

# Introduction Session

Industry Data Exchange,  
Identity & Access Management  
Portal Consolidation

22 March 2023



# 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.**

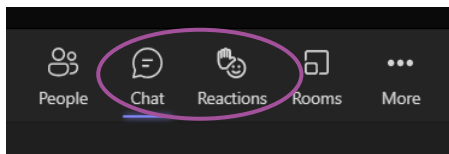
# Introductions

## Session purpose

- Inform stakeholders of the objectives and scope of three foundational / strategic NEM Reform initiatives:
  - IDX (Industry Data Exchange)
  - IDAM (Identity and Access Management)
  - PC (Portal Consolidation)
- Seek industry perspectives on consultation approach for progressing these initiatives.
- Call for nominations for contributors to the consultation.

## Ways of collaborating

To support discussion during this forum, we ask all attendees to please raise their virtual hand when they intend to speak or post questions in the Teams chat and be respectful to others speaking. There will be breaks to verbally answer questions throughout the presentation as well as at the end.



Please introduce yourself (name & organisation) before you speak.

# Agenda

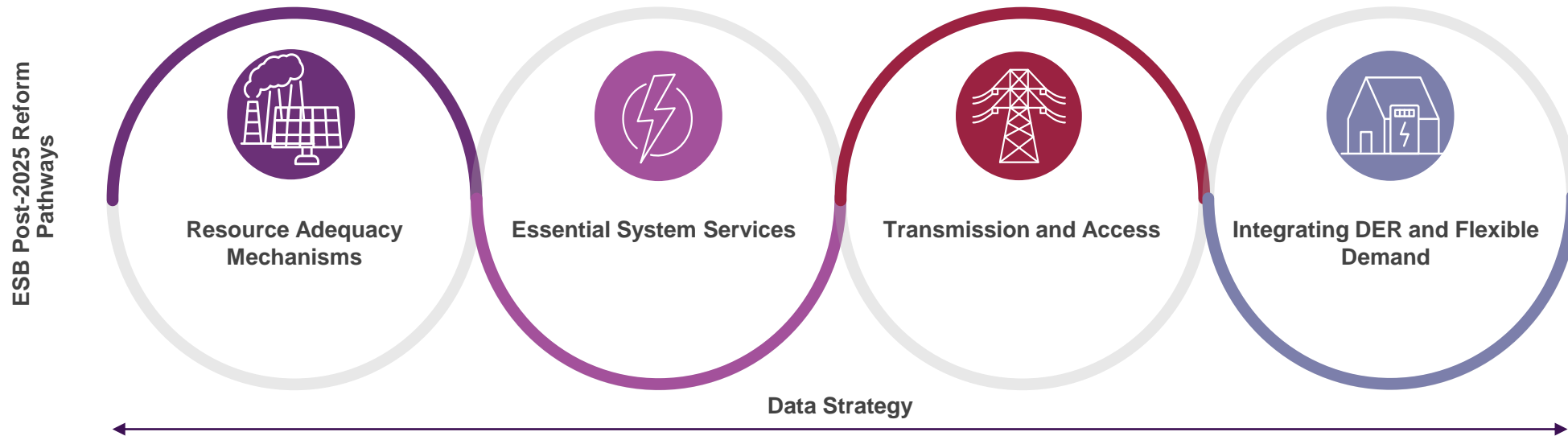
#	Time	Topic	Presenter
1	11:30-11:40	Welcome	Ulrika Lindholm (AEMO)
2	11:40-11:45	NEM Reform Program & Implementation Roadmap	David Reynolds (AEMO)
3	11:45-12:10	Initiatives overview <ul style="list-style-type: none"><li>- IDX (Industry Data Exchange)</li><li>- IDAM (Identity and Access Management)</li><li>- PC (Portal Consolidation)</li></ul>	Andrew Bell (AEMO)
4	12:10-12:15	Industry consultation approach	Ulrika Lindholm (AEMO)
5	12:15-12:25	Discussion & Nominations	All
6	12:25-12.30	Other business & Close	Ulrika Lindholm (AEMO)
		Appendix A: AEMO Competition Law - Meeting Protocol	
		Appendix B: Workshop schedule	

*"Please note that this meeting will be recorded by AEMO and may be accessed and used by AEMO for the purpose of compiling minutes. By attending the meeting, you consent to AEMO recording the meeting and using the record for this purpose. No other recording of the meeting is permitted"*

## 2. NEM Reform Program & Implementation Roadmap

# Context

- The Energy Security Board (ESB) was tasked by the former Council of Australian Governments Energy Council (COAG EC), to advise on design changes required in the National Electricity Market (NEM) as it transitions from a fleet of largely coal fired generation to more variable renewable generation.
- 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.



- One of the main enablers for the reforms is the development of IT systems and business processes.
- In November 2021, AEMO established the Reform Delivery Committee (RDC) to inform the development of a roadmap to navigate the breadth of the ESB reforms, de-risk delivery and inform implementation timings.

# NEM Reform Implementation Roadmap

The **NEM Reform Implementation Roadmap** establishes a basis upon which AEMO, and stakeholders may navigate the breadth of ESB and other energy market reforms over the coming few years, de-risking delivery, and informing implementation timing.

The Roadmap integrates the Regulatory implementation roadmap (version 7) and NEM2025 implementation roadmap (version 2) to provide a holistic view of regulatory reforms and IT uplift initiatives.

## Why is it required?

- The reform program is significant
- Piecemeal implementation of initiatives may cause resource and mobilisation challenges for AEMO and market participants
- Industry wide reform requires industry wide knowledge and collaboration
- Opportunity to identify where strategic investments can deliver efficient outcomes for AEMO, market participants and consumers
- Informs implementation timing decisions by market bodies.

