

B2B Working Group Meeting 13

22 – 23 November 2022



Online forum housekeeping

1. Please mute your microphone, this helps with audio quality as background noises distract from the information being shared.
2. Having your video turned off helps with performance and minimises distractions.
3. We ask that you utilise the 'Chat' function for any questions or comments you may have. This aids note keeping and keeps discussions flowing smoothly.
4. Raise your hand if you wish to speak to an item. This keeps conversations orderly.
5. If you have dialled in via phone, please email B2BWG@aemo.com.au your name and organisation for our records.
6. If your name appears abbreviated on Teams, please add your name and organisation to the chat for our records.
7. Be respectful of all participants and the process.
 - Both on the call and in the chat

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.

Proposed Agenda

Day 1	Item
1	Welcome, breaks, etc.
2	The Year That Was
3	Actions Log
4	B2M Update
5	B2B Guide Improvement

Day 2	Item
7	The Year Ahead
8	Review of the Regulatory Framework for Metering Services
9	Other Business
	Customer contact flagged as Family Violence
	MSATS Disconnection Status
	Wrap up, actions, questions, parked items

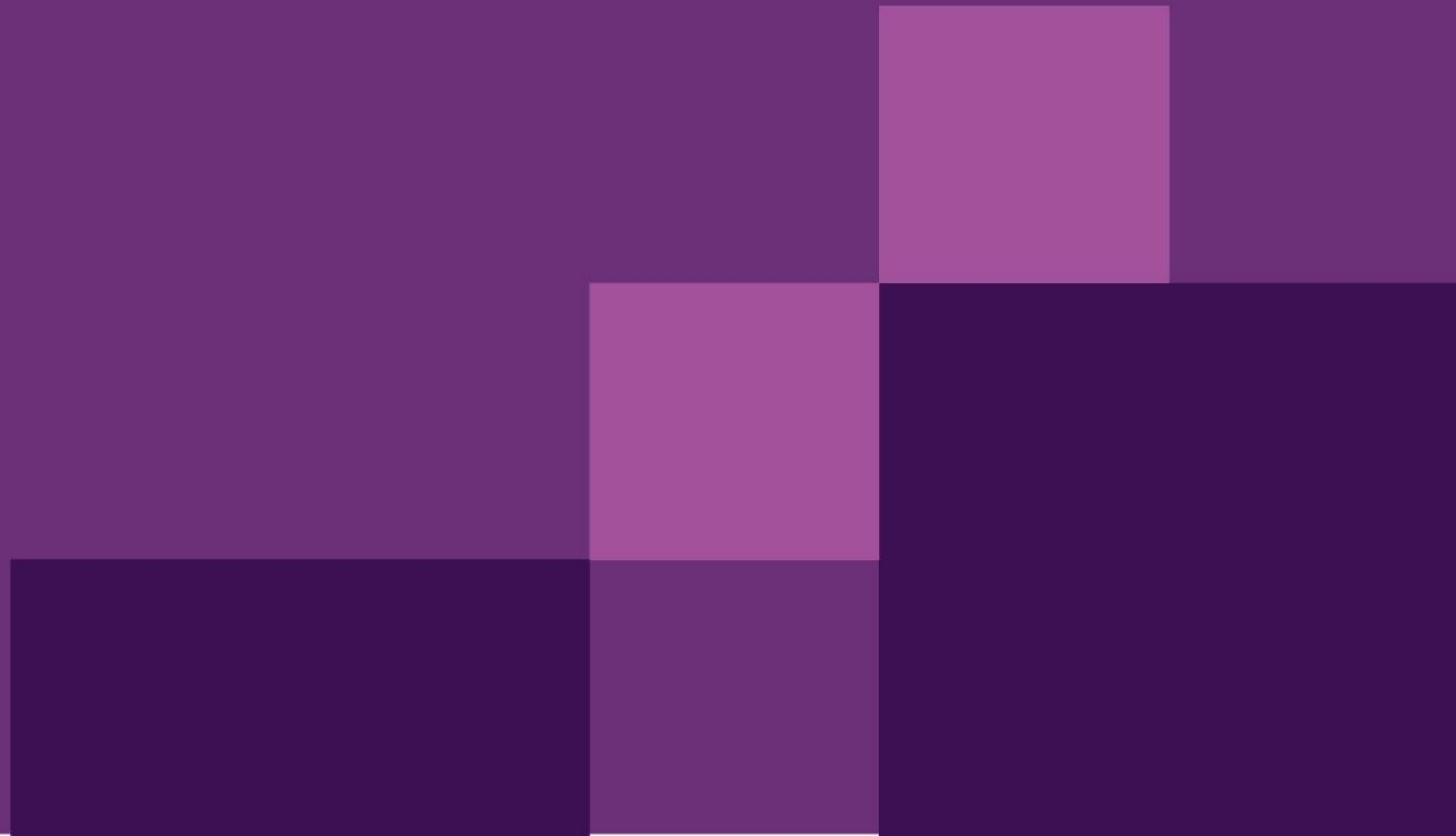
Appendix

1. ERCF ICF Register
2. IESS Background

Any suggested changes (sequencing or topics) to the agenda?



