

IESS BDU Readiness Focus Group

Integrating Energy Storage Systems

14 March 2024



Attendees

Name	Organisation	Name	Organisation
Carlo Polisenno	AGL	Alice Michener	Australian Energy Market Operator (AEMO)
Kieran O'Leary	AGL	Andrew Groom	AEMO
Boris Basich	AGL	Basilisa Choi	AEMO
Shane Kerr	Amplitude Power	Ben Blake	AEMO
Gerard Dunne	CS Energy	Carla Ziser	AEMO
Gagan Sharma	Energy Australia	Catherine Wu	AEMO
Andrew Couttie	EnergyAustralia	Chris Fleming	AEMO
Ranjan Thakur	EnergyAustralia	Demi Chau	AEMO
Dan Mascarenhas	EnergyAustralia	Duncan Swijnenburg	AEMO
Frankie Wong	EnergyAustralia	Emily Brodie	AEMO
Tony Vu	Engie	Glenn Wrest	AEMO
Jovilisi Draunimasi	Global Power Generation	Karen Clarke	AEMO
Lewis Wand	Iberdrola	Kavita Ziomek	AEMO
Nick Clippingdale	Mondo	Luke Barlow	AEMO
Kristopher Luksich	SA Water	May Cotoner	AEMO
Obert Nhau	SA Water	Ulrika Lindholm	AEMO
Shailesh Patankar	SA Water		
Bruce Miller	Shell Energy		
Steven Frimston	Shell Energy		
Trent Morrow	Vena Energy		



1. Welcome

Ulrika Lindholm

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.

Introductions

Objectives

- This Focus Group aims to promote detailed discussion around how AEMO, battery operators and bidding vendors collaborate on industry readiness.
- This session is intended to finalise engagement on BDU transition and cutover planning and provide participants with information about the IESS project's upcoming activities and how to stay involved.

Ways of collaborating

- Questions and comments are welcome, either in the chat or by raising your virtual hand. AEMO will answer questions throughout the presentation, as well as during the dedicated Q&A time at the end.
- Please introduce yourself (name & organisation) in any interactions.
- Before attending, participants should peruse the appropriate meeting protocol (following slide).

AEMO Competition Law - Meeting Protocol

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO, all participants agree to adhere to the CCA at all times and to comply with appropriate protocols where required to do so.

AEMO has developed meeting protocols to support compliance with the CCA in working groups and other forums with energy stakeholders. Before attending, participants should confirm the application of the appropriate meeting protocol.

Please visit: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups>

AGENDA

#	Timing (AEDT)	Topic	Presenter(s)
1	1:30 – 1:35 PM	Welcome	Ulrika Lindholm
2	1:35 – 1:40 PM	Actions from previous meeting	Ulrika Lindholm
3	1:40 – 1:45 PM	IESS timeline updates	Carla Ziser
4	1:45 – 1:55 PM	BDU storage fields	Basilisa Choi & Luke Barlow
5	1:55 – 2:00 PM	Potential Edge Case Dispatch Outcomes	Basilisa Choi
6	2:00 – 2:10 PM	PDSE & Market Trial	Ulrika Lindholm
7	2:10 – 2:15 PM	SCADA Update	Kavita Ziomek
8	2:15 – 2:25 PM	Other business	Carla Ziser
9	2:25 – 2:30 PM	Next steps & close	Ulrika Lindholm

APPENDICES

A	IESS Glossary
B	BDU Readiness Focus Group participation and administration
C	NEM Reform Program Engagement Calendar
D	SCADA changes for BDUs

“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 from previous meeting

Ulrika Lindholm

Actions from Previous Meeting

(Item = Meeting # – Agenda # – Reference)

#	Topic	Action	Responsible	Status
3.4.0.1	SCADA Changes for BDUs	Participants to take proposal to establish new ICCP IDs for MMs backup signals back to their organisation and let us know if any concerns	Participants	Closed
3.8.0.1	Q&A	AEMO and AGL to discuss circumstances around parasitic loads	AEMO & AGL	Closed

Notes

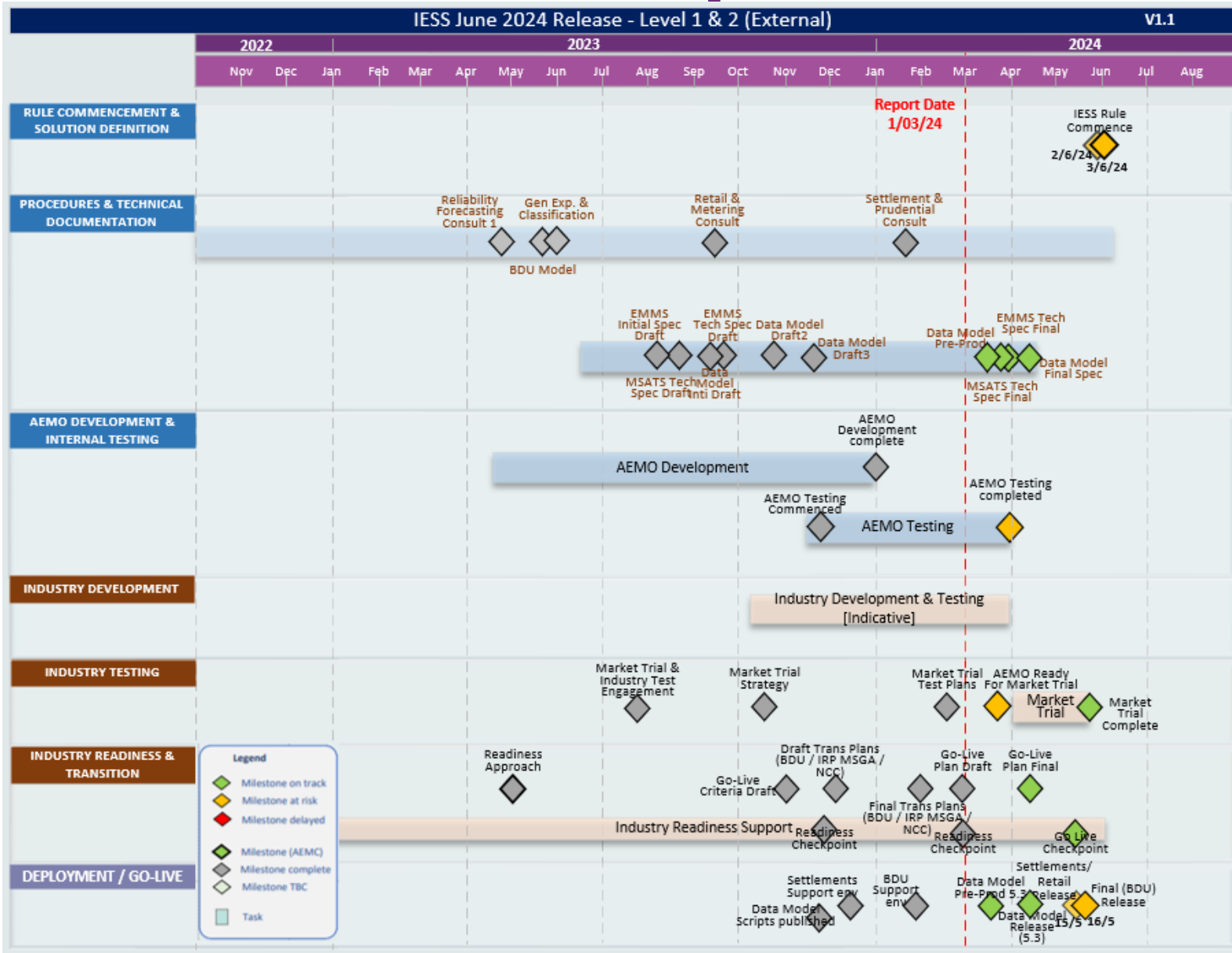
- No feedback was received from participants on the actions from previous meeting.