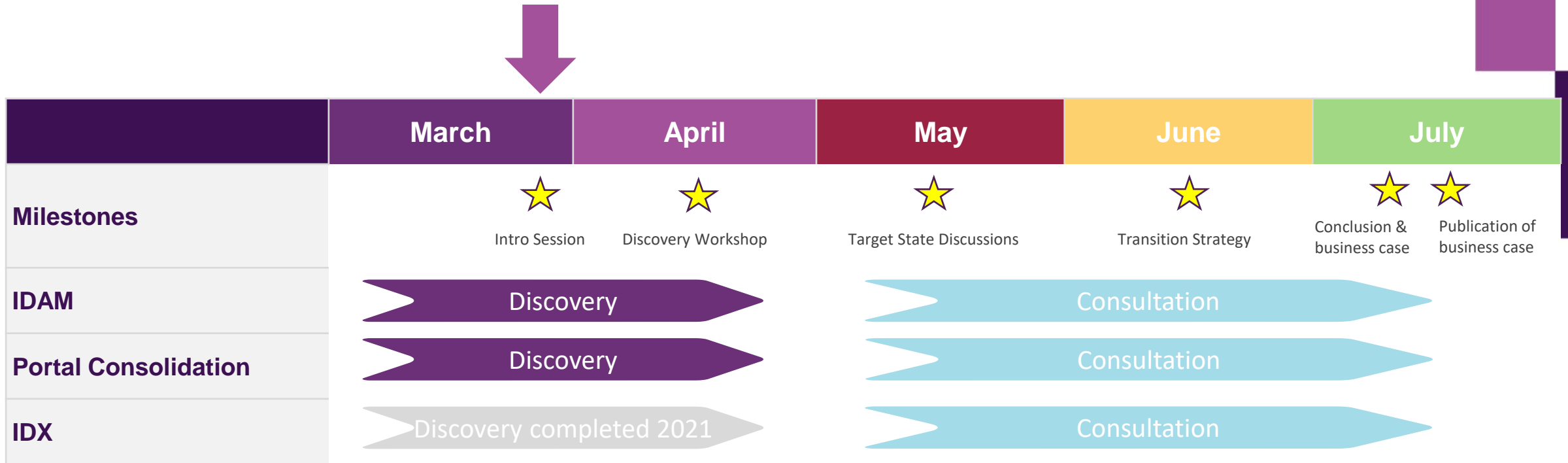
## Roadmap Objectives

- 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



# 3. Initiatives overview

# Starting point



- These initiatives have been identified for the NEM Reform Program and included in the [NEM Reform Implementation Roadmap](#).
- The initiatives are at a Discovery stage and as part of the product roadmap AEMO will consult with industry, including the Reform Delivery Committee, to determine an appropriate transition strategy prior to any funding decision being made.
- AEMO facilitated a Discovery process for the Industry Data Exchange initiative in Feb-June 2021.

# Context to approach in 2023

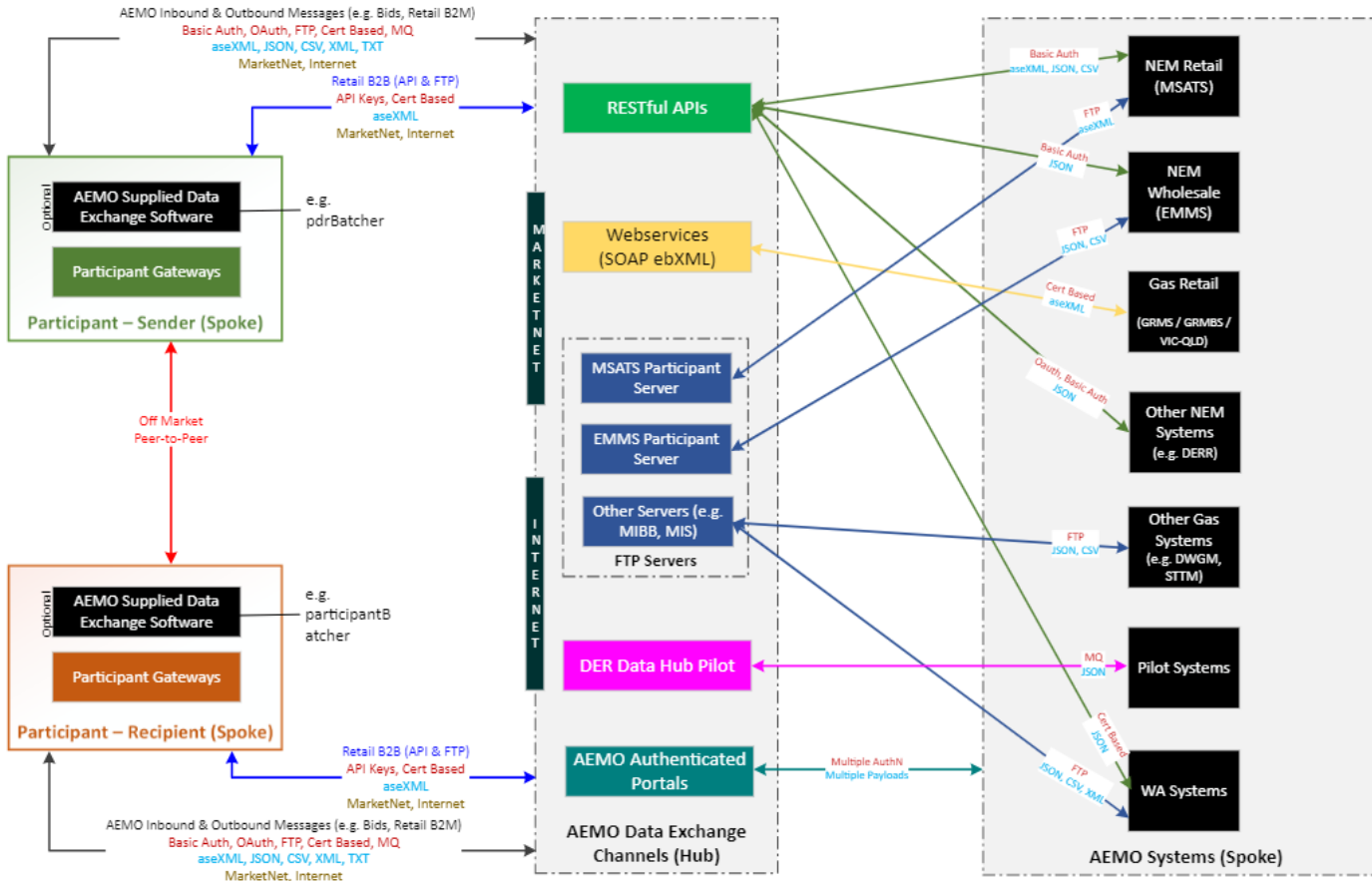
- Early feedback: upfront whole of market transition creates undesirable risk and cost.
- This consultation will assess options to deliver value along specific greenfield and brownfield paths – this might include:
  - Greenfield initiatives requiring an IDX capability (such as DER).
  - Significant reinvestment in market processes impacting IDX (such as Causer Pays).
  - Prioritised drivers (such as Cyber IDAM).
- Aspects for market participants and AEMO to consider:
  - How do we align / leverage the regulatory reform program?
  - Are there technical solutions to enable parallel operation / opt in?

