

NEM Reform Industry Testing Working Group

Meeting #16
28 June 2024



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 and present.**

Agenda

#	Time	Topic	Presenter
1	10:00 – 10:05am	Welcome	Greg Minney
2	10:05 – 10:10am	Actions & Feedback from Previous Meeting	Greg Minney
3	10:10 – 10:15am	Pre-Prod & PDSE Activities & Timings	Greg Minney
4	10:15 – 10:30am	IESS June 2024 Market Trial Review <ul style="list-style-type: none"> Market Trial Review Hypercare and Post Go Live Support Participant Market Trial Feedback Testing and Development Support- Feedback 	Greg Minney / Amit Kumar
5	10:30 – 10:40am	September 2024 Retail Market Improvements (RMI) Release	Greg Minney
6	10:40 – 10:50am	December Frequency Performance Payments (FPP - NFO) Release	Amit Kumar
7	N/A	Upcoming Engagements <ul style="list-style-type: none"> Upcoming Meetings 	For Noting
8	10:50 – 11:00am	General Questions and Other Business	Greg Minney

Appendix A:
Competition law meeting protocol

Appendix B:
Industry Testing Approaches

“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 & Feedback from Previous Meeting

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

#	Topic	Action	Responsible	Status
16.4.1.1	IESS June 2024 Market Trail	AEMO welcomes any additional feedback on the recent market trial activities and Q&A sessions by 12 June and can be sent to NEMReform@aemo.com.au .	Participants	Closed Refer to agenda item 4

The latest meeting minutes and materials are available on the [NEM Reform Industry Testing Working Group](#) webpage.

3. Pre-Prod & PDSE Activities & Timings

Pre-Prod / PDSE Key dates



Proposed Pre-prod dates and outage timings

- Next pre-prod refresh is scheduled for 12 Aug to 16 August to support the September 2024 release (Retail refresh only).
- Subsequent Pre-prod Wholesale and Retail refresh is planned for late Q1 2025 (date TBC) to support FPP (FO) Industry Test.

Data Model 5.4





- Data Model 5.4 to be available in Pre-Prod from **25 September 2024**.

PDSE

- Access to PDSE will be removed from **Friday 28 June 2024**.

4. IESS June 2024 Market Trial Review

Integrating Energy Storage Systems (IESS)

Implementation date	Change	Description
Fri 31 Mar 2023 	Small generation aggregators (SGA) providing FCAS	Complete. Aggregators of small generating and storage units can now provide ancillary services (if they choose to do so).
Wed 09 Aug 2023 	Aggregated dispatch conformance (ADC)	Complete. <ul style="list-style-type: none"> Aggregate Systems can choose to register for ADC ADC provides an Aggregate System with the flexibility to conform to its dispatch instructions by dispatching energy at the connection point from any combination of its units (with some restrictions), rather than individually on a unit-by-unit basis Includes minor changes for Battery Energy Storage Systems (BESS). AEMO will temporarily be using the ADC mechanism to monitor net dispatch conformance for a BESS across its scheduled generating unit/scheduled load pair, as a Target Aggregate.
Sun 02 Jun 2024 	IESS retail and settlement changes	Significant changes to the calculation method to be used for Non-Energy Cost Recovery (NECR): <ul style="list-style-type: none"> Recovery calculations are to consider the gross (consumption separate from generation) energy amounts of all participants, rather than current approach using net energy (generation – consumption) of specific participant types Major settlements database structure changes are required to enable the new calculations, these changes will flow into the Data Model and affect: <ul style="list-style-type: none"> Participant reconciliation and reporting activities AEMO data provision Embedded network management changes to ensure that the parent has the appropriate gross energy volumes available for settlement.
Sun 02 Jun 2024 (IRP) Mon 03 Jun 2024 (BDU) 	Registration, bidding and dispatch changes	<ul style="list-style-type: none"> Introduction of Integrated Resource Provider (IRP) participant type Bidirectional unit (BDU) bidding and dispatch, with impacts for BDU participants and bidding system vendors/developers.

