

NEM Reform Program

General Stakeholder briefing
25 October 2023



Disclaimer

This presentation includes material outlining AEMO's interpretation of indicative impacts of several national energy market (NEM) reforms to energy market systems and processes for energy industry participants, as at 25 October 2023.

The interpretations expressed in this presentation are not binding on AEMO. The interpretation of the impact of NEM reforms may change at any time.

Anyone participating or intending to participate in the NEM should obtain detailed advice about the application of the National Electricity Rules and applicable laws, procedures and policies to their specific circumstances.

To the maximum extent permitted by law, AEMO and its employees or consultants are not liable for any statements in, or omissions from, these materials, or for any use of or reliance on them.

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.

Introduction

This session

General Stakeholder briefing

Objectives

- An overview of AEMO's NEM Reform Program, its initiatives and impact to industry.
- To equip stakeholders with sufficient information to understand how these reforms may impact their business

Scope

- In-Flight initiatives (Scope, timeline and impacts).

Roadmap briefing

Objectives

- Provide an overview and facilitate clarification on the NEM Reform Implementation Roadmap.
- Walk through the incremental as well as material changes since the v.2 release in April 2023.

Scope

- Holistic longer term NEM reform (planning focus).

- We look forward to your feedback and questions.
- Participants are asked to familiarise themselves with AEMO's Competition Law Meeting Protocol as outlined in Appendix A and at AEMO's website.



Agenda

#	Time	Topic	Presenters from AEMO
1	1:00-1:05pm	Welcome	Peter Carruthers
2	1:05-1:15pm	Context & Program overview	David Reynolds
3	1:15-1:40pm	Program initiatives Retail Market Improvements initiatives Integrating Energy Storage Systems (IESS) Frequency Performance Payments (FPP)	David Reynolds Ulrika Lindholm Paul Johnson
4	1:40-1:50pm	Foundational & Strategic initiatives	Ulrika Lindholm
5	1:50-2:00pm	Q&A Participant questions received	David Reynolds
6	2:00pm	How to get involved & close	Peter Carruthers

Appendix A: AEMO Competition Law - Meeting Protocol

Appendix B: Reference information



"Please note that this meeting will be recorded by AEMO and may be accessed and used for the purposes of publishing it on the external [NEM Reform Public forums webpage](#) as a resource for industry participants. By attending the meeting, you consent to AEMO recording the meeting and using the recording for this purpose. No other recording of the meeting is permitted"

2. Context & Program overview

David Reynolds

Current state

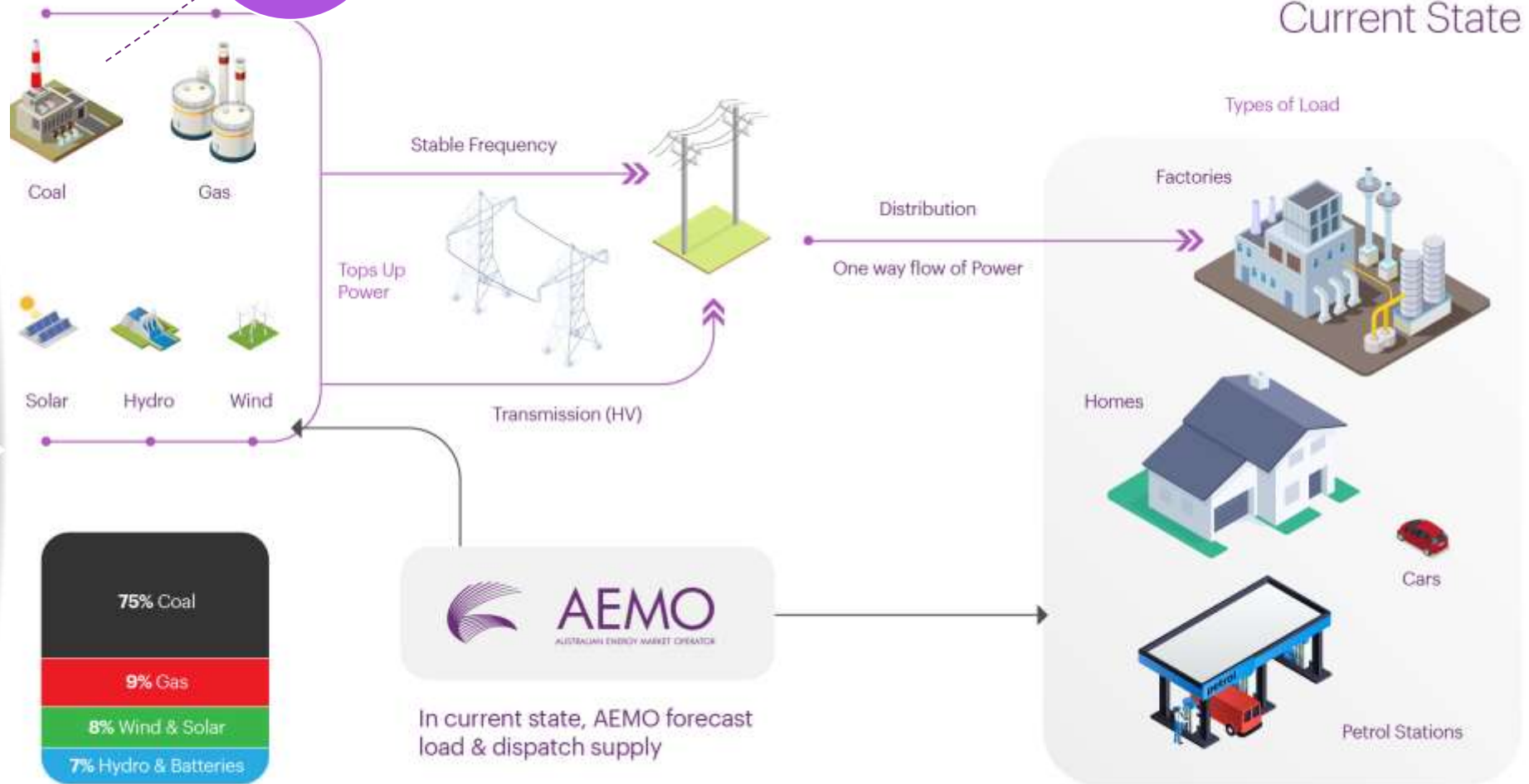


Drivers

- **Net-zero emissions economy by 2050**
- **Respond to factors driving the energy transition:**
 - Retirement of ageing thermal plants
 - Managing a grid with increased variable renewables
 - Significant investment in new transmission
 - Preparing for the integration of distributed energy resources
 - Importance of data for facilitating better consumer outcomes

