscellaneous – 29-May-20

- 5-min Bidding (all packages) – 29-Nov-20

- 5-min Bidding (all packages) – 01-Apr-21

Retail

SWG#23
Slide 49

- ✓ P1: MTRD FTP Metering Data Ingestion – 01-Dec-19
- P2: B2M via API (API Push) & All Meter Data Ingestion scenarios – 15-Jun-20
- P3: B2M via API (API Pull) & SATS Reports – 31-Aug-20

- MDM solution (all packages) – 01-Feb-21

- MDM solution (all packages) – 09-Mar-21

Planned for 01-Mar-20

Settlements

SWG#23
Slide 46

- ✓ P1: Reallocations – 01-Nov-19
- ✓ P2: Settlements & Billing – 16-Mar-20
- ✓ P3: Prudentials & Estimation – 15-May-20

- ✓ Reallocations (P1) – 26-Feb-20
- Settlements Platform (P2&3) – [TBC]-Feb-21

- ✓ Reallocations (P1) 01-Apr-20
- Settlements Platform (P2&3) – 01-Apr-21

Indicatively 15-Feb-21 but TBC

RWG Actions

No.	Action	Comment
12.6.1	RWG to provide feedback on proposal for RWG to be expanded to include SWG members, and for the working group to take an end-to-end systems and readiness view.	Three responses. All supportive. New meeting invites for combined working group have been sent.
12.7.1	AEMO to update industry testing slides with clarifications	Complete
12.7.2	AEMO to provide more details on the testing scope (e.g. test objective, key participants, key scenarios)	Included in updated Test Strategy
12.7.3	RWG to provide feedback on their testing requirements for Dispatch, Settlement and Retail systems in pre-production	Three responses. One noted they will provide more details after the final determination.
12.8.1	RWG to provide feedback on the readiness reporting approach if there is a delay to the 5MS and GS commencement dates	Three responses. No issues raised. To be discussed at the working group today.
12.8.2	RWG to provide feedback on the proposed bar chart format for readiness reporting results	Three responses. All supportive. Future readiness reports will be presented in bar chart format.

RWG Actions

No.	Action	Comment
12.8.3	RWG to provide suggestions on any changes to the readiness reporting plan	<p>Three responses. Two had no additional feedback. Another noted there was ambiguity when interpreting 'n/a' responses.</p> <p>AEMO will update n/a to "Not Applicable" to reduce ambiguity.</p>
12.8.4	AEMO and the RWG to consider how readiness reporting results can be used to consider if the industry is tracking to plan for 5MS and GS	<p>Two responses.</p> <p>AEMO will be providing additional analysis in the readiness report that focuses on the essential capabilities required for market commencements. Will be presented at RWG in August.</p>

Purpose of this Session

Peter Carruthers

Purpose of this session

- To provide a summary of the AEMC decision and its impact on the 5MS & GS implementation program
- To identify the impact of the change in dates on the Industry Readiness activities including:
 - Industry Testing and Market Trial
 - Metering Transition Plan
 - Readiness Reporting
- To discuss the approach to procedure updates
- To discuss, at a high-level, the impact on other market changes

AEMC Decision

AEMC

AEMC Deferral Decision

Activity	Original date	New date
Commencement of 5MS	1 July 2021	1 October 2021
Commencement of "soft start" GS	1 July 2021	1 October 2021
Commencement of financial settlement of GS	6 February 2022	1 May 2022
Compliance date for all new and replacement metering installations (other than excluded metering installations) to be configured to record and provide 5-minute data	1 December 2022	1 December 2022
AEMO required to publish UFE data report	1 July 2021	1 October 2021
AEMO required to publish UFE report on unaccounted for energy trends	1 March 2022	1 June 2022

AEMC final determination on delayed implementation of 5MS and GS

Rule change proposal and AEMC conclusions

In the context of COVID-19 and the market bodies' work to prioritise regulatory reform processes, AEMO proposed to delay the start of 5MS and GS by 12 months.

The rule change was assessed on an expedited process.

AEMC conclusions:

- COVID-19 has had a short term impact on industry capabilities to implement 5MS and GS and meet business activities to supply energy and support customers.
- These COVID-19 impacts have put a strain on participant capabilities, slowing or delaying their 5MS and GS implementation programs.
- The impact of COVID-19 on industry capabilities was only in the order of two to three months and participants have so far had a number of years to implement each of the 5MS and GS reforms.

AEMC final determination on delayed implementation of 5MS and GS

Reasons to delay by 3 months

The AEMC considered that a 12 month delay was too long. It would:

- create cash flow benefits from deferring implementation expenditure, however 5MS and GS project costs would increase and overall industry cash flows are expected to be worse than not delaying 5MS and GS.
- not impact participants equally, with those participants that are more progressed with their implementation being more adversely impacted by a delay than those that were less progressed.
- delay the realisation of short-term efficiency benefits associated with 5MS and GS.
- not be an efficient or targeted way to address specific cash flow issues that a sub-set of participants may have. As such, it would not materially assist in avoiding potential financial contagion from COVID-19.

The AEMC decided that a shorter delay of three months to the start of 5MS and GS would:

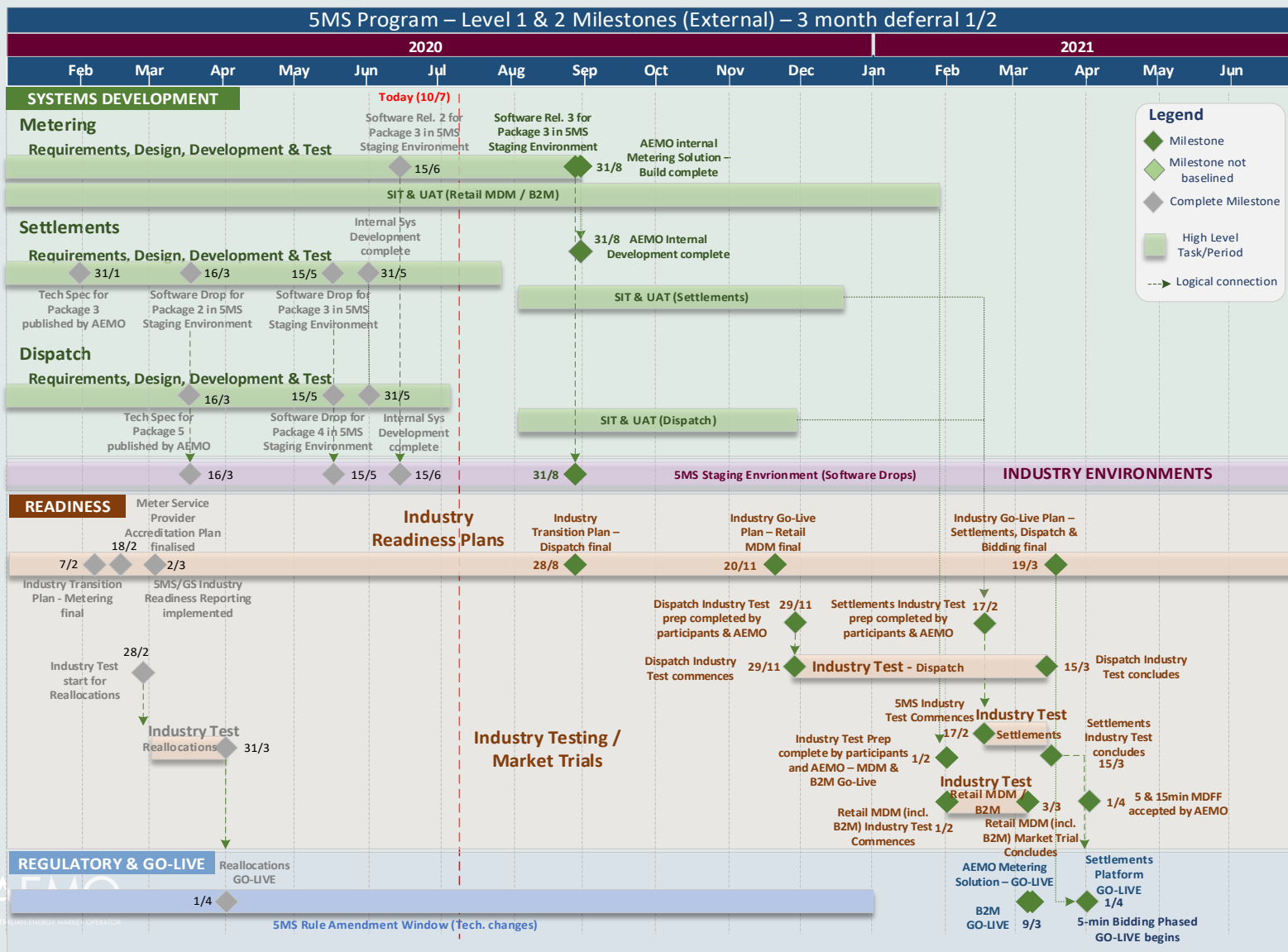
- recognise the short-term impact of COVID-19 on participant capabilities
- not significantly increase or decrease 5MS and GS implementation costs
- not materially reduce the broader market and consumer benefits from the rules.

