

Statement of Approach

The Energy Security Board (ESB), in collaboration with the market bodies (AEMO, AEMC and AER), has set out a pathway to transition the national electricity market into a modern energy system fit to meet consumers' evolving wants and needs. The ESB's Post 2025 electricity market design addresses essential change in a world of expanding consumer choices, new technologies, and large-scale capital replacement as old thermal power stations leave the market.¹

NEM Reform Implementation Roadmap

One of the main enablers for many of the Post-2025 reforms is the development of supporting IT systems and business processes.

AEMO has undertaken a series of planning activities in conjunction with the Reform Delivery Committee² (RDC) to better understand the scope and scale of the ESB's reform initiatives and AEMO's strategic or foundational enabling initiatives that need to be delivered as part of the NEM Reform Program. These activities have culminated in the development of the NEM Reform Implementation Roadmap (the Roadmap) which details an integrated timeline for implementing the full suite of initiatives under the NEM Reform Program, as well as broader National Electricity Market (NEM) and gas related reform initiatives.

The purpose of the Roadmap is to establish a basis upon which to navigate the breadth of the reforms over the coming few years, de-risking delivery, looking for opportunities to take cost out of reform implementation and informing implementation timing. The Roadmap is available to view in full at the RDC section of AEMO's website.³

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

- Managing uncertainty in scope, timing and cost of initiatives. Several of the reforms included in the NEM Reform Program are at an early stage of policy or rules definition. It is likely that the scope and timing of proposed reforms will change, new reforms will be added, and others may not proceed at all. The Roadmap and cost estimates will need to be responsive to these circumstances.

¹ Energy Security Board. Website. Last Accessed 13 May 2022. Available here <https://esb-post2025-market-design.aemc.gov.au/>

² The RDC brings together a strategic group of representatives from across the energy sector, including representatives from the AEMC and AER, to facilitate deep and effective collaboration to develop the NEM Reform Implementation Roadmap that appropriately prioritises and sequences reform implementation considering interdependencies with a least cost whole-of-system intent – ultimately for the benefit of the consumer. Further information on the RDC is available [here](#).

³ At <https://aemo.com.au/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/reform-delivery-committee>

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- Establishing the basis for, and timing of AEMO strategic and foundation enabling initiatives. AEMO has identified several investments in systems to deliver an uplift to its base capability on which reforms are dependent or delivery efficiencies may be achieved. Ensuring the scope and proposed timing for these initiatives are understood by industry participants and justified from a cost/benefit basis will be key.
- Establishing structured investment disciplines to drawing down funds. A 'set and forget' funding strategy that establishes a multi-year overall fixed budget is not appropriate for the Program given the uncertainty surrounding policy and regulatory outcomes and scope of certain initiatives. This uncertainty necessitates establishing structured investment disciplines to drawing down funds as part of the overall governance framework.

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

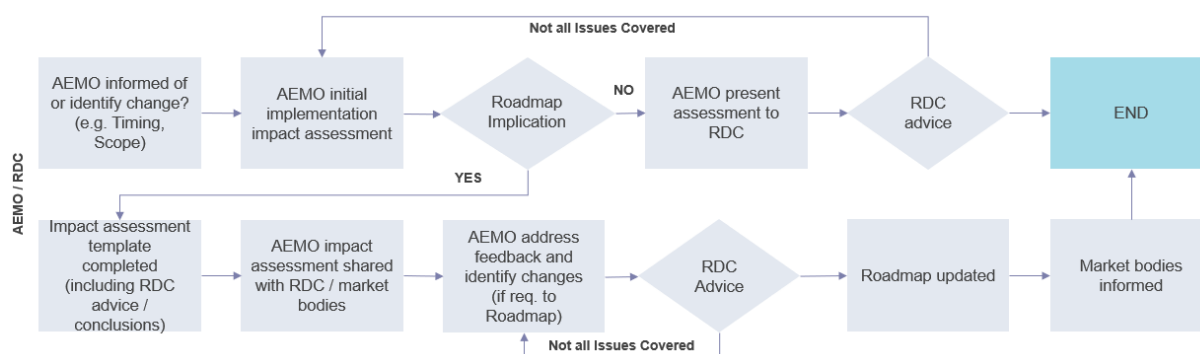
- a **change management process** to manage and advise on impacts of new initiatives being added to the reform scope or changes in scope/timing of existing proposed initiatives,
- a **stage gate process** which includes a cost/benefit analysis and industry consultation for AEMO strategic/foundation initiatives, and
- progressive **investment commitment process** and draw down of funds that will be informed by regulatory determinations and the stage gate approach.