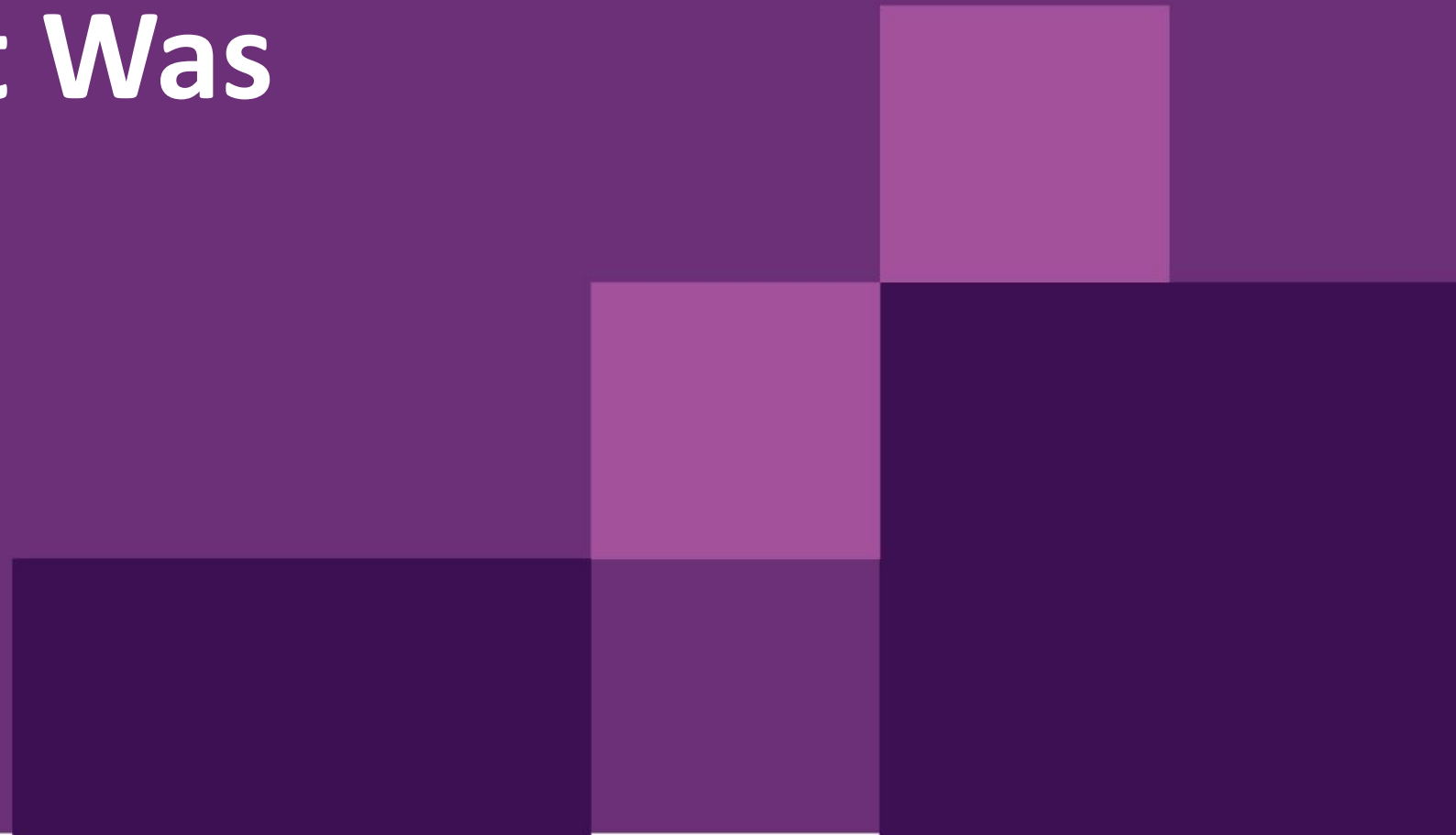
Day 1





The Year That Was

B2B WG



Learnings from 2022

- Thought starters:
 - Why are we here?
 - What role do we play?
 - How did we perform?
 - What went well?
 - What needs to improve?



Actions Log

Blaine Miner (AEMO)

Closed Actions

Action	Description	Responsible	Outcome
0908-07	Consider publishing a running errata sheet for minor procedure corrections that will be implemented at a later date	AEMO	13/09 - develop and circulate a new template to capture B2B corrections 11/10 - Now covered by action 1110-01
0908-12	Identify which of the survey responses will not require any further action	B2B WG	Now covered by action 0803-01
0908-15	Provide their view on how the guide and their handbooks interact	Networks	Now covered by action 0803-01
1309-07	Send feedback about B003 to Aakash Sembey	B2B WG	11/10 - The issue will progress to seek IEC endorsement
1110-04	Send worked example of IEC paper to Mark Riley and Aakash Sembey	Nandu Datar (AEMO)	Example sent
1110-05	Draft the IEC papers, Mark Riley for ICFs (B002 and B004) and Aakash Sembey for ICF B003	Mark Riley (AGL), Aakash Sembey (Origin)	IEC paper prepared and will be on IEC November meeting agenda
1110-06	Send the IEC paper for ICFs B002, B003 and B004 to B2B WG for review	Nandu Datar (AEMO)	This action not required anymore
1110-08	Send all current ICFs to the B2B WG members	Nandu Datar (AEMO)	17/10 – ICFs sent
1110-09	Amend the status of ICF B005 to suspended in the ICF register and include the reason	Nandu Datar (AEMO)	Status changed
1110-10	Organise meeting with Mark Riley to discuss the issue related to ICF B007 and include it in the agenda for B2B WG November meeting	Nandu Datar (AEMO)	Meeting organised
1110-11	Seek clarification about EVM from AEMO IT. This relates to unstructured address in LSN	Blaine Miner (AEMO)	14/10 – Clarification provided to B2B WG
1207-02	Pass on the B2B WG request for any proposed changes to the RoLR communications to be brought to the ERCF and the B2B WG for feedback prior to finalisation	Meghan Bibby (AEMO)	This has been included in the scope of an AEMO review

