



# 5MS & GS Executive Forum #8

THURSDAY 12 MARCH 2020

PLEASE NOTE THIS MEETING WILL BE RECORDED FOR THE PURPOSE OF PREPARING MINUTES

# Agenda

No.	Agenda Item	Presenter
1	Welcome, Introductions and Apologies	Peter Geers
2	Minutes and Actions	Peter Geers
3	Volume of Industry Change	Clinton Rodda - Ausnet
4	AEMO Cost Recovery Update	Peter Carruthers / Jack Fitcher
5	Industry Risks and Issues	Graeme Windley
6	AEMO 5MS & GS Program status update	Graeme Windley
7	Industry Readiness Reporting	Greg Minney
8	Transition and Cutover Approach	Greg Minney
9	Contingency	Greg Minney
10	Industry Engagement	Anne-Marie McCague
11	General Questions	Peter Geers
12	Meeting Close	Peter Geers

# Welcome

Peter Geers

# Action Items

No.	Agenda Item	Action required	Responsible	Status
7.3.1	Market Procedures	AEMO to clarify the 3 potential changes to the Procedures and what procedures change group will be used.	AEMO	Closed - Procedure change tracking log now in use for RWG and SWG in order to be transparent about changes that may impact 5MS/GS.

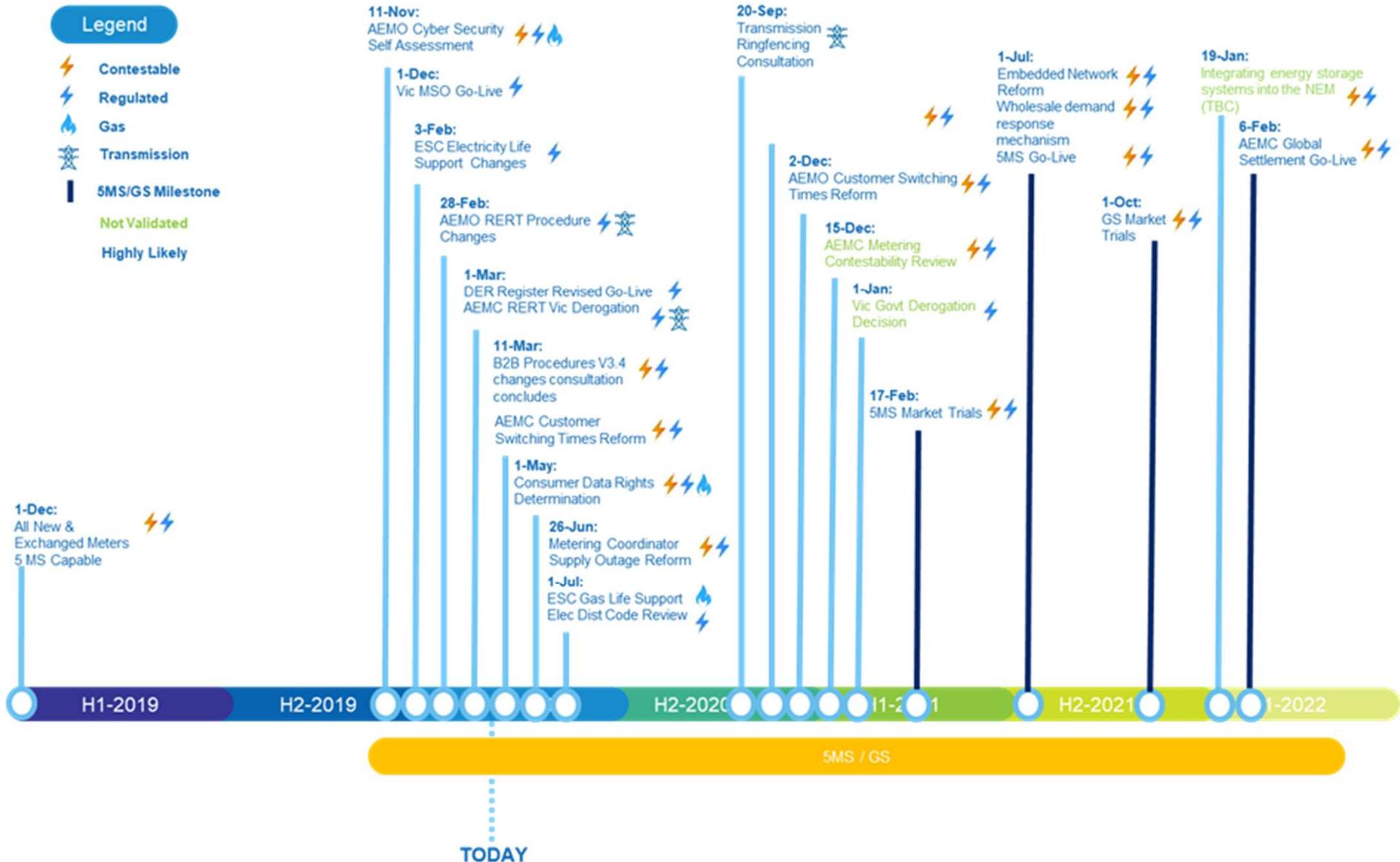
# Volume of Industry Change

Ausnet

## Volume of Industry Change (1)

- ▶ **High priority 5MS industry risk raised around volume of industry change:**
  - › Risk has materialised with several significant industry changes in progress or on the horizon (see illustrative example on next slide)
  - › Changes are being proposed by several regulatory bodies (AEMC/AEMO, AER/ESC, etc)
  - › Timeframes for changes are often very constrained presented challenges with compliance
- ▶ **While the benefits of the changes are clear, the timing needs to be better considered by industry as a whole to ensure impacts are appropriately managed**
  - › Volume of change from 5MS/GS is significant with some activities having implications not been fully planned yet (e.g. volume of CATS across market)
  - › Some 'minor' changes for some participants have significant impacts on others (e.g. customer switching impacts distributors heavily)
  - › Some changes have been more complicated or taken longer than expected to implement (e.g. DER register)
  - › Some changes are directly impacting the 5MS landscape and need to be better assessed as to importance (e.g. Register ID = NMI suffix)