# Industry Data Exchange

*Industry Data Exchange: A unified data exchange mechanism to support exchanging data between energy stakeholders and AEMO.*

**Problem Statement:** AEMO's existing data exchange systems have been variously acquired over the last 10-15 years, and use inconsistent standards, protocols and formats. AEMO's markets are also undergoing significant transformation, resulting in new data exchange needs. Existing data exchange mechanisms will not meet needs and will fail to comply with new industry obligations around cyber security such as the SOCI Act. AEMO is introducing new data exchange patterns without a target state and roadmap which is inhibiting participants from modernising their systems and quantifying the benefits of their investments.

## IDX Context Diagram:



## Following areas will be explored during the IDX feasibility phase.

In Scope	Out of Scope
<ul style="list-style-type: none"> <li>✓ Data Exchange between AEMO and energy stakeholders across NEM, WEM and Gas                             <ul style="list-style-type: none"> <li>• Inbound and Outbound transactions</li> <li>• Connectivity methods</li> <li>• Protocols to connect to AEMO systems</li> <li>• Payload formats</li> <li>• AEMO data exchange systems that Participants connect to</li> <li>• Data exchange standards &amp; patterns</li> </ul> </li> <li>✓ Interactions via all supported channels (current &amp; future)</li> </ul>	<ul style="list-style-type: none"> <li>× Control systems communications and interactions</li> <li>× Direct device communications and interactions</li> </ul>

! Note: Data Exchange Scenarios, Channels, Protocols & Patterns illustrated in this slide are indicative only and not the finite list

# Industry Data Exchange Approach

*Industry Data Exchange: A unified data exchange mechanism to support exchanging data between energy stakeholders and AEMO.*

## Background:

Within the NEM Reform Implementation Program, Industry Data Exchange (IDX) is considered a foundational initiative. This initiative focuses on conceptualising unified data exchange standards, including protocols, payload formats, connectivity methods, and authentication/authorisation mechanisms. This will improve data security, compliance, and governance to provide affordable, reliable, scalable and secure data exchange mechanisms.

### Output of Feasibility Phase

- **Conceptual Target State Architecture Design.**
- A set of agreed-upon **Principles, Guidelines, Patterns, and Data Exchange Standards** that must be adhered to by the upcoming NEM reforms.
- **Transition Strategy** and **Transition Roadmap** for new and existing data exchange services
- **Business Case** pertaining to the scope of NEM Reform Program delivery.

### NEM2025 Business Case

- Options for delivery of target / transition state infrastructure and solutions

### NEM Reforms

- Implement a target / transition state infrastructure and solutions

### Other Reform & Projects Business Case

- New upcoming initiatives leverage the target/transition state protocols and patterns.
- Migration of interfaces beyond the scope of NEM reform will be implemented via other business reforms.

