Reform Delivery Committee

Round 2 Workshop 2
21 March 2022

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

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

1. Introduction

2. Reference guide to the roadmap

3. Roadmap review

4. Workshop questions for the Committee

5. Next steps

Appendix A: NEM 2025 Implementation Roadmap v.0.1

Please note that this meeting will be recorded for note taking purposes and not for publication.

1. Introduction

This workshop provides for a walkthrough of the roadmap and consideration of alternative pathways
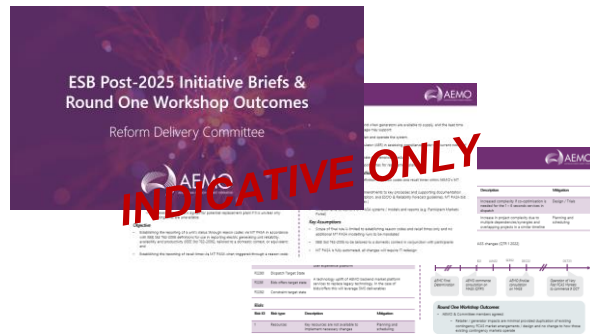
Reference Material

- Outline of individual initiatives including problem statement, objectives, scope, assumptions, dependencies and schedule

- Building upon the material shown during Workshop 1 and to be used as reference material for the final roadmap

- Workshop 1 feedback included

PRE-READING
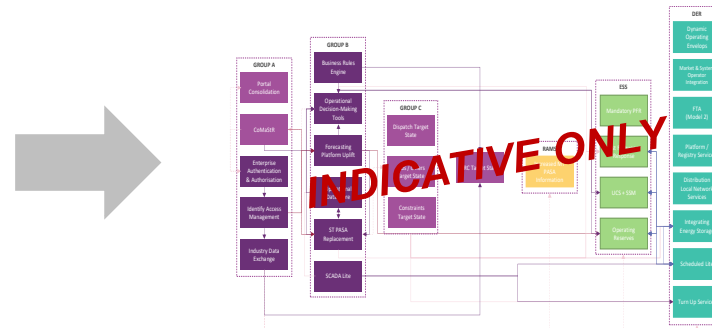
Relationship Mapping

- Draft mapping accounting for all ESB and AEMO initiatives

- Relationships range from: Functional, Deadline, Sequencing (Design or Implementation / Operation), Policy, Trials, Technology (Base), Technology (Strategic)

- Provides a basis to identify bundling, sequencing and prioritisation pathways

**DISCUSSED AT LAST WORKSHOP**
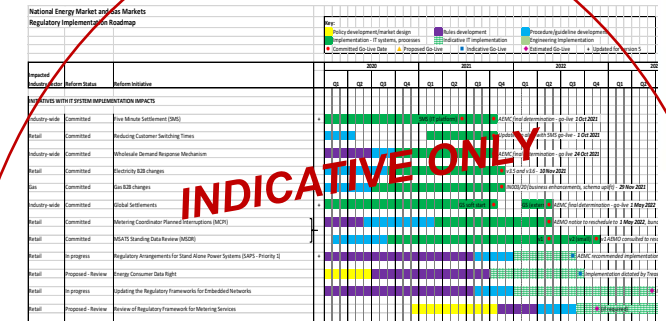
Roadmap Walkthrough

- Draft roadmap building on the work completed to date

- Identification of project sequencing, bundling, timing including key milestones and alternative pathways

- Opportunity to provide feedback on format, information captured
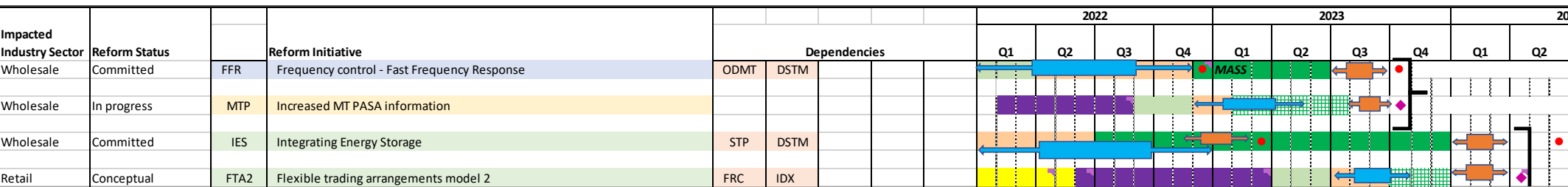
TO BE DISCUSSED TODAY