Open Actions

Action	Description	Responsible	Due Date	Update
0803-01	Improve the B2B Guide	B2B-WG	TBD	To be progressed in this meeting
1207-03	Consider any potential impacts associated to the perceived misalignment between controlled load values between the B2M and B2B Procedures	B2B WG	Next B2B WG meeting	
1309-01	Consider what information is required to determine if the current procedures were sufficiently fit-for-purpose for the transmission of power quality data and what sort of scalability would need to occur to allow for that transmission to occur	B2B WG	TBC	
1309-02	Consider and recommend if the B2B procedure changes could be accelerated to allow for power quality transactions to flow rather than waiting for an AEMC rule change	B2B WG	TBC	
1309-03	Combine the timeframe tables from the meeting pack and add them to the appendix for all future meeting	AEMO	Next B2B-WG meeting	
1309-05	Prepare the IEC engagement content to support the expedited consultation on the PersonName definition	B2B WG	TBC	
1110-01	Create a template for ongoing B2B procedures errata document based on the B2B procedures errata document from power of choice	Nandu Datar (AEMO)	Next B2B-WG meeting	Draft template prepared
1110-02	Prepare initial draft of IESS IEC paper for review by the B2B WG	Blaine Miner, Nandu Datar (AEMO)	TBC	
1110-03	Review the IESS IEC paper and provide feedback	B2B WG	TBC	
1110-07	Determine next steps for progressing ICF B006 with the IEC	Blaine Miner, Nandu Datar (AEMO)	TBC	



B2M Update

Blaine Miner (AEMO)

B2M Update

(Provided for B2BWG visibility, questions and consideration)

Forum/Consultation	Description	Update
ERCF	Primary B2M change channel where interested parties can collaboratively participate in the enhancement of the Retail Electricity Market Procedures Framework	14 Open ICFs, with 5 associated subgroups (refer to the Appendix)
Consumer Data Rights (CDR)	The Consumer Data Right (CDR) for Energy will enable consumers to authorise third parties i.e. FRMPs to access their energy data, up to 2yrs in the same account holder at the NMI. This will empower consumers to more easily share their data to get a better deal on a range of energy products and services.	Final Report Part 2 published Tuesday, 8 November 2022
Stand-alone Power Systems (SAPS)	The AEMC's Final Report and Proposed Rules for Updating the regulatory frameworks for the distributor led Stand-Alone Power Systems (SAPS) Priority One (AEMC Final Report) sets out a national framework to facilitate the provision of SAPS by DNSPs to their existing customers, where SAPS offer a more economically efficient solution relative to investing in, and maintaining, traditional network solutions.	Final Report published Thursday, 3 November 2022.
Integrated Energy Storage Systems (IESS)	The Commission's final rule makes a number of changes that better integrate storage into the NEM, including a new registration category, the Integrated Resource Provider (IRP), that allows storage and hybrids to register and participate in a single registration category rather than under two different categories.	Formal B2B consultation re Retail & Metering consultations are planned to commence mid-2023
MSATS Standing Data Review	48 new and amended MSATS fields: <ul style="list-style-type: none"> 21 NMI Data Table fields (7 new fields, 14 amended fields) 24 Meter Register Table fields (15 new fields, 9 amended fields) 3 Register Identifier Table fields (3 amended fields) 	<ul style="list-style-type: none"> 23 November 2022 - AEMO & Participants to run blind scripts 30 November 2022 – BUT enabled to support all MSDR fields
Other B2M consultations	<ul style="list-style-type: none"> UFE Reporting Guidelines Load Profiling 	<ul style="list-style-type: none"> UFE: Draft Report published on Friday 18 November 2022 Load Profiling Methodologies: Draft Report to be published by 1 December 2022

