NEM Reform Program Consultative Forum

Meeting #17
10 April 2024

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

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 and present.

1. Welcome

Agenda

#	Time	Topic	Presenter
1	1:00-1:05pm	**Welcome**	Chris Muffett
2	1:05-1:10pm	**Actions & Feedback from Previous Meeting**	David Reynolds
3	1:10-1:25pm	**Program & Release Update** • Program status • Industry Risk Register	• Rowena Leung • Greg Minney • David Reynolds
4	1:25-1:45pm	**Spotlight** • IESS Update – • Post implementation reviews	• Greg Minney • Emily Brodie / Greg Minney
5	1:45-2:20pm	**NEM Reform Initiative Updates** • June 2025 – FPP • Foundational & Strategic Initiatives - IDX IDAM PC • Retail Market Improvements September / November Release • Enhanced reserve information • SCADA lite • Improving Security frameworks	• Oliver Derum • Andrew Bell • Greg Minney • Oliver Derum • Luke Barlow • Carla Ziser

#	Time	Topic	Presenter
6	2:20-2:35pm	**NEM Reform – Forward Plan** • Unlocking CER Benefits through Flexible Trading • Accelerated smart meter rollout (Metering Services Review)	Meghan Bibby / Greg Minney
8	2:35-2:50pm	**NEM Reform Stakeholder Update** • Engagement Uplift • Upcoming Engagements	• Ulrika Lindholm • For Noting
9	2:50-3:00pm	**General Questions and Other Business**	Chris Muffett

Appendix A:
Competition law meeting protocol

Appendix B:
NEM Reform program Engagement, Planning, Delivery and Readiness.

"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. Actions & Feedback from Previous Meeting

Actions

(Item = Meeting # – Agenda # – Reference)

Item	Topic	Action	Responsible	Status
16.2.0.1	Actions & feedback from previous meeting	AEMO share Sparse Data Model that will be discussed at upcoming MSUG meetings.	AEMO	Closed Refer to following slide
13.5.0.1	NEM Reform Program Review	AEMO to develop: 1. an industry survey on the year past; and 2. ways that the program can improve for the year ahead.	AEMO	Closed (refer to agenda item 7)

Action item 16.2.0.1

- Background:
  - Decision on transition to SPARSE Data model for key EMMS tables consulted and agreed with MSUG June 2023 – EMMS Data Model 5.2.
  - Transition timeframe established – 18 Months – for Participant implementation
  - Clarification requests raised at PCF and Implementation Forum

- NEM Reform Actions:
  - Item added to MSUG agenda – to support further participant transition planning
  - Final planned transition date confirmed 30th November – updated on Tech Spec Portal

- Issue highlights visibility to planned activities / requirements beyond timeframe of individual initiative
  - AEMO will engage Implementation Forum to highlight known milestones / activities outside of individual initiative timeframes (e.g. pre-prod refresh, completion of transition timeframes)

3. Program & Release Update

Program Update

Current progress:

- Overall program is progressing well, key focus area remains with IESS in lead up to June go-live.

- **IESS:** Market Trial underway.

- 2024 program locked down.

- Planning and project initiation underway for post 2024 committed initiatives, including HLID development for Unlocking CER benefits through flexible Trading

Key areas receiving management attention:

- **IESS June 24:** Continues to make good progress towards scheduled go-lives, rated Amber. AEMO Internal Testing overlap with Market Trial execution has extended beyond completion milestone. Issue resolution being prioritised to maintain market trial progress and dependency for deployment of BDU capability
  2025 / 2026 Initiatives (including IDAM, IDX and PC): Mobilisation of project resources to conduct preparation and design activities in 2024 for initiatives scheduled for implementation in 2025 and 2026; further information in Agenda Item 5.

Release	Initiatives	Previous Status	Current Status	Key Points	Impacted Stakeholders
JUN-24	Integrating Energy Storage Systems [Final]	🟧	🟧	Overall Status Amber, Project risk increased to reflect status of Internal Testing milestone for BDU capability (now Red). A recovery plan to prioritise key issues to support BDU participant readiness and meet deployment criteria is underway. Market Trial execution commenced 3rd April, with IRP Transition and Settlement scenarios. Final readiness checkpoint to be conducted by 3rd May with consideration of contingency options for BDU operation.	IRPs, NSPs, FRMP, MP/MDP, Vendors
OCT-24	SCADA Lite	🟧	🟧	Proof of Concept timing extended, Implementation activities and schedule confirmed for external milestone and progress reporting.	DRSP
SEP-24 / NOV-24	Retail Market Improvements	🟩	🟩	Scope and Procedure effective dates NSLP (29th Sept), Metering Substitutions (4th November) confirmed. Project on-track	MC, MDP, FRMP, DNSP
DEC-24 & JUN-25	Frequency Performance Payments	🟩	🟩	AEMO build for in progress and on track. Release of Initial Tech spec to support FPP reporting on track for 15th April.	Generators, Market Customers
N/A	Enhanced Reserve information (ERI)	N/A	N/A	Project establishment and participant engagement planning underway for Enhanced Reserve Information.	Generators, grid-scale batteries
N/A	Improving Security Frameworks (ISF)	N/A	N/A	Project establishment and participant engagement planning underway for Improving Security Frameworks.	

NEM Reform Level 1&2 Milestones PoaP

➢ The Metering Exemptions solution, including r44 aseXML schema has been successfully deployed. The Procedure change has been effective from 4/3.

➢ IESS Project – Internal Testing has not completed on schedule. The Market Trial commenced on 3/4. The EMMS Data Model 5.3 was deployed into Pre-Production on 13/3 and is planned for deployment into Prod. on 10/4.

➢ FPP Project – Development & Testing continues for the FPP solution. The DM 5.4 Tech Spec (FPP Reports) is on track for release on 15/4.

➢ Retail Market Improvements – The initial MSATS Tech. Spec was published on 2/4. Build activity is due to commence.

➢ SCADA Lite Project - Planning has completed. Project Delivery milestones have been confirmed.

➢ *New projects* – Improving Security Frameworks and Enhancing Reserve Information, to undergo planning activities to substantiate milestones and deliverables

10
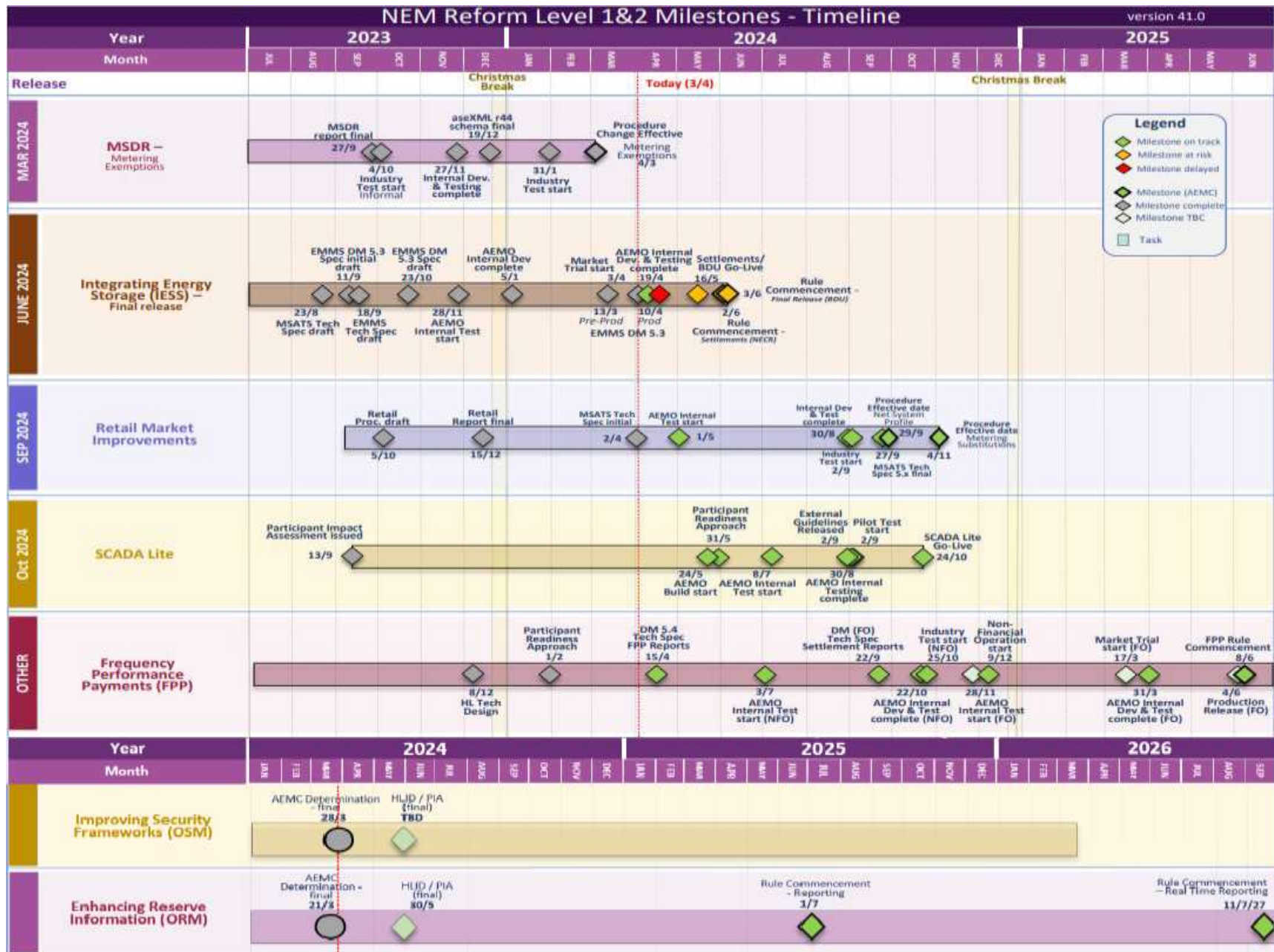
Industry Risk Register (as of March 2024)

AEMO provides participants with visibility of key material risks associated with the delivery of the NEM Reform Program through maintaining an external Industry Risk Register
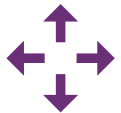
Next steps

AEMO reviews the industry risk register quarterly at the PCF. The review includes consideration of risk descriptions, risk ratings, risk trend, impact and mitigation actions in addition to consideration of new and emerging risks.

The Industry Risks and Issues register has been updated to provide an AEMO program view of Industry Risk

Our review proposes updates to Risk titles, descriptions controls and mitigations, risk trend and proposes the addition of one new risk.

A copy of the risk register has been provided to participants for review.

Next steps

Participants to provide feedback on the industry risk register by Friday 18 April 2024. Participants can also provide initial feedback in this session.

AEMO will incorporate participant feedback into version 4 of the risk register and publish the register on AEMOs website by 25 April 2024.

Feedback on the risk register can be submitted to NEMReform@aemo.com.au

The next review of the industry risk register will be at the July 2024 PCF.

Risks will continue to be reported by exception at other PCF sessions.

Industry Risk Register (as of April 2024)

AEMO has reviewed the industry risk register to provide a program view of risk. Proposed summary changes are outlined below in red.