2. Reference guide to the roadmap

Reference guide to the roadmap
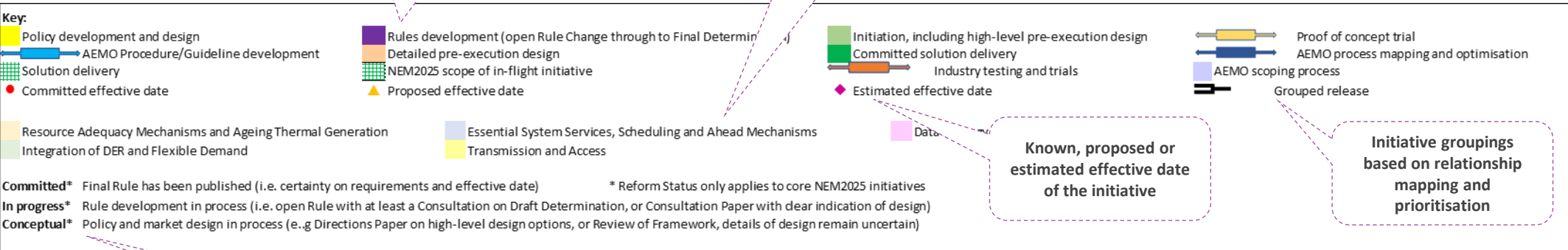
3. Roadmap review

We have developed two pathways with a distinct underlying approach

Regulatory Led Pathway	Pragmatic Strategic Pathway
• It limits the scope to the bare minimum and does not consider coordination of regulatory and IT changes and therefore shared system impacts and minimising the number of system releases • Strategic enabling technology solutions such as consolidating frameworks and platform uplifts to existing systems are deferred to commence after 2025, once most reforms have been delivered • The reforms will be delivered by building on existing system frameworks and platforms, even those nearing the end of technical life. As these systems need to be replaced, new markets and processes implemented through the reforms will need to be migrated/integrated into future systems at a later point in time • Most reforms are delivered by the end of 2025	• Shared system impacts are considered, the number of scheduled releases are reduced, and the foundational technology architecture and frameworks are established for future anticipated capability needs and removal of industry pain-points • Reforms will be delivered into future state systems to the extent possible • This pathway includes foundational target state technology development related to identity and access, and operational systems and tools. It also includes two large-scale and complex target state implementation initiatives relating to the uplift of the core Dispatch and Short-Term Market Operational (Dispatch, Bids/Offers, Constraints) platforms, and the consolidation of the Retail Markets (all fuels) technology and process framework. • The delivery date for some reforms may extend beyond the assumed regulatory deadline. The roadmap limits the number of these instances and the length of a proposed extension will be subject to as yet undefined rule change effective dates.