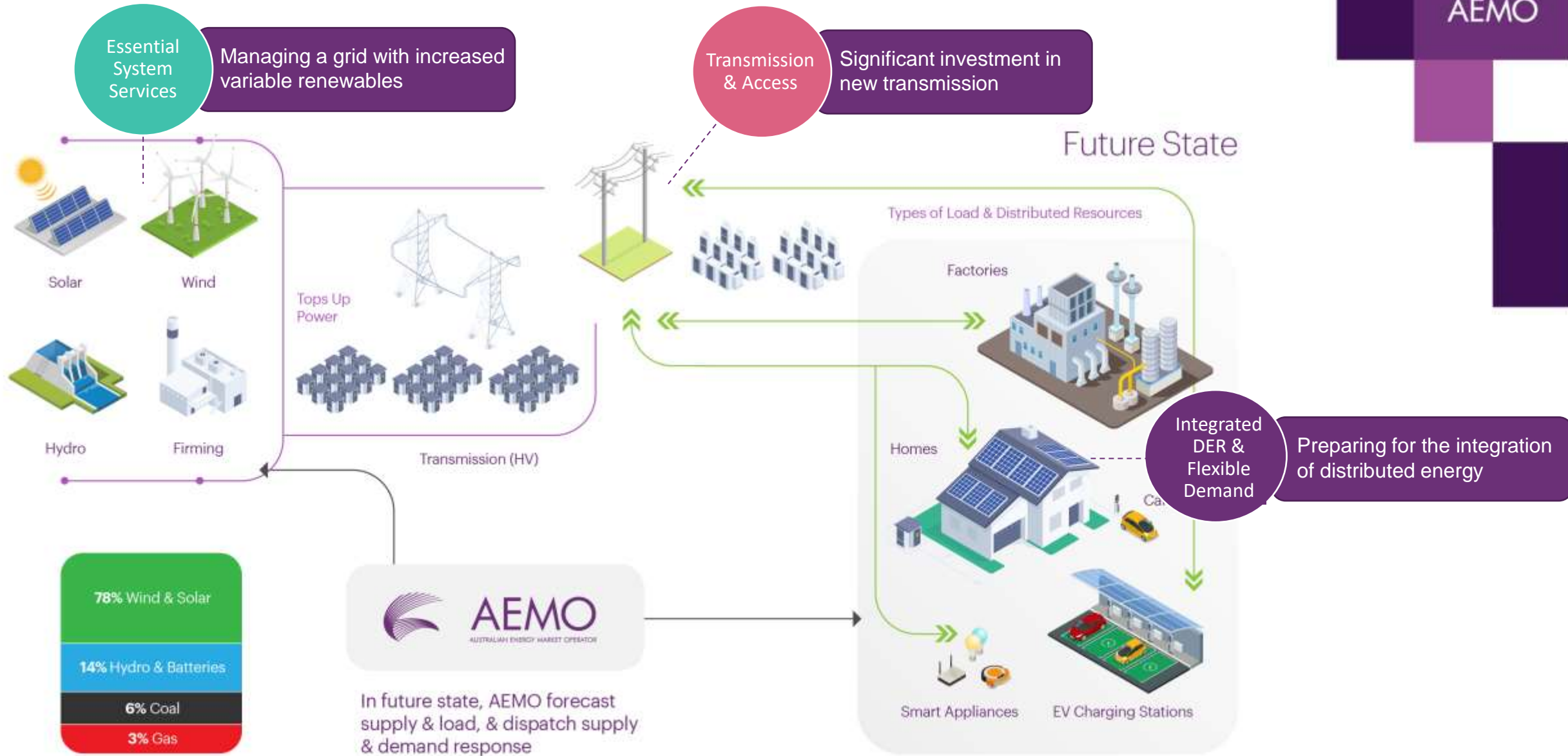
Resource Adequacy Mechanisms

Retirement of aging thermal plants

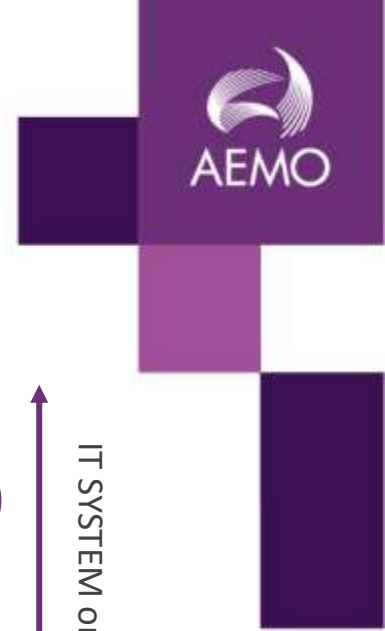


Current State

Future state



Context and background

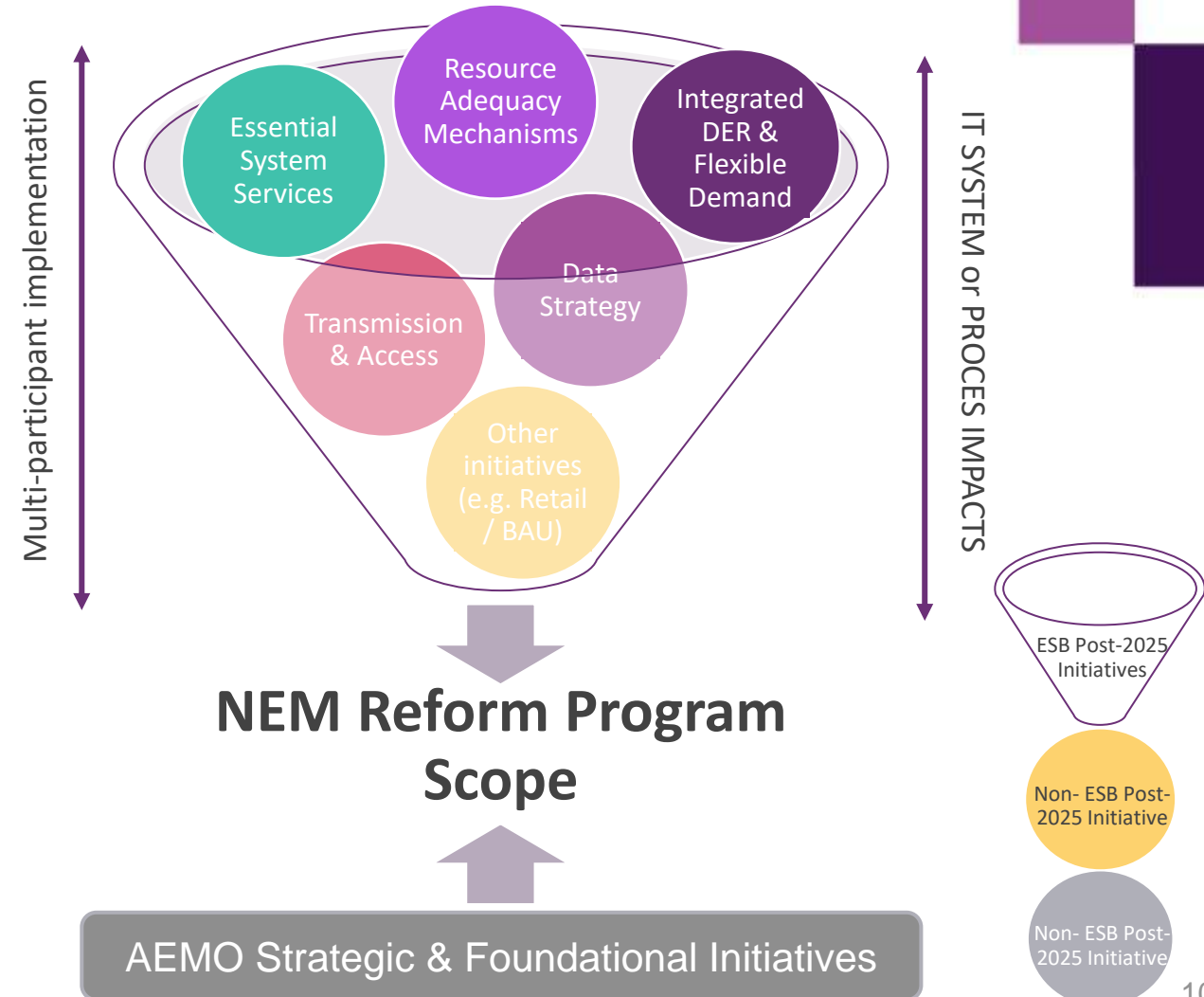


NEM Reform Program

- AEMO, together with industry, is delivering a comprehensive package of reforms, covering the Energy Security Board's (ESB) Post 2025 reforms, AEMO Strategic and Foundational initiatives and other NEM market reforms.
- AEMO has formed the NEM Reform Program to manage the implementation of this reform package.

Objectives of the program

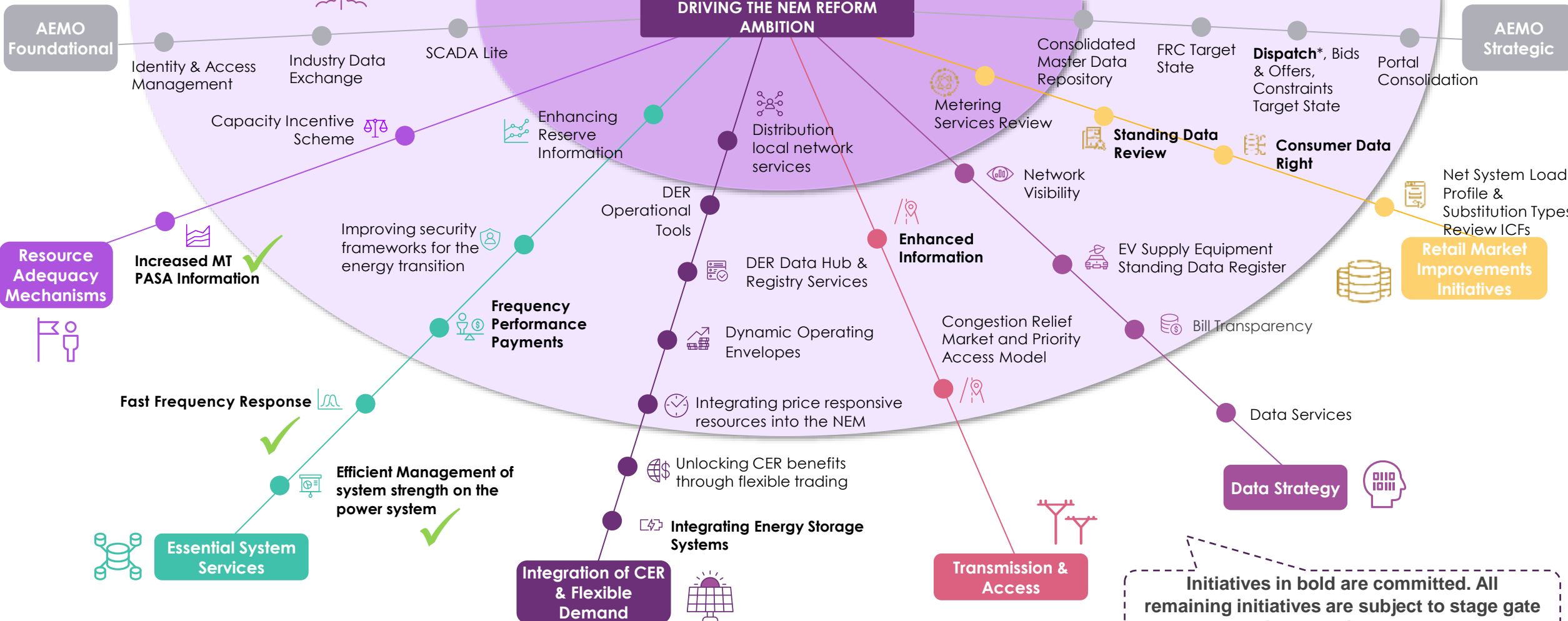
- To work **collaboratively with industry** in setting a forward view aligned with reform timelines to support individual planning and delivery activities.
- To **deliver effective solutions** that meet the reform objectives.
- To **deliver as efficiently** as possible leveraging opportunities to **bundle, sequence and prioritise** projects within the Program, and where possible identify and drive out costs through solution design and implementation.