# Volume of Industry Change (2) (Illustrative only)



## Volume of Industry Change (3)

### ► Key impacts include:

- › Diversion of key resources and funding from other priority business initiatives
- › Constraints with like-minded skillsets across industry, driving up the cost of change
- › Burden on participants to engage in consultation processes and forums for all changes
- › Increased costs for customers
- › Impacts ability to deliver on-time or with quality

### ► Recommend:

- › Upgrade the 5MS risk to an issue
- › Establish (or repurpose) a 5MS forum to:
  - Better triage and prioritise upcoming regulatory change
  - Look at all regulatory change across the landscape from all regulatory bodies
  - Consult and assess impacts from all participants

# AEMO Cost Recovery Update

Peter Carruthers / Jack Fitcher

# AEMO Costs – Cost Recovery Recap

- 'Declared NEM Project' mechanism for recovery of AEMO 5MS costs
  - Enables a bespoke approach to cost recovery which may be more appropriate than utilising existing AEMO fee recovery mechanisms
  - Requires a consultation process, which provides a formal opportunity for participants to have their views tabled and considered
- 2 Stage consultation process required under the Rules
  - Stage 1: The Project meets the criteria to be classified as a 'declared NEM Project' (sect 2.11).
  - Stage 2: The Participant fees, including the structure, start date and duration of recovery
- Stage 1 Consultation: Declared NEM Project – Classification
  - Must be a major reform, major change to AEMO role or major upgrade of IT systems
  - Consultation on Stage 1 was completed in November 2019
  - AEMO concluded that the 5MS/GS reforms meet the criteria to be a declared NEM Project

# AEMO Costs – Stage 2 consultation approach and timeline

- Stage 2 Consultation – Declared NEM Project – Fee Approach
  - Sets out the fee recovery approach e.g. structure, start date, duration
  - Must consider 5 key principles: simplicity, recovery of CAPEX and OPEX, reflect the beneficiary, not unreasonably discriminate, ancillary service providers treatment
  - 2 step consultation process again required.
- Co-ordinated approach with AEMO July 2021 fee re-set process
  - 5MS declared NEM project consultation to run on the same timeline as the AEMO July 21 fee reset process
  - They will be run as separate consultations (i.e. separate consultation papers) but will be co-ordinated
  - It may be necessary to cross reference between the two papers, this will occur as required
  - An aligned timeline is expected to provide the most efficient response approach for participants.
- Key dates
  - Initial consultation paper published July 2020. Consultation open for ~8 weeks, responses due Sept 2020
  - Draft report published November 2020. Consultation open for ~8 weeks. (Dependent on feedback to initial consultation)
  - Final report published March 2021
  - Fee structure takes effect 1 July 2021
  - AEMO obliged to provide 3 months notice period before fees commence.

# Industry Risks & Issues

Graeme Windley

# Issues and Risks - Critical

No.	Title	Description	Rating	Trend	Actions	Target Resolution
R09	Impact to 5MS from other rule changes that are being considered	Future rule changes could affect the implementation of 5MS, resulting in impacts to industry program implementation timelines	Critical	↔	<ul style="list-style-type: none"> <li>• AEMO and industry to participate in rule change processes and to advise AEMC of potential 5MS implications.</li> <li>• Escalate to EF should road blocks or slippage occur.</li> <li>• Participants to engage through the AEC and the ENA.</li> </ul>	30-Jun-21
R06	Interaction with other industry changes that have already been adopted through rule changes	Significant regulatory changes across the energy sector will stretch resources allocated to market change programs, resulting in potential impacts to participants resourcing and program delivery.	Significant	↔	<ul style="list-style-type: none"> <li>• Participants to consider opportunities to raise concerns regarding the pace of regulatory change with AEMC.</li> </ul>	30-Jun-21

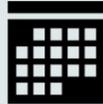
# Issues and Critical Risks - New

No.	Title	Description	Rating	Trend	Actions	Target Resolution
New	Risk of the spread of Coronavirus impacting organisations resulting in an impact to 5MS program readiness.	There is a risk that the spread of the Coronavirus may result in an increase of employees in industry organisations and AEMO needing to take sick leave or to work from home which could reduce the rate of productivity and have impact to planned activities and timelines.	TBC	↔	<ul style="list-style-type: none"> <li>• Raised at PCF#19 5 March.</li> <li>• Further discussion on actions and ratings needed.</li> </ul>	Ongoing

# AEMO 5MS & GS Program status update

Graeme Windley

# Program update and current activities



## *AEMO program*

- Overall green.
- Realignment of key milestones post-Readiness work complete.
- L2-S8 Industry Test start for Reallocations complete with the deployment of the reallocations functionality into pre-PROD 26 Feb 2020.



## *Systems*

- 5MS working with Customer Switching & Industry participants to define appropriate approach for both programs.
- The Settlements & Billing Tech Spec has been re-released to participants (14-Feb-2020). Communication on the Data Model within this pack.
- Internal retail, dispatch and settlements workstreams systems development on track to meet 30-Jun-2020 development completion date.