- On 2 December 2021, the AEMC made a Final Determination on the IESS rule. The change seeks to better integrate storage and aggregate systems into the National Electricity Market (NEM).
- IESS rule comprises of 4 distinct high-level changes - the first 2 have been implemented and delivered.
- IESS industry testing and market trials plan relates to the IESS June 2024 rule commencements.
- IESS Industry Test / Market Trial is now complete with no outstanding issues.

IESS Market Trial Review



Scope: Pilot testing plus 3 main phases, supported by daily stand-up meetings

PHASE	TIMING	STATUS	COMMENTS
Pilot: BDU cutover	Mon 08 Apr to Tue 16 Apr	✓ Complete	Pilot BESS successfully cutover to BDU in pre-production.
Phase 1: Standing data	Wed 03 Apr to Fri 12 Apr	✓ Complete	Retail & registration standing data successfully updated.
Phase 2: Settlements – NECR changes	Wed 03 Apr to Wed 08 May	✓ Complete	<ul style="list-style-type: none"> • Some defects identified and remedied. • Some discrepancies identified due to the timing of AEMO and Participant refresh timings. • No outstanding defects.
Phase 3: BDU cutover	Fri 19 Apr to Fri 24 May	✓ Complete	<p>Selected participant transition from 2DUID to 1DUID:</p> <ul style="list-style-type: none"> • Wed 01 May: Simulated cutover #1 of 6 BESS to BDU successfully completed. • Wed 15 May: Simulated cutover #2 of 3 BESS to BDU successfully completed. • BDU bidding and dispatch: No outstanding defects • Learnings from IESS market trial will be captured and worked through with industry prior to BDU production cutovers.

Hypercare and Post Go Live Support

POST GO-LIVE SUPPORT ACTIVITY	
Post go-live support	<ul style="list-style-type: none"> Hypercare period ends on 28 June 2024 Please follow BAU processes and raise system issues to support.hub@aemo.com.au
BDU transition	<ul style="list-style-type: none"> From July 2024: BDU readiness focus group session to: <ul style="list-style-type: none"> Debrief on learnings from Phase 3 of IESS market trial Prepare for BDU cutovers in production AEMO will maintain the BDU transition schedule Participants are requested to inform AEMO of any changes required to their allocated transition dates as soon as practicable. BDU transition and cutover enquiries and communications to be via NEMReform@aemo.com.au
IESS mailbox	<p>IESS mailbox IESS@aemo.com.au will close on 28 June 2024, noting that:</p> <ul style="list-style-type: none"> BAU enquiries to be via support.hub@aemo.com.au NEM reform program queries to be via NEMReform@aemo.com.au BDU transition and cutover enquiries and communications to be via NEMReform@aemo.com.au



IESS Market Trial Participant Feedback

- Verbal feedback
 - AEMO received very positive feedback at the final daily standup. Key points:
 - Overall, the Market Trial was considered a success
 - Frequency of Q&As and standups was appropriate but a little repetitive
 - Practitest was an effective channel for sharing test scenarios and defects
- Formal feedback
 - AEMO only received 3 written responses on the Market Trial. Key Points:
 - Market Trial should have included transition day scenario for the SCADA file/data stream changes activities.
 - Q&As were useful for problem resolution due to presence of SMEs though more SME access at the beginning of the Market Trial would have been useful.
 - Issues with the timing of the preprod data cuts.
 - This meant that prelim reports couldn't be tested.
 - There were also significant discrepancies between preprod and the equivalent production reports which made reconciliation time consuming. Advanced planning/communication of this will greatly assist in future market trials.
 - Some participants had already ingested daily settlement reports from the first few weeks of the settlement runs in their respective preprod systems limiting early testing.
 - Some bugs/environment issues were found in the PreProd that appeared to have slipped through the AEMO QA process.
 - Some frustration with response times and quality of responses to participant questions.
 - BDUs were excluded from the scope of Settlement scenarios.
 - URLs provided for documentation could not be found on some occasions.
 - Pre-Prod test cases reused existing case IDs. This caused issues with foreign key constraints.
- Lessons learned on Phase 3 (BDU Cutover) of the Market trial was provided via the BDU Readiness focus group.