B2B Guide Improvement

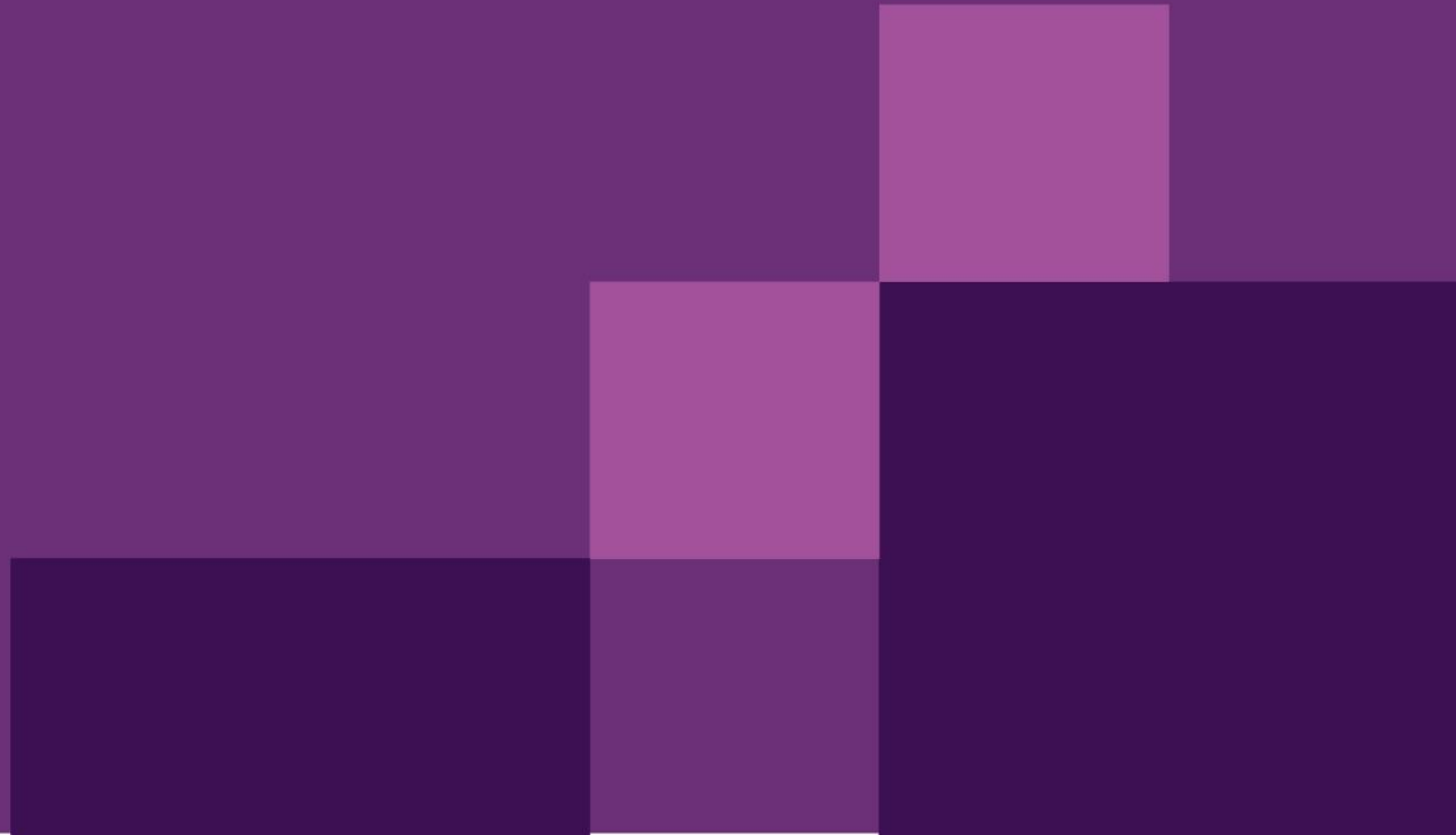
B2B WG

B2B Guide Improvement

- General principle
 - Content
 - It is important to get an agreement on the content of the B2B Guide
 - Determine the content from current guide to be retained or removed
 - Structure (Organise / Grouping)
 - Format
 - Themes identified from survey
- Allocate responsibilities
 - By procedure



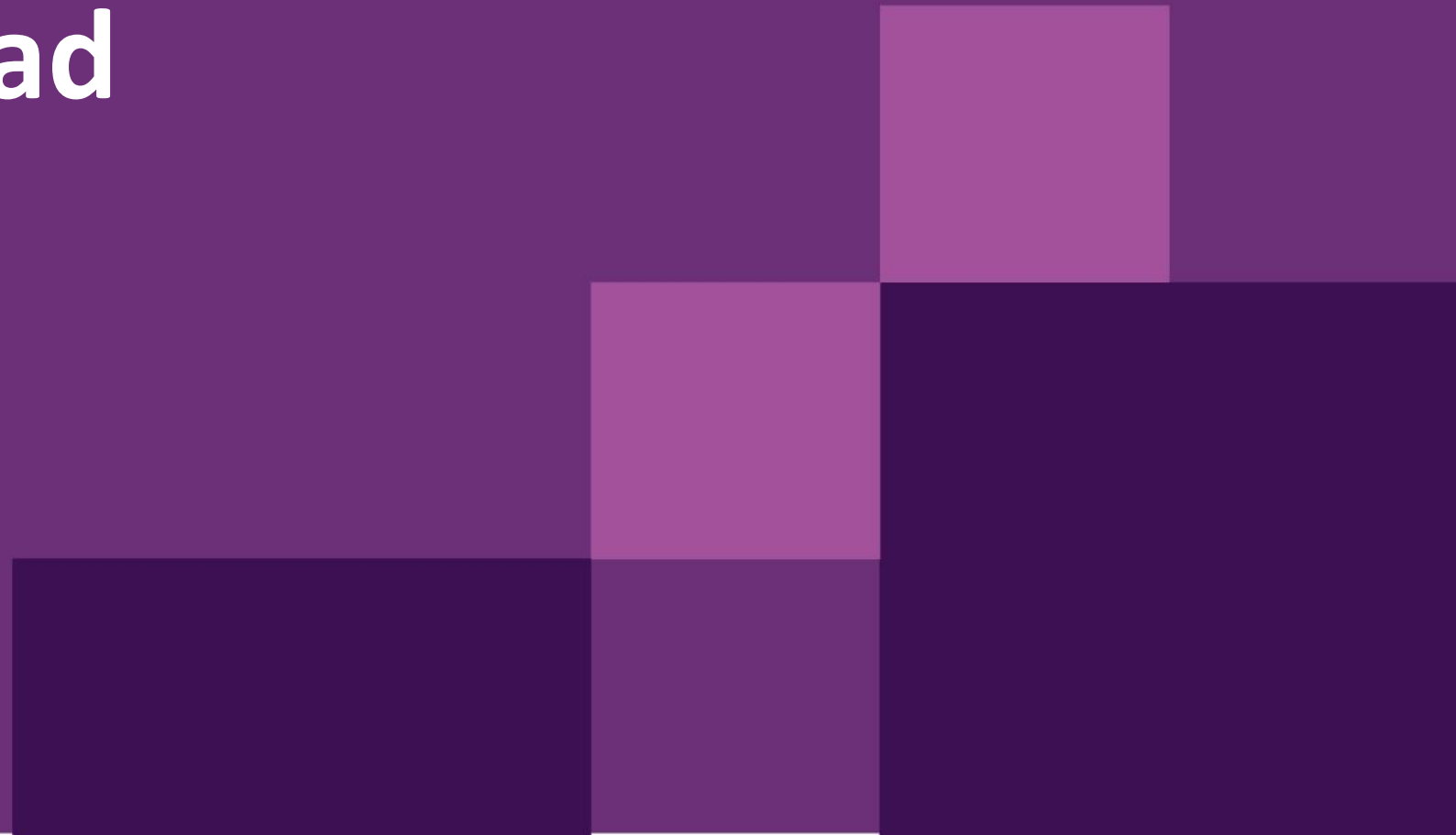
Day 2





The Year Ahead

Blaine Miner (AEMO)



Looking forward to 2023

- NEM 2025 initiatives
- Draft IEC forward plan
- Current IEC ICFs
- System releases
 - B2B 3.8 in May 2023
 - Nov 2023?
- Biggest challenges facing B2B in 2023
- What should we start, stop and continue to ensure our success?

