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## Program Consultative Forum

\*

5 October 2022

### 1. Welcome





We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to their Elders past, present and emerging.





#	Time	Торіс	Presenter(s)
1	2:00 - 2:15	Welcome	Peter Carruthers (AEMO)
2	2:15 – 2:20	Meeting objectives	Peter Carruthers (AEMO)
3	2:20 - 2:40	Introduction to NEM 2025/ NEM reform implementation program	Peter Carruthers (AEMO)
4	2:40 - 3:10	Mobilising NEM reform engagement structure	Greg Minney / Ulrika Lindholm (AEMO)
5	3:10 - 3:30	Ways of working / Principles	Greg Minney (AEMO)
6	3:30 - 3:40	Current initiatives and participant impact	Lance Brooks (AEMO)
7	3:40 -3:50	Upcoming engagements	Ulrika Lindholm
8	3:50- 4:00	Thanks and close	Peter Carruthers (AEMO)

Appendix A: Competition law meeting protocol and AEMO forum expectations

Appendix B: Draft Initiative Milestone Structure

Appendix C: Proposed Stage Gates

Please note that this meeting will be recorded for the purpose of compiling minutes.



### 2. Meeting objectives

## **Objectives for this PCF meeting**

- Brief Industry Participants on the proposed NEM Reform
   engagement structure and approach
- Confirm the PCF's role
- Receive feedback on the applicability of proposed engagement approach for participants



 Receive guidance from participants as to your further needs and requirements for program engagement

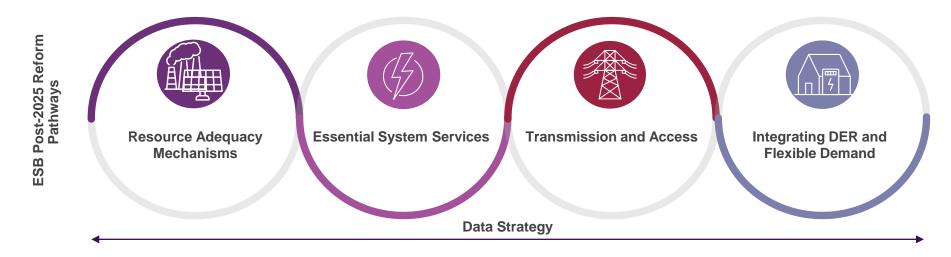


# 3. Introduction to NEM 2025/ NEM reform implementation program





• The ESB provided its final advice to the Energy National Cabinet Reform Committee (National Cabinet) on 27 July 2021. The ESB divided the work into four interrelated reform pathways complimented by a Data strategy for the NEM.



- National Cabinet subsequently approved the Post-2025 reform recommendations on 29 October 2021.
- Energy Ministers agreed several actions at their June and August 2022 meetings regarding recent market volatility, NEM2025 reforms as well as gas market reforms.
- NEM2025 reforms namely the capacity mechanism (senior officials to lead development) and the congestion management mechanism (to be expedited) were called out in the August EMM communique.





#### NEM2025 Reform Program Scope

Pathway	Description	Initiatives
Resource Adequacy Mechanisms	Investment in the right mix of resources (generation, storage and demand response) in place prior to anticipated plant closures, and that plant exit does not cause significant price or reliability shocks to consumers through the transition	<ul><li>Increased MT PASA Information</li><li>Capacity Mechanism</li></ul>
Essential System Services	The resources and services are available to manage the complexity of dispatch and to deliver a secure supply to customers	<ul> <li>Fast Frequency Response</li> <li>Mandatory Primary Frequency Response</li> <li>Operating Reserve Market</li> <li>System Strength (Planning)*</li> <li>Operational Security Mechanism</li> </ul>
Transmission & Access	The network meets future needs, renewable energy zones, and there is a targeted set of investments that can deliver the energy transition at lower cost	Congestion Management Model
Integrating DER & Flexible Demand	New opportunities are created for consumers to receive and use energy, and are rewarded for doing so flexibly	<ul> <li>Integrating Energy Storage</li> <li>Flexible Trading Arrangements (Model 2)</li> <li>Scheduled Lite</li> <li>Dynamic Operating Envelopes</li> <li>Distribution Local Network Services</li> <li>Turn-up Services</li> <li>DER Data Hub &amp; Registry Services</li> <li>DER Operational Tools</li> </ul>
Data Strategy	A framework is established with new guiding policy principles, build capability, forward planning and adaptability and address priority data gaps	<ul> <li>Data Services</li> <li>EV Charging Standing Data Register</li> <li>Bill Transparency</li> <li>Network Transparency</li> </ul>

#### NEM2025 Reform Program Scope

- In addition to the Post-2025 reform initiatives, AEMO has identified a further set of initiatives linked to efficient implementation of the reform program.
- Each initiative represents either a foundational investment in an AEMO legacy system or a more strategic investment as part of AEMO's wider digital program of work aimed at ensuring AEMO and industry participants' IT systems are fit for purpose to meet the needs of the transition and beyond.