Industry Risk Register Version 4 (Summary changes)

| Risk Category	Risk I.D.	Risk title	Residual Risk Rating	Trend	Proposed changes following AMEO review
Volume of regulatory change	R01.1	Delivery congestion – ~~Near term~~ 2023	Low	↘	*Risk title* updated & Risk closed.
	R01.2	Delivery congestion – 2025 - 2026	Medium-High	→	*Risk title* updated; *Inherent Risk* updated (likelihood from possible to likely) *Residual Risk* remains unchanged.
	R01.3	Sub-optimal delivery outcomes	Medium-High	→	*Current controls / mitigation* updated to include industry action.
	R01.4	Delivery congestion – 2024	Medium-High	→	New risk added to reflect Delivery congestion risk for 2024.
AEMO Delivery Program	R02.1	AEMO Resourcing	Medium-High	↘ →	*Trend* updated, *Risk description* updated to include a view of resourcing for committed initiatives and candidate initiatives, *Current controls / mitigation* updated adding HLID, informed go live & AEMO action to stand up projects quickly. *Comments* updated to reflect AEMO perspective on risk.
Participant development and readiness	R03.1	Participant development timeframes	Medium-High	→	*Current controls / mitigation* updated to add additional HLID mitigation action.
	R03.2	Industry Resourcing	Medium-High	→	*Current controls / mitigation* updated to add mobilisation activities underway at the executive level.
	R03.3	Emerging Participant Engagement	Low-Medium	→	*Current controls / mitigation* updated to include activities underway to engage and support emerging participants.
	R03.4	Sub-optimal delivery outcomes	Medium-High	→	*Comments* updated to note review and refinement (if necessary) of HLID process currently underway.
	R03.5	Participant investment and implementation	Medium-High	→	*Current controls / mitigation* updated to include clarification on how rules and non-rules initiatives should be managed.
	R03.6	Extended participant engagement	Medium-High	→	*Current controls / mitigation* updated to outline AEMO's continued collaborative approach to implementation planning for F&S.

4. Spotlight

June 2024 - IESS Update

Emily Brodie / Greg Minney

1. Release update

IESS June 2024 Release - Level 1 & 2 (External) — V1.1
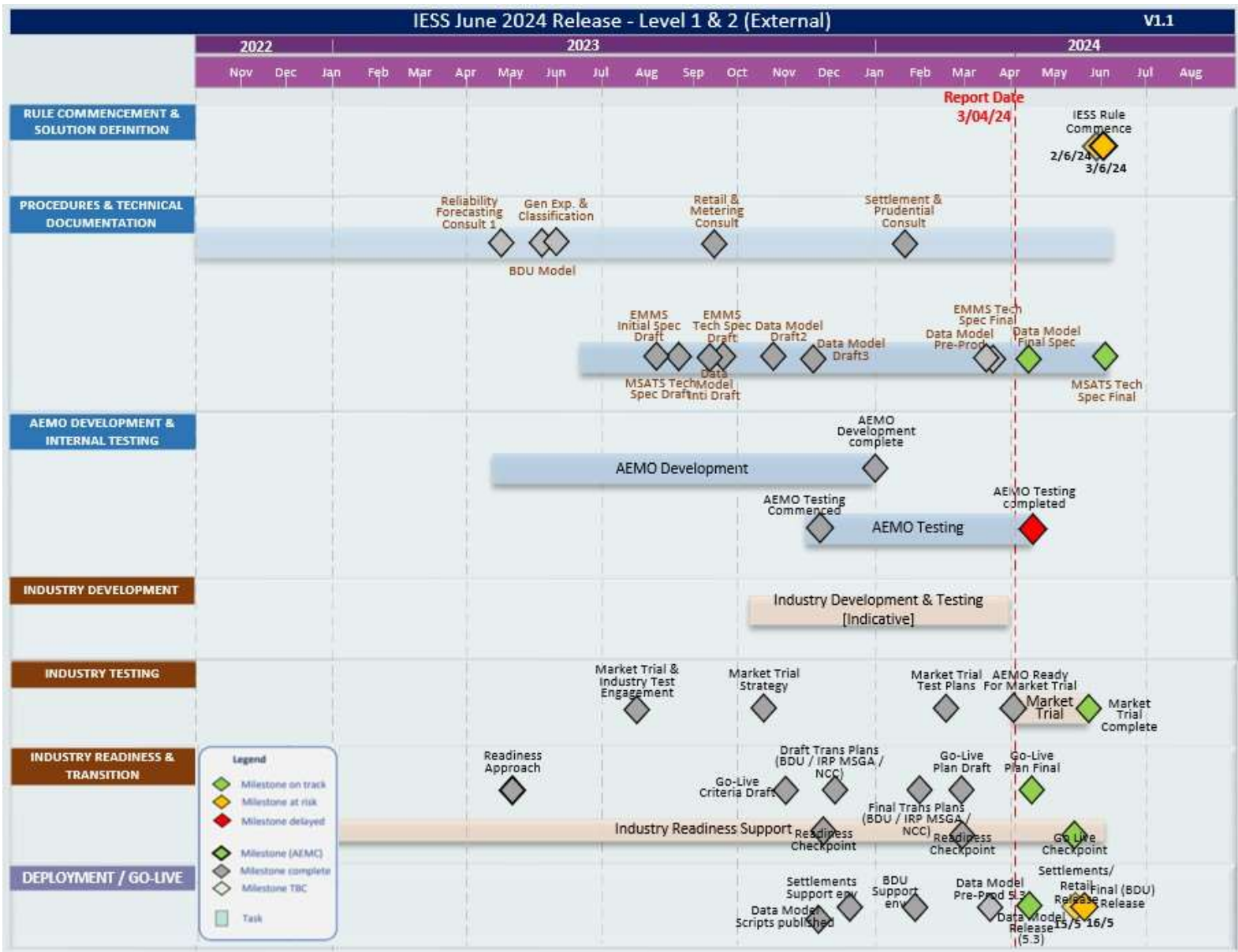
RELEASE COMMENTARY

- **Overall project status** is rated **AMBER.** This recognises no schedule contingency for complex AEMO delivery program. Interim milestones and progress will continue to be tightly managed against go-live criteria.
- **AEMO internal testing** underway with issues being managed against tight overall schedule, with completion of scheduling components now 19th April overlapping Market trial. Defect fixes are prioritised to minimise participant execution impact Completion Milestone RED . **AEMO readiness for Market Trial** commenced on Wed 03 April.
- IRP and Settlement scenarios to commence with 1 day delay. BDU transition timings and scenarios being established with individual impacted participants.
- **Procedure consultations** in progress via EWCF/ ERCF, on track Only remaining are minor and administrative.

Tech specs on track:
- Version of all Tech Specs published – MSATS(12/3), EMMS (18/3), Latest Tech Spec and Data Model updates align with pre-prod release for Data Model 5.3 (Wed 13 Mar). Further releases for issue resolution only

Industry testing:
- Daily market trial Q&A sessions in place
- IESS Market Trial Plan v1.1 re-issued Tue 02 Apr

Industry readiness:
- 3x IESS transition plans – finals published Wed 31 Jan.
- Finalisation of BDU Transition timings in progress via individual participant discussions
- Draft Industry go-live plan final due scheduled for 19th April
- Final IESS Readiness checkpoint to be communicated Fri 03 May, ongoing monitoring of Market Trial performance from contingency aspect

IESS June Milestone Table - Past

	IESS Project - Level 1 & 2 Milestones (External)						
Level	Milestone ID	Milestone	Target Date	Expected Date	RAG	Tentative / Confirmed	
Level 1	IES-100	AEMC Final Determination Published (Integrating energy storage systems into the NEM)	2-Dec-2021	2-Dec-2021	Complete		
Level 2	IES-110	IESS High level Design final	7-Jul-2022	7-Jul-2022	Complete		
Level 2	IES-210	Reliability Forecasting Consultation 1	28-Apr-2023	28-Apr-2023	Complete		
Level 1	IES-120	BDU Model Finalised	31-May-2023	31-May-2023	Complete		
Level 1	IES-211	Guide to Gen. Exp. & Classification - Final documents published	1-Jun-2023	1-Jun-2023	Complete		
Level 2	IES-300	MSATS Technical Specification draft available	7-Aug-2023	23-Aug-2023	Complete		
Level 2	IES-301	EMMS Data Model 5.3 specification - Initial Draft	11-Sep-2023	11-Sep-2023	Complete		
Level 2	IES-302	EMMS June 24 Technical Specification (Draft)	18-Sep-2023	18-Sep-2023	Complete		
Level 1	IES-213	Retail Metering Procedures Final Published	18-Sep-2023	18-Sep-2023	Complete		
Level 2	IES-303	Industry Test and Market Trials Strategy Draft published	22-Sep-2023	22-Sep-2023	Complete		
Level 2	IES-304	EMMS Data Model 5.3 specification - Draft 2	9-Oct-2023	23-Oct-2023	Complete		
Level 2	IES-305	Industry Test and Market Trials Strategy complete	17-Oct-2023	17-Oct-2023	Complete		
Level 2	IES-306	Go-Live Criteria draft/establish	30-Oct-2023	30-Oct-2023	Complete		
Level 2	IES-307	EMMS Data Model 5.3 specification - Draft 3	13-Nov-2023	20-Nov-2023	Complete		
Level 2	IES-308	AEMO Internal Testing commenced	20-Nov-2023	28-Nov-2023	Complete		
Level 2	IES-309	Draft Data Model 5.3 scripts published	22-Nov-2023	22-Nov-2023	Complete		
Level 2	IES-310	Initiative Readiness Checkpoint	28-Nov-2023	28-Nov-2023	Complete		
Level 2	IES-311	Transition Plan Draft (BDU / IRP MSGA / NCC)	15-Dec-2023	1-Dec-2023	Complete		
Level 2	IES-312	Settlements Participant Support Environment available	15-Dec-2023	15-Dec-2023	Complete		
Level 1	IES-217	AEMO Development complete	22-Dec-2023	5-Jan-2024	Complete		
Level 2	IES-313	BDU Participant Development Support Environment available	22-Jan-2024	24-Jan-2024	Complete	Confirmed	
Level 1	IES-314	Settlements & Prudentials Procedures published	29-Jan-2024	25-Jan-2024	Complete	Confirmed	
Level 2	IES-315	Transition Plan Final (BDU / IRP MSGA / NCC)	31-Jan-2024	31-Jan-2024	Complete	Confirmed	
Level 2	IES-316	Market Trial Test Plan complete	16-Feb-2024	16-Feb-2024	Complete	Confirmed	
Level 2	IES-317	Industry Go-Live Plan Draft published	26-Feb-2024		Complete	Confirmed	
Level 1	IES-318	Initiative Readiness Checkpoint	1-Mar-2024	1-Mar-2024	Complete	Confirmed	
Level 2	IES-218	EMMS Data Model 5.3 Released to Pre-Production	27-Feb-2024	13-Mar-2024	Complete	Confirmed	Complete this period

