

# NEM Reform Executive Forum

6 December 2023



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.**

# 1. Welcome

Hosted by:

Violette Mouchaileh, EGM – Reform Delivery, AEMO

*Pack will be taken as read to enable the session to focus on key points, engagement and discussion.*

# Agenda and objectives

| # | Time          | Topic  | Presenter                     | Objectives   | Target |
|---|---------------|--|-------------------------------|--|--------|
| 1 | 11:00-11:05am | Welcome  | Violette Mouchaileh           |  |        |
| 2 | 11:05-11:10am | Actions from previous meeting  | Chris Muffett                 |  |        |
| 3 | 11:10-11:15am | Program Purpose and Objectives   | Chris Muffett                 | <ul style="list-style-type: none"> <li>Recap on objectives, purpose and ways of working</li> </ul>   | Noting |
| 4 | 11:15-11:40am | NEM Reform Program – 2023 Review and 2024 <ul style="list-style-type: none"> <li>A retrospective and forward view incl key industry-wide challenges</li> </ul>                                   | Chris Muffett<br>Lance Brooks | <ul style="list-style-type: none"> <li>2023 achievements &amp; 2024 Forward plan</li> <li>What has gone well? What has gone not so well?</li> <li>What lessons learnt and what do we do differently?</li> <li>The challenges for 2024 (loopback to the challenges we set out in the first EF) - how we are shaping up against those challenges?</li> <li>Executive request:               <ul style="list-style-type: none"> <li>Feedback on how identified challenges relates to 2023 achievements and 2024 forward plan</li> </ul> </li> </ul>   | Action |
| 5 | 11:40-12:00pm | NEM Reform Foundational & Strategic Initiatives <ul style="list-style-type: none"> <li>Identity &amp; Access Management</li> <li>Industry Data Exchange</li> <li>Portal Consolidation</li> </ul> | Luke Barlow                   | <ul style="list-style-type: none"> <li>Note: Draft business case due to be published 8 December. Indications of support will not be sought at this session.</li> <li>Provide a preview of key elements of business case, including:               <ul style="list-style-type: none"> <li>Draft business case investment for AEMO and industry</li> <li>Assessment framework</li> </ul> </li> <li>Review process for business case completion and approach to seeking industry support</li> <li>Executive request:               <ul style="list-style-type: none"> <li>Work with your organisation to ensure the right people are involved to provide your organisation's feedback on business case</li> <li>Share any feedback on business case elements and process to completion</li> </ul> </li> </ul> | Action |
| 6 | 12:00-12:20pm | Overall Program Delivery Status and Program Cost   | Rowena Leung                  | <ul style="list-style-type: none"> <li>Understand overall status of initiatives</li> <li>Review AEMO program costs and status against budget</li> </ul>  | Noting |
| 7 | 12:20-12:30pm | Other Business & Meeting Close   | Violette Mouchaileh           |  |        |

## 2. Actions from previous meeting

Chris Muffett

# Actions from previous meeting

(Item = Meeting # – Agenda # – Reference)

| Item    | Topic  | Action  | Responsible | Status |
|---------|--|---|-------------|--------|
| 1.2.0.1 | Purpose and Objectives                       | AEMO to schedule the next EF prior to the end of the calendar year.               | AEMO        | Closed |
| 1.2.0.2 | Purpose and Objectives                       | AEMO to communicate that EF is not a technical forum.                             | AEMO        | Closed |
| 1.3.0.1 | Mobilising to Deliver the NEM Reform Program | AEMO to update Program challenges overview with mention of cost and republish.    | AEMO        | Closed |
| 1.3.0.2 | Mobilising to Deliver the NEM Reform Program | AEMO to consider IESS approach based on Keith Robertson – Origin Energy feedback. | AEMO        | Closed |

# 3. Program Purpose & Objectives

Chris Muffett

# Program Objectives



## Drivers

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



## NEM Reform Program

- The **most comprehensive reform package** to be implemented since the NEM's inception in 1998
- ESB has defined **four reform pathways**, complemented by a **Data Strategy**
- AEMO has identified supporting **foundational** and **strategic initiatives**
- Continue to implement **AEMC reforms**, delivering **better consumers outcomes**



## Objectives

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



# The challenge



- The NEM Reform Program is a major and complex industry-wide change program, requiring a significant contribution from participants right across the NEM to deliver and implement the reforms successfully.
- Industry participants are currently contending with many competing priorities, challenges and demands.
- This broader context highlights the importance of a carefully considered implementation approach underpinned by industry-wide co-ordination and collaboration to deliver reforms effectively and efficiently.

## **Some of the key challenges to delivering the program include:**

- Size and complexity of the reform program, collectively
- Variable level of impacts across participants
- Uncertainty in the timing, scope and progression of individual initiatives
- Managing investment in a disciplined manner
- Deliverability and resourcing
- Competing demands across the industry and within individual participants.

# Executive Forum – August 2023



- Key points from August Forum:
  - AEMO will schedule Executive Forum 3-4 times per year; these will align with key decision points to gain insights and views from Executive Forum
  - AEMO will ensure the Forum focus remains "strategic" rather than "technical"
  - A key point of focus will be on the high-level challenges, including:
    - Policy considerations
    - Commercial focus / considerations
    - Ongoing improvement of reform delivery

# 4. NEM Reform Program – 2023 Review and 2024

Chris Muffett & Lance Brooks

A retrospective and forward view including key industry-wide challenges

# 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, MS DR compliance Holiday  | Delivered |

# How did we go and where can we improve ?

## Stand Alone Power Systems

- Policy objectives delivered through process and system enablement. AEMO able to centrally deliver NSP responsibilities reducing overall industry costs.
- Limited industry use so far, but progress made on establishment. Certain aspects of commencement delayed.

## IESS: Contingency FCAS for SGA (Mar 2023)

- Policy objectives met. Optional for participants, all set-up costs were for AEMO. Detailed materials available for participants wishing to register. Thorough industry engagement.
- No uptake to date by participants, limited benefit delivered thus far.