Impact on AEMO Program

Rowena Leung

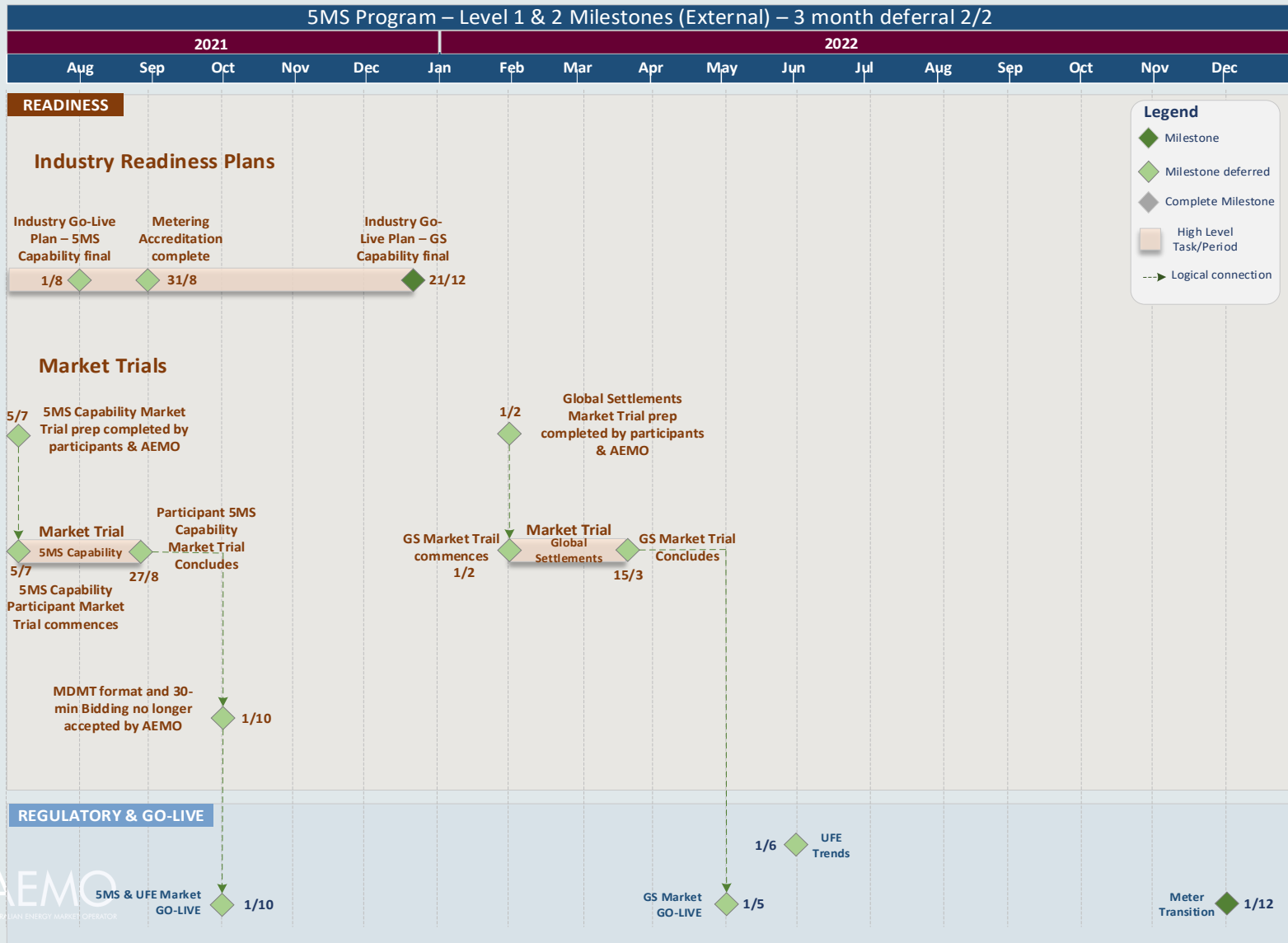
5MS Program Timeline

Level 1 and External Level 2 Milestones 1/2



5MS Program Timeline

Level 1 and External Level 2 Milestones 2/2



Milestone Changes

ID	Milestone	Planned Date	Deferral Date	Owner
Level 1 Milestones				
L1-17	5MS Market Trial Commences	6-Apr-21	5-Jul-21	AEMO
L1-9	5MS Market Trial Successfully completed	31-May-21	27-Aug-21	AEMO
L1-10	Metering Accreditation complete	31-May-21	31-Aug-21	AEMO / MSPs
L1-4	5MS & UFE Market Go-Live	1-Jul-21	1-Oct-21	AEMO / Participants
L1-18	GS Market Trial Commences	1-Oct-21	1-Feb-22	AEMO
L1-20	GS Market Trial Concludes	15-Nov-21	15-Mar-22	AEMO
L1-5	GS Market Go-Live	6-Feb-22	1-May-22	AEMO / Participants
L1-6	Mandatory 5MS Meter Data Delivery	1-Dec-22	1-Dec-22	AEMO
Level 2 Milestones				
Readiness Stream				
L2-RE23	5MS Capability Market Trial preparation completed by participants	6-Apr-21	5-Jul-21	Participants
L2-RE24	5MS Capability Market Trial preparation completed by AEMO	6-Apr-21	5-Jul-21	AEMO
L2-RE31	5MS Capability Participant Market Trial commences	6-Apr-21	5-Jul-21	AEMO
L2-RE20	Industry Go-Live Plan - 5MS Capability final complete	7-May-21	1-Aug-21	AEMO
L2-D10	5MS Capability Market Trial concludes	31-May-21	27-Aug-21	AEMO
L2-D11	30-min Bidding no longer accepted by AEMO	1-Jul-21	1-Oct-21	AEMO
L2-RE25	MDMT format no longer accepted by AEMO for interval meters	1-Jul-21	1-Oct-21	AEMO
L2-RE26	GS Market Trial preparation completed by participants	1-Oct-21	1-Feb-22	Participants
L2-RE27	GS Market Trial preparation completed by AEMO	1-Oct-21	1-Feb-22	AEMO
L2-RE21	Industry Go-Live Plan - GS Capability final complete	21-Dec-21	21-Dec-21	AEMO