IESS June Milestone Table: Future

		IESS Project - Level 1 & 2 Milestones (External)					
Level	Milestone ID	Milestone	Target Date	Expected Date	RAG	Tentative / Confirmed	
Level 2	IES-218	EMMS Data Model 5.3 Released to Pre-Production	27-Feb-2024	13-Mar-2024	Complete	Confirmed	Complete this period
Level 2	IES-322	EMMS Technical Specification final	2-Apr-2024	18-Mar-2024	Complete	Confirmed	Complete this period
Level 2	IES-107	AEMO Development & Testing complete	28-Mar-2024	19-Apr-2024	Red	Confirmed	Milestone has not been met, recovery action in progress to complete required testing by 19th April to support production deployment of BDU required capability for rule commencement.
Level 2	IES-320	AEMO Ready for Market Trial	2-Apr-2024	3-Apr-2024	Complete	Confirmed	
Level 2	IES-321	MSATS Technical Specification final available	2-Apr-2024	3-Jun-2024	Green	Confirmed	
Level 1	IES-108	Market Trial start	2-Apr-2024	3-Apr-2024	Complete	Confirmed	Delayed by one day due to technical uplift
Level 1	IES-319	EMMS Data Model 5.3 final specification available	12-Mar-2024	10-Apr-2024	Green	Confirmed	
Level 2	IES-219	EMMS Data Model 5.3 Released to Production	10-Apr-2024		Green	Confirmed	
Level 2	IES-323	Settlement Certification complete	19-Apr-2024	29-Apr-2024	Green	Confirmed	Minor schedule update, Solution Readiness not impacted, issues if any to be remediated prior go-live decision,
Level 2	IES-324	Industry Go-Live Plan Final published	19-Apr-2024		Green	Confirmed	
Level 2	IES-325	Go-Live Checkpoint	1-May-2024		Green	Confirmed	
Level 2	IES-326	Market Trial complete	24-May-2024		Green	Confirmed	
Level 2	IES-220	IESS Settlements Go-Live	2-Jun-2024	15-May-2024	Amber	Confirmed	Deployment of code prior to rule commencement. Reflects current scheduling. Amber reflection of overall schedule
Level 1	IES-327	Rule Commencement Date - Settlements [NECR]	2-Jun-2024		Amber	Confirmed	Reflects compressed schedule
Level 2	IES-221	IESS BDU Go-Live	3-Jun-2024	16-May-2024	Amber	Confirmed	Deployment of code prior to rule commencement. Reflects current scheduling. Amber reflection of overall schedule
Level 1	IES-109	IESS Final Release [BDU] - Rule Commencement	3-Jun-2024		Amber	Confirmed	Reflects compressed schedule

June 2024: Integrating Energy Storage Systems

Key Date(s)	• Settlements / NECR go-live Sun 02 Jun 2024 • IRP/BDU go-live Mon 03 Jun 2024
Affected stakeholders	• Changes to settlement data tables and non-energy cost recovery framework (NECR): Financially responsible market participants • Introduction of IRP participant type and bi-directional unit (BDU) bidding, scheduling and participation: BDU participants, SGAs, bidding system vendors/developers
Industry testing	• Market trial and industry testing, participant development support environment
Overall status	• **AMBER**: On schedule. Overall amber remains due to tight testing schedules, with increased risk due to completion .

Procedures	Technical documentation	AEMO development & internal testing	Industry readiness & transition	Industry testing	Deployment & go-live
Final 'standard' procedure consultation for IESS is complete. Only 'minor and administrative' consultations remain. **Upcoming procedure consultations (April)** • National Connections documents • Settlement documents • Ops Planning documents	**Changes to:** • MSATS technical specification • EMMS technical specification • MMS Data model **Milestones** for initial, draft and final documentation confirmed (see project schedule). Updates to Tech Specs published monthly as required for identified changes	• AEMO development for Participant-facing capability completed. • Development of elements of internal capability continuing. • Internal testing underway with issues being managed against tight schedule contributing to Red rating on completion milestone for Internal testing	• IESS go-live criteria finalised. • Contingency approaches published and monitoring in place. • Settlement, BDU and IRP participant briefing sessions scheduled or conducted. • Final IESS transition plans complete and published Wed 31 Jan. • Final go-live plan to be published Fri 19 Apr.	**Participant development support environment**: • Settlements opened Fri 15 Dec. • BDU bidding & dispatch opened Mon 22 Jan. **IESS Market Trial**: • Updated Final Market trial plan (v1.1) published Tue 02 Apr. • Pre-prod data refresh to support Market Trial completed. • Market Trial started Wed 03 Apr. • Daily market trial stand ups in place.	**Go-live criteria & checkpoints** • Readiness and go-live criteria established • Regular **readiness checkpoints** established. → See following slide **Data model**: • Pre-prod deployment Wed 13 Mar to allow for pre-prod refresh. • Prod deployment Wed 10 Apr. **Industry Go-Live plan**: • Feedback received • Final go-live plan to be published Fri 19 Apr.

RELEVANT LINKS

AEMC | IESS rule	AEMC | Implementing IESS rule	AEMO | IESS procedure change program	AEMO | IESS participant toolkit

Go-live criteria update: As at 02 Apr 2024

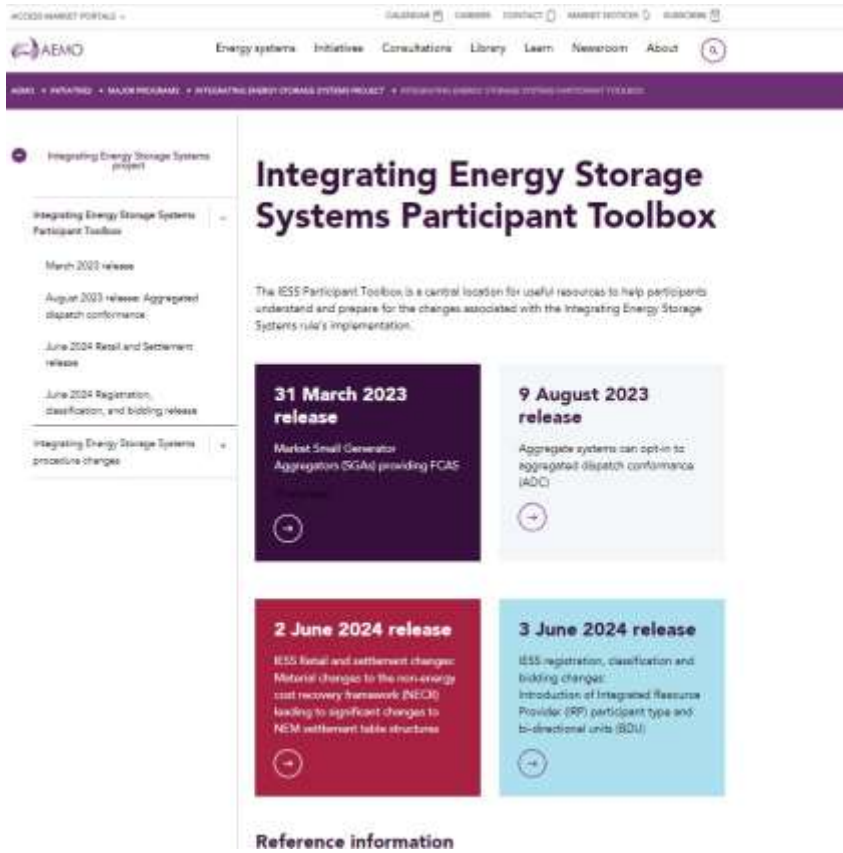| INITIATIVE	IESS Sun 02 Jun 2024	IESS Mon 03 Jun 2024	SUMMARY STATUS: AMBER (as at Wed 03 April 2024)
	• New non-energy cost recovery (NECR) framework • Associated settlement database structure updates • New IRP registration category • New/updated NCC	• BDU classification and participation	Overall track against schedule , however: • Risk to completion of internal testing and defect resolution prior to BDU deployment milestone • Market Trial has commenced on schedule for IRP and NECR / Settlements Phases. • Market Trial BDU transition scenarios rescheduled for cutover capacity.

GO-LIVE CRITERIA			
AEMO	**AEMO solution** tested in-line with requirements for: • NEM operation incorporating new NECR framework from rule commencement date • Providing for new IRP registration category	• **AEMO solution** tested in-line with requirements for enabling scheduled batteries to participate as a single DUID in energy and FCAS markets	• IRP registration and NECR /settlement framework capability proceeding to schedule, • Dispatch and Bidding Internal Testing is delayed, regression and progression defects identified that will need to be addressed <u>during</u> the trial period to maintain production deployment milestone for BDU capability. • Required capability needed for Market Trial start has been deployed with IRP and Settlement scenarios in progress • Commencement of BDU scenarios replanned in line with Cutover Capacity and participant preference. • **NOTE**: Known defects have carried over from UAT. Status to be confirmed with affected participants prior to relevant test phase/s.
	AEMO business: • Ready to operate new NECR framework • Ready to register IRPs • Has re-registered SGAs as IRPs	• **AEMO business** ready to support BDU operations in the NEM	• **AEMO business readiness :** Preparations on schedule to support market trial and full operation. • **NEM Procedures:** Final 'standard' procedure consultation for IESS is complete. Only 'minor and administrative' consultations remain and are on track.
INDUSTRY	• Participant readiness activity is not a pre-requisite for go-live. • However, to ensure that NEM operations remain uninterrupted and reliable, AEMO will monitor for any systemic issue that materially affects NEM operational integrity.	Participant readiness activity is not a pre-requisite for go-live, noting: • BDU transition period to 03 Mar 2025 means that there is no industry readiness requirement for "day 1" (rule commencement) • Participants can cutover on or near rule commencement date if they choose to and are ready	• **IESS settlements**: AEMO has monitored for any "systemic impact to NEM operational integrity" via one-to-one conversations with participants and a call for participants to raise any issues. No such systemic impact has been identified by AEMO or raised by participants. • **IESS IRP/BDU:** Transition timings have been agreed and confirmed prior to 3 June – staggered deployment provides readiness flexibility. There is no go-live dependency from the participants' BDU implementation activities.
CONTINGENCY	Contingency approaches developed and contingency actions proposed		**Contingency approaches:** Agreed contingencies being monitored. Trigger point for BDU transition to be assessed during Market Trial. Contingencies will be monitored and reviewed up to the June go-live dates.

IESS Market Trial

- Market trials have commenced (started Wed 03 Apr)
- Verbal update will be provided in this meeting on progress, status and any key issues.