Pathway	Description	Initiatives
AEMO Foundational	Foundational dependency work to deliver an uplift to base capability on which reforms are dependent	<ul><li>Identity Access Management</li><li>Industry Data Exchange</li><li>SCADA Lite</li></ul>
AEMO Strategic	Strategic dependency work to effectively futureproof capabilities and scalability of systems thereby avoiding investment in systems that will become end-of-life shortly after the reforms take effect	<ul> <li>Portal Consolidation</li> <li>CoMaStR</li> <li>Dispatch Target State</li> <li>Bids / Offers Target State</li> <li>Constraints Target State</li> <li>FRC Target State</li> </ul>

# AEMO

### **NEM Reform Implementation Roadmap**

- The **NEM Reform Implementation Roadmap** is to establish a basis upon which AEMO, and stakeholders may navigate the breadth of ESB reforms over the coming few years, de-risking delivery, and informing implementation timing.
- It will enable careful planning for the delivery of reforms, avoid unnecessary or duplicative costs, and identify where strategic investments can be made to deliver efficient outcomes for AEMO, market participants and consumers

#### Why is it required?

- The Post-2025 reform program is significant, let's maximise the chances of industry-wide success and efficient delivery
  - Integrated program rather than piecemeal and fragmented
  - Drive down implementation costs
  - Supports implementation resource planning and mobilisation for all implementation stakeholders
- Transparency on implementation
- Informs implementation timing decisions by market bodies

#### **Roadmap Objectives**

- The objectives of the NEM2025 Implementation Roadmap is to set out a program that:
  - Implements reforms in a timely and efficient manner;
  - Co-ordinates regulatory and IT change;
  - Aims to remove costs associated with implementation of individual initiatives; and
  - Provides transparency to stakeholders on the implementation program

The roadmap will be augmented over time to reflect Energy Ministers' initiatives that are strategic in nature and/or have a significant IT systems impact (i.e. meet the criteria for inclusion on the roadmap)



### **NEM Reform Implementation Roadmap**

- The Roadmap, provides AEMO and stakeholders with a holistic view of the reform program impacting National Electricity and Gas Markets
- It does so by bringing together AEMO's former Regulatory Implementation Roadmap (version 7) and NEM2025 Implementation Roadmap (version 1) into one central Roadmap
- The Roadmap will be revised periodically to reflect changes in scope or timelines as policy or designs are being finalised or as new rule determinations are made.



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# AEMO

#### **Context and reference material**

Significant collateral has been produced as part of the NEM Reform Implementation Roadmap development

- **NEM Reform Implementation Roadmap V1**, which reflects the planned implementation sequence and timing at an initiative level;
- **NEM2025 Program scope statement**, introduces the scope of AEMO's NEM2025 program;
- **NEM2025 Gate 1 Business Case**, outlines AEMO's approach to implementation and includes a summary of stakeholder feedback informing the approach;
- **Participant Impact Assessments**, high level Impact assessment performed by Industry groups to highlight expected participant impact of reform initiative;
- **NEM2025 initiative briefs**, provides a short ~3 page description of the scope and benefit of each initiative that is part of the NEM2025 scope; and
- **NEM Reform Implementation Roadmap Governance Statement of Approach,** which outlines AEMO's approach to governing scope and funding commitments for implementation of the Roadmap.

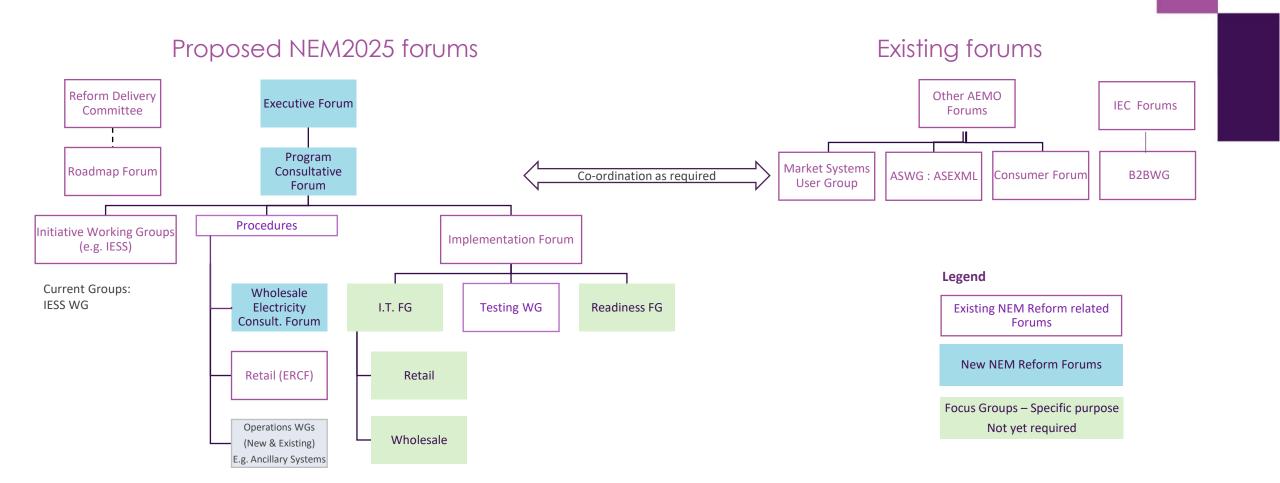
All documents have been published at <u>AEMO | NEM Reform Implementation Roadmap</u>



# 4. Mobilising NEM reform engagement structure

# How AEMO proposes to engage across the program





### **Proposed forums - roles**

Executive Forum to enable senior participant and market body engagement across NEM reform agenda

PCF to provide over-arching engagement and direction for the program

Implementation Forum – continuation of existing forum, focused on the system and business implementation aspects of initiatives

- Industry Test Focus Group (ITFG) to continue for participant testing engagement on release by release
   basis
- IT Working Group where technical and interface changes require focussed engagement
- Readiness Working Group where scope and complexity of initiative / release readiness require greater engagement than can be efficiently supported through Implementation Forum

#### Procedural Engagement via:

- WECF Wholesale Electricity Consultative Forum new forum established to focus on wholesale procedural change
- ERCF Electricity Retail Consultative Forum continuation of current role
- Recognise differing Wholesale and Retail participant impacts and procedural requirements for effective consultation

Initiative specific Working Groups (e.g. IESS) where required will be established during initiative design, after which engagement will be provided through program wide forums

