

Reform Delivery Committee

28 November 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.

Agenda

#	Time	Topic	Ask of Committee	Presenter(s)
1	10:00-10:05am	Welcome		Violette Mouchaileh
2	10:05-10:10am	Action items from previous meeting	For noting	Peter Carruthers
3	10:10-10:15am	Change Management & Roadmap Update	For discussion and endorsement	Lance Brooks
4	10:15-10:35am	Foundational and Strategic Initiatives Update	For discussion	Ulrika Lindholm / Andrew Bell
5	10:35-11:05am	Prioritisation Assessment	For discussion	Lance Brooks
6	11:05-11:35am	DER Holistic Review <i>[Subject to Ministers Mtg]</i>	For discussion	Nicole Dodd
7	-	Stage Gate Update	For noting	Lance Brooks
8	-	Executive Forum	For noting	Monica Morona
9	11:35-12:00pm	Other Business – Informed go live – NEM Reform Program Review	For discussion	Peter Carruthers

Appendix A: Competition law meeting protocol

Appendix B: Status: Reform and Foundational & Strategic Initiatives

Appendix C: DER Industry Trials & Jurisdictional Developments (Summary)

Appendix D: Foundational & Strategic initiatives investment phasing approach

"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. Action items from previous meeting

Action items from previous meeting

RDC Meeting actions

(Ref: Item = Meeting number/Agenda item number/Ref)

#	Topic	Action	Responsible	Status
10.4.0.1	Informed Go Live	At the appropriate time, AEMO to inform the RDC of which initiative we'll seek to trial the informed go live process.	AEMO	Proposed closed. To be discussed under Other business.
10.5.0.2	Stage Gate Update	AEMO to provide an update on how and when the work on Dynamic Operating Envelopes might progress based on recent trials incl Project Edge	AEMO	Closed. Covered under item 4 of this meeting
11.1.0.1	Welcome	AEMO and Red Energy/Lumo Energy to discuss a suitable profile for replacement representative.	Peter Carruthers, Geoff Hargreaves	Closed. New AEC rep Dan Mascarenhas welcomed to the Committee.
11.3.0.1	Change Management and Roadmap Update	Members to discuss DER Initiatives at the November RDC Collaborative workshop.	AEMO	Closed. Covered under item 4 of this meeting.
11.3.0.2	Change Management and Roadmap Update	AEMO to ensure details on the costs and benefits analysis for CRM / Priority access are updated as part of the ESB's assessment.	AEMO	Closed. Covered under item 4 of this meeting.
11.3.0.3	Change Management and Roadmap Update	AEMO to provide clarity on the 2025 dependencies, and potential sequencing options as part of an overall prioritisation assessment of those initiatives contributing to congestion within the Program no later than Q1 2024.	AEMO	Closed. Covered under item 4 of this meeting
11.3.0.4	Change Management and Roadmap Update	Members to provide feedback on a revised 'Ask of the Committee' and publication of v3 Roadmap and supporting artefacts as outlined on slide 21 by 15 September.	Committee members	Closed. Suggestions received with thanks.
11.5.0.1	Progression of Foundational & Strategic initiatives	Members to optionally provide feedback on the Foundational & Strategic initiatives case for change narrative, direction of travel and business case process by 8 September.	Committee members	Closed. No feedback received through RDC.

3. Change management and Roadmap update

Lance Brooks

Recap: Roadmap v3.1 proposal

Several material (and incremental) changes have been identified since publication including:

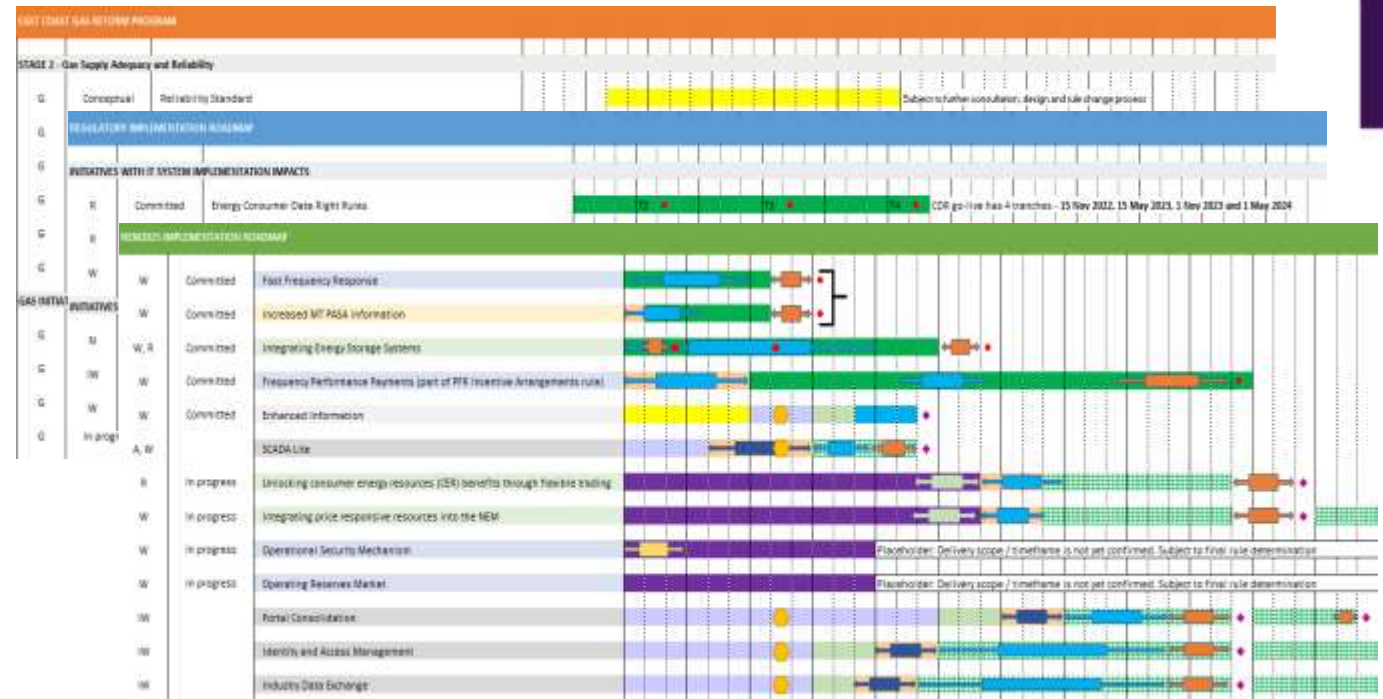
- Unlocking CER benefits through flexible trading (revised DD date)
- Integrating Price Response Resources into the NEM (revised DD date)
- Enhancing Reserve Information (revised DD date)
- Improving Security Frameworks for the energy transition (revised FD date)
- Inclusion of MSATS Release / B2B / AseXML Release on main 'Roadmap' worksheet

New proposal following stakeholder feedback

AEMO propose to update the Roadmap ahead of the Nov 28 RDC meeting to capture such changes before publishing as version 3.1 in December

NEM Reform Implementation Roadmap

(version 3 published 05 October 2023)



Change Management & Impact Assessment

DATE:	12 October 2023
NEM2025 INITIATIVE:	Unlocking CER benefits through flexible trading rule change
SUBJECT:	Change in timeline greater than 2 months

What are the implementation impacts to Participants?

IMPACT ASSESSMENT

QUESTION / ASSESSMENT	RESPONSE / DESCRIPTION
What is the nature of the change?	<ul style="list-style-type: none"> AEMC extension of draft determination publication to 29 February 2024
When is the change to come into effect?	<ul style="list-style-type: none"> Immediate
What are the impacts to AEMO?	<ul style="list-style-type: none"> Adjustment of implementation project schedules to reflect updated timing

AEMO Advice & Conclusions:
 Extension of roadmap timeline with the initiative go-live date pushed out to Q1 CAL 2026

RDC Advice & Conclusions:
 Input sought from RDC

AEMC Advice & Conclusions:
 Input sought from AEMC

Change Management & Impact Assessment

DATE:	5 October 2023
NEM2025 INITIATIVE:	Integrating price-responsive resources into the NEM
SUBJECT:	Change in timeline greater than 2 months

What are the implementation impacts to Participants?

IMPACT ASSESSMENT

QUESTION / ASSESSMENT	RESPONSE / DESCRIPTION
What is the nature of the change?	<ul style="list-style-type: none"> AEMC extension of draft determination publication to 29 February 2024
When is the change to come into effect?	<ul style="list-style-type: none"> Immediate
What are the impacts to AEMO?	<ul style="list-style-type: none"> Adjustment of implementation project schedules to reflect updated timing

AEMO Advice & Conclusions:
 Extension of roadmap timeline with the initiative go-live date pushed out to Q1 CAL 2026

RDC Advice & Conclusions:
 Input sought from RDC

AEMC Advice & Conclusions:
 Input sought from AEMC

Change Management & Impact Assessment

DATE:	5 October 2023
NEM2025 INITIATIVE:	Enhancing reserve information (formerly Operating reserves)
SUBJECT:	Initiative name change and timeline greater than 2 months

What are the implementation impacts to Participants?

IMPACT ASSESSMENT

QUESTION / ASSESSMENT	RESPONSE / DESCRIPTION
What is the nature of the change?	<ul style="list-style-type: none"> AEMC extension of draft determination publication to 14 December 2023 AEMC have also renamed the initiative from 'Operating reserve market' to 'Enhancing reserve information' to better capture the direction of the rule change
When is the change to come into effect?	<ul style="list-style-type: none"> Immediate
What are the impacts to AEMO?	<ul style="list-style-type: none"> Adjustment of implementation project schedules to reflect updated timing

AEMO Advice & Conclusions:
Update the Roadmap to reflect timeline extension

RDC Advice & Conclusions:
Input sought from RDC

AEMC Advice & Conclusions:
Input sought from AEMC

Change Management & Impact Assessment

DATE:	17 October 2023
NEM2025 INITIATIVE:	MSATS Release / B2B / AseXML Release
SUBJECT:	Stakeholder request

What are the implementation impacts to Participants?

IMPACT ASSESSMENT

QUESTION / ASSESSMENT	RESPONSE / DESCRIPTION
What is the nature of the change?	<ul style="list-style-type: none"> Stakeholder request to include a new line item in the main 'Roadmap' worksheet to capture MSATS Release / B2B / AseXML Release New line item named as 'Retail Market Improvements'
When is the change to come into effect?	<ul style="list-style-type: none"> Immediate
What are the impacts to AEMO?	<ul style="list-style-type: none"> Inclusion of new line item to the roadmap worksheet

AEMO Advice & Conclusions:
Update the Roadmap to include new line item for 'Retail Market Improvements'

RDC Advice & Conclusions:
Input sought from RDC

AEMC Advice & Conclusions:
Input sought from AEMC

Change Management & Impact Assessment

DATE:	9 November 2023
NEM2025 INITIATIVE:	Improving security frameworks for the energy transition
SUBJECT:	Change in timeline greater than 2 months

What are the implementation impacts to Participants?