## IESS: Aggregated Dispatch Conformance (Aug 2023)

- Policy objectives met. Optional for participants, all set-up costs were for AEMO, and solution delivered preferable outcome following stakeholder feedback. Thorough industry engagement
- Low uptake at present, however the reform is valuable in incentivising the important firming resources going forward.

## Fast Frequency Response

- Policy objectives met. A good example of delivering reforms at the right time and is expected to deliver significant benefits in terms of efficiently delivering system security as inertia levels decrease. Thorough industry engagement.

## Enhanced MT PASA Information

- Policy objectives met. Provides a good opportunity to uplift participant interfaces. Development of API will reduce industry costs going forward. Thorough industry engagement.

# 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

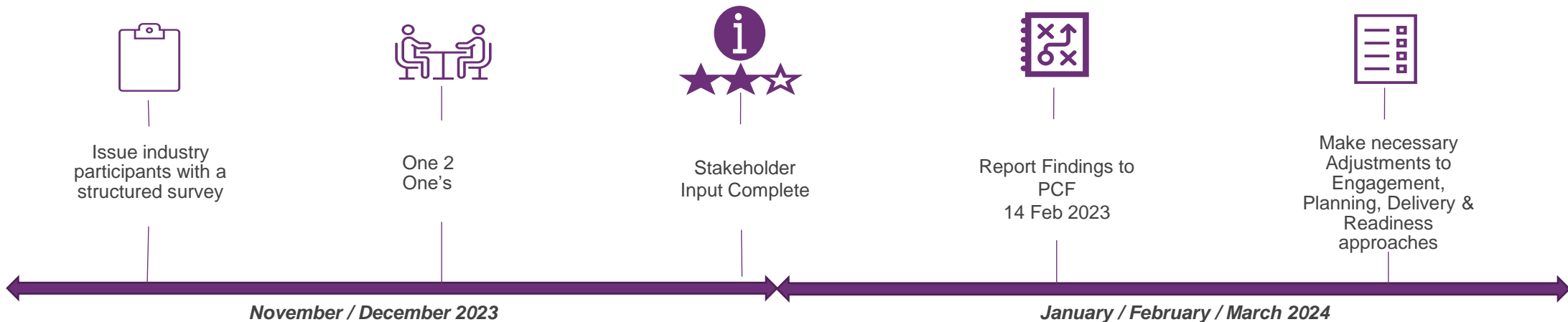
As always, please reach out to the team should you wish to provide 1:1 feedback  
[NEMReform@aemo.com.au](mailto:NEMReform@aemo.com.au)

- 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



# 2024 is shaping up as another busy year for all

## ONGOING / COMMITTED IN 2024

| Release | Initiatives   | Impacted Stakeholders   |
|---------|---|---|
| MAR-24  | Metering Exemptions (MSDR)  | Retailers<br>MC<br>MP/MDP                                     |
| JUN-24  | <a href="#">Integrating Energy Storage Systems [Final]</a>              | IRPs<br>NSPs<br>FRMP<br>MC/MP/MDP<br>MSRPs<br>ENMs<br>Vendors |
| SEP-24  | Retail Market Improvements  | FRMP<br>MDP<br>LNSP   |
| DEC- 24 | <a href="#">Frequency Performance Payments</a> (Non-Financial)          | Generators<br>Scheduled Loads                                 |
| JUN-25  | <a href="#">Frequency Performance Payments</a> (Financial Commencement) | Generators<br>Market Customers                                |

- In addition to those committed reforms, several initiatives are likely to reach a draft or final determination in 2024 including:
  - Improving security frameworks for the energy transition** (FD – Mar 24)
  - Enhancing Reserve Information** (DD – Dec 23, FD – Apr 24)
  - Unlocking consumer energy resource benefits through flexible trading** (DD – Feb 24)
  - Integrating price responsive resources into the NEM** (DD – Feb 24)
- This may require us to start work on these initiatives depending on the final scope and if a rule change is made by the AEMC
- In a similar manner and subject to ongoing industry consultation and business case development implementation of AEMO’s foundational / strategic initiatives (IDAM, IDX, PC, SCADA Lite) may commence throughout the year (see Section 5)
- Finally, various reforms will continue to progress through a policy development phase including for example CER initiatives



# Industry Risk Register (as of August 2023)

The Industry Risk Register to be reviewed at upcoming PCF on 13 December. Any revisions will be presented at the next Executive Forum.  
Please inform AEMO of any risks new or updated risks to be considered.

**Volume of regulatory change**

**Delivery congestion near term and longer term**  
Risk Rating: **High**

**Sub-optimal delivery outcomes**  
Risk Rating: **High**

- Impacts**
- Delivery Schedules
  - Costs
  - Resourcing
  - Delivery outcomes

- Mitigation**
- Transparent delivery schedules
  - Bundling, sequencing and prioritisation
  - Informed Go-live
  - Stakeholder engagement

**AEMO delivery program**

**AEMO resourcing**  
Risk Rating: **High**

- Impacts**
- Delivery / testing timeframes
  - Go-live dates
  - Costs

- Mitigation**
- Resource succession & contingency planning
  - Business / digital continuity processes
  - Strategic partnerships