General engagement forums and channels to complement Working Groups

#### **Principles of the approach**

- Support participant implementation across multiple reform initiatives
- Utilise existing engagement channels where feasible
- Recognise scale and extent of reform program through establishment of PCF and Executive Forums



### Program forums and working groups



	Purpose	Membership and suggested roles	Chair	Cadence
EXECUTIVE FORUM	To facilitate engagement between AEMO and executive-level representatives from market bodies, market participants and consumer groups on matters relating to the implementation of the NEM2025 Program.	Executive and Senior industry stakeholders, Open nomination	Violette Mouchaileh	6-monthly and to be determined by the forum (October / April)
REFORM DELIVERY COMMITTEE	Co-design the development of, and updates to NEM2025 Implementation Roadmap	Executive and Senior industry stakeholders, Attendance by nomination by peak industry bodies	Violette Mouchaileh	Quarterly (Nov / Feb / May /Aug)
PROGRAM CONSULTATIVE FORUM (PCF)	To collaborate with participants and intending participants on matters relating to the planning, coordination and implementation of the NEM Reform Program.	Open to nominated representatives Program Directors / Business owners	Peter Caruthers	Monthly (1 <sup>st</sup> week of month)
INITIATIVE WORKING GROUPS / FOCUS GROUPS	Undertake impact assessment following a final determination, collaborate on high level design & update mobilisation plan.	Open to nominated representatives Initiative Specific SMEs	Initiative business lead	As Required
IMPLEMENTATION FORUM (IF)	To collaborate with participants and intending participants the IT systems development, transition planning and deployment of initiatives under the NEM2025 Program. See sub-groups on following page.	Open forum with current membership Project Managers/ Implementation Leads / Business Leads	Greg Minney	Monthly (3 <sup>rd</sup> week of month)
PROCEDURES -Wholesale Electricity Consultative Forum - Retail Electricity Consultative Forum	To collaborate with participants and intending participants on the coordination, and the development of amendments to, procedures, guidelines and documentation required for implementation of reforms. Will utilise AEMO / initiative forums to consult on	Open to nominated representatives Regulatory Leads & procedural SME's	WECF- Chris Muffet ERCF – Blaine Miner	Monthly
	REFORM DELIVERY COMMITTEE PROGRAM CONSULTATIVE FORUM (PCF) INITIATIVE WORKING GROUPS / FOCUS GROUPS IMPLEMENTATION FORUM (IF) PROCEDURES -Wholesale Electricity Consultative Forum - Retail Electricity	executive-level representatives from market bodies, market participants and consumer groups on matters relating to the implementation of the NEM2025 Program.REFORM DELIVERY COMMITTEECo-design the development of, and updates to NEM2025 Implementation RoadmapPROGRAM CONSULTATIVE FORUM (PCF)To collaborate with participants and intending participants on matters relating to the planning, coordination and implementation of the NEM Reform Program.INITIATIVE WORKING GROUPS / FOCUS GROUPS	executive-level representatives from market bodies, market participants and consumer groups on matters relating to the implementation of the NEM2025 Program.stakeholders, Open nominationREFORM DELIVERY COMMITTEECo-design the development of, and updates to NEM2025 Implementation RoadmapExecutive and Senior industry stakeholders, Attendance by nomination by peak industry bodiesPROGRAM CONSULTATIVE FORUM (PCF)To collaborate with participants and intending participants on matters relating to the planning, coordination and implementation of the NEM Reform Program.Open to nominated representatives Program Directors / Business ownersINITIATIVE WORKING GROUPS / FOCUS GROUPSUndertake impact assessment following a final determination, collaborate on high level design & update mobilisation plan.Open to nominated representatives Initiative Specific SMEsIMPLEMENTATION FORUM (IF)To collaborate with participants and intending participants the IT systems development, transition planning and deployment of initiatives under the NEM2025 Program. See sub-groups on following page.Open to nominated representatives Initiative Specific SMEsPROCEDURES -Wholesale Electricity Consultative ForumTo collaborate with participants and intending participants on the coordination, and the development of amendments to, procedures, guidelines and documentation required for implementation of reforms.Open to nominated representatives Regulatory Leads & procedural SME'sPROCEDURES -Wholesale Electricity Consultative ForumTo collaborate with participants and intending participants on the coordination, and the development of amendments to, procedures, guidelines and documentat	executive-level representatives from market bodies, market participants and consumer groups on matters relating to the implementation of the NEM2025 Program.stakeholders, Open nominationMouchailehREFORM DELIVERY COMMITTEECo-design the development of, and updates to NEM2025 Implementation RoadmapExecutive and Senior industry stakeholders, Attendance by nomination by peak industry bodiesViolette MouchailehPROGRAM CONSULTATIVE FORUM (PCF)To collaborate with participants and intending participants on matters relating to the planning, coordination and implementation of the NEM Reform Program.Open to nominated representatives program Directors / BusinessPeter CaruthersINITIATIVE WORKING GROUPS / FOCUS GROUPSUndertake impact assessment following a final determination, collaborate on high level design & update mobilisation plan.Open to nominated representatives Initiative Specific SMEsInitiative business leadIMPLEMENTATION FORUM (IF)To collaborate with participants and intending participants the IT systems development, transition planning and deployment of initiatives under the NEM2025 Program. See sub-groups on following page.Open to nominated representatives Initiative Specific SMEsGreg MinneyPROCEDURES -Wholesale Electricity Consultative ForumTo collaborate with participants and intending participants on the coordination, and the development documentation required for implementation of reforms.Open to nominated representatives Regulatory Leads & procedural SME'sWECF- Chris Mulfet ERCF - Blaine Miner