Program Overview



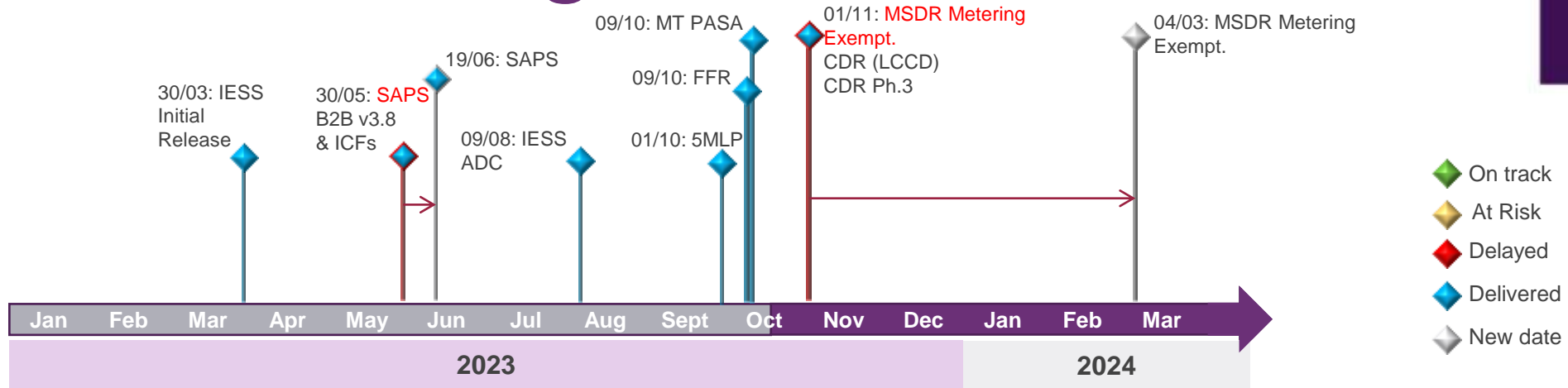
Successfully enabling the energy transition and net-zero emissions economy for Australians



* Tactical uplift only. ✓ Implemented

Initiatives in bold are committed. All remaining initiatives are subject to stage gate and approval processes

NEM Reform Program – 2023 Overview



Release	Initiatives	Status	Key Points	Impacted Stakeholders
Mar-23	Integrating Energy Storage Systems (Initial release)	Delivered	Successful deployment and rule commencement 31 March 2023. Further information on IESS initial release available here .	Market Small Generation Aggregators
	Stand Alone Power Systems (SAPS) Market Stand-Alone Power System Resource Provider (MSRP) Registration	Delivered	Software deployed. MSRP registration accepted from 17th April 2023.	LNSP, FRMP, MP/MDP
MAY-23	CDR (excluding LCCD)	Delivered	Successful implementation of first batch of performance improvements on 23 May 2023.	Major retailers
	B2B v3.8 and other ICFs	Delivered	Successful implementation of B2B and 4 ICFs on 28 May 2023.	LNSP, FRMP, MP/MDP
JUN-23	SAPS	Delivered	Successful implementation on revised date of 19 Jun 2023.	LNSP, FRMP, MP/MDP
AUG-23	Integrating Energy Storage Systems (ADC)	Delivered	Successful implementation on 9 August 2023. Further information on IESS Aggregated dispatch conformance (ADC) available here .	Aggregate Systems
	Fast Frequency Response - Dispatch & Reg	Delivered	Registration opened 9 August 2023. Participants interested in registering for this service can find out more information here .	Generators, Scheduled Loads, SGA, FRMP, IRP
OCT-23	Fast Frequency Response	Delivered	Successful go-live on 9 October 2023. Further information on FFR available here .	Generators, Scheduled Loads, SGA, FRMP, IRP
	5 Minute load profile	Delivered	Successful implementation on 1 October 2023	Market Customers / FRMP
	Increased MT PASA Information	Delivered	Successful go-live on 9 October 2023. Further information on MT PASA available here .	Generators, Scheduled Loads
NOV-23	CDR (LCCD), CDR Ph3, MSDR compliance Holiday	On Track	On track for 1 November 2023 delivery	FRMPs, MPs, LNSP

NEM Reform Program – 2024 Focus



- ◆ On track
- ◆ At Risk
- ◆ Delayed
- ◆ Delivered
- ◆ New date

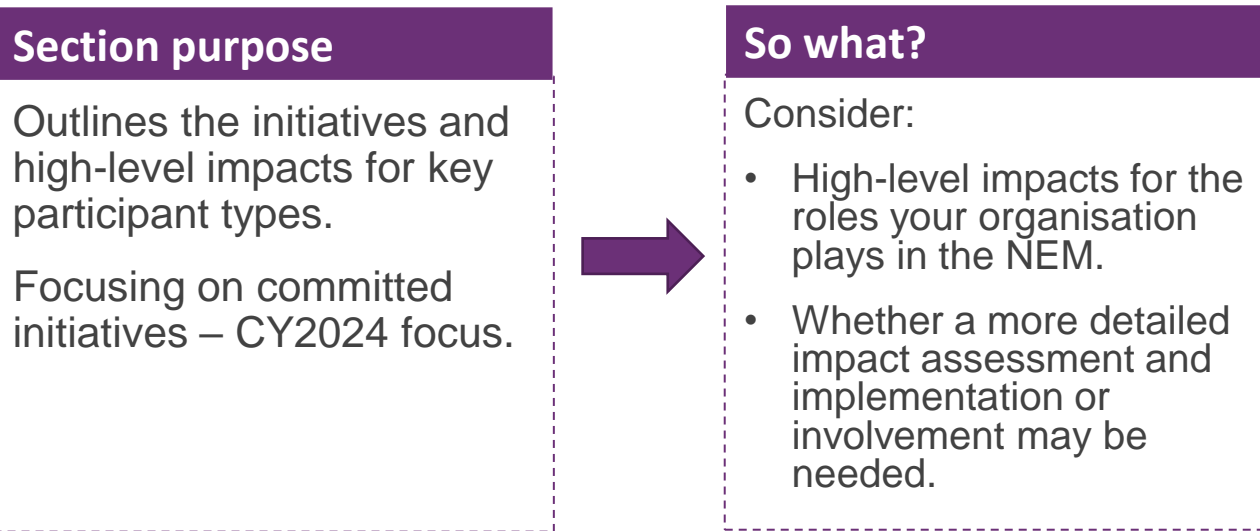
Release	Initiatives	Status	Key Points	Impacted Stakeholders
MAR-24	Metering Exemptions (MSDR)	New date On Track	Project is progressing on track for 4 March 2024.	Retailers, MC and MP/MDP
JUN-24	Integrating Energy Storage Systems [Final]	Amber	Overall IESS June 2024 tracking on schedule. Amber status due to pressures on development and system test schedule. Additionally overall Schedule is tight for BDU end to end delivery.	IRPs, NSPs, FRMP, MC/MP/MDP, MSRPs, ENMs ,Vendors
SEP-24	Retail Market Improvements	TBC	Proposed release date is 29 Sept 2024 to be confirmed via procedure consultation	FRMP, MDP, LNSP
DEC- 24	Frequency Performance Payments (Non-Financial)	On track	Project progressing to schedule.	Generators, Scheduled Loads.
JUN-25	Frequency Performance Payments (Financial Commencement)	On track	Project progressing to schedule.	Generators, Market Customers

3. Program initiatives

David Reynolds

About this section – 2024 Initiatives

Impacts for industry participants



The information presented in this session is general in nature. AEMO encourages industry participants to undertake their own due diligence to assess energy market reform impacts on their respective organisations.

What underpins this assessment?





