

Regulatory implementation roadmap update

Stakeholder forum 9 July 2021

Agenda

- 01 Welcome and background
- Objectives of this forum
- Roadmap updates since version 4
- Updates to detailed implementation schedule
- Five-minute Settlement contingency scenario
- 06 Questions and feedback
- 07 Wrap-up and next steps



Background

- In April-May 2020, the market bodies undertook a process to prioritise the regulatory program, in response to COVID-19, and in recognition of the current regulatory burden
- As part of this process, AEMO developed a regulatory implementation roadmap (roadmap) focused on regulatory initiatives with material IT system implementation impacts, and other key/strategic reforms
- AEMO committed to maintaining the roadmap to support ongoing transparency, prioritisation and program management by all stakeholders
- AEMO published version 4 of the roadmap on 18 March 2021 and plans to publish revised roadmap 2-3 times a year to align with key regulatory implementation milestones



Objectives of this forum

- The objective of the roadmap is to provide stakeholders and the market bodies with a portfolio view of regulatory initiatives to support ongoing transparency, prioritisation and program management
- The objectives of this stakeholder forum are to:
 - Provide an overview of key updates to the roadmap since version 4 was published in March 2021
 - Present an updated detailed implementation schedule that extends to mid 2022 and aligns to the roadmap
 - Present the five-minute settlement contingency scenario
 - Seek stakeholder views on contingency scenario
 - Invite industry feedback and questions on the above



Committed regulatory initiatives with IT system impacts

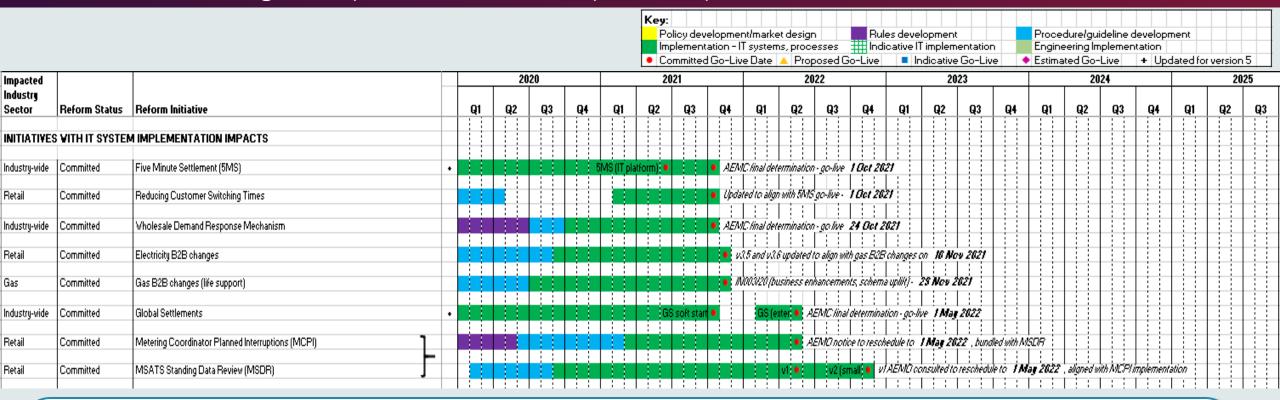
- Five-minute Settlement Program
 - 21 June 2021 go-live of retail MDM IT platform reflected on roadmap
 - on track for market trial to take place between 19 July to 10 September and for rule commencement on 1
 October 2021
- A contingency plan has been developed to accommodate potential issues arising following deployment of retail MDM IT solution, during market trial or with participants' readiness.
- A contingency scenario is presented and implications for other regulatory initiatives are considered later in this slide pack (agenda item 5)
- AEMO expects 5MS to go-live on 1 October 2021 and for all participants to continue to work to this committed date



03

Roadmap Updates since Version 4

Committed regulatory initiatives with IT system impacts



- 5MS retail MDM IT solution go-live updated to June 2021
- Global settlements shown as a separate initiative and initiatives have been re-ordered to demonstrate bundling more clearly
- No changes to committed regulatory initiatives with system impacts, due to go-live in late 2021 and mid 2022 since version 4, however AEMO is seeking stakeholder views on delaying go-live of electricity B2B changes from 10 Nov 2021 to 29 Nov 2021 to align with gas B2B changes