NEM Reform Implementation Roadmap

- AEMO published Version 1 of the NEM Reform Implementation Roadmap (The Roadmap) on 1 Sept 2022, outlining a hybrid pathway that establishes a baseline plan for the implementation of reform in the energy market.
 - <https://aemo.com.au/-/media/files/initiatives/regulatory-implementation-roadmap/reform-update-v1/nem-reform-implementation-roadmap-v1.xlsx?la=en>
- This release includes an integration of the Regulatory Implementation Roadmap
 - Version 7 and NEM2025 Implementation Roadmap
 - Version 2 to provide a holistic view of the regulatory reforms and IT uplift initiatives over the coming years.
- AEMO has led the development of The Roadmap, together with the Reform Delivery Committee (RDC), to establish a basis upon which to navigate the Energy Security Board (ESB) and other reforms over the coming few years, de-risking delivery, and looking for opportunities to take cost out of reform implementation and informing implementation timing.
- AEMO held a stakeholder forum on 8 September to provide an overview of:
 - The Roadmap, including incorporation of stakeholder feedback;
 - The supporting processes, stakeholder engagement and governance put into place to manage changes to scope and timing and a progressive investment commitment process and drawdown of funds; and
 - Next steps for mobilising the implementation program and engagement with stakeholders.

NEM Reform Implementation Roadmap

Items of interest:

Title	Primary Sector	Reform Status	Phase	Objective
Flexible trading arrangements model 2	Retail	In Progress	Phase 1 - NEM2025 Reform Initiatives	Remove or materially reduce barriers preventing customers obtaining additional retail arrangements for DER, enabling competition and active management of DER, providing customers with rewards for their flexible demand and generation.
Capacity Mechanism	Wholesale & Retail	Conceptual	Phase 2 - Foundational & NEM2025 Reform Initiatives	The Commission has published a directions paper on options for the scheduling and procurement of essential system services to ensure the power system remains secure in response to rule change requests from Hydro Tasmania and Delta Electricity.
DER Data Hub and Registry Services	Industry Wide	Conceptual	Phase 4 - Strategic, NEM2025 Reform & Data Strategy Initiatives	Establish a DER Data Hub to provide efficient and scalable data exchange and registry services for DER between industry actors (Customer Agents, DNSPs, retailers, AEMO. Customer Agent to device communications is addressed in technical standards processes).
DER Operational Tools	Industry Wide	Conceptual	Phase 4 - Strategic, NEM2025 Reform & Data Strategy Initiatives	To identify and develop, in collaboration with DNSPs, new DER operational tools that may be required by each party, which can work together to maintain efficient and secure power system operations at times when up to 100% of system load can be met with DER.
Data Services	Industry Wide	Conceptual	Phase 4 - Strategic, NEM2025 Reform & Data Strategy Initiatives	To define and deliver data services models that enable greater access to, and derived value from, existing data via innovative data services and analytics capabilities.
Bill Transparency	Industry Wide	Conceptual	Phase 4 - Strategic, NEM2025 Reform & Data Strategy Initiatives	Provide a statistically robust, accessible source of data on what consumers are actually paying, linking their retail arrangements and usage to understand both billing arrangements and associated market outcomes.
Electric Vehicles	Industry Wide	Conceptual	Phase 4 - Strategic, NEM2025 Reform & Data Strategy Initiatives	It is critical to ensure agencies and market participant have sufficient visibility of emerging EV technologies to support efficient and responsive forecasting, planning, and operational management.

Note: There are a large number of initiatives in the roadmap, not listed in this table, where AEMO has been called out as the ‘Primary Sector’

Draft IEC Forward Plan

- Proposed meeting dates:
 - 27 February 2023
 - 29 May 2023
 - 28 August 2023
 - 27 November 2023

IEC Meeting 2023	Agenda Item	Description
February	Energy Consumer and AEMO Discretionary Members final meeting	Energy Consumer and AEMO Discretionary Members terms expire on 1 March 2023. IEC and AEMO to consider existing appointments.
	Finalisation of IEC budget	Final budget for IEC for 2023-24 to be tabled.
	Update on Integrating Energy Storage Systems (IESS)	Business to Market (B2M) and Business to Business (B2B) Consultations on IESS due to commence in CAL YR 2023.
	Discussion on next round of B2B Consultation	Matters to be included in the consultation to be discussed with IEC.
May	Energy Consumer and AEMO Discretionary Members	First meeting for Energy Consumer and AEMO Discretionary Members appointed from 1 March 2023-2024
	AEMC Review of the Regulatory Framework for Metering Services	Update on AEMC's Review of the Regulatory Framework for Metering Services
	Update on IESS	Progress on B2M and B2B Consultations on IESS
	Update on B2B consultation	Update for IEC on industry consultation on the next version of the B2B Procedures.
	Overview of current NEM2025 reforms	Overview of NEM2025 reform initiatives
August	Update on B2B consultation	Update for IEC on industry consultation on the next version of the B2B Procedures.
	AEMC Review of the Regulatory Framework for Metering Services	Overview of the final decisions from the AEMC and any impacts on B2B procedures or system
	Update on IESS	Progress on B2M and B2B Consultations on IESS
November	Draft Annual Report 2023	For consideration by the IEC
	Draft IEC Budget 2024-25	For consideration by the IEC

Current IEC ICFs

ICF No	Title	Description	Proponent	Status	Next Step
B002/22	Alignment of B2B field lengths to B2M Procedures/schema	Since r42 B2M schema release, there has been some inconsistent field lengths identified for the same fields in the B2B transactions. Due to this issue, the information may get truncated while using B2B transaction.	Aakash Sembey (Origin Energy)	IEC Engagement	Non-urgent, to be included in the next Consultation which requires a schema change.
B003/22	B2B RoLR Procedure Updates	Version 2.3 of the NEM RoLR Processes (Part B) require changes to some of the in-text referencing in section 104 as errata changes. Also, while reviewing these clause references, it was observed that some of the subclauses need to be broadened to other service providers, in addition to the LNSPs.	Aakash Sembey (Origin Energy)	IEC Engagement	B2B WG to review the amended clause in the RoLR procedure and provide feedback
B004/22	B2B/B2M field lengths – Address elements	ICF is aimed to harmonise the B2B fields lengths in line with the Australian Standard, as well as any B2M usage to ensure consistent interchange of information within the energy market.	Mark Riley (AGL)	IEC Engagement	Non-urgent, to be included in the next Consultation which requires a schema change.
B005/22	Clarification of UMS Data in Inventory Table	ICF is to ensure a consistent approach to the use of the Inventory Table, which will allow all parties to more effectively reconcile the movement of unmetered assets and minimise future administrative mistakes.	Mark Riley (AGL)	Pending	B2B WG review
B006/22	PERSONNAME definition spec correction	Person Name field Technical Specification clarification	Helen Vassos (PLUS ES)	Pending	B2BWG to prepare the IEC engagement content to support the expedited consultation on the PersonName definition
B007/22	Discrepancy between B2B SO Process and B2B Guide (V3.7)	Discrepancy between B2B SO Process and B2B Guide for FormReference and FormNumber fields		New	Mark Riley preparing ICF

Looking forward to 2023

- System releases
 - B2B 3.8 in May 2023
 - Nov 2023?
- Biggest challenges facing B2B in 2023
- What should we start, stop and continue to ensure our success?

