

NEM2025 Implementation Forum

Meeting #10
26 April 2023



1. Welcome

We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to their Elders past, present and emerging.

Agenda

#	Time (AEDT)	Topic	Presenter(s)
1	1:00 – 1:05pm	Welcome	Greg Minney
2	1:05 – 1:10pm	Actions & Feedback from Previous Meeting	Greg Minney
3	1:10 – 1:15pm	2023 Release Summary	Greg Minney
4	1:15 – 1:20pm	March 2023 Release • Release Summary milestones	Emily Brodie
5	1:20 – 1:40pm	May 2023 Release • Progress and Deliverable update • Industry Testing • Go-Live Plan • Go-Live Criteria and approach / Deployment Scope	Jim Agelopoulos Greg Minney Chris Fleming Greg Minney
6	1:40 – 2:10pm	August - October 2023 Release • IESS ADC – Progress Summary and Updated Milestones • FFR – Progress Update and Market Start summary • MT PASA – Progress Summary • 5MLP Confirmation • Industry Testing Approach – August and October	Emily Brodie Greg Minney / Carla Ziser Greg Minney Jim Agelopoulos Greg Minney
7	2:10 – 2:20pm	November 2023 • November Release Scoping considerations • Last Customer Change Date – Consultation Update • Metering Exemptions – Consultation Update	Greg Minney Justin Stute Gareth Morrah
7	2:20 – 2:30pm	June 2024 Release • Progress Update (including consultation) • Feedback from previous meeting • IESS Participant Impacts • Next steps	Greg Minney Emily Brodie Various Emily Brodie
8	2:30 – 2:35pm	Other Initiative • IDAM,IDX & PC	Ulrika Lindholm
9	2:35 – 2:40pm	Upcoming Engagements	Ulrika Lindholm
10	2:40 – 3:00pm	General Questions & Other Business	Greg Minney

Appendix A:
Supplementary Information

- Increased MT PASA Information
- Fast Frequency Response
- IESS industry readiness approach

Appendix B:
Competition law meeting protocol and AEMO forum expectations

“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

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

#	Topic	Action	Responsible	Notes
9.5.3	Industry Testing	AEMO to provide AGL and Ausgrid a summary on the next steps for the May SAPS testing.	AEMO	
8.6.0	August – October Release	Participants are encouraged to provide feedback on AEMO's Readiness Approach for the Aug-Oct 2023 release.	Participants	
6.3.1	CDR API Statistics	AEMO to establish if we can / then provide update on CDR volumes (API requests) back to Implementation forum	AEMO	Ongoing

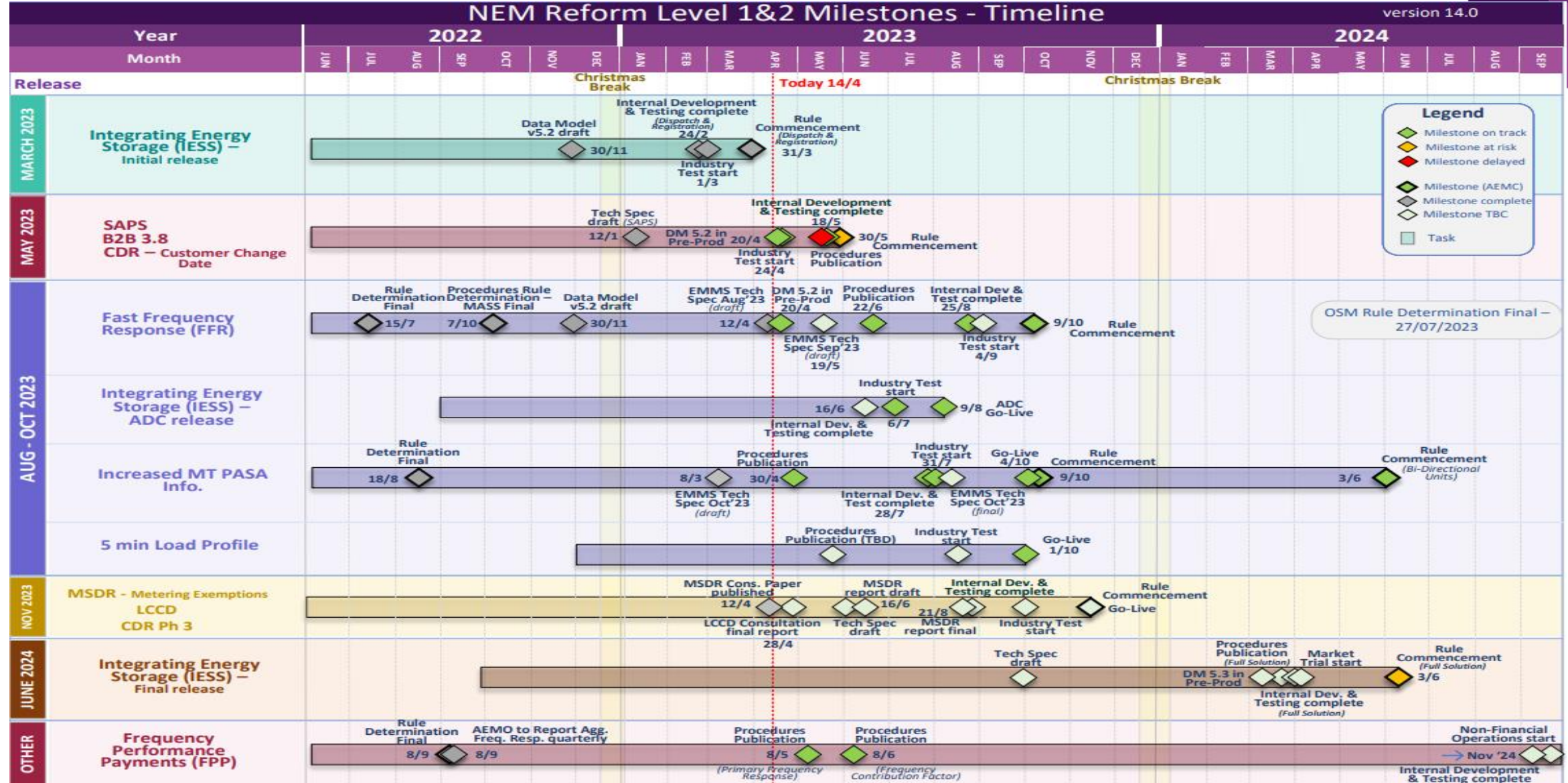
The latest meeting minutes and materials are available on the [Implementation Forum](#) webpage.

3. 2023 Release Summary

Release Summary milestones

NEM Reform Level 1&2 Milestones - Timeline

version 14.0

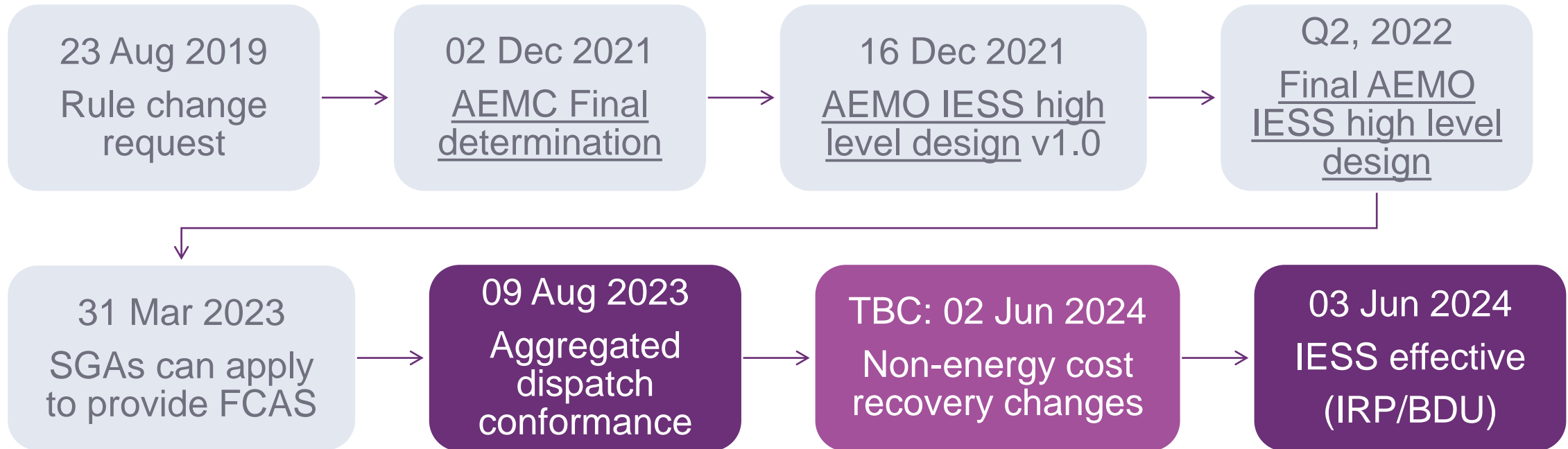


Legend

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

4. March 2023 Release

Refresher: IESS high-level timeline



SGA	Small generation aggregator
FCAS	Frequency control ancillary service/s
IRP	Integrated resource provider
BDU	Bi-directional unit

REFERENCES

- [AEMC IESS rule change](#)
- [AEMC Implementing IESS rule change](#)
- [AEMO IESS High Level Design and Implementation Strawperson](#)
- [AEMO IESS Participant Toolbox](#)

Milestone Review – March IESS

COMPLETE

- **29 Mar:** Successful production deployment
 - **31 Mar:** IESS initial rule commenced (FCAS for MSGAs)
 - Contingency not needed
 - This is final Implementation Forum update as activity now BAU.
- IESS: [MSGAs registration](#) to provide FCAS
- SAPS: [MSRP registration documents](#) available
- SAPS: Early MSRP registration from 17 Apr

5. May 2023 Release

Progress and Deliverable update

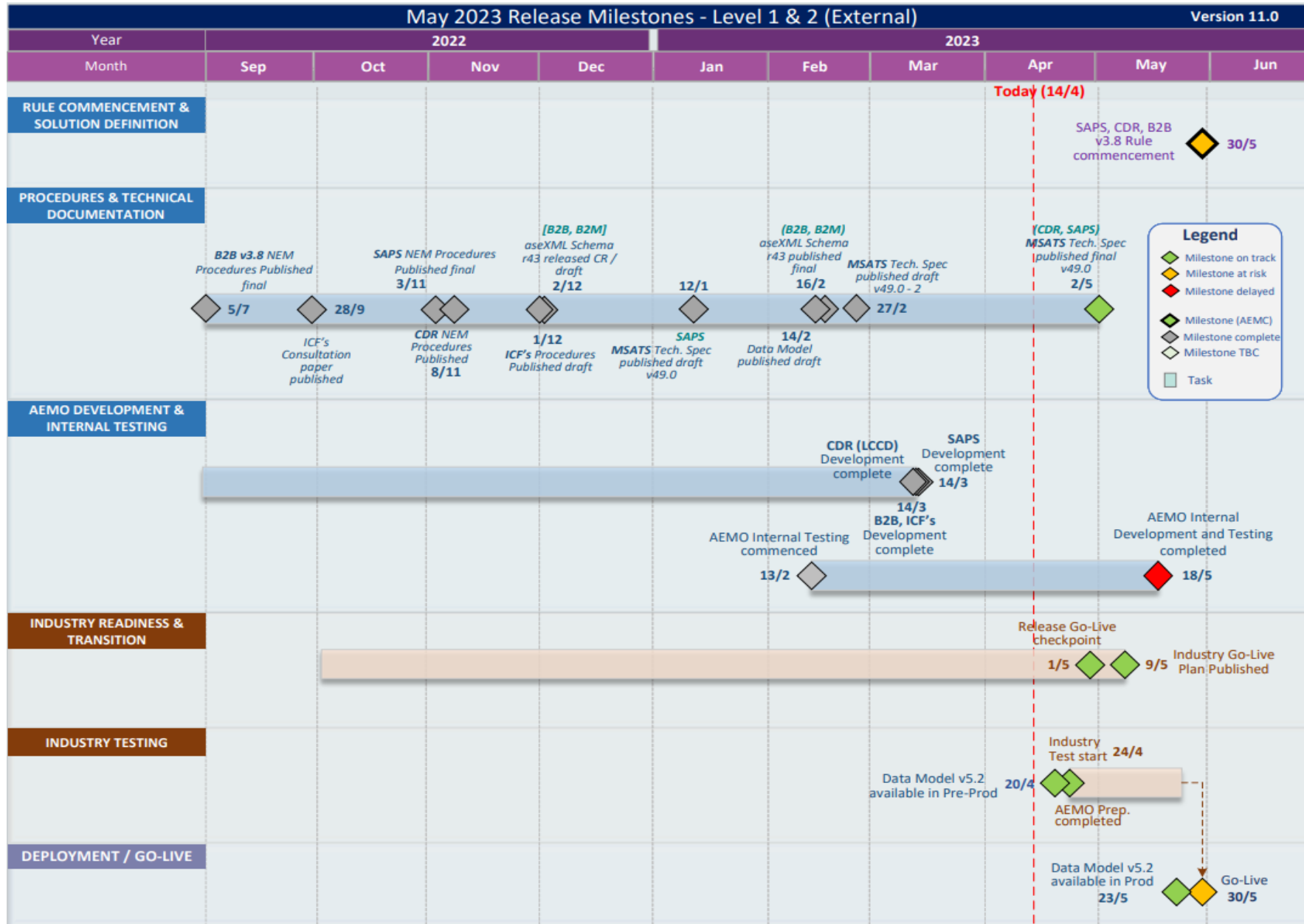
Jim Agelopoulos



Milestone Review

May 2023 Release Milestones - Level 1 & 2 (External)

Version 11.0



Release Commentary

- May Release is rated Red due to progress with SAPS Internal Testing
- Industry Test for May still scheduled to commence as planned.
- Invitation Industry Test for SAPS will not include settlement run as pre-prod data refresh has been deferred
- Draft Industry Go Live plan issued, final version due 9/5
- EMMS Data Model 5.2 deployed to pre-prod 20/4
- Go-live commitment 1/5 with Contingency approaches identified
- Implementation Forum scheduled for 3/5 for briefing on go-live decision

Deliverable Update (Retail)

Deliverable	Content	Status	Initial Release	Final Release
B2B v3.8 & Other ICFs (MSATS Release 49.0)				
MSATS Technical Specification (v49.0)	Describes the projects and enhancements planned by AEMO from a participant perspective and includes the related changes to participants' IT systems	Revision Published	12-Jan-23 27-Feb-23 06-Apr-23	02-May-23
B2M Mapping to aseXML	New guide detailing the mapping between the MSATS B2M procedures and the aseXML schema. A draft document was distributed B2M Mapping to aseXML in early December for participant review.	Initial published	05-Dec-22	02-May-23
aseXML schema (r43)	The aseXML r43 schema will be the current XML version for B2B and B2M following the May 2023 Release. The changes in r43 include: B2M updates supporting Stand alone Power Systems, Consumer Data Right and Retail ICFs, while the B2B changes include a new transaction type for Shared Fuse One Way Notifications.	Final published	02-Dec-22	16-Feb-23

The Markets Portal Help is accessible from the following places on AEMO's website:

- New: AEMO's public website. [Click Here](#)
- Existing: Requires a MarketNet connection. [Click Here](#)

Deliverable Update (Wholesale)

Deliverable	Content	Status	Initial Release	Final Release
SAPS, MT PASA, IESS – ADC & Fast Frequency Response				
EMMS Data Model 5.2	Update to various tables to support SAPS, MT PASA, IESS ADC, Settlements, Billing and Fast Frequency Response initiatives for the August to October 2023 Release.	Revision Published	14-Feb-23 21-Mar-23	23-May-23

May Release Go-live

Draft May Go-live Plan released for Participant review. Feedback requested from Participants by 21/4

AEMO encourages participants currently using aseXML schema version r39_p1 to migrate to aseXML schema version r43 prior to this Release. Key impacts:

- For participants having a B2M aseXML schema preference lower than r43 the new aseXML items are removed from Message Responses with a comment flagging the removal in the transformed aseXML payload.
- AEMO delivers all SharedFuseNotification OWNX transactions to the Recipient in the r43 schema (there is no transform).
- Schema change impacts are described further in the [MSATS 49.0 Technical Specification](#)

Key Milestones

Preprod

- EMMS 5.2 Data Model deployed to pre-prod 20th April.
- Wholesale changes deployed to pre-prod on 27th April. There will be an outage from 10:00 to 14:30
- Retail changes (which include the r43 aseXML schema) deployed on 2nd May from 12:00 to 16:00 (Market Time). There will be a pre-prod MSATS outage during this window
- The SAPS and B2B rule effective date for the changes will be set at 4th May in pre-prod to mimic the production go-live.