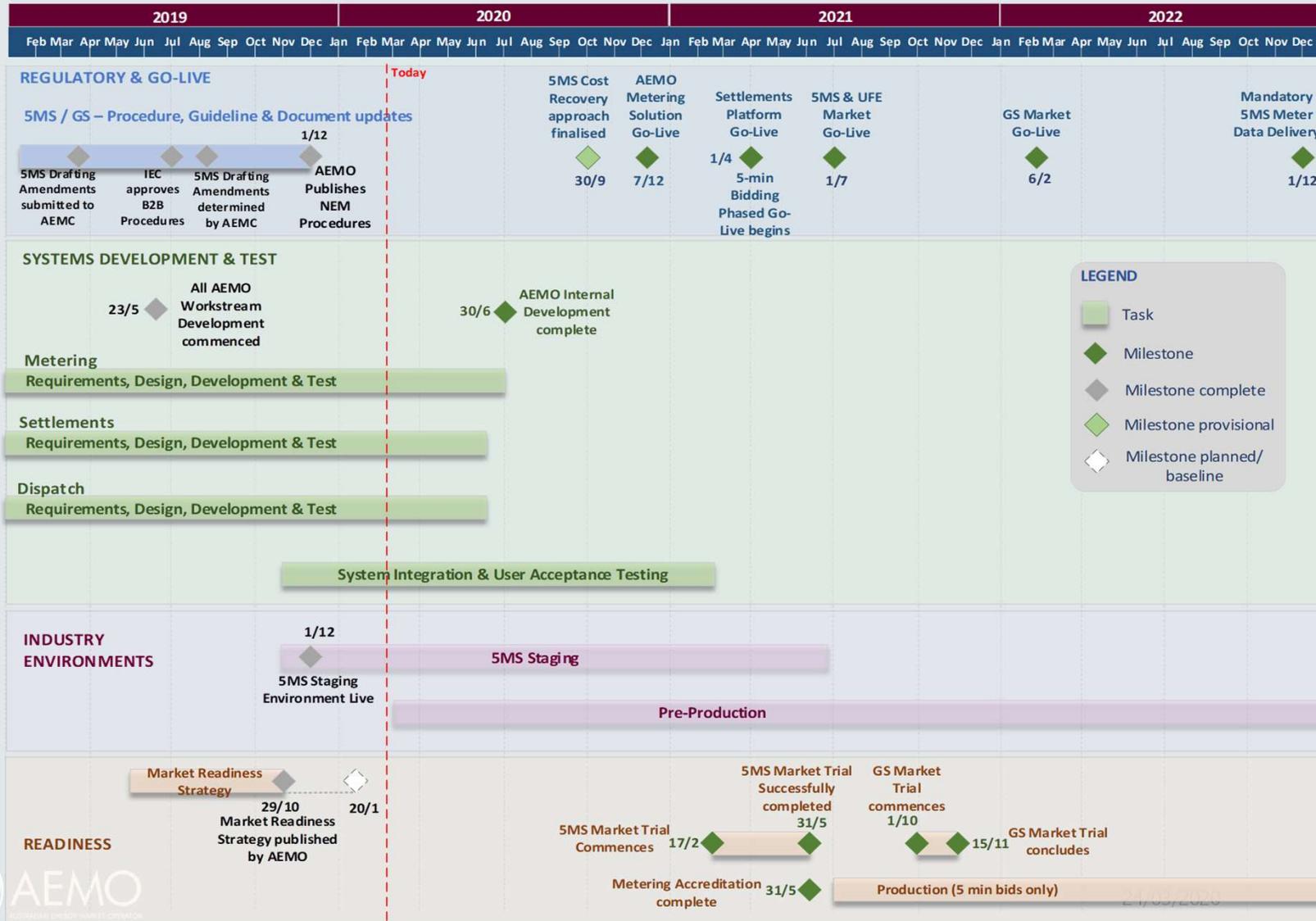


## *Readiness*

- Metering Transition Plan was published on 7 Feb 2020 and the Metering Service Provider Accreditation Update Plan on 18 Feb 2020.
- The second draft of Industry Readiness Contingency Plan was circulated to RWG on 6 Mar 2020 with a focus on *critical* mass for review and discussion.
- Initial Readiness Reporting – draft report circulated to RWG on 2 Mar 2020 for review and discussion.