These processes are set out below.

Change Management Process

Given the uncertainty and/or complexity of individual initiatives that make up the NEM Reform Program and the high likelihood of incremental or material changes in scope or timelines as policy or designs are finalised, a change management process has been established for the NEM Reform Program as shown in **Error! Reference source not found..** This change management process acknowledges the inevitability that policy and rules changes will occur through the policy/rule making process, and that these changes will have implementation impacts for scope, timeline and cost. The change management process seeks to understand the potential implementation impacts of these changes, ensuring the Roadmap and overall forecast costs remain up to date and to help inform decision-makers on potential approaches or solutions to those impacts.

Figure 1. Change management process





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The change management process targets those material changes including introduction of new initiatives, changes in scope and/or timeline changes of current initiatives. Here a material change refers to:

- A change in scope that impacts on the complexity of the initiative, leading to a higher or lower level of complexity rating under the Roadmap (e.g. moves the complexity from Medium to Large, or Medium to Small). This type of change will impact timeline and cost.
- A change in timeline that impacts the implementation timing of the initiative, requiring an adjustment of two (2) months or more. This threshold is selected as an adjustment of two months or more is likely to lead to the implementation timing moving into a different implementation window.

Note that this is a general principle for assessing the materiality of a change, and the specific circumstances of the change will be reviewed where necessary to assess materiality.

The process provides for engagement with the RDC and relevant market bodies, the completion of an impact assessment (see Appendix A) and a standing quarterly review process. All changes are to be assessed against a baseline comprising the current version of the Roadmap, initiative briefs, cost estimates, and participant impact assessments.

Stage Gate Process

The challenges and risks resulting from policy and regulatory uncertainty (and therefore scope and timing uncertainty) mean that a 'set and forget' funding strategy that establishes a multi-year overall fixed budget is not appropriate for the NEM Reform Program. Accordingly, the Roadmap is complemented by a stage gate process applicable to all initiatives that are part of NEM Reform Program to manage such uncertainty and to provide for appropriate implementation and investment disciplines.

Table 1 highlights the proposed stage gates as part of this process.

The stage gate process will be different depending on whether the initiative is either a Post-2025 reform initiative or AEMO strategic or foundational enabling initiative.

For Post-2025 reform initiatives:

- An initiative becomes mandatory once a final rule determination (or equivalent legal obligation) is made.
- A cost benefit assessment is completed by the rule- or policy- maker and precedes an AEMC final rule determination or ministers' decision. AEMO, together with other market participants and stakeholders will continue to provide key inputs into such costs benefit assessments completed by the AEMC and/or various policy makers to help inform their decision making.
- At the time of making a final rule determination or Ministers' decision, the Rules decision becomes an obligation for all relevant parties and the objective becomes effective mobilisation and delivery.

Here the stage gate process takes effect and is focused on effective mobilisation and delivery providing for engagement with the Program Consultative Forum and RDC.

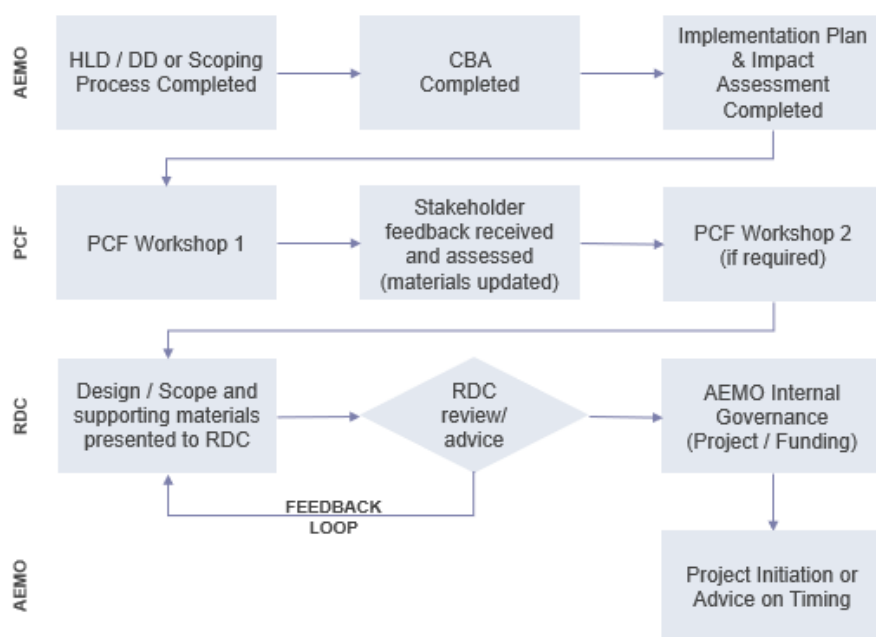
AEMO strategic or foundational enabling initiatives require a different stage gate process as shown in Figure 2 below.