IMPACT ASSESSMENT

QUESTION / ASSESSMENT	RESPONSE / DESCRIPTION
What is the nature of the change?	<ul style="list-style-type: none"> AEMC extension of final determination publication to 28 March 2024
When is the change to come into effect?	<ul style="list-style-type: none"> Immediate
What are the impacts to AEMO?	<ul style="list-style-type: none"> Adjustment of implementation project schedules to reflect updated timing

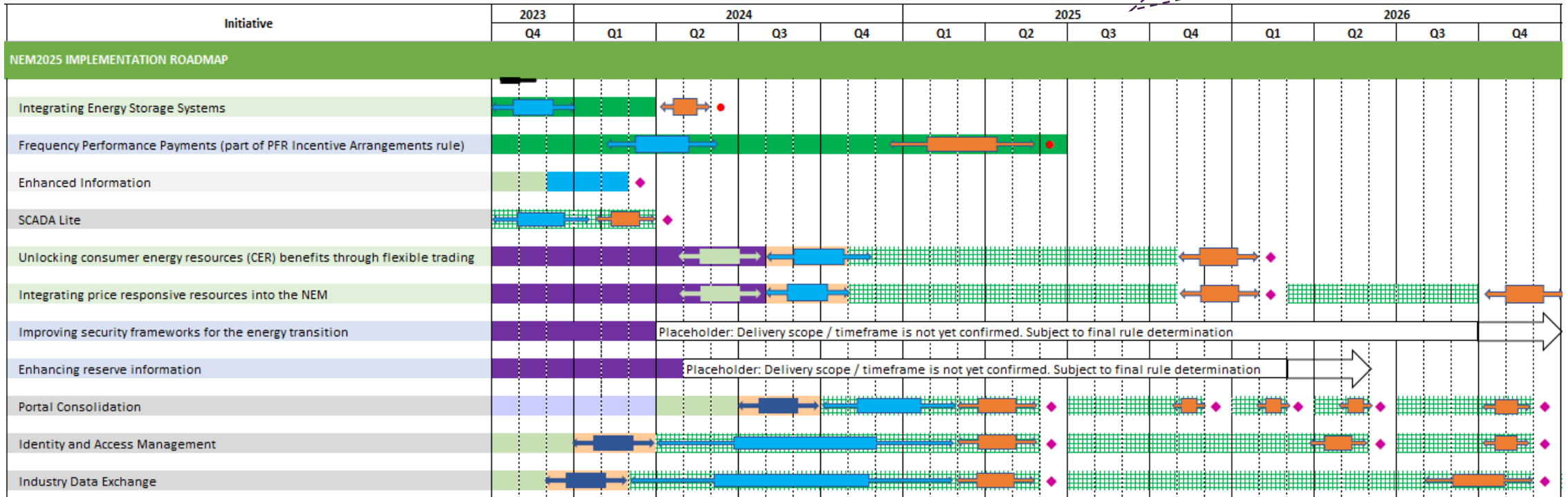
AEMO Advice & Conclusions:
Update the Roadmap to reflect timeline extension

RDC Advice & Conclusions:
Input sought from RDC

AEMC Advice & Conclusions:
Input sought from AEMC

Draft NEM Reform Implementation Roadmap (V3.1) developed

Timeline updates made to various rule change processes

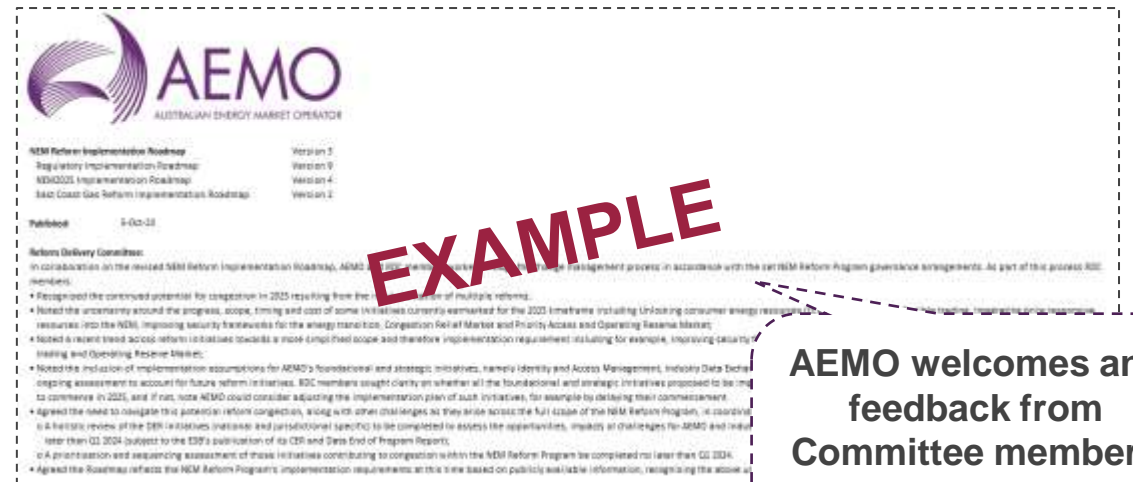


AEMO propose publishing this version of the Roadmap alongside revised supporting artefacts in early December 2023 subject to any further feedback from RDC members

Ask of the Committee

AEMO is seeking Committee members support for publishing v3.1 of the NEM Reform Implementation Roadmap (plus supporting artefacts) as a minor update to capture the latest rule determination timings from the AEMC and ensure the industry has available the latest information as it undertakes any implementation planning and forecasting.

- AEMO note these updates have been made in accordance with the Change Management process
- AEMO proposed to retain the current 'Ask of the Committee' as published on 'Cover' worksheet of the Roadmap



4. Progression of Foundational & Strategic initiatives (IDX, IDAM, PC)

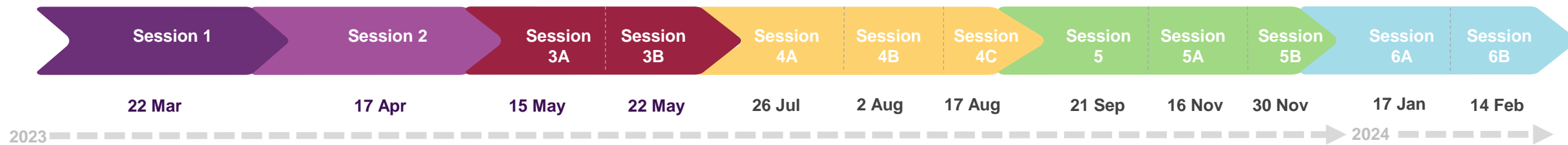
Ulrika Lindholm / Andrew Bell

- Update and business case

Consultation update

- Industry consultation underway to support business case assessment.
- Cost assessments (Implementation costs only) received from eleven organisations, however, two of those high-level number only. Further submissions sought from focus group to firm up industry’s numbers, given:
 - Lack representation from metering
 - No responses on quantifiable benefits (cost avoidance) or operational costs
- AEMO aims to publish draft business case on 15 December.

The expected release of the working draft of business case was changed post-meeting from 8 to 15 December to allow for additional industry cost submissions.



Session	Introduction	Discovery	Target State	Transition Strategy	Cost & Method	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"> • Industry and AEMO costs • Assumptions, options and methodology 	<ul style="list-style-type: none"> • Walkthrough of draft business case • Assessment and completion

Published information and materials:

<https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/nem-reform-foundational-and-strategic-initiatives-focus-group>

Business Case Options



Option 0: Do nothing

Retains existing platforms in their current form.

- Option “0” is **not tenable** due to **mandatory legislative and security requirements** for AEMO and Industry.

Option 1: Status-quo with tactical security uplifts

Extend the life of existing capabilities

IDAM:

- Minimum Viable Product (MVP) focused on addressing legislatively-driven requirements such as Security of Critical Infrastructure Act (SOCIA) and The Australian Energy Sector Cyber Security Framework (AESCSF) to enhance the security posture.

IDX:

- Enhance all existing Data exchange mechanisms with a focus on addressing legislatively-driven requirements to strengthen the security posture
- Any new reform initiatives will define and implement only the channels, patterns, protocols and payload formats applicable to that initiative’s scope. Eg DER

Portal Consolidation:

- Integrating IDAM MVP to address legislatively-driven requirements to enhance the security posture.

Option 2a & 2b: Phased Investment

Foundational capability for energy transition and industry-driven priorities

- Establish **foundational technology capability** for **energy transition** requirements such as DER, Electric Vehicles, Dynamic Operating Envelopes, etc
- Transitional support capability over an agreed sunset timeframe to provide participants with the flexibility to determine their individual investment timing and sequence.
- A phased investment approach focused on addressing industry-driven priority areas where critical improvements are required.
- Leverages an integrated roadmap to clearly articulate investments in business services by tranche.
- Option 2a reflects target state addressing industry pain points defined through the consultation.
- Option 2b reflects a compromised target state suggested by some participants. Does retain existing data payloads, but does not fully address industry pain points, residual security risk, and, operational and lifecycle costs.

Options assessment framework

Assessment Categories	Description	Assessment Metric
<p>Decreased Residual Security Risk</p> <ul style="list-style-type: none"> - Attack Surface Area 	<p>Higher levels of integration across the value chain have increased the complexity of the overall security landscape, as well as the impact of a potential cyber-attack. Fragmented security landscape, built over time have level of risk or potential security threats after security measures, controls, and safeguards have been implemented.</p>	<p>Maturity Scale 1-5</p>
<p>Deliverability of Future reforms</p> <ul style="list-style-type: none"> - Speed to Market - Realisation of Benefits - Flexibility and Innovation 	<p>The highly fragmented and complex technology environment creates barriers to future reforms. It slows the speed of change, increases complexity, and incurs higher costs to transition to new fit-for-purpose solutions while supporting legacy systems through a sunset period</p>	<p>\$\$</p>
<p>Cost to Deliver</p> <ul style="list-style-type: none"> - Immediate Implementation Cost - Cost of delivering future reforms 	<p>The cost to implement the different options will be assessed along with the cost to deliver future reforms</p>	<p>\$\$</p>
<p>Operational Cost</p> <ul style="list-style-type: none"> - Support and Maintenance - Participant operational cost differential - “Black Swan” Events impact and recovery 	<p>The operational cost for the different options would be assessed</p>	<p>\$\$</p>