Summary of Impact

- AEMO 5MS Program will continue to progress with system development and deployments to meet the current milestones
 - Platform release of MDM, Settlements and 5-min Bidding into 5MS Staging Environment, AEMO pre-production environment and production will remain as scheduled
 - The details of when each piece of functionality will be discussed through the RWG/SWG and will be shared on 13-Jul-20
- Industry Readiness activities (participant testing and transition) will change to accommodate the new rule commencement dates – to be discussed during this session
- Extension of the 5MS Staging Environment is under consideration
- Reallocations update will be needed with new 5MS commencement date – plan will be communicated through RWG/SWG
- Working Groups will remain on a monthly basis until 5MS go-live with focus groups being used as needed
- Working Groups/ Focus Groups used as needed up until GS go-live
- 5MS mailbox will remain active until GS go-live

Impact on Procedures

Emily Brodie

INDICATIVE effect of 5MS/GS deferral on procedures (1)

- New effective dates are likely the only impact to those procedures already updated for 5MS/GS
- Final determination indicates that AEMO can change the effective date of already-determined procedures (updated for 5MS and GS) without further consultation.
- <https://aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/procedures-workstream>

INDICATIVE effect of 5MS/GS deferral on procedures (2)

Area	# Rules consulted procedures	# other documents	Total # documents	Indicative impact of deferral	Proposed approach/comments
Metering	11	10	21	Low – effective date change only	<ul style="list-style-type: none"> • 5MS date change will likely be bundled with another planned consultation e.g. with ICFs or WDR. • Metering procedures “wash-up” consultation timing is able to be scheduled and communicated now that 5MS start date has been confirmed. • Planning will account for metrology procedures NER requirement that they are published at least 3 months ahead of their effective dates.
B2B	1		1	Low – effective date change only	<ul style="list-style-type: none"> • 5MS date change will likely be incorporated into current consultation. • Final publication expected late July.
Settlements	3	10	13	Low – effective date change only	BAU process, AEMO will update and advise
Prudentials	4	10	14	Low – effective date change only	BAU process, AEMO will update and advise
Dispatch	3	12	15	Low – effective date change only	BAU process, AEMO will update and advise
System operations	1	0	1	Low – effective date change only	BAU process, AEMO will update and advise

Next steps

Use AEMO's BAU processes to:

1. Review each of the 5MS and GS affected documents
 2. Assess the need for a consultation process
 3. Advise the industry of the outcome of the assessment of need for a consultation process
 4. Make any necessary changes to affected documents
 5. If necessary, consult in accordance with clause 8.9 of the Rules (or other clauses as relevant).
- Will advise on timeframes for each step at the August RWG/SWG (now that key 5MS/GS dates have been confirmed), accounting for any flow-on impacts to transition planning.
 - In addition to using BAU engagement channels, AEMO's 5MS program will communicate procedure change information through a log presented monthly to the RWG/SWG.

BAU channels for procedures

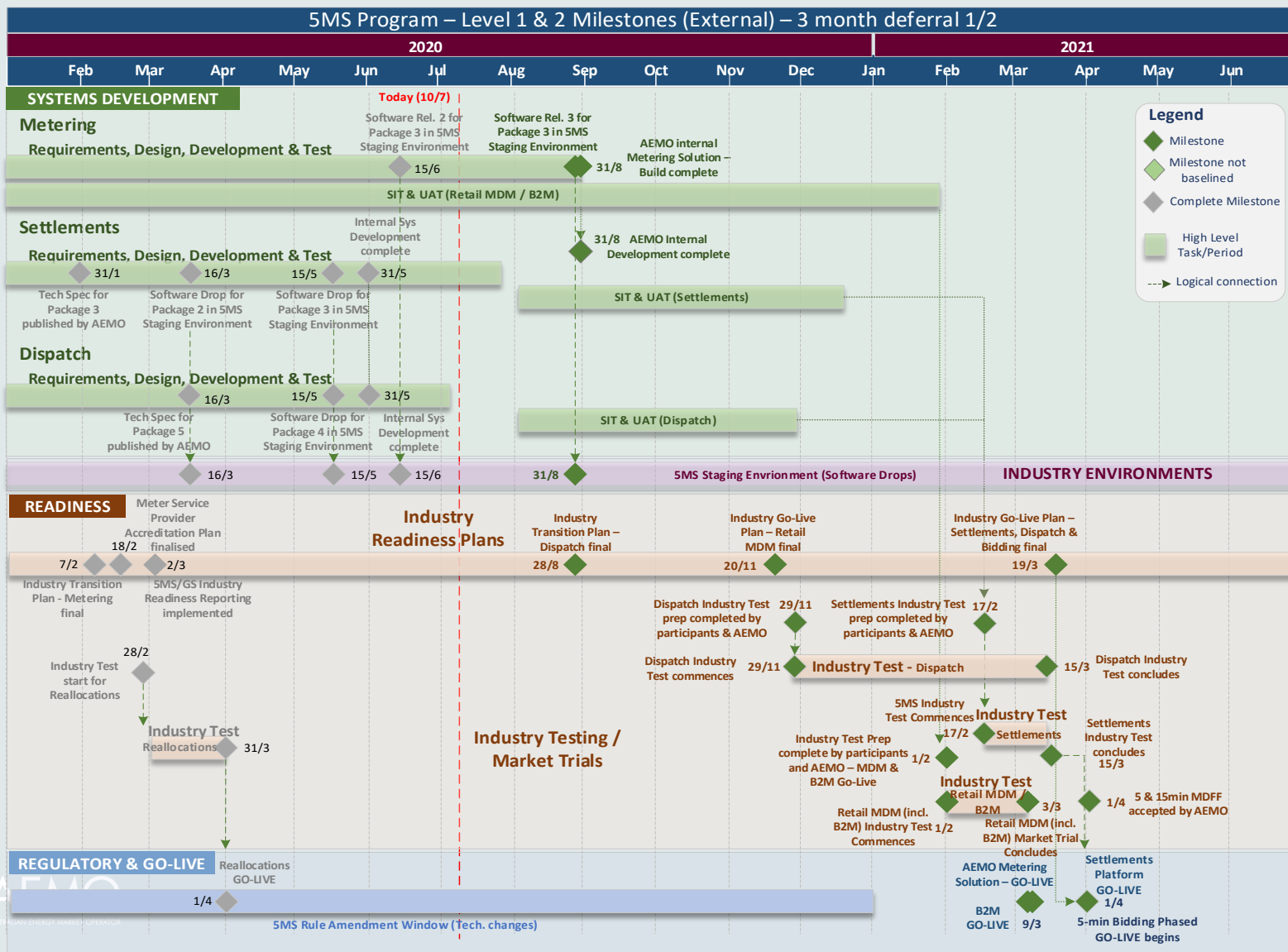
Area	Channel
Metering / metering data / standing data	B2M <u>Electricity Retail Consultative Forum (ERCF)</u> <ul style="list-style-type: none">Follow <u>change process</u> B2B <u>Information Exchange Committee</u> <ul style="list-style-type: none">Follow <u>change process</u>
Settlements	email: <u>settlements@aemo.com.au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