3. IESS June 2024 Timeline

Carla Ziser

IESS timeline update

Participants can access the latest status on this timeline via the [NEM Reform Program Consultative Forum](#) and [Implementation Forum](#)



RELEVANT INFORMATION

- **Overall project status** remains **AMBER**, recognising no schedule contingency for complex delivery program.
- **BDU Cutover schedule** being confirmed with stakeholders
- **IRP Registration and BDU forms** incoming from participants, to be processed in time for Market Trial

Tech specs

- Drafts of all [tech specs](#) have been released
- Final EMMS and MSATS tech specs to be published Tue 2 Apr
- Final EMMS data model v5.3 [spec](#) to be published Wed 10 Apr

Industry testing/market trial

- Final [IESS market trial plan](#) released Tue 16 Feb
- Market trial commences Tue 2 Apr

Industry readiness

- 3x IESS transition plans – finals published Wed 31 Jan
- Feedback on [Draft Industry go-live plan](#) due Mon 18 Mar

BDU Transition schedule update

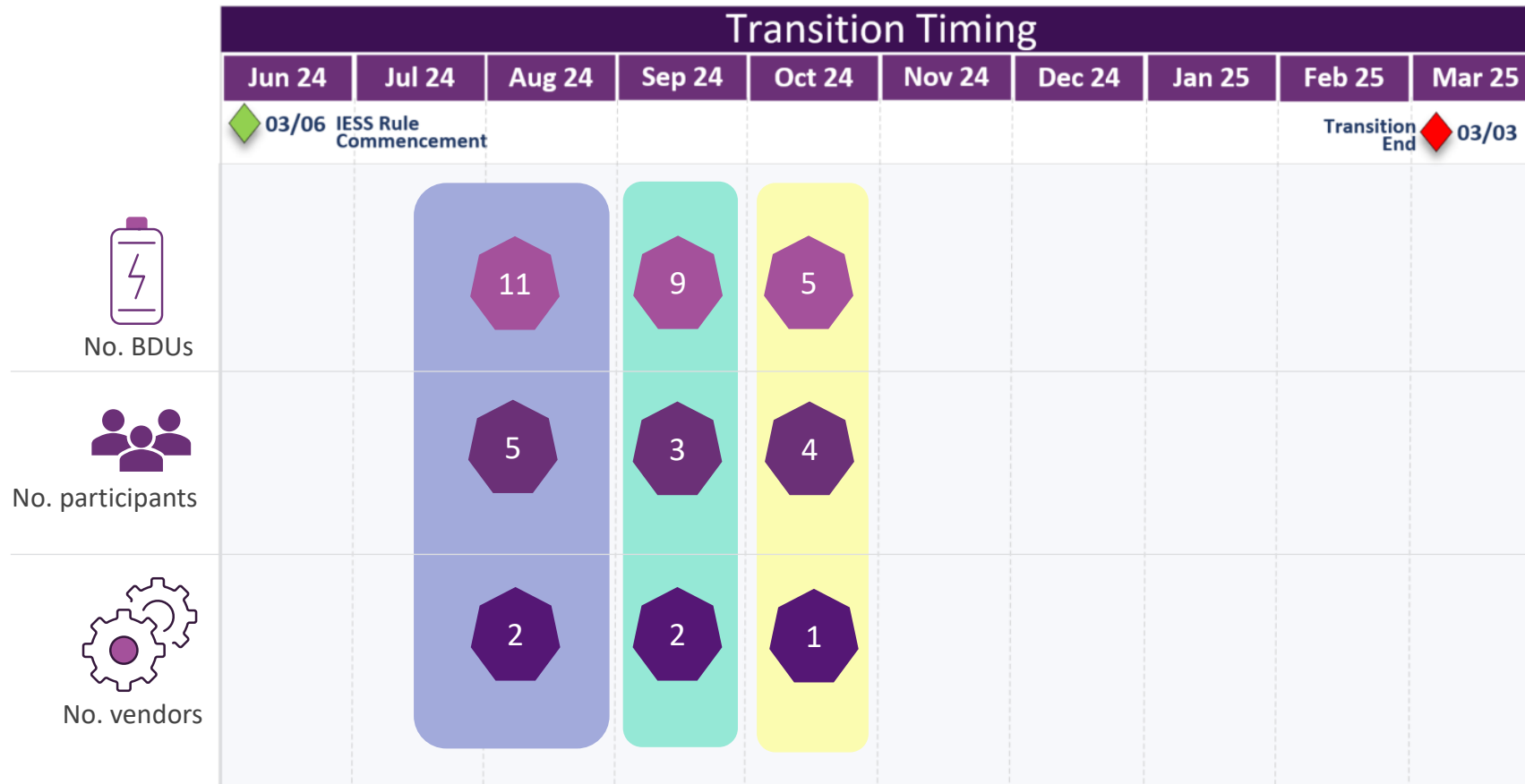
	AEMO	Participant	Vendor
1 Confirm AEMO-Vendor coordination (refer below)	X	X	
2 Complete understanding of vendor preferences	X		X
3 Resolve timing mismatches with participant/vendor	X	X	X
4 Develop alternative cutover dates to resolve congestion	X		X
5 Confirm suitability of cutover dates	X	X	X