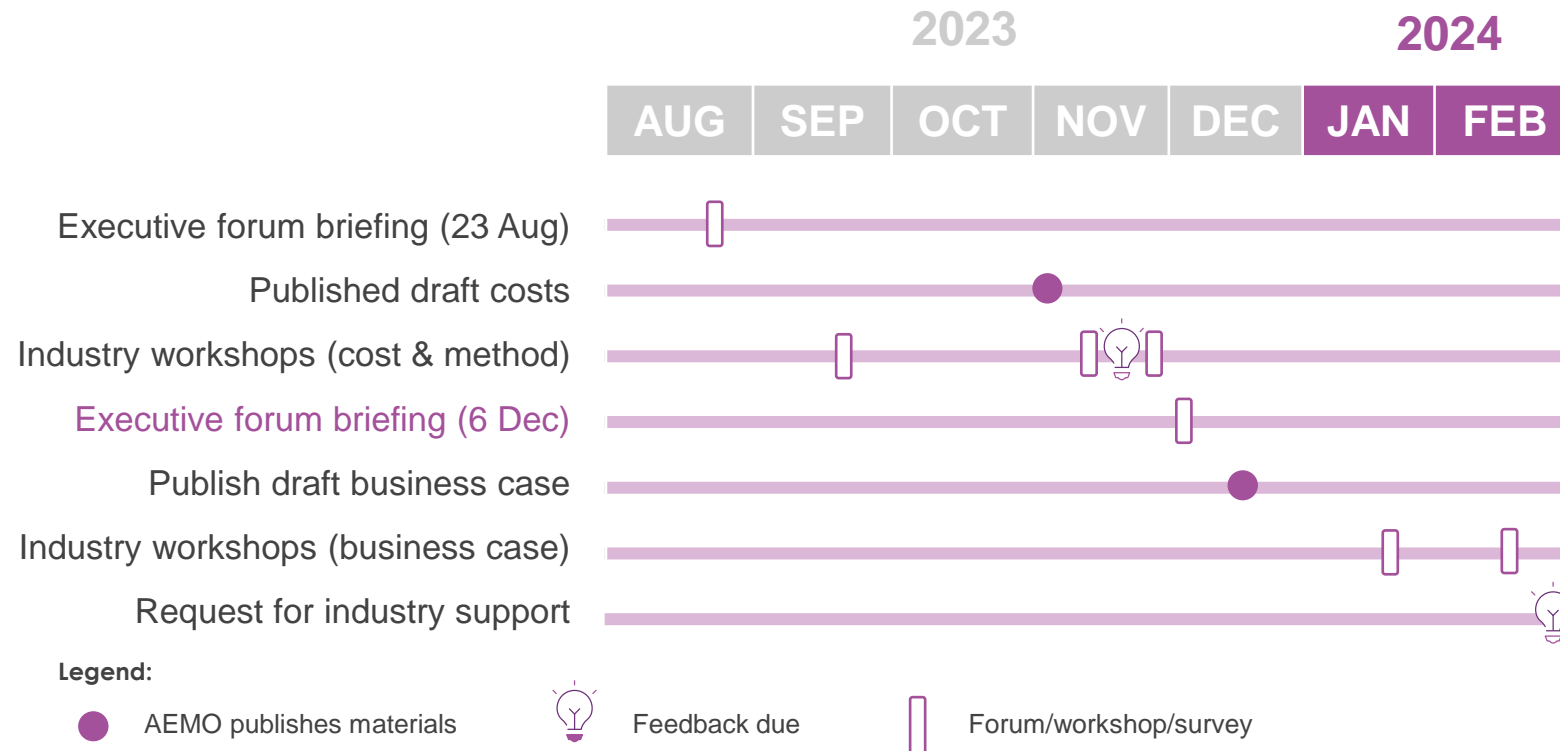


Views are welcome on the approach to business case assessment.

Intended process - business case

This process is guided by the NEM Reform investment governance framework, agreed with the RDC and published in September 2022*:

- ❖ AEMO to put forward a recommended option.
- ❖ Broad industry support will be sought following conclusion of industry workshops.
- ❖ Industry views will inform AEMO internal governance.



The expected release of the working draft of business case was changed post-meeting from 8 to 15 December to allow for additional industry cost submissions.

Timing is indicative. Additional engagement with Executive forum members to be informed by extent of industry consensus.

Next steps

- AEMO to publish draft business case 15 December and further develop it through consultation with technical and business focus groups
- RDC members to:
 - Work with your organisation to ensure the right people are involved to review the business case.
 - Consider any feedback on business case framework and process to completion.

Beyond the business case

AEMO welcomes RDC members views on the scope and approach to this review.

- IDAM, IDX and Portal Consolidation is the first set of Foundational & strategic initiatives to progress through this governance process.
- Given the significant industry wide investment in time and effort into the assessment, once business case is wrapped up, AEMO is intending to conduct a review of lessons learnt and will invite industry to comment.

Likely review points

- What has worked?
- What might we do differently?
- Aspects:
 - Time commitment
 - Resolution, clarity and quality of outputs
 - Opportunities to provide views and seek clarification

5. Prioritisation Assessment

Lance Brooks

- Addressing congestion in 2025

Recap: Prioritisation assessment

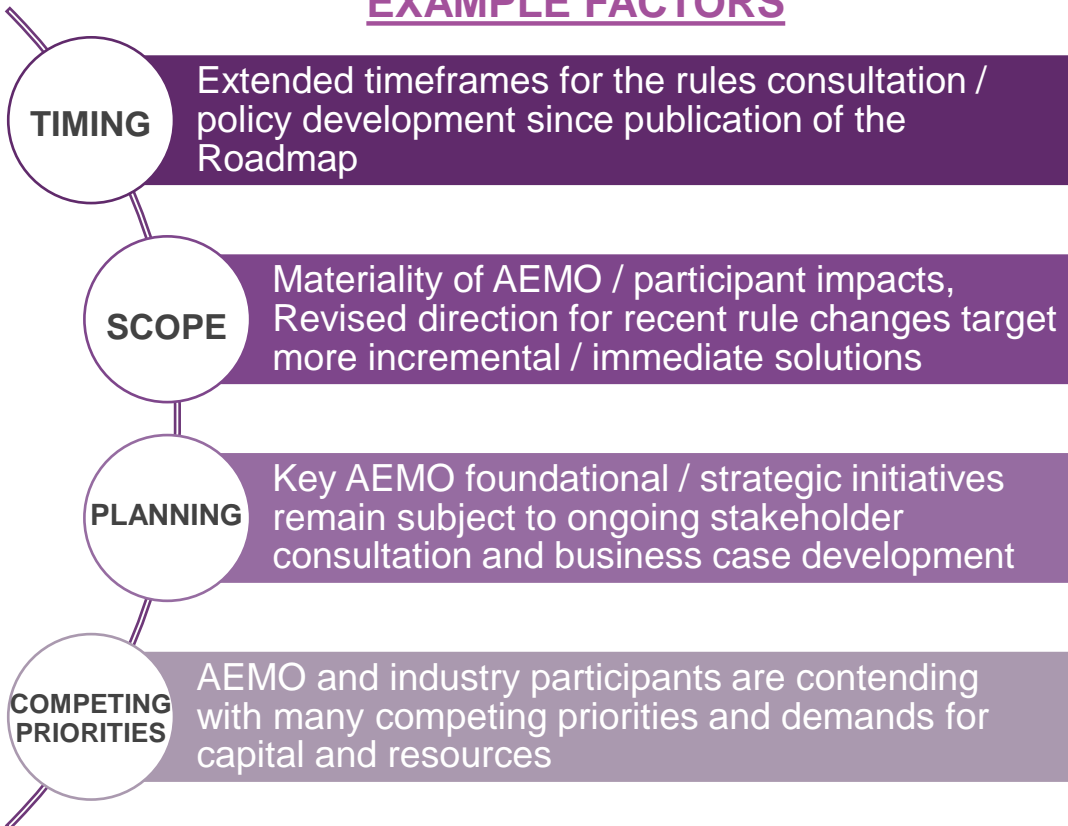
'Ask of Committee'

- In publishing v3 of the NEM Reform Implementation Roadmap the RDC:
 - recognised the continued potential for congestion in 2025 resulting from the implementation of multiple reforms; and
 - noted the uncertainty around the progress, scope, timing and cost of some initiatives currently earmarked for the 2025 timeframe
 - noted a recent trend across reform initiatives towards a more simplified scope and therefore implementation requirement
- As a result of this, it was agreed the need to navigate this potential reform congestion, along with other challenges as they arise across the full scope of the NEM Reform Program, in coordination with the relevant market bodies including the completion of key tasks:
 - ***A prioritisation and sequencing assessment of those initiatives contributing to congestion within the NEM Reform Program be completed no later than Q1 2024***
- Today's session aims to kick off this work by:



Is congestion in 2025 period real ?

EXAMPLE FACTORS



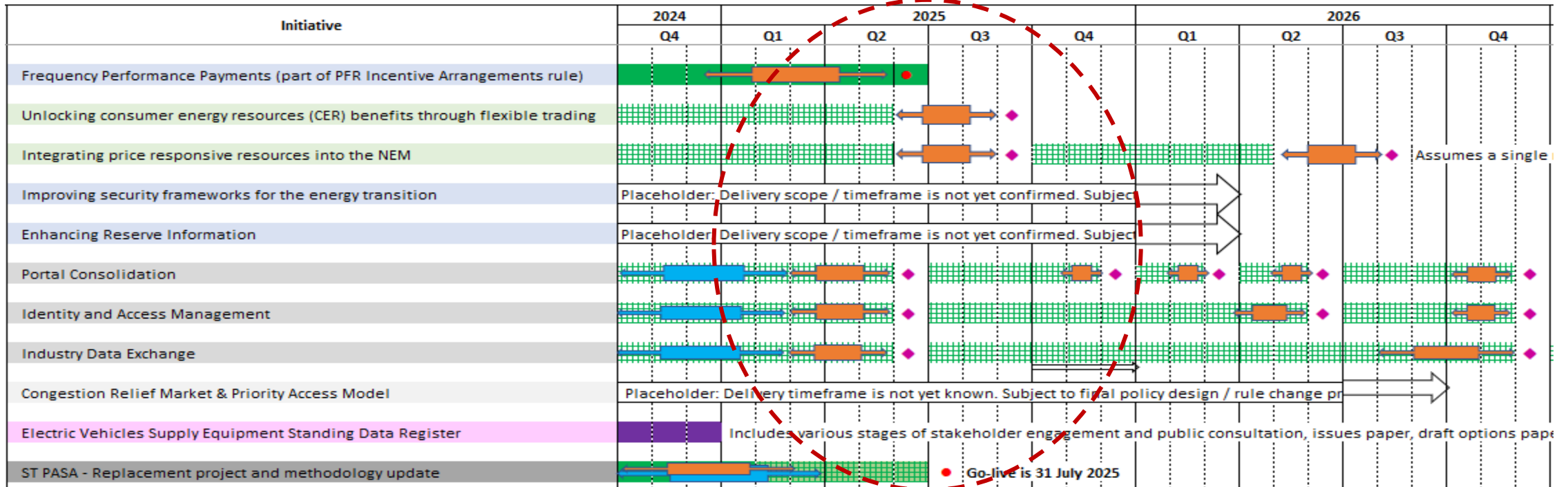
EXAMPLE INITIATIVES

- Unlocking CER benefits through flexible trading
- Integrating price response resources into the NEM
- Enhancing reserve information
- Improving security frameworks for the energy transition
- Enhancing reserve information
- Identity and access management
- Industry data exchange
- Portal consolidation
- Gas market reform
- WA market reform
- AEMO Operational Technology Roadmap