**Participant development and readiness**

**Participant development timeframes**  
Risk Rating: **High**

**Industry resourcing**  
Risk Rating: **High**

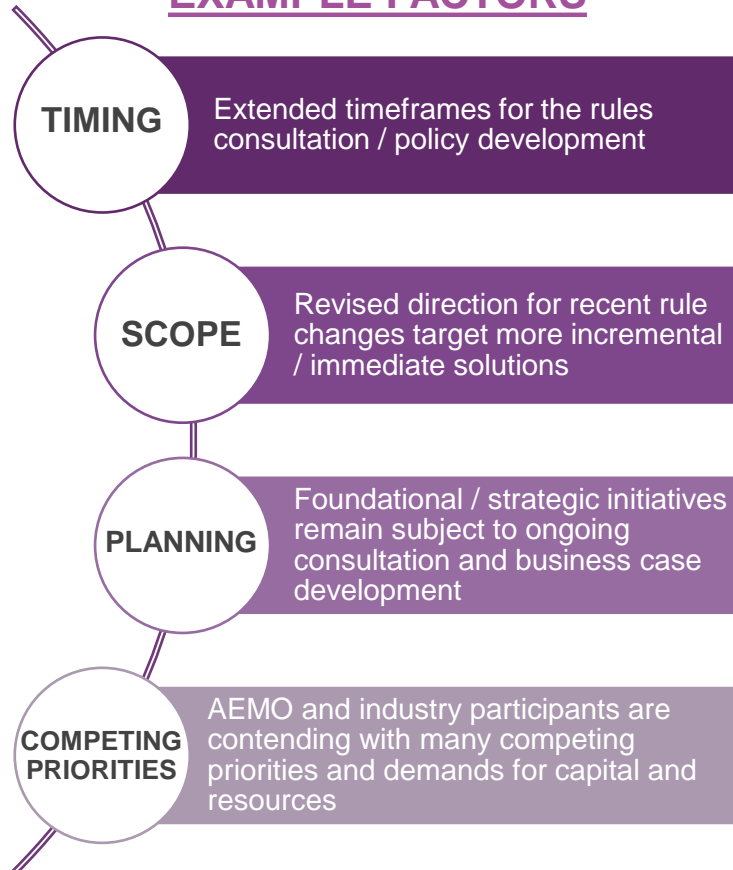
- Impacts**
- Development, testing and readiness
  - Delivery schedules
  - Costs

- Mitigation**
- Transparent delivery schedules / Roadmap
  - Undertake earlier project activities / sharing of material
  - Participants review resourcing plans

Each of the above risks have a risk rating of “High”, with those under the categories of AEMO delivery program and participant development and readiness also having a High likelihood and consequence. Risks under the Volume of Regulatory Change category have an Medium likelihood and High consequence

# 2024 challenges and impacts

## EXAMPLE FACTORS



## KEY CHALLENGES



### Uncertainty in timing, scope and progression of initiatives

Managing certainty is a key challenge. **Expect substantial improvements over the coming 3 – 6 months** with decisions or directions on a number of reforms



### Deliverability and resourcing

Continues to be a watch item for all, with the Roadmap providing a basis for analysing implementation impacts, facilitating the conversations and helping **support** informed implementation approaches

### Key challenges:

1. Ongoing policy Government policy development impact reform delivery priorities
2. AEMC timeframes
3. Industry resourcing – over- or under-resourced

# Ask of Executive Forum members to support Participant Delivery & Readiness

- Check impact analysis for your business for committed initiatives (Refer to Appendix B – Participant Impact Assessments)
  - June 2024 release: Integrating Energy Storage Systems
  - Dec 2024 release (soft start): Frequency Performance Payments
- Make planning provisions for forthcoming initiatives
  - Refer to NEM Reform Implementation Roadmap

## Ask of Exec Forum

- Provide feedback and input into the upcoming NEM Reform Program Review
- Mobilise teams and/or check readiness where required for committed initiatives

# 5. NEM Reform Foundational & Strategic Initiatives

Luke Barlow

- Identity & Access Management
- Industry Data Exchange
- Portal Consolidation

# Recap: Background

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



## Security

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

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



## Ageing & fragmented Technology

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



## Evolving Market Needs

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

# Recap: Initiatives overview

- Foundational and strategic initiatives represent investments intended to establish secure, standardised and effective capability required for both existing and new market services.
- These initiatives have been identified for the NEM Reform Program and included in the NEM Reform Implementation Roadmap.
- A business case is being developed for implementation. AEMO is consulting with industry to define scope and timing prior to any funding decision being made.



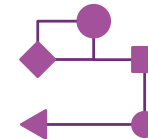
## Identity and Access Management (IDAM)

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



## Portal Consolidation (PC)

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

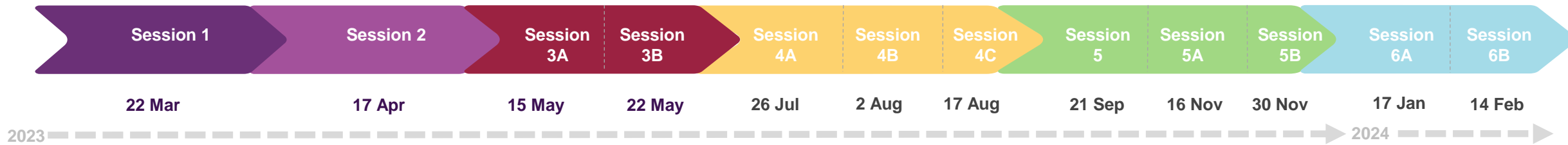


## Industry Data Exchange (IDX)

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

# Engagement process with industry

- Industry consultation underway to support technical assessment and business case development.
- Seeking additional information from industry regarding costs to input to the Draft Business Case.
- AEMO aims to publish Draft Business Case 15 December.



| Session | Introduction   | Discovery  | Target State  | Transition Strategy   | Cost & Method   | Business Case   |
|---------|--|--|---|---|---|---|
| Agenda  | <ul style="list-style-type: none"> <li>• Introduce initiatives</li> <li>• Outline workshop plan</li> </ul> | <ul style="list-style-type: none"> <li>• Pain points and benefits</li> <li>• Survey</li> </ul> | <ul style="list-style-type: none"> <li>• Concept walkthrough</li> <li>• Survey</li> </ul> | <ul style="list-style-type: none"> <li>• Transition Strategy</li> <li>• Impacts &amp; Benefits</li> <li>• Survey</li> </ul> | <ul style="list-style-type: none"> <li>• Industry and AEMO costs</li> <li>• Assumptions, options and methodology</li> </ul> | <ul style="list-style-type: none"> <li>• Walkthrough of draft business case</li> <li>• Assessment and completion</li> </ul> |