# Program forums and working groups continued

Туре	Channel	Purpose	Membership	Chair	Cadence
on Forum – Groups	IT FOCUS GROUP	Co-ordination and collaboration on IT technology matters Consultation on AEMO foundational/strategic initiatives implementation - Retail subgroup - Wholesale subgroup	Open to nominated representatives	TBD	lf required.
Implementatio Working G	TESTING WORKING GROUP	Coordination and dialogue between subject matter experts on testing prior to each release, Test Planning and Joint issue resolution	Open to nominated representatives	Tui Grant	As Required for Initiative support
Imple	READINESS WORKING GROUP (RWG)	Coordination and dialogue between subject matter experts on readiness to go-live- if required given scale of initiative and level of market impact	Open to nominated representatives	Greg Minney	Monthly (As Required)
Information Forums	NEM REFORM ROADMAP FORUM	Facilitate broad industry perspectives on NEM reform and Roadmap iterations	Open attendance	Peter Caruthers	6 monthly/as required by roadmap updates
Infor	INDUSTRY INFORMATION SESSION	Provide high-level, transparent, timely information on program implementation	Open attendance	Peter Caruthers	Quarterly



#### Other channels

Туре	Channel	Purpose	Stakeholders	Cadence
	MEDIA RELEASES	Generate general awareness around key implementation milestones that have broader implications to the public	Trade and National media, General public	At major program milestones
	AEMO NEWS ROOM ARTICLES & SOCIAL MEDIA (LINKEDIN)	Generate general awareness around implementation milestones.	Industry and general public	At program milestones
tools	FACT SHEETS & INFOGRAPHICS	To support effective communication around implementation milestones, used in newsletters, articles, social media etc	As required	As required
and	AEMO COMMUNICATION NEWSLETTER	Provide high level updates to wider industry on key implementation milestones using AEMO's existing weekly industry newsletter	Subscribers to <u>AEMO Comms newsletter</u>	At program milestones
Communications	PROGRAM NEWSLETTER	Provide transparent and timely information on program management and implementation progress to involved stakeholders	Stakeholders involved in forums and working groups	Monthly
Commi	DEDICATED PROGRAM WEBSITE	Provide transparent, timely information on program. Linking relevant implementation information for individual reform initiatives. Final versions of documents are published on the website.	Industry and general public	Throughout the program
	DIGITAL COLLABORATIVE TOOLS	Enables collaborative development of documents	Impacted industry stakeholders	As required
	DEDICATED MAILBOX	Provide coordination point for implementation program Connect stakeholders with the correct AEMO representative to assist with questions or suggestions	As required	Throughout the program



### **PCF Terms of Reference - Scope**

- Provide overall advice on the mobilisation, coordination, and implementation of NEM reform initiatives
  - Approach to development of high-level designs for solution development
  - Market and operational procedures, guidelines and other documentation
  - Participant IT development
  - Industry Testing and Initiative Go-Live readiness
- Provide advice on necessary subsidiary working and focus groups
  - Including the establishment, oversight and delegation to any groups established
- Monitor program delivery
  - Including industry testing and readiness, and the management of changes against key program milestones, including collaboration and co-ordination in managing and resolving risks and issues
- Inform the process to confirm critical elements of strategic/foundation initiatives on the Roadmap
  - High Level Design, Detailed Design or Scope
  - Implementation Plan and Impact Assessment (including the cost/benefit assessment)
- Explore and identify opportunities to remove costs from industry
  - In the design and development of AEMO and industry systems including identifying where AEMO can build common infrastructure that can be utilised by industry.

#### Out of scope:

The PCF is not a decision-making body regarding AEMO's internal program governance.

The PCF is not a consultative forum for policy development and design and rules development.

#### PCF Terms of Reference -Representation

Participation in the Program Consultative Forum is open to suitably qualified nominations from market participants impacted by the implementation of reforms. In the interests of facilitating effective discussions, each organisation should nominate a primary member. An organisation's membership can change, as appropriate, through the life of the program.

AEMO expect PCF members to:

- Have a thorough understanding of the NEM and the reform initiatives under the NEM2025 Program,
- Have a detailed understanding of their own program's timelines, deliverables and business impacts and how their program interfaces with AEMO's program,
- · Be prepared to participate in discussion and provide detailed responses to matters under discussion,
- Have the authority to consider PCF matters and provide official views and commitments on behalf of their business, and
- Provide Forum outcomes back into their business.



### **Engagement Structure – Discussion**

- 1. Are there any refinements that should be considered to the working group structure?
- 2. Do participants plan to establish "NEM Reform" programs or engage on a initiative by initiative basis?
- 3. At what stage are participants at in establishing individual reform programs?
- 4. Is October an appropriate timeframe for NEM Reform Executive Forum
  - 1. Currently scheduled for 25th October
  - 2. Would holding this forum assist in mobilising engagement
  - 3. Would early 2023 better reflect participant engagement
- 5. Ability of participants to engage in relevant forums?
  - 1. Number and extent of engagements to be supported given number of initiatives
  - 2. Ability to select which forums provide best engagement for available resources



### 5. Ways of Working

### Managing Inflight Initiatives

For initiatives the are "In Flight", following issue of AEMC final determination AEMO will provide program:

- Milestone Management
  - Consistent set of milestones that reflect both regulatory and delivery progression (draft milestones included in appendix)
  - Highlight availability of artefacts required for participant development
- Status Reporting
  - Progression against committed dates, highlight implementation issues and risks
- Readiness Management
  - Defined and measured go-live criteria, with associated contingency approaches
  - Industry and market test support
  - Transition planning and engagement
- Execution Change management
  - Impact assessment for changes to schedule, scope to in-flight initiatives
  - · Industry and AEMO program impacts taken into account
- Program and Industry Risk management
  - Consolidation of Industry risk across initiatives
  - Regular review and mitigation evaluation