Retail Market Improvements Initiatives

David Reynolds

Retail Market Improvements Scope & key dates

TIMING	ELEMENT	SUMMARY
1 November 2023	CDR Rule Commencement	<ul style="list-style-type: none"> Consumer Data Right (CDR) Tranche 3 commences: <ul style="list-style-type: none"> Tranche 3 integration with all retailers with >10k customers excluding complex requests.
1 November 2023	CDR LCCD Data Population Commencement	<ul style="list-style-type: none"> CDR Market Settlement and Transfer Solution (MSATS) Last consumer change date (LCCD) field population obligations commence: <ul style="list-style-type: none"> Effective date of AEMO LCCD population logic and all retailers proposed to populate LCCD from 1 November 2023. LCCD field deployed on 30 May 2023 r43 schema.
4 March 2024	MSDR: Metering Installation Exemptions Automation Commencement	<ul style="list-style-type: none"> Automation of the metering installation exemption process for meter malfunctions and small customer metering installation commences. <ul style="list-style-type: none"> Consultation completed on associated procedures and effective date Metering Installation Exemption Guideline available, provides guide on steps to perform and maintain automated metering exemption requests. Update to MSATS exemption fields to be deployed in r44 B2M schema.
29 September 2024	NSLP & Substitution Types Review ICFs Commencement	<ul style="list-style-type: none"> NSLP & Substitution Types Review ICFs proposed to commence: <ul style="list-style-type: none"> A preferred longer-term Net System Load Profile (NSLP) Methodology (ICF_072): Considers situations where positive and negative NSLP trading interval values are present. Substitution Types review (ICF_054): Intends to provide recipients a clearer understanding of the reason and method used to support a substituted metering data value. Consultation in progress on associated procedures and effective date
1 July 2025	Metering Services Review	<ul style="list-style-type: none"> Initiative to enable the outcomes from the AEMC's Review of the regulatory framework for metering services Timeline subject to Rules and Procedure consultations with industry: <ul style="list-style-type: none"> Metering Services Review Working Group established to discuss changes required

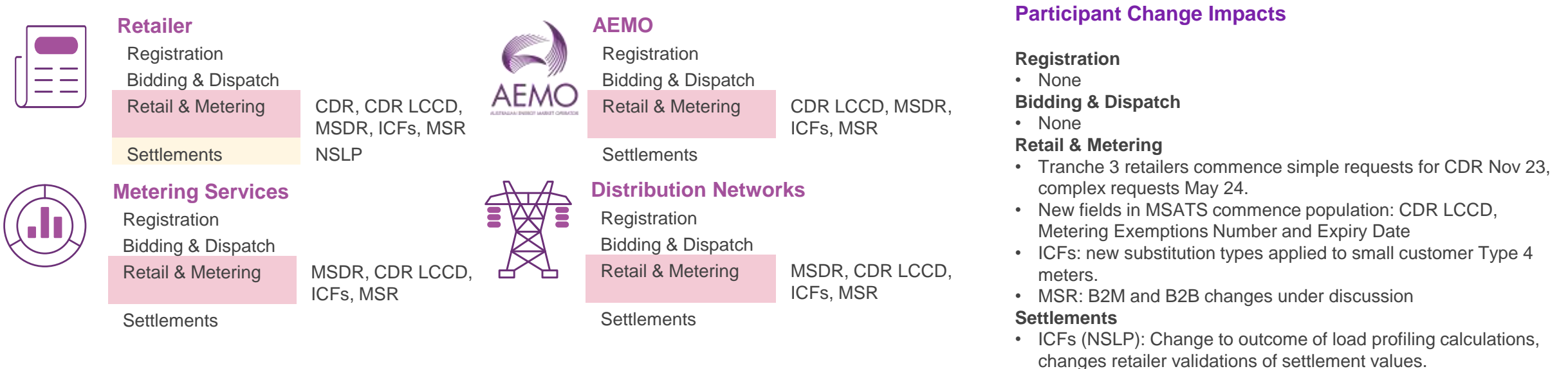
Participant Impact Assessment

Objective	Scope and key dates
Consumer Data Right (CDR) Tranche 3	Integration with all retailers with >10k customers excluding complex requests commences 1 Nov 2023. Complex requests for all retailers with >10k customers commences May 2024.
CDR LCCD Data Population	Market Settlement and Transfer Solution (MSATS) Last consumer change date (LCCD) field population obligations commences 1 Nov 2023.
MSDR: Metering Installation Exemptions Automation	Automation of the metering installation exemption process for meter malfunctions and small customer metering installation commences 4 March 2024. Population of MSATS exemption fields and automated application for exemptions commences, and r44 B2M schema released.
Net System Load Profile (NSLP) & Substitution Types Review ICFs	<ul style="list-style-type: none"> NSLP & Substitution Types Review ICFs proposed to commence 29/9/2024: <ul style="list-style-type: none"> Change made to NSLP Methodology by AEMO. Substitution Types to provide recipients a clearer understanding of the reason and method used to support a substituted metering data value. New types to be recognised.
Metering Services Review (MSR)	<ul style="list-style-type: none"> Initiative to enable the outcomes from the AEMC's Review of the regulatory framework for metering services Timeline subject to Rules and Procedure consultations with industry: <ul style="list-style-type: none"> Metering Services Review Working Group established to discuss changes required for B2M and B2B.

Legend

	HIGH
	MODERATE
	LOW
	NONE

Industry impact heatmap showing affected market systems and processes



Integrating Energy Storage Systems (IESS)

Ulrika Lindholm

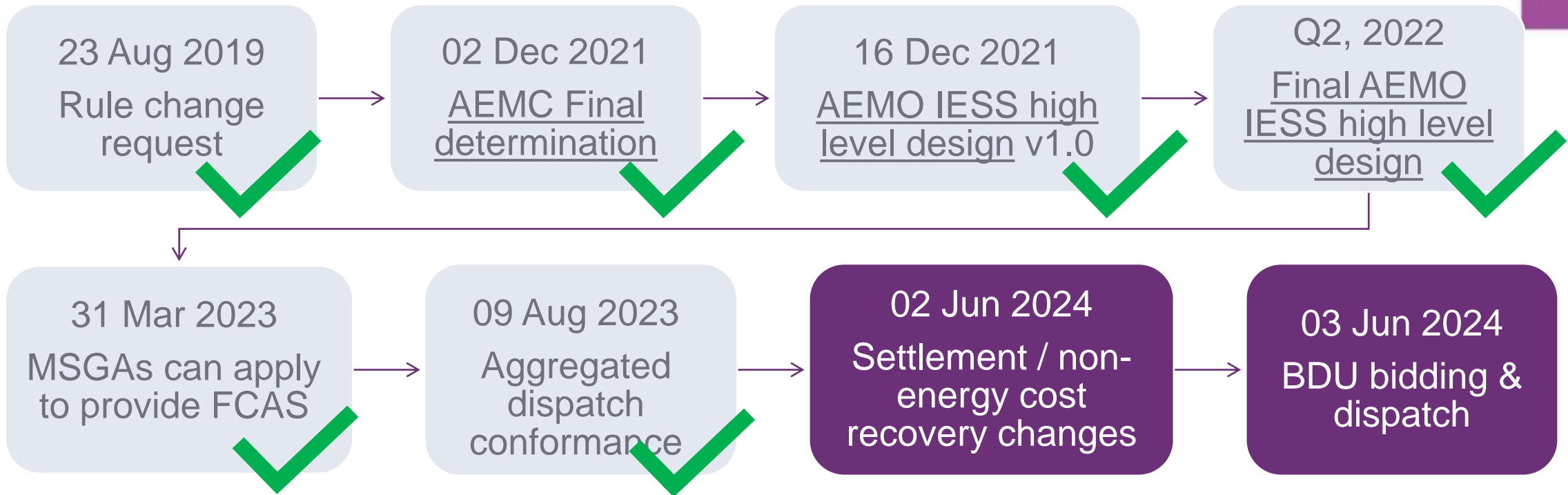
Background

- The electricity markets were traditionally one-sided with separate producers and consumers of electricity; which has been reflected in the rules, systems and processes that shapes interactions between AEMO and market participants.
- This has had flow on effect for energy storage and hybrid/aggregate systems where energy is bidirectional, requiring them to e.g. register and participate under two different categories and other arrangements which creates inefficiencies for energy storage compared to other market participants.
- At the same time, as our electricity system transitions to a net zero system with very high proportions of variable renewable energy,
 - Energy storage plays an important role to firm up the expanding volume of renewable energy, and
 - The pipeline of large energy storage projects is significant and increasing.
- The Integrating Energy Storage Systems (IESS) rule:
 - Addresses this problem through changes to the regulatory framework, as well as to various AEMO systems and processes
 - Removes barriers and accommodates more and improved ways for storage and hybrid facilities to participate in the NEM.
- AEMO established the IESS project under the NEM Reform Program to:
 - Carry out the procedure and system changes arising from the IESS rule
 - Support industry readiness for the IESS changes.