IESS contact and information

IESS project information	Participant toolbox
IESS market procedure updates	Indicative change program
Tech spec information	IT change & release management
General IESS queries	iess@aemo.com.au
IESS market trial queries	NEMReform@aemo.com.au

2023 Post Implementation Review

Objectives

- To identify the key learnings and areas for improvement which can be applied across the delivery of future initiatives under the NEM Reform Program

- To consider implementation of the reform against the broader policy or reform objectives, benefits and/or assumptions defined at the time a final rule or policy is made and whether those objectives and benefits have been realised

- At the DEC 2023 Executive Forum, AEMO provided its preliminary thoughts on how the implementation of initiatives went in 2023 and whether policy objectives were met

- **AEMO has published the first of these reviews on the Increased MT PASA Information initiative delivered in October 2023**

- AEMO will publish its second review on the Fast Frequency Response initiative also delivered in October 2023 in the coming weeks

- Each review provides for a more detailed assessment taking into consideration **timelines, scope, budget, AEMO and industry readiness**, as well as the **reform in action and assessed benefits** at the time of making a final rule determination or final policy decision

AEMO intend to complete similar assessments for the **Stand-alone Power Systems** and **Integrated Energy Storage System** reform initiatives in the coming months

NEM Reform Program Post Implementation Review

Increased MT PASA Information
March 2024

NEM Reform Program Post Implementation Review

Fast Frequency Response
March 2024

PIR – Increased MT PASA Information available here
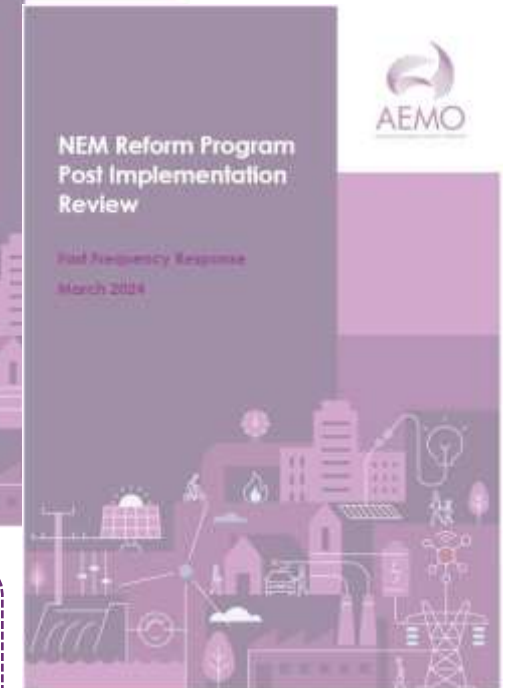
Example: Increased MT PASA Information

NEM Reform Program Post Implementation Review

Increased MT PASA Information
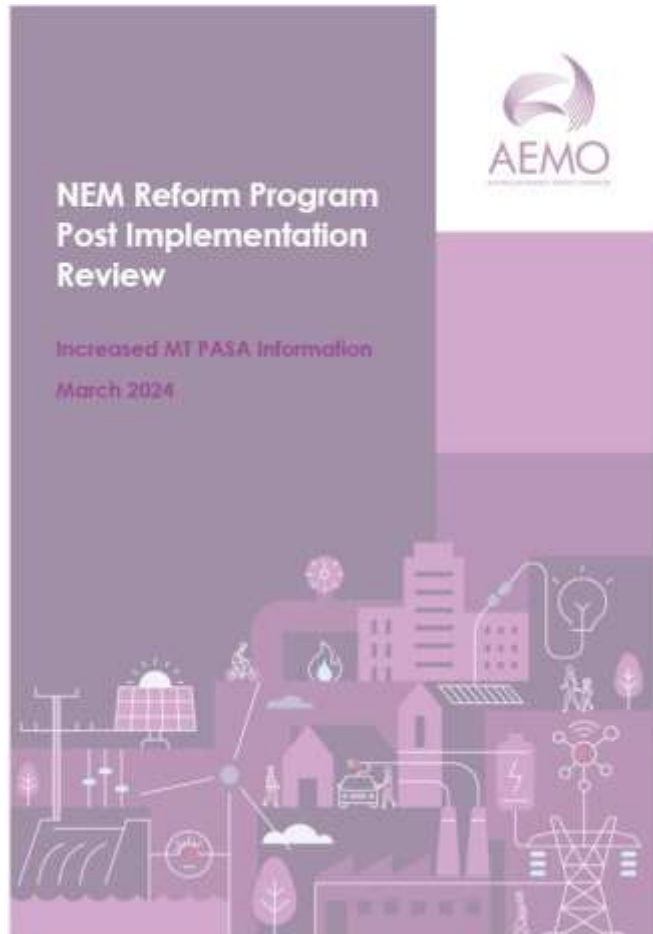
March 2024

SUMMARY FINDINGS

- The initiative was implemented without delays throughout the delivery lifecycle and within the allocated budget

- Extensive engagement between AEMO and industry throughout the lifecycle of the project resulted in the smooth implementation of the initiative. This included early engagement of the testing team to clarify participants' understanding as well as numerous AEMO demonstrations and interactive sessions to stakeholders on the user interface to minimise issues

- Medium-term reliability and security problems associated with a lack of consistent, standardised, public information about generator availability have been addressed through the implementation of the initiative with improved functionality now afforded to participants via an API solution which subsequently minimises implementation costs for participants who can utilise AEMO's forward facing Industry Data Exchange (IDX) approach

- The additional information can provide more informed and efficient decision making by participants and policy makers – for example in the assessment of the future reliability impacts

In drafting its assessment, AEMO note (i) this reform is part of a broader package defined by the ESB as part of the Resource Adequacy Mechanism stream; and (ii) the benefits of certain reforms may not be apparent from the outset and instead take time to develop or embed within the operation of the market, or participants behaviours. For this reason, a subsequent assessment at a later point in time may be warranted.

5. NEM Reform Initiative Updates

June 2025 – FPP

Oliver Derum
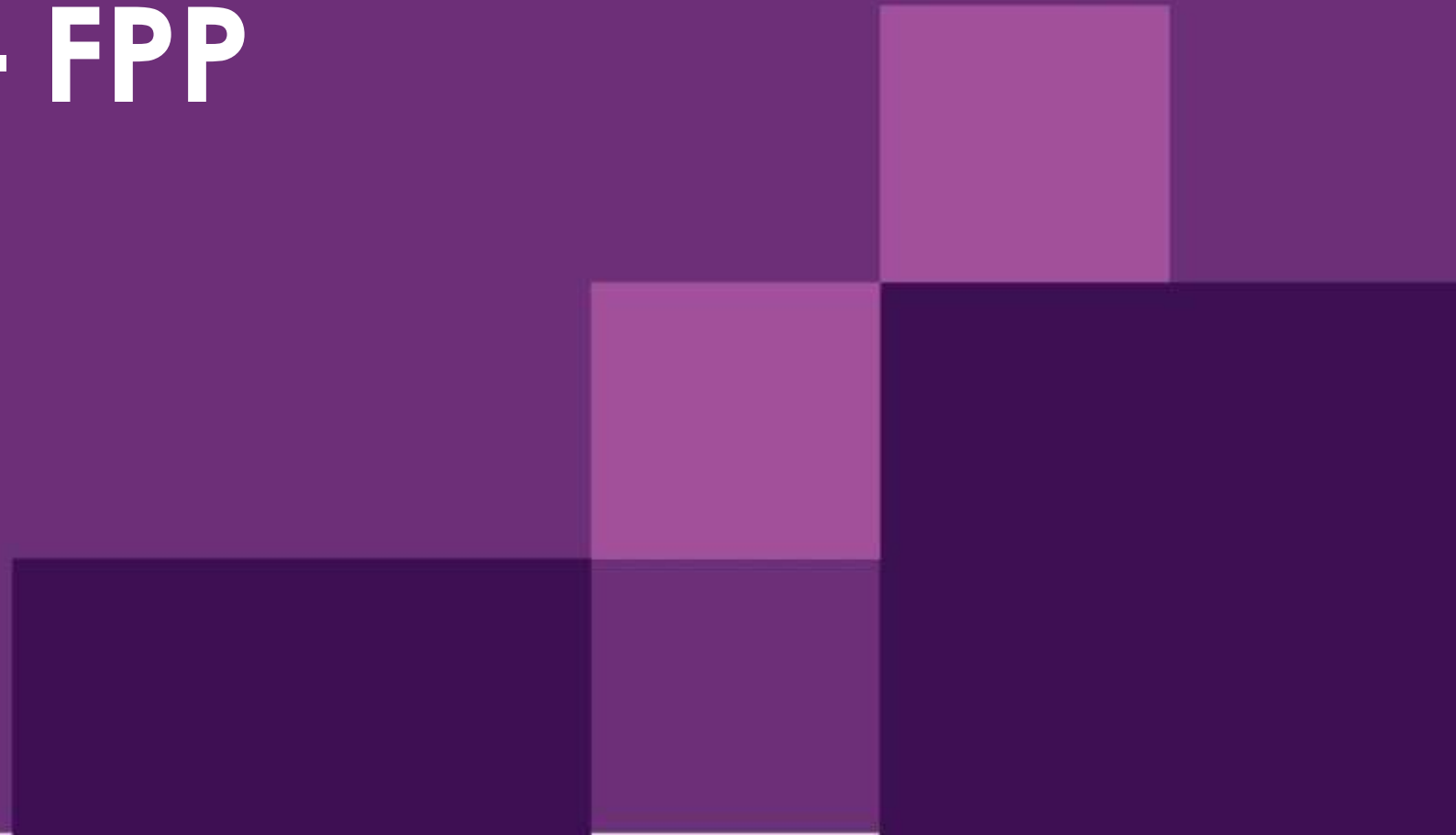
FPP April update

- The FPP Reporting data model tech spec is on track to be released on 15 April.
- The new tech spec will also include an energy forecasting update, and will, therefore, be considered a major update (numbered accordingly as 5.4, not 5.3.1).
    - There is no impact on the FPP content as a result of this change.

FPP development and testing timeline

FPP- External Milestones NFO (as at 28/3/24) - Delivery

FPP Project - Level 1 & 2 Milestones (External)

Level	Milestone ID	Milestone	Project	Target Date	Expected Date	RAG	Tentative / Confirmed	Commentary
Level 2	FPP-221	High Level Technical Design (External)	FPP-NFO	15-Dec-2023	8-Dec-2023		Confirmed	
Level 2	FPP-222	Participant Readiness Approach (incl. Dev Support Reqmts) published	FPP-NFO	1-Feb-2024	1-Feb-2024		Confirmed	
Level 2	FPP-230	Readiness Criteria available (NFO)	FPP-NFO	29-Feb-2024	29-Feb-2024		Confirmed	
Level 2	FPP-217	Data Model 5.4 Tech Spec (FPP Reports)	FPP-NFO	15-Apr-2024		Green	Confirmed	Project resource to deliver confirmed
Level 2	FPP-227	Industry Test Strategy (NFO) published	FPP-NFO	7-Jun-2024		Green	Confirmed	
Level 2	FPP-212	AEMO Internal Testing commenced (NFO)	FPP-NFO	3-Jul-2024		Green	Confirmed	
Level 2	FPP-229	Industry Test Plan published (NFO)	FPP-NFO	2-Sep-2024		Green	Confirmed	
Level 2	FPP-231	Industry Development finish (NFO)	FPP-NFO	1-Oct-2024		Green	Tentative	
Level 2	FPP-232	Readiness Checkpoint - Industry Test start (NFO)	FPP-NFO	15-Oct-2024		Green	Confirmed	
Level 1	FPP-103	AEMO Internal Development & Testing complete (NFO)	FPP-NFO	22-Oct-2024		Green	Confirmed	
Level 2	FPP-225	Pre-Production Release (NFO)	FPP-NFO	25-Oct-2024		Green	Confirmed	
Level 2	FPP-233	Data Model 5.4 available in Pre-Prod	FPP-NFO	25-Oct-2024		Green	Confirmed	
Level 1	FPP-104	Industry Test start (NFO)	FPP-NFO	25-Oct-2024		Green	Confirmed	
Level 2	FPP-234	Industry Go-Live Plan published - draft (NFO)	FPP-NFO	4-Nov-2024		Green	Confirmed	
Level 2	FPP-236	Readiness Checkpoint - Go-Live (NFO)	FPP-NFO	8-Nov-2024		Green	Confirmed	
Level 2	FPP-235	Industry Go-Live Plan published - final (NFO)	FPP-NFO	18-Nov-2024		Green	Confirmed	
Level 2	FPP-215	Industry Test finish (NFO)	FPP-NFO	22-Nov-2024		Green	Confirmed	
Level 2	FPP-238	Data Model 5.4 available in Prod	FPP-NFO	9-Dec-2024		Green	Tentative	
Level 2	FPP-246	Production Release (NFO)	FPP-NFO	28-Nov-2024		Green	Confirmed	
Level 1	FPP-105	Non-Financial Operations commences	FPP-NFO	9-Dec-2024		Green	Confirmed	