 We are here

AEMO requests confirmation from participants by 20 March on suitability of proposed cutover dates.

Participant & vendor preferred transition timing

- AEMO have refined the transition schedule to address identified periods of congestion
- Proposed schedule is within constraints identified in AEMO’s BDU Transition and Cutover Plan.



Notes

- AEMO advised that the overall project status is amber and noted that the BDU Cutover schedule and IRP Registration and BDU work are progressing, with detailed information available in the slide pack. Further information on Tech Specs, Industry Testing and Industry Readiness are also included.
- AEMO requests confirmation from participants by 20 March on suitability of proposed cutover dates.
- AEMO also noted that an [updated version of the BDU Transition and Cutover plan](#) has been published in the IESS Participant Toolbox.

Raised by	Question/Issue Raised	Response
Ranjan Thakur, EnergyAustralia	How many are participating in the market trial?	Several BDU participants are participating in Phase 3 of the Market Trial. More participants will join the other market trial phases, that cover the IESS settlement and other changes.

4. BDU Storage fields

Basilisa Choi / Luke Barlow

BDU DUID specific fields

Participants have flexibility to decide how BDU DUID storage constraint fields are applied.

These fields are:

Registration Fields	Units	Definition	Use in AEMO's dispatch systems
Apply operational state of charge constraint (Op SOC Constraint)?	Yes or No	If 'Yes', apply the Min and Max Operational SOC constraints if EnergyLimits are not provided in bids.	Triggers use of the min and max Operational SOC as defaults in AEMO's Predispach and 7-day Predispach.
Min Operational State of Charge	MWh	The minimum operational state of charge (MWh)	To be applied if Op SOC Constraint is 'Yes'. Overwritten if min EnergyLimit is provided in bids.
Max Operational State of Charge	MWh	The maximum operational state of charge (MWh)	To be applied if Op SOC Constraint is 'Yes'. Overwritten if max EnergyLimit is provided in bids

Fields in bids	Units	Definition	Use in AEMO's dispatch systems
Min EnergyLimit (EnergyLimit in GEN direction)	MWh	The minimum state of charge (MWh)	Limits will be applied in AEMO's Predispach and 7-day Predispach.
Max EnergyLimit (EnergyLimit in LOAD direction)	MWh	The maximum state of charge (MWh)	Limits will be applied in AEMO's Predispach and 7-day Predispach.

Example: State of Charge Constraints

Registration	Bid		SOC Constraint
Apply Operational SOC?	Min EnergyLimit?	Max EnergyLimit?	
Y	Y	Y	min SOC level = Min EnergyLimit, max SOC level = Max EnergyLimit
Y	Y	N	min SOC level = Min EnergyLimit, max SOC level = Max OpSOC
Y	N	Y	min SOC level = Min OpSOC, max SOC level = Max EnergyLimit
Y	N	N	min SOC level = Min OpSOC, max SOC level = Max OpSOC
N	Y	Y	min SOC level = Min EnergyLimit, max SOC level = Max EnergyLimit
N	Y	N	min SOC level = Min EnergyLimit, No max SOC constraint
N	N	Y	No min SOC constraint, max SOC level = Max EnergyLimit
N	N	N	No SOC constraints

Participants have option of using the Operational SOC as default values, and overwriting them by providing the energy limits in bids if/when needed.

Other BDU registration fields

- Other storage values that Participants need to provide for registration are provided below.
- Efficiency factors are required so that NEMDE can apply the factors in the following:
 - Creation of min and max EnergyLimit/SOC constraints
 - Calculation of the remaining State of Charge for each BDU at the end of the interval.
- AEMO recommends participants updates these values annually or as needed.

Field	Units	Definition	Use in AEMO's dispatch systems
DUID Maximum Storage Capacity	MWh	The rated energy storage capacity of the dispatchable bidirectional unit.	Used to validate min and max EnergyLimits in bids
Storage Import Efficiency Factor*	0 ... 1	The storage energy import conversion efficiency. Number from >0 to 1 where 1 is lossless. Calculated as (increase in SOC / imported energy.)	Used to calculate EnergyStorage at the end of each interval.
Storage Export Efficiency Factor*	0 ... 1	The storage energy export conversion efficiency. Number from >0 to 1 where 1 is lossless. Calculated as (sent out energy / reduction in SOC)	Used to calculate EnergyStorage at the end of each interval.

Release of BDU storage information

Given the introduction of new storage fields, AEMO provides the below summary of which information will be held private or made publicly accessible.

State-of-charge (SOC) information is generally treated as for capacity information and dispatch.

- SOC information will not be published in real-time (for commercial sensitivity reasons)
- Publication of SOC data via EMMS Data Model:

Field	Confidential NEMReport	Next Day NEMReport
Initial_Energy_Storage	Y	Y
Energy_Storage	Y	N

- The next day publication of NEMDE files from Dispatch will include the SOC initial conditions
- Information submitted in bids will be published on a next-day basis, including min and max Energy Limits (if submitted)
 - Consistent with publication of Daily Energy Limits submitted via bids
- All standing values submitted at the time of registration will be published in the EMMS model.