May Release Go-live

Key Milestones

Production

- EMMS 5.2 Data Model to be deployed to pre-prod 23rd May
- Wholesale changes to be deployed to pre-prod on 25th May. AEMO is planning for an outage but timing is TBC
- Retail changes deployed on 28th May from 10:00 to 14:00 (Market Time). There will be a production MSATS outage during this window. The following changes will be active immediately after the deployment:
 - r43 aseXML schema
 - Changes to C1, C4 & C7 reports
 - New attributes (LCCD & HouseNumberToSuffix) visible in MSATS
 - SAPS Node Hierarchy and Node Type data implemented
- The SAPS and B2B rule effective date will be 30th May



Industry Testing

Greg Minney



May Release Industry Testing

- May Industry Testing scope to reflect May 30 Go Live Scenario
 - Support for LCCD
 - “Non” SAPS implementation
 - SAPS implementation
- Deployment timings will reflect go live scenario where software is deployed ahead of procedure effective date
- AEMO will release summary of known defects at commencement of industry testing for participant impact assessment on scenario timing
- Pre-prod environment will remain available post 30 May for continued industry testing

Suggested Testing for the May 2023 Release.

Q&A sessions will be held during the Pre Production testing period to support any participants testing and requiring assistance and track the invitation testing progress

Industry Testing

Invitation Testing

Suggested Tests	Participants
Invitation for interested parties to verify SAPS set up	MSRP/FRMP/LNSP
Verify additional validations to CR's as part of SAPS	LNSP/FRMP
Settlement run for SAPS (if interest is high enough)	LNSP/FRMP/MSRP

Suggested Tests	Participants
C1 updates – additional tables available for participants	ALL
B2B Schema r43	ALL
B2M Schema r43	ALL
'House Number To Suffix' is a part of the Australian structured address standards.	ALL
Updating Network Tariff for a Greenfield NMI	ALL
Allow ENMs visibility to parent NMI standing data	ALL
Extend the current 130 business day limitation on NMID3 requests.	ALL
New field and CR 5056/5057 – Last consumer change date (LCCD)	FRMP
Verify changes to child NMI standing data	ALL
Change to CR3101 to validate greenfield site network tariff code	LNSP
Verify NMI discovery change to type 3 discovery (130 business days)	FRMPS
Verify additional validations to CR's as part of SAPS	LNSP/FRMP
Data Model changes (Deployment only)	FRMP

SAPS Invitation Testing

AEMO will progress Invitation Industry Testing with the identified participants

Scope expected to include conditions related to establishment of SAPS, including MSRP and CR Validations relating to customer NMIs

Scope will not include Settlement run – due to deferral of Pre-Prod environment refresh

Go-Live Criteria and Approach – Checkpoint

Greg Minney



May Release Go Live Criteria Check Point

Initiative	Criteria	Participant Readiness	Current Status 14/4
SAPS	Solution supports SAPS processing and no regression to current NEM settlement process, (Disclosure of Defects to be addressed in Industry Test Period) AEMO Business Ready to Support	Optional adoption, no pre-requisite participant activity	RED AEMO testing Late, potential for UAT to overlap Industry testing
CDR (LCCD)	AEMO Solution Tested to procedures (Disclosure of Defects to be addressed in Industry Test Period)	No pre-requisite participant activity. November 23 procedural obligation (as per consultation)	Consultation to consider 1 November Procedure Effective Date. LCCD will not be populated until effective date.
B2B 3.8, ICF's, r43 Schema Release	AEMO Solution Tested to procedures (Disclosure of Defects to be addressed in Industry Test Period)	Individual Participant readiness to meet procedural requirements. Individual Participant readiness will not impact go live	Internal Testing on track.

May Release Contingency Options

May Release testing Components	Test completion
1	“Non SAPS” components – required for B2B, r43 Schema, LCCD
2	NEM Settlement with No SAPS activated
3	SAPS capability progression Non SAPS components plus all capability to support SAPS

At 1/5 checkpoint

May Release Scenario	Scenario	Approach and Implications
A	1,2 & 3 Successfully completed	All Components of May Release available for Industry testing and 30 May commencement. SAPS establishment and activation commence.
B	1&2 only successfully completed	“Non SAPS” components ready for Industry testing and 30 May commencement. AEMO to co-ordinate directly with intending SAPS participants on timing for pre go live testing and SAPS Activation
C	1 &2 not Successfully completed	May release deferred, AEMO to advise rescheduled for Industry testing and Go-Live

Go-Live Communication

- AEMO will communicate assessment of May release Go-Live scenarios via email to Implementation Forum / PCF
- Implementation Forum Briefing established for 3 May

6. August – October 2023 Release

August – October release

Four major deployments included in this release:

1. IESS – Aggregated Dispatch Conformance (**9 August**)
2. Fast Frequency Response (**9 August** and **9 October**)
3. Increased MT PASA information (**4 October** and **9 October**)
4. 5MLP – Updates to 5 Minute Load Profile Calculation (**1 October**)



IESS – Aggregated Dispatch Conformance

09 Aug 2023

Emily Brodie





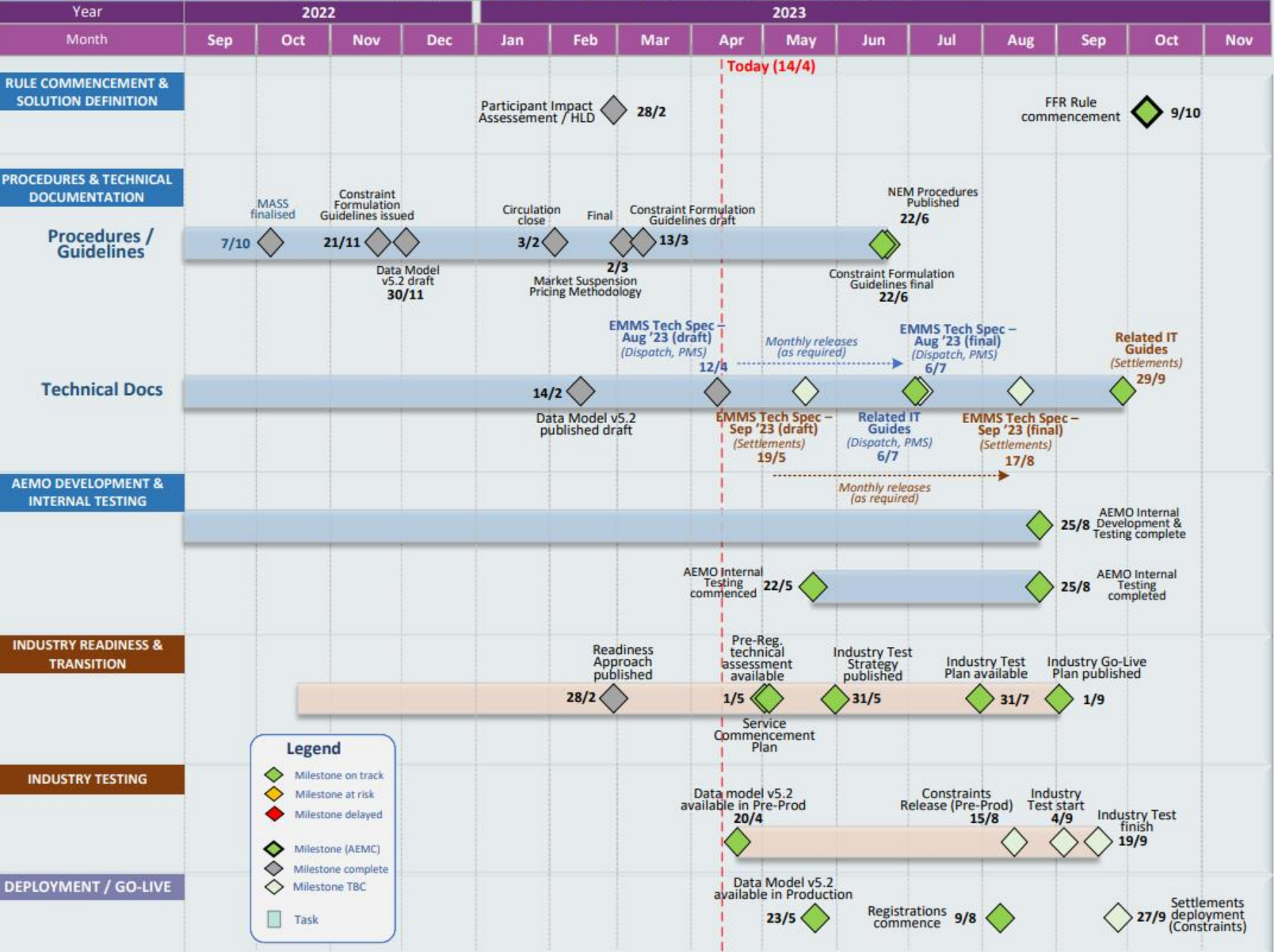
Fast Frequency Response

Greg Minney /Carla Ziser



FFR Milestones and progress

P2267 Fast Frequency Response (FFR) Milestones - Level 1 & 2 (External) v10.0



Release Commentary

- EMMS Data Model deployed to pre-prod 20/4
- Draft version of Service Commencement plan released, to provide outline of approach to commencement of new services.
- Pre-Registration technical assessments available from 1 May, to provide provisional confirmation of VF FCAS maximum capacity
- Technical Spec for PMS, Dispatch API, Bidding and Markets Portal updates published 12/4, If required will be updated monthly.
- AEMO development is in progress, noting some schedule pressures in relation to Integration and UAT and development completion of some components
- FFR will involve multiple deployments to enable progressive uptake of data and support participant registration and offers ahead of 9th Oct Rule commencement
- Industry test planning to incorporate uptake confirmation

Readiness for Market Start

The Service Commencement Plan for FFR has been released, at [AEMO | Fast Frequency Response](#).

Components of the Service Commencement Plan

Registration process

- Facilitating registration of eligible FCAS providers prior to market start

Determining the FCAS requirement

- The approach to determining the amount of each service required under different power system conditions in order to maintain security (consistent with the Frequency Operating Standard)

Implementing the requirement

- Timelines for transitioning from current FCAS requirements to the new model

AEMO encourages those interested in attending an information session in May to email

FFRconsultation@aemo.com.au

Increased MT PASA Information

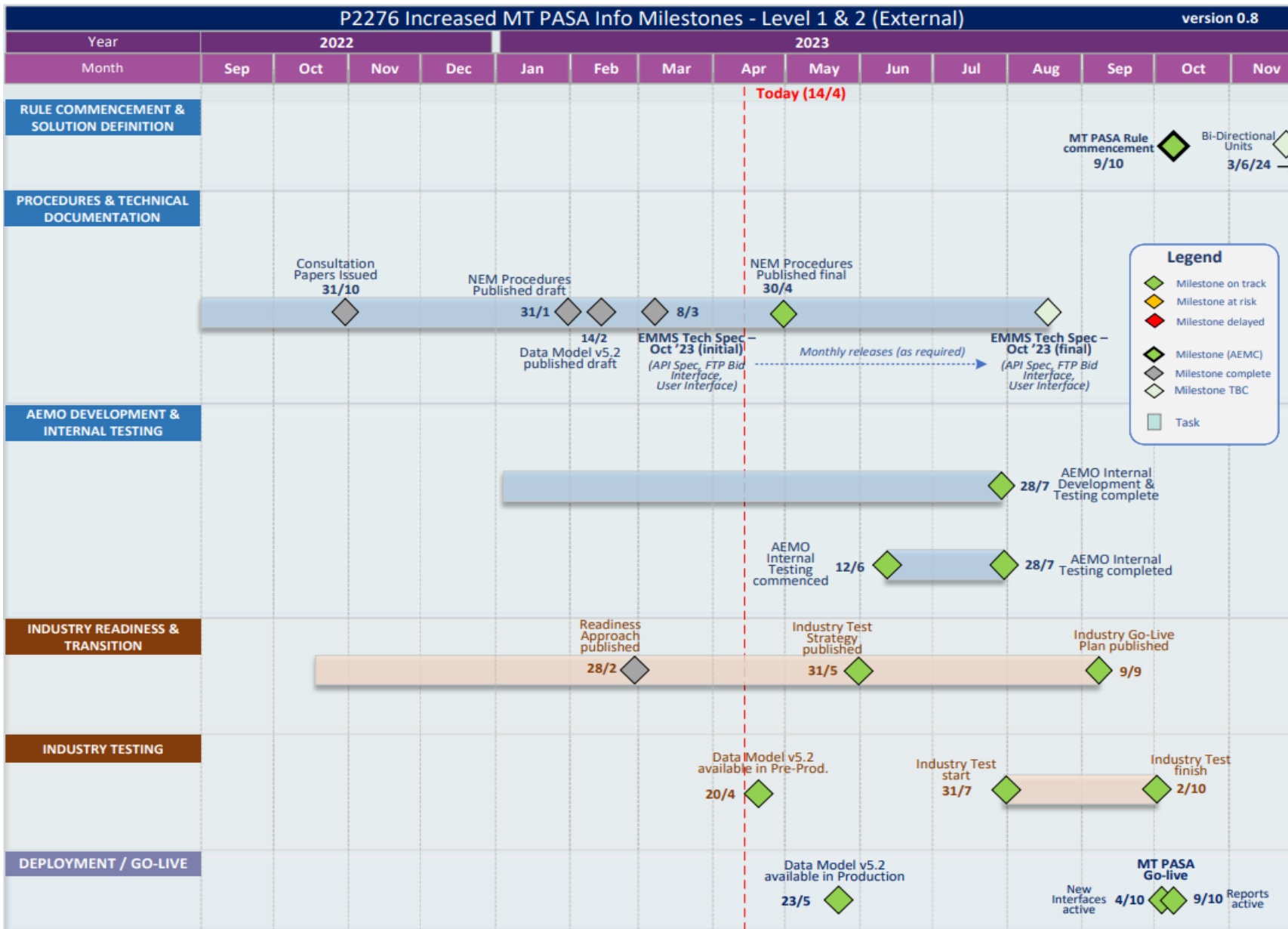
Greg Minney



MT PASA Milestones and progress

P2276 Increased MT PASA Info Milestones - Level 1 & 2 (External)

version 0.8



Release Commentary

- Procedures draft consultation response period completed; no departure from proposed approach noted
- AEMO IT Design and development in progress and on track
- EMMS Data Model release to Pre-production 20/4
- Technical Spec updates released as required.
- Industry test period being confirmed



5MLP Confirmation

Jim Agelopoulos



5MLP Confirmation

- Procedure effective date for 5MLP change is 1 October
- No changes to technical specifications are required to support this change
- Industry Testing period and approach will be established, noting the overlap with FFR testing, which will require co-ordination of Settlement runs
- AEMO development has been scoped and scheduled
- Updated POAP to be provided for Industry alignment

Industry Testing Approach

Greg Minney



Industry testing for Q3 releases

- Indicative testing approaches for Q3 releases has been outlined with ITWG as per following slide
- Pre-prod refresh (wholesale and retail) will be required to support scope of testing for this set of releases. Dates and periods TBC
- AEMO will be engaging with potential ADC participants to establish invitation testing scenarios
- FFR planning to include service registration for new service and end to end settlement runs for FRMP validation

Suggested Testing for Q3 Releases.