Issues of congestion are not limited to having multiple go-live dates within a year but extend to the ability to work across multiple initiatives concurrently

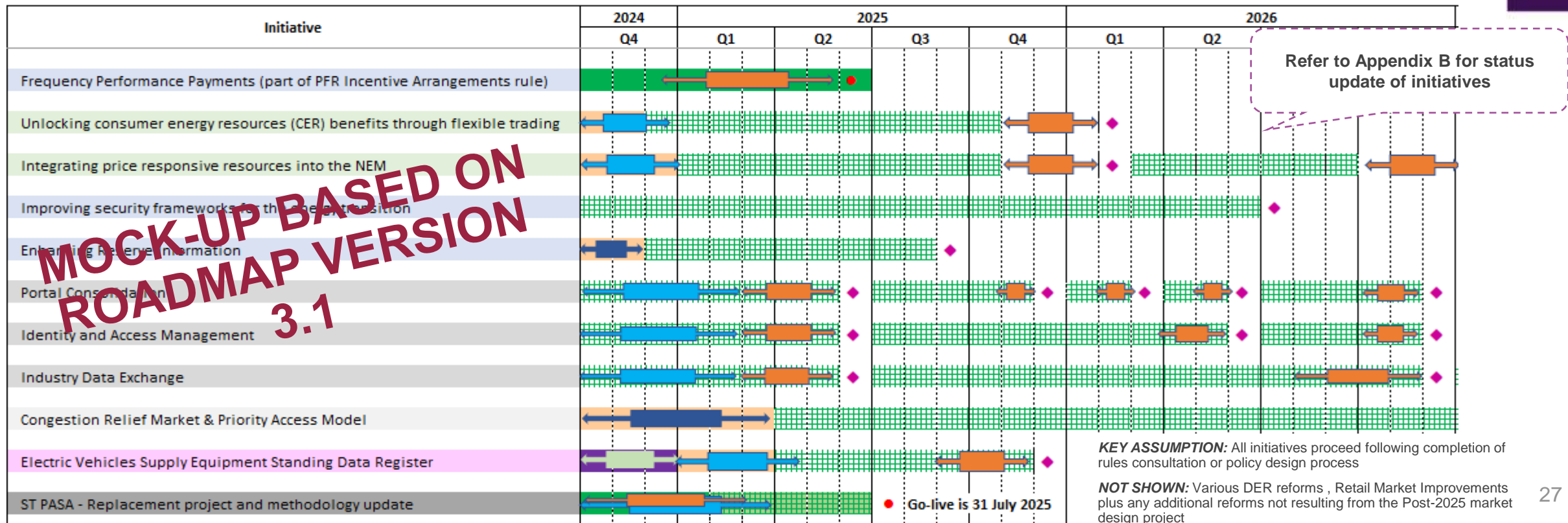
2025 on the surface remains a congested delivery year despite policy / rules delays and direction changes

- Two reform initiatives with firm go-live dates and multiple reform initiatives subject to ongoing rules consultation or policy development (e.g. Congestion Relief Market & Priority Access and DER (not shown))
- Three AEMO foundational / strategic initiatives (IDAM, IDX, PC) with future implementation subject to ongoing industry consultation and business case assessment
- Ongoing retail market improvements (e.g. Metering Service Review not shown)



Based on what we know, many of the initiatives will likely be pushed into FY26

- While issues associated with multiple initiatives going live may be alleviated in 2025 it does not resolve the issue of working on multiple initiatives concurrently
- Further, it only serves to push the issue of multiple go-live dates into 2026 (assuming all initiatives result in a final rule being made)



How material / who may be impacted by the reforms?

Preliminary assessment for discussion !

Initiative	Go-live*	AEMO Impacts	Participant Impacts	Impacted Participants****						
				G	Sch L	FRMP	TNSP	DNBP	ENM	MSP
Integrating energy storage systems	2024	High	Moderate – High	✓	✓	✓	✓	✓	✓	✓
Frequency performance payments	2025	Moderate – High	Low – Moderate	✓	✓	✓	-	-	-	-
Unlocking CER benefits through flexible trading**	2026	Low – Moderate	Low – Moderate	-	-	✓	-	-	✓	✓
Integrating price responsive resources in the NEM**	2026	High	Moderate – High	-	-	✓	-	✓	-	-
Improving security frameworks for the energy transition	2026	Moderate – High	Moderate	✓	✓	✓	✓	-	-	-
Enhancing reserve information	2025	Low	Low	✓	✓	✓	✓	-	-	-
Congestion relief market & priority access model	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
Enhance Information	2024	Low	None	-	-	-	-	-	-	-
DER Various (e.g., DOE, DLNS)	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
Data services	2024	Low	None	-	-	-	-	-	-	-
EV supply equipment standing data register	2025	Low – Moderate	Low – Moderate	-	-	-	-	✓	-	-
Retail Market Improvements (incl. MSR)	2025	Low – Moderate	Moderate – High	-	-	✓	-	✓	-	✓
Identity and access management	2025***	High	Moderate	✓	✓	✓	✓	✓	✓	✓
Industry data exchange	2025***	High	Moderate – High	✓	✓	✓	✓	✓	✓	✓
Portal consolidation	2025***	Moderate – High	Moderate	✓	✓	✓	✓	✓	✓	✓
SCADA Lite	2024	Low	Low	-	-	-	-	-	✓	-

Not all registered participant categories shown

Is this a fair representation of the likely participant impacts resulting from these reforms ?

All initiatives assumed to proceed unless noted

* Committed / indicative go-live based on final determination or current assumptions. ** Participants that opt into these rule changes (if made) *** Foundational phase (AEMO only) **** Does not reflect schema changes

Summary assessment: Extent of impacts 2025 – 2026 (preliminary only)

Only Moderate to High impact initiatives shown

	Wholesale	Retail / Metering	Networks	AEMO
Initiative Summary	<p>4 initiatives to be delivered</p> <p>2025</p> <ul style="list-style-type: none"> FPP (Low – Moderate) Enhancing reserve information (Low) <p>2026</p> <ul style="list-style-type: none"> Unlocking CER benefits through flexible trading (Low – Moderate) Improving security frameworks through energy transition (Moderate) 	<p>4 initiatives to be delivered</p> <p>2025</p> <ul style="list-style-type: none"> FPP (Low – Moderate) Retail Market Improvements incl. MSR (Moderate – High) <p>2026</p> <ul style="list-style-type: none"> Unlocking CER benefits through flexible trading (Low – Moderate) Integrating price responsive resources into the NEM (Moderate – High) 	<p>4 initiatives to be delivered by Tx and Dx respectively</p> <p>2025</p> <ul style="list-style-type: none"> EVSE Standing Data Register (Low) Retail Market Improvements incl. MSR (Moderate – High) <p>2026</p> <ul style="list-style-type: none"> Unlocking CER benefits through flexible trading (Low – Moderate) Integrating price responsive resources into the NEM (Moderate – High) 	<p>10 initiatives to be delivered (incl. foundational and strategic)</p> <p>2025</p> <ul style="list-style-type: none"> FPP (Moderate – High) IDAM / IDX and PC (Moderate – High) <p>2026</p> <ul style="list-style-type: none"> Improving security frameworks through energy transition (Moderate – High) Integrating price responsive resources into the NEM (High)
Comment	<p>If CRM & PA proceeds, then congestion issue would likely be real and a major initiative for wholesale participants to deliver. A prioritisation exercise would therefore likely be required.</p>	<p>Ongoing planning in relation to delivery of MSR reforms to be considered in assessment with significant workload anticipated for participants</p>	<p>Potential impacts are subject to further policy outcomes from ongoing DER initiatives / recommendations noting this could increase the scope to be delivered over this period. A prioritisation exercise may be required</p>	<p>Significant work program to be managed, with impacts across various teams and systems (e.g., wholesale and retail). If CRM & PA proceeds, then congestion issue would likely be real and a major initiative for AEMO to deliver. A prioritisation exercise would therefore likely be required</p>
<p>Assessment excludes consideration of AEMO F&S initiatives with initial foundational work to be completed by AEMO ahead of first go-live date</p>				

Initial assessment of the extent of impacts indicates

- **2025 and 2026 will be busy and challenging for all**, with several reform initiatives to be delivered
- For **AEMO**, this is potentially **heightened as we look to deliver foundational phases** for our Foundational & Strategic (F&S) initiatives
- **However**, when considering the extent of the reform impacts to individual sectors the reforms provide:
 - for **equal split of initiatives** to be implemented (albeit with varying impacts across individual initiatives)
 - only **one committed go-live** impacting wholesale and retail participants with many still subject to policy / rule consultation outcomes
 - potential **simplified scope** for implementation (e.g. Enhanced Information)
 - opportunities to explore **phased implementation** (e.g. Metering Services Review)
- Key assumptions:
 - If **CRM & PA proceeds**, then a congestion issue would be real, with this a major initiative for wholesale participants and AEMO to deliver
 - Similarly, depending on the potential policy outcomes from ongoing **DER initiatives** / ESB recommendations additional reforms to be delivered will impact individual sectors differently
- A prioritisation assessment would therefore likely be required **if either of these scenarios eventuate**

Based on this assessment AEMO does not consider a reprioritisation assessment essential at this time. Instead, we should reassess to ensure delivery is optimised by explicitly looking at opportunities to bundling and sequencing initiatives

Do RDC members agree this is a fair representation given what is known ?

Do RDC members agree with this conclusion ?

Are we working on the right initiatives to ensure efficient delivery of the Program?