Testing and Development Support- Feedback

- Only two responses were received.
 - One of the two respondents utilised the PDSE and both respondents used Preprod.
 - When should PDSE be set up for future initiatives?
 - Where a significant risk to industry is identified.
 - Complex development.
 - Compressed timeline or if industry identifies a need for additional testing.
 - When there is a potential conflict with Preprod registrations.
 - What extent, timing and functionality would be needed?
 - Early availability is important as it took a longer than expected time to connect to the AEMO PDSE.
 - the PDSE could be made available with basic functionality and data to allow time to connect and perform shakeout testing.
 - Is timing of availability or certainty of scope/ approach key factor in usage?
 - Scope is critical to usage. One participant didn't use the PDSE for IESS because the required settlement functionality (RM Integration) wasn't available.
- Other feedback
 - AEMO need to consider if sufficient support is available to answer PDSE questions and support the environment in a timely manner, that doesn't also impact AEMO's delivery timelines.
 - It would be good to have a permanent PDSE environment that could be made available in addition to Preprod and had more support for things like dummy BDUs or other functionality that may not be reflective of current registrations.
 - AEMO to consider a reference web page to provide the test data being used

5. September Retail Market Improvements (RMI) Release

Retail Market Improvements (RMI)

- AEMO build activities are in progress and internal test execution has commenced .
- Industry Test Strategy published on 20 June 2024 .
- Two Industry Test windows
- Net System Load Profile (ICF_072).
 - Beginning Sept to end Sept 2024
 - Similar in scope and structure to last years 5MLP Industry Test
 - The new methodology will become effective in production from **29 Sept 2024**
- Substitution Types Review (ICF_054)
 - Beginning **Oct** to end **Oct 2024** (previously scheduled from Sept to Oct 2024)
 - Anticipate Bilateral testing between MDPs and FRMPs, ENLRs and LNSPs
 - Changes to the Substitution Types and Reason Codes will become effective in production from **4 Nov 2024**
- Pre-prod deployment scheduled for 27 August for both ICFs
- Production deployment scheduled for 29 September for both ICFs
- September Technical Specification has been drafted [MSATS – Technical Specification – September 2024](#).

RMI Industry Testing Strategy

WHO?	MSPs, FRMPs, ENLRs and LNSPs.	
WHEN?	2 Sept to 27 Sept 2024	ICF_072 industry test period
	30 Sept to 1 Nov 2024	ICF_054 industry test period
WHAT?	<p>Industry Testing ICF-072</p> <ul style="list-style-type: none"> • Demonstrate the changes to the profiling methodology to convert accumulation (basic meter) reads, that typically account for consumption over a 90-day period, into 5-minute trading intervals. • Preprod shakeout in the week prior to industry test period (26 Aug – 30 Aug) • Validation in Preprod to be via RM reporting based on 1 year’s data in the following sequence: <ol style="list-style-type: none"> 1. PAE Baseline runs (current profiling methodology) 2. PAE runs with new methodology • Participants can compare the profiling outcomes via the relevant RM reports (RM20, RM16, RM17, also potentially UFE RM reports). • Report cycle will be run for a selected period and shared with Participants as early as possible in the Industry Test window. Report cycle for a subsequent period will then be run to provide further validation if time permits. 	

RMI Industry Testing Strategy

WHAT?

ICF_054 Industry Testing

- Confirm that MDPs can submit meter data with the new Substitution Types and Reason Codes post deployment of the changes into Pre-prod.
- Confirm that FRMPs, ENLRs and LNSPs can consume meter data with the new Substitution Types and Reason Codes post deployment.