Projects	Suggested Testing
ADC - Aggregated Dispatch Conformance - IESS	<ul style="list-style-type: none"> - Assist any participant who want to industry test with AEMO
	<ul style="list-style-type: none"> - Invitation Industry testing will be extended for the testing of key ADC scenarios
MT PASA	<ul style="list-style-type: none"> - Scheduled generators can use additional fields on screen and via FTP - Scheduled generators can use submit via API - Scheduled generators can see the changes in the data model - NEM Report changes to accommodate new fields
FFR - Fast Frequency Response	<ul style="list-style-type: none"> - Register to provide the new very fast FACS service - Verify offer in new FFR format for FACS - Existing FCAS participants not transition to FFR can regression test offer functionality - Settlement changes for generators and load market customers showing recovery calculations for the new service - Settlement reports and data model will reflect the additional information
5MLP	<ul style="list-style-type: none"> - Settlement run in support of changes to the profiling of 15 and 30 minute meters to reflect updated profiling methodology

7. November 2023 Release - Planning in Progress

Items being Progressed for November Production Release

- Items being progressed for November
 - Metering Exemptions
 - LCCD – all participants
 - CDR obligations for major retailers commence
- AEMO to provide milestone reporting on progress (noting No-Changes to be implemented to support Major retailer CDR obligations)
- Industry Testing support for November to be planned via ITWG



Last Customer Change Date Deployment

Justin Stute



Consumer Data Right – Last Customer Change Date

- AEMO received 8 responses to the consultation.
- The responses were supportive to defer AGL, Energy Australia and Origin's obligations to populate the LCCD field from 30 May 2023 to 1 November 2023.
- AEMO intends to publish the final report on the 28th April.

Metering Exemption Status

Gareth Morrah



Metering Exemptions - MSDR

- Procedure consultation has been published on the AEMO website <https://aemo.com.au/consultations/current-and-closed-consultations/metering-installation-exemption-automation-consultation>
- Indicative dates (subject to change):

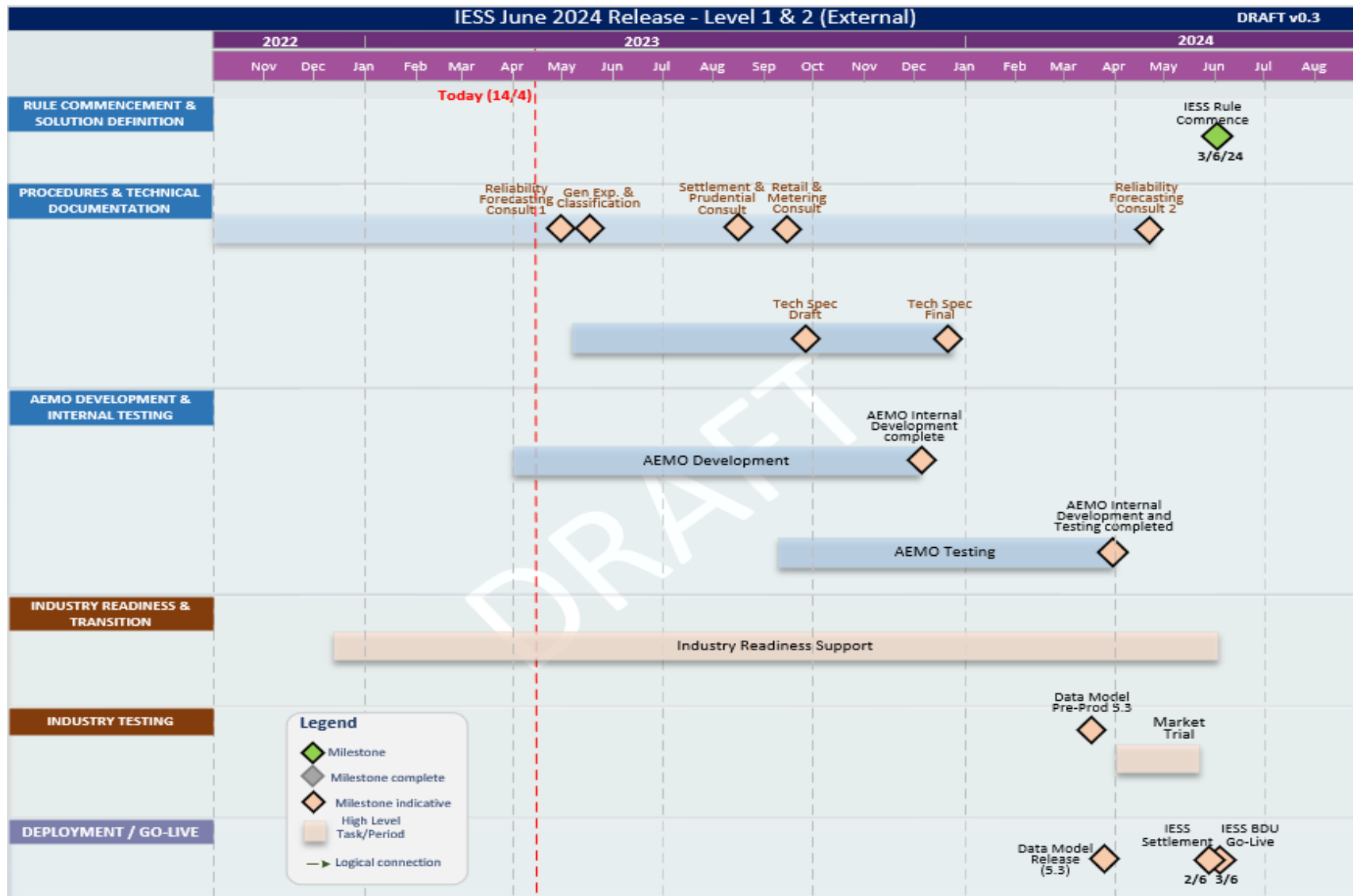
Stage	Date
Consultation paper published	12 April 2023
Submissions due on consultation paper	12 May 2023
Draft report published	16 June 2023
Submissions due on draft report	17 July 2023
Final report published	21 August 2023

Metering Exemptions - MSDR

- Scope of changes in the procedure consultation:
 - Automation of the exemption process by creating MSATS interfaces which participants can use to apply for exemptions, and for extensions to the current exemption applications.
 - AEMO proposes to change response timeframes due to the volume of exemption applications which AEMO has been processing.
- Proposed implementation start of November 2023

7. June 2024 Release

June 2024 - IESS Final Release



RELEASE COMMENTARY

- [Procedures consultation](#) proceeding through EWCF/ ERCF*
- BDU stakeholder session held Tue 21 Mar
 - AEMO is assessing detailed feedback on BDU implementation
 - Will publish BDU model and feedback summary for next meeting (May)
- Following milestones being defined and confirmed:
 - Draft technical documentation
 - Industry readiness support
 - Market trial plan
 - Transition and go-live plans

*Electricity wholesale / retail consultative forums

IESS Readiness Approach

Emily Brodie



IESS Glossary

Term	Definition
5MPD	5-minute pre-dispatch
AGC	Automatic generation control
ASL	Ancillary service load
ASU	Ancillary service unit
B2B	Business-to-business
B2M	Business-to-market
BDU	Bi-directional unit
BESS	Battery energy storage system
CR	Change request
CRMP	Cost recovery market participant
DRSP	Demand response service provider
DUID	Dispatchable unit identifier
FRMP	Financially responsible market participant
IESS	Integrating Energy Storage Systems rule
IRP	Integrated resource provider

Term	Definition
IRS	Integrated resource system
MSATS	Market settlements and transfer solutions
MSGA	Market small generation aggregator
MT PASA	Medium-term PASA
NCC	NMI classification code
NECR	Non-energy cost recovery
NEMDE	National electricity market dispatch engine
NMI	National metering identifier
PAE	Profiling and allocation engine
PASA	Projected assessment of system adequacy
PD	Pre-dispatch
PMS	Portfolio management system
SCADA	Supervisory control & data acquisition
SoC	State of charge
UFE	Unaccounted for energy
WDRU	Wholesale demand response unit

IESS update

This section covers:

1. Feedback received and industry readiness approach – indicative dates
2. Participant impact assessment
3. Next steps

1. Feedback and industry readiness approach timing

Emily Brodie

Feedback: Industry readiness timing

At March 2023 Implementation Forum:

- Asked members to provide detailed feedback on IESS readiness activity timing:
 - **when** technical specifications are needed and timing on their finalisation
 - **what** factors contribute to these timings
 - **what** other support or approaches are desired to support participant solution development
- AEMO committed to providing:
 - Consideration of feedback received to date
 - Indicative dates for developing and engaging on plans (e.g. test, transition, go-live)
- Requested feedback by Fri 14 Apr, one response received.

Feedback: Industry readiness timing

RESPONSES	NEXT STEPS
<p>One response provided in relation to impact of IESS <u>settlement</u> changes noting there needs to be sufficient time and contingency for participants to complete design, development and testing ahead of market trial.</p> <p>Suggested that:</p> <ul style="list-style-type: none"> • Settlement changes should be in pre-prod by Dec 2023 to minimise go-live risk • AEMO clarify with participants that IESS will affect Retailers, not just wholesale operations • AEMO clarify its transition approach to the IESS settlement changes 	<p>AEMO will:</p> <ul style="list-style-type: none"> • Hold some one-to-one conversations with other participants to further understand the settlement change impacts to participants. • Further define key dates e.g. tech spec draft and final publication, data models, market trial period • Provide ongoing and transparent reporting of status, progress and risks/issues (via this forum) so contingencies can be applied if need be. • Identify whether there are other participant support activities needed to support the transition approach. <p>Via iess@aemo.com.au, participants to:</p> <ul style="list-style-type: none"> • Provide detailed feedback on settlement impacts • Advise level of interest in a further IESS settlement information session.

IESS readiness approach: Indicative timing

ELEMENT	DOCUMENT	IF / ITWG ENGAGEMENT	FINAL	STATUS
STRATEGY	Readiness approach	28 Mar 2023	26 Apr 2023	Complete
	Participant impact assessment	26 Apr 2023	TBC	On track
READINESS CRITERIA	Go-live criteria and monitoring	Oct 2023	Q4 2023	Not started
TEST / TRIAL	Market trial & industry test strategy	Jul 2023 (Implementation Forum)	Oct 2023 ITWG	Not started
	Detailed market trial/industry test plan	Dec 2023 ITWG	Jan/Feb 2024 ITWG	Not started
TRANSITION	Reclassifications: <ul style="list-style-type: none"> • SGAs become IRPs • Existing BDUs become IRPs • Relevant loads & generators ASUs 	n/a	15 Dec 2023	Not started
	NMI classification codes where a new code needs to apply (links to NCC go-live plan)	Nov 2023	Dec 2023	Not started
	Bi-directional units: <ul style="list-style-type: none"> • Existing BDUs to single DUID participation, including consolidating NMIs & moving to single bid forms. • “New” BDUs start single DUID participation 03 Jun 2024 	Aug/Sep 2023	Dec 2023	Not started
GO-LIVE	New NMI classification codes (links to NCC transition plan)	Oct 2023	Dec 2023	Not started
	Go-live plans for data model releases (wholesale and retail)(TBC)	Dec 2023	Feb 2024	Not started

2. IESS draft participant impact assessment

Various

The information provided by AEMO on IESS is general and may not be appropriate for any participant's particular situation or market activities.

Please also refer to AEMO's [privacy and legal notices](#)

IESS Draft participant impact assessment

A. Initiative summary

B. High-level impacts

C. IESS impact assessment and affected participants

- Registration
- Bidding and dispatch
- Retail and metering
- Settlements and prudentials

A. Initiative summary: IESS June 2024 release

TIMING	ELEMENT	SUMMARY
02 Jun 2024**	Non-energy cost recovery (NECR) changes	<ul style="list-style-type: none"> Changes to the way NEM participants pay for “non-energy” services i.e. costs of ancillary services, interventions etc. Fundamental change - move from current category-based approach to a directional approach: <ul style="list-style-type: none"> “generator” and “customer” energy will become “sent out” and “consumed” energy, regardless of the type of connection point NECR will be recovery from cost recovery market participants (CRMPs) based on their proportion of sent-out or consumed energy. CRMPs are: <ul style="list-style-type: none"> Market generators Integrated resource providers Market customers
	New/updated NMI Classification Codes	<ul style="list-style-type: none"> Subject to outcomes of current Retail Procedure consultation, AEMO is proposing 3 new codes and amendments to 2 further codes that it considers necessary for: <ul style="list-style-type: none"> Identifying integrated resource systems (IRS) and removing the current use of two NMIs for grid-scale storage facilities Appropriate application of market fees and unaccounted-for-energy (UFE) Incorporating changes relating to the new Small Resource Aggregator category Enabling appropriate compliance monitoring to protect the integrity of market settlements.
03 Jun 2024	Facilitating a new category, near universal participant type – Integrated Resource Provider (IRP)	<ul style="list-style-type: none"> An IRP will be able to classify a wide range of units. <ul style="list-style-type: none"> New category will help simplify registration, particularly for battery participants who currently need to register as both a customer and a generator. Existing BDU participants (generator/customer) transition to IRPs SGAs become IRPs
	Facilitating bi-directional units (BDU)	<ul style="list-style-type: none"> A new unit type for plant (such as a battery) that can act as a generator and a consumer of electricity. There will also be a new approach to bidding whereby a BDU will use a single bid form, rather than the current two (one each for generation and consumption).