FPP Project - Level 1 & 2 Milestones (External)

Level	Milestone ID	Milestone	Project	Target Date	Expected Date	RAG	Tentative / Confirmed	Commentary
Level 2	FPP-218	Data Model (FO) Tech Spec (Settlement Reports)	FPP-FO	22-Sep-2024		Green	Confirmed	
Level 2	FPP-214	Participant Readiness Approach complete (Financial Operation)	FPP-FO	1-Oct-2024		Green	Confirmed	
Level 2	FPP-237	AEMO Internal Testing commmenced (FO)	FPP-FO	28-Nov-2024		Green	Tentative	
Level 2	FPP-223	Market Trial Strategy published (Financial Operation)	FPP-FO	31-Jan-2025		Green	Tentative	
Level 2	FPP-224	Readiness Criteria available (Financial Operation)	FPP-FO	31-Jan-2025		Green	Tentative	
Level 2	FPP-246	Market Trial Plan complete (Financial Operation)	FPP-FO	10-Feb-2025		Green	Tentative	
Level 2	FPP-239	Industry Go-Live Plan published - draft (Financial Operation)	FPP-FO	28-Feb-2025		Green	Tentative	
Level 2	FPP-240	Readiness Checkpoint - Market Trial start (Financial Operation)	FPP-FO	28-Feb-2025		Green	Tentative	
Level 2	FPP-241	Industry Development Finish (Financial Operation)	FPP-FO	15-Mar-2025		Green	Tentative	
Level 2	FPP-242	Data Model (FO) available in Pre-Prod	FPP-FO	15-Mar-2025		Green	Tentative	
Level 2	FPP-226	Pre-Production Release (Financial Operation)	FPP-FO	14-Mar-2025		Green	Tentative	
Level 1	FPP-108	Market Trial start (Financial Operation)	FPP-FO	17-Mar-2025		Green	Tentative	
Level 2	FPP-243	Industry Go-Live Plan published - final (Financial Operation)	FPP-FO	28-Mar-2025		Green	Tentative	
Level 1	FPP-107	AEMO Internal Development & Testing complete (Financial Operation)	FPP-FO	31-Mar-2025		Green	Confirmed	
Level 2	FPP-244	Readiness Checkpoint - Financial Operation	FPP-FO	9-May-2025		Green	Tentative	
Level 2	FPP-245	Market Trial finish (Financial Operation)	FPP-FO	20-May-2025		Green	Tentative	
Level 1	FPP-109	Production Release (Financial Operation)	FPP-FO	4-Jun-2025		Green	Tentative	
Level 1	FPP-106	FPP Project Go-Live / Rule Commencement	FPP-FO	8-Jun-2025		Green	Confirmed	

June 2025: Frequency Performance Payments

FREQUENCY PERFORMANCE PAYMENTS (FPP)

Key Date(s)	Go-live June 2025;
Likely impacted stakeholders	Generators, Market Customers
Industry testing anticipated	Extended period of non-financial operation for participant validation expected, Industry Testing for NFO,

Procedures	Technical documentation	AEMO Development and Internal Testing	Industry readiness and Transition	Industry testing	Deployment and go-Live
• Final Primary Frequency Response Requirements procedure published 4 May. • Final Frequency Contribution Factor Procedure published 1 June, along with the related Tuning Parameters and Input Sources document.	• Data Model Technical Specification with updates for FPP reporting – April 2024 on track • Data Model Technical Specification with updates for FPP Settlements reporting – Sept 2024	• AEMO development in Progress, and on track for NFO • Data integration Jun to Dec 2023 (NFO) • Settlements system development Jul to Dec 2024 (FO)	• Readiness approach to agreed Feb 24 • Readiness Criteria for NFO published and will form basis of readiness checkpoints and readiness tracking	• FPP calculation testing Dec 2024 (non-financial operation) • Industry test approach to be drafted June 24 • FO Settlements testing April 2025	• Pre-prod releases 1+2 Nov 2024 (start and end) • Pre-prod releases 3+4 start and mid-March 2025 • Prod release end May 2025

Relevant links
AEMO	Frequency Contribution Factors page (Contains Frequency Contribution Factors Procedure and Tuning Parameters)
AEMO	Frequency Contribution Factors Procedure Consultation Page
AEMO	Frequency Performance Payments project

Background & Context

- AEMO and Industry collaborated via the Foundational and Strategic Initiatives (FaSI) Working Group through the course of 2023 an early 2024

- Business case has completed drafting and formal submissions with the final FaSI Working Group and was presented to the Executive Forum on 28th March
  - ➢ A short video (10 minutes) of the executive summary was prepared so executives can quickly review and understand the key points. Available here.
  - ➢ The full Business Case is available here.

28th March Executive Forum

- AEMO sought industry support for progressing with these initiatives in line with the recommendations

- AEMO recognises that the Executive Forum doesn't cover all participants, but notes that the public consultation and working group process has provided the opportunity for any interested party to have their say

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 has been developed for implementation in consultation with industry to define scope, options, timing, costs and benefits.

Identity and Access Management (IDAM)	**Portal Consolidation (PC)**	**Industry Data Exchange (IDX)**
A unified mechanism to authenticate and authorise external identity when accessing AEMO services, consolidating and improving overall cyber security controls.	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.	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.
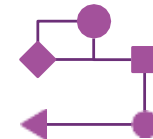
Engagement process with industry

Session 1	Session 2	Session 3A	Session 3B	Session 4A	Session 4B	Session 4C	Session 5	Session 5A	Session 5B	Session 6A	Session 6B

22 Mar	17 Apr	15 May	22 May	26 Jul	2 Aug	17 Aug	21 Sep	16 Nov	30 Nov	22 Jan	12 Mar

2023 → 2024
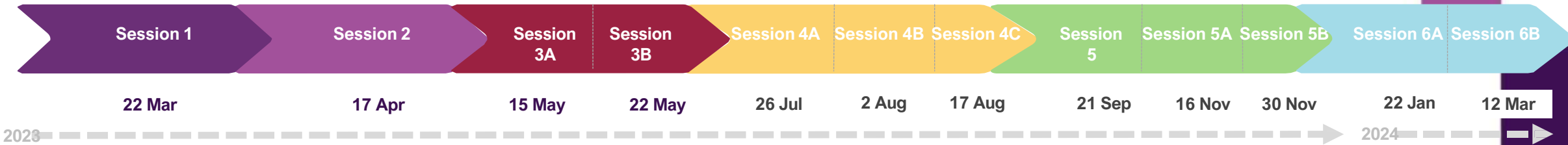
Session	Introduction	Discovery	Target State	Transition Strategy	Cost & Method	Business Case
Agenda	• Introduce initiatives • Outline workshop plan	• Pain points and benefits • Survey	• Concept walkthrough • Survey	• Transition Strategy • Impacts & Benefits • Survey	• Industry and AEMO costs • Assumptions, options and methodology	• Walkthrough of draft business case • Assessment and completion

Published information and materials:

- Focus Group webpage:
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

Key Elements of the Process

- Materials were developed, published and consulted on throughout the workshop schedule

- A total of twelve detailed workshops, averaging sixty to seventy attendees

- Progress and updates reported to PCF, RDC and IEC

- Feedback incorporated through workshops, informal one on one sessions and finally via formal submission on the Business Case.

Recommendation Summary

Compelling drivers exist to develop new foundational capability across IDAM, IDX and PC areas. Given short term reform roadmap congestion & need for fiscal prudency, _AEMO recommends a phased investment approach for IDX_ to address critical security needs, support near-term NEM reforms, provide flexibility for the future & address priority industry pain points.

	RECOMMENDATION	RATIONALE
Identity and Access Management	**PROCEED** with a Strategic target state, AEMO investment of **$21M¹** over 2 years	• Address key security vulnerabilities and reduce attack surface area – identity management is the most impactful "weak link" in the cyber security chain • Manage expected increase in identities for management: DERs, small generators • AEMO TCO cost differential of **$8M** & total Industry costs of **$38M** are smaller than the potential cost and customer impact of security breaches
Industry Data Exchange	**PROCEED** with a Strategic target state Foundation phase, AEMO investment of **$20M** over 2 years **DEFER** decision on Transition phase to Q4 2025.	• As the grid becomes digitised, data exchanged is increasing in volume, frequency and requires lower latency • IDX Foundation phase represents an efficient and unified implementation of data exchange capabilities across multiple reforms requiring it (AEMO costs are **$20M** compared to **$29M** if done initiative by initiative, and participants also see a cost efficiency) • Migrating legacy services is difficult to assess at this stage given the cost uncertainty and value uncertainty. Deferring the decision point on migrating legacy services – IDX Transition phase – allows for more certainty on cost and value estimates and more information to guide optimising the transition approach.
Portal Consolidation	**PROCEED** with a strategic target state, AEMO investment of **$6M** over 2 years	• Portal Consolidation Strategic target state delivers benefits to address identified industry pain points for a TCO cost differential of **$6M** for AEMO and **$13M** for industry • Reduces AEMO's attack surface area in the most common 'entry point' for bad actors

1. All financial figures presented on this slide have a +/- of 40%

Industry support in the Executive Forum

Process was 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.

We heard support across multiple participant types:

- **Distribution**
- **Metering**
- **Retail**
- **Gentailer**

- ❖ No objections raised by any participants
- ❖ Multiple participants were keen to confirm when they can commence work
- ❖ One action arising to develop exit criteria for the IDX Foundation

Looking ahead –
What's next for IDAM, IDX and PC?