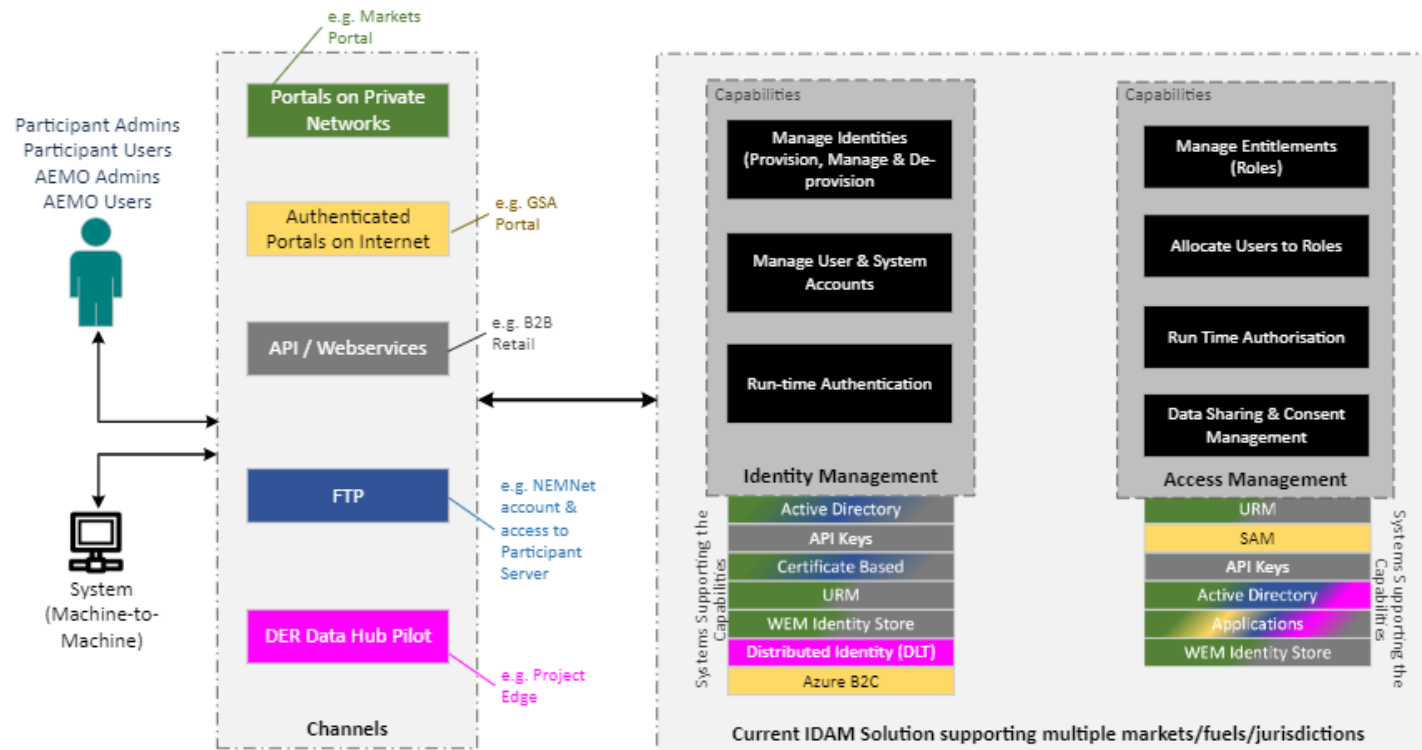
# Identity and Access Management Approach


*Identity and Access Management: A unified mechanism to authenticate and authorise external identity when accessing AEMO services, consolidating and improving overall cyber security controls.*

## Problem Statement:

AEMO's Identity and Access Management (IDAM) services are disparate, requiring users to retain multiple sets of credentials in order to access AEMO business services. The legacy IDAM services do not implement best practices in cyber security controls (e.g. multifactor authentication) and are insufficient to meet new industry obligations introduced under the SOCI Act.

## IDAM Current State Context Diagram:



 Note: Channels & IDAM Stores illustrated in this slide are indicative only and not the finite list

Following areas will be explored during the IDAM feasibility phase.

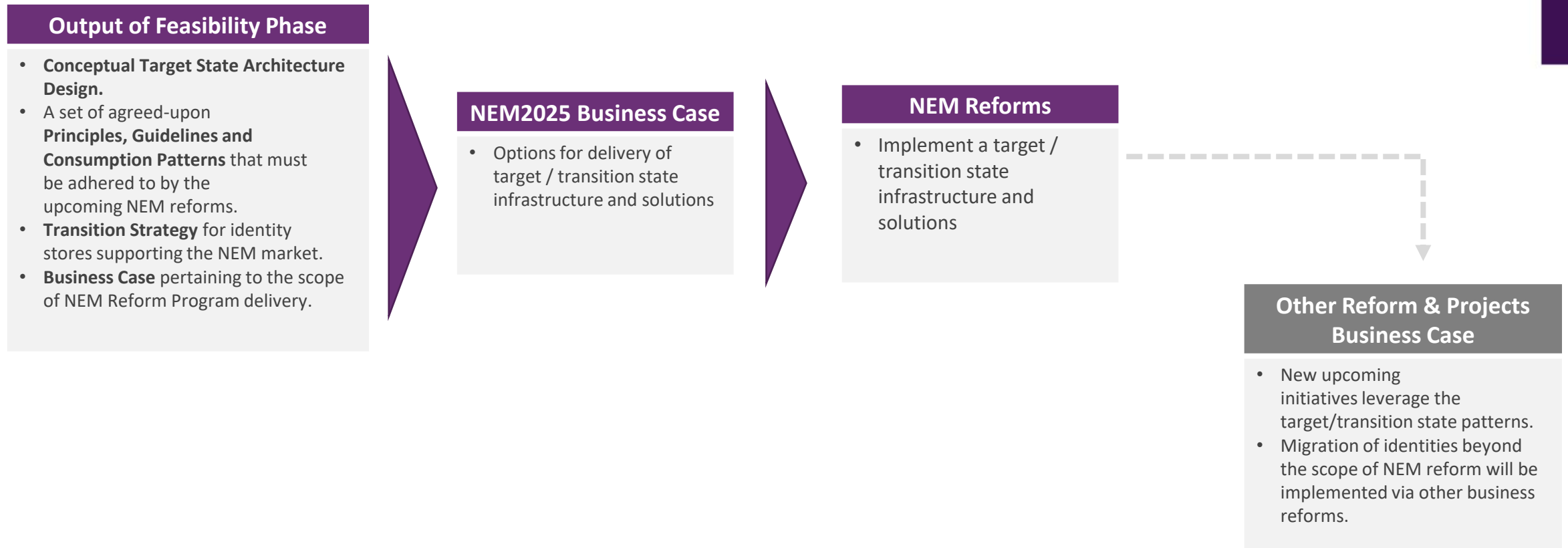
In Scope	Out of Scope
<ul style="list-style-type: none"> <li>✓ NEM, WEM and Gas involving AEMO external interactions</li> </ul>	<ul style="list-style-type: none"> <li>× Network layer security</li> </ul>
<ul style="list-style-type: none"> <li>✓ External Identities including:                             <ul style="list-style-type: none"> <li>- Registered Participants</li> <li>- Non-registered Participants</li> <li>- Potential Participants</li> <li>- Service Providers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>× Control systems communications / interactions</li> <li>× Direct device communications /interactions</li> </ul>
<ul style="list-style-type: none"> <li>✓ External System Accounts Interactions via all supported channels (current &amp; future)</li> </ul>	