# 5MS & GS Program Timeline

Current as at 28-02-2020



**LEGEND**

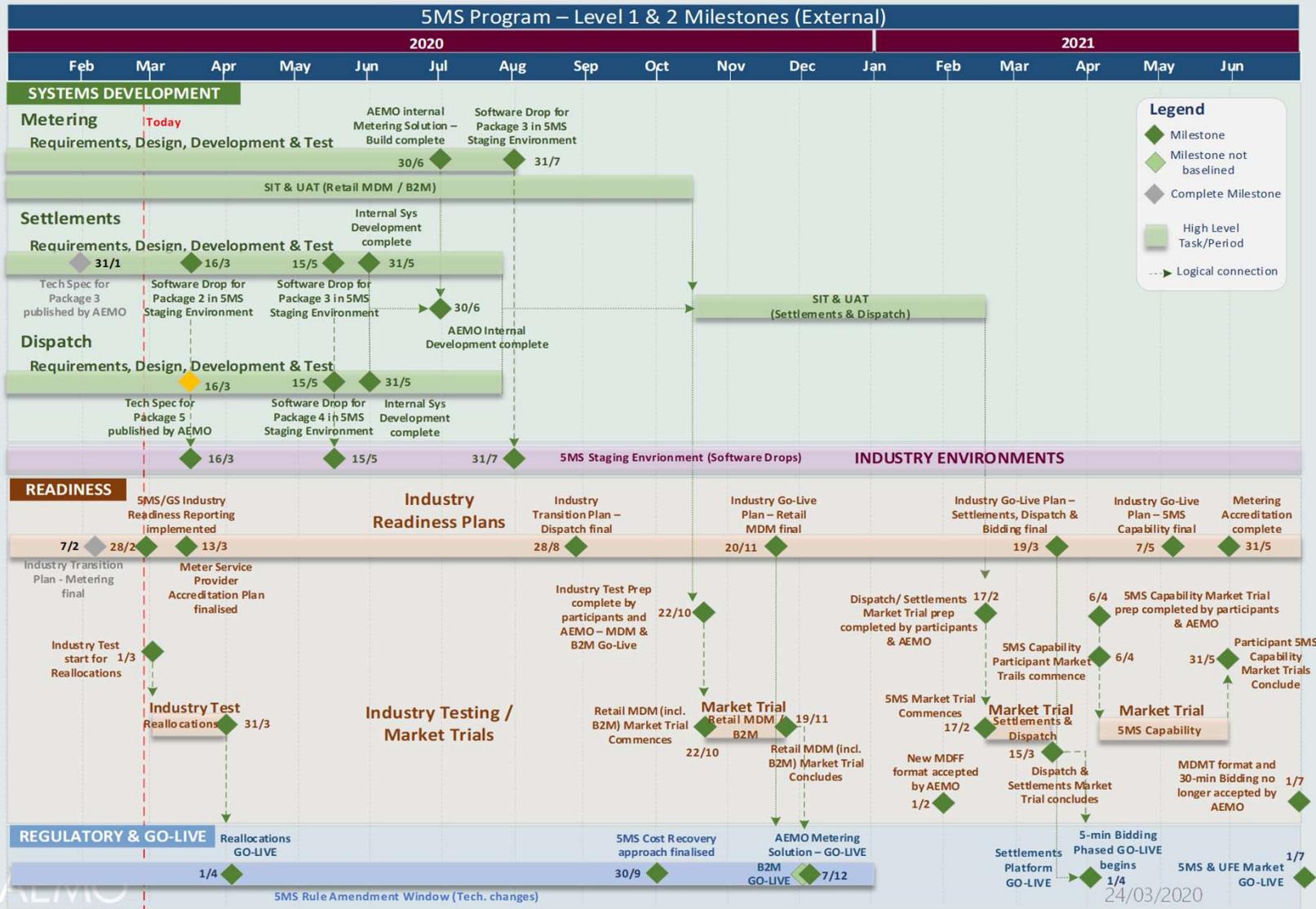
- Task (Green bar)
- Milestone (Green diamond)
- Milestone complete (Grey diamond)
- Milestone provisional (Light green diamond)
- Milestone planned/baseline (White diamond)



# 5MS Program Timeline (Jan '20 to Jul '21)

## Level 1 and External Level 2 Milestones

Current as at 28-02-2020



# Level 1 Milestones – Status Report

Current as at 28-02-2020

Domain	Initiative	2019												2020												2021																	
		Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4																				
Program				L1-1			L1-11			L1-2	L1-15			L1-7	L1-12	L1-3			L1-13			L1-16			L1-19			L1-17	L1-21	L1-22			L1-10			L1-9	L1-4			L1-18			L1-20
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec						

## 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	30-Jun-2020	30-Jun-2020	AEMO	
L1-16	5MS Cost Recovery approach finalised	30-Sep-2020	[30-Sep-2020]	AEMO	
L1-19	AEMO Metering Solution – Go-Live	07-Dec-2020	07-Dec-2020	AEMO	
L1-17	5MS Market Trial Commences	17-Feb-2021	17-Feb-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	31-May-2021	31-May-2021	AEMO	
L1-10	Metering accreditation complete	31-May-2021	31-May-2021	AEMO / MSPs	
L1-4	5MS & UFE Market go Live	01-Jul-2021	01-Jul-2021	AEMO / Participants	
L1-18	GS Market Trial Commences	01-Oct-2021	01-Oct-2021	AEMO	
L1-20	GS Market Trial concludes	15-Nov-2021	15-Nov-2021	AEMO	
L1-5	GS Market go live	06-Feb-2022	06-Feb-2022	AEMO / Participants	
L1-6	Mandatory 5MS meter data delivery	01-Dec-2022	01-Dec-2022	AEMO	

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

# Industry Readiness Reporting

Greg Minney

# 5MS & GS Industry Readiness Report 1

- 5MS / GS Industry Readiness reporting track industry readiness for 5MS and GS commencements. The first readiness assessment questionnaire was distributed on 5 February 2020, covering
  - Program establishment and overall progress
  - Progress against participant segment specific criteria
  - Progress against Activity detailed in the Metering Transition Plan
- The survey response covered 26 organisations. The Industry coverage providing reasonable assurance this provides a representative view of overall industry position. Follow up will be undertaken to increase coverage in key participant areas.

Table 1: Readiness reporting round 1 respondents info and industry coverage

	#Responses	% Industry coverage	Industry coverage methodology
Organisations	26	-	-
Total responses	55	-	-
Generator	8	 80%	Generator respondents capacity / Total NEM capacity
Retailer	10	 73%	Retailer respondents settlement vol. / 2019 NEM settlement vol.
MP	13	 93%	MP respondents NMIs / Total NMIs
MDP	12	 99%	MDP respondents NMIs / Total NMIs
DNSP	9	 90%	Number of DNSPs survey respondents / Total DNSPs
TNSP	3	 50%	Number of TNSPs survey respondents / Total TNSPs