**AEMO has asked the AEMC to consider shifting the settlements go-live to a Sunday. Rule change request on [AEMC website](#).

B. High-level impacts

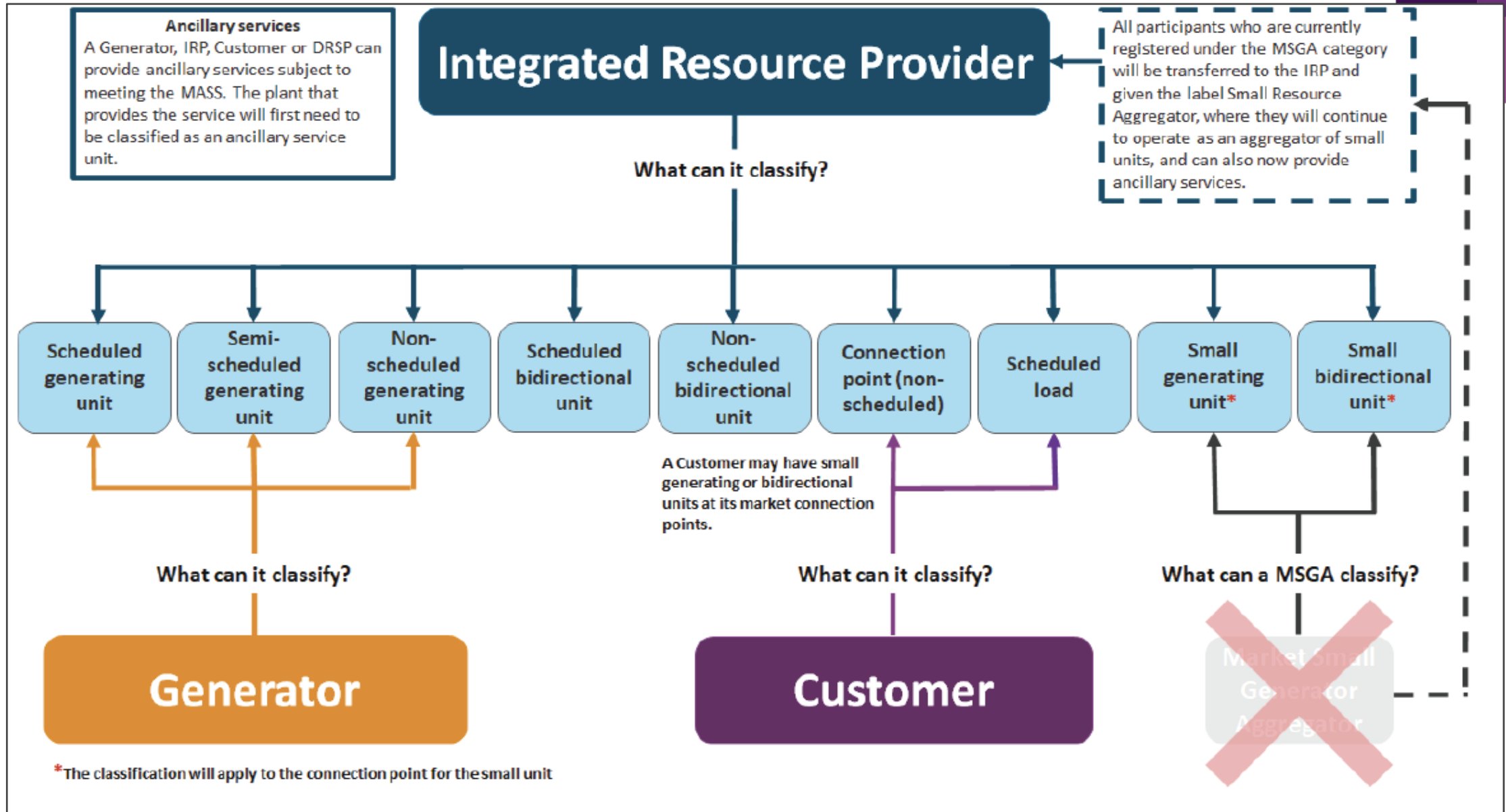
Affected market systems & processes	<u>Indicative</u> participant change impacts
Registration	<p>High for those:</p> <ul style="list-style-type: none"> • New participants registering as IRPs • Existing BDUs and SGAs transitioning to IRPs
Bidding and Dispatch	<p>High level of process and IT impact, including:</p> <ul style="list-style-type: none"> • Data model changes to accommodate BDU • Bidding interface changes to accommodate BDU
Retail and Metering	<p>Moderate level of process and IT impact, including:</p> <ul style="list-style-type: none"> • Standing data, NMI classification changes • B2M interfaces / aseXML changes • RM reports
Settlements	<p>High, under consideration based on initial participant feedback. Includes:</p> <ul style="list-style-type: none"> • Fundamental change from generator/customer energy to energy generated /consumed • Data model changes to accommodate NECR • Changes to MCL calculations and prudential forecasting • Changes to Billing and Invoicing

IESS impacts: Registration

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
REGISTRATION	<p>HIGH for BDUs/SGAs</p> <p>Optional for market generators & market customers</p>	<ul style="list-style-type: none"> • Introduce IRP new registration category <ul style="list-style-type: none"> • SGAs/existing BDUs transition to IRP category • Introduction of new classification Unit type - BDU • All existing and new grid-scale storage (5 MW and above) will be required to be registered to an IRP • Market Generator and Market customers can choose to become IRPs DC coupled systems under 5 MW would be classified as non-scheduled BDU • Conformance with dispatch would be assessed as a whole, subject to AEMO’s Power system operating procedure. • AEMO will need to engage with Existing IRS Participants and Existing Non-Customer Load Participants as part of industry readiness to ensure they submit their applications to transition their registration as an IRP and classify their productions units appropriately. 	<ul style="list-style-type: none"> • Participants will be required to classify certain resource types under new IRP category. • No exemptions for participants registering BDUs 5MW or greater • Transitional approach for IRP (occur within grace period after go-live) - All existing BDUs and new grid scale storage (5MW and greater) will be required to re-register as an IRP. AEMO will facilitate this change. • Registration documentation (application form, guide, factsheet, AEMO webpage) changes for participants registering as an IRP.
PORTFOLIO MANAGEMENT SYSTEM (PMS)	MEDIUM	<ul style="list-style-type: none"> • AS loads and ASGUs become ASUs • All SGAs will be transitioned to IRP category automatically and will be allowed to provide ancillary services (SGA site with SCADA) • SRA (MSGAs that will be transitioned to IRP and their label under the NER would be SRA) • SRAs will be able to aggregate small BDU (below 5MW) and small generating units (below 30 MW and exempt from registering as a Generator) 	<ul style="list-style-type: none"> • Participants with NMIs classified under SGA will be transitioned to IRP/SRA. • Transitional approach for SGA • PMS external markets portal to be updated to reflect IESS changes (Remove SGA category from PMS, Transition SGAs to IRP)

IRP classifications & services from 03 Jun 2024

Source: Australian Energy Market Commission, [IESS Final Determination](#), 02 Dec 2021. p iv.



IESS affected participants: Registration

PARTICIPANT TYPE	REGISTRATION	PMS
Metering Co-ordinator		
FRMP (Retailer)		
FRMP (Market Customer)		
FRMP (Generator/IRP)		
FRMP (MSRP)		
DNSP		
TNSP		
Accredited Embedded Network Managers		
Accredited Metering Data Providers		
Accredited Metering Providers, Cat A and B		
Market NSP		
NSP Other		
Generator- Scheduled	X	
Generator - Semi Scheduled	X	
Generator – Non Scheduled		
Load - Scheduled		
Generator - exempt		
IRP	X	X
MSGA	X	X
MSRP		
DRSP - ASL	X	
DRSP - WDRU		
Trader		
Reallocator		

IESS impacts: Bidding & dispatch*

NO IMPACT for non-BDU participants

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
BIDDING FORMAT	HIGH	<ul style="list-style-type: none"> Extend singular JSON based Bidding submission format (multiple participant submission methods - FTP, API, web UI) to support introduction of BDU. For Energy bids: <ul style="list-style-type: none"> accommodate 20 bid bands (10 load/10 generation) dual ramp rates (4) dual PASA availability for gen and load (2) Minimum and Maximum Energy SoC (optional) For FCAS Bids: No change other than enablement min/max and low/high break point support provision of positive and negative values (currently +ve only) 	<ul style="list-style-type: none"> For BDU participants submitting BDU bids: <ul style="list-style-type: none"> adhere to modified format i.e. submit 20 bands of monotonically increasing availability in MWs. can process additional BDU related validation error responses Participants querying their BDU bids via APIs will need to support extended format.
BIDDING INTERFACES	HIGH	<ul style="list-style-type: none"> FTP, Markets Portal and APIs to be extended to support: <ul style="list-style-type: none"> processing of modified BDU bid format. application of existing and new business validations/responses for BDU DUIDs GetBid(s) and GetSubmission(s) API requests extended to support BDU related data Transition process from 2 DUIDs to 1 DUID still to be determined 	<ul style="list-style-type: none"> Participants registering BDUs required to support the changed interfaces i.e. support ability to submit/query BDU bids.

IESS impacts: Bidding & dispatch (continued)

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
DISPATCH AND PRICING	HIGH	<ul style="list-style-type: none"> • AEMO will implement the changes so that NEMDE will optimise one BDU DUID and determine one dispatch instruction for each scheduled BDU. • The Energy Target (MW) value in Dispatch Instructions (all run types i.e., Dispatch, PD and 5MPD) will be a positive or negative value for BDU units via data interchange and AGC i.e. a positive value represents generation target, a negative value represents load target. • No change to FCAS dispatch instructions i.e. remains a positive value. • The new BDU services will be added to existing EMMS data interchange reports/NEM web reports (i.e. Bids, Dispatch and Pre-dispatch packages) 	<ul style="list-style-type: none"> • For participants that consume dispatch outcomes (dispatch targets, constraints and pricing etc), there will be new information that relates to the new BDU services. • Scheduled BDUs will receive a single (bidirectional) dispatch instruction representing the net flow to be achieved. • Storage resources capable of simultaneously charging and discharging responsible for conforming to single net dispatch target. • Participants with existing bidirectional resources would need to ensure that their bidding and dispatch systems can accommodate this change.
PRE DISPATCH / 5-MIN PRE DISPATCH / 7-DAY PRE DISPATCH	HIGH	<ul style="list-style-type: none"> • See Dispatch and Pricing 	<ul style="list-style-type: none"> • See Dispatch and Pricing • Participants will require adoption of BDU MMS Data Model Report

IESS impacts: Bidding & dispatch (continued)

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
CONSTRAINTS	HIGH	<ul style="list-style-type: none"> New BDU constraints to be formulated and applied in NEMDE constraint calculations 	<ul style="list-style-type: none"> IRPs with registered BDU's and Interested parties can leverage the IRP enhanced related displays, tools and calculators
PASA (SHORT TERM and PRE DISPATCH)	NONE	<ul style="list-style-type: none"> ST PASA and PD PASA calculations and existing outputs will include BDU generation side availabilities 	<ul style="list-style-type: none"> No changes
MEDIUM TERM PASA	LOW	<ul style="list-style-type: none"> MT PASA extended to support the introduction of IRP and BDU. <ul style="list-style-type: none"> Submissions of MT PASA offer(s) by IRPs via FTP, API, and Markets Portal (no change to offer format) Data Interchange and MT PASA DUID availability report supports provision of IRP offer(s). 	<ul style="list-style-type: none"> IRPs with registered scheduled generation, load or BDU DUIDs need to provide MT PASA information
MARKET NOTICES	TBC	<ul style="list-style-type: none"> Changes to the relevant Market Notices to include IRPs. 	<ul style="list-style-type: none"> TBC

IESS impacts: Bidding & dispatch (continued)

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
DATA INTERCHANGE / DATA MODEL	HIGH	<ul style="list-style-type: none"> • The Data Model requires extension to support the introduction of the new IRP participant category and BDU. • Rego – changes to data model • Specifically model extension and new model release to support: <ul style="list-style-type: none"> ○ new BDU related fields and values to Bids package tables, changes to allowable values for existing table fields, new BDU bid tables ○ new Target SoC BDU field and Energy Targets support -ve/+ve values for Dispatch, Pre-dispatch and P5MIN packages. 	<ul style="list-style-type: none"> • IRPs registering BDUs (and interested parties) to adopt new data model • Non-interested can defer implementing only until next release becomes available (model supports backward compatibility for 1 version) • Settlement changes require FRMPs to adopt new data model
CONFORMANCE MONITORING	LOW	<ul style="list-style-type: none"> • BDU will be included in conformance monitoring reports. 	<ul style="list-style-type: none"> • During transition period conformance monitoring applied to original two DUID arrangement and replacement single BDU DUID until two DUID retired

IESB affected participants: Bidding and dispatch (continued)

AEMO has not identified any participant impacts in the following operational components / applications:

- SHORT TERM PASA and PRE DISPATCH PASA – calculations and existing outputs will include BDU generation side availabilities
- DEMAND FORECASTING – will be extended to support inclusion of BDU
- AGC/SCADA (DISPATCH AND INPUTS)
- MARKET NOTICES – Impact to the participants **to be determined**

IESS impacts: Retail & metering

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
STANDING DATA CHANGES	MEDIUM	<ul style="list-style-type: none"> • New NMI Classification Codes: TIRS, DIRS, DGENRATR • Amended NMI Classification Codes: GENERATR, NREG 	<ul style="list-style-type: none"> • Need to work on transition for 2 NMIs to 1 NMI • MDPs no longer need to separate Sent Out Energy & Consumed Energy data to 2 different NMIs
B2M INTERFACES / aseXML CHANGES	LOW	<ul style="list-style-type: none"> • Additional NCCs and Amended NCCs will impact CRs 	<ul style="list-style-type: none"> • Participants will need validations to address new NCCs
ENERGY PROFILING AND AGGREGATION	LOW	<ul style="list-style-type: none"> • NECR (impacts CRMPs) • UFE Calculations • PAE to handle the transition period of Pre and Post IESS Logic • New NMI Classification Codes 	<ul style="list-style-type: none"> • Accommodate new UFE Calculation methodology from Net to Gross • Financial impact of UFE methodology change

IESS impacts: Retail & metering (continued)

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
ENERGY ALLOCATION	HIGH	<ul style="list-style-type: none"> • NECR Calculations • Embedded networks will be calculated in PAE, changing energy allocation for Parents in Embedded Networks. Additionally, this change will also impact the RM16 file for FRMPs with Parent EN's whereby RM27 file will no longer match, impacting participant settlements systems/audit • IRPs – ACE and ASOE to be sent through as individual reads • ImportNet and ExportNet will no longer be required • Changes to DME, ADMELA, UFEF and UFE calculations and reports • MeterTCD and PeelOff logic to cater for new NCC 	<ul style="list-style-type: none"> • Changes to calculations are seen in RM Reports Impact
RM REPORTS	HIGH	<ul style="list-style-type: none"> • No change to RM40 file 	<ul style="list-style-type: none"> • Changes to RM 16, 21 and 27 to reconcile settlement statements