**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

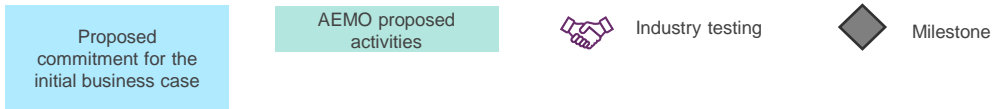
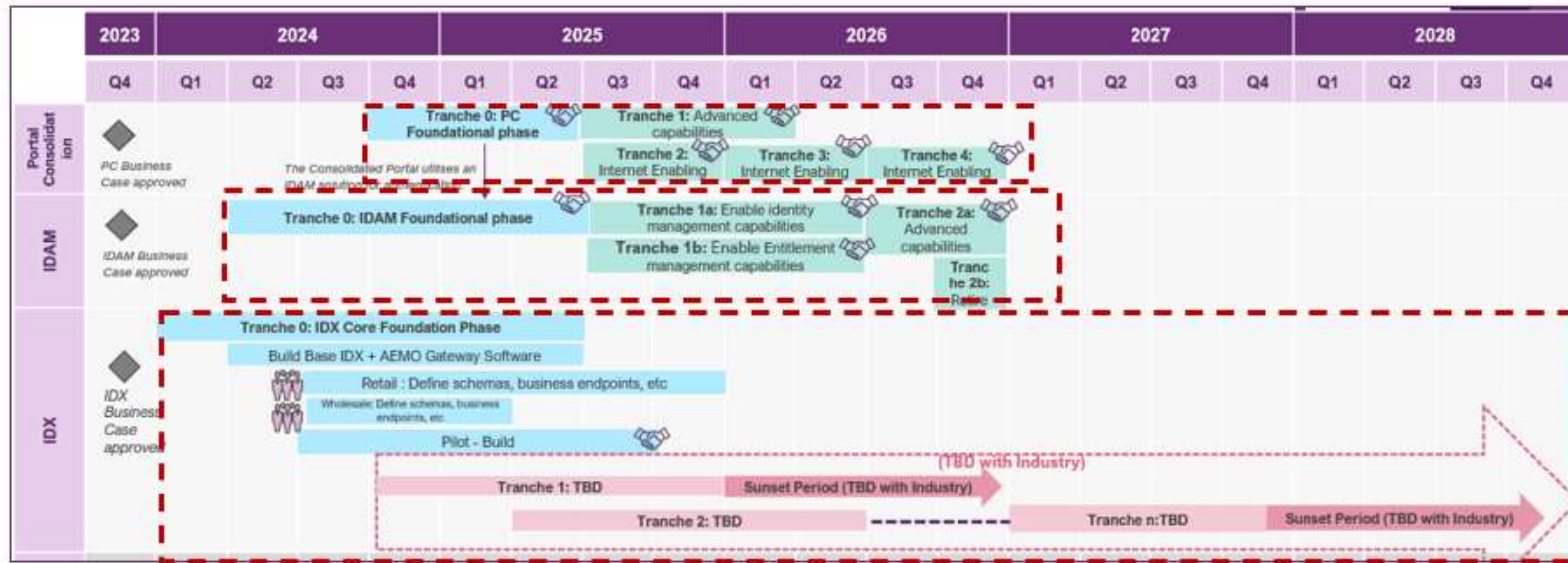
*Foundational capability for energy transition and industry-driven priorities*

- 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 and AEMO pain points defined through the consultation.
- Option 2b reflects a compromised target state suggested by some participants. Does retaining data payloads. Does not fully address industry pain points, residual security risk, and operational and lifecycle costs.



# Recap: Investment Phasing and Considerations for Option 2

- 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).

# Options assessment framework



Views are welcome on the approach to business case assessment.

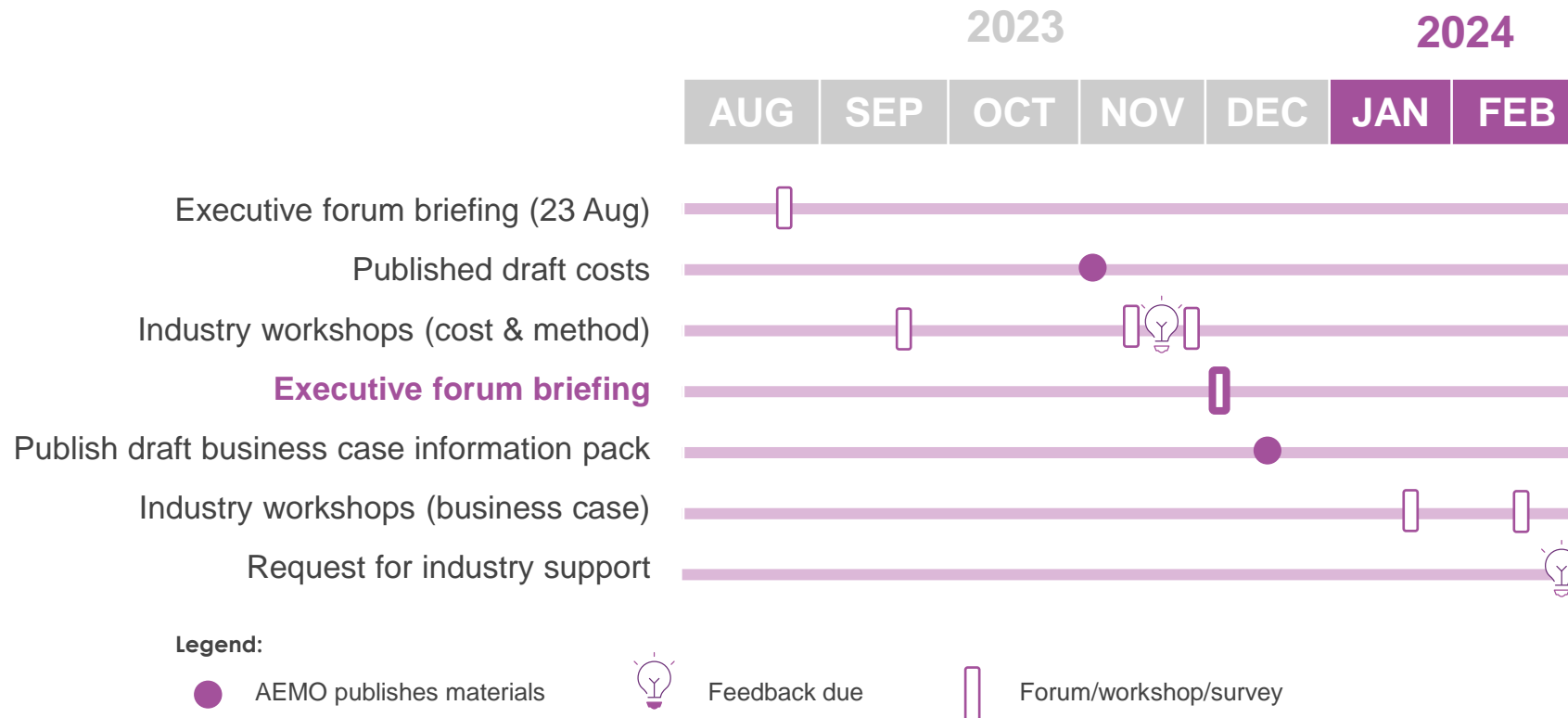
The full draft business case to be published on 8 December include operational and ongoing costs, benefits and risks to inform the options assessment.