- The Roadmap (and Program) assumes **all initiatives will proceed at some time in the future** – e.g., a final rule is made, and therefore does not seek to debate the merits of rules or policy decisions
- **Are there strategies we should leveraging to improve delivery / reduce risks ?**
- Each of the following strategies come with known trade-offs and may not be advantageous to the current grouping of initiatives across 2025 - 2026 period

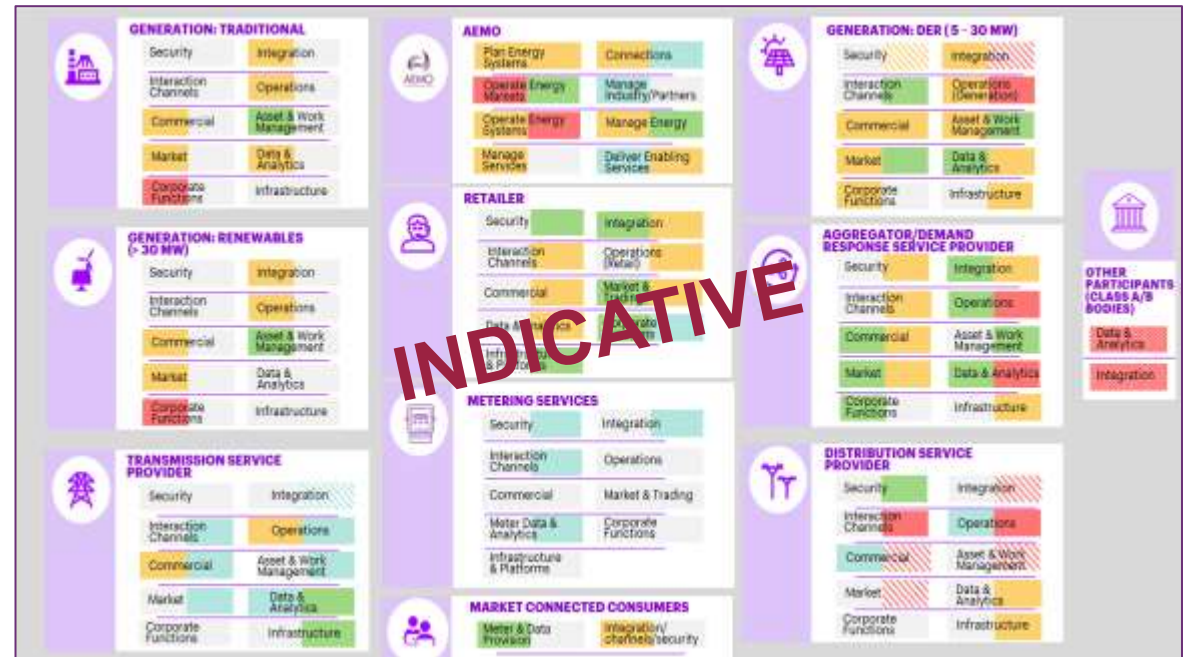
Strategies	Example Pros	Example Cons
Bundling	Able to drive efficiencies throughout various stages of implementation e.g., solution delivery, procedural development / consultation	Potential risks to overall implementation e.g., delays in one initiative result in delays across all bundled initiatives
Sequencing (incl. phasing)	Structured approach with ability to optimise implementation accounting for key dependencies / relationships, improved allocation of resources	Potential deferred benefits / increased costs associated with implementation of the Program, potential reduced flexibility throughout implementation
Scope	Simplified scope can minimise delivery risks and costs of implementation and allow for improved resource allocation	Oversimplification does not align with original initiative objectives, Potential spillover effects and scope creep to other initiatives
Prioritisation	Focus on implementation of initiatives with relatively higher value / lower cost and complexity, improved allocation of resources	There may not be consensus on which initiatives are prioritised across stakeholders, Unlikely initiatives will have the same cost / complexity impact for all stakeholders

Are there other strategies to consider?

Proposed next steps

- **AEMO / RDC members** to revisit:
 - Industry impacts for each of the NEM Reform initiatives to determine process and technology changes required (heat maps)
 - Participant Impact Assessments
 - Bundle assessment to ensure key efficiencies are captured and actioned
 - Sequence assessment to ensure we are working on the right initiatives to progress the energy transition and driving efficiencies in delivery
- AEMO to present draft assessment for RDC consideration at **February 2024** meeting

EXAMPLE HEATMAP



AEMO propose this exercise become an annual process providing for a holistic review of the NEM Reform Program

6. Holistic DER Review

Nicole Dodd

- Realigning DER within the Roadmap

Recap: DER Initiatives Update

NEM Reform Implementation Roadmap

- Dynamic Operating Envelopes
- DER Data Hub and Registry Services
- DER Operational Tools
- Distribution Local Network Services

Jurisdictional Schemes / Initiatives

- VIC – Emergency Backstop Mechanisms for Rooftop Solar
- SA – Distributed Energy Transition Roadmap (2020-25)
- Others?

ESB CER and Data End-of Program Report

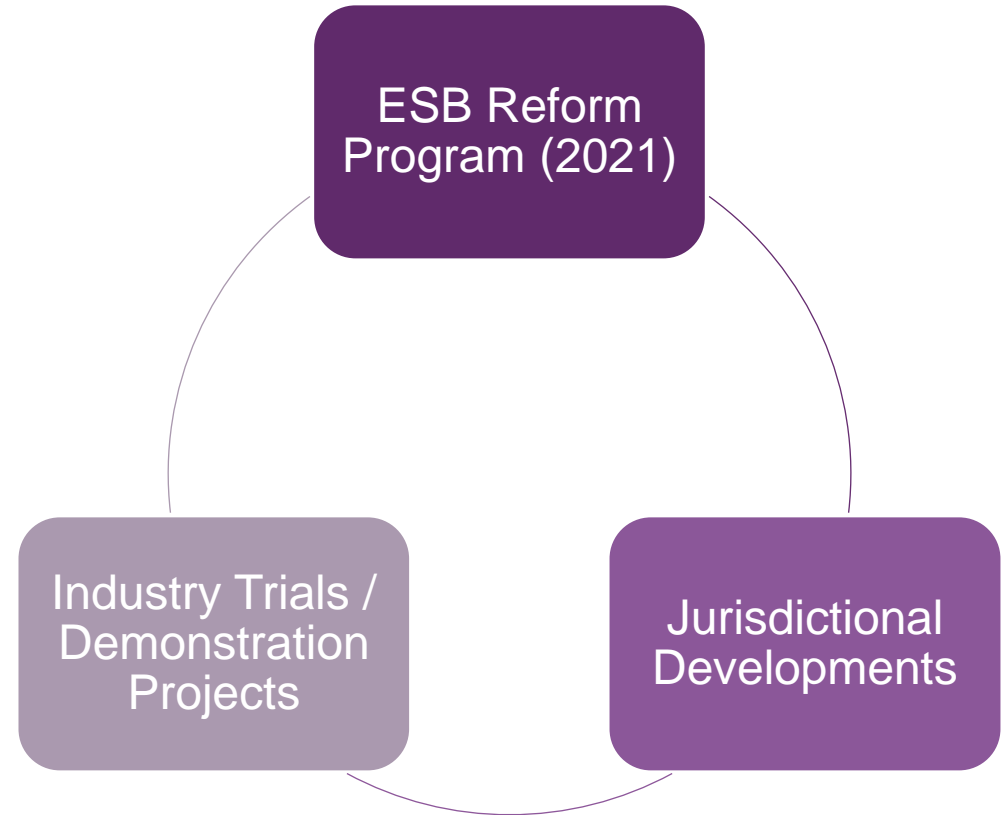
The ESB’s CER and Data End of Program Report is intended to show the components of the CER work program and how they fit together.¹ This will also help inform a forward workplan

Proposal: A holistic review of the DER initiatives (national and jurisdictional specific) to be completed to assess the opportunities, impacts or challenges for Industry Participants and how they may be accounted for in the Roadmap / Program

Mapping DER initiatives

- Further to the work of the ESB and the market bodies seeking improved integration of DER and flexible demand in the market several additional industry trials, demonstration projects and jurisdictional policy developments have been in operation or announced over the past 18 months
- For jurisdictions, such policy developments seek to incentivise DER uptake, and address key issues associated with electrification and a transitioning economy
- For industry, trials and demonstration programs aim to test new capabilities, address known, and unknown issues associated with the integration of DER into today's systems and markets, including the development of new products and services

Included in the NEM Reform Implementation Roadmap



How should linkages between the ESB Reform Program, industry trials / demonstrations and jurisdictional developments be reflected in the Roadmap ?

Mapping DER initiatives

Non-exhaustive list of all trials, projects or developments

Industry Trials / Demonstration Projects

- Project Edge (Vic)
- Project Symphony (WA)
- Project Edith (NSW)
- Project Converge (ACT)
- Simply Energy VPP (SA)
- Evolve DER Project (NSW, ACT, Qld)
- Indra Monash Smart City (VIC)
- Realising Electric Vehicle-to-Grid Services (ACT)

ESB Reform Program

- Unlocking CER benefits through flexible trading
- Integrating Price Response Resources into the NEM
- DER Data Hub & Registry Services
- Dynamic Operating Envelopes
- Distribution Local Network Services
- DER Operational Tools
- EVSE Standing Data Register

Jurisdictional Developments

- Cth:** Driving the Nation, Supporting demand flexibility in the energy transition, Valuing Load Flexibility in the NEM
- Qld:** Enabling Dynamic Customer Connections for DER, QEJP, Backstop Mechanism
- NSW:** EV Strategy, Solar for low-income households
- Vic:** Energy Compare, Backstop Mechanism
- SA:** Dynamic Export Limits Requirements, Backstop Mechanism
- TAS:** ChargeSmart Grants

Energy and Climate Change Ministerial Council Meeting – 24 November

Develop a National Consumer Energy Resources (CER) Roadmap – Powering Decarbonised Homes and Communities

Consideration to implementing a national approach to technical regulatory settings for CER in 2024

Establishment of an expert taskforce to deliver priorities under the CER Roadmap

New Minimum Operating Standards for Government-Funded Electric Vehicle Charging Infrastructure

Roadmap Options

- **ESB initiatives that are in the rule change process** can be expected to proceed, although timelines not yet certain
 - These should be maintained on the Roadmap and monitored as they are currently
 - No further action required and Informed Go-Live Data processes to be undertaken at the appropriate point
- **ESB initiatives that are not in the rule change process** these are likely to be reviewed by the CER Taskforce and defined/prioritised accordingly
 - These should be maintained on the Roadmap for completeness and aligned to the timing of the CER Roadmap
- **For the CER Roadmap and future taskforce recommendations** these should be monitored and included in the Roadmap as and when appropriate

- **For Jurisdictional Developments consideration be given** as to whether a **co-ordinated approach** to support delivering solutions is necessary
 - Does it require IT development and is this across multi-participants and benefit from a coordinated approach ?
 - Or should the solution for the jurisdictional initiative be undertaken on a case-by-case basis, and broadening this to a co-ordinated approach offers no industry-wide value

- **For the Industry Trials / Demonstration Projects, these should continue to be monitored**
 - No further action / inclusion on the Roadmap

Do RDC members agree with this conclusion and next steps ?

Based on this assessment AEMO propose:

- Updates to ESB initiatives on the Roadmap as part of the next major release (April 2024)
- AEMO / RDC members complete a broader review of the jurisdictional developments to assess whether co-ordinated approach to support delivering is required ahead of Feb 2024 meeting

7. Stage gate update

Lance Brooks
• For Noting

Stage Gate – Updates

Pathway ¹	Initiatives	Q3 2022 (Completed)	Q3 2023 (TBC)	Q1 2024 (TBC)	Q3 2024 (TBC)	Q1 2025 (TBC)	Update
RAMS	Increased MT PASA information	✓					No update – Included in Tranche 1
	Capacity Incentive Scheme						No update – Candidate for Q3 2023 subject to final policy design and auction process (unlikely to be required)
ESS	Fast Frequency Response	✓					No update – Included in Tranche 1
	Frequency Performance Payments	✓					No update – Included in Tranche 1
	Improving security frameworks for the energy transition	✓ (Prototyping Only)		✓			No update – Candidate for Q1 2024 subject to scope and timing of AEMC final rule determination
	Enhancing Reserve Information				✓		Candidate for Q3 2024 subject to subject to scope and timing of AEMC final rule determination (previously Q1 2024)
TA ²	Enhanced Information						To be delivered as part of AEMO BAU activities
	Congestion Relief Market & Priority Access Model		To be determined subject to policy / rules development				

¹ RAMS: Resource Adequacy Mechanisms, ESS: Essential System Services, TA: Transmission & Access reform, DER & FD: Integrating DER and Flexible Demand, DS: Data Strategy, AEMO F: AEMO Foundational, AEMO S: AEMO Strategic.