Impact on Industry Readiness

Greg Minney

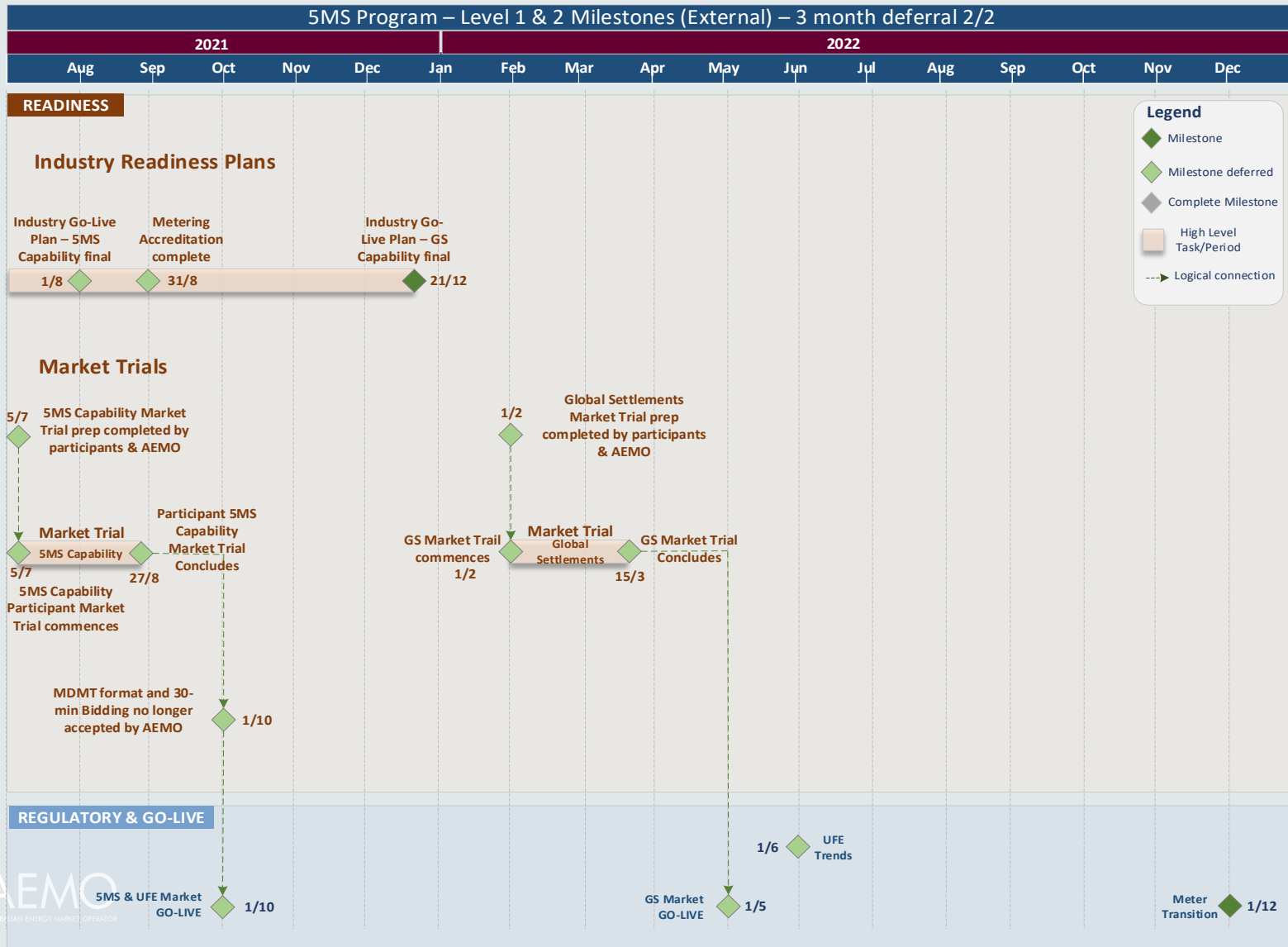
5MS Program Timeline

Level 1 and External Level 2 Milestones 1/2



5MS Program Timeline





Level 1 and External Level 2 Milestones 2/2



Level 2 Milestones – Readiness

Domain	Initiative	2019				2020				2021													
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4										
Readiness																							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct

Key Milestones (Program)

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

ID	Milestone	Target Date	Expected Date	Owner	Status
L2-RE11	Metering Service Provider Accreditation Plan Finalised	13-Mar-2020	18-Feb-2020	AEMO	Completed
L2-S12	Reallocations Go-Live	01-Apr-2020	01-Apr-2020	AEMO	Completed
L2-RE32	Industry Test for Reallocations Concludes	31-Mar-2020	31-Mar-2020	AEMO	Completed
L2-RE22	Industry Transition Plan – Dispatch final complete	28-Aug-2020	28-Aug-2020	AEMO	
L2-M11	Industry Test preparation completed by participants for MDM and B2M Go-Live	01-Feb-2021	01-Feb-2021	Participants	
L2-M12	Industry Test preparation completed by AEMO for MDM and B2M Go-Live	01-Feb-2021	01-Feb-2021	AEMO	
L2-RE29	Retail MDM (incl. B2M) Market Trial Commences	01-Feb-2021	01-Feb-2021	AEMO	
L2-RE30	Retail MDM (incl. B2M) Market Trial Concludes	03-Mar-2021	03-Mar-2021	AEMO	
L2-RE18	Industry Go-Live Plan Retail MDM finalised	20-Nov-2020	20-Nov-2020	AEMO	
L2-M24	B2M Go-Live	09-Mar-2021	09-Mar-2021	AEMO	
L2-M10	5 minute files in MDFF accepted by AEMO	01-Apr-2021	01-Apr-2021	AEMO	
L2-D7	Dispatch Industry Test preparation completed by participants	29-Nov-2020	29-Nov-2020	Participants	
L2-D8	Dispatch Industry Test preparation completed by AEMO	29-Nov-2020	29-Nov-2020	AEMO	

Level 2 Milestones – Readiness

Domain	Initiative	2019												2020												2021											
		Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
Readiness																																					

Key Milestones (Program)