| Assessment Categories  | Description   | Assessment Metric                    |
|--|---|--------------------------------------|
| <p><b>Decreased Residual Security Risk</b></p> <ul style="list-style-type: none"> <li>- Attack Surface Area</li> </ul>   | <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><b>Maturity Scale</b><br/>1-5</p> |
| <p><b>Deliverability of Future reforms</b></p> <ul style="list-style-type: none"> <li>- Speed to Market</li> <li>- Realisation of Benefits</li> <li>- Flexibility and Innovation</li> </ul>                        | <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><b>Cost to Deliver</b></p> <ul style="list-style-type: none"> <li>- Immediate Implementation Cost</li> <li>- Cost of delivering future reforms</li> </ul>   | <p>The cost to implement the different options will be assessed along with the cost to deliver future reforms</p>   | <p>\$\$</p>                          |
| <p><b>Operational Cost</b></p> <ul style="list-style-type: none"> <li>- Support and Maintenance</li> <li>- Participant operational cost differential</li> <li>- “Black Swan” Events impact and recovery</li> </ul> | <p>The operational cost for the different options would be assessed</p>   | <p>\$\$</p>                          |

# Intended process - business case

This process is guided by the NEM Reform investment governance framework, agreed with the Reform Delivery Committee 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.



Timing is indicative. Additional engagement with Executive forum members to be informed by industry matters raised.

# Next Steps : Draft Business Case Package

- Consultation remains ongoing.
- **AEMO will publish a package of materials 15 December**; this will form the basis for ongoing consultation in early 2024.
- Opportunity for participants to review industry implementation cost ranges and provide further submission or approaches to extrapolation to better inform the business case.
- Note that implementation costs represent only one dimension of the business case; the full draft package will include operational and ongoing costs, and benefits and risks to complete the options assessment
- The next stage of industry briefings will be scheduled for late January / early February

## Ask of Executive Forum

- Work with your organisation to ensure the right people are involved to review inputs to the business case.
- Consider any feedback on business case elements and process to completion.
- Advise of Executive Forum briefing expectations.

# Beyond the business case

AEMO welcomes Executive Forum 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 the governance process.
- Given the significant industry wide investment in time and effort into the assessment, AEMO will conduct a review of lessons learnt in Q2 2024 following finalisation of the business case.
  - AEMO will invite industry participation and comment into this process.