The Regulatory Led roadmap delivers the reforms within the set or assumed regulatory effective dates by limiting the scope to the bare minimum
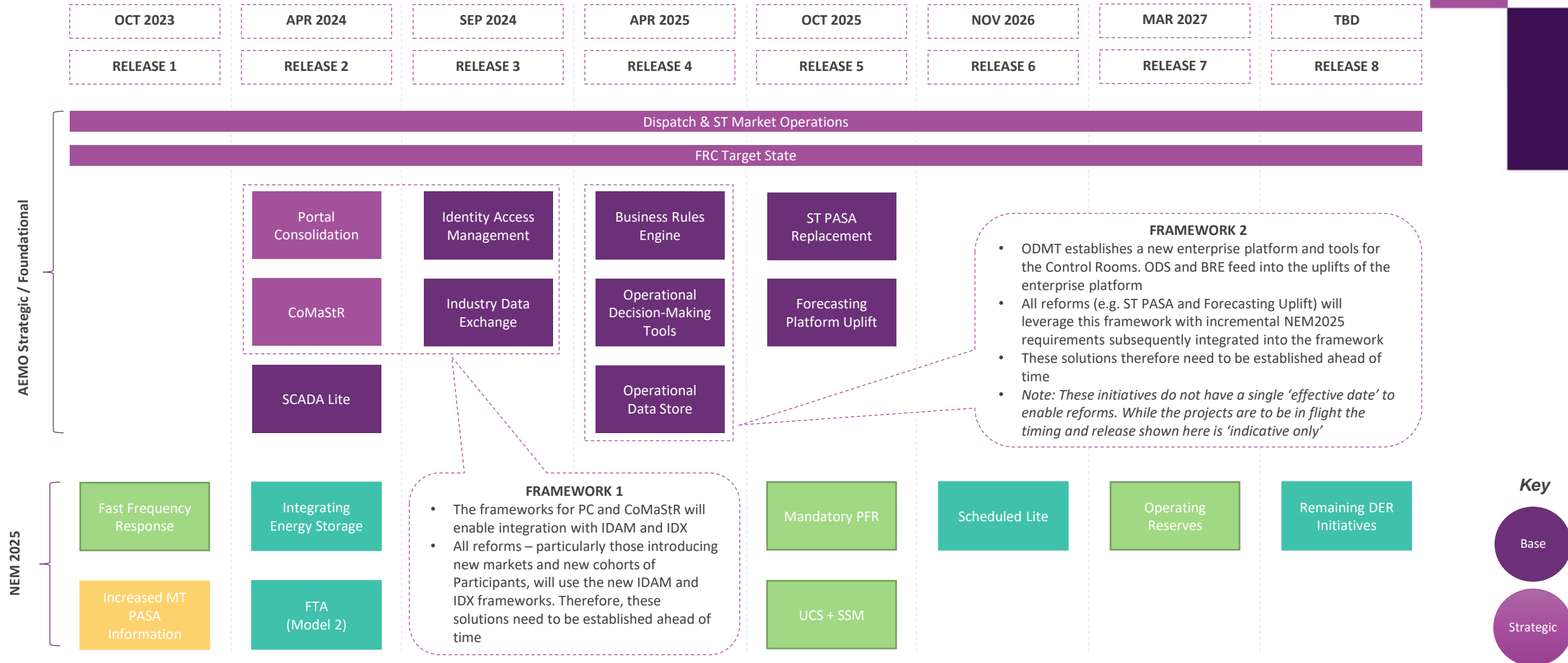
Neither roadmap is yet fully integrated with AEMO's enterprise-wide program of work and constraints

The Pragmatic Strategic roadmap balances implementing reforms within regulatory timeframes where possible and optimising the reform delivery program

An illustrative pathway linking strategic / foundation and reform initiatives

OCT 2023	APR 2024	SEP 2024	APR 2025	OCT 2025	NOV 2026	MAR 2027	TBD
RELEASE 1	RELEASE 2	RELEASE 3	RELEASE 4	RELEASE 5	RELEASE 6	RELEASE 7	RELEASE 8

Dispatch & ST Market Operations

FRC Target State

AEMO Strategic / Foundational

- Portal Consolidation
- CoMaStR
- SCADA Lite
- Identity Access Management
- Industry Data Exchange
- Business Rules Engine
- Operational Decision-Making Tools
- Operational Data Store
- ST PASA Replacement
- Forecasting Platform Uplift

FRAMEWORK 2
- ODMT establishes a new enterprise platform and tools for the Control Rooms. ODS and BRE feed into the uplifts of the enterprise platform
- All reforms (e.g. ST PASA and Forecasting Uplift) will leverage this framework with incremental NEM2025 requirements subsequently integrated into the framework
- These solutions therefore need to be established ahead of time
- *Note: These initiatives do not have a single 'effective date' to enable reforms. While the projects are to be in flight the timing and release shown here is 'indicative only'*