Notes

- AEMO advised of the BDU DUID storage values that participants need to provide for registration and how these are to be used in AEMO's dispatch systems.

Raised by	Question/Issue Raised	Response
Carlo Poliseno, AGL	Is AEMO expecting the max MWh to be the MWh that is able to be dispatched or the summed nameplate capacity of the installed inverters?	What can be dispatched.
Jovilisi Draanimasi, GPG	Are we required to fill this section i.e storage import and export efficiency factor?	Participants need to report on this regardless of whether they have opted in or out for the limits to be applied in pre-dispatch.
Boris Basich, AGL	Does the reported Maximum Storage Capacity have to align with the value provided for registration purposes?	No. Also note that there are three values for participants; the operational maximum state of charge, maximum storage capacity value, maximum energy limit in the bid. The maximum storage capacity value is only used for bid validation, not for state of charge constraints. Only when participants have opted in to apply operational state of charge constraints, AEMO will use the operational state of charge values.
Steve Frimston, Shell	Most batteries do one cycle per day. Will this constrain me even if we're able to do 2 cycles in a day?	The BDU DUID storage constraints has to do with the capacity of MWh at any given point in time, rather than how much is sent over a trading day.

5. Potential Edge Case Dispatch Outcomes

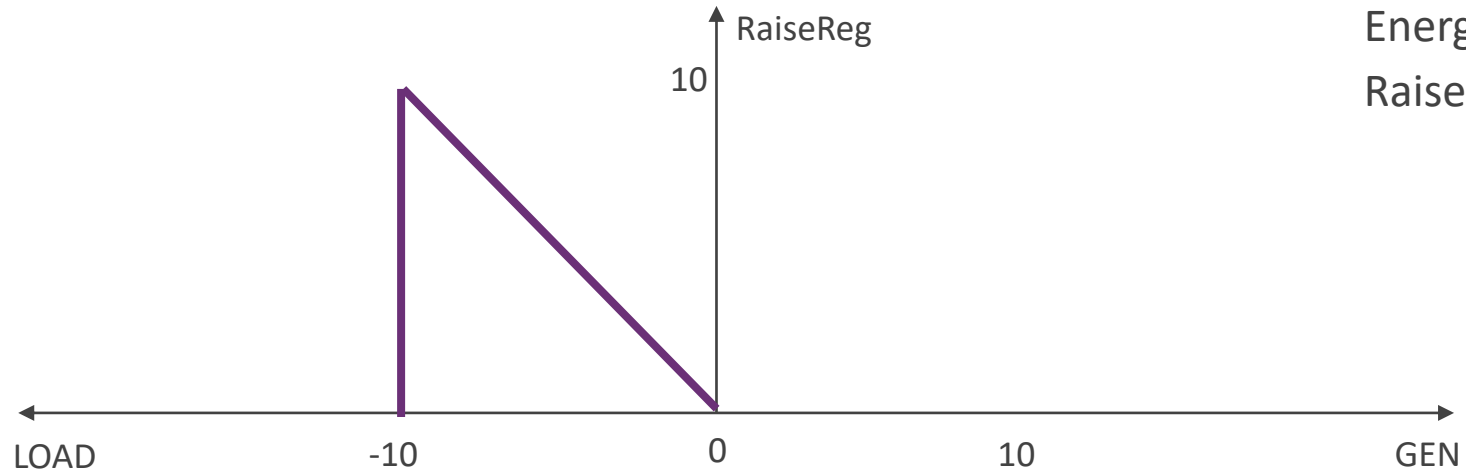
Basilisa Choi

Potential Edge Case Dispatch Outcomes

- NEMDE currently has potential for complex or undesirable dispatch outcomes for the existing 2 DUID model
- During the NEMDE Certification process, it was identified that the same behaviour could be observed for BDU Regulation FCAS in the new NEMDE.
- A brief description of example edge cases, and their potential dispatch outcomes, is below.
- Participants need to be aware that these cases exist and they can be managed through making appropriate bids for Energy and Regulation FCAS – same as now

	Edge case	Potential dispatch outcome
1	Dispatch in both LOAD and GEN directions	Energy and Regulation FCAS dispatch targets do not relate to the Regulation FCAS trapezium.
2	Partial acceptance of Regulation offers in both LOAD and GEN directions	Energy dispatched from the one direction and Regulation FCAS enabled from both directions.
3	Mismatch in Energy dispatch and Regulation FCAS enablement directions	Energy dispatched from the one direction and Regulation FCAS enabled from the other direction.
4	Trapped for Regulation FCAS in one direction but dispatched for Energy in the other direction	Flagged as Trapped but the Energy dispatch target is outside the FCAS trapezium.

Dispatch in both LOAD and GEN directions



Energy RRP = \$10
RaiseReg tight supply

Energy Bid:

	LOAD	GEN
BandPrice	-\$ 1	\$ 1
BanAvail	10 MW	10 MW

NEMDE optimisation:

Direction	Energy	RaiseReg
LOAD	-10 MW	10 MW
GEN	10 MW	

RaiseReg Bid:

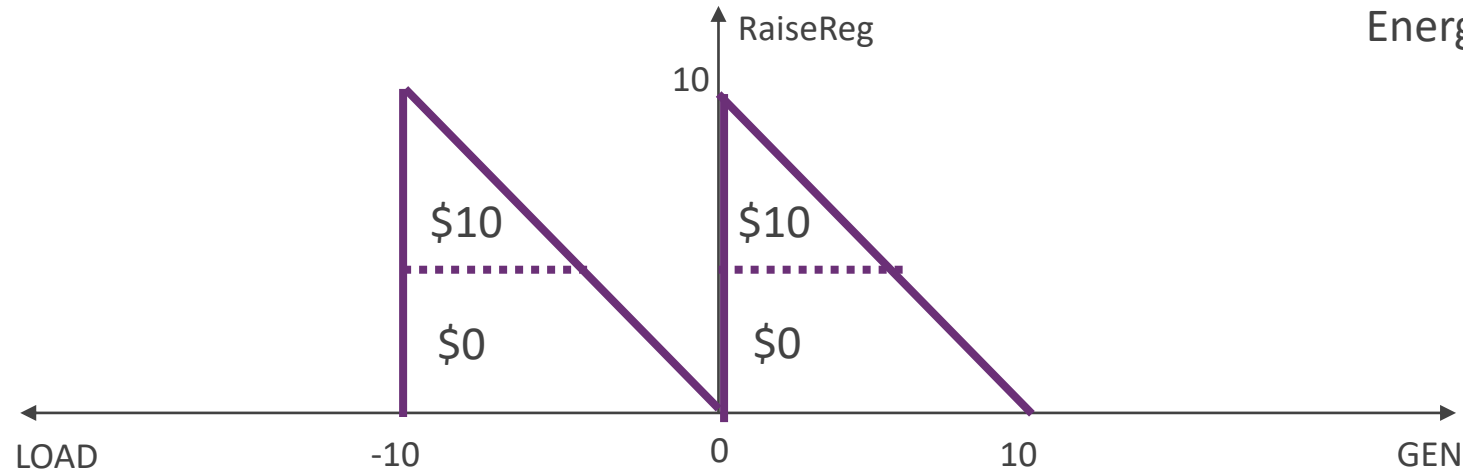
	LOAD	GEN
BandPrice	\$ 10	
BanAvail	10 MW	

NEMDE Outputs:

	Target
Energy	0 MW
RaiseReg	10 MW

Partial acceptance of Regulation offers in both LOAD and GEN directions

Energy RRP = \$100



Energy Bid:

	LOAD	GEN
BandPrice	\$ 100	\$ 200
BanAvail	10 MW	10 MW

NEMDE optimisation:

Direction	Energy	RaiseReg
LOAD	-10 MW	5 MW
GEN	0 MW	5 MW

RaiseReg Bid:

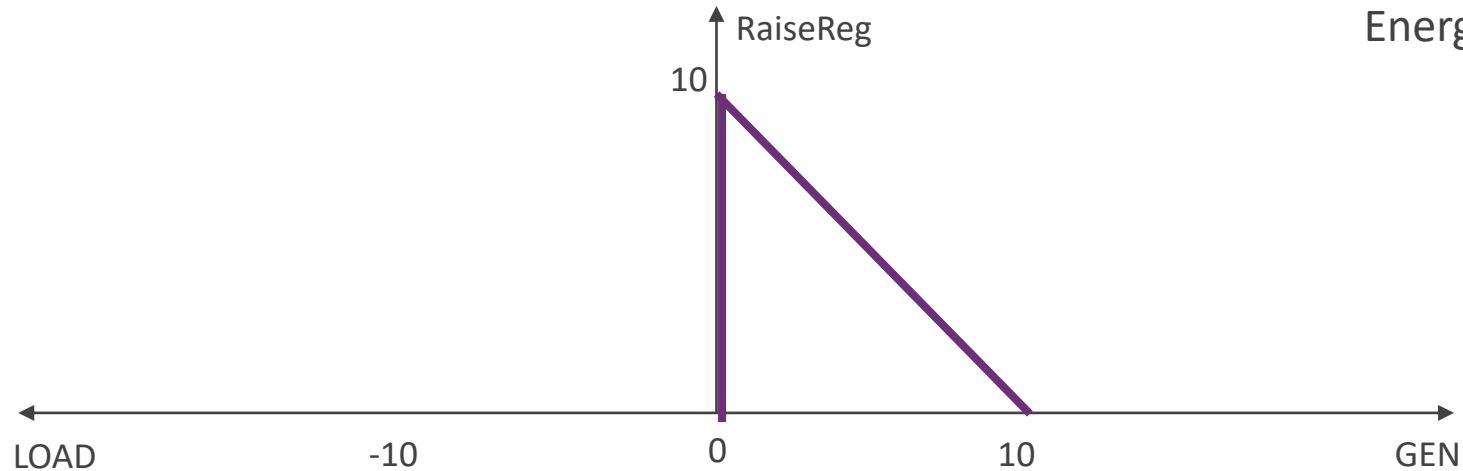
	LOAD		GEN	
BandPrice	\$ 0	\$ 10	\$ 0	\$ 10
BanAvail	5 MW	5 MW	5 MW	5 MW

NEMDE Outputs:

	Target
Energy	-10 MW
RaiseReg	10 MW

Mismatch in Energy dispatch and Regulation FCAS enablement directions

Energy RRP = \$10



Energy Bid:

	LOAD	GEN
BandPrice	\$ 100	\$ 200
BanAvail	10 MW	10 MW

NEMDE optimisation:

Direction	Energy	RaiseReg
LOAD	-10 MW	
GEN	0 MW	10 MW

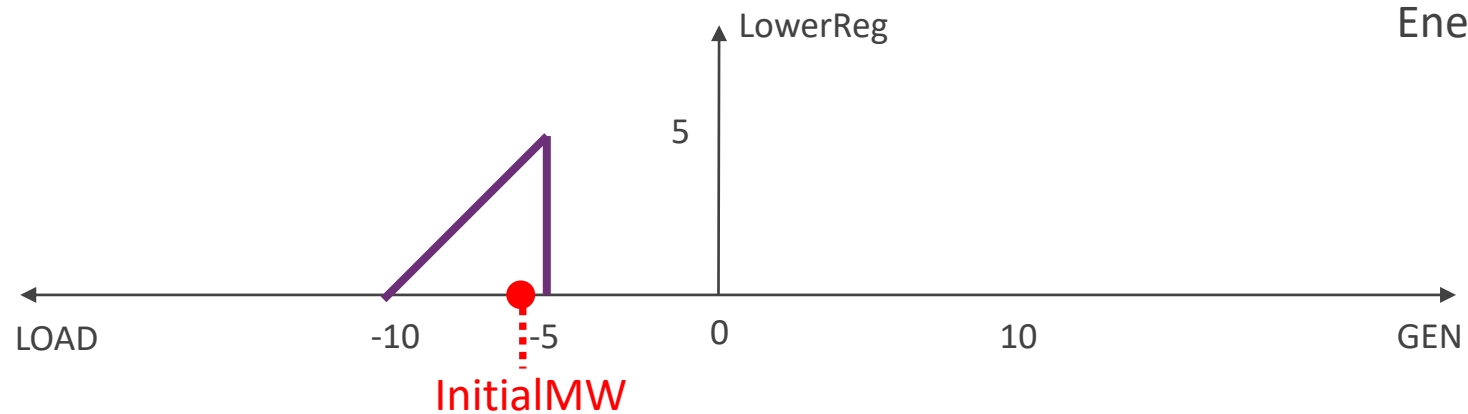
RaiseReg Bid:

	LOAD	GEN
BandPrice		\$ 0
BanAvail		10 MW

NEMDE Outputs:

	Target
Energy	-10 MW
RaiseReg	10 MW

Trapped for Regulation FCAS in one direction but dispatched for Energy in the other direction



Energy RRP = \$100

Energy Bid:

	LOAD	GEN
BandPrice	\$ 0	\$ 10
BanAvail	10 MW	10 MW

NEMDE optimisation:

Direction	Energy	LowerReg
LOAD	-5 MW	2 MW
GEN	10 MW	

LowerReg Bid:

	LOAD	GEN
BandPrice	\$ 1	
BanAvail	10 MW	

NEMDE Outputs:

	Target
Energy	5 MW
LowerReg	2 MW

Notes

- AEMO presented on potential edge cases in bidding for Participants awareness.

Raised by	Question/Issue Raised	Response
Lewis Wand, Iberdrola	How will this be provided? Under schedule 3.1?	Expecting this will follow the same process.

6. PDSE & Market Trial

Ulrika Lindholm

Participant Development Support Environment (PDSE) update



- PDSE is additional to AEMO’s pre-production and allows market generators, market customers and market small generation aggregators to test their system changes against beta versions of key AEMO system changes in advance of the IESS market testing period
- The PDSE has not been built to replicate or replace pre-production. It is a dedicated IESS environment to support participants in the early stages of their development work, particularly the development testing of interfaces to AEMO’s updated market systems data models
- PDSE is available to June 2024 for beta testing. Weekly Q&A sessions available for PDSE and Market trial
- Contact the program at NEMReform@aemo.com.au if you’d like to get involved
- See the [PDSE fact sheet](#) for details.

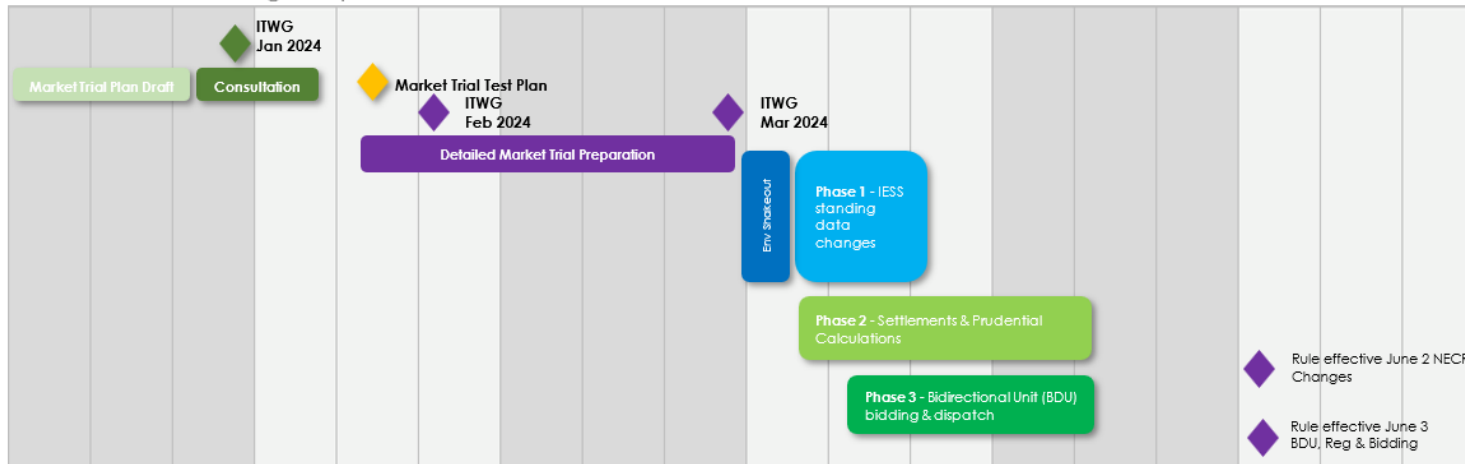


IESS Market Trial General Update

IESS industry testing and market trial high level timeline

2024	2024	2024	2024	2024	2024
JAN	FEB	MAR	APR	MAY	JUN

IEE Market Trial Planning & Implementation



- Nominations and queries directed to Industry Testing Working Group and Market trial Q&A via NEMReform@aemo.com.au
- BDU registration paperwork to participate in market trial were due by 08 March
- Survey for expressing interest in market trials kept open <https://forms.office.com/r/v21psxfyYG>
- To date, 20 participants have signed up for market trial
- During market trial, there will be a daily stand-up - see [Market Trial plan](#) for details
- Contact the program at NEMReform@aemo.com.au for any queries.

Notes

Was provided for noting. No questions were asked.

7. SCADA update

Kavita Ziomek

SCADA changes

As discussed at the 8 February Focus Group meeting, there are changes involving participants who receive Energy MW targets and/or Ancillary Service enablement values via SCADA systems (details in Appendix D). AEMO intends to seek participants' feedback on the proposed approach.

	AEMO	Participants	Timing
AEMO to engage NSPs regarding the changes	X	X	March
AEMO to reach out to affected participants to understand their preferences	X	X	March
AEMO to define new ICCP IDs based on the feedback	X		Mid April

← We are here

AEMO has now contacted all affected BDU participants and will continue discussions with relevant SCADA Engineers on best transition approach for each.

Notes

Was provided for noting. No questions were asked.