Review of the Regulatory Framework for Metering Services



Justin Stute (AEMO)

AEMC – Metering Competition

The Commission propose four recommendations to accelerate the deployment of smart meters as well as unlocking the benefits of their deployment:

1. Accelerating smart meter deployment
2. Reducing barriers
3. Improving the customer experience in meter upgrades
4. Opportunities to unlock further benefits for customers and participants

AEMC Recommendation and B2B impact

AEMC recommendation	Sub-category	Potential B2B impact
Accelerating the smart meter deployment	DNSP legacy meter retirement approach	<ul style="list-style-type: none"> • Meter Fault and Issue Notification • Service Order Process
Barriers to installing smart meters and improving coordination	Shared isolation	<ul style="list-style-type: none"> • Service Order Process
	Site remediation	<ul style="list-style-type: none"> • Service Order Process
Opportunities to unlock further benefits for customers and participants	Basic/Advanced PQD	<ul style="list-style-type: none"> • Peer to Peer arrangement*
	Meter Enquiry Service	<ul style="list-style-type: none"> • Remove Service Request
	Multi Meter ping	<ul style="list-style-type: none"> • Remote Service Request
	Real time data	<ul style="list-style-type: none"> • To be determined

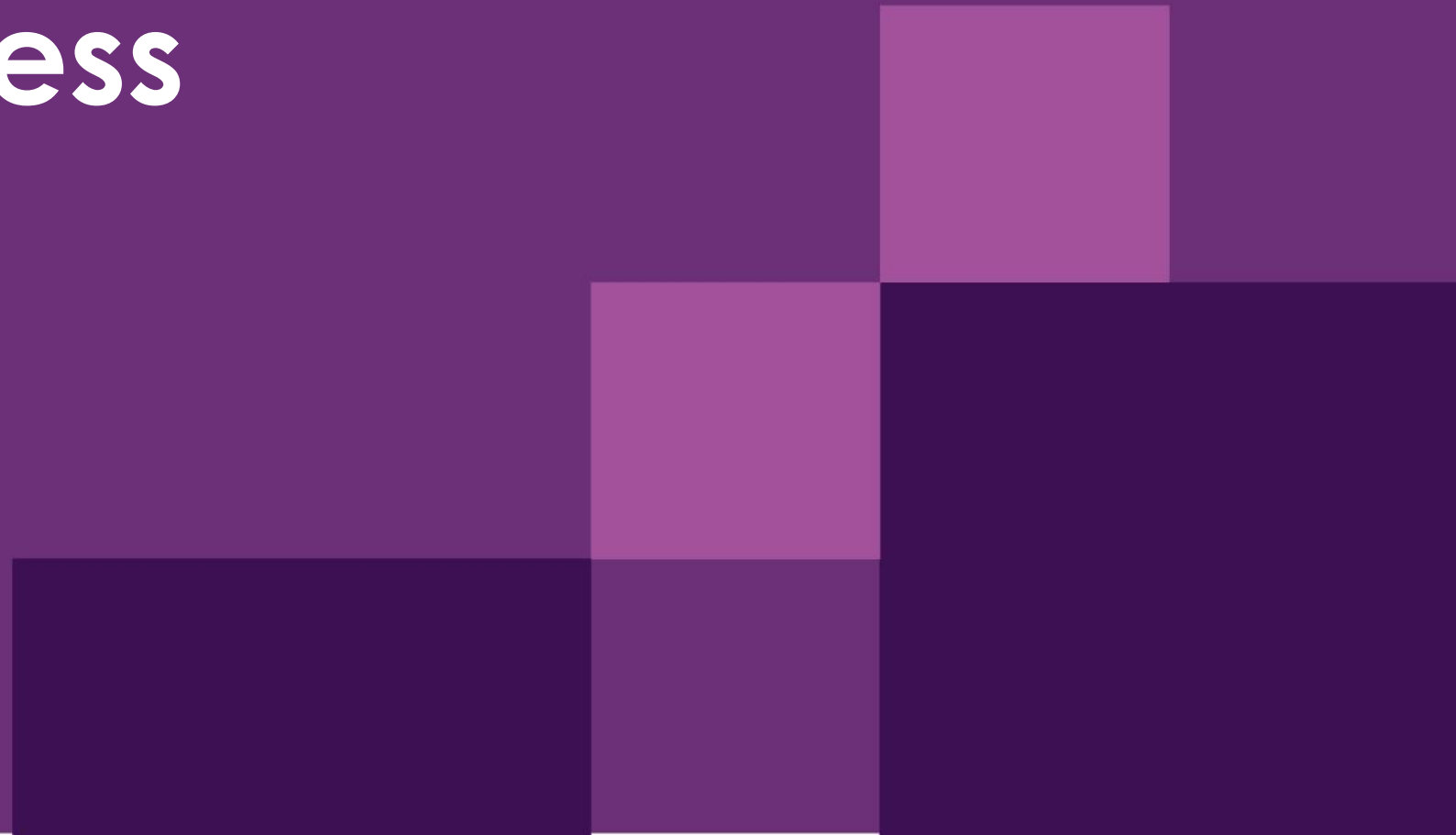
* New functionality

B2B considerations

- Are new definitions required in MFN and Service Order to facilitate the implementation of accelerating the smart meter deployment via the DNSP approach?
- Do participants see the 'One in all in approach' for shared isolation affecting B2B transactions? If, so how?
- Would a new service order definition that identifies defects assist businesses to manage the compliance obligation of recording unsuccessful metering installation attempts?
- Have businesses considered the system development that would be required for the proposed 'peer to peer' approach to receive power quality data