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This process provides for engagement with industry stakeholders, via the NEM Reform Program Consultative Forum, to confirm critical elements of the initiatives including:

- High Level Design (HLD), Detailed Design (DD) or Scope; and
- Implementation Plan and Impact Assessment (including quantified and/or qualified assessment of the costs and benefits⁴).

Figure 2. Stage gate process – AEMO strategic or foundational initiatives



Having completed this engagement, AEMO would seek RDC advice in relation to whether/when and how the initiative proceeds. AEMO's objective is for the RDC to operate as a collaborative forum on implementation, and therefore a consensus position will be sought. Where consensus is not reached AEMO will note the different views held by members for transparency. RDC views will be published to AEMO's website and will inform AEMO decisions. These decisions will explain how AEMO has considered the feedback provided and respond to issues raised.

Table 1. Stage gate checkpoints (indicative)¹

Pathway ²	Initiatives	Q3 2022 (Completed)	Q3 2023 (TBC)	Q1 2024 (TBC)	Q3 2024 (TBC)	Q1 2025 (TBC)
RAM	Increased MT PASA Information	✓				
	Capacity Incentive Scheme		✓			
ESS	Fast Frequency Response	✓				

⁴ AEMO note in certain cases it may not be practicable to secure reliable and meaningful industry-wide cost or benefit data to quantify industry-wide impacts on strategic or foundational initiatives. AEMO will work with RDC members and industry participants to best understand these impacts (quantified or qualified) as part of its impact assessment.



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Pathway ²	Initiatives	Q3 2022 (Completed)	Q3 2023 (TBC)	Q1 2024 (TBC)	Q3 2024 (TBC)	Q1 2025 (TBC)
	Frequency Performance Payments	✓				
	Operational Security Mechanism	✓ (Prototyping only)	✓ (Execution)			
	Operating Reserves Market			✓		
TA	Enhanced Information	To be determined subject to policy / rules development ³				
	Congestion Relief Market & Priority Access Model	To be determined subject to policy / rules development ³				
DER & FD	Integrating Energy Storage Systems	✓				
	Flexible Trading Arrangements (M2)		✓			
	Scheduled Lite			✓		
	Dynamic Operating Envelopes	To be determined subject to policy development				
	Distribution Local Network Services	To be determined subject to policy development				
	DER Data Hub & Registry Services	To be determined subject to policy development				
	DER Operational Tools	To be determined subject to policy development				
DS	Data Services	To be determined subject to policy development				
	EV Charging Standing Data Register	To be determined subject to policy development				
	Bill Transparency	To be determined subject to policy development				
	Network Visibility	To be determined subject to policy development				
AEMO F	Identity and Access Management		✓			
	Industry Data Exchange		✓			
	SCADA Lite		✓			
AEMO S	Portal Consolidation		✓			
	Consolidated Master Data Repository			✓		
	FRC Target State			✓		
	Dispatch, Bids & Offers and Constraint Target States	✓ (Tactical Uplift Only)				

¹ Timing is indicative of when an initiative, or group of initiatives defined in the Stage Gate bundle, is expected to reach a level of policy/rules certainty that will enable those initiative(s) to proceed through the Stage Gate process for funding commitment. The timing is subject to progress on Policy decisions and Rules development processes.

² 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.

³ Anticipated TA reforms will be implemented by 2027, on the condition policy / rules development is finalised in 2023.



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Investment Commitment Process

A Gate 1 Business Case has been prepared (August 2022) setting out the initiatives within scope and the overall forecast cost range for AEMO's implementation activities for these initiatives. The forecast cost range will change from time to time as reform initiatives are added, removed or changed. This process will be governed by the Change Management process set out above with addendums to the business case published as required.

The forecast costs are set out as a range to reflect uncertainty, with the uncertainty range to narrow as policy and rules decisions are finalised.

It is important to note that the forecast cost range does not reflect a funding commitment. It represents the current estimate based on presently known information. It provides for a holistic view and helps inform decisions in relation to the overall roadmap and implementation program.