IESS affected participants: Retail & metering



PARTICIPANT TYPE	STANDING DATA	METER DATA INTERFACES / FORMAT	B2M INTERFACES / aseXML	ENERGY PROFILING & AGGREGATION	ENERGY ALLOCATION	RM REPORTS
Metering Co-ordinator	X		X			
FRMP (Retailer)	X		X	X	X	X
FRMP (Market Customer)	X		X	X	X	X
FRMP (Generator/IRP)	X		X	X	X	X
FRMP (MSRP)	X		X	X	X	X
DNSP	X		X			
TNSP	X		X			
Accredited Embedded Network Managers	X	X	X		X	X
Accredited Metering Data Providers	X		X			
Accredited Metering Providers, Cat A & B	X		X			
Market NSP						
NSP Other						
Generator- Scheduled						
Generator - Semi Scheduled						
Generator - Non Scheduled						
Load - Scheduled						
Generator - exempt						
IRP						
MSGA						
MSRP						
DRSP - ASL						
DRSP - WDRU						
Trader						
Reallocator						

IESS affected participants: Retail and metering (continued)

AEMO has not identified any participant impacts in the following operational components / applications:

- METER DATA INTERFACES / FORMAT
- B2B INTERACTION / aseXML
- MSATS BROWSER – will only see new/amended NCCs in existing fields

IESS impacts: Settlements & Prudentials

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
SETTLEMENT	HIGH	<ul style="list-style-type: none"> • Energy settlement inputs updated to use gross imports and exports (ACE and ASOE) in a single calculation table for all generation/consumption data, with no netting of imports and exports as currently occurs in SETCPDATA • NECR will be from CRMPs, with calculations updated to the relevant ACE and/or ASOE, no longer reliant on participant category • No functional change to scheduled load carve outs for NECR • Market fee structure is under consultation until ~August 2023 and likely to use ACE & ASOE data inputs • IRPs fees be calculated on gross ACE and ASOE, this includes SGAs moving to IRP category • Intra-regional residue inputs to be based on ACE and ASOE • Existing processes for inter-regional SRA being extended to IRPs • Settlement shortfall calculations and processes to be extended to IRPs • CO2E calculations impacted - likely to be based on ASOE for generators and implemented for IRPs 	<ul style="list-style-type: none"> • Participant systems will require updates to implement the data model changes to align to ACE and ASOE from a new single table Energy_Transaction, instead of using deprecated tables SETGENDATA, SETCPDATA and ENERGY_GENERATOR_AGG for interval level energy volumes and amounts • Current summary participant and weekly level billing aggregation tables will also be replaced with new equivalent tables • Invoice reconciliation will be significantly changed as per the above, with NECR relying on ACE and/or ASOE from the new table • NEM reports updated for ACE and ASOE

IESS impacts: Settlements & Prudentials (continued)

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
BILLING	HIGH	<ul style="list-style-type: none"> • Implement billing and invoicing processes for IRPs • Billing summary tables impacted, with the former billing week summary tables of SETGENDATA and SETCPDATA replaced by summaries of the new single Energy_Transaction table • Invoicing reports (SR, SRR) impacted, with sales/purchase volumes being replaced by ACE and ASOE • External reporting impacted (NEMWEB, website, EMMS, CDEII) 	<ul style="list-style-type: none"> • Same as Settlement
SETTLEMENTS DATA INTERCHANGE / DATA MODEL	HIGH	<ul style="list-style-type: none"> • SETGENDATA, SETCPDATA and ENERGY_GENERATOR_AGG tables replaced by single Energy_Transaction table storing ACE and ASOE • Summary tables of the above data are similarly to be replaced • Participant systems will require updates to implement the data model changes • Invoice reconciliation data will be significantly changed 	<ul style="list-style-type: none"> • Same as Settlement

IESS impacts: Settlements & Prudentials (continued)

OPERATIONAL COMPONENTS / APPLICATIONS	IMPACT	IMPACT DESCRIPTION	POTENTIAL PARTICIPANT IMPACT
PRUDENTIALS	HIGH	<ul style="list-style-type: none"> • Inclusion of Ancillary Services into the MCL calculation • MCL calculations will be updated to use ACE and ASOE • Display of graphs for MCL calcs analysis uses up to 36 months of data so there will be a transition period of where the MCL calcs will use both the old data (SETGEN and SETCP) and the new data (ACE and ASOE) • Extension of Prudential processes to IRP • Prudential Forecasting will be updated to use ACE and ASOE • New (internal) Alert for IRPs with increase in NMI counts • New (internal) Alert for Increase of average load • Prudential Adjustment Tool will be updated to use ACE and ASOE 	<ul style="list-style-type: none"> • Ancillary Services will now be included in MCL calculation taking the payments and recoveries into account to reduce or increase MCL • Participant systems will require updates to implement the data model changes to align to ACE and ASOE instead of SETGEN and SETCP
SETTLEMENT ESTIMATION	LOW	<ul style="list-style-type: none"> • Methodology being updated for days D-1 calculation using ACE and ASOE • Proposed change for calculation of estimations using Multiple Linear Regression methodology 	<ul style="list-style-type: none"> • Participant systems will require updates to implement the data model changes to align to ACE and ASOE instead of SETGEN and SETCP

I ESS affected participants: Settlements & prudentials



PARTICIPANT TYPE	SETTLEMENT ESTIMATION	SETTLEMENT	BILLING	SETTLEMENT DATA INTERCHANGE / DATA MODEL	PRUDENTIALS
Metering Co-ordinator					
FRMP (Retailer)	X	X	X	X	X
FRMP (Market Customer)	X	X	X	X	X
FRMP (Generator/IRP)	X	X	X	X	X
FRMP (MSRP)	X	X	X	X	X
DNSP					
TNSP					
Accredited Embedded Network Managers					
Accredited Metering Data Providers					
Accredited Metering Providers, Cat A and B					
Market NSP					
NSP Other					
Generator- Scheduled		X	X	X	
Generator - Semi Scheduled		X	X	X	
Generator - Non Scheduled		X	X	X	
Load - Scheduled		X	X	X	
Generator - exempt		X	X	X	
IRP		X	X	X	
MSGA		X	X	X	
MSRP		X	X	X	
DRSP - ASL					
DRSP - WDRU					
Trader					
Reallocator					

IESS affected participants: Settlements & prudentials (continued)

AEMO has not identified any participant impacts in the following operational components / applications:

- REALLOCATIONS – existing reallocation processes being extended to IRPs
- SETTLEMENT DIRECT – only the content of the reports and statements being exported are impacted, but not the interface itself

3. Next steps

Emily Brodie

Next steps

Seeking feedback on:

1. Settlement impacts
2. Level of interest in a further IESS settlement information session.
3. Indicative timing for readiness documents
4. Completeness and accuracy of participant impacts
5. Areas for further consideration

Please respond on or before Fri 19 May via liess@aemo.com.au

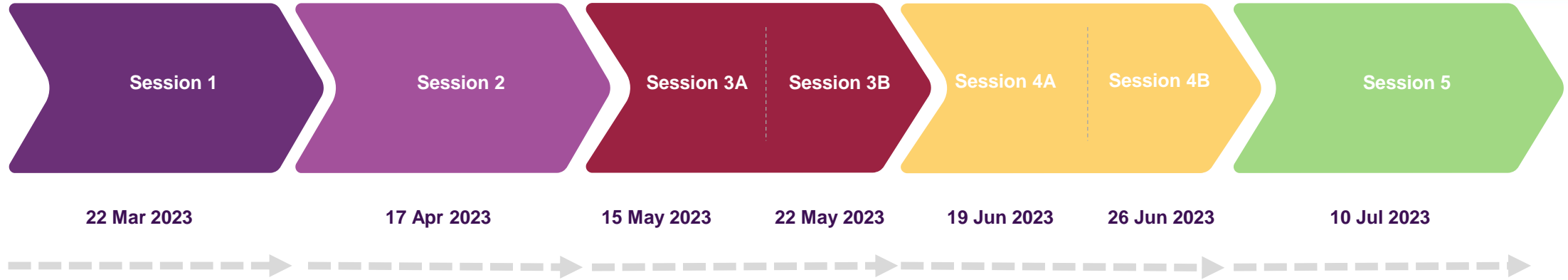
8. Other initiatives

Recap: A business case is being developed for three Strategic / Foundational initiatives

Pathway	Initiatives	Description
Foundational <ul style="list-style-type: none"> Foundational dependency work to deliver an uplift to base capability on which reforms are dependent 	<ul style="list-style-type: none"> Identity Access Management (IDAM) 	<ul style="list-style-type: none"> A unified mechanism to authenticate participant users and applications when accessing AEMO services.
	<ul style="list-style-type: none"> Industry Data Exchange (IDX) 	<ul style="list-style-type: none"> Unified access to AEMO services across all markets, using modern authentication and communication protocols, facilitating a cohesive approach to industry data exchange. This will leverage IDAM
Strategic (Related) <ul style="list-style-type: none"> Strategic dependency work to effectively futureproof capabilities and scalability of systems thereby avoiding investment in systems that will become end-of-life shortly after the reforms take effect 	<ul style="list-style-type: none"> Portal Consolidation (PC) 	<ul style="list-style-type: none"> A 'single pane of glass' user experience for participants accessing all AEMO browser based services

- These initiatives have been identified for the NEM Reform Program and included in the [NEM Reform Implementation Roadmap](#).

Industry Consultation underway



Session	Introduction – IDX, IDAM & PC	Discovery Workshops – IDAM and PC	Target State Discussion	Transition Strategy	Conclusions and Business Case
Agenda*	<ul style="list-style-type: none"> Introduce initiatives Outline workshop plan 	<ul style="list-style-type: none"> Pain points and benefits Survey 	<ul style="list-style-type: none"> Concept walkthrough 	<ul style="list-style-type: none"> Transition Strategy Impacts & Benefits 	<ul style="list-style-type: none"> Summary Options
Audience		 	 	 	

* Detailed consultation schedule available in Appendix B of this pack.

9. Upcoming Engagements

Upcoming Engagements

April						
S	M	T	W	T	F	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						
S	M	T	W	T	F	S
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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						
S	M	T	W	T	F	S
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July						
S	M	T	W	T	F	S
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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					

Legend
Program forums
NEM2025 Program Consultative Forum
Reform Delivery Committee
Reform Delivery Committee - Collab W.
Implementation Forum
Electricity Wholesale Consultative Forum
Electricity Retail Consultative Forum
Industry Testing Working Group
AEMO Consumer Forum
All Stakeholder NEM Reform and Roadmap briefing
Initiative specific meetings
NEM Reform Foundational and Strategic initiatives
PLACEHOLDER: NEM Reform Implementation Forum - May Go-Live Criteria
Other
National Public Holiday
State/Territory Public Holiday

To learn more about these events, please visit AEMO's [Industry meeting calendar](#) or contact the program at NEMReform@aemo.com.au.

10. General Questions & Other Business



NEMReform@aemo.com.au



[AEMO | Implementation Forum](#)

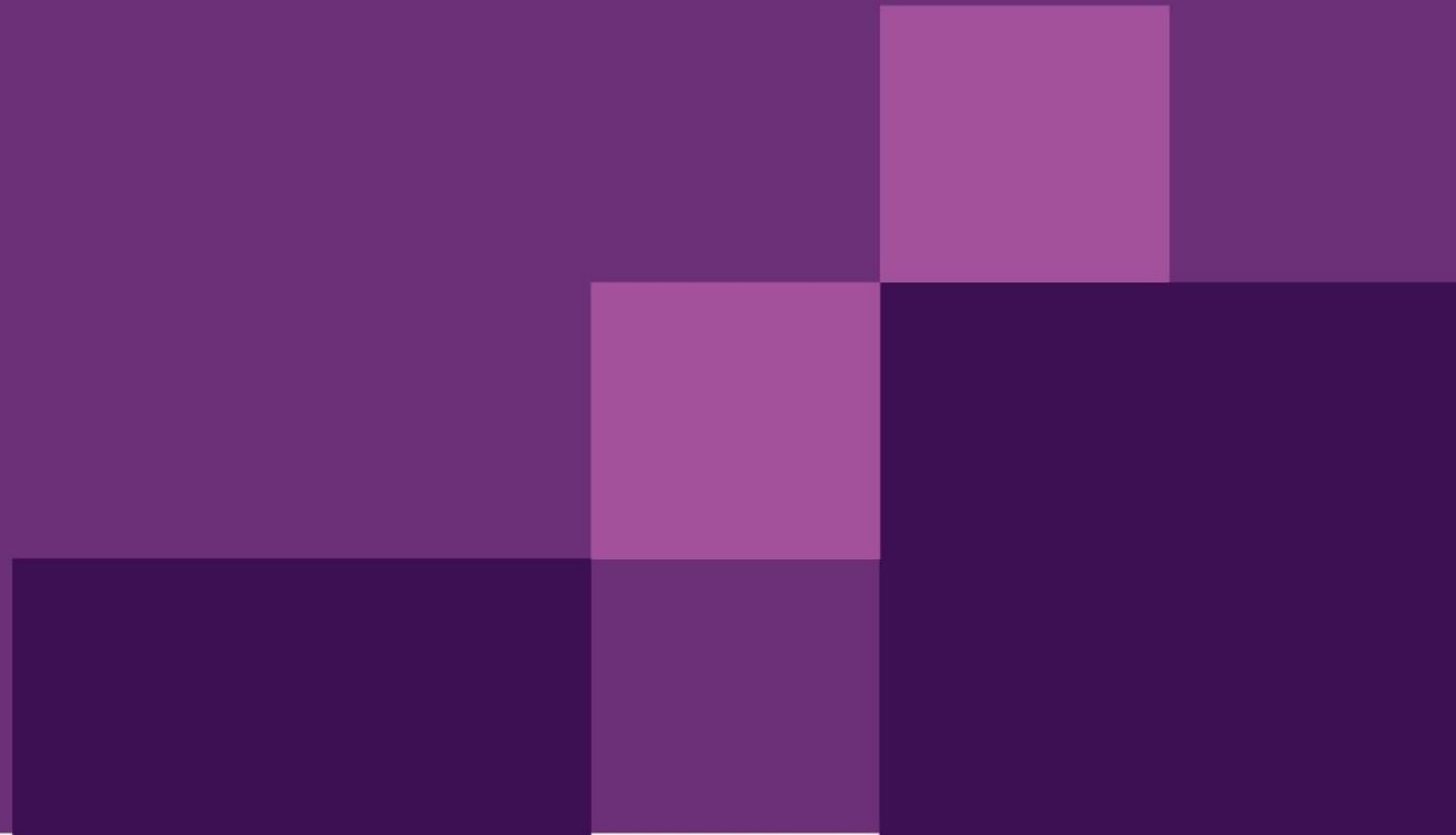


Appendix A: Supplementary Information

- **Increased MT PASA Information**
- **Fast Frequency Response**
- **IESS June 2024 Readiness Approach**
- **IDAM/IDX/PC Representation**