² Anticipated TA reforms will be implemented by 2027, on the condition policy / rules development is finalised in 2023

Stage Gate – Updates (continued)

Pathway ¹	Initiatives	Q3 2022 (Completed)	Q3 2023 (TBC)	Q1 2024 (TBC)	Q3 2024 (TBC)	Q1 2025 (TBC)	Update
DER & FD	Integrating Energy Storage Systems	✓					No update – Included in Tranche 1
	Unlocking CER benefits through flexible trading (formerly FTA m2)				✓		No update – Candidate for Q3 2024 subject to outcome and timing of AEMC rule consultation
	Integrating price responsive resources in the NEM (formerly Scheduled Lite)				✓		No update – Candidate for Q3 2024 subject to outcome and timing of AEMC rule consultation
	Dynamic Operating Envelopes	To be determined subject to policy / rules development					No update – Ongoing policy / rules development
	Distribution Local Network Services	To be determined subject to policy / rules development					No update – Ongoing policy / rules development
	DER Data Hub & Registry Services			✓			No update – Candidate for Q1 2024 subject to progression of IDAM and IDX
	DER Operational Tools	To be determined subject to policy / rules development					No update – Ongoing policy / rules development
DS	Data Services		✓				No update – Candidate for Q3 2023 subject to policy finalisation and rules development
	EV Supply Equipment Standing Data Register				✓		No update – Candidate for Q3 2024 subject to policy finalisation and rules development

Stage Gate – Updates (continued)

Pathway ¹	Initiatives	Q3 2022 (Completed)	Q3 2023 (TBC)	Q1 2024 (TBC)	Q3 2024 (TBC)	Q1 2025 (TBC)	Update
DS (cont'd)	Bill Transparency	To be determined subject to policy / rules development					No update – ongoing policy / rules development
	Network Visibility	To be determined subject to policy / rules development					No update – ongoing policy / rules development
AEMO F	Identity and Access Management			✓			No update – Candidate for Q1 2024 subject to business case development and industry consultation
	Industry Data Exchange			✓			No update – Candidate for Q1 2024 subject to business case development and industry consultation
	SCADA Lite		✓				No update – Candidate for Q3 2023 subject to established work plans
AEMO S	Portal Consolidation			✓			No update – Candidate for Q1 2024 subject to business case development and industry consultation
	Consolidated Master Data Repository	To be determined subject to AEMO Future State Architecture assessment					No update – Subject to AEMO FSA assessment
	FRC Target State	To be determined subject to AEMO Future State Architecture assessment					No update – Subject to AEMO FSA assessment
	Dispatch, Bids & Offers and Constraint Target States	✓ (Tactical uplift only)					Tactical Uplift included in Tranche 1

8. Executive Forum

Monica Morona

- For Noting

Executive Forum

AEMO has established a NEM Reform Executive Forum

The forum brings together Executive level organisational representatives from across industry to address key challenges associated with delivery of the NEM Reform Program. This includes how we mobilise as an industry to deliver the Program effectively and efficiently.

The first Executive Forum was held on 23 August.

Key outcomes:

- Interest in continuous improvements to reform process as a means to minimise costs, including approach to ‘Informed Go-Live’.
- Collaboration and dialogue was welcomed by execs. Forum to occur three-four times per year going forward.

The next Executive Forum is on **6 December 2023, 11.00am – 12.30pm**

Preparations are underway:

- The session will build upon the foundations we laid in the last forum, including:
 - A retrospective and forward view incl key industry-wide challenges
 - Outline key elements of the business case and process to completion for the NEM Reform Foundational & Strategic Initiatives
 - Review AEMO’s program costs and status against budget
- We are in the process of finalising the specific agenda for our December session. Formal invitations have been issued, with agenda and meeting material to follow in due course.

RDC members to note:

- Executives interested in attending the NEM Reform program Executive forum can submit their nominations to NEMReform@aemo.com.au
- Meeting papers will be circulated to RDC members to allow briefing of execs in advance of the forum

9. Other business

Peter Carruthers
• For Discussion

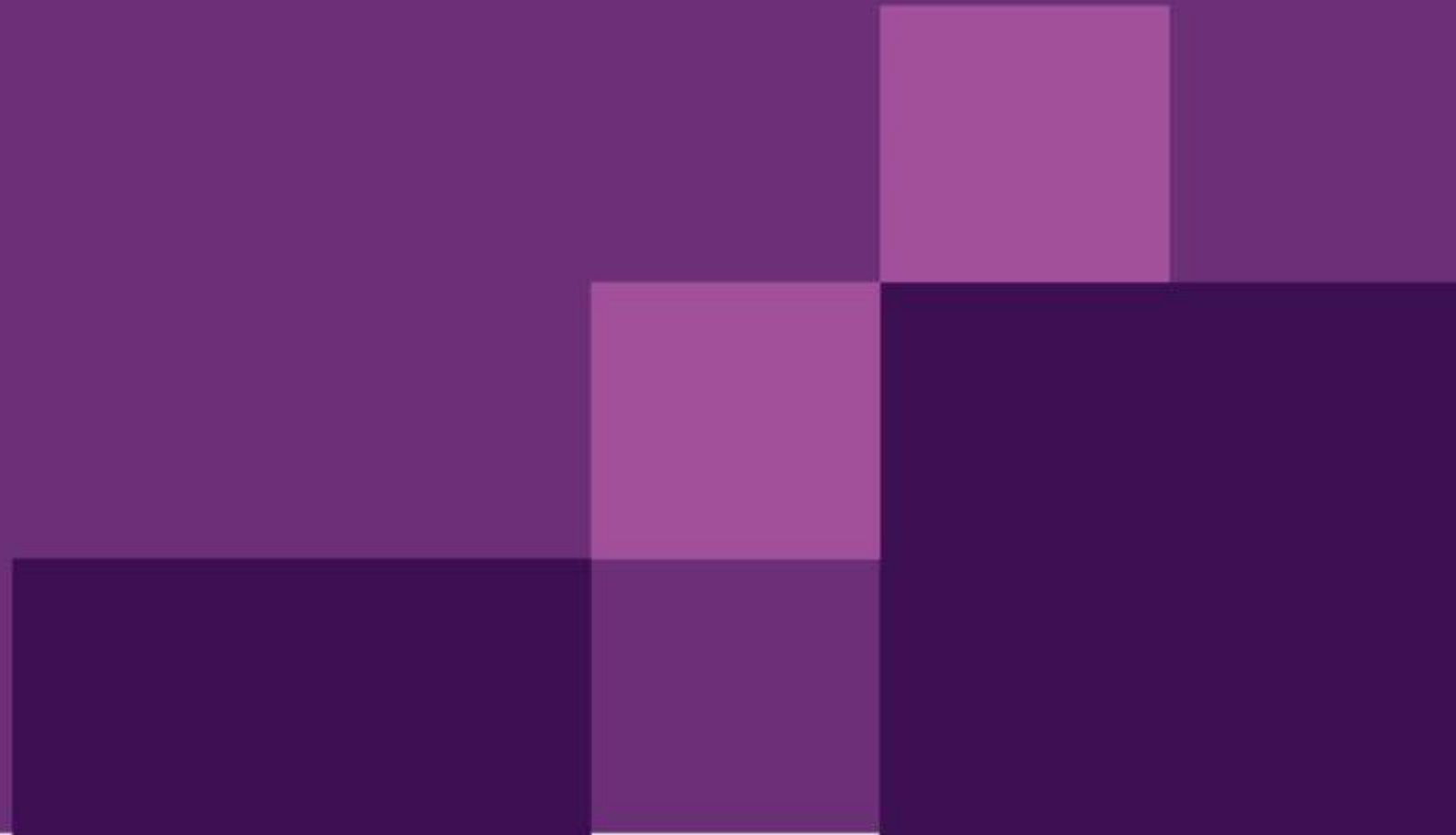
Informed Go-Live



Discussion



NEM Reform Program Review



2023 has been an intensive, but successful year

- Collectively, we have successfully deployed a large volume of reforms with the November 2023 release marking our final release for this calendar year
- While we as an industry should be proud of the successful deployment of those initiatives they have not been without their challenges
- Building on established engagement structures, **the program has evolved to deliver integrated planning for participants and prioritise participant facilitation** to support participants with the necessary information and artefacts that underpin their own readiness preparations (see next slide)
- For example:
 - AEMO to provide early, whenever possible High-Level Implementation Design for participant consideration
 - A better understanding and factoring in of participant development timelines and support requirements can enable AEMO to better mitigate delivery risks and reduce overall implementation stress (Informed by participant impact assessments)

Release	Initiatives	Status
Mar-23	Integrating Energy Storage Systems (Initial release)	Delivered
	Stand Alone Power Systems (SAPS) Market Stand-Alone Power System Resource Provider (MSRP) Registration	Delivered
MAY-23	CDR (excluding LCCD)	Delivered
	B2B v3.8 and other ICFs	Delivered
JUN-23	SAPS	Delivered
AUG-23	Integrating Energy Storage Systems (ADC)	Delivered
	Fast Frequency Response - Dispatch & Reg	Delivered
OCT-23	Fast Frequency Response	Delivered
	5 Minute load profile	Delivered
	Increased MT PASA Information	Delivered
NOV-23	CDR (LCCD), CDR Ph3, MSDR compliance Holiday	Delivered

Going beyond engagement

Establishing engagement

Establish information channels

Media Releases, Newsroom articles, Newsletters, Website, Mailbox, infographics, Fact sheets & Tailored materials.

Establish consultation channels

Industry briefing & information sessions, Consultative forums, One 2 One meetings, Surveys

Stakeholder involvement

Establishing working groups and focus groups, to ensure stakeholder perspectives are understood and provide feedback on the outcome of stakeholder contributions.