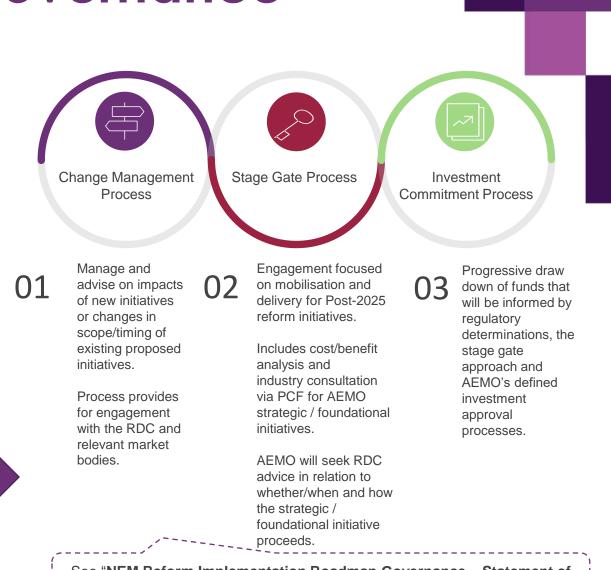
#### NEM2025 Roadmap Governance

In developing the Roadmap, AEMO and RDC members noted the significant challenges and risks associated with delivery of the NEM2025 Program and the importance of an appropriate management and governance framework.

Challenges include but are not limited to:

- Managing uncertainty in scope, timing and cost of initiatives
- Establishing the basis for, and timing of AEMO strategic and foundation enabling initiatives
- Setting funding commitments over a multi-year Program given the uncertainty surrounding policy and regulatory outcomes and scope of certain initiatives.

The Roadmap commits to delivery of mandatory and no regrets initiatives in a timely way. It also sets a pathway and progressive commitment process for delivery of those initiatives with greater uncertainty in policy, design, scope or timing



See "**NEM Reform Implementation Roadmap Governance – Statement of Approach**" for further information on each process.

### Industry Cost management



Given scope and scale of the NEM Reform program a key focus must be the management of total industry cost in the realisation of reform outcomes

NEM reform program endeavours to address this through multiple channels:

- Efficiency in implementation planning
  - · Bundling of initiatives and commencement timeframes to extract implementation efficiencies
  - NEM Reform Roadmap to outline long term program and reflect overall implementation priorities and capacity
  - Integrated Design of initiatives at policy / rule stage, to the extent practicable
- Implement opportunities for process improvement through Quick Wins
  - E.g. Settlement Reconciliation workshops as conducted under 5MS to clarify and refine end-to-end process
  - · Workshops / focus groups to be established via the program as opportunities identified
- Long term operational efficiency initiatives
  - Bundled into stage gate 3 initiatives (foundational and strategic initiatives)
  - Proposals and business case to be confirmed with participants as basis for inclusion in roadmap for implementation
- Opportunities to avoid or remove duplication of implementation activity
  - Relies on industry input to identify opportunity
  - · May require increased investment in AEMO process to leverage multiple participant investment

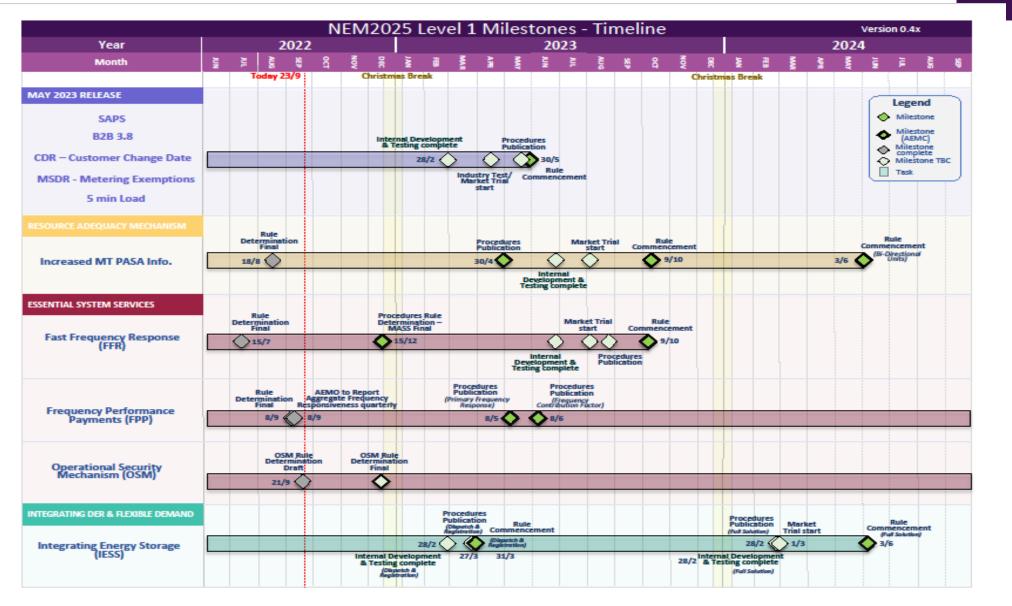
#### Implementation of approaches :

- Quick wins and low hanging fruit items have been successfully implemented previously
- Big ticket items have proven harder to progress. A longer term perspective and progressive transition to provide participant flexibility are likely to lead to better outcomes.