Funding commitments by AEMO will be made in alignment with the Stage Gates set out above. This means the funding commitments will be progressive and will only be made once there is sufficient certainty to provide an approval to proceed, i.e. AEMC regulatory determination or Ministerial decision for reform initiatives, and a stage gate process for AEMO foundation and strategic initiatives.

AEMO funding commitments will be undertaken according to AEMO's defined investment approval processes. These processes are governed by AEMO's Enterprise Portfolio Office (EPO). The EPO is described further below, and the EPO governance framework is set out in Appendix B.

In the case of the NEM Reform Program, the relevant investment approval steps include:

- Executive Steering Committee,
- AEMO Investment Committee together with appropriate supporting forums such as the Portfolio Assessment Forum and EPO co-ordination, and
- AEMO Board, with support where required from the Board sub-committee the Technical and Regulatory Committee and Risk and Audit.

Program governance and delivery

The NEM Reform Program is a large, complex Program. As a result, a number of important governance and delivery elements will be applied to the Program. An overview of the structure, key roles and responsibilities across the NEM Reform Program appears below.

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Figure 3. NEM Reform Program Delivery Structure

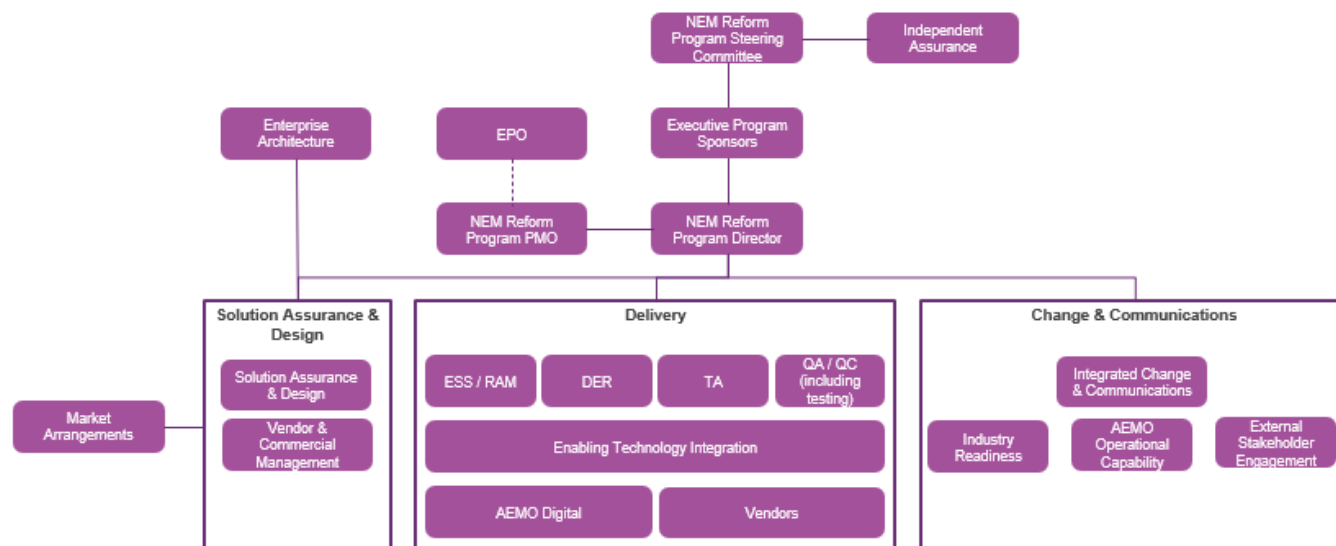


Table 2. Summary of Program delivery roles and responsibilities

Program role	Summary of responsibilities
NEM Reform Program Steering Committee	<ul style="list-style-type: none"> Executive-level body which oversees the NEM Reform Program and has decision-making authority within the bounds set by the Investment Committee and Board.
Executive Program Sponsor	<ul style="list-style-type: none"> Accountable for achieving business outcomes, delivering benefits and accepting risks and operating costs of the program; and Facilitates engagement with relevant AEMO teams to ensure collaboration and information sharing
Independent Assurance	<ul style="list-style-type: none"> Independent third party engaged to provide periodic assessments of Program health; and Reports to the Risk and Audit Board sub-committee.
EPO	<ul style="list-style-type: none"> Facilitates, support and governs the program and project management standards, methodologies, processes and tools mandated across AEMO, and will be applied on NEM Reform Program; The EPO provides an independent review and assessment across the broader enterprise Portfolio and facilitates investment decision making through several key governance & investment forums; and The EPO will ensure the projects move appropriately through the EPO Stage Gate processes.
NEM Reform Program Director	<ul style="list-style-type: none"> Day-to-day responsibility for running the NEM Reform Program; and Reports to NEM Reform Program Steering Committee.
NEM Reform Program PMO	<ul style="list-style-type: none"> Enables the program and project management function in alignment with the EPO standards, tools and methodologies for the NEM Reform Program; and Undertakes functions such as Program reporting, Program budget tracking, risk and issue register maintenance and Steering Committee pack preparation and minuting.
Solution Architecture and Design	<ul style="list-style-type: none"> Provides the overarching alignment of business and technology strategic outcomes through roadmaps, architectures and transformational change impact management; Also provides the sequencing and integrated release planning of design and delivery; and Includes Business Design Authority, Architecture Design Authority and Change Approval Board.
Vendor and Commercial Management	<ul style="list-style-type: none"> Supports the program in the procurement and ongoing management of vendors including performance and execution to contract.