ID	Milestone	Target Date	Expected Date	Owner	Status
L2-S10	Settlements Industry Test preparation completed by participants	17-Feb-2021	17-Feb-2021	Participants	
L2-S11	Settlements Industry Test preparation completed by AEMO	17-Feb-2021	17-Feb-2021	AEMO	
L2-RE28	Dispatch Industry Test concludes	15-Mar-2021	15-Mar-2021	AEMO	
L2-RE32	Settlements Industry Test concludes	15-Mar-2021	15-Mar-2021	AEMO	
L2-RE19	Industry Go-Live Plan Settlements, Dispatch & Bidding finalised	19-Mar-2021	19-Mar-2021	AEMO	
L2-RE23	5MS Capability Market Trial preparation completed by participants	05-Jul-2021	05-Jul-2021	Participants	
L2-RE24	5MS Capability Market Trial preparation completed by AEMO	05-Jul-2021	05-Jul-2021	AEMO	
L2-RE31	5MS Capability Market Trial commences	05-Jul-2021	05-Jul-2021	AEMO	
L2-RE20	Industry Go-Live Plan – 5MS Capability final complete	01-Aug-2021	01-Aug-2021	AEMO	
L2-D10	5MS Capability Market Trial concludes	27-Aug-2021	27-Aug-2021	AEMO	
L2-D11	30-min Bidding no longer accepted by AEMO	01-Oct-2021	01-Oct-2021	AEMO	
L2-RE25	MDMT format no longer accepted by AEMO for interval meters	01-Oct-2021	01-Oct-2021	AEMO	
L2-RE26	GS Market Trial preparation completed by participants	01-Feb-2022	01-Feb-2022	Participants	
L2-RE27	GS Market Trial preparation completed by AEMO	01-Feb-2022	01-Feb-2022	AEMO	
L2-RE21	Industry Go-Live Plan – GS Capability final complete	21-Dec-2021	21-Dec-2021	AEMO	

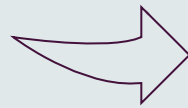
- Milestone complete
- Milestone on track
- Milestone deferred
- Milestone at risk
- Milestone not achieved

Summary of Impact on Approach to Transition



Phased implementation approach is maintained:

- Platform go-lives to deliver require capabilities
- 5MS and GS implementations aligned to Rule Commencement



Limited impact to Transition timeframes and windows:

- Shorter deferral has reduced the need for a “2 speed” transition
- Bidding transition period extends from 1 Apr to 1 Oct 2021
- Transition approach will continue to support commencement of transition activities as early as possible (subject to appropriate counter party agreements)



Metering Transition:

- Plan to be revised to take into consideration new Rule Commencement requirements
- Participants plans may need to be revised, with progress reported against new timings
- Participant accreditation timings to be reviewed

Summary of Impact on Market Trials and Readiness Reporting



Industry Testing and Market Trials:

- Market Trials realigned with revised Rule Commencement dates
- Staging environment to be utilized for participant testing of all releases, in mode agreed with Industry
- Industry tests for platform deployments as per current strategy



Readiness reporting:

- Participant special survey issued to provide the Executive Forum a consolidated view of participant impacts associated to the Rule Change request process and outcome
- Cadence of planned Readiness Reporting to be maintained
- Participants expected to report against their updated plans i.e. reflective of the revised Rule Commencements

Transition Documents

- Transition Strategy and Plan deliverables to be updated to reflect revised timeframes and dates
 - Metering Transition Plan - Priority
 - Bidding Transition Plan – 13 July 2020
 - Market Readiness Strategy
 - Transition and Go-Live Strategy
 - Industry Test and Market Trial Strategy
- Other documents to be reviewed
 - Contingency Plan
 - Industry Risks and Issues
 - Readiness Reporting
- Documents to be reviewed as part of the existing review cycles

Impact on Readiness Reporting

Austin Tan

Special readiness survey

- A special readiness survey was released on Friday 10 July to understand Participant impacts associated to the rule change request and final determination
- Results will be released to the PCF and RWG on Friday 24 July, and presented to the Executive Forum on Thursday 30 July.
- Survey responses are due COB Friday 17 July.

Stage	Date
Special survey released	Friday, 10 July 2020
Survey close	Friday, 17 July 2020
Results distributed to PCF/RWG	Friday, 24 July 2020
Present at EF	Thursday, 30 July 2020

Readiness Reporting

- Standard Readiness reporting will resume on Monday 20 July, with participants now considering their progress against the new Rule Commencement dates.
- The frequency of reporting will be every two months.
- An updated reporting timeline is provided below:

Readiness reporting	Survey released	Survey responses due	Distribute results	Discuss at RWG	Discuss at PCF	Discuss at EF
Round #1	05-Feb-20	14-Feb-20	2-Mar-20	11-Mar-20	05-Mar-20	12-Mar-20
Round #2	14-Apr-20	23-Apr-20	07-May-20	14-May-20	02-Jun-20	TBC
Special survey	10-Jul-20	17-Jul-20	24-Jul-20	24-Jul-20	24-Jul-20	30-Jul-20
Round #3	20-Jul-20	29-Jul-20	12-Aug-20	17-Aug-20	03-Sep-20	07-Sep-20
Round #4	15-Sep-20	24-Sep-20	08-Oct-20	13-Oct-20	05-Nov-20	19-Nov-20
Round #5	16-Nov-20	25-Nov-20	09-Dec-20	14-Dec-20	TBC	TBC

Impact on Metering Transition Plan

Blaine Miner

Context

Background

- Transition Focus Group reviewed the MTP at its 6th May meeting to understand what effects a delay may have on the plan
- Broadly speaking, nearly all MTP activities would shift by the duration of the deferral

Key Inputs/Assumptions

- Final determination timings
 - 5MS commencement date – 1 Oct 2021
 - GS “soft” start date – 1 Oct 2021
 - GS “hard” start – 1 May 2022
 - 5-min data delivery for new and replacement type 4/4A meters – 1 Dec 2022
- AEMO internal program continues to its current milestones i.e. staged platform deployments

Proposed Changes to the MTP

(Current MTP version 1.4 used as starting point)

Category	Act #	Activity Description	Current Start Date	Current End Date	Proposed Start Date	Proposed End Date
Meter Installation & Reconfiguration	A4, A9, A14, A20, A24	Install or reconfigure meters as required	Participant's Discretion	30-Apr-21	Participant's Discretion	30-Apr-21
	A5, A10, A15, A21	Apply for data storage exemptions as required	Participant's Discretion	30-Apr-21	Participant's Discretion	30-Apr-21
	A30	Creation of 5-min metering data based on SCADA data	AEMO's Discretion	1-Apr-21	AEMO's Discretion	1-Oct-21
	A31	For any registered 'Special Site'	Participant's Discretion	31-May-21	Participant's Discretion	31-Aug-21 (3mths extension)
Meter Data Delivery	A32, A37, A42, A47, A53, A59, A65, A71, A84, A88	Agreement to allow the delivery of 5min metering data pre 1 July 2022 between NSP, Retailer, MDP and AEMO	Participants' Discretion	28-Feb-21	Participants' Discretion	31-May-21 (3mths extension)
	A33, A38, A43, A48, A54, A60, A66, A90	5min metering data delivered to Participants (B2B)	As per Agreements	31-May-21	As per Agreements	31-Aug-21 (3mths extension)
	A34, A39, A44, A49, A55, A61, A67, A73, A85, A91	Agreement to allow the delivery of 5min metering data pre 1 July 2022 for B2M purposes	AEMO and MDPs Discretion	28-Feb-21	AEMO and MDPs Discretion	31-May-21 (3mths extension)
	A35, A41, A46, A50, A56, A62, A68, A74, A86, A92	5min metering data delivered to AEMO (MDFF)	As per Agreements	31-May-21	As per Agreements	31-Aug-21 (3mths extension)