- FaSI Business Case proceeding through AEMO governance
- Review of working group model to support future consultation
- Updates on progress to be shared with relevant industry forums

Retail Market Improvements September / November Release

Greg Minney

September 2024: Retail Market Improvement

Retail Market Improvements: NSLP Update, Metering substitutions

Key Date(s)	NSLP Effective Date 29th September 2024, Metering Substitutions effective date 4th November 2024
Likely impacted stakeholders	FRMP, DNSP, MDP
Industry testing anticipated	Industry Testing
Overall status	Overall **Green**, Implementation milestones baselined

Procedures	Technical documentation	AEMO Development and Internal Testing	Industry readiness and Transition	Industry testing	Deployment and go-Live

• Retail/Metering Procedures final report published 15 December 2023
  • ICF_072 – preferred longer term NSLP methodology
  • Substitution Types review (ICF_054) to provide Clearer understanding of reason and method used to support a metering data value
	• Tech Spec update timings to support ICF_054 initial release issued 2nd April	• Design process has in progress
		• Development and AEMO internal testing approach planned .
			• Initiative Readiness Approach draft to be provided to agree industry support approach, scheduled for April Implementation forum	• Industry Test Approach scheduled to be published end-June
				• Expectation that AEMO will facilitate Industry Testing for NSLP change in similar approach to recent 5MLP testing (TBC)
				• Industry Testing for ICF_054 to be supported up to procedure effective date
					• System Deployment date 29th Sept (TBC)
					• 29th September procedure effective date NSLP
					• 4th November procedure effective date substitution Types Review

Relevant links

AEMO | July 2023 REMP Consultation

September – Retail Improvements – milestones

September 2024 - Level 1 & 2 Milestones (External)

Level	Milestone ID	Milestone	Target Date	Expected Date	Status	RAG	Tentative / Confirmed	Commentary
Level 2	RMI-201	Retail Procedures draft issued	5-Oct-2023	5-Oct-2023	Complete		Confirmed	
Level 2	RMI-202	Retail Report final report	15-Dec-2023	11-Dec-2023	Complete		Confirmed	
Level 2	RMI-211	MSATS Tech Spec initial	27-Mar-2024	2-Apr-2024	Complete		Confirmed	Issued for publication. Published on 2/4. No participant impact.
Level 2	RMI-203	Readiness Approach published	26-Apr-2024			Green	Confirmed	
Level 2	RMI-204	Go-Live Criteria published	29-Apr-2024			Green	Confirmed	
Level 2	RMI-212	MSATS Tech Spec final	27-Sep-2024			Green	Confirmed	
Level 2	RMI-205	Industry Test Strategy published	28-Jun-2024			Green	Confirmed	
Level 2	RMI-206	AEMO Internal Development complete	31-May-2024			Green	Confirmed	
Level 2	RMI-207	AEMO Internal Testing start	1-May-2024			Green	Confirmed	
Level 2	RMI-208	AEMO Development & Testing complete	30-Aug-2024			Green	Confirmed	
Level 1	RMI-101	Industry Test start	2-Sep-2024			Green	Confirmed	
Level 2	RMI-209	Retail Market Improvements Go-Live checkpoint	29-Aug-2024			Green	Confirmed	
Level 2	RMI-210	Industry Go-Live Plan published	9-Sep-2024			Green	Confirmed	
Level 1	RMI-102	Retail Market Improvements Go-Live	29-Sep-2024			Green	Confirmed	
Level 1	RMI-103	Net System Profile - Procedure Effective Date	29-Sep-2024			Green	Confirmed	
Level 1	RMI-104	Metering Substitution - Procedure Effective Date	4-Nov-2024			Green	Confirmed	

September Release Timeline

Enhancing Reserve Information (ERI)

- The AEMC made a final determination on 21 March 2024 in a rule change process that consolidated proposals from Delta Electricity and Infigen (now Iberdrola Australia), both submitted in 2020.

- The AEMC made a more preferable rule not to create an operating reserve market but to require the publication of new information about reserves.

- The changes should not be onerous for participants or AEMO to implement. The required information is either already provided by participants, or will be as part of IESS.

ERI – Key elements and implementation dates

From 1 July 2025

At the end of each trading day, AEMO to publish state of change data for batteries at the DUID level for each trading interval.

At the start of each trading day, AEMO to publish aggregated daily energy limits for other types of scheduled plant (e.g. gas, coal, hydro).

From 1 July 2027

AEMO to publish the state of charge of batteries, aggregated by region, in close to real time.

Note: The timing of this element is intended to allow for enough batteries to enter each region for aggregation to conceal the positions of individual participants.

SCADA Lite

Luke Barlow

Initiative summary: SCADA Lite release

AEMO ──── Control Signals (AGC) ────→ Market Participant

AEMO ←──── Telemetry ──── Market Participant
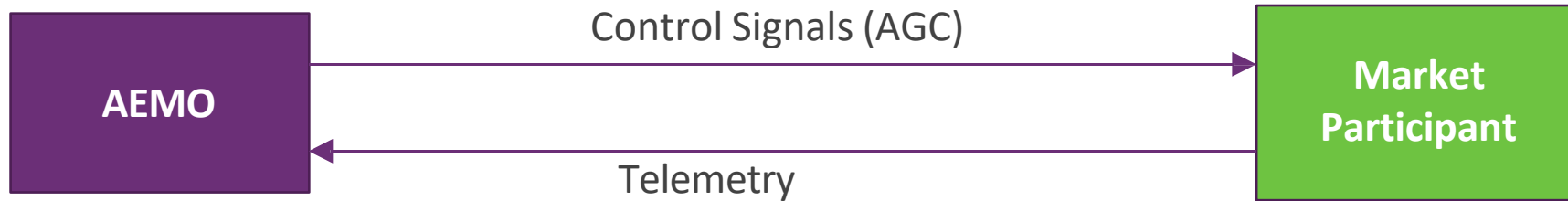
Provide a new capability for a market participant to establish a bi-directional communication path to exchange telemetry data and control signals with AEMO such that they can participate in the wholesale market. Specifically:

- Demand Response Service Providers (DRSP) providing Wholesale Demand Response (WDR).

- Generators or Integrated Resource Providers not able to exchange information or controls with AEMO via an NSP.

AEMO proposes to implement this capability via a pilot test with a selected participant to prove the service option. When working correctly the SCADA Lite service will be made available in Production to all eligible participants.

AEMO will report on progress against the established milestones – via implementation forum and PCF. No broader working groups are envisaged during the implementation process

SCADA Lite Timeline

SCADA Lite Project Milestones - Level 1 & 2 (External) — Version 0.2

Year	2023	2024											
Month	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Today (28/3)

RULE COMMENCEMENT & GO-LIVE
SCADA Lite Go-Live — 24/10

PROCEDURES & TECHNICAL DOCUMENTATION
Guidelines
External Guidelines available - Draft 2/9
External Guidelines published – Final 1/10

AEMO DEVELOPMENT & INTERNAL TESTING
AEMO Internal Development start 24/5
AEMO Internal Development complete 19/7
AEMO Testing start 8/7
AEMO Development &Testing complete 30/8

INDUSTRY READINESS & TRANSITION
Participant Impact Assessment issued 13/9
Participant Readiness Approach available - Draft 23/4
Participant Readiness Approach available - Final 31/5
Industry Go-Live Plan published - Draft 17/9
Industry Go-Live Plan published - Final 11/10

INDUSTRY TESTING
Pilot Test Strategy confirmed 26/7
Readiness Checkpoint – Pilot Test start 27/8
Pilot Test Plan confirmed 30/8
Pilot Test start 2/9
Pilot Test complete 20/9

DEPLOYMENT / GO-LIVE
Readiness Checkpoint – Go-Live 24/9
Deploy to Prod 24/10

Legend
- Milestone on track
- Milestone at risk
- Milestone delayed
- Milestone (AEMC)
- Milestone complete
- Milestone TBC
- Task

SCADA Lite – milestones

SCADA Lite Project - Level 1 & 2 Milestones (External)

ID	Level	Milestone	Project	Target Date	Expected Date	Status	RAG	Tentative / Confirmed	Comments
SCL-201	Level 2	Partcipant Impact Assessment issued	SCADA Lite	13-Sep-2023		Complete		Confirmed	
SCL-202	Level 2	Participant Readiness Approach available - Draft	SCADA Lite	23-Apr-2024			Green	Confirmed	
SCL-203	Level 2	AEMO development and internal testing commences	SCADA Lite	24-May-2024			Green	Confirmed	
SCL-203	Level 2	Participant Readiness Approach available- Final	SCADA Lite	31-May-2024			Green	Confirmed	
SCL-204	Level 2	Participant Readiness and Go-live Criteria published	SCADA Lite	31-May-2024			Green	Confirmed	
SCL-205	Level 2	Pilot Test Strategy confirmed with participant	SCADA Lite	26-Jul-2024			Green	Confirmed	
SCL-101	Level 1	AEMO development and internal testing complete	SCADA Lite	30-Aug-2024			Green	Confirmed	
SCL-206	Level 2	Readiness Checkpoint - Pilot Test Start	SCADA Lite	27-Aug-2024			Green	Confirmed	
SCL-207	Level 2	External Guidelines available - Draft	SCADA Lite	2-Sep-2024			Green	Confirmed	
SCL-208	Level 2	Pilot Test Plan confirmed with participant	SCADA Lite	30-Aug-2024			Green	Confirmed	
SCL-102	Level 1	Pilot test period commences	SCADA Lite	2-Sep-2024			Green	Confirmed	
SCL-209	Level 2	Industry Go-live Plan published - draft	SCADA Lite	17-Sep-2024			Green	Confirmed	
SCL-103	Level 1	Pilot Test Complete	SCADA Lite	20-Sep-2024			Green	Confirmed	
SCL-210	Level 2	Readiness checkpoint - Go-live	SCADA Lite	24-Sep-2024			Green	Confirmed	
SCL-211	Level 2	External Guidelines published - Final	SCADA Lite	1-Oct-2024			Green	Confirmed	
SCL-212	Level 2	Industry Go-live Plan published - final	SCADA Lite	11-Oct-2024			Green	Confirmed	
SCL-104	Level 1	Production Release	SCADA Lite	24-Oct-2024			Green	Confirmed	

SCADA Lite: High-level impacts - DRAFT

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

AFFECTED TECHNOLOGY & PROCESSES	<u>INDICATIVE</u> PARTICIPANT CHANGE IMPACTS	<u>AFFECTED</u> PARTICIPANTS				
		IRP	GEN	DRSP	TNSP	DNSP
REGISTRATION	• **Required:** DRSPs seeking to register >5MW of WDR from a single site/aggregation who do not provide telemetry via an NSP will require a SCADA lite connection • **Optional**. IRPs or Generators seeking a transitional SCADA Lite connection where the NSP does not support the service. **MEDIUM** • Provide required data and undergo required certification • Direct annual fees for a SCADA Lite connection	O	O	✓		
DISPATCH	**MEDIUM**: • OPTIONAL - Operational systems could be upgraded to receive/respond to instruction signals from a SCADA Lite feed.	O	O	O		
TECHNOLOGY	**MEDIUM** for non-NSP participants: • Potential for new technology and hardware will be required to enable the bidirectional communication link with AEMO to provide telemetry and optionally receive instruction signals.	O	O	✓		

* Refer to SCADA Lite Stakeholder Workshop Presentation – 23 August 2023 for technical overview

DRSP	Demand Response Service Provider
GEN	Scheduled Generators
IRP	Integrated Resource Providers

TNSP	Transmission network service provider
DNSP	Distribution network service provider

52

October 2024: SCADA Lite

SCADA Lite

Key Date(s)	Go-live 24 October 2024;
Likely impacted stakeholders	DRSPs, IRPs, Small Generators
Industry testing anticipated	Pilot Test with selected participant