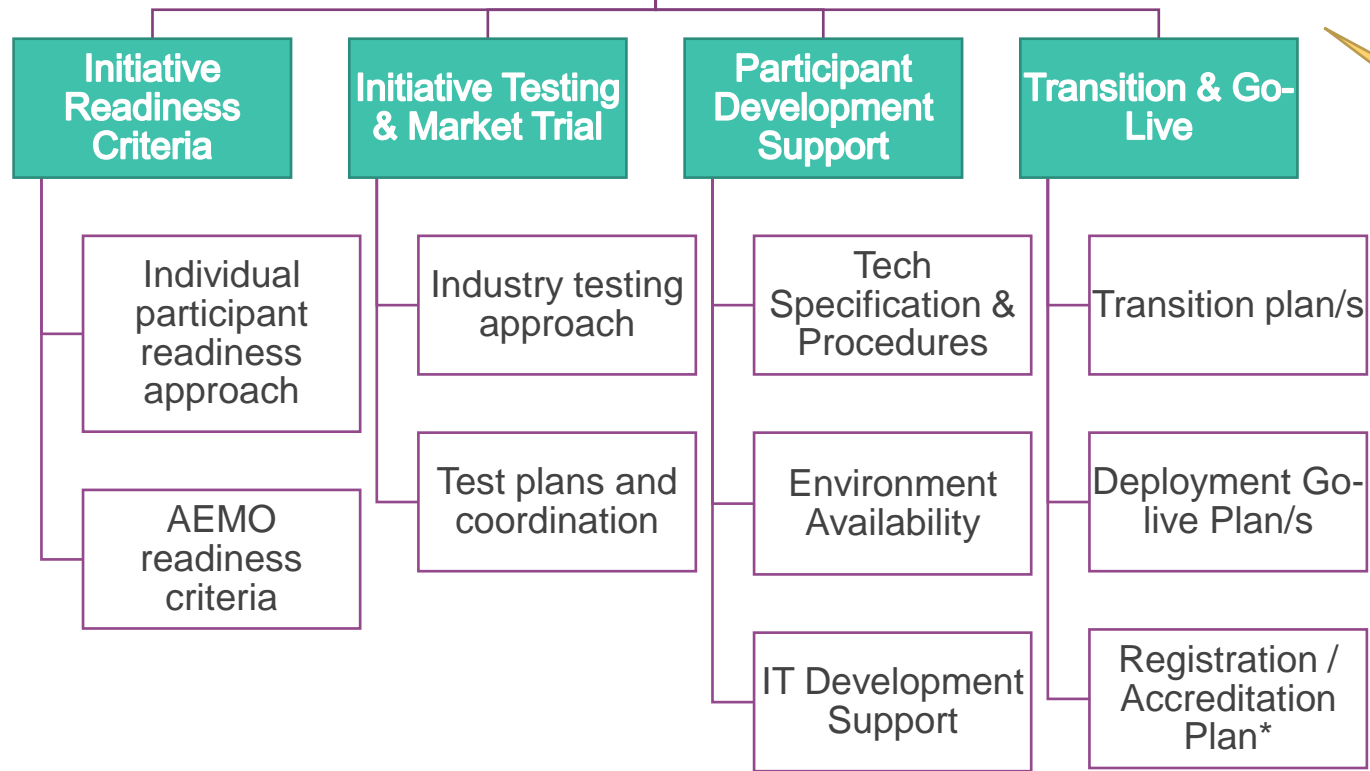
Increased MT PASA Information



Industry Implementation Approach – MT PASA

NEM REFORM READINESS STRATEGY (ALL INITIATIVES)

INDIVIDUAL INITIATIVE READINESS APPROACH



MT PASA readiness approaches adopt this framework

*If required

RISK & CONTINGENCY MANAGEMENT

INITIATIVE READINESS REPORTING & GO-LIVE CRITERIA MANAGEMENT

Initiative Readiness Criteria - MT PASA

Go Live Criteria Management summarises the criteria for decision making on readiness for the initiative to go-live in line with rule commencement timeframes and the efficient operation of the NEM and approach for the initiative

Readiness Component	Proposed Initiative Approach	Rationale
Go-Live Criteria	<p>MT PASA go-Live criteria will reflect Technical Readiness for go-Live and AEMO preparedness to accept updated availability and recall information.</p> <p>Impacted participant readiness will not be considered as criteria for go-live but as individual compliance factor</p>	
Criteria Components	<p>Initiative Readiness components will consist of :</p> <p>Solution Readiness: Market System Changes required to meet initiative requirements</p> <p>AEMO Business Readiness: AEMO business operations and IT Support prepared to operate enhancements from production Deployment</p> <p>Participant Readiness: Impacted participant readiness to provide increased MT PASA information is a participant compliance requirement and will not prevent initiative go-live</p>	Ability for AEMO to receive and process updated information is required for successful implementation of rule
Go-live Decision Management	Initiative go-live to be made on recommendation of AEMO Program on the basis of evaluation against agreed criteria components	
Industry Notification	<p>Decision Milestone to be established for communication of AEMO readiness to deploy and accept information – in line with commencement of Industry Test Period.</p> <p>Progress to be managed via ongoing progress / milestone reporting including deployment for Industry Testing</p>	To be included in project schedules, with Industry communication approach to be determined during execution phase

Initiative Readiness Reporting

Initiative Readiness Reporting outlines the form of participant readiness reporting required to meet go-live criteria decisions, and provide industry wide view on the progress towards implementation for AEMO and Industry. The approach considers whether the initiative requires formalised participant readiness reporting to be implemented

Readiness Component	Proposed Initiative Approach	Rationale
Formal Participant Readiness Surveys and Reporting	Formal participant reporting of readiness not required for Initiative	Impact is to a defined group of participants, with individual participant readiness not impacting other participants preparations
AEMO progress reporting	MT PASA progress reporting against defined L1/ L2 milestones as component of PCF and Implementation Forum reporting. This will include reporting against the agreed readiness criteria and checkpoint establishment prior to go-live	

Initiative Industry Testing

Outlines the expected approach to the conduct of Industry testing, providing and view on release based industry testing requirements. This approach to be validated with industry as part the Industry Test Strategy development

Readiness Component	Proposed Initiative Approach	Rationale
Industry Test Approach	<p>Industry Test Approach to be agreed with participants as component of October Release , with engagement on the scope and timing via ITWG from May</p> <p>Testing Approach for MT PASA will follow and Industry Test approach, where participants will be able to exercise their selected population approach (including API delivery), in line with their own timeframes. No co-ordinated industry test scenarios are required</p>	Participants can verify success of their changes without reliance on other participant responses – NEM reports available to all
Release Testing Requirements / Considerations	MT PASA Industry Testing will overlap with Industry Test planning and execution for ADC , FFR and potentially Metering Exemptions, with overall co-ordination performed at a release level	

Participant Development Support

Outlines the Initiative approach to the provision of technical and functional support for participants in their implementation of PASA initiative. Approach is guided by the initiative impact assessment view on scale of change and spread across participant categories

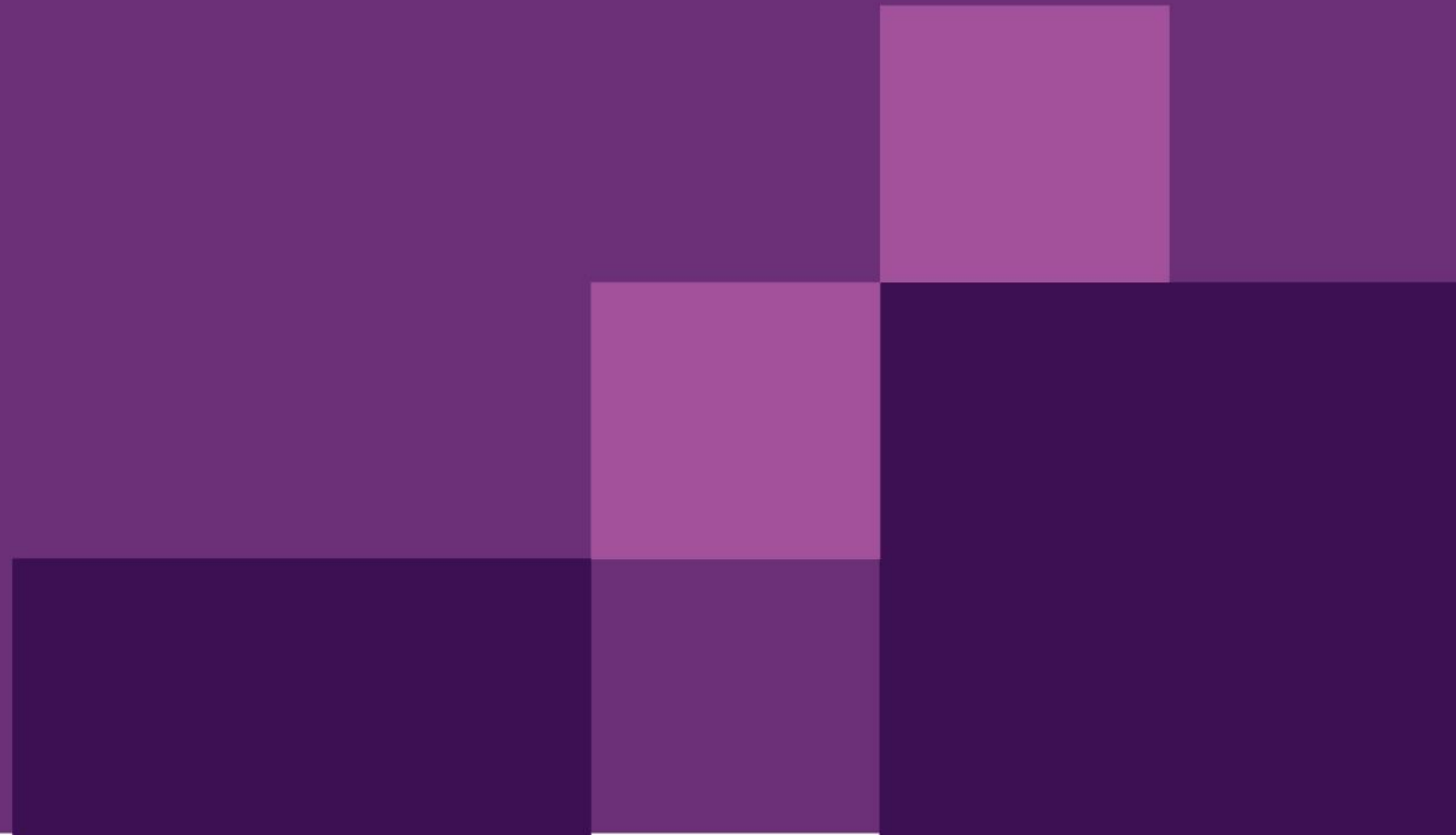
Readiness Component	Proposed Approach	Rationale
Update Market Procedures and Guidelines	Identified Procedures / guidelines / registration processes updated for new service, published in line with agreed milestones	
Update Technical Documentation (Specs, User Guides, FAQ)	Identified External guidelines and technical specs updates published in line with agreed milestones	
Update Data Model	Data model updates included in release 5.2, published in line with agreed milestones	
Update and agree external Report Formats, web Pages, etc	Consistent with procedures with Specifications available in timeframe to support participant development	
Provide Technical Implementation Support	Q&A, response to NEM2025 mailbox query, no specific focus groups to be established, technical support also available via MSUG	
Provide Impacted Participant support	Q@A, Address specific questions on specs , service introduction , process and eligibility - AEMO to support via Implementation Forum with specific briefing sessions if sufficient demand	

Transition Support

Initiative approach to the activities required to transition into operation. Both a longer term (transition) and cutover view are included to manage the scope and timing of required transitional activity

Readiness Component	Proposed Approach	Rationale
Transition Planning and Management	Rule provides for the population of recall times / unit status for planned outages 36 months from 9 th October commencement Capability to provide increased information will be deployed from 1 October to support participant update of required information. Reporting of increased MT PASA information will commence from the 9 th October	Procedures support requirement "from 9th Oct" - software implementation in advance will support participant population ahead of 9th October - and reduce "bow wave" of updates for participants
Go-Live (Cutover) Planning and Communication	Industry Go-Live Plan will be produced to align participant and AEMO deployment activities in line with agreed deployment dates	
Industry Post Go_live Support	Project support for hyper-care/ post go live support Principle to leverage normal business support processes where possible supplemented where required to assist immediate industry issues. This may include post go-live Q&A , Issue management sessions,	Consistent with project implementation scope, API support requirements will be dependent on uptake from participants

Fast Frequency Response

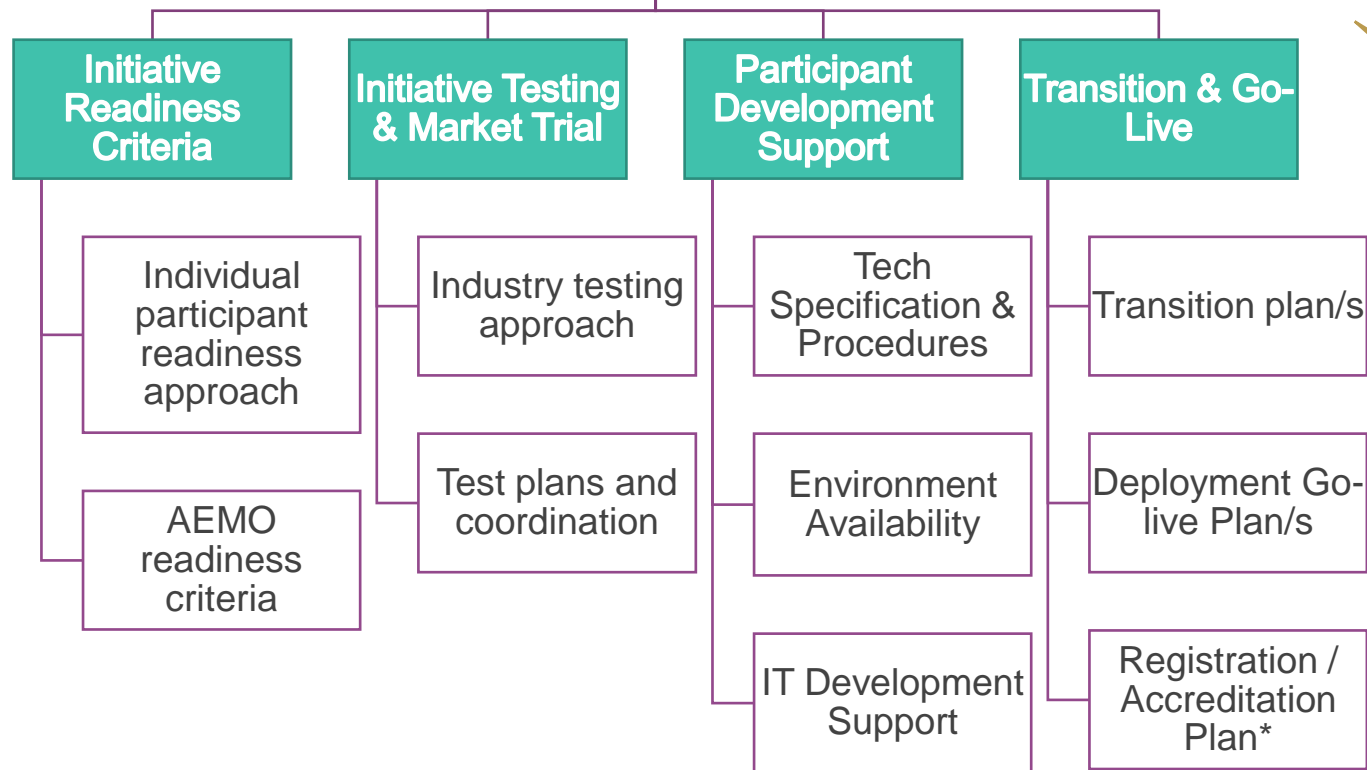


Industry Implementation Approach – FFR

NEM REFORM READINESS STRATEGY (ALL INITIATIVES)

Summary Plus
Feedback Question?