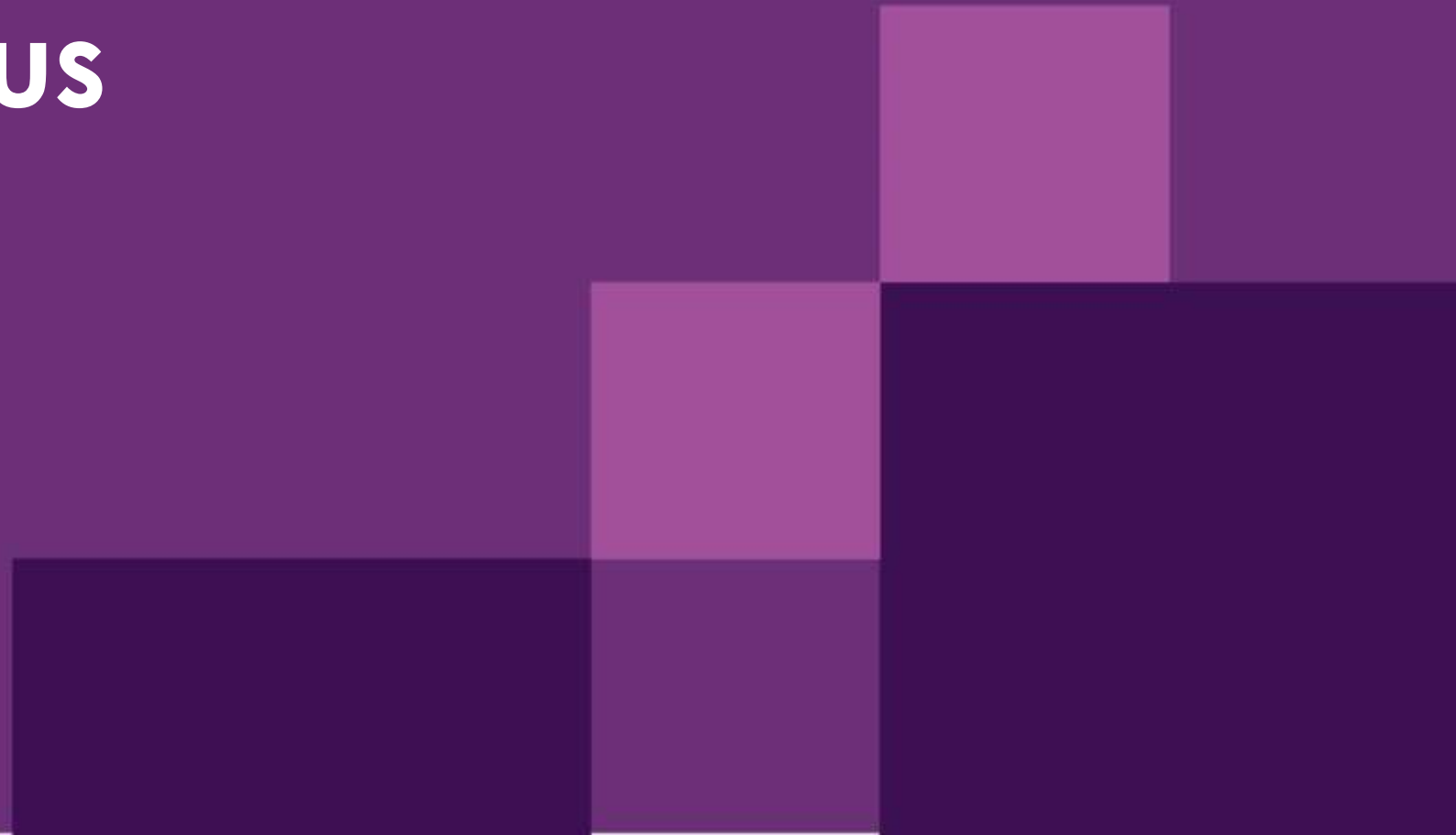
## Likely review points

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

# 6. Overall Program Delivery Status & Cost

Rowena Leung

# Delivery Status



# Program Update



Good progress made in the following areas.

- **2023 draws to a close with successful deployment of November releases**
- **Our attention will now turn to focus on initiatives being delivered in 2024**

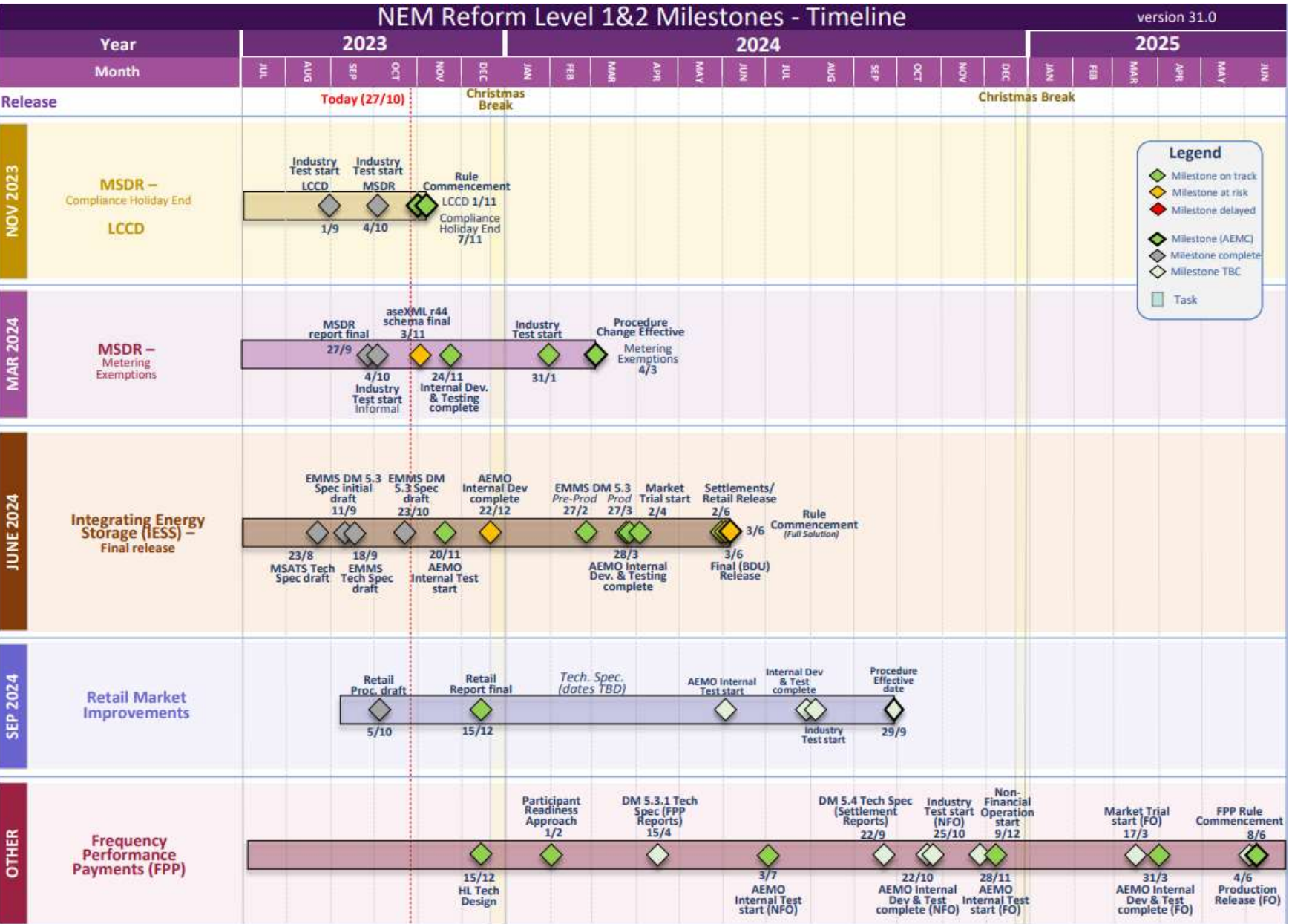
Key areas receiving management attention:

- **IESS June 24:** Overall tracking on schedule. Project status to be reviewed at November checkpoint
- **IDAM/IDX/PC:** Business Case preparation work continues. First round of estimates released 2 Nov. Review workshops scheduled.