Establish collaborative channels

(via EWCF, ERCF, PCF and Implementation Forum to facilitate and support industry readiness)

Planning uplift

NEM Reform Implementation Roadmap

(Visibility of implementation roadmap, long-term planning, bundling, sequencing and prioritizing of initiatives)

Reform Delivery Committee (RDC)

(Leveraging industry insight to maintain the Implementation Roadmap)

NEM Reform Program Governance

(manage implementation impacts of policy/rules changes, stage gate, investment commitment)

Informed Go-Live Date Process

(High-level implementation design and participant impacts to assist in setting an informed go-live date for the Rule)

Participant delivery facilitation

Participant Impact Assessments & Development Timelines / Requirements
(identify impacts to participants and the timeline needed for their development)

Participant technical information
(Provide participants with tech spec and interface information, testing support and environments, etc)

Participant self service
(Self-serve videos outlining implementation design, timing and participant impact assessment)

Industry readiness

Industry readiness requirements
(Establish L1/L2 milestones, Readiness criteria, Readiness monitoring and reporting, Contingency Plans)

Industry Test, Transition & Go-Live
(Plan and facilitate industry testing and market trial, define industry transition plans, define/manage industry-wide go-live)

Upcoming: NEM Reform Program Review

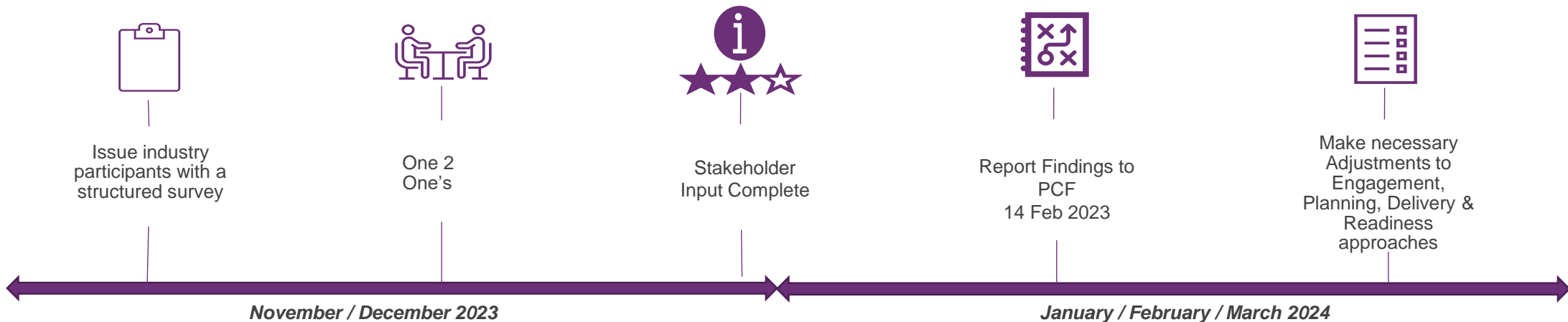
As always, please reach out to the team should you wish to provide 1:1 feedback
NEMReform@aemo.com.au

- With 2023 wrapping up, this presents us with an opportunity to reflect on our delivery process and look for opportunities to improve the process for our 2024 delivery schedule
- AEMO intend to undertake a review of our 2023 program processes to help inform 2024 delivery processes
- The review will leverage industry insights, and include, but not be limited to, a review of our engagement, planning, delivery and readiness process

KEY CONSIDERATIONS

- Is the current program engagement meeting its objectives?
- Is this engagement framework supporting the implementation needs of market participants?
- What else can AEMO do to support *participant delivery facilitation* objective?

INDICATIVE PROCESS





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.
- To access the full protocol at AEMO's website, visit: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups>

Appendix B

Status: Reform and Foundational & Strategic Initiatives

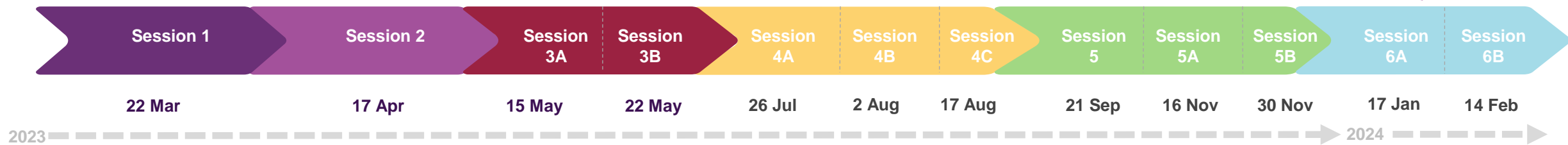
Status: Reform Initiatives

Initiative	Status	Notes / Assumptions
Integrated Energy Storage Systems	Committed solution delivery. Confirmed go-live Jun 24	No action proposed, proceed as planned
Frequency Performance Payments	Committed solution delivery. Confirmed go-live Jun 25	As above
ST PASA Replacement	Committed solution delivery. Confirmed go-live Jul 25	As above
Unlocking CER benefits through flexible trading	Rules consultation: DD now anticipated Feb 2024 (prev. Dec 2023)	FD assumed mid CAL24 will push implementation out to FY26. No changes in assumed scope at this time
Integrating Price Response Resources into the NEM	Rules consultation: DD now anticipated Feb 2024 (prev. Dec 2023)	As above.
Improving Security Frameworks for the Energy Transition	Rules consultation: FD anticipated Mar 2024 (prev. Dec 2023)	Revised direction of reform modifies or removes some operational elements of the implementation task, while more emphasis falls on elements that apply over longer timeframes. While revised approach constitutes a smaller systems implementation task further assessment is required to understand time and effort to implement. Implementation unlikely in CAL25
Enhancing Reserve Information	Rules consultation: DD anticipated Dec 2023 (prev. Oct 2023)	Uncertain scope and timing for implementation (subject to scope and FD in FY24). Anticipated changes focus on information transparency leveraging pre-existing channels
Congestion Relief Market & Priority Access	Policy development: ESOM meeting Nov 2023 to provide further guidance on initiative anticipated at this time.	Significant scope of work if approved, Rules development to continue into mid 2024
EV Supply Equipment Standing Data Register	AEMO currently drafting RCR as per ESB final recommendations	Anticipated RCR submission late CAL 23, Assumed rules consultation completed throughout 2024
Metering Services Review	AEMC final review report delivered. Rule change request (Accelerating smart meter deployment) submitted. Rule Change: pending. Industry/AEMO working group established to prepare for 2025 onwards	Assumes market systems updated to support commencement of accelerated rollout from mid 2025
DER: Various	ESB End of Program Report delivered to Ministers Nov 23 further guidance on policy initiatives anticipated at this time	Updates potential required to key priority areas to reflect ESB report, as well as capture existing jurisdictional initiatives

Status: Strategic & Foundational Initiatives

Initiative	Status	Notes / Assumptions
SCADA Lite	AEMO planning complete, awaiting internal funding approval	Assumed implementation Mar 24, pre-requisite to Integrating Price Response Resources into the NEM
Identity and Access Management	Ongoing industry consultation and business case development	Current assumptions provide for implementation in phases / tranches with foundational elements delivered in FY25
Industry Data Exchange		
Portal Consolidation		

Timing is indicative. Additional engagement with Executive forum members depending on extent of consensus.



Session	Introduction	Discovery	Target State	Transition Strategy	Cost & Method	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"> Industry and AEMO costs Assumptions, options and methodology 	<ul style="list-style-type: none"> Walkthrough of draft business case Assessment and completion

Appendix C

DER Industry Trials & Jurisdictional Developments
(Summary)

Industry trials / demonstration projects (1/2)

Industry trial	Description
Project EDGE (Vic)	<ul style="list-style-type: none"> • Project EDGE (Energy Demand and Generation Exchange) is a multi-year project to demonstrate an off-market, proof-of-concept DER Marketplace that efficiently operates DER to provide both wholesale and local network services within the constraints of the distribution network • Project EDGE is a supporting program for DOEs, DER Data Hub and Registry Services as well as Local Network Services • EDGE commenced in November 2020 with Final Knowledge Sharing Report released in October 2023 • ARENA backed project in collaboration with AEMO, AusNet Services (DSO role) and Mondo.
Project Symphony (WA)	<ul style="list-style-type: none"> • Project Symphony WA's largest DER orchestration pilot, where DERs such as rooftop solar, batteries, and other major appliances, like air conditioning and pool pumps, will be orchestrated as a VPP to participate in a future energy market • Project Symphony is a collaboration between AEMO, Western Power and Synergy. Western Power as the DSO, Synergy as the Aggregator, and as the established Market and System Operator in the SWIS and WEM, AEMO is taking on the role of the Distributed Market Operator (DMO) • AEMO undertakes a central role in Symphony in simulating the WEM and providing dispatch instructions to the aggregator to provide WEM services • The project also used DOEs to manage local network constraints
Project Edith (NSW)	<ul style="list-style-type: none"> • Project Edith is an initiative that aims to showcase how the grid can facilitate technology and green energy solutions (like VPPs) to participate in energy markets while staying within distribution network capacity limits. • The project is exploring the use of tools DOEs and Dynamic Network Prices (DNPs) • Project Edith is a collaboration between Ausgrid and Reposit Power
Project Converge (ACT)	<ul style="list-style-type: none"> • The Project Converge ACT's DER Demonstration Pilot aims to demonstrate new DER orchestration capabilities known as 'Shaped Operating Envelopes' (SOEs) which will allow DNSPs to improve network congestion management, minimise network expenditure and improve DER market bidding into energy and ancillary service markets • SOEs are a form of DOE that refines the concept to factor in aggregator/customer preferences and network support, with the goal of improved network utilisation and market access for DER • The project is also using DOEs to manage local network constraints • ARENA backed project led by Evoenergy in collaboration with ANU, Zepben and the ACT Government

Industry trials / demonstration projects (2/2)

Industry trial	Description
Simply Energy VPP (SA)	<ul style="list-style-type: none"> • The Simply VPP project will deliver up to 1200 Tesla Powerwall 2 batteries to Adelaide households • The VPP is an ARENA backed three-year trial and is expected to be up and running by the end of 2019 • The project will SAPN greater visibility of behind the meter battery storage and access to those batteries as DER that can be used to address local network constraints and manage demand
Evolve DER Project (NSW, ACT, Qld)	<ul style="list-style-type: none"> • The Evolve DER project aims to increase the network hosting capacity of DER by maximising their participation in energy, ancillary and network service markets, while ensuring the secure technical limits of the electricity networks are not breached • By using new sensors and powerful software capabilities developed through the evolve project, we will be able to see how the electricity system is behaving in real time • The project will implement systems and capabilities that calculate and publish (via a software API) the operating envelopes for individual and aggregate DER in the distribution network • ARENA backed research project led by Zeppelin Bend
Indra Monash Smart City (VIC)	<ul style="list-style-type: none"> • The ARENA backed, Indra Monash Smart City will demonstrate how smart and renewable technologies can be integrated at the Monash University Clayton embedded network to maintain power quality and test market driven responses and business models • Indra's Active Grid Management (InGRID AGM) platform will provide real-time monitoring and control over the grid-connected assets, and be optimised to add value to customers, market participants and the electricity grid • InGRID AGM platform will control DER, of a minimum of 1 MW of solar panels, 20 buildings, electric vehicle charging stations and 1 MWh of energy storage • Unlike other embedded network projects relying on centralised control from one single industrial equipment manufacturer, the Indra Monash Smart City will demonstrate the interoperability among different manufacturers and technologies to unlock opportunities for scalable smart grids with participants and providers
Realising Electric Vehicle-to-Grid Services (ACT)	<ul style="list-style-type: none"> • The Realising Electric Vehicle-to-Grid Services project seeks to unlock the full economic and grid benefits of vehicle-to-grid (V2G) services in Australia • Newly available EVs that support V2G functionalities (i.e. communicate with the electricity grid) create opportunities for EVs to enhance grid resilience and energy reliability and security • The project will install 51 bi-directional chargers and deploy a fleet of 51 V2G capable vehicles in the ACT. A system will monitor charger and vehicle availability, as well as a range of electrical parameters, which will enable the delivery of market contingency FCAS at a fleet scale.