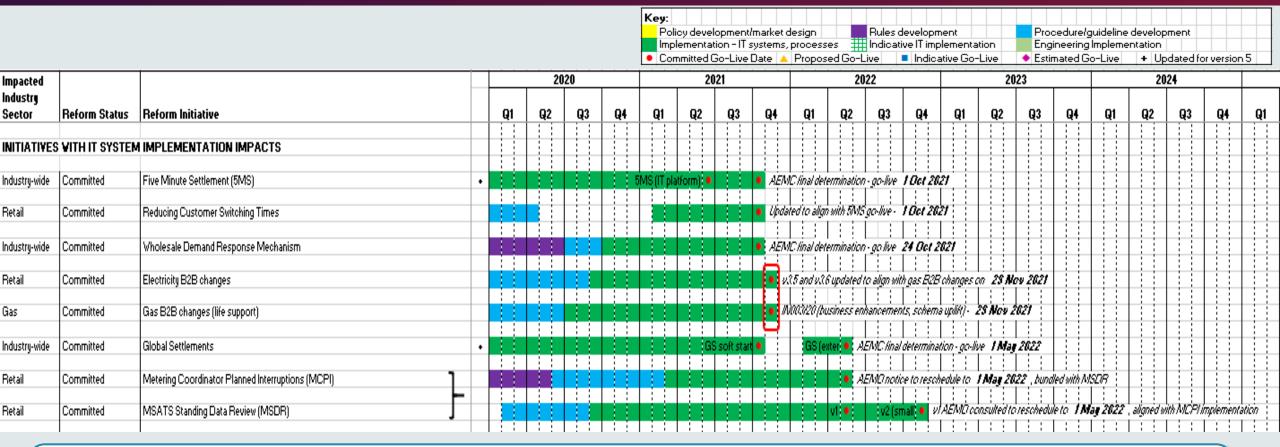
Electricity B2B changes delay

- The potential benefits to aligning electricity B2B changes to gas B2B changes go-live on 29 November 2021 includes allowing:
 - for dual fuelers to manage a single B2B system change
 - for all to transition across on a weekend and not interfere with mid-week processes
 - additional time for pre-production matters including identification of environments.
- Stakeholder feedback from this roadmap consultation process could inform the Information Exchange Committee regarding any postponement to the electricity B2B change date
- If the electricity B2B changes go-live was delayed to 29 November 2021, the roadmap would need a minor update to include note against the electricity B2B changes (as per shown on slide 8), while there would be limited changes to the detailed implementation schedule to reflect a 29 November 2021 schema change (R41) and go-live date. The pre-production industry test may be extended from early September to mid October 2021.





Committed regulatory initiatives with IT system impacts



• Consultation Question 1 - Should the electricity B2B changes go-live move to 29 November 2021, to align with the gas B2B changes go-live?

03

Roadmap Updates since Version 4

In progress regulatory initiatives with IT system impacts

- Standalone Power Systems (SAPS):
 - legislation passed and National Electricity Law has been updated
 - subsequent consultation process on NER changes (15 March 6 April) to accommodate NER changes made since the package of reforms was agreed and to specify an implementation date. NER changes have not been made yet, with SA Minister expected to make rules in the near term
 - Roadmap reflects 12 month implementation period from the making of the final rule. AEMO has proposed golive date of May 2023 given significant reform agenda throughout 2021 and 2022 and will allow any implications from the energy storage systems rule change to be considered prior to implementing SAPS rule change
- Energy Consumer Data Right
 - Treasury consultation on CDR rules and standards design paper (peer-to-peer data access model) 30 April 2021
 - Draft rules expected to be published mid-2021
 - Indicative go-live remains at end Q3 2022 (unchanged)
- ST PASA updated to reflect AEMO's rule change lodged on 29 June 2021 to amend the rules to support the replacement of the current ST PASA to produce information over a 7 day forecasting horizon