Further Information:

- [IESS webpage](#)
- [Contact the NEM Reform team](#)

High-level Timeline



MSGA	Market small generation aggregator
FCAS	Frequency control ancillary service/s
IRP	Integrated resource provider
BDU	Bidirectional unit

- REFERENCES**
- [AEMC IESS rule change](#)
 - [AEMC Implementing IESS rule change](#)
 - [AEMO IESS High Level Design and Implementation Strawperson](#)
 - [AEMO IESS Participant Toolbox](#)

Scope & key dates (1/2)

TIMING	ELEMENT	SUMMARY
24 Jul 2023	Bidirectional Unit Implementation Design	✓ Final design has been published
18 Sep 2023	Retail procedures	✓ Final procedure has been published, following consultation. It covers: Changes to National Metering Identifier (NMI) Classification Codes to enable AEMO to appropriately allocate unaccounted for energy (UFE), market fees, and monitor the integrity of the market.
13 Sep 2023	Technical specification draft	✓ Based on AEMO Detail Design at level to support participants' development activities for the IESS June releases (settlements changes and the introduction of bidirectional units (BDUs))
11 Sep 2023	Data model technical specification initial draft	✓ Participant data model, containing changes to Settlement tables, columns and definitions
9 Oct 2023	Readiness Approach update	✓ Outlines activities planned to ensure that industry and AEMO are ready for rule commencement
17 Oct 2023	Industry test and market trial strategy	✓ Plan for managing, coordinating, monitoring and reporting on AEMO's and NEM participants' IESS market testing activities scheduled for April and May 2024
18 Oct 2023	Participant Impact Assessment update	✓ High level view on participant impacts of IESS
23 Oct 2023	Technical specification update	✓ As above, version that AEMO development will be based on. High degree of certainty for Participant development/planning
15 Dec 2023	Transition and cutover plans draft	• Establishes a timetable and process for transitioning affected participants to new arrangements
15 Dec 2023	Participant Development Support Environment - Settlements	• Temporary system environment which allows Participants access to static settlement data format examples
22 Jan 2024	Participant Development Support Environment – Bidirectional Unit	• Temporary system environment which allows Participants access to “beta” release of bidding and reporting interface changes supporting single DUID changes.
19 Jan 2023	Transition and cutover plans final	• Establishes a timetable and process for transitioning affected participants to new arrangements
2 Apr 2024	Technical specification final	• Outlines settlements changes and the introduction of bidirectional units (BDUs)
27 Mar 2024	Data model technical specification final	• Participant data model is released in production environment
April-May 2024	Market trial	• Coordinated multi-party end-to-end testing of business process scenarios e.g. a Settlement run

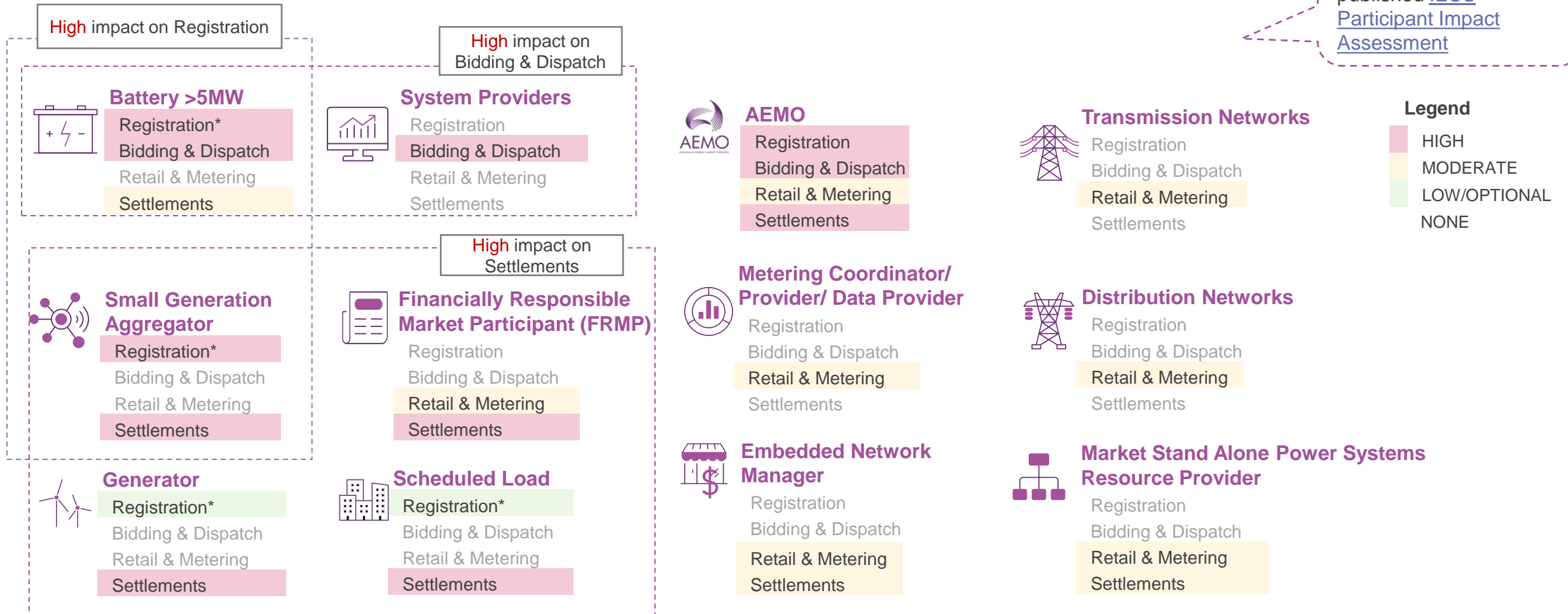
Scope & key dates (2/2)

TIMING	ELEMENT	SUMMARY
02 Jun 2024	Settlement and non-energy cost recovery (NECR) changes	<ul style="list-style-type: none"> Fundamental change - move from current category-based approach to a directional approach: <ul style="list-style-type: none"> “Generator” and “customer” energy will become “sent out” and “consumed” energy, regardless of the type of connection point Changes to the way NEM participants pay for “non-energy” services i.e. costs of ancillary services, interventions etc. Major AEMO database structure changes required to enable the new calculations, these changes will flow into the Data Model and affect participant reconciliation and reporting activities and also AEMO data provision. Non-energy cost recovery will change to recovery from cost recovery market participants (CRMPs) based on their proportion of sent-out or consumed energy. CRMPs are: <ul style="list-style-type: none"> Market generators Integrated resource providers Market customers
	New/updated National Meter Identifier (NMI) Classification Codes	<ul style="list-style-type: none"> Via the Retail Procedures, 3 new codes and amendments to 2 further codes will be implemented under IESS for: <ul style="list-style-type: none"> Identifying integrated resource systems (IRS) and removing the current use of two NMIs for grid-scale storage facilities Appropriate application of market fees and unaccounted-for-energy (UFE) Incorporating changes relating to the new Small Resource Aggregator category Enabling appropriate compliance monitoring to protect the integrity of market settlements.
	Facilitating a new category, near universal participant type – Integrated Resource Provider (IRP)	<ul style="list-style-type: none"> An Integrated Resource Provider will be able to classify a wide range of units. <ul style="list-style-type: none"> New category will help simplify registration, particularly for battery participants who currently need to register as both a customer and a generator. Existing Bi-directional unit (BDU) participants (generator/customer) transition to IRPs Small Generation Aggregators become IRPs
03 Jun 2024	Facilitating bi-directional units (BDU)	<ul style="list-style-type: none"> A new unit type for plant (such as a battery) that can act as a generator and a consumer of electricity. There will also be a new approach to bidding whereby a BDU will use a single bid form, rather than the current two (one each for generation and consumption).

Participant Impact Assessment

Indicative industry impact heatmap showing affected market systems and processes

For detailed Participant Change Impacts, refer to published [IESS Participant Impact Assessment](#)



* An Integrated Resource Provider will be able to classify a wide range of units. From June 2024, batteries and aggregated small resources must be classified by an IRP. Other generator and load types may be classified by an IRP i.e. in these cases, market generators & market customers can choose to become IRPs.

Frequency Performance Payments (FPP)



Paul Johnson

Background

- AEMO is currently implementing the Australian Energy Market Commission (AEMC) September 2022 final determination in the [PFR Incentives rule change](#). The new Frequency Performance Payments (FPP) framework comes into effect in June 2025.
- As the generation mix transforms and more renewable sources and batteries come on-line, it is increasingly important to provide frequency response to keep the electricity grid stable and control system frequency close to 50Hz to avoid blackouts.
- Under the new arrangements, the impact of generators and large loads on power system frequency will be calculated every five minutes, with incentive or penalty payments being allocated based on the impact of a particular generator or large load. Positive and negative payments are equal in each interval.
- The new five-minute contribution factors will also be used to allocate and recover the cost of Regulation Frequency Control and Ancillary Services (Reg FCAS), replacing the current Causer Pays framework.

Further Information:

- [FPP webpage](#)
- [Contact the NEM Reform Team](#)

Scope & key dates

TIMING	ELEMENT	SUMMARY
4 May 2023	Primary Frequency Response	<ul style="list-style-type: none"> ✓ Final procedure has been published, following consultation. Procedure covers: <ul style="list-style-type: none"> ✓ Requirement to provide Primary Frequency Response (PFR) ✓ PFR parameters and additional performance requirements
1 June 2023	Frequency Contribution Factor Procedure (FCFP)	<ul style="list-style-type: none"> ✓ Final procedure has been published, following consultation. The FCFP, covers: <ul style="list-style-type: none"> ✓ The calculation of a generating unit's impact on system frequency and the associated payment ✓ Determination of the need to raise or lower power system frequency
July 2023	Participant Impact Assessment	<ul style="list-style-type: none"> ✓ High level view on participant impacts of FPP
December 2023	High-level technical design	<ul style="list-style-type: none"> • Detail regarding FPP reporting to enable participants to scope their own requirements, begin engagement with developers/vendors and provide feedback to AEMO
April 2024	Data model technical specification update - Reporting	<ul style="list-style-type: none"> • Updated participant data model, containing new Frequency Performance Payments (FPP) data reporting
September 2024	Data model technical specification update – Settlements	<ul style="list-style-type: none"> • Updated participant data model, containing new elements for FPP settlements
December 2024 to May 2025	Non-financial operation of new FPP systems	<ul style="list-style-type: none"> • Extended period of non-financial operation of the new FPP system to allow market participants to familiarise themselves with its operation
8 June 2025	Frequency Performance Payments Go live	<ul style="list-style-type: none"> • New FPP arrangements replace existing 'causer pays' arrangements.