Procedures	Technical documentation	AEMO Development and Internal Testing	Industry readiness and Transition	Industry testing	Deployment and go-Live
• Wholesale Demand Response (WDR) Guidelines published 25 Mar 2021 effective 24 June 2021. • Power System Data & Communication Standard v3.0 published 24 Nov 2022, effective 3 Apr 2023.	• Technical "How-To" Guideline – prior to go-live • No changes to Data Models	• AEMO development in Progress, and on track. • Internal Testing commences July 2024	• Readiness approach to be agreed 31 May 24 • Readiness Criteria published and will form basis of readiness checkpoints and readiness tracking	• Pilot Test with selected participant in AEMO internal environment – Preprod not required. • Testing approach to be confirmed with pilot participant July 2024. • Solution available in Production once successfully tested. • Configuration data required to establish SCADA Lite connection BAU registration process	• Pilot Test commences 2 Sep 2024 • Go-live 24 Oct 2024

Relevant links

AEMO | Wholesale Demand Response Guideline
AEMO | Power System Data & Communication Standard v3.0
AEMO | SCADA Lite project

Improving security frameworks

Carla Ziser

Improving Security Frameworks (ISF)

- The AEMC made a final determination on 28 March 2024 on a more preferable rule to improve market arrangements for security services in response to rule change requests from Hydro Tasmania and Delta Electricity

- The final rule differs from the earlier approach of an Operational Security Mechanism (OSM), and instead provides a framework that will enable AEMO to develop new tools to manage system security

Policy outcome

- The final rule
  - aligns the existing inertia and system strength frameworks' procurement timeframes
  - removes the exclusion to procuring inertia network services and system strength in the NSCAS framework
  - adjusts TNSP cost recovery procedures for non-network security options to support efficient contracting arrangements and minimise volatility for electricity consumers
  - creates a new transitional non-market ancillary services (NMAS) framework for AEMO to procure security services necessary for the energy transition and to trial new sources of security services
  - empowers AEMO to enable (or 'schedule') security services with a whole-of-NEM perspective
  - improves directions transparency
  - introduces a new annual reporting requirement on AEMO, known as the 'transition plan for system security' (or transition plan), in which AEMO will report annually on the steps it will take to manage security through the transition.
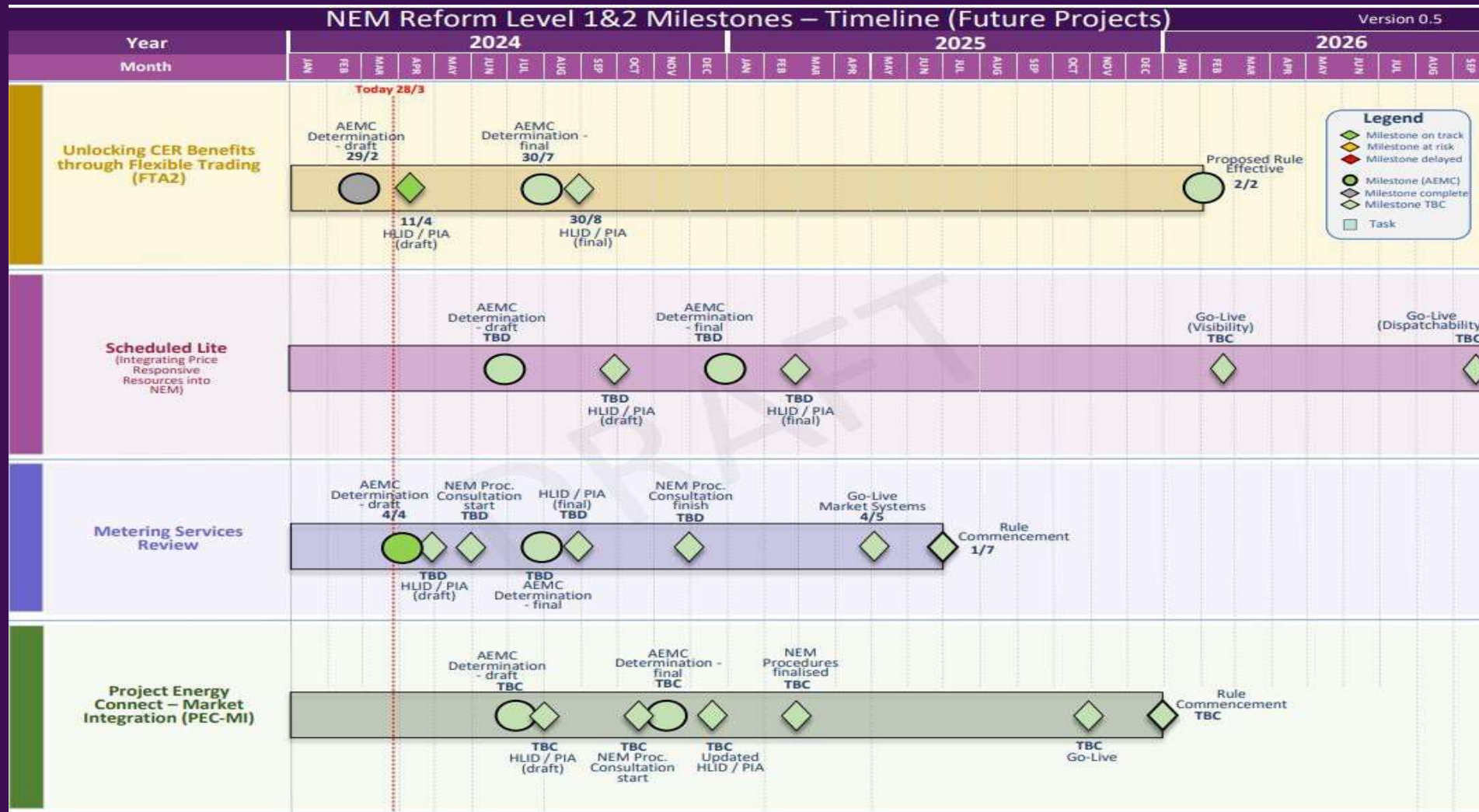
6. NEM Reform – Forward Plan

Upcoming Initiatives

Unlocking CER Benefits through Flexible Trading

- AEMC has issued Draft Determination
  - Sets Proposed Rule Commencement Date of 2 Feb 2026
  - Requests stakeholder submissions on Draft 11 April 2024
  - Final determination 11 July 2024

- AEMO has scheduled HLID/ PIA briefing for April 5th
  - Initial views of impacts based on Draft Determination
  - Invitations have been sent to PCF, Implementation forum, ERCF and B2B WG members
  - Briefing session will include updated approach to timing and approach to participant feedback into Informed Go-Live process with RDC

- Publication of HLID/ PIA – 11th April
  - Will incorporate feedback from participants in regard HLID and Implementation path and timing

- Integration with AEMC consultation and Informed Go-Live
  - Participants should make their submissions directly to the AEMC regarding the Draft Determination by the 11th April
  - Further details on the feedback approach will be provided at the 5th April briefing

# Accelerated smart meter rollout (Metering Services Review)

- AEMC issued Draft Determination 4th April
  - Requests stakeholder submissions on Draft 30 May 2024

- AEMO plans to issue HLID/ PIA post Draft Determination – Date TBC
  - Timing will be based on evaluation of draft determination policy and timing positions

- Accelerated smart meter rollout timelines are determined through AEMC fast tracked consultation
  - HLID/PIA will provide early impact assessment and indicative implementation timeframes for participant planning in line with NEM Reform process
  - Participants should make their submissions directly to the AEMC regarding the Draft Determination
  - HLID/PIA will be updated post AEMC Final Decision (scheduled for July 2024)
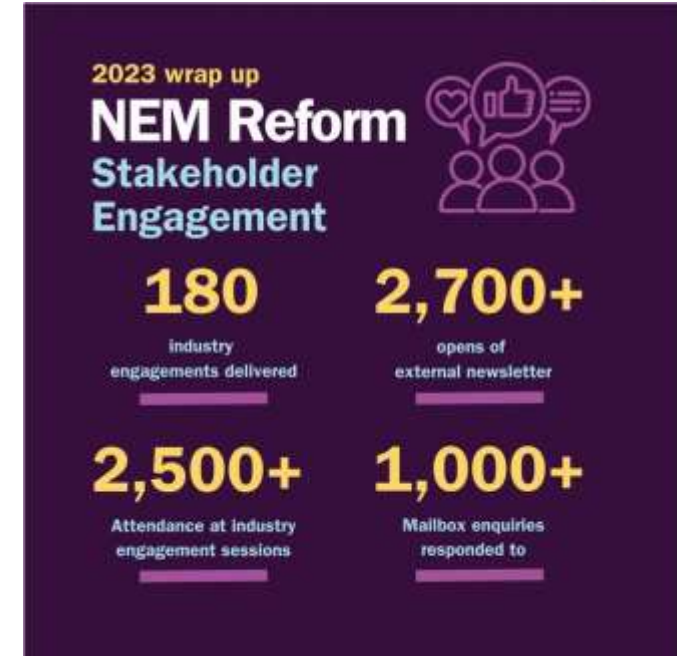
7. NEM Reform Stakeholder Update