Proposed Changes to the MTP

(Current MTP version 1.4 used as starting point)

Category	Act #	Activity Description	Current Start Date	Current End Date	Proposed Start Date	Proposed End Date
Meter Data Delivery	A36, A40, A45, A51	Create/activate export and import (active (kWh) and reactive (kVArh)) energy datastreams in CNDS table	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
	A36a, A40a, A45a	Complete data cleanse to ensure, the RegisterID matches the content of the 'Suffix'	Participant's Discretion	31-May-21	Participant's Discretion	31-Aug-21 (3mths extension)
	A83	Updating Type 7 Datastreams in MSATS	Participant's Discretion	31-May-21	Participant's Discretion	31-Aug-21 (3mths extension)
	A93	Delivery of tier 1 basic meter metering data (Actuals, Subs and Forward Estimates) to AEMO	Participant's Discretion	31-Mar-21	Participant's Discretion	30-Jun-21 (3mths extension)
MSATS Standing Data Creation & Maintenance	A95-A97 A99-A101	Create Cross Boundary and NCONUML NMIs, including associated datastreams and registers	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
	A101a-A101c	Convert 'SASCALE NMI' - Create individual controlled load NMIs in MSATS	Participant's Discretion	31-Mar-21	Participant's Discretion	30-Jun-21 (3mths extension)
	A102, A104, A106, A108, A110, A112, A114	Ensure capability to receive and process new NMI classification codes	Participant's Discretion	30-Apr-21	Participant's Discretion	30-Apr-21
	A103, A105, A107, A109, A111, A113, A115	Update NMI Class Codes for existing NMIs as required	1-May-21	31-May-21	1-May-21	31-Aug-21 (3mths extension)

Proposed Changes to the MTP

(Current MTP version 1.4 used as starting point)

Category	Act #	Activity Description	Current Start Date	Current End Date	Proposed Start Date	Proposed End Date
MSATS Standing Data Creation & Maintenance	A116	Update LR and FRMP to GLOPOOL for existing NMIs as required	6-Feb-22	6-Feb-22	1-May-22 (3mths extension)	1-May-22 (3mths extension)
	A117, A118	Create/activate tier 1 basic meter datastreams as required	Participant's Discretion	31-Mar-21	Participant's Discretion	30-Jun-21 (3mths extension)
	A119	Update Datastream type codes from 'P' to 'I' or 'N' as required	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
	A120	Update VIC TUoS Datastream type codes from 1-4 to 'I' or 'N' as required	9-Mar-21	31-May-21	9-Mar-21	31-Aug-21 (3mths extension)
Metering Accreditation Updates	A125, A126, A133, A134	Apply and gain accreditation update approval as required	In accordance with Roadmap agreed with AEMO	In accordance with Roadmap agreed with AEMO	In accordance with Roadmap agreed with AEMO	In accordance with Roadmap agreed with AEMO

Next Steps

- Engage TFG to discuss and finalise propose changes to the MTP
- Obtain RWG endorsement of TFG recommended amendments
- Progress, monitor and report on MTP progress

Impact on Industry Test and Market Trial

Greg Minney

5MS and GS Industry Test and Market Trials

- Industry Test and Market Trials strategy updates to reflect Industry Deferral
- Testing to support platform go-lives as currently planned
- Timings for Market Trials for 5MS and GS shift in alignment with new rule commencements
 - Proposed 5MS market Trial 5/7/21 → 27/08/21
 - Proposed GS Market Trial 1/2/22 → 15/03/22
- GS Market Trial proposed dates avoid market trial over Christmas period
- Separate market trials proposed for 5MS/ UFE reporting capability and GS to allow for industry population of required standing and tier 1 metering data

Proposed Changes to Participant Testing Milestones

ID	Milestone	Planned Date	Deferral Date	Owner
Level 1 Milestones				
L1-9	5MS Market Trial Successfully completed	31-May-21	27-Aug-21	AEMO
L1-18	GS Market Trial Commences	1-Oct-21	1-Feb-22	AEMO
L1-20	GS Market Trial Concludes	15-Nov-21	15-Mar-22	AEMO
Level 2 Milestones				
Readiness Stream				
L2-RE23	5MS Capability Market Trial preparation completed by participants	6-Apr-21	5-Jul-21	Participants
L2-RE24	5MS Capability Market Trial preparation completed by AEMO	6-Apr-21	5-Jul-21	AEMO
L2-RE31	5MS Capability Participant Market Trial commences	6-Apr-21	5-Jul-21	AEMO
L2-RE20	Industry Go-Live Plan - 5MS Capability final complete	7-May-21	1-Aug-21	AEMO
L2-D10	5MS Capability Market Trial concludes	31-May-21	27-Aug-21	AEMO
L2-RE26	GS Market Trial preparation completed by participants	1-Oct-21	1-Feb-22	Participants
L2-RE27	GS Market Trial preparation completed by AEMO	1-Oct-21	1-Feb-22	AEMO



Please provide feedback on these proposed changes to the 5MS Mailbox by 22-Jul-20

This allows us to include the outcome in the Executive Forum Pack due 23-Jul-20

Participant Testing in 5MS Staging Environment

- Capability deployed to staging environment to support participant build and test well in advance of Industry Test and Market trial commencement
- Capability and timing to reflect the operating mode (e.g. bidding transition or full 5MS mode, MDM platform go-live , 5MS settlement, GS modes to be agreed with RWG/ITWG
 - Discussion includes detailed functionality provided
 - Test data refresh dates for industry test data preparation
- Staging extended to support extended participant testing during deferral period being evaluated

Test Planning engagement

- As requested by the SWG, AEMO has developed a spreadsheet that sets out the deployment dates for functionality into the 5MS Staging Environment, pre-prod and prod
- The first draft will be circulated on 13-Jul and a session with the RWG (SWG) and ITWG will be arranged for the W/B 20-Jul
- Discussion topics will be circulated in advance to allow participants to prepare
- The table below provides the schedule for developing the test plans in consultation with ITWG

Test Phase	Go-live Date	Test Commencement Date	ITWG Engagement	Draft Plan	Finalised Plan
MSATS	9/3/21	Feb 2021	Sept 2020	Oct 2020	Dec 2020
Five-Minute Settlement	1/10/21	<i>July 2021</i>	<i>Feb 2021</i>	<i>March 2021</i>	<i>May 2021</i>
Global Settlement	1/5/22	<i>Feb 2022</i>	<i>Sept 2021</i>	<i>Oct 2021</i>	<i>Dec 2021</i>

Industry Risks and Issues Review

Anne-Marie McCague

Objective of this section

- A number of risks as a consequence of a 12-month deferral have been raised through the working group discussions
- AEMO has noted those risks but agreed with participants that they would not be added to the Industry Risks and Issues Register until the AEMC final determination was published – they are included in the following slides
- AEMO has identified existing risks and issues in the Industry Risks and Issues Register that are impacted by the deferral to be discussed during this session

Reduced opportunity for influence for those participants that choose to defer

Risk Description	Risk Assessment		
<p>There is a risk that participants that choose to postpone their programs in line with the new commencement dates will have less opportunity to influence the 5MS Program than those that progress on the same timeline as AEMO.</p>	Inherent Likelihood	Inherent Consequence	Inherent Risk Rating
	Residual Likelihood	Residual Consequence	Residual Risk Rating

- AEMO does not consider that a 3-month deferral will result in a 2-speed implementation as was expected with a 12-month scenario.
- AEMO stakeholder engagement and working groups will continue at the same frequency until the GS go-live.
- Therefore, AEMO proposes that this item not be included on the risk register.