For more detailed information on the FPP timeline please visit the Program Consultative Forum (PCF) webpage at: [AEMO | NEM Reform Program Consultative Forum](#)

Frequency Performance Payments

Objective	Scope and key dates
<p>The new rule creates a system of positive and negative Frequency Performance Payments (FPP), which will replace the current “Causer Pays” system in June 2025.</p> <p>Under the new regime, market participants will receive payments for eligible facilities where their PFR helps to reduce the frequency deviations which would otherwise require the use of regulation Frequency Control and Ancillary Services (FCAS).</p>	<p>On 8 June 2025 - new FPP arrangements replace existing ‘causer pays’ arrangements.</p>

Legend

	HIGH
	MODERATE
	LOW
	NONE

Industry impact heatmap showing affected market systems and processes



Generation

- Registration
- Bidding & Dispatch
- Retail & Metering
- Settlements



AEMO

- Registration
- Bidding & Dispatch
- Retail & Metering
- Settlements

Participant Change Impacts

Registration

- No impact on the participant registration process.

Bidding & Dispatch

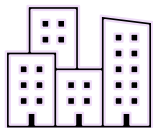
- No impact on the NEM bidding or dispatch process.

Retail & Metering

- No new metering obligations. Four-second SCADA data is required for participants to receive an individual FPP contribution factor.

Settlements

- New FPP contribution factors will be used to allocate amounts to be deducted or credited in the settlement process.
- New contribution factors to be used to allocated the recovery of Regulation FCAS, replacing causer pays.



Scheduled Loads

- Registration
- Bidding & Dispatch
- Retail & Metering
- Settlements

4. Foundational & Strategic initiatives

Ulrika Lindholm

Background

Current energy market is supported by a fragmented and complex technology landscape of identity and access management, industry data exchange and multiple portals, which will not remain fit-for-purpose as the industry continues through the energy transition.



Security

Cyber security vulnerabilities are on the rise, and critical infrastructure remains a prime target for cyber criminals.

Proactive measures are required to protect Australia's energy services and uphold national security.



Ageing & fragmented Technology

Platforms were established independently across NEM services utilising multiple now aged technologies which are both highly customised and nearing end of life. This drives up cost and slows the speed of change.



Evolving Market Needs

Market reforms enabling for example better integration of distributed energy resources are identified on the NEM Reform Implementation Roadmap and require a technology uplift to be deployed.

Initiatives at a glance

- Foundational and strategic initiatives represent investments that will establish secure, standardised and effective capability required for both existing and new market services.
- These initiatives have been identified for the NEM Reform Program and included in the NEM Reform Implementation Roadmap.



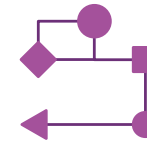
Identity and Access Management (IDAM)

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



Portal Consolidation (PC)

Enables a unified stakeholder experience that hosts web applications. The portals framework is an enabling platform that supports energy market participants and other partners to consume AEMO browser services in a secure manner.



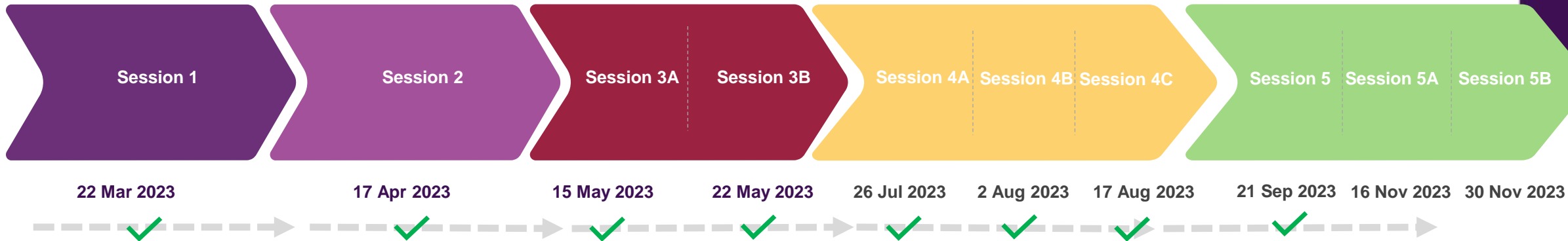
Industry Data Exchange (IDX)

Unified access to AEMO services across the NEM, with a framework scalable to all markets. Using modern authentication and communication protocols, facilitating a cohesive approach to industry data exchange. This will leverage IDAM.

Industry consultation

- AEMO is conducting an industry consultation to evaluate the business case for the three initiatives before any funding decision is made.

Timing is indicative. Additional engagement may be required.



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"> Introduce initiatives Outline workshop plan 	<ul style="list-style-type: none"> Pain points and benefits Survey 	<ul style="list-style-type: none"> Concept walkthrough Survey 	<ul style="list-style-type: none"> Transition Strategy Impacts & Benefits Survey 	<ul style="list-style-type: none"> Business case inputs Industry cost Walkthrough of draft business case Assessment and completion

Published information and materials:

- [NEM Reform Foundational and Strategic Initiatives Focus Group \(FaSI FG\)](#)
- Any queries can be directed to NEMReform@aemo.com.au.

5. Q&A

David Reynolds

Stakeholder questions

#	Pre-submitted questions	AEMO's initial response
1	<p>It would be good to get information on governance for metering review and how does it impact NEM reform program.</p> <p>Nothing specific, I just want to understand what work is upcoming impacting Metering.</p>	<p>The metering review will be an initiative included in the NEM Reform program within the Retail Market Improvements stream. It will be subject to the NEM Reform governance structure and has a working group established to discuss the changes required.</p> <p>The Metering Review Working Group comprises a cross section of Industry representatives from across the NEM and market sectors. Membership has been established through nominations received via the ERCF and B2B Working Groups. The objective of the Working Group is to develop key artifacts/content to inform the ERCF, B2B Working Groups and other key stakeholders of potential metering related considerations and impacts. There are currently two face-to-face workshops planned for November 2023 in Melbourne to determine key areas of focus and commence more detailed analysis.</p>
2	<p>How much FCAS capacity has been registered by what were previously known as SGA participants since the IESS rule change came into effect allowing SGA participants to register for FCAS?</p>	<ul style="list-style-type: none"> • IESS project introduces four changes – the first was allowing aggregators of small generating and storage units to provide ancillary services (if they choose to do so). • To date, no FCAS capacity has been registered by an SGA. • To monitor this activity, please refer to the NEM registration and exemption list (updated monthly)
3	<p>Can you confirm scope of each change i.e., if they are NEM specific, or impact WEM, East and West Coast Gas markets too.</p>	<p>The scope of the NEM Reform Program is limited to those initiatives impacting the National Electricity Market (NEM) only. The NEM Reform Implementation Roadmap does include reference to several east coast gas reforms to provide those participants / stakeholders with operations or interests in both electricity and gas markets a complete picture of the reform landscape and the potential impacts to their businesses.</p> <p>AEMO note there is a significant reform program occurring in the WEM. AEMO has established a separate program of work to deliver these reforms.</p>
4	<p>Can you explain how the AEMO foundational items have been developed please and the intended process for consultation, go/no-go and implementation (if proceeding).</p>	<p>AEMO's foundational and strategic initiatives were identified conceptually by AEMO's technical subject matter experts as pre-requisites for the successful implementation of the NEM Reform Program and form part of the ESB's final recommendations to Energy Minister's as part of the ESB's Post-2025 market design program. They fall into two categories:</p> <ul style="list-style-type: none"> • Foundational investment in an AEMO legacy system to deliver an uplift to base capability on which reforms are dependent; or • Strategic investment where system uplift is required at some time in the future and AEMO sees the opportunity for this life-cycle type investment to be brought forward and delivered in the same timeframes as the reforms for efficiency purposes. <p>These initiatives are subject to the governance frameworks established for the reform program, including the Stage Gate process, where AEMO will engage with industry stakeholders to confirm critical elements of the initiatives including High Level Design (HLD), Detailed Design (DD) or Scope; and Implementation Plan and Impact Assessment. This information is to form the basis of a Business Case to inform future decisions to proceed or not with implementation. AEMO is currently in the process of completing this work for its initiatives: IDAM, IDX and PC.</p>