In progress regulatory initiatives with IT system impacts

- Fast frequency response market ancillary services has been updated to reflect proposed implementation timing as per draft determination (22 Apr 2021). Final determination expected 15 July 2021.
- System Services rule changes AEMC has extended timeframes to make draft determinations for:
 - synchronous services market 16 Dec 2021
 - capacity commitment mechanism for system security and reliability services 16 Dec 2021
 - operating reserve market 9 Dec 2021
 - introduction of ramping services 9 Dec 2021

These rule changes are coordinated with the ESB's P2025 Essential System Services workstream. If rules are made, IT implementation will bundled with related ESB initiatives where feasible.

ESB's Post 2025 Market Design Options Paper (30 April 2021) – ESB market design recommendations expected mid-2021. The sequencing, delivery and funding of reforms are to be determined and have not been factored into AEMO's delivery plans.



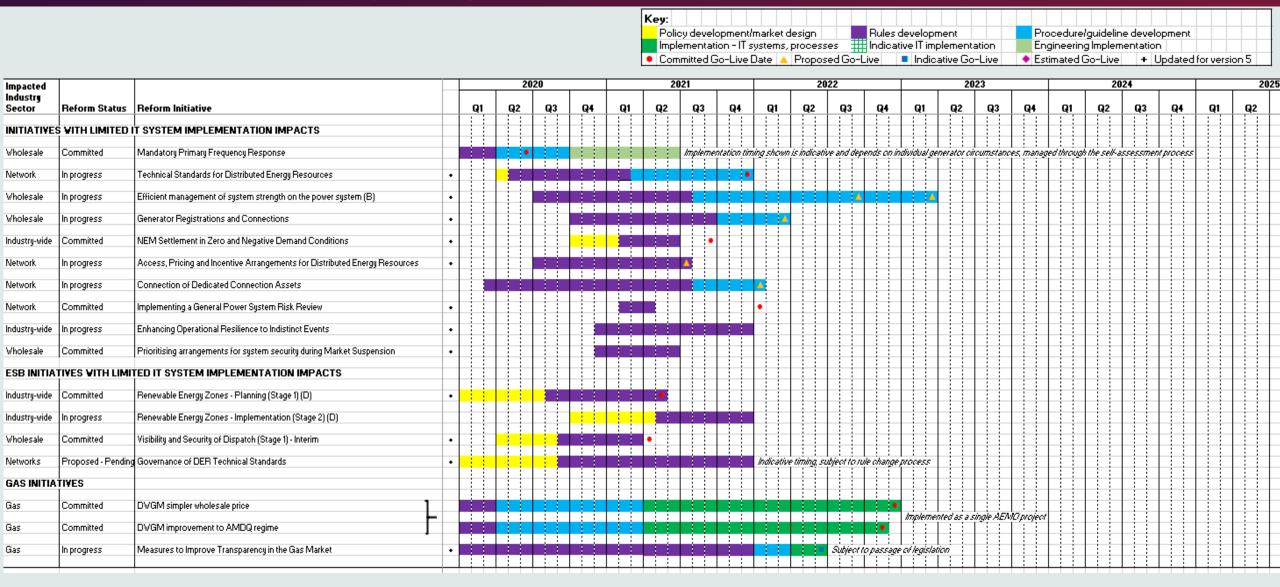
In progress regulatory initiatives with IT system impacts

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Regulatory initiatives with limited IT system impacts and Gas Initiatives

- Four final determinations relevant to the roadmap have been made since version 4 was published:
 - Renewable Energy Zone Planning rules (Stage 1) 13 May 2021
 - Implementing a General Power System Risk Review 3 June 2021
 - NEM settlement under low, zero and negative demand conditions 17 June 2021
 - Prioritising arrangements for system security during market suspension 17 June 2021
- Final determination for Connection to Dedicated Connection Assets rule changes expected 8 July 2021
- Draft determinations for system strength and generator registrations and connections limited system impacts expected and proposed commencement dates included
- Removed visibility and security of dispatch (stage 2) interim measures from roadmap AEMO's assessment determined that measures being pursued to supplement pre-dispatch process do not require rule change and noted that some measures have been superseded by system security rule changes/ESB P2025 market design reforms
- Updated timeframes for measures to improve transparency in the gas market based on preliminary advice from DISER
- Refer to Appendix for updated roadmap draft version 5 and full log of changes