| Release         | Initiatives                                | Previous Status | Current Status | Key Points   | Impacted Stakeholders             |
|-----------------|--|-----------------|----------------|--|-----------------------------------|
| NOV-23          | MSDR Compliance                            |                 | Delivered      | Release Successfully Delivered , Changes Effective 1/11 and 7/11   | Retailers, MC and MP/MDP, DNSP    |
|                 | CDR (LCCD)                                 |                 | Delivered      | Release Successfully Delivered, Changes Effective 1/11   | FRMPs, DNSP                       |
| MAR-24          | Metering Exemptions (MSDR)                 |                 |                | Re-baselined with new schedule.Rescheduled to 4 March, includes schema update (3/3). Early release (to pre-prod) of APIs to support participant development, Schema Tech Spec (3/11) rescheduled for ASWG consideration. | Retailers, MC and MP/MDP, DNSP    |
| JUN-24          | Integrating Energy Storage Systems [Final] |                 |                | Overall IESS remains on track. The schedule is tight, overall project status will be reviewed at a November checkpoint. Results from checkpoint will feed into a status update.  | IRPs, NSPs, FRMP, MP/MDP, Vendors |
| SEP-24          | Retail Market Improvements                 | N/A             |                | Proposed scope to include NSLP and metering substitutions ICF, REMP consultation underway. Proposed release date is 29 Sept 2024 to be confirmed via procedure consultation.   | MC, MDP, FRMP, DNSP               |
| DEC-24 & JUN-25 | Frequency Performance Payments             |                 |                | Project progressing to schedule. High level tech design on track for 15 December.  | Generators, Market Customers      |



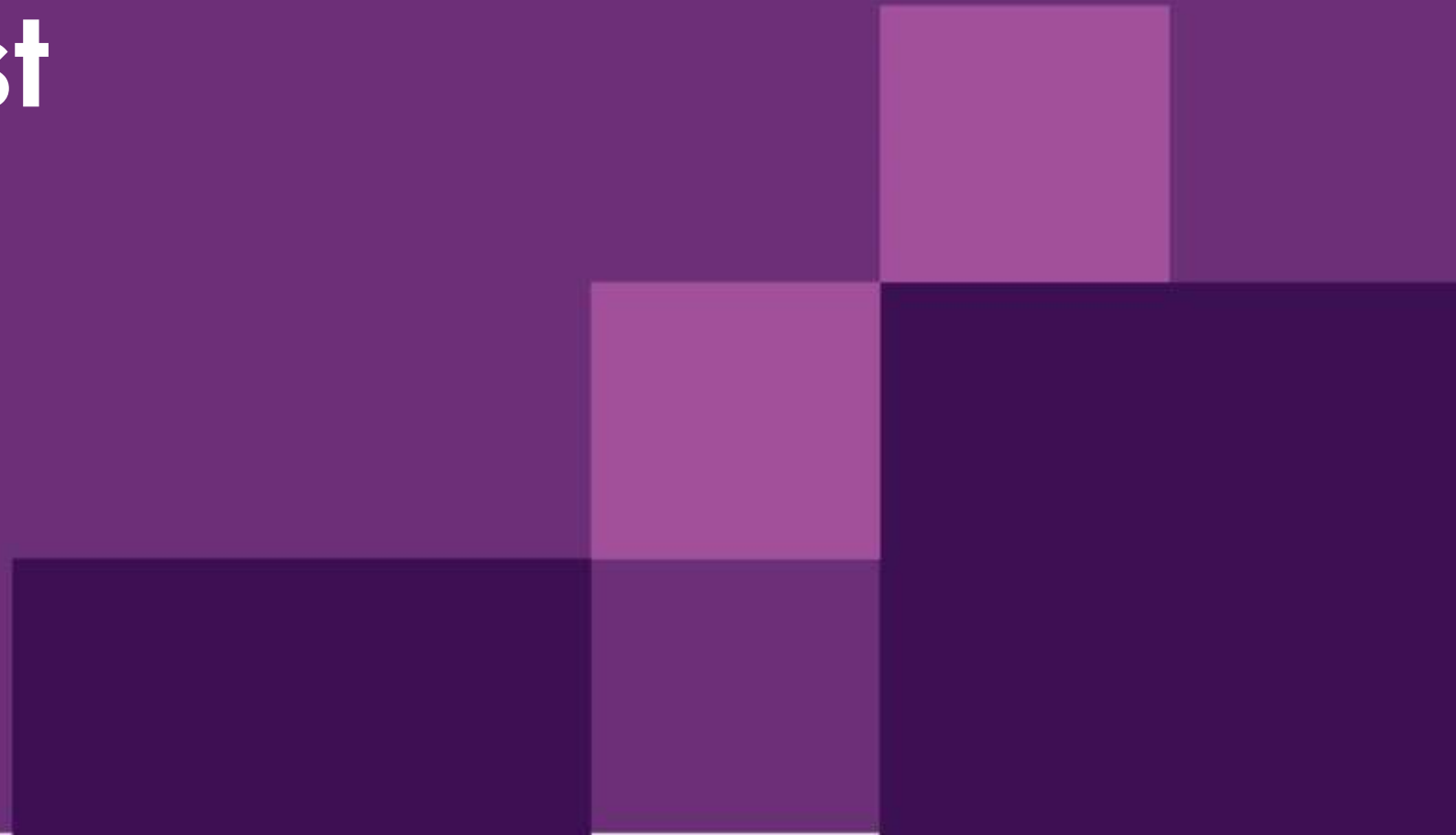
# NEM Reform Level 1&2 Milestones PoaP



**Key call outs:**

- MSDR commenced Industry Testing from 4/10. The Compliance Holiday End Rule effective date is on 7/11.
- The Metering Exemptions internal development and testing of the r44 schema is planned to complete by 24/11. Publication of the final version of the r44 Schema Specification has been delayed to 3/11.
- The LCCD Rule Commencement is on 1/11/23. Industry Testing has concluded on 27/10.
- IESS Project – Internal Development and System Testing is planned to complete during December. Testing of the Retail solution is on track to start in November. The EMMS Data Model 5.3 Spec second draft was published on 23/10.
- FPP Project – the High-Level Technical Design is planned to be available on 15/12.
- Retail Market Improvements – the Retail Report final version is due to be published on 15/12. Planning is in progress.