Jurisdictional developments (1/4)

Industry trial	Description
Commonwealth	
Driving the Nation Program	<ul style="list-style-type: none"> • ARENA backed program which provides funding to demonstration and deployment projects accelerating the uptake of Zero Emission Vehicles (ZEVs). ZEVs include Battery Electric Vehicles (BEVs), Hydrogen Fuel Cell Vehicles and biofuel vehicles • This program commenced in 2022 and is ongoing • In 2022, \$127.9 million was allocated towards accelerated uptake of ZEVs by business fleets. In 2023 \$70 million allocated towards innovation in public charging and management of charging
Supporting demand flexibility in the energy transition	<ul style="list-style-type: none"> • Energy Consumers Australia (ECA) is investigating how our energy system can better support demand side flexibility, looking at how consumers can be supported to reduce, shift, or increase their energy use at, or for, specific times • Study commenced in 2023 and is ongoing • The ECA's KPMG report identifies a variety of policies implemented across the jurisdictions and also international examples on demand side flexibility
Valuing Load Flexibility in the NEM	<ul style="list-style-type: none"> • ARENA commissioned NERA Economic Consulting and Energy Synapse to model the potential value of flexible demand in the electricity transition • The report was released in April 2022. A Study Reference Group was formed to guide the study's implementation, consisting of ARENA, AEMC, AEMO, AER and the ESB • The study provides important information about how increased demand-side participation across major sectors of the Australian economy can contribute to the energy transition , the contribution from different sources of demand-side flexibility and the potential savings that could be achieved by enabling greater load flexibility

Jurisdictional developments (2/4)

Industry trial	Description
Queensland	
Enabling Dynamic Customer Connections for DER	<ul style="list-style-type: none"> • Ergon Energy Network and Energex have been working closely with the industry to move from connecting passive DER with very limited ‘smarts’, to enabling a future where the dynamic connection of DER is the norm. • Late 2020, Energex and Ergon Network engaged with industry on their plans to introduce dynamic connection offers for customers to support continuing uptake of solar, and other technologies such as batteries and electric vehicles. Consultation closed early 2021. • The first version of the new Dynamic Customer Standards have been released
Queensland Energy and Jobs Plan (QEJP)	<ul style="list-style-type: none"> • The Queensland Energy and Jobs Plan, launched in September 2022, outlines how Queensland’s energy system will transform to deliver clean, reliable and affordable energy to provide power for generations • The QEJP includes (but not limited to) <ul style="list-style-type: none"> ○ \$285 million to start building the SuperGrid and Powerlink to invest \$365 million for Central Qld Grid Reinforcement ○ \$2.5 billion boost to the Queensland Renewable Energy and Hydrogen Jobs Fund ○ Over \$270 million to progress two world-class Pumped Hydros ○ \$42 million for integrating electric vehicles
Emergency backstop mechanism	<ul style="list-style-type: none"> • From 6 February 2023 all new and some replacement inverter energy systems (like rooftop solar PV), with aggregated capacity of 10 kVA and above are required to be fitted with a generation signalling device (GSD). <ul style="list-style-type: none"> • Some exclusions apply to the requirement – including inverter energy systems where the inverter is solely supplied by a battery • The signal is sent to the GSD from Ergon Energy Network and Energex’s powerline signalling system • This device enables Ergon Energy and Energex to reduce the risk of state-wide power outages by switching these systems off for a short time in an energy emergency • The ‘emergency backstop mechanism’ will be activated only as a last resort at the direction of AEMO

Jurisdictional developments (3/4)

Industry trial	Description
NSW	
Electric Vehicle Strategy	<ul style="list-style-type: none"> The NSW Government will invest \$209 million to ensure widespread, world-class EV charging coverage to future proof the EV network. This includes \$149 million being invested into EV fast charging grants, which will co-fund charge point operators to install and operate ultra-fast charging stations at 100 km intervals across the state, and every 5 km in metropolitan areas The NSW Government will offer \$3,000 rebates for the first 25,000 new full battery electric vehicles (BEVs) and hydrogen fuel cell electric vehicles (FCEVs), purchased for a dutiable value of less than \$68,750 that are registered on or after 1 September 2021 Stamp duty is exempt for new or used BEVs and FCEVs light vehicles, under 4.5 tonne gross vehicle mass (including motorcycles) with a dutiable value up to and including \$78,000
Solar for Low-Income Households	<ul style="list-style-type: none"> This program is ongoing and offers low-income homeowners free 3kW solar systems
Vic	
Energy Compare	<ul style="list-style-type: none"> Victorian Energy Compare is an independent government tool to help you to compare electricity, gas and solar offers from all energy retailers, based on information you provide about your household or small business
Emergency backstop mechanism	<ul style="list-style-type: none"> From 25 October 2023, an emergency backstop will apply to all new, upgrading and replacement solar systems greater than 200 kW (large) In July 2024, Victoria will introduce an emergency backstop for new, upgrading and replacement rooftop solar systems less than or equal to 200 kW (small and medium)
The Solar Homes Program	<ul style="list-style-type: none"> The Solar Homes Program offers eligible Victorian households solar panel (PV) rebates (up to \$1,400) and the option of an interest-free loan, hot water rebates, and an interest-free loan for solar batteries

Jurisdictional developments (4/4)

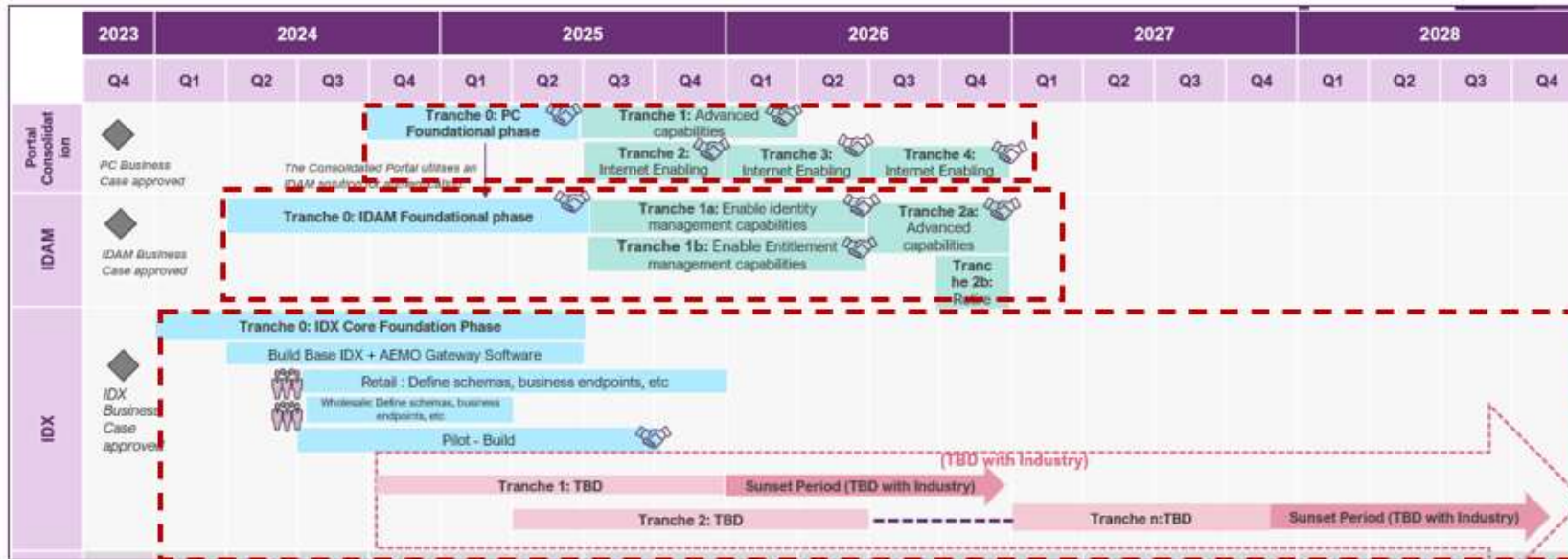
Industry trial	Description
SA	
Dynamic Export Limits Requirement	<ul style="list-style-type: none"> On 1 July 2023, SA Power Networks commenced the progressive rollout of Flexible Exports as a standard connection option New generating plants with a total generating capacity greater than 30 kW are exempt from Dynamic Export compliance until 1 July 2024 The new system requires modern inverter technology to be installed with rooftop panels so that exports can be remotely controlled and ramped up and down, to better suit the needs of the grid and minimum demand A Dynamic Export Capable (Connection) has export limits up to 10.00 kW (up to double the previous export limit)
Emergency backstop mechanism	<ul style="list-style-type: none"> South Australia is the first state introduce the emergency backstop mechanisms and the first state to implement it on 14 March 2021 affecting around 12,500 households in Adelaide
TAS	
ChargeSmart Grants	<ul style="list-style-type: none"> ChargeSmart grants support organisations to install electric vehicle chargers that are accessible to the public Three ChargeSmart grants programs (Fast, Destination and Workplace Charging) were delivered in 2018-2019 to support the installation of 14 fast chargers, and 23 destination and workplace chargers across Tasmania The Tasmanian Government in 2021 launching a second round of ChargeSmart funding. Individual grants of up to \$50,000 are available towards the upfront cost of purchasing and installing a DC electric vehicle fast charging station in Tasmania, for use by the public. Individual grants of up to \$2,500 to fund AC destination chargers are also available

Appendix D

Foundational & Strategic initiatives investment phasing approach recap

Investment Phasing and Considerations

- With existing capability spanning multiple markets, dependencies across initiatives as well as new initiatives, a phased investment approach is proposed to identify a first cut of capability (subset of tranches) to be assessed via Business Case.
- This provides greater surety on the initial investment and timing and allows for progressive re-evaluation, bundling of capability with new initiatives (where appropriate) and accommodation of change to the transition roadmap.



Defining the phases

- The investment phases were defined in collaboration with the industry focus group.
- For each initiative AEMO is seeking input from participants on the logical tranches to include in the phased investment case.
- Tranches excluded from the phased investment case will be the subject of subsequent investment case(s).

Proposed commitment for the initial business case

AEMO proposed activities

Industry testing

Milestone