NEM 2025

- Fast Frequency Response
- Increased MT PASA Information
- Integrating Energy Storage
- FTA (Model 2)
- Mandatory PFR
- UCS + SSM
- Scheduled Lite
- Operating Reserves
- Remaining DER Initiatives

FRAMEWORK 1
- The frameworks for PC and CoMaStR will enable integration with IDAM and IDX
- All reforms – particularly those introducing new markets and new cohorts of Participants, will use the new IDAM and IDX frameworks. Therefore, these solutions need to be established ahead of time

Key

- Base
- Strategic

Assessment of trade-offs between pathways

TRADE-OFF	ASSESSMENT
Program Optimisation	Pragmatic Strategic scores higher as it gives consideration to shared system impacts and bundling of initiatives to minimise the number of system releases however will impact on participants' ability to deliver BAU initiatives
Regulatory Timelines	Regulatory Led scores higher as it delivers the benefits identified from reforms according to intended or assumed timeframe minimising any delays
Overall Cost Efficiency	Pragmatic Strategic scores higher as efficiency gains achieved through aligning the delivery of reforms with establishment of frameworks for future state systems. Regulatory Led scores lower despite potentially being cheaper in the short-term as it will require transition to target state after reforms are delivered adding costs in the long-term
Risks	Regulatory Led scores higher overall as total number and scope of initiatives to be implemented is reduced, minimising risk. Pragmatic Strategic also lowers risk by reducing the scale of scope for some strategic initiatives and potentially delaying the implementation of some reforms
Scalability	Pragmatic Strategic scores higher as delivery of reforms to leverage the frameworks for future state systems
Participant Investment & Operations	Both a Regulatory Led and Pragmatic Strategic score equally. A Regulatory Led minimises total number and scope of initiatives initially allowing focus on internal BAU initiatives. However, will require more releases over the duration of the roadmap. Pragmatic Strategic potentially more impactful in the short term but with few releases over the duration of the roadmap
Overall	*Overall a Pragmatic Strategic approach scores higher and is possible to achieve. A critical question for the RDC will be whether actual implementation of this roadmap is plausible given known constraints (e.g. resources, funding, BAU initiatives)*
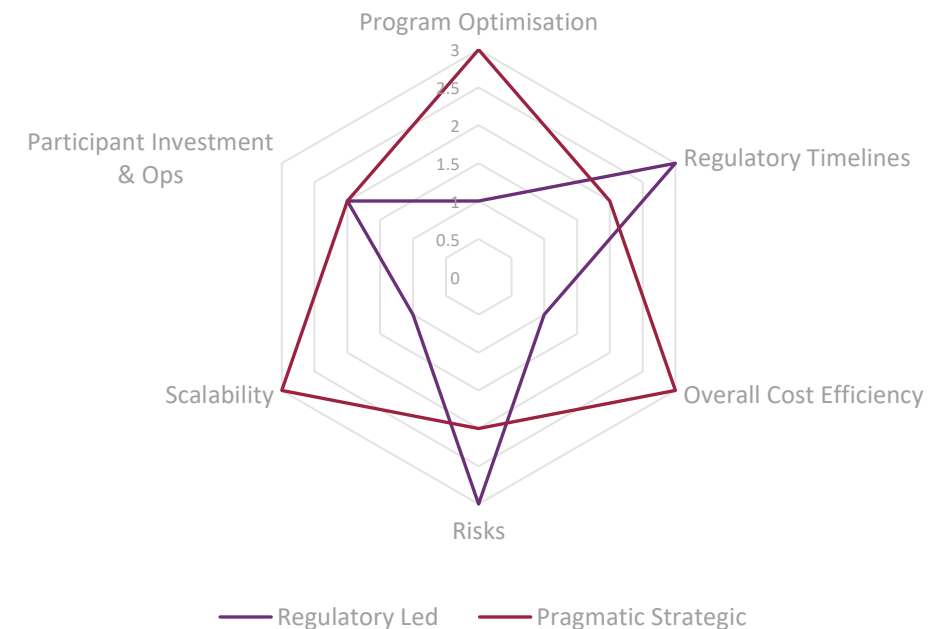
TRADE-OFFS[1]