# How to interpret readiness reporting results

Criteria	Overview	Example questions	Response options	Results presentation	Legend
General Readiness Criteria	<ul style="list-style-type: none"> <li>Criteria related to the level of program establishment of participant programs.</li> </ul>	<ul style="list-style-type: none"> <li>For your organization's SMS and GS program:               <ol style="list-style-type: none"> <li>is project funding secured?</li> <li>Is the project plan established?</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>	<ul style="list-style-type: none"> <li>All Yes and No responses are presented in a pie chart.</li> <li>All responses are unweighted.</li> </ul>	 <ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>
Specific Readiness Criteria	<ul style="list-style-type: none"> <li>Criteria that tracks the implementation of specific market commencement requirements for each participant type. Hence, each participant type will have their own set of specific readiness criteria (e.g. generators ability to submit 5 min bids by 1 July 2021, retailers ability to receive and reconcile 5 minute data).</li> </ul>	<ul style="list-style-type: none"> <li>What is your organization's progress and status towards the following readiness criteria?               <ol style="list-style-type: none"> <li>Receive and reconcile 5 minute settlements data</li> <li>Receive and reconcile UFE allocations data (from 6 Feb 2022)</li> <li>Support 5-min reallocations (if relevant)</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Participants (including AEMO) are asked to report their status towards fulfilling these requirements by market commencement (on track, at risk or late), and also report on progress in 25% increments.</li> </ul>	<ul style="list-style-type: none"> <li>Participants status and progression towards specific criteria are illustrated through Harvey balls.</li> <li>Each quadrant of the Harvey ball represents 25% progress. Quadrants will progressively fill with solid colours as the criteria is completed.</li> <li>The Harvey Ball will be coloured red, amber or green based on if the criteria is on track, at risk or late.</li> <li>All responses are unweighted.</li> </ul>	<p><b>Status: On track Progress: 1 - 24%</b></p>  <p><b>Status: At risk Progress: 25 - 49%</b></p>  <p><b>Status: Late Progress: 50 - 74%</b></p> 
Metering Transition Plan Status (MTP)	<ul style="list-style-type: none"> <li>Status monitoring of defined activities in the MTP. The MTP outlines the expected activities, responsibilities, timeframes, as well as other necessary elements required for completion of the SMS and GS metering transition.</li> </ul>	<ul style="list-style-type: none"> <li>For the following sub-categories defined in the MTP, is your organisation on track to complete the associated activities (MDP related only) by the defined transition end date?               <ol style="list-style-type: none"> <li>BULK / Wholesale Meters (S13)</li> <li>Type 1-3, subset of 4 (S14)</li> <li>Cross Boundary Meters (KNOWN) (S15)</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Participants are asked to provide their status towards completing activities by the transition end date for each defined sub-category in the MTP (Complete, On track (started), On track (not started), At risk, Late, n/a).</li> <li>Given that a sub-category has multiple activities supported by various participant types, respondents were only expected to provide status reporting for activities that were relevant to their participant type.</li> </ul>	<ul style="list-style-type: none"> <li>All responses are presented in a pie chart. A separate pie chart will also illustrate the proportion of all responses with n/a responses omitted.</li> <li>All responses are unweighted.</li> </ul>	 <ul style="list-style-type: none"> <li>Complete</li> <li>On track (started)</li> <li>On track (not started)</li> <li>At risk</li> <li>Late</li> <li>n/a</li> </ul>

# Readiness Reporting Round 1 – Results on a page

	AEMO	Generator	Retailer	DNSP	TNSP	MP	MDP	Total (not incl. AEMO)
Overall program delivery progress and status								
General criteria (Program establishment) - Consolidated readiness	-							
Specific criteria (Capability development) - Consolidated readiness	-					-	-	
Ability to support 5-minute reallocations	-			-	-	-	-	
Ability to receive and reconcile 5-minute settlements data	-					-	-	
Ability to receive and reconcile UFE allocations data	-	-		-	-	-	-	
Ability to submit 5-minute bids	-		-	-	-	-	-	
Metering Transition Plan status - consolidated	-	-	-					

**Legend:**

- Yes
- No
- Completed
- In progress
- Not started
- Complete
- On track (started)

# Readiness Reporting - commentary

Overall program status: **On track**  
Overall progress: 1-24% complete

Participant programs across all segments established, with systems designs commenced and operational impact assessments conducted, with generally reported on track status

- Individual participants reporting at risk status on delivery
- 2 participants indicating development underway

Overall project establishment status: **On track**

Majority of programs are funded, with established project plans, project teams on boarded:

- 5 organisations are yet to secure funding with 2 at risk
- 4 organisations are yet to formalise project plans although only 1 has indicated this is at risk

All respondents report an intention to participate in Market trials.

The AEMO program is proceeding on track and in line with overall program milestones

Overall specific criteria status: **On track**

Progress against specific readiness capability reflects overall program reporting and in general is reported as on track

- A number of respondents (DNSP/ Retailers) are reporting impacts from other market change initiatives on programs
- 2 generators reporting schedule being at risk, with mitigations being applied

# Readiness Reporting - commentary

## Overall MTP Status: **On track**

- Progress on Metering Transition spans 4 participant groups with activity timeframes from present through Dec 2022.
- Activity is general reported as “underway, on track” and “not started, on track”.
- A number of participants have reported “N/A” on activities, follow-up will be performed to ensure this is accurate and not a misunderstanding of scope

## Overall MTP Status Continued

- 2-3 key MP participants are not currently reporting progress, and will be engaged in the next period
- Activity where expected date as per the MTP has passed but is being reported as “underway, on track” will be investigated