INDIVIDUAL INITIATIVE READINESS APPROACH



FFR readiness approaches adopt this framework

*If required

RISK & CONTINGENCY MANAGEMENT

INITIATIVE READINESS REPORTING & GO-LIVE CRITERIA MANAGEMENT

Go-live Criteria Management

Go Live Criteria Management summarises the criteria for decision making on readiness for the initiative to go-live in line with rule commencement timeframes and the efficient operation of the NEM and approach for the initiative

Readiness Component	Proposed Initiative Approach	Rationale
Go-Live Criteria	FFR go-Live criteria will reflect Technical Readiness for go-Live and readiness for service introduction	
Criteria Components	<p>Technical Initiative Readiness components will consist of</p> <p>Solution Readiness: System Changes required to meet initiative requirements and ongoing stability of existing settlements processes</p> <p>AEMO Business Readiness: Procedures and business operations in place</p> <p>AEMO IT Support Readiness: IT operational support for solution in place</p> <p>Participant Readiness: As an optional service , no pre-requisite participant activity as dependency for technical initiative readiness</p> <p>Market Readiness For Service commencement: to be evaluated based on number of participants registered to provide service, offers in place , assessment of service requirements for market operation.</p>	Technical Capability may be available, but given the optionality of service uptake, Very Fast Services may not be viable at rule commencement
Go-live Decision Management	<p>Decision Milestone to be established for communication of:</p> <p>Technical Go-Live – Decision point for proceed decision based on criteria evaluation, at least 1 month prior to rule commencement</p> <p>Service Commencement: Decision point for service commencement in line with “Pre-dispatch” evaluation . Notification to Industry Via Market Notice</p>	

Initiative Readiness Reporting

Initiative Readiness Reporting outlines the form of participant readiness reporting required to meet go-live criteria decisions, and provide industry wide view on the progress towards implementation for AEMO and Industry. The approach considers whether the initiative requires formalised participant readiness reporting to be implemented

Readiness Component	Proposed Initiative Approach	Rationale
Formal Participant Readiness Surveys and Reporting	FFR will not require formalised participant readiness reporting, in line with Participant readiness Criteria FFR will utilise Registration data and pre-dispatch information as indication of participant intention and readiness to commence offering Very Fast FCAS	FFR is optional service for participant offering. There are no mandatory participant transition, preparation activities that if not performed will impact technical readiness for market or other participants
AEMO progress reporting	FFR progress reporting against defined L1/ L2 milestones as component of PCF and Implementation Forum reporting. Includes milestones at risk and impact on Go-Live Decisions	FFR will implement NEM Reform framework for progress reporting

Initiative Industry Testing

Outlines the expected approach to the conduct of Industry testing, providing and view on release based industry testing requirements. This approach to be validated with industry as part the Industry Test Strategy development

Readiness Component	Proposed Initiative Approach	Rationale
Industry Test Approach	<p>Industry Test Approach to be agreed with participants as component of October Release .</p> <p>Industry support to include extended availability of release in Pre-Prod Environment, settlement runs to be scheduled allow participant verification of end to end processes including settlement statement verification</p>	
Release Testing Requirements	<p>FFR currently scheduled to go-live in similar timeframe to MT PASA, with which it will share data model updates, and 5 MLP update (ICF060) where end to end industry testing will require scheduling and support of settlement runs to support participant verification</p>	

Participant Development Support

Outlines the Initiative approach to the provision of technical and functional support for participants in their implementation of FFR initiative. Approach is guided by the initiative impact assessments view on scale of change and spread across participant categories

Readiness Component	Proposed Approach
Update Market Procedures and Guidelines	Identified Procedures / guidelines / registration processes updated for new service, published in line with agreed milestones
Update Technical Documentation (Specs, User Guides, FAQ)	Identified External guidelines and technical specs updates published in line with agreed milestones.
Update Data Model / AseXML Schema	Data model updates included in release 5.2, published in-line with agreed milestones
Update and agree external Report Formats, web Pages, etc	Consistent with procedures and reports published as component of Technical Specifications
Provide Participant Education (Q&A, Training Course Update, Implementation Advice)	Scheduling and requirements to be discussed at Implementation Forum MSUG sessions to support Technical Specification updates
Provide Impacted Participant support	Participant specific support via NEM2025@AEMO.com.au for responses to specific questions

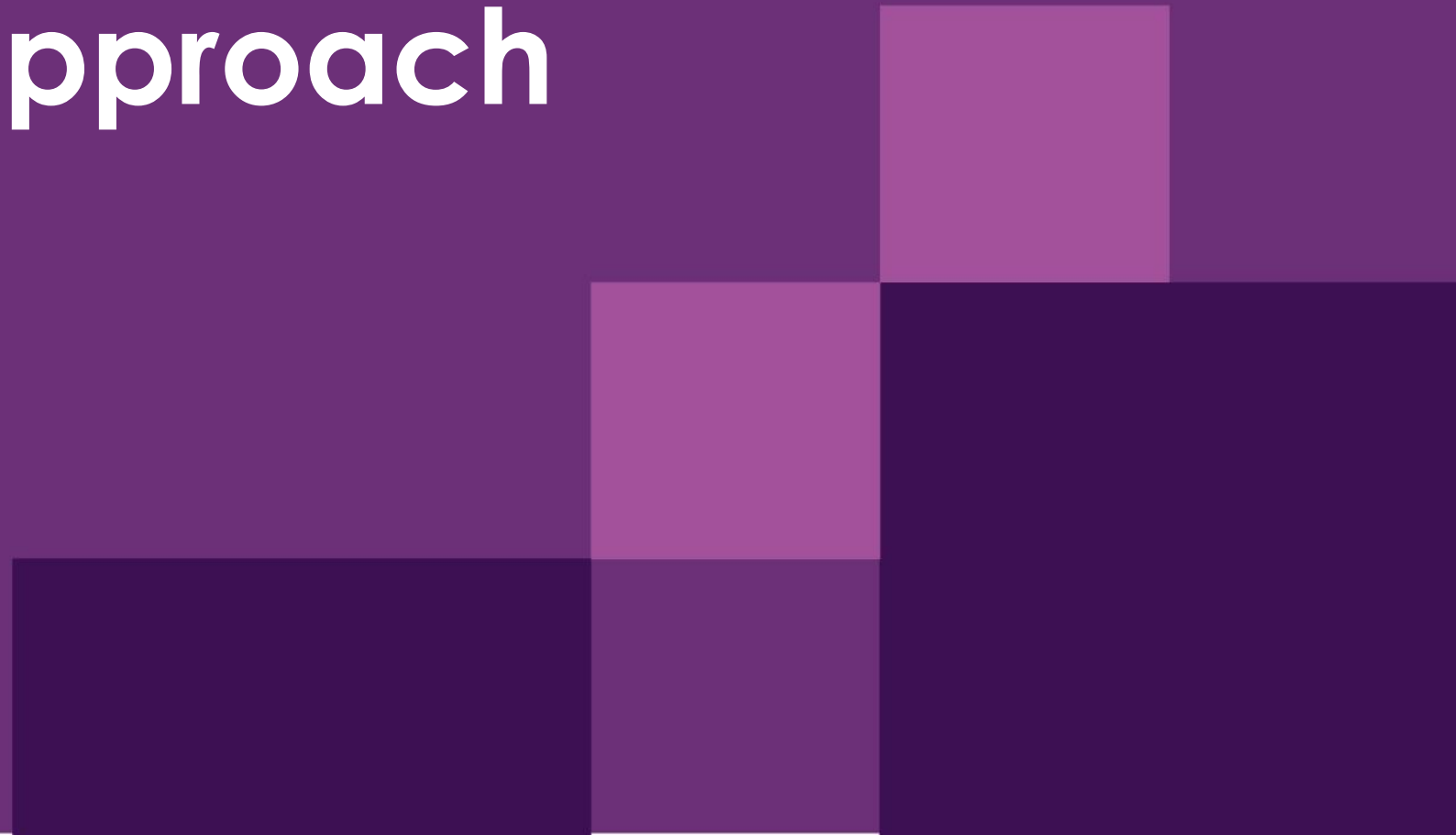
Transition Support

Initiative approach to the activities required to transition into operation. Both a longer term (transition) and cutover view are included to manage the scope and timing of required transitional activity

Readiness Component	Proposed Approach	Rationale
Transition Planning and Management	<p>AEMO will produce a Service Commencement Plan to communicate the decision points and activities (both AEMO and Participant) relating to the service commencement decisions.</p> <p>Transition activities will address the approach to registration updates for Fast FCAS participants, with consideration given to enabling Industry testing activities.</p> <p>Initial FCAS Service registration and participant technical capability assessment for the provision of Very Fast and other FCAS services will be considered as normal business operation.</p>	Key aspect of participant preparation is to guide AEMO decision on market readiness to commence new FCAS services and alignment of registered participants
Go-Live (Cutover) Planning and Communication	<p>Go-Live plans will cover key cutover timeframes, communications and (where required) participant co-ordinated activity to be incorporated.</p> <p>Phased deployment of capability is planned to support registration availability, dispatch data accumulation and bidding commencement prior to rule commencement dates.</p>	To reflect release strategy and timing once determined
Industry Post Go_live Support	<p>Project support for hyper-care/ post go live support</p> <p>Principle to leverage normal business support processes where possible supplemented where required to assist immediate industry issues. This may include post go-live Q&A , Issue management sessions,</p>	Consistent with project implementation scope



IESS June 2024 readiness approach



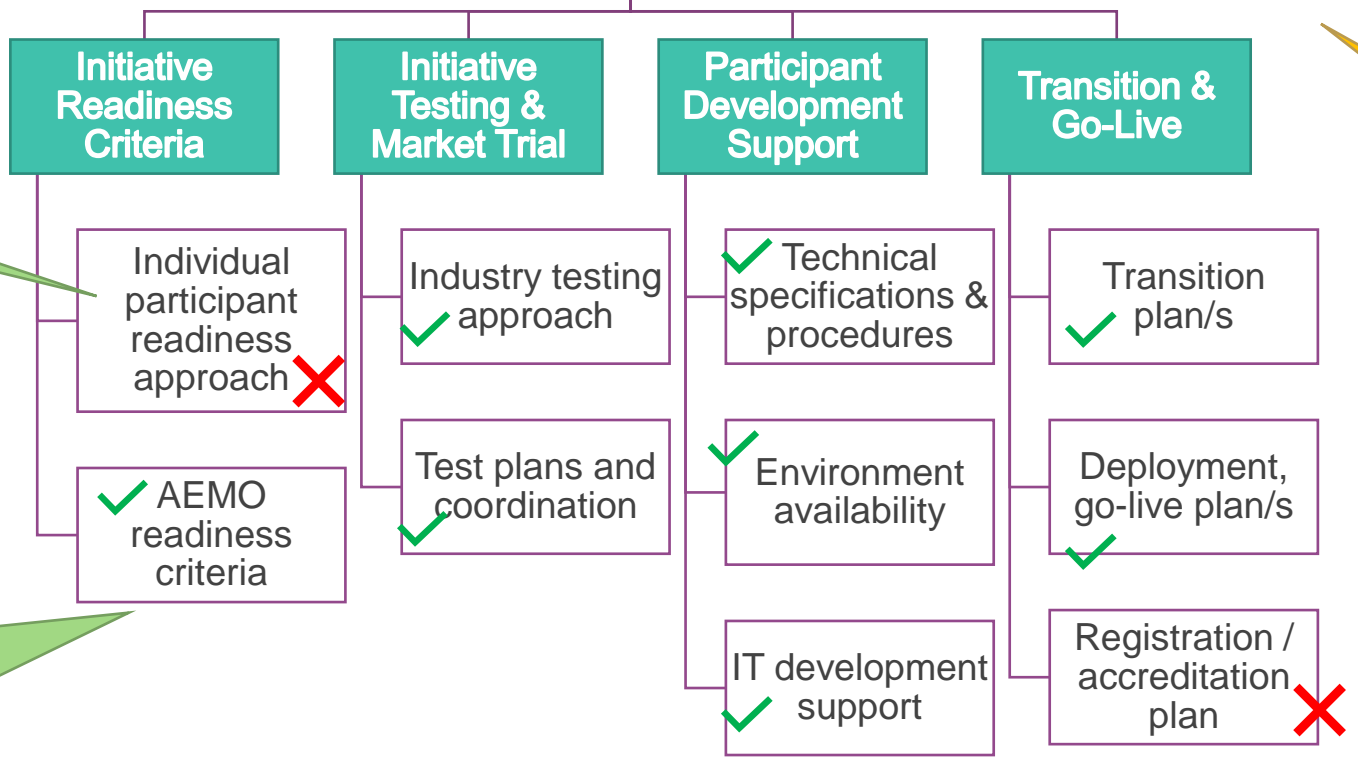
Context: NEM Reform program industry strategy

NEM REFORM READINESS STRATEGY (ALL INITIATIVES)

IESS JUNE 2024 READINESS APPROACH

Individual participant (or participant category) readiness is **NOT** a dependency for go-live.