## 6. Current initiatives progress

#### Initiatives in progress



AEMO

### **High level impact Assessment**



- Impact of Initiative implementation varies across Participants
- Attached Slides are extract of preliminary assessments performed by industry groups in development of roadmap and published on <u>AEMO's website</u>
- Consideration should be given to extent and timing of impacts in developing participant engagement approaches
- AEMO will expand and consolidate impact heatmaps as initiatives move into implementation

#### Australian Energy Council – Roadmap Implementation Impact



#### **Reform Delivery Committee Participant Impact Assessment**

Australian Energy Council

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be c	Transmission & Access	N/A at this time																							
Scope		Data Services																							
	Data Strata au	EV Charging Standing Data Register																							
	Data Strategy	Bill Transparency																							
		Network Transparency																							

Impact is Y/N

Impact is H/M/L - see 'Cover' tab

\*Led by transmission network service providers

#### ENA (TNSP) – Roadmap Implementation Impact



#### **Reform Delivery Committee Participant Impact Assessment**

Energy Networks Australia (Transmission Network Service Providers)

					PARTIC		ТҮРЕ									FUNCTIONS COMMENT	Г
		imers - non particip ers - wholesale parti	Demand Response Service Providers (DRSPs) Developers - Renewables/Storage Distribution Network Service Provides (DNSPs)	Generators - Renewable Generators - Scheduled	Manufacturers - renewables/batteries Metering Coordinators	Metering Data Providers	Meter providers and manufacturers Reallocators	Retailers Small Generator Aggregators (SGAs)	Trader	Transmission Network Service Providers (TNSPs) [add new suggestions here]	[add new surgestions hare]	add new suggestions here] Bidding/Data Provision	Trading Settlement	Data Collection & Storage Billing	Network Management		
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	Mandatory Primary Frequency Response														v		
	Operating Reserve Market									L							
Essential System Services	System Strength (Planning)*											1†		Y	Y	Significant	TNSPs obligations under the new rules.
	Structured Procurement & Scheduling Mechanism (UCS + SSM)								l	L							
	Integrating Energy Storage								N	м				Y	Y		
	Flexible Trading Arrangements (Model 2)								l	L							
	Scheduled Lite	$\downarrow \downarrow \downarrow$							1	L							
Integration of DER & Flexible Demand	Dynamic Operating Envelopes	+ + +	++		$\square$				1	L		++					
	Distribution Local Network Services								I	L							
	DER Platform Registry Services	$\downarrow$ $\downarrow$					++			L		++	+				
	Market & System Operator Integration								I	L					Y		
	Turn-up Services								1	L		+	+				
	N/A at this time	+ + +					++	_	$\square$	$ \rightarrow $		++	+				
	Data Services EV Charging Standing Data	+++		$\left  \right $		++	++				+	++					Changes to the application of performance standards to and also application of TUOS.
										L							
Data Strategy	Register	+ $+$ $+$															
	Register Bill Transparency Network Transparency								1	L			+		Y Y		

#### ENA (DNSP) – Roadmap Implementation Impact

#### Reform Delivery Committee Participant Impact Assessment

Energy Networks Australia (Distribution Network Service Providers)

							PARTICIP	PANT TYPE	E								FUNCTIONS	COMMENT
			Consumers - non participants	Consumers - wholesale participants Demand Response Service Providers (DRSPs)	Developers - Renewables/Storage Distribution Network Service Provides (DNSPs)	Generators - Renewable Generators - Scheduled	Manufacturers - renewables/batteries Metering Coordinators	Metering Data Providers Meter providers and manufacturers	Reallocators Retailers	Small Generator Aggregators (SGAs) Transmission NeTradef Service Providers (TNCPC)	(add new suggestions here)	[add new suggestions here]	Bidding/Data Provision Trading	Settlement Data Collection & Storage	Billing	Network Management Network operations		Seneral comment that final design of many proposals are still not y confirmed, let alone if the rule change itself proceeds without mate changes. Some of the assumptions are noted in the comments belo mpacts where provided are indicative and have a significant level c uncertainty.
	Resource Adequacy Mechanism	Increased MT PASA Information	++				L	L	$\rightarrow$			$\downarrow$				++		from DNSPs, therefore no impact anticipated.
		Fast Frequency Response			м		L	L						Y		Y		DNSPs could be impacted through engagement with Registered Participants or those seeking to engage with the Frequency Market as changes to performance and technical requirements assessment
		Mandatory Primary Frequency Response			н		L	L								Y		Underfrequency load shedding assumed to be included in this servi
	Essential System Services	Operating Reserve Market	++	++			L		++	++	+	++			$\vdash$	++		
	essential system services	System Strength (Planning)*			м		L	L						Y	,	r (		Although TNSPs are leading, DNSPs will be required to continue to o with TNSPs as the jurisdictional planner to ensure that system strer adequately procured and generators appropriately supporting syste strength requirements. This change is yet to be understood clearly DNSPs.
sion 1)		Structured Procurement & Scheduling Mechanism (UCS + SSM)			н		L	L		Instrumentation         Several comment that final design of many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that the store the store that nucleosing the many proposals are still confirmed by the store that nucleosing the many proposals are still confirmed by the store that the store that the store that the store the store that the store that the store that the store the store that the store that the store that the store that the store the store that the store that the store that the store that the store the store that the store that the store that the store the store the store the store the store t								
(Vers		Integrating Energy Storage			н		L	L						Y	Y Y	( Y		DNSPs currently working through waiver mechanisms which do not provide/support ESS across the whole system.
n Roadmap		Flexible Trading Arrangements (Model 2)			H+		м	м						Y Y	YY	/ Y		This initiative needs further development before the extent of DNSI resources can be estimated. DNSPs will be impacted and must prep
ementatio		Scheduled Lite			L		м	м						Y		Y		Assumes DNSPs will gain some marginal visibility for network management but have no role in settlements for private metering arrangements.
12025 I mpl	Integration of DER & Flexible Demand	Dynamic Operating Envelopes			H+		м	м					Y	Y	۱ ۱	r y		Some (but not all) DNSPs have already invested heavily in DOE ahea implementation of ESB reforms. Further significant resourcing will t necessary as the market and system continues to transition
Scope of NEM2025		Distribution Local Network Services			м		м	м					Y	Y	Y Y	( Y		More development required, particularly on network tariff reform to seen as an important way of creating incentives for network service procurement of services only being considered in limited situations as during RIT-D process).
		DER Platform Registry Services			м		м	мΠ					v T	v				Assume the intent for this to replace or significantly augment the experiment and the experiment of the second sec
		Market & System Operator Integration	n		н		м	м					ү	Y	,	( Y		We note that this initiative needs further development before the e of DNSP resources can be estimated.
		Turn-up Services			м		м	м					Y		YY	( <b>y</b>		We note that this initiative needs further development before the e of DNSP resources can be estimated.
	Transmission & Access	N/A at this time										11						
		Data Services			м		N/A	м						Y				of DNSP resources can be estimated.
	Data Strategy	EV Charging Standing Data Register			L			м				$\downarrow \downarrow$		Y	Y	$\parallel$		
		Bill Transparency			L		L	L							Y			of DNSP resources can be estimated.
		Network Transparency			н		н	н					,	Y				We note that this initiative needs further development before the of DNSP resources can be estimated.
			Impact	t is H/M/	'L - defin	ition												