## Risks and Issues

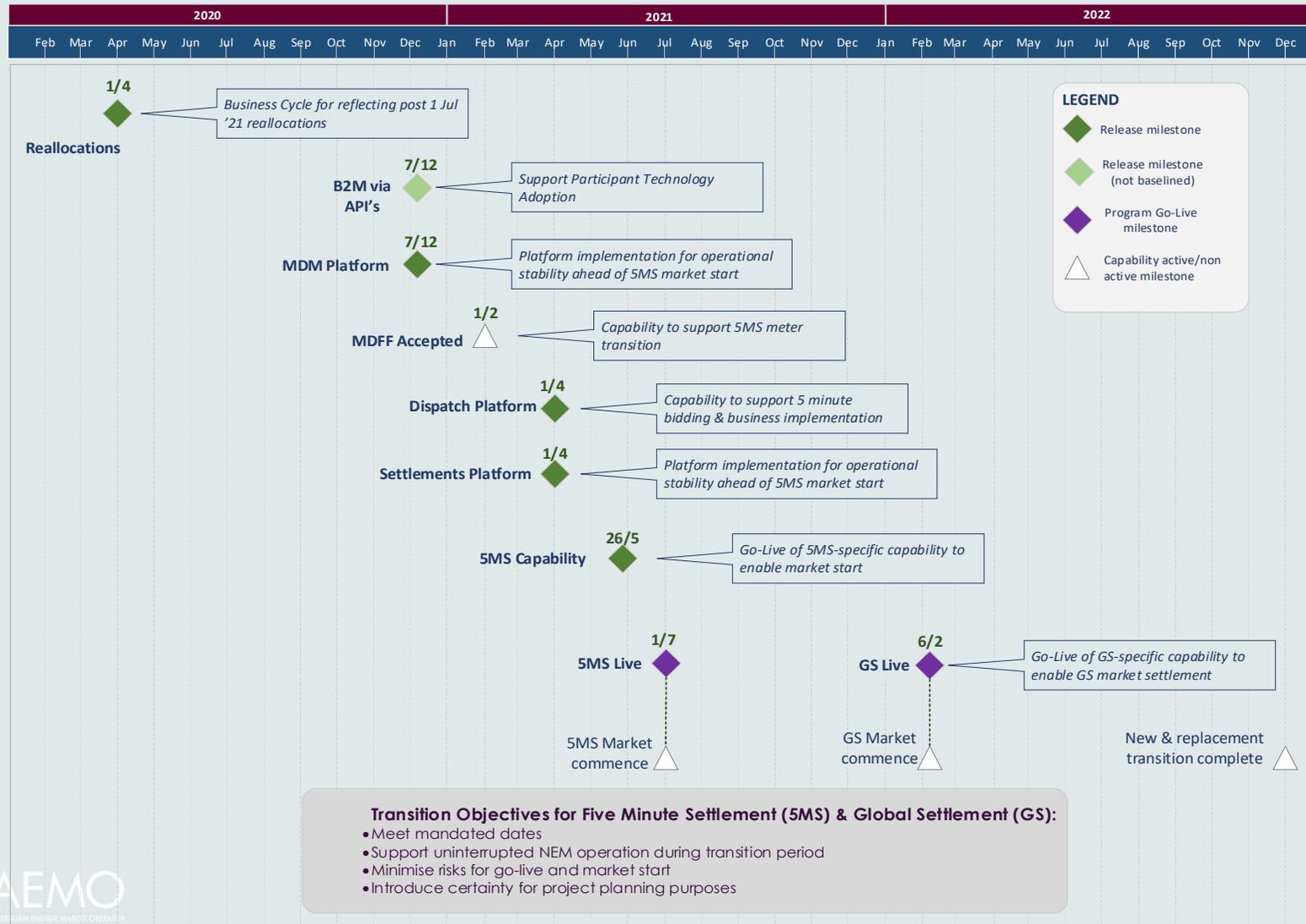
- Respondents highlighted a number of issues for follow up and validation including:
- AEMO approach for settlement certification
  - Impact of other industry initiatives on participant delivery resourcing
  - Uncertainty on transition approaches for metering and Meter Standing Data
  - Further definition of response actions for participant failure to “be ready”