ICF_072 Validation

- Participants to review provided reports utilising updated NSLP calculation

NEXT STEPS

- AEMO will hold twice-weekly Q&A sessions with participants to support industry testing and discuss any issues encountered.
- Q&A sessions to commence 29th August
- AEMO will coordinate with market participants on timings of when the reports will be published and respective case IDs and periods for ICF_072.
- Participants to arrange Bilateral testing for ICF_054.

Industry Testing Strategy

- The RMI Industry Testing Strategy published 20 June 2024. Feedback requested by 19 July 2024.
- AEMO welcomes feedback via NEMreform@aemo.com.au

6. December Frequency Performance Payments (FPP - NFO) Release

Frequency Performance Payments (FPP)

- AEMO development in progress and due to be completed at the end of June and AEMO Internal testing is on schedule to commence in early July 2024.
- Industry Test Strategy for the Non-Financial Operation published 7 June [Industry Test Strategy](#).
- Industry Test for the Non-Financial Operation (NFO) phase scheduled to commence 25 October 2024.
- Market Trial for the Financial Operation (FO) phase scheduled to commence 17 March 2025.
 - Pre-prod refresh will be required in Q1 2025, prior to this Market Trial
- FPP Reporting Data model, EMM DM 5.4, was published 15 April 2024, see the [AEMO Tech Spec Portal](#)

FPP (NFO) Industry Testing Strategy

WHO?	All participants planning on migrating to the 5.4 Data Model	
WHEN?	25 Oct to 22 Nov 2024	Industry test period
WHAT?	<p>FPP (NFO) Industry Testing</p> <ul style="list-style-type: none"> • New data model 5.4 reports developed as part of FPP December 2024 non-financial operation release. • Data model 5.4 release will provide two scripts to participants: <ul style="list-style-type: none"> • A script to create data model from scratch and • A script to update from previous version. • Once participants have upgraded to/installed data model 5.4, they will be able to subscribe to new table data feeds. • Participants should then be able to receive and validate the new data feeds in their data model tables and any downstream processes dependent on this data. • Industry Testing will be executed in Pre-prod. There is no requirement for a Pre-prod data refresh for the NFO Industry Test. 	
NEXT STEPS	<ul style="list-style-type: none"> • Data model 5.4 will be deployed to Preprod on 25 September 2024. • AEMO will hold weekly Q&A sessions from Tues 8 October 2024 to assist Participants with the upgrade/installation of data model 5.4. • Q&A sessions will be scheduled twice-weekly for the duration of the industry test (from 22 October) to support participant testing and to discuss any issues encountered. 	

7. Upcoming Engagements

For Noting

Upcoming Engagements

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				

August						
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	

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

NEM Reform Program Committees/Forums

- Executive Forum
- Reform Delivery Committee
- Reform Delivery Committee Collaborative Workshop
- Program Consultative Forum
- Electricity Wholesale Consultative Forum
- Implementation Forum
- Industry Testing Working Group

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 Industry Testing Working Group](#)



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 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.

Appendix B: Industry Testing Approaches

Approaches to Industry Testing

AEMO provides opportunity for Industry participants to test their updated systems and processes prior to release of AEMO updates into production.

The approach to the level of co-ordination, integrated planning and scenario management that is provided is dependent on a number of factors including:

- Impact to end-to-end participant process flows
- Ability of impacted participants to successfully test changes without AEMO or other participant co-ordinated activity
- Number and range of participants impacted by release

The approaches to Industry testing are described as:

Type of market testing	Description	Example
Industry testing	Self-testing of functionality such as connectivity, and/or coordinated multi-party testing of functional scenarios	Testing a change request (CR) or processing a reallocation or bid submission
Invitation industry testing	Coordinated testing of business process scenarios with a select number or subset of participants with systems ready for testing.	Testing NMI transfer Process
Market trials	Coordinated multi-party end-to-end testing of business process scenarios	Meter exchange involving CRs, service orders and 5-minute meter reads

In all cases involvement in testing is voluntary on participants behalf.

Agreement on approach to the type of industry testing for a release is conducted through the Implementation forum and Industry Test Focus Group along with support arrangements during the test period.



For more information visit

aemo.com.au