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#### Energy Efficiency Council – Roadmap Implementation Impact

Reform Delivery Committee Participant Impact Assessment

Energy Efficiency Council

									PARTIC	IPANT T	TYPE											I	FUNCTIC	ONS					
			Consumers - non participants	Consumers - wholesale participants Demand Reconnee Service Providers (DRSDs)	ers -	0	Generators - Renewable Generators - Schodulod	Manufacturers - renewables/batteries	Metering Coordinators	Metering Data Providers Meter providers and manufacturers	Reallocators	Retailers Small Generator Addregators (SGAs)	Transmission Network Service Providers	(TNSPS) Engineering / sthon consultancy	Software developer (e.g. battery optimisation) BTM hardware developer		[add new suggestions here] Bidding/Data Provision		Settlement	Data Collection & Storage	Billing Network Management	Compliance	add new suggestions here] [add new suggestions here] [add new convertions here]	add new suggestions nere) [add new suggestions here]	[add new suggestions here] [add new suggestions here]	[add new suggestions here] [add new suggestions here]	[add new suggestions here] [add new suggestions here]	[add new suggestions here]	add new suggestions here]
	Resource Adequacy Mechanism	Increased MT PASA Information											Y		Y		L, M for sche dule d gene rator												
		Fast Frequency Response										ut w)	Y				M	м	L/M	L									
ap (Version 1)	Essential System Services	Mandatory Primary Frequency Response Operating Reserve Market System Strength (Planning)* Structured Procurement & Scheduling Mechanism (UCS + SSM)											Y		Y		Н	н	M	L									
Scope of NEM 2025 Implementation Roadmap (V	Integration of DER & Flexible Demand	(JUS + 35M) Integrating Energy Storage										Y	Y		Y		L (dep ends bid form requi reme nts set by AEM O)												
		Flexible Trading Arrangements (Model 2) Scheduled Lite Dynamic Operating Envelopes Distribution Local Network Services	Y	Y Y Y Y						Y		Y Y Y	Y Y Y Y		Y Y Y Y Y			M		м м		H?							
		DER Platform Registry Services			+		+	+		+			$\left  \right $	+		+	+			+	+	$\square$	++	++	+	+	+	Ħ	_
	Transmission & Access	Market & System Operator Integration Turn-up Services N/A at this time		<u>' Y</u>									Y				м	м	м						$\pm$			#	-

Impact is H/M/L - see 'Cover' tab

\*Led by transmission network service providers





## 7. Upcoming engagements

#### Upcoming engagements





### 8. Thanks and close



NEM2025@aemo.com.au



### Appendix A: Competition law meeting protocol and AEMO forum expectations



#### **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:

- Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
- Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
- 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:

- Which customers they will supply or market to
- The price or other terms at which Participants will supply
- Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
- Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
- 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.



#### **AEMO Forum and Meeting Expectations**

This charter explains expectations regarding participation and behaviour in the Australian Energy Market Operator (AEMO)'s stakeholder forums.

#### **Meeting Expectations**

All participants will:

- Respect the diversity of the group.
- Speak one at a time refrain from interrupting others.
- Share the oxygen ensure that all attendees who wish to have an opportunity to speak are afforded a chance to do so.
- Maintain a respectful stance towards all participants.
- Listen to others' points of view and try to understand others' interests.
- Share information openly, promptly, and respectfully.
- If requested to do so, hold questions to the end of each presentation.
- Remain flexible and open-minded, and actively listen and participate in meetings.
- Abide by COVID-Safe workplace guidelines, if attending a meeting on AEMO's premises.

#### **Roles and Responsibilities**

Forum stakeholders agree to:

- Be specific and fact-based in their feedback on a specific workstream or emerging issue;
- Review and provide feedback on papers and reports;
- Relay information to their colleagues or constituents after each meeting and gather information/feedback from their colleagues or constituents, as practicable, before each meeting;
- Maintain a focus on solutions or outcomes that benefit all energy consumers.

#### AEMO agrees to:

- Provide technical expertise in a manner that is considerate of the audience and their level of expertise;
- Assist participants in understanding issues enough to represent their views;
- Provide all participants the opportunity to voice their views.