Committed and in progress regulatory initiatives with limited IT system impacts

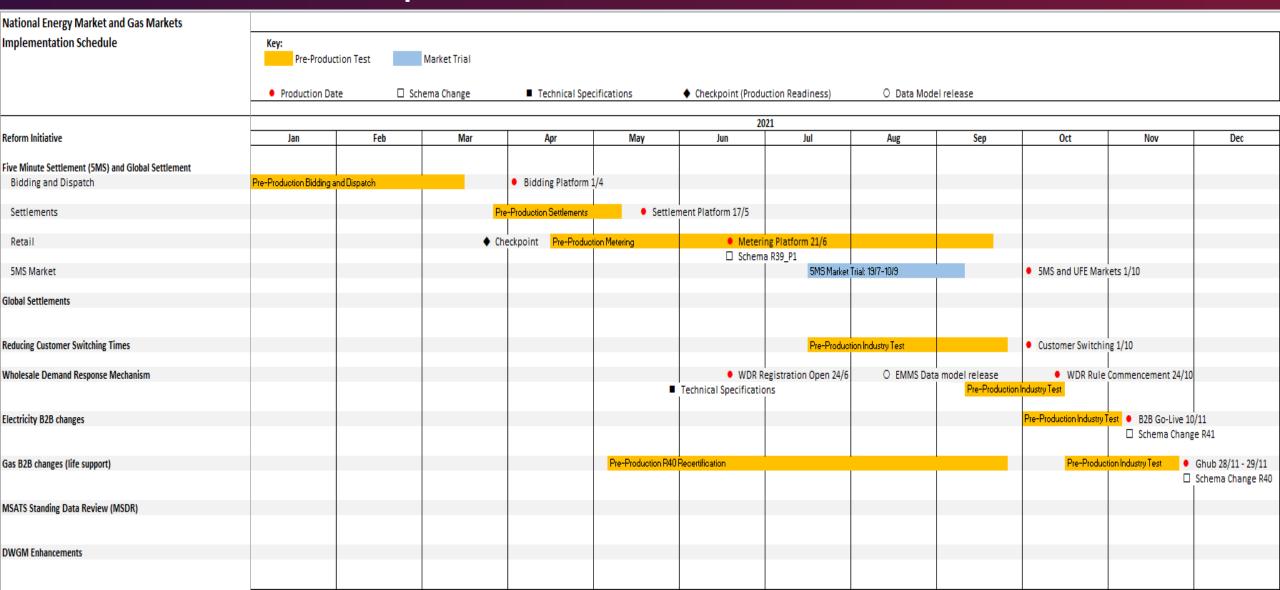


Detailed implementation schedule

- AEMO has updated the detailed implementation schedule to provide a more granular view of key phases and milestones for the following committed NEM and gas projects with go-live in 2021 and 2022 (where possible):
 - Five-minute settlement
 - Global Settlement
 - Customer Switching
 - Wholesale Demand Response Mechanism
 - Electricity B2B Changes
 - Gas B2B Changes
 - MSATS Standing Data Review
 - Declared Wholesale Gas Market enhancements
- Following rule commencement of five-minute settlement, AEMO expects to have increased capacity to enhance the detailed implementation schedule and address feedback provided as part of the last consultation process