# Identity and Access Management Approach

*Identity and Access Management: A unified mechanism to authenticate and authorise external identity when accessing AEMO services, consolidating and improving overall cyber security controls.*

## Background:

Identity and Access Management (IDAM) is considered a foundational initiative within the NEM Reform Implementation Program. This initiative supports the tools that enable unified identification, authorisation, and entitlement management while ensuring compliance with industry obligations under cyber security policies such as SOCI Act.



# Portal Consolidation Approach



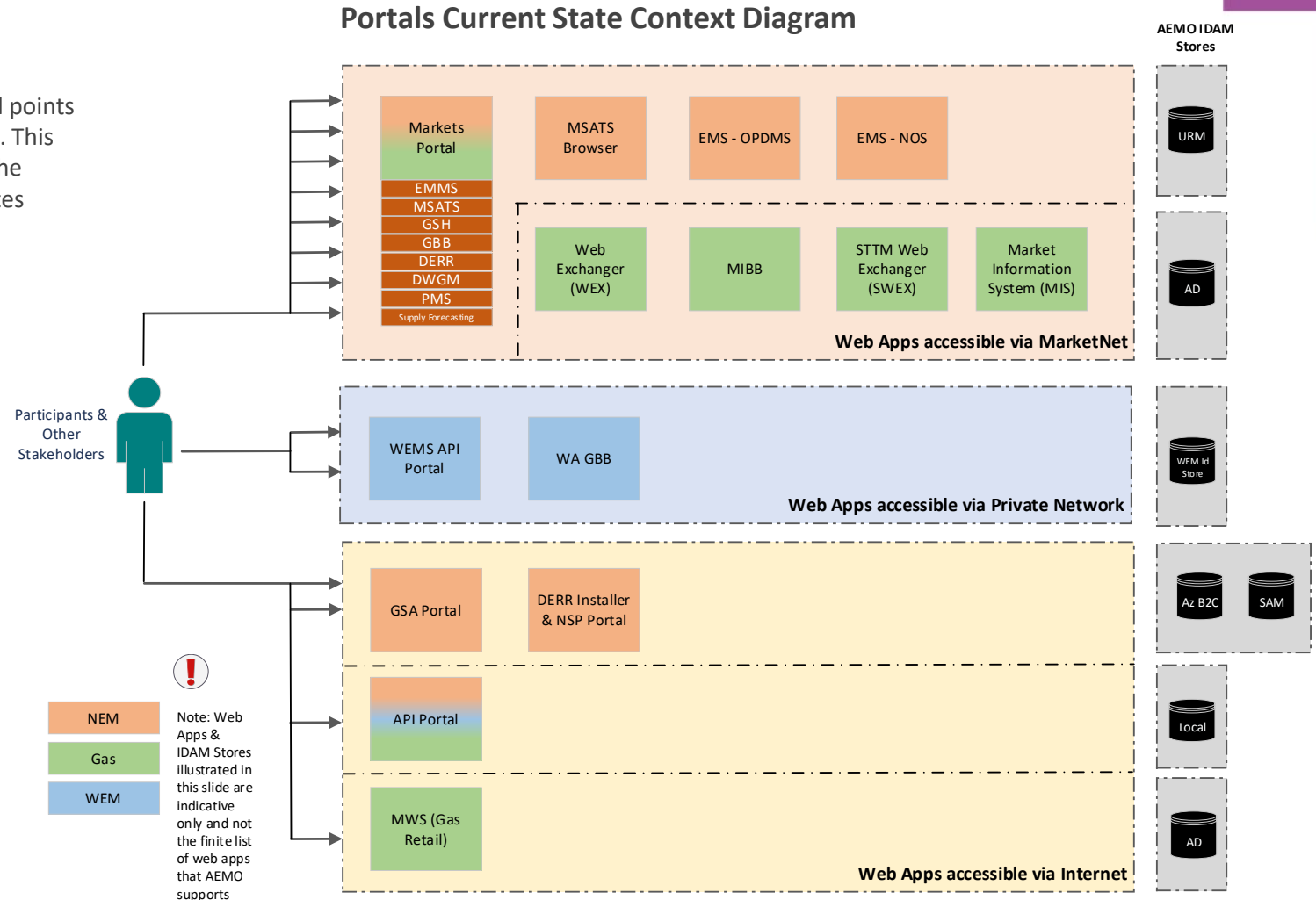
*Portal Consolidation: The aim of portal consolidation is to enable a single pane of glass experience for energy market systems. The portals framework is an enabling platform that supports energy market participants and other partners to consume AEMO browser services in a secure manner.*

## Problem Statement:

AEMO browser services are exposed over a disparate range of end points and require multiple sets of credentials to consume these services. This results in a suboptimal user experience for energy stakeholders. The requirement to access browser services via private networks creates technical barriers to consuming these services.