Stakeholder questions

#	Pre-submitted questions	AEMO's initial response
5	How is the NEM reform program encouraging the private sector to install community batteries at LV (sub 5 MW size)?	<p>Encouraging the private sector to install community batteries is not explicitly within the remit of the NEM Reform Program. However, the NEM Reform Program is progressing a range of initiatives that should make it easier for these types of installations to operate in, and obtain value from, the market, which may better support the private sector in establishing community batteries. Examples include:</p> <ul style="list-style-type: none"> • The IESS project, which evolves the existing Small Generation Aggregator (SGA) framework by enabling SGAs to provide FCAS (commenced March 2023) and explicitly recognise small bidirectional units (<5 MW) as a resource classification (to commence from June 2024). Previous feasibility studies on community batteries have noted the challenges of accessing sufficient value streams under the existing NEM participation framework, and the changes introduced by IESS may help to address some of these concerns. • Flexible trading arrangements, an in-flight rule change that aims to provide greater flexibility in the way flexible DER may be independently recognised and managed for the purpose of wholesale settlement. • Scheduled Lite, an in-flight rule change which aims to integrate a wide range of price-responsive DER into the market by providing a voluntary framework for visibility and participation in NEM scheduling processes. AEMO anticipates that community batteries would be eligible to participate in Scheduled Lite.
6	What is the likelihood of specific initiatives resulting in work in FY25, so that can internally prepare and scale up if required.	<p>ST PASA Replacement and Frequency Performance Payments both have committed go live dates in 2025. For the remaining initiatives that fall within the FY2025 timeframe these remain subject to the AEMC's rule change consultation process or ongoing policy development / design consultation and final Ministerial direction. The Roadmap intentionally does not debate the merits of policy and instead aims to optimise, efficiently the implementation of all initiatives. Please refer to the AEMC for an update on the likelihood of certain reform initiatives proceeding.</p> <p>For AEMO's foundational / strategic initiatives (IDAM, IDX and PC), AEMO is currently consulting with industry stakeholders on the implementation impacts and preferred timing for these initiatives. At present the current draft roadmap does provide for some work occurring in relation to these initiatives in FY2025.</p>
7	What role can OEM's play in the NEM Reform Program or Roadmap?	OEM's can play a key role in providing expert input and insights into the consultation process for those initiatives that have a direct impact on OEM's. (e.g. MASS Consultation).

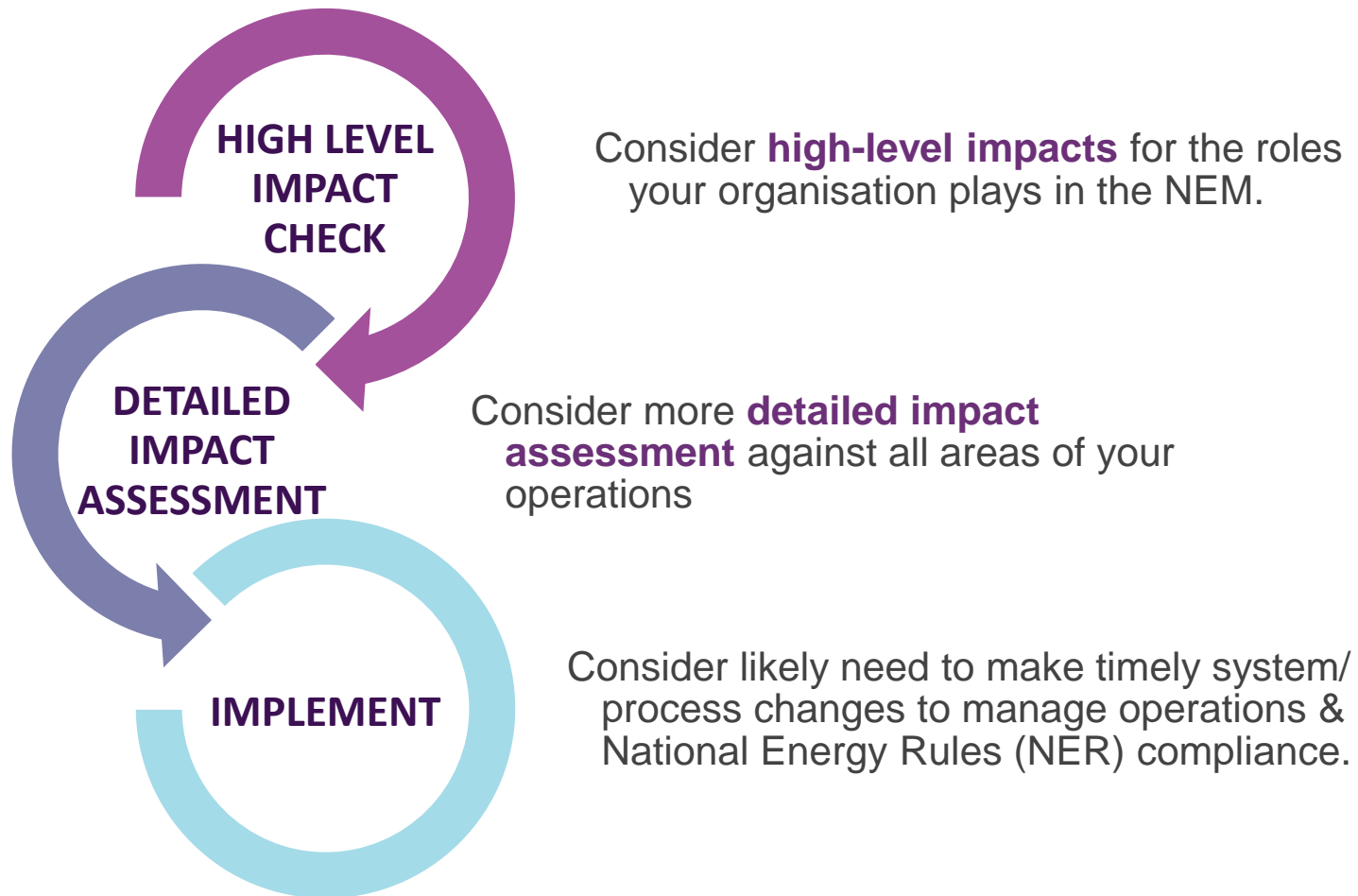
Stakeholder questions

#	Pre-submitted questions	AEMO's initial response
8	<p>What is the purpose and expected benefits for the NEM Reform Program?</p>	<p>In 2021 the Energy Security Board (ESB) set out a pathway of reforms for the National Energy Market (NEM) and a timeline for their implementation towards 2025 and beyond. There are four key pathways, complemented by a data strategy, additional retail market improvements and strategic and foundational initiatives identified by AEMO.</p> <p>There are more than 30 distinct projects (or initiatives) spanning the reform pathways. It is the most comprehensive reform package to be implemented since the NEM was established in 1998.</p> <p>The purpose of these reforms is to deliver essential system changes and upgrades that support the transition of the NEM into a modern energy system that can meet Australia's future wants and needs. This includes enabling more renewable energy sources, storage systems and distributed energy resources to connect and operate within the NEM.</p> <p>Benefits of the reforms include:</p> <ul style="list-style-type: none"> • enabling the right mix of sufficient, variable energy sources into the NEM to maintain reliability and ensure security of supply, • markets, systems and networks that encourage investment in new and developing generation and storage technologies, • a network that meets our future needs, accesses renewable energy zones and delivers energy efficiently to consumers at a lower cost, • rewarding consumers for their flexible demand and generation, while providing options to engage with the energy market and a consumer protection framework, and • optimising and supporting the changing data needs and future data gaps for consumers, including greater access to and control of their own data. <p>AEMO established the NEM Reform Program to coordinate the delivery of the reforms.</p> <p>The purpose of AEMO's NEM Reform Program is to work collaboratively with industry to agree on effective solutions that meet the reform objectives, establish shared and aligned timelines and plan and deliver the reforms.</p> <p>Through the Program, AEMO facilitates efficient and effective delivery of the reforms by leveraging opportunities to bundle, sequence and prioritise projects, and where possible identify and lessen costs through solution design and implementation.</p> <p>The Program is supported by an enterprise-wide project governance framework, which ensures consistency of approach, financial hygiene, reporting and accountability and regular review to gain insights and ensure continual project delivery improvements for AEMO and industry participants.</p>

6. How to get involved & close


Peter Carruthers

So what – indicative next steps



Tip! Consider which of the Forums on the next page might support you in these next steps.

NEM Reform Program Engagement

Forums	Forum focus 	Cadence	Approach
Executive Forum	Program overview and status update	3 per Year	Nomination
Reform Delivery Committee (RDC)	Long term strategic perspective	Quarterly	Nomination
Program Consultative Forum (PCF)	Inflight initiatives status & co-ordination	Monthly	Open
Implementation Forum	Implementation of reforms	Monthly	Open
Electricity Wholesale (EWCF) & Electricity Retail (ERCF) Consultative Forums	Procedures working groups	Monthly	Open
Industry Testing Working Group	Testing	Monthly	Open
Working Groups	Inflight	As appropriate	As appropriate



To learn more about these forums, please visit

- [AEMO | NEM Reform Program Forums](#)
- [AEMO | NEM Reform Program Initiatives](#)
- [AEMO | Industry Meetings Calendar](#)
- or contact the program at NEMReform@aemo.com.au.