Detailed implementation schedule





Detailed implementation schedule

National Energy Market and Gas Markets Implementation Schedule Pre-Production Test Market Trial Production Date ☐ Schema Change ■ Technical Specifications ◆ Checkpoint (Production Readiness) O Data Model release 2022 Jan Feb Mar Jun Jul Sep Oct May Aug Nov Dec Reform Initiative GS Market Trial: 1/2 - 15/3 Global Settlements 1/5 **Global Settlements** • New & Modified DATA Fields in MSATS 1/5 MSATS Standing Data Review (MSDR) Deprecated Fields 1/11 Pre-Production Industry Test Pre-Production Industry Test **DWGM Enhancements** CC Auctions and Registry Markets Systems Deployment

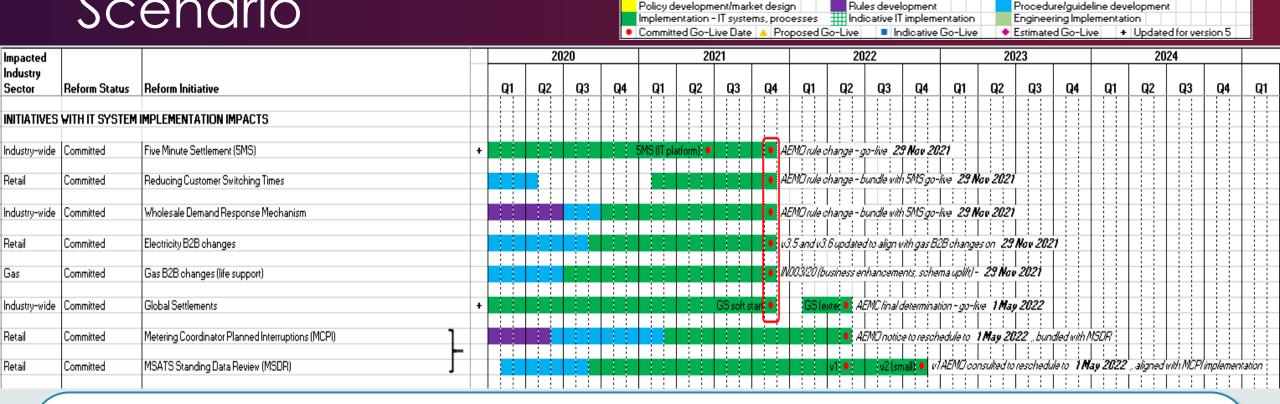


Five-Minute Settlement Contingency Scenario

- The 5MS Program has been developing a Contingency Plan with the 5MS Working Groups to address the risk that issues may arise during the 5MS Market Trial that may impact the rule commencement date.
- Contingency planning objectives:
 - Moving market start date is a last resort measure will only be triggered if necessary
 - If the market start date needs to be moved, then earliest practical notification is to be provided and it will only be moved once.
- One of the considerations of the contingency plan is the impact to the other regulatory implementation programs if the 5MS commencement date was to move.
- For the purpose of discussion and feedback, AEMO has proposed a theoretical contingency scenario of a 2 month delay to the 5MS commencement on the next slide.
- Only one contingency scenario is being considered, on the basis it's the most probable scenario and to avoid confusion from presenting multiple contingency scenarios. Stakeholder feedback may be able to apply/inform alternative scenarios.
- Note, the regulatory mechanism to give effect to the contingency scenario is beyond the scope of this consultation process