## Following AEMO browser services will be explored during the Portal Consolidation feasibility phase:

In Scope	Out of Scope
<ul style="list-style-type: none"> <li>✓ External Authenticated Portals (accessed by Market Participants and other External Users)</li> <li>✓ SharePoint Apps which are accessed by Market Participants such as ROCL</li> </ul>	<ul style="list-style-type: none"> <li>× Public Un-authenticated Portals (e.g. aemo.com.au)</li> </ul>



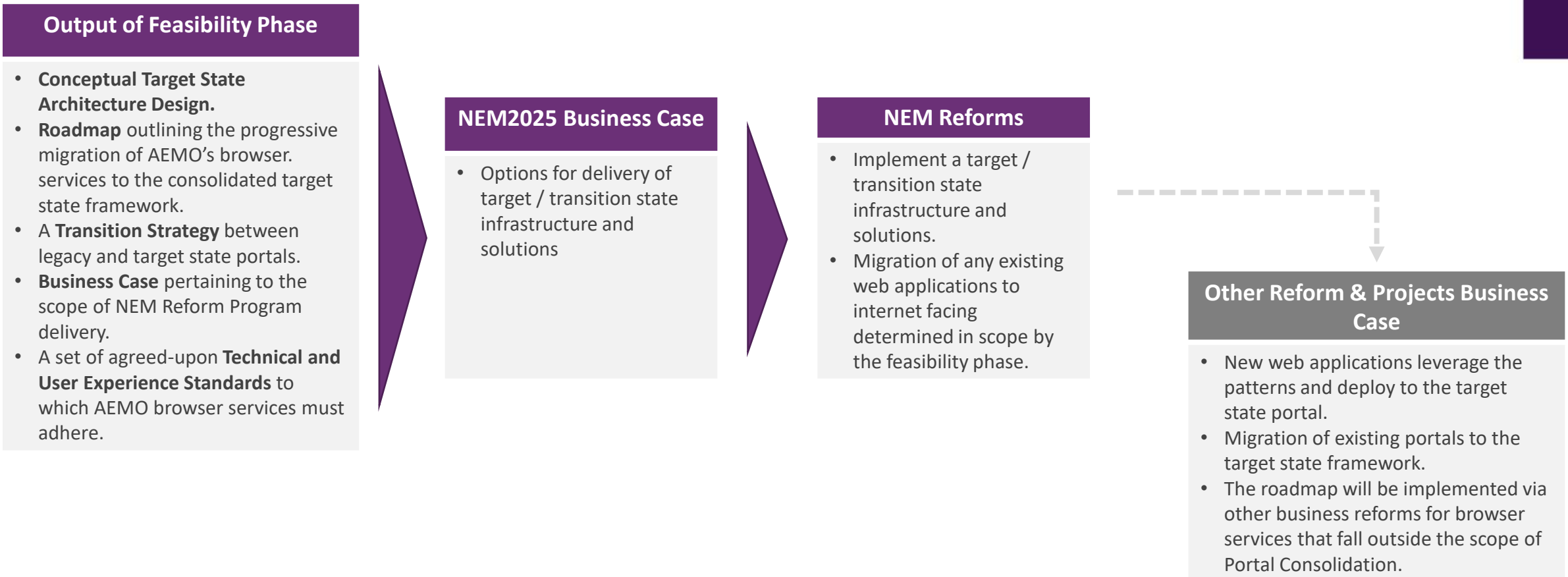


# Portal Consolidation Approach

*Portal Consolidation: The aim of portal consolidation is to enable a single pane of glass experience for energy market systems. The portals framework is an enabling platform that supports energy market participants and other partners to consume AEMO browser services in a secure manner.*

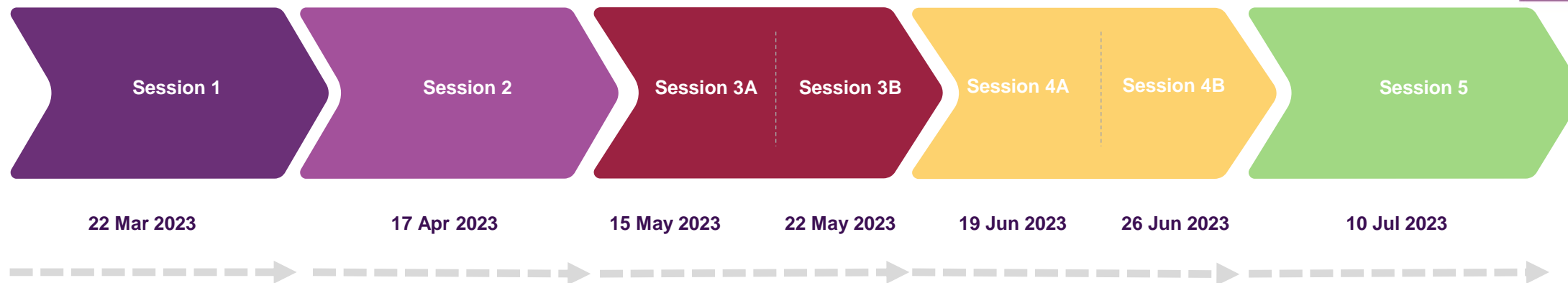
## Background:

Portal Consolidation (PC) is considered a strategic initiative within Tranche 3A of the NEM Reform Implementation Program. This initiative focuses on establishing a new consolidated internet-facing and mobile portal for hosting AEMO browser services for use by both registered and non-registered NEM users including personalisation features.