# Cutover & Transition Approach

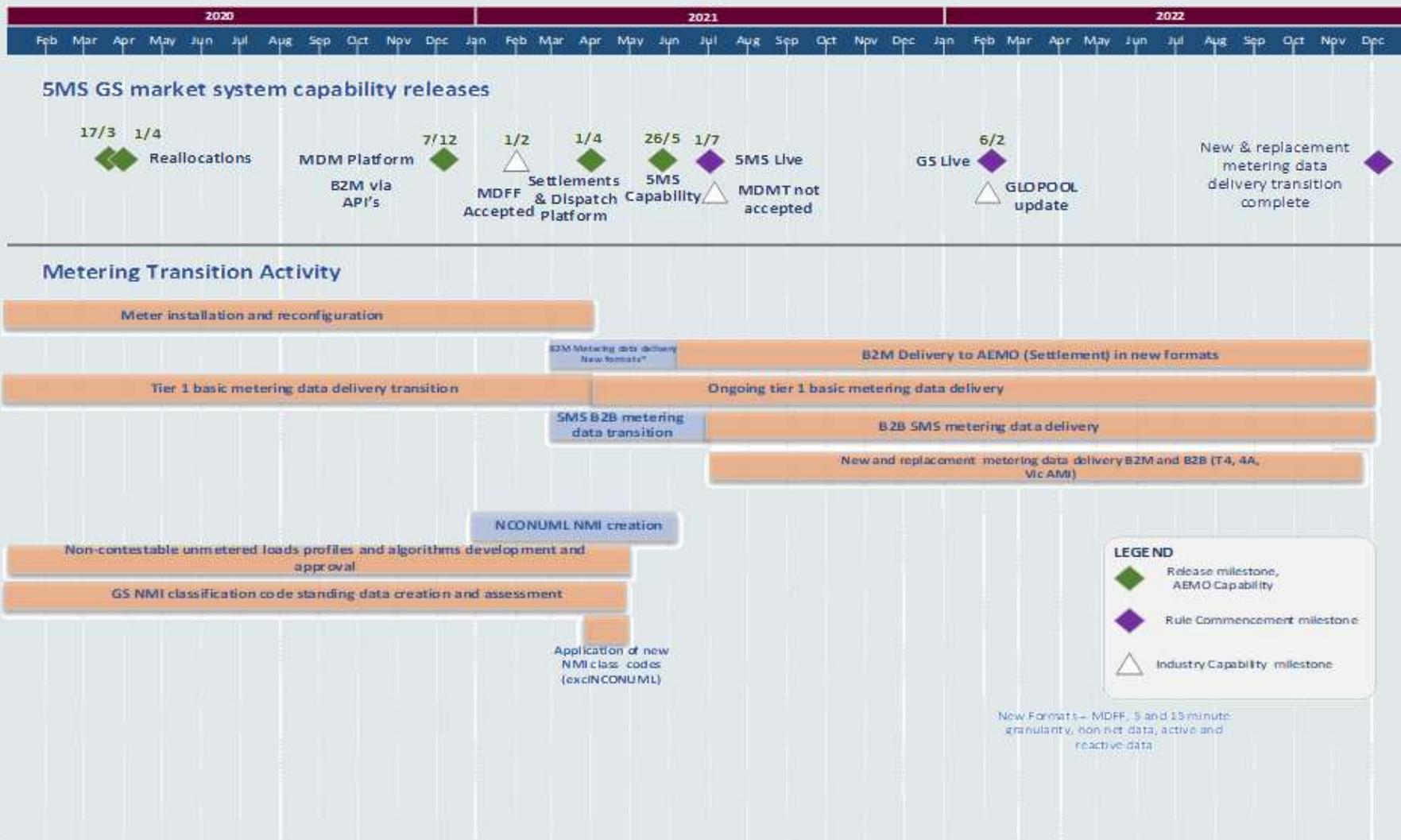
Greg Minney

# Transition and Go Live Approach

Current as at 28-02-2020



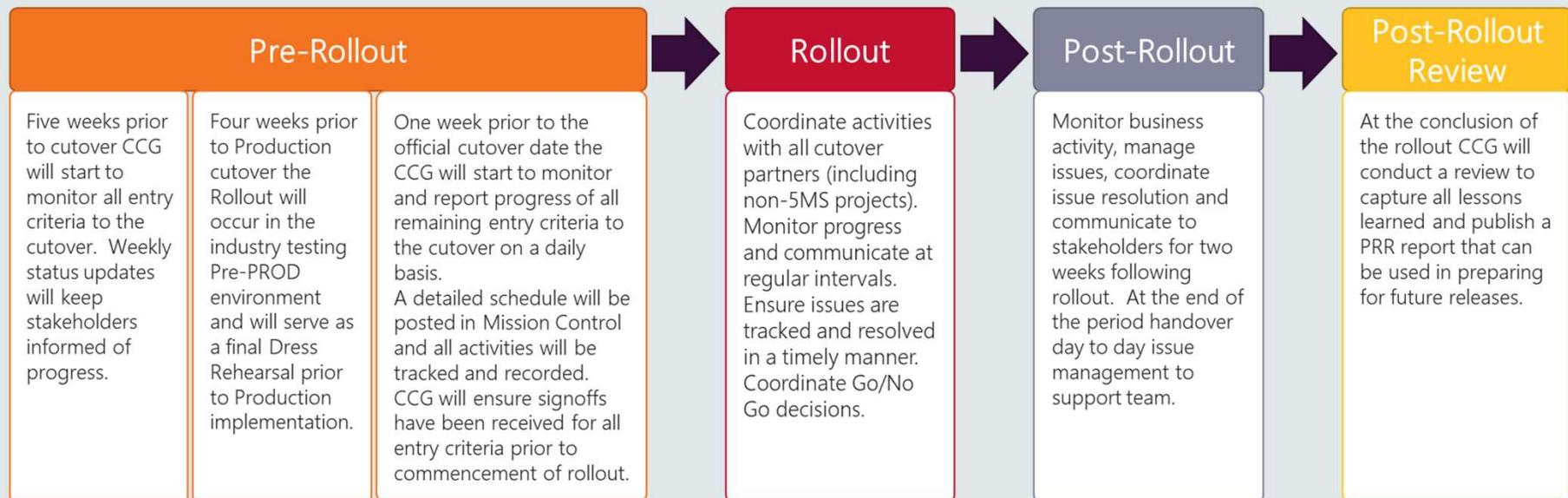
# Metering Transition Approach



# Cutover & Transition Approach

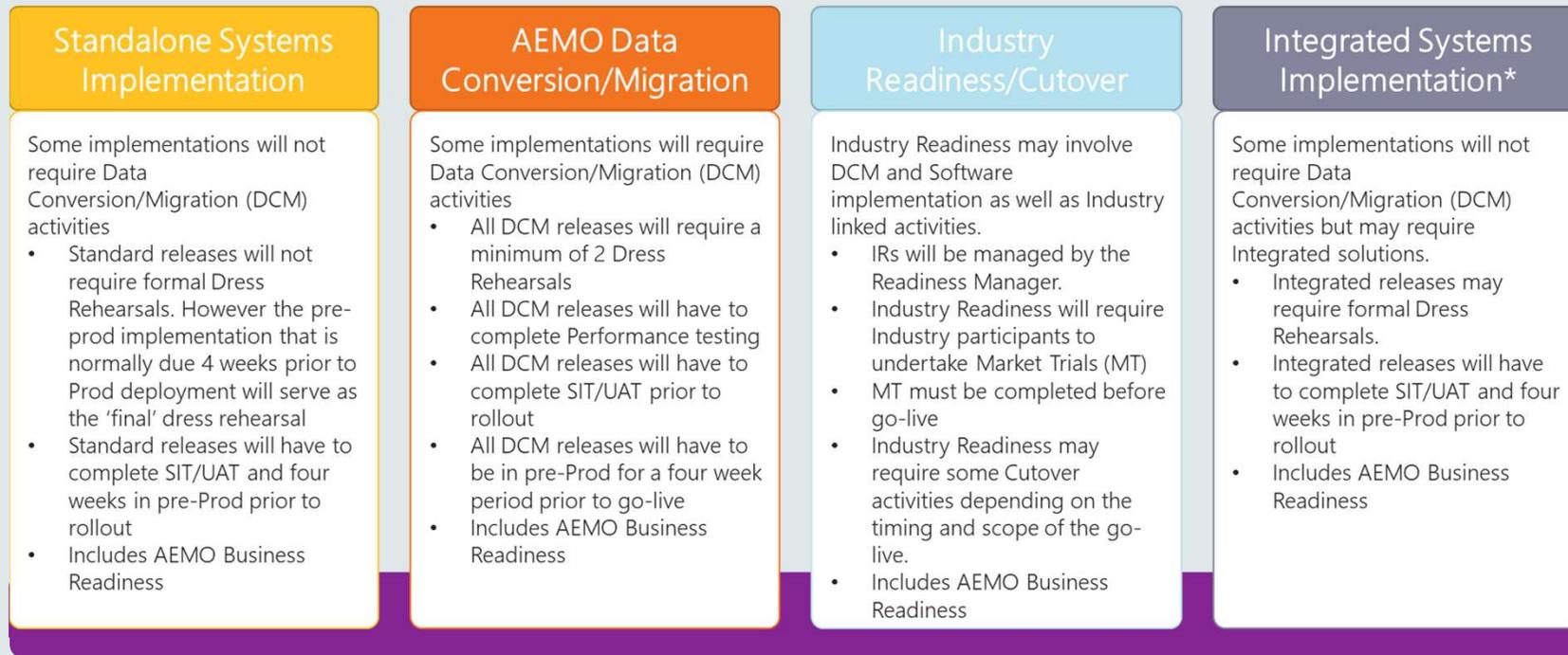
Each 5MS Release will be managed by the Cutover Coordination Group (CCG) led by the Readiness and Cutover Managers.