Other Business

B2B WG



Other Business

- Aakash
 - Customer contact flagged as Family Violence
 - Impact of National Energy Retail Amendment Rule (protecting customers affected by family violence)
 - Schedules 1, 2 and 3 of this Rule commence operation on 1 May 2023

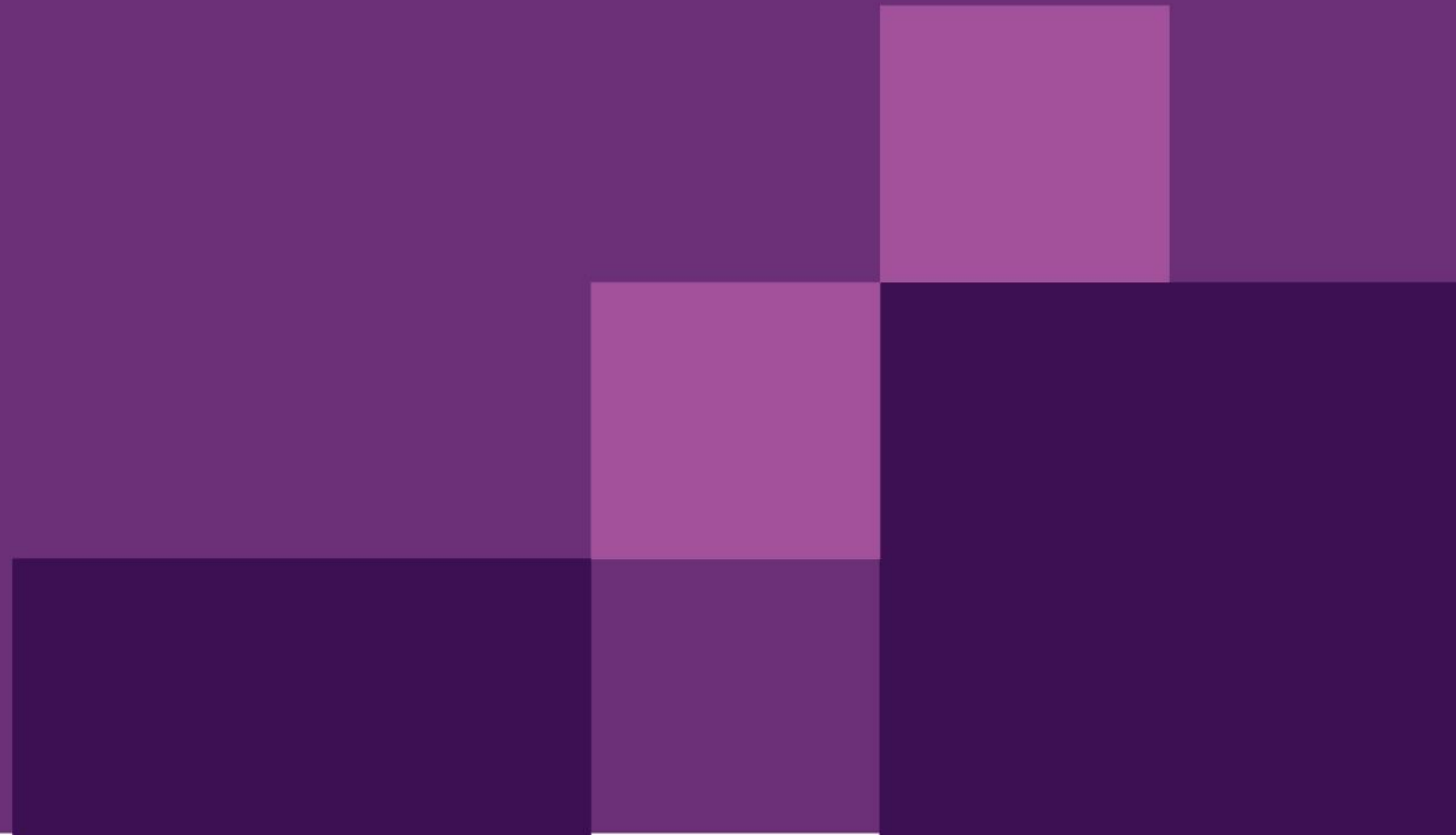
Other Business

- Mark
 - MSATS Disconnection Status
 - Mark's slide pack

Other Business

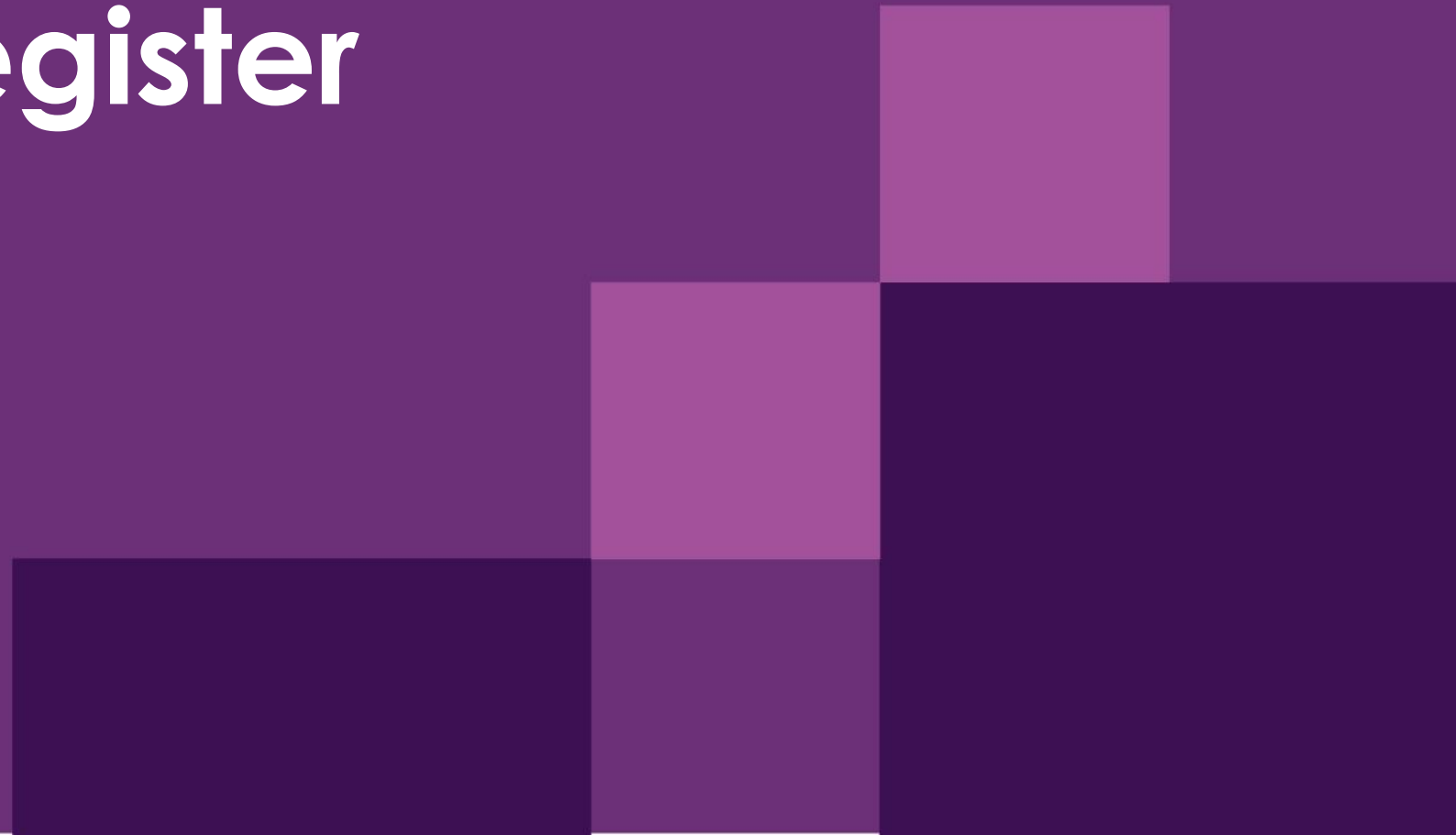
- Any other business items?
- Wrap up, actions, questions and parked issues

Appendix





ERCF ICF Register



ICF Register Update

Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
ADWNAN Reporting changes	Assignment of Interval ADWNANs to MDP in AEMO Performance Reports	Jane Hutson, EQ	017	Implementation delayed due to an identified impact to AEMO's MDM. Implementation date TBD.
Child NMI standing data quality - TNI and DLF	<p>ENM compliance requirement includes maintenance of standing data of Child NMIs – TNI and DLF I.</p> <p>Child NMI TNI and DLF is directly inherited from parent NMI TNI and DLF for all child NMIs except Child NMIs with site specific TNIs.</p> <p>ENMs currently do not have visibility on parent NMI standing data and to any changes made on the parent NMI standing data (CRs raised on Parent NMIs).</p> <p>This results in an issue as the Child NMI TNI and DLF becomes inaccurate when a parent NMI TNI and DLF are changed in the market but not updated to the ENMs.</p> <p>This affects the Child NMI billing in the market resulting in incorrect billing of consumers. * This also directly affects the SDQ report in MSATS and in turn our ENM compliance report from AEMO.</p>	intelenm@energy intel.com.au	032	Scheduled for the May 2023 release.
Updating Network Tariff for a Greenfield NMI	Configuration change to validation in MSATS on the CR3101 to allow the CR3101 to continue rather than reject on a Greenfield NMI.	Laura Peirano (UE)	047	Scheduled for the May 2023 release.

ICF Register Update

Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