# 4. Industry consultation approach

# Industry Consultation



Session	Introduction – IDX, IDAM & PC	Discovery Workshops – IDAM and PC	Target State Discussion	Transition Strategy	Conclusions and Business Case
Agenda*	<ul style="list-style-type: none"> <li>Introduce initiatives</li> <li>Outline workshop plan</li> </ul>	<ul style="list-style-type: none"> <li>Pain points and benefits</li> <li>Cyber considerations</li> <li>Survey</li> </ul>	<ul style="list-style-type: none"> <li>Concept walkthrough</li> </ul>	<ul style="list-style-type: none"> <li>Transition Strategy</li> <li>Impacts &amp; Benefits</li> </ul>	<ul style="list-style-type: none"> <li>Summary</li> <li>Options</li> </ul>
Audience		 	 	 	

\*Detailed workshop schedule available in Appendix B

# 5. Discussion & Nominations

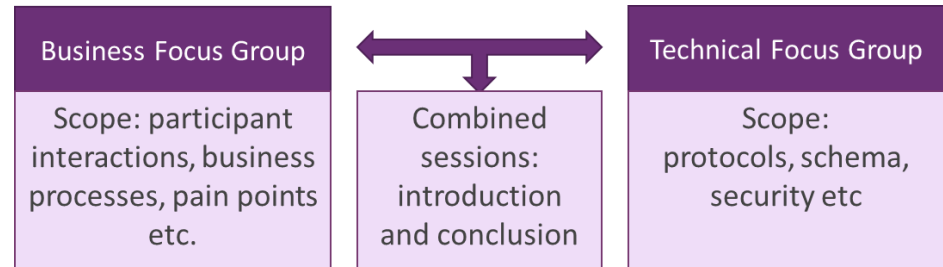
# Discussion & Nominations

## Questions

Does the consultation approach reasonably support the achievement of the objectives of the industry consultation?

Are there any additional factors (dates etc) which AEMO should consider in the approach?

## Nominations



AEMO is seeking nominations for the two Focus Groups.  
Nominations and any queries may be sent to [NEM2025@aemo.com.au](mailto:NEM2025@aemo.com.au).

# 6. Other business & Close



[NEM2025@aemo.com.au](mailto:NEM2025@aemo.com.au)



[AEMO | NEM Reform Program](#)



# Next steps



- Next session: 17 April
- Nominations and any queries to be sent to [NEM2025@aemo.com.au](mailto:NEM2025@aemo.com.au).



For more information visit

[aemo.com.au](http://aemo.com.au)



# Appendix A

AEMO Competition Law - Meeting Protocol



# 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, all participants agree to adhere to the CCA at all times and to comply with appropriate protocols where required to do so.

AEMO has developed meeting protocols to support compliance with the CCA in working groups and other forums with energy stakeholders. Before attending, participants should confirm the application of the appropriate meeting protocol.

Please visit: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups>

# Appendix B

Workshop schedule



# Consultation workshop schedule (page 1/3)

Dates	Purpose	Audience	Session Outline	Time [AEST] / Length
<b>SESSION 1: Introduction to IDX, IDAM and PC</b>				
22 Mar	Introduction – IDX, IDAM & PC	All interested stakeholders who nominated to Focus Groups (Nomination through NEM2025 Program forums)	<ul style="list-style-type: none"> <li>Context and objectives</li> <li>Introduce initiatives – IDX, IDAM &amp; PC</li> <li>Outline the Industry Consultation plan</li> <li>Call for nominations for workshops (Sessions 2 – 5)</li> </ul>	11:30am– 12:30pm (1 hr)
<b>SESSION 2: Discovery Workshops – IDAM and Portal Consolidation</b>				
17 Apr	Introduction: IDAM and PC	Technical and Business Focus Groups	<ul style="list-style-type: none"> <li>Introduction and Objectives – IDAM and PC</li> <li>Present AEMO view of pain points from internal workshop</li> <li>Outline format of workshop (Business/Technical) and breakout sessions</li> </ul>	1:00 – 1:30pm (30 mins)
	<b>Technical</b> Discovery Workshops: IDAM and PC	Technical Focus Group – IDAM Technical Focus Group - PC  Hybrid session (online & in-person)	<ul style="list-style-type: none"> <li>Technical streams to workshop industry pain points</li> <li>Technical streams to identify industry benefits</li> <li>Cyber considerations in the context of IDAM and PC</li> </ul>	IDAM Focus Group 1:30 – 3:00pm (1.5 hrs)  - 15 min break -  PC Focus Group 3:15 – 4:15pm (1 hr)
	<b>Business</b> Discovery Workshops: IDAM and PC	Business Focus Group – IDAM Business Focus Group - PC  Hybrid session (online & in-person)	<ul style="list-style-type: none"> <li>Business streams to workshop industry pain points</li> <li>Business streams to identify industry benefits</li> <li>Cyber considerations in the context of IDAM and PC</li> </ul>	IDAM Focus Group 1:30 – 3:00pm (1.5 hrs)  - 15 min break -  PC Focus Group 3:15 – 4:15pm (1 hr)
	Workshop Close	Technical and Business Focus Groups	<ul style="list-style-type: none"> <li>Summarise and close</li> <li>Communicate survey details and invite inputs from participants by due date</li> </ul> <p>Post-workshop actions:                      Issue IDAM &amp; PC survey – <b>17 Apr</b>                      IDAM &amp; PC survey results due – <b>26 Apr</b>                      Issue IDAM &amp; PC survey final pack – <b>3 May</b></p>	4:15 – 4:30pm (15 mins)