Agreed approach during meeting

Additional costs incurred as a result of 12-month deferral

Risk Description	Risk Assessment		
<p>There is a risk that a 12-month deferral will cause participants to incur additional costs and face possible impediments to delivery. At this stage, with contractual commitments made and additional contract staff engaged, delay to the program go-live date will force either:</p> <ul style="list-style-type: none"> a) extension of contracted resources for 12 months at considerable additional cost, or b) release of contractors and negation of warranty obligations - escalating delivery risk. 	Inherent Likelihood	Inherent Consequence	Inherent Risk Rating
	Residual Likelihood	Residual Consequence	Residual Risk Rating

- AEMO considers that this risk is not relevant with a three-month deferral and proposes not to include it in the Industry Risks and Issues Register.

Agreed that this should be changed to an issue and amended to reflect 3-mth deferral

New 5MS and GS Go-Live dates could impact other industry change programs

Risk Description	Risk Assessment		
<p>The new commencement dates are closer to some other industry change programs. There is a risk that industry and AEMO resources and systems may be constrained during a period of multiple major go-lives which may lead to difficulties with timelines and system stability.</p>	Inherent Likelihood	Inherent Consequence	Inherent Risk Rating
	Likely	Moderate	Significant
	Residual Likelihood	Residual Consequence	Residual Risk Rating

- This risk is under consideration by AEMO and will be discussed further in the next section.
- Mitigation measures will be developed and the residual risk rating will be assessed.

Agreed approach during meeting

AEMO Systems Deployment Cutover Risk

Agreed approach during meeting

Risk Description	Risk Assessment		
<p>The current approach to the AEMO systems deployments elements of the cutover has the Retail stream (the most complex and riskiest) going first on 9 March, then both the Dispatch and Settlements systems deployments together 3 weeks later on 1 April. There is a risk that the Retail deployment could lead to push back on the following deliveries from the SMS program, the AEMO business and/or market participants.</p>	Inherent Likelihood	Inherent Consequence	Inherent Risk Rating
	Possible	Major	Significant
	Residual Likelihood	Residual Consequence	Residual Risk Rating

- AEMO will take the following measures internally to reduce the risk:
 - Identify shared resources and establish dedicated personnel in place
 - Minimise/re-schedule AEMO-wide BAU changes during the “cutover” period
 - Bring forward compatibility testing of key interfaces (i.e. RM40 file) to the maximum extent possible
 - Bring forward production deployment of any components to reduce the “go-live footprint”, where possible and overall go-live risk is not increased (currently being executed for Dispatch).
- Changing dates (either bring forward or push back) is not the preferred option, however:
 - Dispatch and Settlements system capability deployments do not result in immediate actions for participants (noting the potential for a mandatory data model uptake if they are split, which would need to be understood and discussed if so); and
 - Any proposed change would need to ensure the benefits to mitigating delivery risk outweigh inconvenience or impacts on the market.

Non-5MS Market changes not reflected in the 5MS Staging Environment

Risk Description	Risk Assessment		
<p>There is a risk that market changes from projects other than the 5MS and GS implementation that go-live during the extended 5MS and GS transition period will not be reflected in the 5MS Staging Environment which could mean that it is not an effective environment for participant testing.</p>	Inherent Likelihood	Inherent Consequence	Inherent Risk Rating
	Likely	Moderate	Significant
	Residual Likelihood	Residual Consequence	Residual Risk Rating

- This risk was raised under the assumption of a 12-month deferral.
- There will be no market change go-live before the 5MS commencement date.
- Risk still relevant for transition period up to GS commencement.
- This is being reviewed as part of the work on interactions with other market changes and 5MS Staging Environment.
- Mitigation measures to be determined and risk to be updated with residual risk rating.

Agreed approach during meeting

Risk that participants that paused their programs will not be ready

Risk Description	Risk Assessment		
There is a risk that key participants that chose to pause their 5MS and GS implementation programs while they waited for the AEMC decision on the deferral and may not be able to recover the lost time under a 3-month deferral.	Inherent Likelihood	Inherent Consequence	Inherent Risk Rating
	Likely	Major	Critical
	Residual Likelihood	Residual Consequence	Residual Risk Rating

- AEMO has circulated a short survey to the RWG to identify if there are any participants that chose to pause their programs that are now at risk of not being ready for the new commencement dates
- AEMO needs to understand the role of these participants and the mitigation measures that are being put in place prior to making a full assessment of this risk.

Agreed approach during meeting

There is no single environment for complete industry testing

Issue Description	Rating
<p>Currently, the functionality releases into 5MS Staging Environment do not allow for participants to test end-to-end (integrated) 5MS and GS functionality across streams (including B2B). Participants can test the majority of market system capabilities in the 5MS Staging environment, however for some participants that involves carrying out a change to repoint their testing environment from one AEMO environment to another, and back again for future test phases. It will be possible to test 5MS and GS E2E processes once it is available in pre-production, however this will be closer to the 5MS and GS commencement dates and does not allow for 5-minute testing in the near-term.</p>	Medium

- AEMO is considering this issue in light of the three-month deferral and will discuss the issue resolution approach with RWG/SWG and ITWG.

Agreed approach
during meeting

Updated to reflect decisions made during meeting

Existing Risks Impacted by Deferral

No.	Risk Description	Residual Likelihood	Residual Consequence	Residual Risk Rating	AEMO Proposal
R11	The AEMO internal project is not ready for 5MS Go Live	Unlikely	Major	Medium	Risk trend is improving as 3-month deferral provides contingency to all industry participants.
R26	Impact of Covid-19 resulting in participants and / or AEMO being unable to meet 5MS Program timelines	Unlikely	Moderate	Medium	Reduce likelihood to "Rare" since deferral has provided additional time to compensate for the impact of Covid-19. Overall rating remains at "Medium" Continue to monitor risk.
R19	Risk of a critical mass of participants not being ready at identified critical path milestones	Unlikely	Major	Medium	This risk needs to be reviewed once the results of the readiness reporting has been received.
R02	Risk that there is one or more participants that aren't 'ready' at go-live	Possible	Major	Significant	Risk trend is improving as 3-month deferral provides contingency to all industry participants. Continue to monitor risk.

Existing Issues Impacted by Deferral

Issue Description	Rating
Reduced resource availability as staff are diverted on to considering 12-month deferral consultation	Significant

- This issue can now be closed.