Focus/working Groups for inflight initiatives include:

- Initiative working groups
- Strategic and foundational focus groups (IDX/IDAM/PC)
- Industry Testing Working Group (ITWG) – IT technical implementations

Subscribe to the NEM Reform Newsletter [here](#)

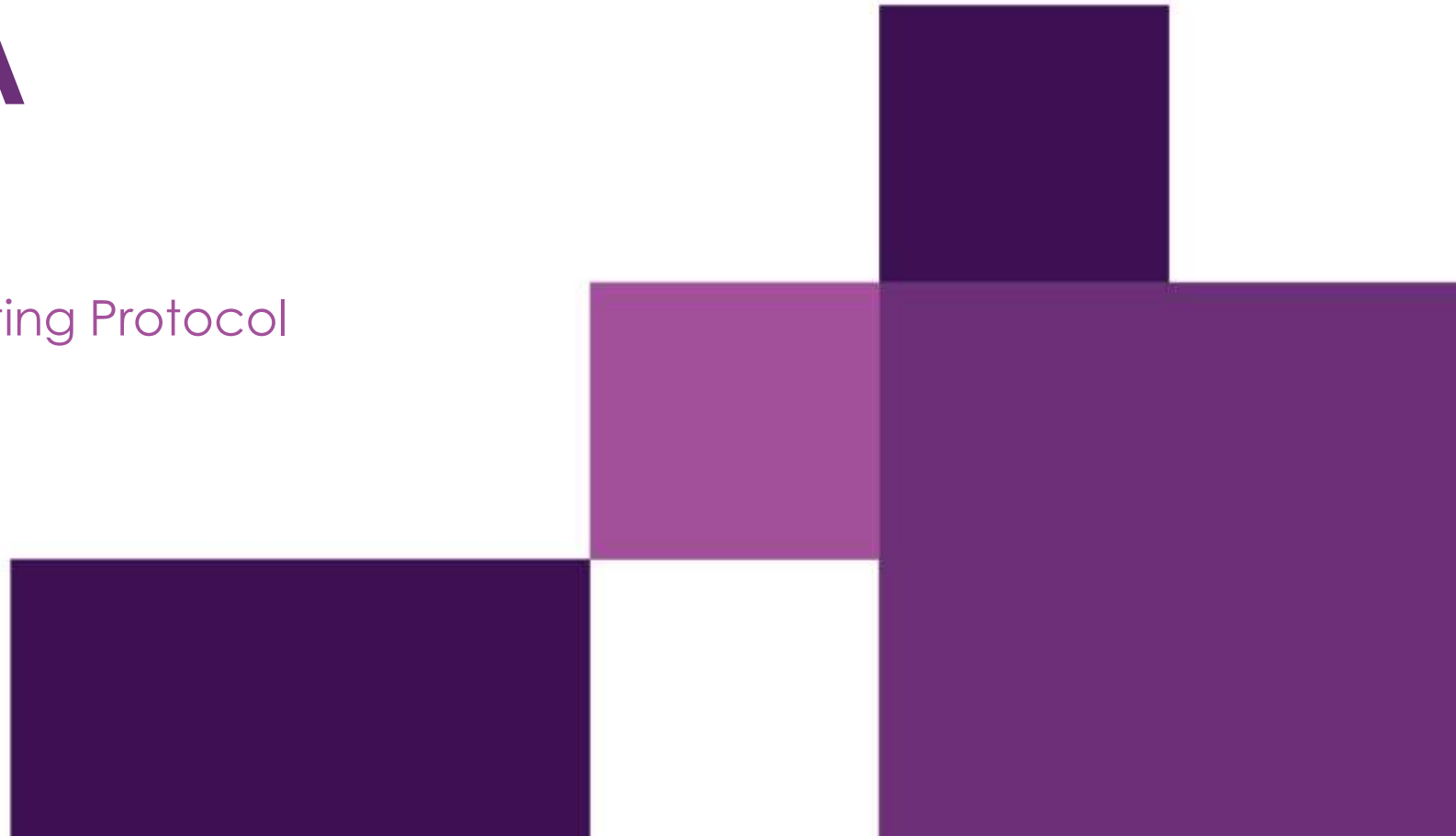


For more information visit

aemo.com.au

Appendix A

AEMO Competition Law - Meeting Protocol



AEMO Competition Law - Meeting Protocol



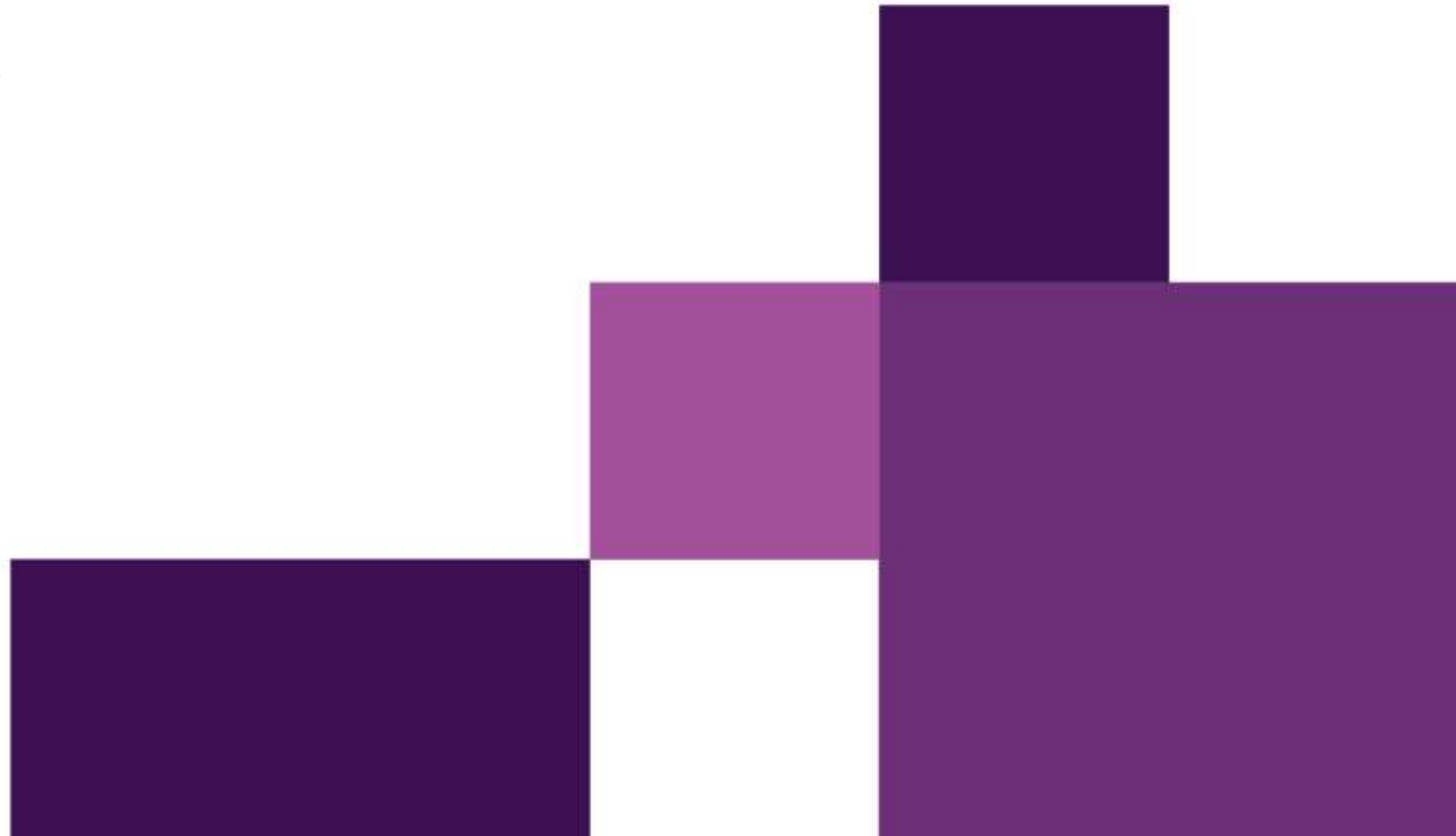
AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO, all participants agree to adhere to the CCA at all times and to comply with appropriate protocols where required to do so.

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: [AEMO | Forums and working groups](#)

Appendix B

Reference information



Relevant resources

Initiative	Relevant links
NEM Reform Program and stakeholder forums	AEMO NEM Reform Program Forums AEMO NEM Reform Program Initiatives AEMO Industry Meetings Calendar
NEM Reform Implementation Roadmap	AEMO NEM Reform Implementation Roadmap
Retail & BAU initiatives	AEMO Consultations Consumer Data Rights MSATS Consultation AEMO Consultations Load Profiling Methodologies Consultation AEMO Consultations Standalone Power Systems (SAPS) – Identifying a SAPS NMI in MSATS AEMO Consultations B2B Procedures v3.8
Fast Frequency Response	AEMC Fast Frequency Response Market Ancillary Service AEMO Consultations MASS Very Fast FCAS
Increased MT PASA information	AEMC Enhancing Information Generator Availability MT PASA AEMO Consultations 2022 Reliability Forecasting Guidelines and Methodology
Integrating Energy Storage Systems	AEMC Integrating Energy Storage Systems NEM AEMO Integrating Energy Storage Systems Project AEMO Integrating Energy Storage Systems Working Group AEMO Integrating Energy Storage Systems Participant Toolbox
Frequency Performance Payments	AEMC Primary Frequency Response Incentive Arrangements AEMO Consultations Frequency Contribution Factors Procedure
Foundational & Strategic initiatives	AEMO NEM Reform Foundational and Strategic Initiatives Focus Group (FaSI FG)

Glossary



AEMO Website Links

- A comprehensive glossary of terms (and measurements) can be found [here](#) for your reference.

AEMC Website Links

- For rules terms, see the relevant industry rules on the [AEMC website](#) > [Energy rules](#).