# Workshop schedule (page 2/3)

Dates	Purpose	Audience	Session Outline	Time [AEST] / Length
<b>SESSION 3A: Target State Proposal for Technical Focus Groups</b>				
15 May	Introduction	Technical Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Introduction</li> <li>Overview of session structure for IDX, IDAM and PC</li> </ul>	10:00 - 10:15am (15 mins)
	Target State Proposal for IDX	Technical Focus Group - IDX	<ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Recap on Discovery workshop outcomes</li> <li>Proposed Target State models</li> <li>Feedback</li> </ul>	10:15am – 12:15pm (2 hrs)
	<b>LUNCH 12:15 – 1:30PM</b>			
	Target State Proposal for IDAM	Technical Focus Group – IDAM	Focus: Authorisation, Authentication, Entitlement Management <ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Recap on Discovery workshop outcomes</li> <li>Proposed Target State models</li> <li>Feedback</li> </ul>	1:30 – 3:00pm (1.5 hrs)
	<b>AFTERNOON TEA 3:00 – 3:15PM</b>			
	Target State Proposal for PC	Technical Focus Group - PC	<ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Recap on Discovery workshop outcomes</li> <li>Proposed Target State models</li> <li>Feedback</li> </ul>	3:15 – 4:15pm (1 hr)
	Session Close	Technical Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Summarise and close</li> </ul>	4:15 – 4:30pm (15 mins)
<b>SESSION 3B: Target State Discussion for Business Focus Groups</b>				
22 May	Introduction	Business Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Introduction</li> <li>Overview of session structure for IDX, IDAM and PC</li> </ul>	1:00 – 1:15pm (15 mins)
	Target State Discussion for IDX	Business Focus Group - IDX	<ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Recap on Discovery workshop outcomes</li> <li>Sample use cases – B2B, B2M, non-NEM</li> <li>Feedback</li> </ul>	1:15 – 2:30pm (1.25 hrs)
	<b>COFFEE BREAK 2:30 – 2:45PM</b>			
	Target State Discussion for IDAM	Business Focus Group – IDAM	<ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Recap on Discovery workshop outcomes</li> <li>Sample use cases – B2B, B2M, non-NEM</li> <li>Feedback</li> </ul>	2:45 – 3:45pm (1 hr)
	Target State Discussion for PC	Business Focus Group – PC	<ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Recap on Discovery workshop outcomes</li> <li>Sample use cases – B2B, B2M, non-NEM</li> <li>Feedback</li> </ul>	3:45 – 4:45pm (1 hr)
	Session Close	Business Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Summarise and close</li> </ul>	4:45 – 5:00pm (15 mins)

# Workshop schedule (page 3/3)

Dates	Purpose	Audience	Session Outline	Time [AEST] / Length	
<b>SESSION 4A: Transition Strategy for Technical Focus Groups</b>					
19 Jun	Introduction	Technical Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Introduction and objectives</li> <li>Overview of Transition Strategy for IDX, IDAM and PC</li> </ul>	10:00 – 10:15am (15 mins)	
	Transition Strategy, Impacts & Benefits – IDX and IDAM	Technical Focus Group – IDX Technical Focus Group – IDAM	<b>IDX:</b> <ul style="list-style-type: none"> <li>Enabling progressive transition</li> <li>N -1 discussion</li> <li>Sunset timeframe discussion</li> <li>Propose principles for utilization</li> </ul> <b>IDAM:</b> <ul style="list-style-type: none"> <li>Aligned with IDX &amp; PC take up</li> <li>Sunset timeframes</li> </ul> Impacts & Benefits of IDX and IDAM initiatives – Technical view	10:15am – 12:30pm (2.25 hrs)	
	<b>LUNCH 12:30 – 1:30PM</b>				
	Transition Strategy, Impacts & Benefits - PC	Technical Focus Group – PC	<b>PC:</b> <ul style="list-style-type: none"> <li>Align to initiatives</li> <li>Sunset timeframes</li> </ul> Impacts & Benefits of PC initiative – Technical view	1:30 – 2:45pm (1.25 hrs)	
Session Close	Technical Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Summarise and close</li> </ul>	2:45 – 3:00pm (15 mins)		
<b>SESSION 4B: Transition Roadmap for Business Focus Groups</b>					
26 Jun	Introduction	Business Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Introduction and objectives</li> <li>Walkthrough of the principles for NEM2025</li> <li>Overview of the IDX, IDAM and PC Transition Roadmap</li> </ul>	1:00 – 1:30 (30 mins)	
	Transition Roadmap, Impacts & Benefits – IDX and IDAM	Business Focus Group – IDX Business Focus Group – IDAM	<ul style="list-style-type: none"> <li>Present Roadmap for IDX and IDAM aligned to NEM2025</li> <li>Present Impacts and Benefits – Business view</li> </ul>	1:30 – 3:30pm (2 hrs)	
	<b>COFFEE BREAK 3:30 – 3:45PM</b>				
	Transition Roadmap, Impacts & Benefits – PC	Business Focus Group – PC	<ul style="list-style-type: none"> <li>Present Roadmap for PC aligned to NEM2025</li> <li>Present Impacts and Benefits – Business view</li> </ul>	3:45 – 4:45pm (1 hr)	
Session Close	Business Focus Groups – IDX, IDAM, PC	<ul style="list-style-type: none"> <li>Summarise and close</li> </ul>	4:45 – 5:00pm (15 mins)		
<b>SESSION 5: Conclusions and Business Case</b>					
10 Jul	Conclusions & Business Case	Business Focus Groups – IDX, IDAM and PC	<ul style="list-style-type: none"> <li>Introduction and re-cap of Sessions 3 and 4</li> <li>Present key options – Incremental upgrade vs Early Transition</li> <li>Recommendations and considerations</li> </ul>	1:00 – 3:00 pm (2 hrs)	
14 Jul	Publication of Business Case	All stakeholders, including Reform Delivery Committee	Submissions by participant stakeholders due 28 July	NA	