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Program role	Summary of responsibilities
Delivery	<ul style="list-style-type: none">• Combined teams (business, AEMO digital and partner vendors) responsible for developing requirements and designing delivery to meet reforms, updating policies and procedures, and delivering technology changes.
Change and Communications	<ul style="list-style-type: none">• Internal communications and change management including training;• External communications; and• Industry readiness.



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Appendix A: Change Management and Impact Assessment Template



CHANGE MANAGEMENT AND IMPACT ASSESSMENT

DATE:	
NEM2025 INITIATIVE:	
SUBJECT:	
COMPLETED BY	

This Change Management and Impact Assessment provides a means for identification and documentation of potential implementation impacts associated with changes to key reform initiatives captured as part of the NEM2025 Reform Program and documented in the Regulatory & NEM2025 Implementation Roadmap

IMPACT ASSESSMENT

Question / Assessment	Response / Description
What is the nature of the change?	
When is the change to come into effect?	
What are the impacts to AEMO?	
What are the impacts to Participants?	
What are the impacts to Consumers?	
RDC Advice & Conclusions	
AEMC Advice & Conclusions	
AER Advice & Conclusions	

RECOMMENDATIONS

CHANGE REQUIRED TO ROADMAP	YES <input type="checkbox"/> NO <input type="checkbox"/>
CHANGE TO BE MADE	
IMPLICATION OF CHANGE	
APPROVED BY	
DATE	

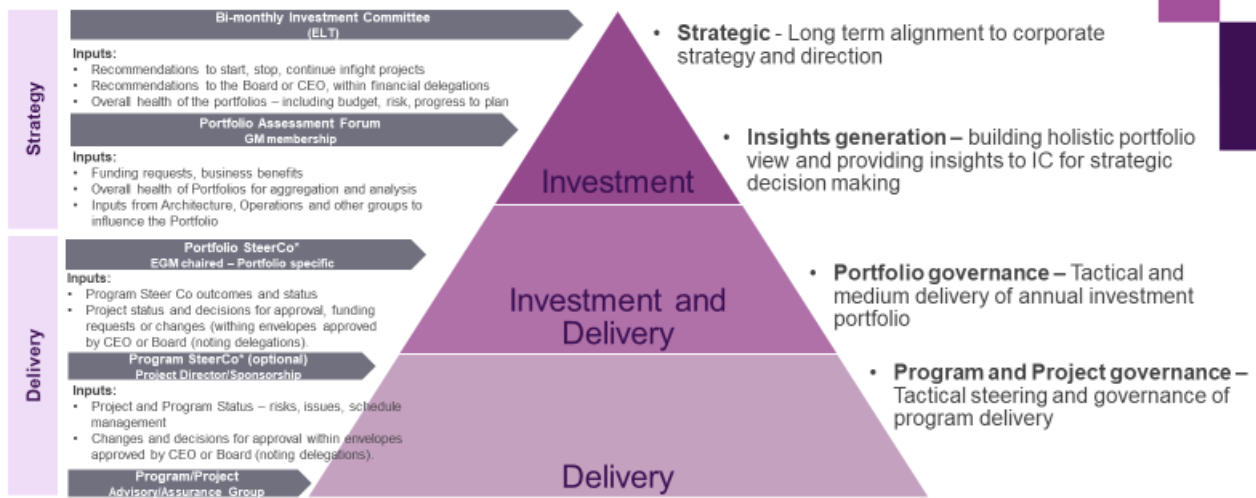


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Appendix B: Enterprise Portfolio Office – Portfolio and Program Governance Model

Governance model

To create an efficient and effective mechanism for managing governance, a tiered approach has been applied to ensure effective and efficient decision-making



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