- AEMO Market systems updated and tested
- AEMO business needs to be ready to operate
- AEMO IT support needs to be in place

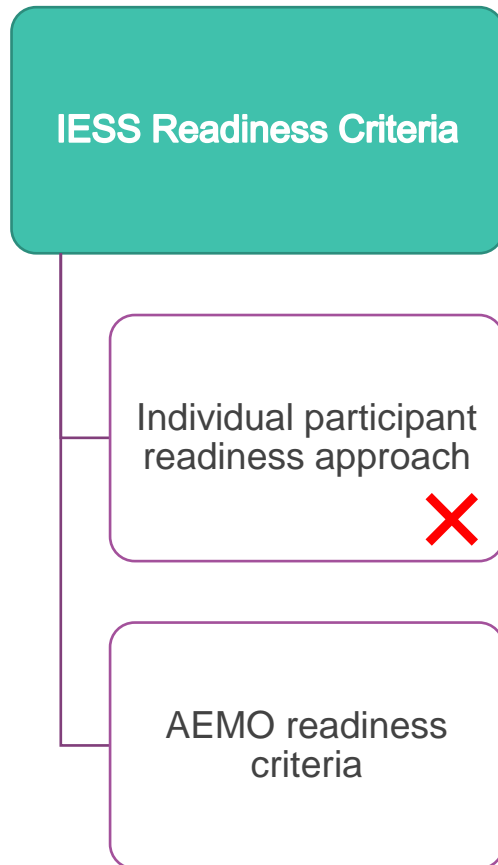


IESS readiness approach adopts the standard NEM Reform program framework

RISK & CONTINGENCY MANAGEMENT ✓

INITIATIVE READINESS REPORTING & GO-LIVE CRITERIA MANAGEMENT ✓

Elements of IESS readiness approach: IESS readiness criteria

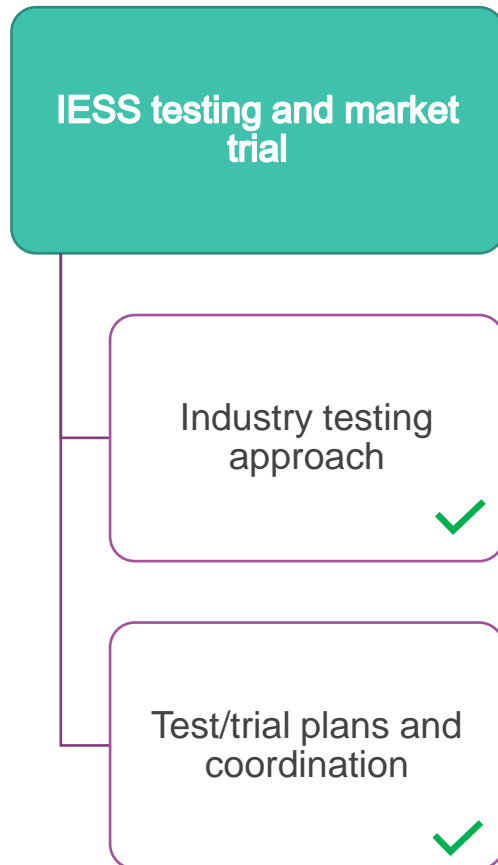


For IESS to go-live:

- AEMO needs to design, build & test its solution/s
- AEMO business needs to be ready to operate
- AEMO IT support needs to be in place
- Individual participant (or participant category) readiness is not a dependency for go-live.
 - For the uninterrupted and reliable operation of the NEM, only AEMO needs to be ready for the June 2024 release/s
 - However participants will likely need to make timely system/process changes in managing their operations and also compliance with the IESS rule.

These criteria will be more fully defined and form the basis of go-live criteria management.

Elements of IESS readiness approach: IESS testing and market trial



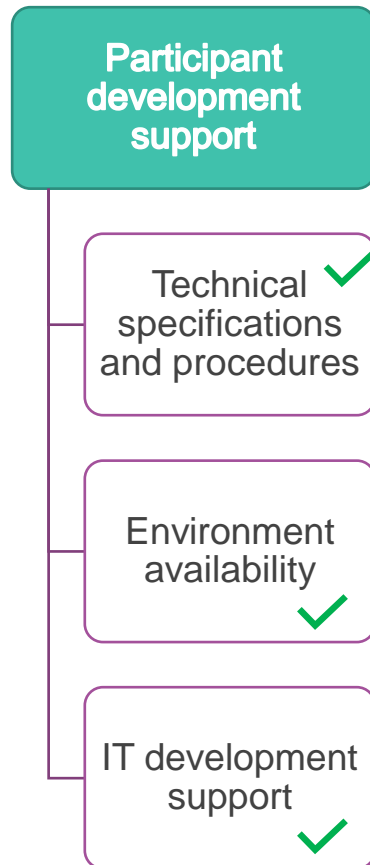
Early thinking on IESS testing/trial approach includes:

- pre-production will be available for industry testing
- appropriate to hold market trial (scope TBD) given scale of changes across participant categories and settlement impacts

Market trial scoping and planning will occur in:

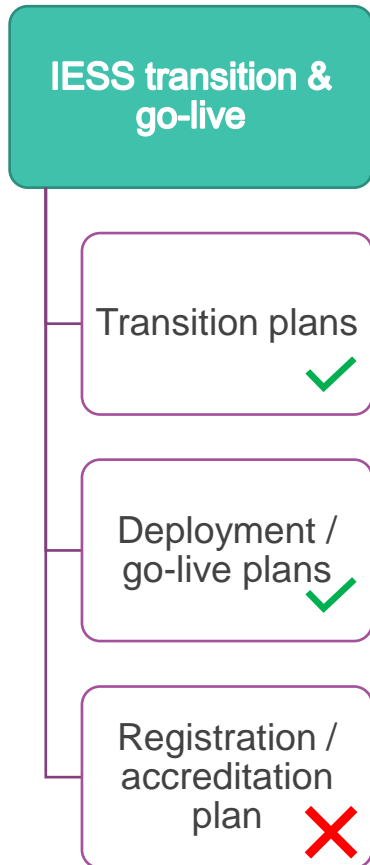
- consultation with participants
- alignment with the project schedule

Elements of IESS readiness approach: IESS participant development support



- Key procedure changes required for retail, bidding, dispatch, settlements and prudentials. These procedure consultations have been planned
- EMMS and MSATS tech specs/data models will need updates in time for participants to make their system changes
- Development support activities will be discussed in Implementation Forum e.g. information or Q&A sessions etc

Elements of IESS readiness approach: IESS transition and go-live



Transition plans will be needed for:

- Reclassifying SGAs and Generators/Customers with BDUs to IRP registration category
- Reclassifying relevant loads and generators to “ancillary service units”
- Transitioning participants with existing (pre-December 2021) BDUs to ‘single DUID’ bidding and dispatch
- AEMO to transition existing NMI Classification Codes where a new code needs to apply.
 - NSPs will not have an obligation to *transition* NMI Classification Codes
 - However, ongoing from June 2024 non-registered NMI Classification Codes [LARGE, SMALL & NREG] will be applied by the NSP to create NMIs. AEMO will then apply the new NMI Classification Code once an installation is registered

Deployment / go-live plans will be needed for:

- Introducing new NMI classification codes
- Data model changes
- Bidding format changes
- Alignment of participant and AEMO system deployments

Registration / accreditation plans

- Registration changes relate to reclassifying some participants to IRP category. This will be addressed through transition plans (above)
- IESS does not introduce or trigger any additional accreditation requirements

Elements of proposed IESS readiness approach - IESS readiness reporting etc

IESS READINESS REPORTING & GO-LIVE CRITERIA MANAGEMENT

Market readiness activities are intended to:

- 1) address readiness challenges and support the prudent implementation of NEM changes
- 2) safeguard the integrity of NEM processes across the various IT system go-lives or market starts, given the market's size, value, complexity and need for continuous operation.

Readiness reporting is used when there is a need for AEMO and industry to have an accurate assessment of industry's readiness for:

- system deployments,
- transitional activities, and/or
- rule commencements.

Participant readiness reporting is not needed. For the uninterrupted and reliable operation of the NEM, only AEMO needs to be ready for:

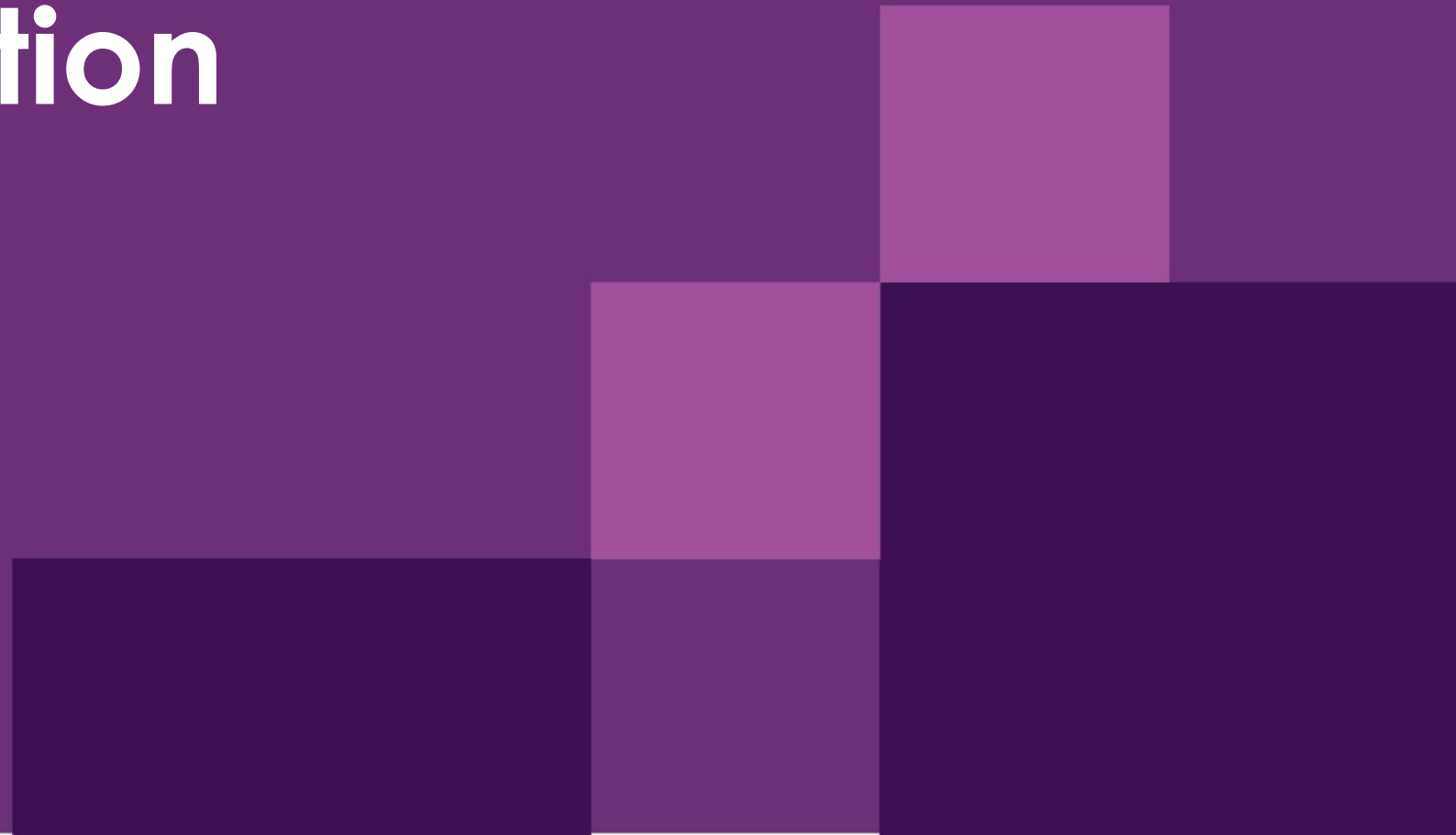
- 02 Jun 2024 NECR changes - AEMO will deploy system changes to adjust settlement reports
- 03 Jun 2024 registration and dispatch changes – AEMO will deploy system and process changes to introduce IRP registration category and BDU classification & bidding.

While participants will likely need to make timely system/process changes in managing their operations and also compliance with the IESS rule, AEMO does not propose to monitor participant readiness.

AEMO will report to industry:

- Progress against agreed milestones
- Checkpoints on go-live criteria in the lead-up to implementation.

IDAM/IDX/PC Representation

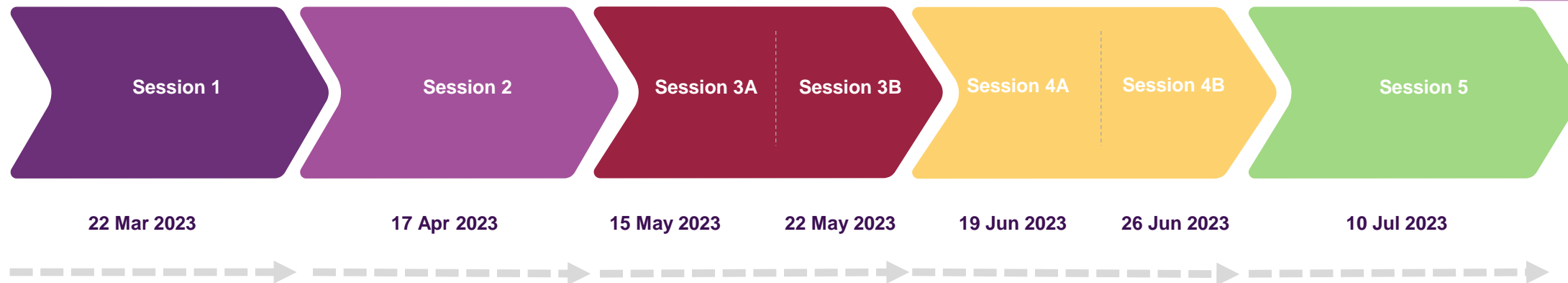


Background – Strategic / Foundational initiatives

Pathway	Initiatives	Description
Foundational <ul style="list-style-type: none"> Foundational dependency work to deliver an uplift to base capability on which reforms are dependent 	<ul style="list-style-type: none"> Identity Access Management (IDAM) 	<ul style="list-style-type: none"> A unified mechanism to authenticate participant users and applications when accessing AEMO services.
	<ul style="list-style-type: none"> Industry Data Exchange (IDX) 	<ul style="list-style-type: none"> Unified access to AEMO services across all markets, using modern authentication and communication protocols, facilitating a cohesive approach to industry data exchange. This will leverage IDAM
Strategic (Related) <ul style="list-style-type: none"> Strategic dependency work to effectively futureproof capabilities and scalability of systems thereby avoiding investment in systems that will become end-of-life shortly after the reforms take effect 	<ul style="list-style-type: none"> Portal Consolidation (PC) 	<ul style="list-style-type: none"> A 'single pane of glass' user experience for participants accessing all AEMO browser based services

- These initiatives have been identified for the NEM Reform Program and included in the [NEM Reform Implementation Roadmap](#).

Industry Consultation



Session	Introduction – IDX, IDAM & PC	Discovery Workshops – IDAM and PC	Target State Discussion	Transition Strategy	Conclusions and Business Case
Agenda*	<ul style="list-style-type: none"> Introduce initiatives Outline workshop plan 	<ul style="list-style-type: none"> Pain points and benefits Cyber considerations Survey 	<ul style="list-style-type: none"> Concept walkthrough 	<ul style="list-style-type: none"> Transition Strategy Impacts & Benefits 	<ul style="list-style-type: none"> Summary Options
Audience		 	 	 	

Appendix B: 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 regarding proposed reforms or other initiatives, all participants agree to adhere to the CCA at all times and to comply with this Protocol. Participants must arrange for their representatives to be briefed on competition law risks and obligations.

Participants in AEMO discussions **must**:

- Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
- Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
- Immediately and clearly raise an objection with AEMO or the Chair of the meeting if a matter is discussed that the participant is concerned may give rise to competition law risks or a breach of this Protocol

Participants in AEMO meetings **must not** discuss or agree on the following topics:

- Which customers they will supply or market to
- The price or other terms at which Participants will supply
- Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
- Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
- Refusing to supply a person or company access to any products, services or inputs they require

Under no circumstances must Participants share Competitively Sensitive Information. Competitively Sensitive Information means confidential information relating to a Participant which if disclosed to a competitor could affect its current or future commercial strategies, such as pricing information, customer terms and conditions, supply terms and conditions, sales, marketing or procurement strategies, product development, margins, costs, capacity or production planning.



For more information visit

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