Engagement Uplift
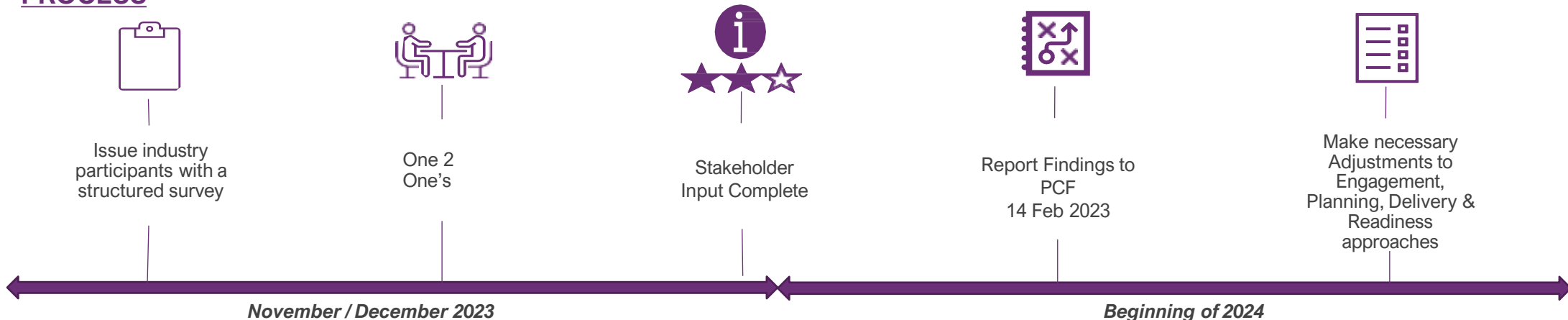
For Noting – Ulrika Lindholm
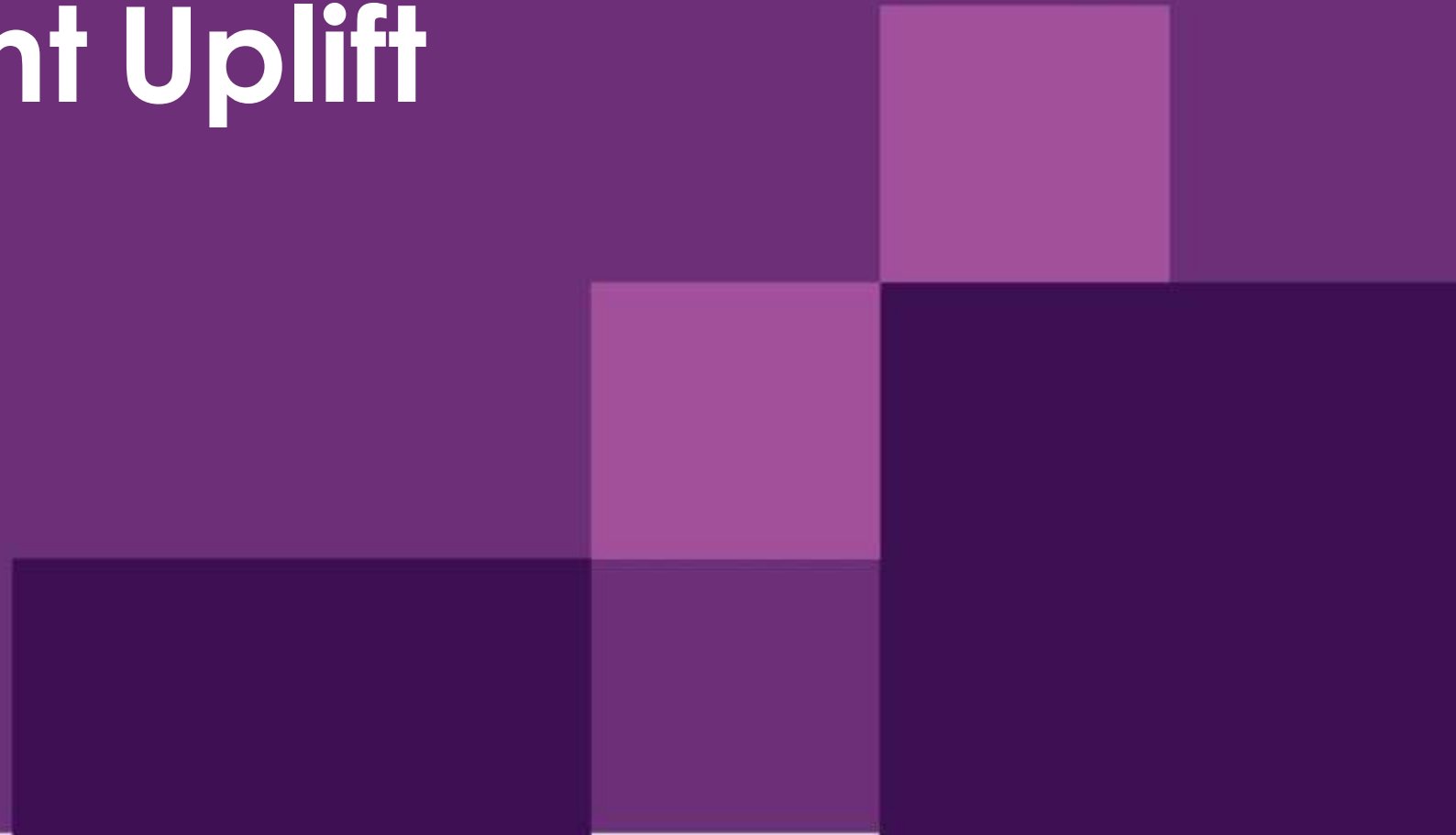
Recap: NEM Reform Program Review

- AEMO undertook a review of our 2023 program processes to help inform 2024 delivery processes

- The review leveraged industry insights and reviewed our engagement, planning, delivery and readiness processes

- Key considerations of the review included
    - 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?

2023 wrap up
NEM Reform Stakeholder Engagement

180 industry engagements delivered

2,700+ opens of external newsletter

2,500+ Attendance at industry engagement sessions

1,000+ Mailbox enquiries responded to

PROCESS

| Issue industry participants with a structured survey | One 2 One's | Stakeholder Input Complete | Report Findings to PCF 14 Feb 2023 | Make necessary Adjustments to Engagement, Planning, Delivery & Readiness approaches |

November / December 2023   *Beginning of 2024*

Review insights & Key focus areas for uplift

Engagement

What's working well?
- **Information channels:** Meeting packs are comprehensive, timely & serve as useful reference material.
- **Delivery support:** Program is responsive to stakeholder queries. Strong appreciation for individualised nature of query resolution.
- **Transparency:** Willingness to work transparently with stakeholders highly valued.

Opportunities for uplift
- **Engagement volume:** Large number of forums & forum packs make it difficult to get across all the information.
- Stakeholders have limited time capacity.
- **Forum efficiency:** Review cadence and duplication across forums.
- **Engagement clarity:** Establish clear problem statements and clarify the ask for participants.

Planning

What's working well?
- **NEM Reform Implementation roadmap:** is recognised as a key tool for planning amongst stakeholders.
- **Risk Register:** The inclusion of the Risk register is strongly supported at a time of significant change

Opportunities for uplift
- **Limited capacity:** Manage time on longer engagement sessions.
- **Participant support:** Issues with "build interpretation" sessions in build phase may be helpful depending on the level of change.
- **Consultation time:** Make sure we provide sufficient time for consultation where needed.

Participant delivery facilitation

What's working well?
- **Q&A Sessions:** Q&A sessions after deployment provide a useful opportunity for collective trouble shooting and good opportunity for participants to work through issues.
- **Focus groups and topic specific workshops:** Strong appreciation for specific and focused sessions through deployment.
- **Participant self-serve:** Introductory and explanatory videos available on AEMO website.

Opportunities for uplift
- **Release information:** Need improved consistency or information for releases: i.e. build is withheld/goes ahead regardless of final version of specs/procedures etc.
- **Issues identification:** An open channel that all participants can access to see the issues identified and the progress as well as add comments on their observations.

Industry readiness

What's working well?
- **Engagement:** The engagement level, and willingness to work with stakeholders through [the implementation Forum] is excellent and appreciated.
- **Readiness planning:** Increased emphasis on go-live criteria and check points have been well received

Opportunities for uplift
- **Post implementation support:** NEM Reform support for a short window post-implementation rather than generic help line as Support Hub not able to provide specific details.
- **Participant development considerations:** Timely recognition of what participants require for their development support and building into AEMO delivery.

NEM Reform Program Review – Forums

Feedback on the PCF

PCF Rating 4

Survey breakdown
- Responses - 9.
- Engagement - 4.1.
- Agenda - 4.3.
- Information - 3.7.

We asked this forum for suggestions to improve participant support and engagement in 2024. Responses included:

Proposed improvements:
- *Reduce overlap between PCF and Implementation Forum and reduce number of meeting hours*
- *More consistency in information provided across projects (FAQs, Implementation Q&As)*
- *Consider options for NEM Reform support to continue for a short period post go-live*
- *Post-implementation survey to industry / participants*

Things that are working well:
- Willingness to work with stakeholders through forums has been highly valued.
- *Comprehensive meeting packs and early provision of information*
- *Q&A sessions to work through issues collaboratively*
- *Implementation Roadmap is a key document is a key tool for planning.*

Recommendation and ask of PCF

- *Engagement approach seen as fundamentally sound however improvements considered as part of continuous improvement.*
- *PCF (and IF) members key feedback is for AEMO to manage duplication across both forums and reduce time spent on meetings.*
- *AEMO has identified areas of duplication and proposed adjustments to forum agendas and focus (next page).*
- **Ask of PCF members: Do the recommendations on the next page sufficiently address the issue?**

Next steps

Actions to improve stakeholder engagement in response to feedback.
- **Executive Forum:** Not proposing fundamental changes, rather refinements to the delivery process.
- **RDC:** Modifications to cadence, refocusing key activities, broadening membership.
- **PCF and IF:** Refinements to manage duplication across both forums
- **EWCF & ITWG:** Not proposing fundamental changes, rather refinements to forum delivery.

RDC Rating 3.8

Rating breakdown
- Responses - 2
- Engagement – 4.0
- Agenda – 4.0
- Information – 3.5

Exec Forum Rating 3.5

Rating breakdown
- Responses - 7
- Engagement – 3.6
- Information – 3.4

IF Rating 4.1

Rating breakdown
- Responses - 20
- Engagement – 4.1
- Agenda – 4.4
- Implementation Support – 4.1
- Post-implementation support – 3.8

EWCF Rating 4.5

Rating breakdown
- Responses - 2
- Engagement – 4.5
- Agenda – 4.5
- Implementation Support – 4.5
- Relevance – 4.0

ITWG Rating 4

Rating breakdown
- Responses - 8
- Engagement – 4.2
- Agenda – 4.1
- Implementation Support – 3.5
- Post-implementation support – 4.0

Recommendations

- It is proposed that a clarification of forum purposes and modification of standard agendas for PCF and Implementation Forum allows a reduction in duplication and meeting hours

Forum purposes (initiatives view)	
PCF: **Monitoring initiatives throughout the lifecycle** (from rules development /feasibility to post-implementation).	**Implementation Forum (IF):** **Detailed collaboration** with affected participants on industry readiness for projects in solutions delivery.

It is proposed to further clarify forum purpose to better inform participants of which forum(s) to join, thus reducing meeting hours.

It is proposed that a level of duplication is acceptable as the resolution is different e.g. High level PCF Program status update vs Detailed release summary in IF.

Current standard agenda

PCF	IF
Program update Projects from rules development /feasibility to post-implementation	**Release summary** Projects in delivery
Inflight initiative updates • Progress updates	**Release updates** • Progress updates • Detailed discussion on industry readiness matters
Upcoming initiatives	**Other initiatives**
Stakeholder update	**Stakeholder update**
Industry risk register (Quarterly)	n/a
Spotlight	n/a

Legend
- Partial overlap to be addressed
- Administrative overlap/content for noting
- ABC Proposed agenda changes

Proposed new standard agenda

PCF	IF
Program update Projects from rules development /feasibility to post-implementation	**Release summary** Projects in delivery
Inflight initiative updates • Progress updates available for noting, discussed by exception • Focus on interactive Q&A	**Release updates** • Progress updates • Detailed discussion on industry readiness matters
Upcoming initiatives	n/a
Stakeholder update	**Stakeholder update**
Industry risk register	n/a
Spotlight	n/a
Completed initiatives	n/a

Upcoming Engagements

For Noting

Upcoming Engagements

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					

May

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		

June

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

July

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				

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

NEM Reform Initiative Specific

- Unlocking CER Benefits through Flexible Trading

Other Forums

- Electricity Retail Consultative Forum

Other

- National Public Holiday
- State/Territory Public Holiday

8. General Questions and Other Business

NEMReform@aemo.com.au

NEM Reform Program Consultative Forum

Appendix A:
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:
NEM Reform Program Engagement, Planning, Delivery and Readiness

For Noting

NEM Reform Program – 2023 delivery

Overview and description of NEM Reform Program Engagement, Planning, Delivery and Readiness processes.

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

Engagement

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

Consultation channels
Industry briefing's & information sessions, Consultative forums, One 2 one meetings, Surveys

Stakeholder involvement
Working groups and focus groups,

Collaborative channels
EWCF, ERCF, PCF and Implementation Forum facilitate and support industry readiness

Planning

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

Reform Delivery Committee (RDC)
(Leverages 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
(identifies impacts to participants and the timeline needed for their development)

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

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

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)

For more information visit

aemo.com.au