For the purposes of the rollout of each release the CCG will manage all aspects of the systems and process delivery during the following periods;



# Cutover & Transition Approach

## Four types of Cutover/Implementation





# Contingency

Greg Minney

# 5MS / GS Contingency Approach

- The purpose of the Industry Readiness Contingency Plan is to establish responses in the event that identified risks occur. These responses will ensure that rule commencement is achieved and that the NEM continues to operate uninterrupted.
- The first draft of the Industry Readiness Contingency Plan was released in December 2019 for comment after initial engagement with the Readiness Working Group (RWG).
- The second draft was released on 6 March 2020 and included a proposal for 'critical mass'
- 3 types of risk to be addressed:

## Systems Deployment and Implementation

- Schedule Contingency within critical date range
- Separation of AEMO and participant platform deployments
- Rollback during systems deployment

## Interruption post system deployment

- Implementation of existing NEM exception processes
- Market rollback not considered as contingency approach to identified scenarios

## Capability availability for rule commencement

- Critical participant readiness
- AEMO capability

# 5MS/ GS Contingency Approach – Capability availability (under consultation)

Critical participant type	Essential function for 5MS/GS and reliable wholesale market operations
Generator/ Market Network Service Providers	<ul style="list-style-type: none"><li>• 5-minute bidding</li><li>• Pay settlement invoices</li></ul>
Retailers	<ul style="list-style-type: none"><li>• Pay settlement invoices</li></ul>
MPs/MCs	<ul style="list-style-type: none"><li>• Wholesale meters need to be capable of reading and communicating 5-min data</li></ul>
MDPs	<ul style="list-style-type: none"><li>• Wholesale meters need to be capable of reading and communicating 5-min data</li></ul>
TNSPs	<ul style="list-style-type: none"><li>• Energy inflows from transmission networks into distribution networks to be 5-min metered for meaningful profiling of non-5-min metering data.</li></ul>

# Capability Availability response



Staged transition approach to minimise "Big Bang"



Monitoring of progress against critical criteria via readiness reporting



Active management of participant progress and responses



"Critical Mass" required for ongoing NEM operation



Checkpoints during implementation

# Stakeholder Engagement

Anne-Marie McCague

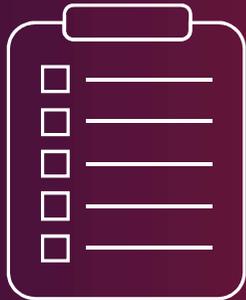
# 5MS Executive Forum Dates

- The Executive Forum dates have been rescheduled to align with the Industry Readiness Reporting cycle.
- The Executive Forum will be held on the following dates in 2020:
  - 11 June
  - 7 September
  - 19 November

# Stakeholder Engagement Events for 2020

- Monthly Working Groups:
  - Program Consultative Forum
  - Readiness Working Group
  - Systems Working Group
  - Industry Testing Working Group
- Vendor Session – 1 in 2020
- Information Session – 3 in 2020 (1 already held in Jan)
- Small Generator Aggregator (SGA) Session– 1 in 2020
- Open Q&A Sessions – monthly
- Staging Environment Sessions after releases
- Industry Testing Open Q&A
- Market Trial Sessions

# Survey Time!



- Stakeholder Engagement Survey for Q1 2020 will be issued 30 March to the Working Groups
- Previous survey was issued in December and received 26 responses
- AEMO issued a survey report to the Working Groups summarising the results and providing response
- Changes we have made since the last survey:
  - Reorganised the SWG agenda
  - Refreshed the Industry Action Log and put in place internal processes to manage actions
  - Implemented monthly Open Q&A sessions
  - Reviewed website content to provide more background information – rolling out over March to mid-April

# Upcoming meetings

<https://aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement>

Current as at 4/03/2020



## MARCH

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

## APRIL

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

## MAY

Su	Mo	Tu	We	Th	Fr	Sa
26	27	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	26	27	28	29	30	
	31	1	2	3	4	5

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

Focus Groups
Dispatch
Metering
Settlements
Transition
Industry Testing
Reconciliation
Contingency

Other
Information sessions
General Q&A session
National Public Holiday
State Public Holiday*

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

# General Questions

Peter Geers