Agreed approach
during meeting

Interactions with other market changes

Simone Zawadski

Interaction with other market changes

- AEMO recently developed and consulted on a 'Regulatory Implementation Roadmap'
- This roadmap sets out a holistic view of the industry-wide program for implementation of regulatory change initiatives
- The roadmap had go-live date assumptions for key initiatives 5MS and WDR
- Dates have now been finalised, so the roadmap will be updated and released to participants
- Key issue will be co-ordination of regulatory implementation in 2H 2021
 - 5MS – 1 October 2021
 - WDR – 24 October 2021
 - Customer switching
 - Other initiatives flagged including NMI Standing Data Review, MC Planned Interruptions and SAPS.
- AEMO is presently considering co-ordination matters:
 - Co-ordination of industry readiness (e.g. market trials)
 - IT development and schema/aseXML co-ordination
 - Testing environments
 - Procedures
 - Technical Specifications

Next Steps

Peter Carruthers

Next Steps

- AEMO will continue to work with participants on the impact of the decision
- AEMO will circulate the results of the survey on the impacts of the decision on participant programs to the PCF and RWG by 24 July. The results will be presented at the Executive Forum on 30 July
- A General Information Session will be held on 31 July with the aim to provide an update to the wider stakeholder groups i.e. those not directly engaged in the 5MS Program.
 - All Working Groups members are still welcome
 - Please forward the invite to any of your colleagues that you think may be interested
- Invitations to a Vendor Session in September will be issued
- Participants to provide feedback on changes to testing milestones by 22-Jul

Executive Forum Agenda

- Actions from previous meeting
- AEMC decision on proposed deferral
- Impact on AEMO Program as a result of 3-month deferral
- Impact on Industry Readiness as a result of 3-month deferral
 - Readiness reporting
 - Industry test and market trial
 - Metering Transition Plan
- Issues and risks as a result of the deferral
- Update on regulatory implementation roadmap
- Program update including changes to milestones
- Update on cost recovery
- Update on Readiness Report Round 2
- Update on definition of Critical Mass

Program Update

Rowena Leung

Program update and current activities



AEMO program

- Overall Program Green trending down
- L1-13 milestone: Core functionality on target to be completed end of Aug. Defect fixing and solution tuning will continue. These items will not impact Staging and pre-Prod deployments.
- Delivery alignment with Wholesale Demand Response and Customer Switching programs required. Impacts to be discussed with the RWG.
- Realigned industry forum (the combined RWG / SWG) to begin from July.



Systems

- Staging environment has been successfully updated with the 2nd Retail drop on 15 June. Minimal market interaction with the deployment so far (Q&A sessions resulting in one or two questions).
- Planning for 3rd Staging drop for Retail planned for required with the RWG –
- Dispatch and Settlements is on track for completing ST in July and beginning SIT activities on time from 3 August.
- Retail Metering stream is in an intense period of development and acceptance testing



Readiness

- Assessment of readiness report results with focus on assessment of progress against rule commencement requirements
- ITWG and RWG focus on Industry test scope, approach and preparation for Retail, Settlements and Dispatch releases
- Planning for the initial assessment of Industry impacts arising for 9th July deferral decision. Special readiness survey to be released 10th July for industry response
- Bidding transition plan approach reviewed with DFG on 29th July, Draft plan to be released 14th July

SWG #23 Update – 17 June 2020

Key Discussion Topics:

- Capability deployment to 5MS Pre-Prod discussed
 - Certain data and environment limitations mean some functionality in Pre-Prod may not be able to be effectively tested in that environment.
 - Request for a more detailed view from a Testing perspective instead (participant input provided in session and appreciated).
 - Spreadsheet to be delivered to the SWG, RWG & ITWG distribution lists Tuesday 14 July.
- Risk requested on Staging environment – participants needing to point to Staging then re-point later to Pre-Prod.
- Considerable support for combined RWG / SWG approach from SWG.
- The pack & minutes contain further details on discussions on Procedures, the B2M MTRD and B2B Stop Files – please reference for further information.

General Questions

Peter Carruthers

Meeting Close

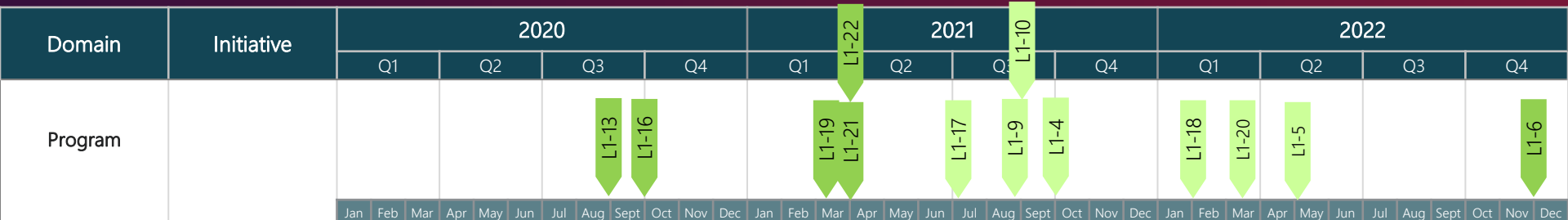
Peter Carruthers



Appendix: Milestones impacted by deferral

- The complete timelines pack is available on the 5MS website:
- <https://www.aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement>

Level 1 Milestones



Key Milestones (Program)					
ID	Milestone	Target Date	Expected Date	Owner	Status
L1-1	5MS Drafting Amendments submitted to AEMC	20-Mar-2019	15-Mar-2019	AEMO	Complete
L1-11	All AEMO workstream development commenced	23-May-2019	23-May-2019	AEMO	Complete
L1-2	IEC Approves B2B Procedures	01-Jul-2019	01-Jul-2019	AEMO	Complete
L1-15	5MS Drafting Amendments determined by AEMC	31-Aug-2019	08-Aug-2019	AEMO	Complete
L1-12	5MS Staging Environment live	01-Dec-2019	01-Dec-2019	AEMO	Complete
L1-3	AEMO publishes NEM Procedures	01-Dec-2019	01-Dec-2019	AEMO	Complete
L1-7	Market Readiness Strategy published by AEMO	20-Jan-2020	29-Oct-2019	AEMO	Complete
L1-13	AEMO internal development complete	31-Aug-2020	31-Aug-2020	AEMO	
L1-16	5MS Cost Recovery approach finalised	31-Mar-2021	31-Mar-2021	AEMO	
L1-19	AEMO Metering Solution – Go-Live	09-Mar-2021	09-Mar-2021	AEMO	
L1-17	5MS Market Trial Commences	05-July-2021	05-July-2021	AEMO	
L1-21	5-min Bidding Phased Go-Live begins	01-Apr-2021	01-Apr-2021	AEMO	
L1-22	Settlement Platform Go-Live	01-Apr-2021	01-Apr-2021	AEMO	
L1-9	5MS Market Trial Successfully completed	27-Aug-2021	27-Aug-2021	AEMO	
L1-10	Metering accreditation complete	31-Aug-2021	31-Aug-2021	AEMO / MSPs	
L1-4	5MS & UFE Market go Live	01-Oct-2021	01-Oct-2021	AEMO / Participants	
L1-18	GS Market Trial Commences	01-Feb-2022	01-Feb-2022	AEMO	
L1-20	GS Market Trial concludes	15-Mar-2022	15-Mar-2022	AEMO	
L1-5	GS Market go live	01-May-2022	01-May-2022	AEMO / Participants	
L1-6	Mandatory 5MS meter data delivery	01-Dec-2022	01-Dec-2022	AEMO	

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