8. Other business

Carla Ziser



BDU Readiness Focus Group closure

This is the last regular meeting with the BDU Readiness Focus Group

Until IESS commencement (June 2024):

- Participants can continue to collaborate on IESS topics via NEM Reform Program forums
- BDU cutover queries will be managed via IESS mailbox
- AEMO welcomes requests for one-to-one conversations and group meetings may be stood up as required
- AEMO to maintain BDU focus group mailing list for communications purposes.

IESS topics

- Project timeline update
- Industry readiness
- Technical specifications and data model
- Market trial
- BDU cutover



Channel	Purpose	Cadence
Program Consultative Forum	Collaboration with participants on planning and coordination and implementation of the NEM Reform Program initiatives <i>Incl IESS topics:</i> - Project timeline update - Industry risk and issues	Monthly Next meeting: 10 April
Implementation Forum	Collaboration with participants on implementation of NEM Reform Program initiatives <i>Incl IESS topics:</i> - Project timeline update - Industry readiness	Monthly Next meeting 26 March
Industry Testing Working Group	Coordination with participants regarding IT and Testing/Market trial	Monthly Next meeting 27 March
IESS PDSE & Market trial Q&A	Opportunity to seek clarification from AEMO SMEs on PDSE and IESS Market trial related matters	Weekly (Daily during market trial) Next meeting 21 March
Market System User Group (MSUG)	Walk through and Q&A with AEMO SMEs on technical specifications and data model	As required aligned with tech spec updates Next meeting 20 March

- Learn more at <https://aemo.com.au/initiatives/major-programs/nem-reform-program/nem-reform-program-forums>
- Nominations to NEM Reform forums are sent to NEMReform@aemo.com.au.
- Information about how to join the MSUG: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/market-systems-user-group-msug>

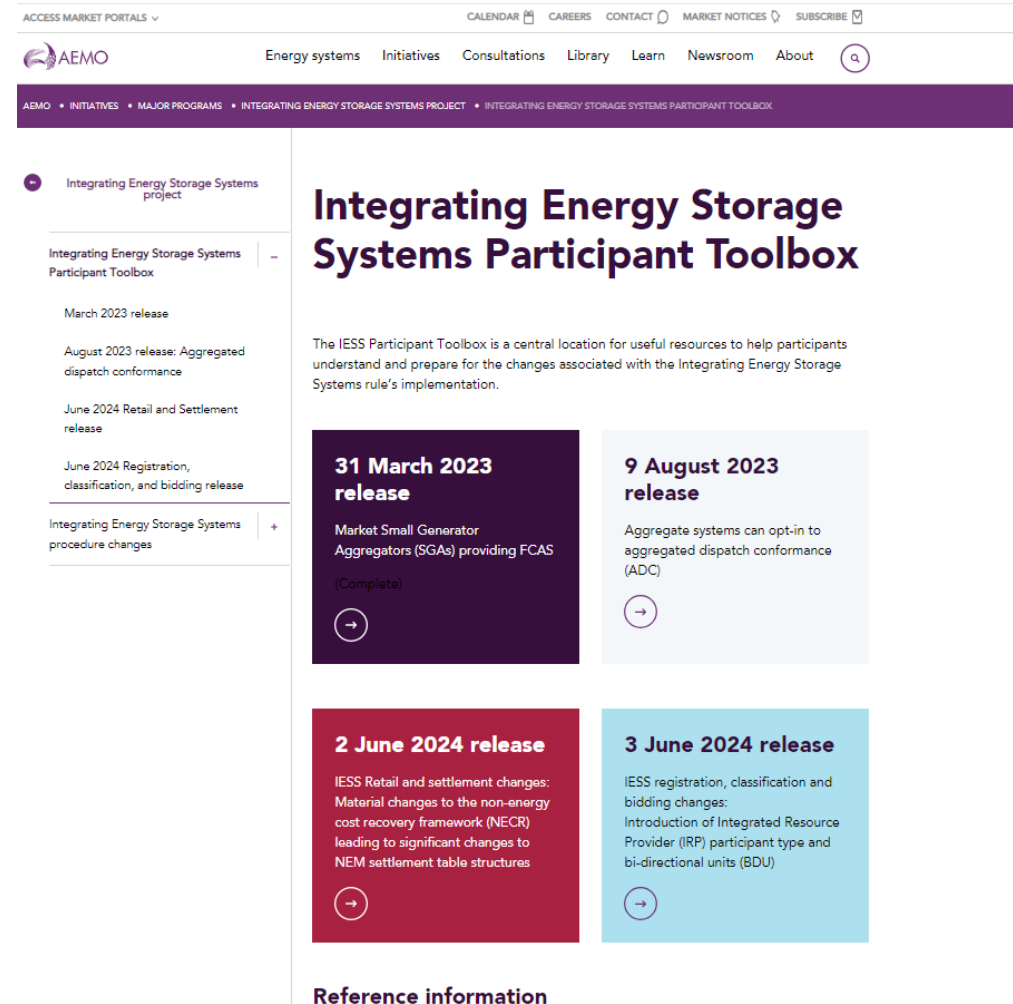
NOTE! Good opportunity for IT and testing staff understand changes in the updated EMMS Tech Specs and Data Model 5.3

I ESS material

REMINDER

Refer to the IESS participant toolbox for key project information

Contact:
IESS@aemo.com.au



The screenshot shows the AEMO website's 'Integrating Energy Storage Systems Participant Toolbox' page. The page features a navigation menu at the top with links for 'Energy systems', 'Initiatives', 'Consultations', 'Library', 'Learn', 'Newsroom', and 'About'. Below the navigation is a breadcrumb trail: 'AEMO > INITIATIVES > MAJOR PROGRAMS > INTEGRATING ENERGY STORAGE SYSTEMS PROJECT > INTEGRATING ENERGY STORAGE SYSTEMS PARTICIPANT TOOLBOX'. The main content area is titled 'Integrating Energy Storage Systems Participant Toolbox' and includes a sub-header 'Integrating Energy Storage Systems project'. A list of releases is shown on the left, with the following items: 'March 2023 release', 'August 2023 release: Aggregated dispatch conformance', 'June 2024 Retail and Settlement release', and 'June 2024 Registration, classification, and bidding release'. The main content area contains four release cards, each with a date, title, and a brief description, followed by a right-pointing arrow icon. The cards are: '31 March 2023 release' (Market Small Generator Aggregators (SGAs) providing FCAS (Complete)), '9 August 2023 release' (Aggregate systems can opt-in to aggregated dispatch conformance (ADC)), '2 June 2024 release' (IESS Retail and settlement changes: Material changes to the non-energy cost recovery framework (NECR) leading to significant changes to NEM settlement table structures), and '3 June 2024 release' (IESS registration, classification and bidding changes: Introduction of Integrated Resource Provider (IRP) participant type and bi-directional units (BDU)). At the bottom of the page, there is a section for 'Reference information'.