ROADMAP	Program Optimisation	Regulatory Timelines	Overall Cost Efficiency	Risks	Scalability	Participant Investment & Ops	TOTAL
Regulatory Led	1	3	1	3	1	2	11
Pragmatic / Strategic	3	2	3	2	3	2	15

1. Individual trade-off scores range from 1 – 3, with a higher number indicating a better score with respect to meeting the benefits of that particular trade-off

The Pragmatic Strategic pathway must meet preconditions and assumptions

- The Pragmatic Strategic pathway is *theoretically possible*. However it assumes certain pre-conditions and underlying assumptions are met*

- The pathway does not include initiative or portfolio contingency. As such, the roadmap represents timelines that should be achieved providing these pre-conditions and actions are delivered

#	Topic	Description
1	Start time	The initiatives must start on time
2	AEMO resources	AEMO has sufficient business, solution development, management, IT infrastructure resources and funding at appropriate times to deliver what is required
6	Participants	Industry and Market Participants have sufficient duration allowed, industry specs (procedure definitions, tech specs) are available in a timely way and resources at appropriate times to deliver what is required
4	Rule Change timing	Policy and Rule Change Determinations are delivered on time
5	Design	Detailed design of individual initiatives is completed upfront and in a timely manner
6	Effective Dates	Industry and Market Bodies accept proposed effective dates
7	Further Change	Initiatives agreed for inclusion in V2 – subject to further policy work – can be integrated into the Roadmap without impact. I.e. capacity mechanism, congestion management
8	Complexity	Complexity has not been under-estimated. Regulatory complexities and foreshadowed design (where available) remain as anticipated
9	Technology	Unforeseen technology complexities do not arise. For example, unforeseen supply chain issues that delay delivery of engineering elements

Is a contingency overlay required?

- A critical question for the RDC will be – given these pre-conditions and assumptions critical to the successful delivery of this pathway – whether it is prudent to develop a new pathway that includes a contingency overlay.

If so, how should schedule contingency be accounted for?

- On approach may be to risk assess each of the initiatives (e.g. complexity/certainty), and apply contingency accordingly.

* AEMO is currently conducting a review of its Future State Architecture. The outcomes of this review may similarly impact on the delivery of pre-requisites and reform initiatives.

4. Workshop questions for the Committee

Workshop questions

The key objective is for Committee members to interrogate the Roadmap through a stakeholder lens.

Feedback from this perspective is sought for comparison of the two Critical Pathways:

1. Do the durations identified on the Roadmap allow sufficient time for participant activities?

2. Are the groupings/releases identified reasonable, or would different groupings provide for a more efficient development process?

3. Is the sequencing reasonable, or would a different sequencing provide for a more efficient development process?

And generally across both pathways:

1. Would a change in the order, priority or bundling of initiatives deliver a higher value proposition e.g. bringing forward, or back, initiatives that have a higher or lower priority?

2. Are the risks and trade-offs identified and articulated reasonably?

Note that the questions above will be workshopped using jamboard.

5. Next steps

Next Steps

Proposed actions	Responsibility
Provide feedback on the proposed pathways and relevant trade-offs	Committee members
Provide feedback on grouping or sequencing as it impacts participant constituents	Committee members
Provide feedback on the timing and duration allocated to individual steps associated with implementation of each pre-requisite / reform initiative	Committee members
Finalise first draft of the Roadmap incorporating Committee feedback including Participant Impact Assessment	AEMO
Document key assumptions, issues or uncertainties to be addressed in the development of subsequent versions of the Roadmap.	AEMO

For more information visit

aemo.com.au

Appendix A

NEM2025 Implementation Roadmap v.01

The roadmap is accessed through the Reform Delivery Committee External SharePoint site. If any issues accessing this document, please contact stakeholderrelations @aemo.com.au.