Five-Minute Settlement Contingency Scenario Scenario

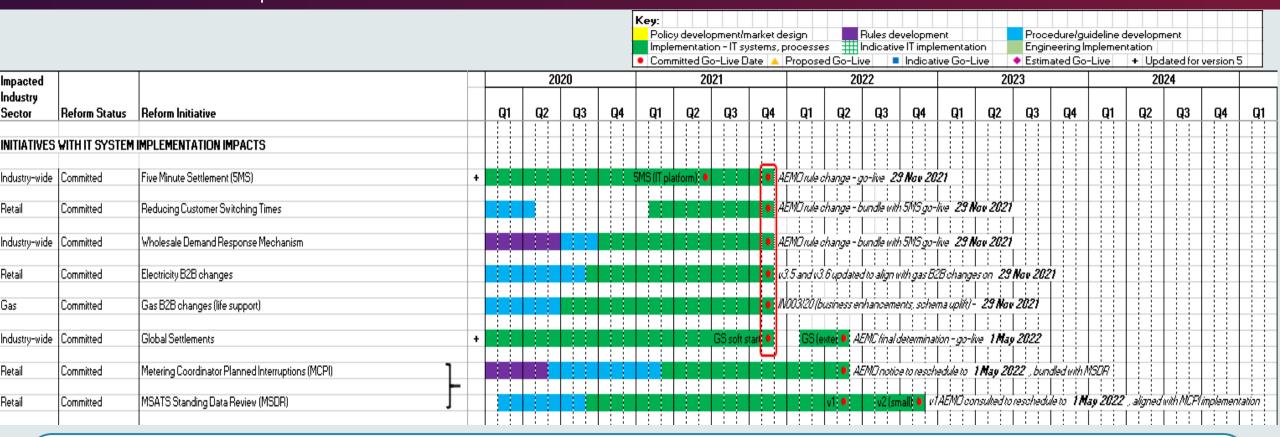


- The contingency scenario roadmap reflects a two month delay to five-minute settlement, with a 29 November 2021 go-live
- The 29 November 2021 has been selected as it is a Monday and aligns with the proposed electricity and gas B2B changes go-live
- The contingency scenario roadmap proposes bundling 5MS, global settlements (soft start), customer switching and WDR
- No changes are proposed for global settlement (hard start), metering coordinator planned interruptions and MSATS standing data review

05

5MS Contingency Scenario

Consultation question



- Consultation Question 2 If a short delay to 5MS is required, should 5MS, global settlement (soft start), customer switching, wholesale demand response, electricity and gas B2B changes be bundled?
- Consultation Question 3 Given that the gas B2B changes go-live date is more difficult to change, is there support to align with a 29 November 2021 go-live?



Questions and feedback

Stakeholder questions and feedback are welcome



Wrap-up and next steps

- Any stakeholder feedback is requested by 16 July 2021 via email to StakeholderRelations@aemo.com.au
- Stakeholder feedback will inform the preparation of the rule change request. AEMO will seek to address feedback as far as practicable and continue to make incremental improvements over time
- AEMO plans to publish the updated regulatory implementation roadmap (version 5) prior to lodging rule change request in early August 2021
- AEMO expects to next roadmap update to be at the end of 2021 depending on the extent of updates and changes to the regulatory implementation program

Thank you.



Appendix

Draft regulatory implementation roadmap (version 5) and log of changes



Updated roadmap – draft version 5

 Key:
 Policy development/market design
 Rules development
 Procedure/guideline development

 Implementation - IT systems, processes
 Indicative IT implementation
 Engineering Implementation

 • Committed Go-Live Date
 A Proposed Go-Live
 Indicative Go-Live
 ◆ Estimated Go-Live
 + Updated for version 5

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Industry-wide		Essential System Services, Scheduling and Ahead Mechanisms (B)		High Le	vel Design	•	Mark	ket Design	` 		Indicat	ive Exec	ution Range:	Legislatio	on, Rules.	Procedur	es,IT	· · ·				· —· — :- ·		tended Exe	cution R	ange		·		1
Industry-wide	Proposed - Review	Demand Side Participation (C)					11											111	<u> </u>		777	1		7	T T T T	7777	TTTT		TTTT	1
	Proposed - Review	Transmission and Access (D)																1 1												
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Updated roadmap – draft version 5