# Program Cost



# Program costs (as of Q4 2023)

## NEM2025 Gate 1 Business Case (August 2022)

The assessment provided for **updated cost estimates of individual initiatives** and a **whole of life cycle comparison** of two alternative implementation pathways (Regulatory-led and Strategic) over a 10-year period

- The business case:
  - Commits to undertaking mandatory and no regrets initiatives in a timely way.
  - Sets a budget envelope to allow for the full scope the Strategic pathway but imposes implementation and investment disciplines for delivery of initiatives with greater uncertainty
  - Assumes a 40% contingency estimate to account for policy and regulatory uncertainty across the program at the time

## NEM2025 Initiatives (\$m)

| Initiative                         | Gate 1 Business Case<br>(± 40%) | Project Funds Approved<br>(incl. contingency) | Actual Spend to Date | Forecast Estimate at Completion | Variance | Comments |
|------------------------------------|---------------------------------|---|----------------------|---------------------------------|----------|----------|
| Integrating Energy Storage Systems | \$19.3 - \$44.9                 | \$36.9  | \$17.0               | \$39.4                          | -\$2.5   | N/A      |
| Fast Frequency Response            | \$2.5 - \$5.9                   | \$4.8   | \$4.2                | \$4.4                           | \$0.4    | N/A      |
| Increased MT PASA Information      | \$0.9 - \$2.1                   | \$1.8   | \$1.3                | \$1.3                           | \$0.5    | N/A      |
| Frequency Performance Payments     | \$6.9 - \$16.0                  | \$14.2  | \$3.3                | \$13.4                          | \$0.8    | N/A      |

# Program costs (as of Q4 2023)

## NEM2025 Initiatives Continued (\$m)

| Initiative                     | Gate 1 Business Case<br>(± 40%) | Project Funds Approved<br>(incl. contingency) | Actual Spend to Date | Forecast Estimate at Completion | Variance | Comments   |
|--------------------------------|---------------------------------|---|----------------------|---------------------------------|----------|--|
| Identity and Access Management | \$7.6 - \$17.7                  | \$2.8   | \$1.6                | TBD                             | N/A      | Final project funds subject to business case and stage gate approval |
| Industry Data Exchange         | \$7.6 - \$17.7                  | \$2.6   | \$2.1                | TBD                             | N/A      |  |
| Portal Consolidation           | \$7.6 - \$17.7                  | \$0.4   | \$0.3                | TBD                             | N/A      |  |

## Non-NEM2025 Initiatives (\$m)

| Initiative                    | Gate 1 Business Case<br>(± 40%) | Project Funds Approved<br>(incl. contingency) | Actual Spend to Date | Forecast Estimate at Completion | Variance | Comments                    |
|-------------------------------|---------------------------------|---|----------------------|---------------------------------|----------|-----------------------------|
| Metering Standing Data Review | N/A                             | \$4.3   | \$4.1                | \$4.4                           | -\$0.1   | Additional testing required |
| Consumer Data Right           | N/A                             | \$6.2   | \$5.1                | \$5.3                           | \$0.9    | N/A                         |
| Stand Alone Power Systems     | N/A                             | \$3.8   | \$3.4                | \$3.8                           | \$0.0    | N/A                         |
| B2B v3.8 & Other Retail ICFs  | N/A                             | \$1.2   | \$1.1                | \$1.2                           | \$0.0    | N/A                         |

# 7. Other Business & Meeting Close



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



[NEM Reform Executive Forum](#)



# Upcoming engagements

| January |    |    |    |    |    |    |
|---------|----|----|----|----|----|----|
| M       | T  | W  | T  | F  | S  | S  |
| 1       | 2  | 3  | 4  | 5  | 6  | 7  |
| 8       | 9  | 10 | 11 | 12 | 13 | 14 |
| 15      | 16 | 17 | 18 | 19 | 20 | 21 |
| 22      | 23 | 24 | 25 | 26 | 27 | 28 |
| 29      | 30 | 31 |    |    |    |    |

| February |    |    |    |    |    |    |
|----------|----|----|----|----|----|----|
| M        | T  | W  | T  | F  | S  | S  |
|          |    |    | 1  | 2  | 3  | 4  |
| 5        | 6  | 7  | 8  | 9  | 10 | 11 |
| 12       | 13 | 14 | 15 | 16 | 17 | 18 |
| 19       | 20 | 21 | 22 | 23 | 24 | 25 |
| 26       | 27 | 28 | 29 |    |    |    |

| March |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|
| M     | T  | W  | T  | F  | S  | S  |
|       |    |    |    | 1  | 2  | 3  |
| 4     | 5  | 6  | 7  | 8  | 9  | 10 |
| 11    | 12 | 13 | 14 | 15 | 16 | 17 |
| 18    | 19 | 20 | 21 | 22 | 23 | 24 |
| 25    | 26 | 27 | 28 | 29 | 30 | 31 |

| April |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|
| M     | T  | W  | T  | F  | S  | S  |
| 1     | 2  | 3  | 4  | 5  | 6  | 7  |
| 8     | 9  | 10 | 11 | 12 | 13 | 14 |
| 15    | 16 | 17 | 18 | 19 | 20 | 21 |
| 22    | 23 | 24 | 25 | 26 | 27 | 28 |
| 29    | 30 |    |    |    |    |    |

| NEM Reform Program Committees/Forums             |  |
|--|--|
| Executive Fourm                                  |  |
| Reform Delivery Committee                        |  |
| Reform Delivery Committee Collaborative Workshop |  |
| Program Consultative Forum                       |  |
| Electricity Wholesale Consultative Fourm         |  |
| Implementation Forum                             |  |
| Industry Testing Working Group                   |  |

| Other Forums                          |  |
|---------------------------------------|--|
| Electricity Retail Consultative Forum |  |

| Other                          |  |
|--------------------------------|--|
| National Public Holiday        |  |
| State/Territory Public Holiday |  |

Note: All NEM Reform related committees, forums and working group invitations for CY2024 have been issued and are referenced on [AEMO's industry calendar](#).

# 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>





For more information visit

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