Notes

- AEMO noted that FAQs are available via the IESS Participant Toolbox and are updated on an ongoing basis. Participants are welcome to raise anything they think should be added to FAQs.

9. Next Steps & CClose

Ulrika Lindholm

Next steps

TIMING	ACTION	RESPONSIBLE
20 March 2024	Endorsement of production cutover date for each BDU	Participants
February/March 2024	Clarify preference for SCADA MMS Backup signals with AEMO	Participants
March/April 2024	Participants engage their Metering Data Provider once a cutover date has been agreed	Participants
Anytime	Nominate to the Industry Testing Working Group and other relevant NEM Reform forums (see slide 27)	Participants

Notes

- AEMO noted next steps for participants and thanked them for the collaboration on the BDU implementation design and transition and cutover planning.

Session close



IESS@aemo.com.au



[AEMO | IESS Participant toolbox](#)



APPENDIX A

Glossary



IESS Glossary

Term	Definition
5MPD	5-minute pre-dispatch
ADC	Aggregated Dispatch Conformance
ADG_ID	Aggregate Dispatch Group identifier for an Aggregate System
AGC	Automatic generation control
ASL	Ancillary service load
ASU	Ancillary service unit
B2B	Business-to-business
B2M	Business-to-market
BDU	Bidirectional 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
NEM	National electricity market
NEMDE	National electricity market dispatch engine
NMI	National metering identifier
PAE	Profiling and allocation engine
PASA	Projected assessment of system adequacy
PD	Pre-dispatch
PDM	Participant Data Model
PMS	Portfolio management system
SCADA	Supervisory control & data acquisition
SoC	State of charge
UFE	Unaccounted for energy
WDRU	Wholesale demand response unit

APPENDIX B

BDU Readiness Focus Group participation and administration



Participation and administration

This Focus Group is open to nominations from participants.

Participation



- Aimed at participants with existing and planned grid scale batteries and bidding system vendors, that are affected by the IESS rule and will transition from dual to a single DUID.
- Nominees with suitable experience and expertise, for example regulatory managers, trading and product managers.
- A detailed understanding of the IESS reform initiative and authority to participate in discussions about implementation activities is required.
- One primary and one alternative contact to be nominated

Format



- Short term Focus Group under NEM Reform Implementation Forum (IF)
- Readiness and transition related risks and issues escalated to IF. Outcomes from Focus Group reported back to IF.
- Collaborative and consultative rather than a decision-making group
- Focus on readiness-related matters rather than debating specific policy.

Meetings



- Video conference
- Monthly cadence (last 2023 meeting in Nov, recommence Feb 2024)
- 1-1.5hr duration
- Additional meetings as required.

Administration



- Meeting material distributed prior
- Minutes and presentations made publicly available.

Feedback on the approach is welcome.

APPENDIX C

NEM Reform Program Engagement calendar



Upcoming engagements

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

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

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

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

NEM Reform Program Committees/Forums

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

Other Forums

- Electricity Retail Consultative Forum

Other

- National Public Holiday
- State/Territory Public Holiday

APPENDIX D

Scada changes for BDUs

(extract from 8 February 2024 Focus Group meeting)



Real Time Systems (SCADA)

The following applies for participants who receive Energy MW targets and/or Ancillary Service enablement values via SCADA systems.

- **Automatic Generation Control (AGC) MW targets:**
 - No changes will occur. Participants will continue to receive AGC MW targets via existing mechanisms.
- **Backup Market Management System (MMS) signals (outside of AGC) will change as follows**

This materials was discussed with the Focus Group on 8 February.

Backup signal type	Signal name	Values currently received	Values received post cutover
MMS 5 min target	MWB	Two positive-sign signals received (one for each DUID) OR One signal received, can be positive or negative.	Once signal received that will have either positive or negative values.
Regulation FCAS enablement	ARA and/or ALA	One signal received per signal name, can be positive values only.	One signal received, can be positive values only.
Contingency FCAS enablement	1RA/6RA/5RA /FRA/1LA/6LA/5LA/FLA	One signal received per signal name, can be positive values only.	One signal received per signal name, can be positive values only. Signal will now apply to whole unit, not either of charge/discharge side of BESS.

SCADA Cutover

AEMO is proposing to establish new ‘ICCP’ IDs for all MMS backup signals.

- This means cutover can be planned in advance and will occur automatically.
- At cutover time, all existing signals will stop updating and new signals will apply.
- *What's involved for participants here?*
 - On site - will need to program new points (at the RTU) and link to the NSP master station.
 - AEMO anticipates this could be done in advance of cutover.
 - AEMO/NSP/site would need to test new linkage works well before cutover.

An alternative option is reuse existing ICCP IDs.

- Cutover would need to be done manually in and in real-time
- Carries a potential for data gaps.
- NSP involvement not required as existing links are already tested and online.
- Participants may need to update logic on site if using this option.

AEMO plans to engage NSPs next month regarding these changes.

AEMO will also reach out to each affected participant to understand their preference during February/March, so that New ICCP IDs can be agreed on by mid-April.

ICCP	Inter-Control Center Communications Protocol
MMS	Market Management System
RTU	Remote Terminal Equipment
NSP	Network Service Provider

NOTE: AEMO will update its IESS BDU Transition and Cutover Plan to include activities relating to SCADA Cutover.