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Impacted				2	2020			20	021	1	2022					2	023		2024					202	<u> 25</u>		
Industry Sector	Reform Status	Reform Initiative	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INITIATIVE	VITU I IMITED IT	SYSTEM IMPLEMENTATION IMPACTS																						$\perp \perp \perp$			
INITIATITES	WITH CIMITED II	STSTEM IMPLEMENTATION IMPACTS																									
Wholesale	Committed	Mandatory Primary Frequency Response			•				Impleme	ntation tim	ing shown	is indicati	ve and dep	ends on ind	lividual ge	enerator d	ircumstan	ces manaj	ed throug	n the self-	assessmen	t process					
Network	In progress	Technical Standards for Distributed Energy Resources								•					++									+			
Wholesale	In progress	Efficient management of system strength on the power system (B)	•										<u> </u>		<u> </u>									+		\sqcup	
Wholesale	In progress	Generator Registrations and Connections									<u> </u>																
Industry-wide	Committed	NEM Settlement in Zero and Negative Demand Conditions	•						•						+									+	+	+	
Network	In progress	Access, Pricing and Incentive Arrangements for Distributed Energy Resources	•						Δ																		
Network	In progress	Connection of Dedicated Connection Assets									Δ																
Network	Committed	Implementing a General Power System Risk Review	•								•																
Industry-wide	In progress	Enhancing Operational Resilience to Indistinct Events	•																								
Wholesale	Committed	Prioritising arrangements for system security during Market Suspension	•																								
ESB INITIAT	IVES VITH LIMITI	ED IT SYSTEM IMPLEMENTATION IMPACTS																									
Industry-wide	Committed	Renewable Energy Zones - Planning (Stage 1) (D)	•					•																			
Industry-wide	In progress	Renewable Energy Zones - Implementation (Stage 2) (D)																									
Wholesale	Committed	Visibility and Security of Dispatch (Stage 1) - Interim	•					•																			
Networks	Proposed - Pending	Governance of DER Technical Standards	•								Indicativ	i : Le timing, su	ubject to ru	ile change p	rocess												
GAS INITIA	IVES																										
Gas	Committed	DWGM simpler wholesale price												•			+					+	+	+			
		-													Impleme	nted as a	single AEI	VO projeci									
Gas	Committed	DWGM improvement to AMDQ regime												•													
Gas	In progress	Measures to Improve Transparency in the Gas Market											Subject i	lo passage	of legisla	tion											

Log of changes – draft version 5

- 5MS retail MDM IT platform go-live updated to 21 June 2021 on roadmap, detailed implementation schedule also updated for go-live date of retail MDM IT platform to 21 June 2021 and market trial dates to 19 July 10 September 2021
- Global Settlement established as a separate line item
- Wholesale Demand Response updated detailed implementation schedule to reflect revised timing of preproduction test
- Extended rules development timeframes for the following initiatives:
 - Standalone Power Systems to July 2021
 - Consumer Data Right to Sept 2021
 - Updating the Regulatory Frameworks for Embedded Networks to July 2021, status updated to on hold
 - ST PASA replacement and methodology update to Feb 2022
 - Enhancing Operational Resilience to Indistinct Events end of 2021
 - Governance of DER Technical Standards end of 2021
 - Measures to Improve Transparency in Gas Market to Dec 2021, with indicative go-live date of mid 2022

Log of changes – draft version 5

- Updated implementation timeframes for fast frequency response market ancillary services for draft determination
- Extended rules development timeframes by 6 months to mid-2022 to reflect revised timing of AEMC processes for the following system services rule changes:
 - Operating reserve market
 - Introduction to ramping services
 - Capacity commitment mechanism for system security and reliability services
 - Synchronous services.
- Updated timing of the ESB's final post 2025 market design report with final recommendation for 4 workstreams to July 2021



Log of changes – draft version 5

Updated implementation timings and committed go-live dates for final determinations/rules for:

- NEM Settlement in Zero and Negative Demand Conditions 1 Sept 2021
- Implementing a General Power System Risk Review 10 Jan 2022
- Renewable Energy Zones Planning (Stage 1) 13 May 2021
- Updated implementation timings and proposed go-live dates for draft determinations and rules for:
 - Efficient management of system strength on the power system Sept 2022 and Mar 2023
 - Generator Registrations and Connections 30 Mar 2022
 - Access, Pricing and Incentive Arrangements for Distributed Energy Resources 1 July 2021
 - Connection of Dedicated Connection Assets Jan 2022
- Removed Visibility and Security of Dispatch (Stage 2) Interim measures
- Removed Protecting Critical Infrastructure and Systems of National Significance
- Full log of changes is available see separate tab on the published roadmap version 5