### Appendix B: Draft Initiative Milestone Structure

#### **Draft Initiative Milestone Structure**

Milestone	Level	Description	
	L1	L1 Milestones to manage progress against key Implementation in line with Regulatory Roadmap identifying where significant delay has potential to Impact rule commencement	
Initiative	14		
Draft Determination Published (AEMC) Final Determination Published (AEMC)	L1 L1	Identifies point of NEM2025 Program Implementation Engagement Confirmation of Scope and timing	
Rule Commencement Date(s)	LI L1	Reflects effective date(s) for rule that will be met by implementation program	
NEM Procedures Published	L1 L1	Provide procedure certainty to impacted Particpants- where included in rules decision	
			<ul> <li>Milestones to reflect consistency of</li> </ul>
AEMO Internal Development and Testing Completed	L1	Progress Confidence prior Industry Test	
Market Trials / Industry Testing Commence	L1	Key Initiative Readiness milestone	implementation approach
			<ul> <li>Support participant planning and</li> </ul>
	L2	L2 Milestones provide transperancy for the completion of L1 milestones and support for particpant preparation	
	LZ		progress management
High Level Design Published	L2	Basis for Procedure and System changes	Tailored to requirements of initiative
AEMO Program Workstreams Engaged	L2	Commencement of Initialitive Implementation in Timeframe to support Go-Live	· · · · · · · · · · · · · · · · · · ·
		Staged deployment of solution to support Rule Commnecement Milestones (eg early availblility of Registration, update	Commence for an initiative once Draf
Phase go-Live/ Deployment (s)	L2	of interface tech)	Determination available and refine
			during lifecycle
Procedures		By Package	
		Supports NEM Procedures L1 Milestones and Industry Resource allocation, assumes consolidation across timeframes,	
Consultation Papers issued	L2	relates to those external procedural documents required for Particpants to progress their changes	
Draft Documents Published	L2	Draft Procedures determination	
Final Documents Published	L2	Procedures finalised	
Systems Development		By "release"	
		Technical Documentation milestones to be supported by detailed scheduled of all supporting - milestone to reflect	
Technical Specs Draft	L2	scope/ build requirements	
Technical Specs Final	L2		
Data Model / Schema Draft	L2	Identifies scope and timing for MMS, aseXML (B2M) and B2B changes to support initiative	
Data Model / Schema final	L2		
AEMO Development Complete	L2	Progress milestone for Industry transperancy	
AEMO Development Commenced	L2	Progress milestone for Industry transperancy	
AEMO Internal Testing Commenced	L2	Progress milestone for Industry transperancy - completion of Release development and Testing is L1	
Industry Testing / Market Trial		by "Release"	
Testing Strategy (Approach) Published	L2	Approach for Initiative	
Particpant Preparation Completed	L2	As Required for Market Trial / not explicit for Industry Testing	
AEMO Preparation Completed	L2	Support of Test Commence (may include environment prep/ dta refresh)	
Staging Environment release Available	L2	If identified in Readiness approach to support Particpant implementation	
Readiness		By "Release"	
Readiness Approach Published	L2	Agree approach to Readiness support for Initiaitive	
Transition Plan Published	L2	For Prepatory transition activities if required	
Industry Go-Live Plan Published	L2	Activities and communication to take release live	
Contingency plans updated	L2	For Release readiness - if identified in Readiness Approach as required	
Accreditation / Registration Plan	L2	If required to meet release changes	

- Tailored to requirements of initiative
- Commence for an initiative once Draft Determination available and refine during lifecycle

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### Appendix C: Proposed Stage Gates



### Stage Gate Proposal – Initial Plan

Initial plan – flexibility to manage changes in timing will be required

Stage Gate	Name	Comment	Timing	
-	Initial Business Case	<ul> <li>Presents holistic view and sets out overall budgetary envelope</li> <li>No funding commitment</li> <li>Used to inform decision around Strategic vs Reg-Led Pathway</li> </ul>	3Q2022	
1	Immediate Reforms	<ul> <li>Mandatory Initiatives for 2022 Rules Determinations</li> <li>IESS, FFR, MT-PASA, FPP and OSM</li> </ul>	3Q2022	
2	Capacity Market & Congestion Management model	<ul> <li>Stage Gate 2A: Capacity Mechanism</li> <li>Stage Gate 2B: Congestion Management Model</li> <li>Separated due to possible different policy timelines for each initiative, and likely short timeframes for CM.</li> </ul>	Subject to Policy- makers timing	
3	Strategic & Foundation Pre- Requisites	<ul> <li>Stage Gate 3A: Identity &amp; Data bundle: IDA, IDX (noting pre-existing participant consultation should be leveraged), CoMASTR and Portal Consolidation</li> <li>Stage Gate 3B: Dispatch Bundle (including dispatch, constraints and bids/offers target state)</li> <li>Stage Gate 3C: FRC target state</li> <li>Integrated design, plan and cost/benefit to be prepared, industry engagement to be conducted</li> </ul>	1Q2023 4Q2022 1Q2023	
4	DER Flexible Demand & Marketplace	<ul> <li>Stage Gate 4: Turn-up services, DOEs, DER Data Hub &amp; Registry services, Distribution/local network services and potentially DER Operational Tools</li> <li>Scope is subject to change once Policy/Trials complete (impacting budget, timeline and responsibilities).</li> <li>Co-ordinated approach with DNSPs may be valuable, to ensure roles are clear and scope for each role is defined</li> </ul>	Indicative Mid-2023, subject to trials & policy development	
5	Next Reforms	<ul> <li>Mandatory initiatives for 2023 Rules Determinations</li> <li>FTA2, Scheduled Lite &amp; SCADA Lite, ROR</li> </ul>	Indicative mid/late 2023, subject to Rules timing	
6	Data Strategy	Data Services, Bill Transparency, Electric Vehicles, Network Visibility	Indicative Mid-2023 (subject to policy development)	43



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