NMI Status Updates	Proposes more explicit obligations regarding LNSPs reflecting NMI status energisations/de-energisations in MSATS regardless of the mechanism that triggered the status and this trigger point being from when LNSPs are advised of said status.	Helen Vassos (PLUS ES)	052	Subgroup formed. Proponent considering next steps.
Substitution Review	The review requires consideration for new substitution rules to be implemented for interval metering data to replicate substitution rules derived from Manually Read Interval Meters and Accumulative Meters.	Mark Leschke (Yurika)	054	Subset of the initial subgroup to meet to consider next steps. Next meeting likely to occur Feb 2023.
Clarifying when an embedded network code must be issued	Clarifying EN interpretations of the relevant clause, so the clauses are applicable regardless of the Distributor's embedded network application process.	Dino Ou (Endeavour)	055	Included in the 'Load Profiling Methodologies' consultation
Clarification of End Date in Inventory Table	Some MDPs are using NCONUML Inventory Table End Date to identify when the metering data is last calculated, updating it each month. Proposal is to clarify the end-date be when there is a change to consumption or abolishment. If not, the End Date should be reflected as 31.12.9999.	Mark Riley (AGL)	056	Subgroup formed. Proponent considering next steps.
Review of NMI Classifications	Some NMI Classifications are defined according to consumption, while some are defined according to throughput. The descriptions should be updated for consistency and to better accommodate for new connection arrangements (EG: those associated with IESS)	Mark Riley (AGL)	059	Subgroup formed. Subgroup considering next steps.
'Spikes' in settlement volumes within a 30-minute period	Following the introduction of 5MS, participants have witnessed peculiar 'spikes' in settlement volumes. These spikes occur within a 30-minute period and are a consequence of using the methodology outlined in AEMO's Metrology Procedures Part B.	Mark Riley (AGL)	060	Included in the 'Load Profiling Methodologies' consultation

ICF Register Update

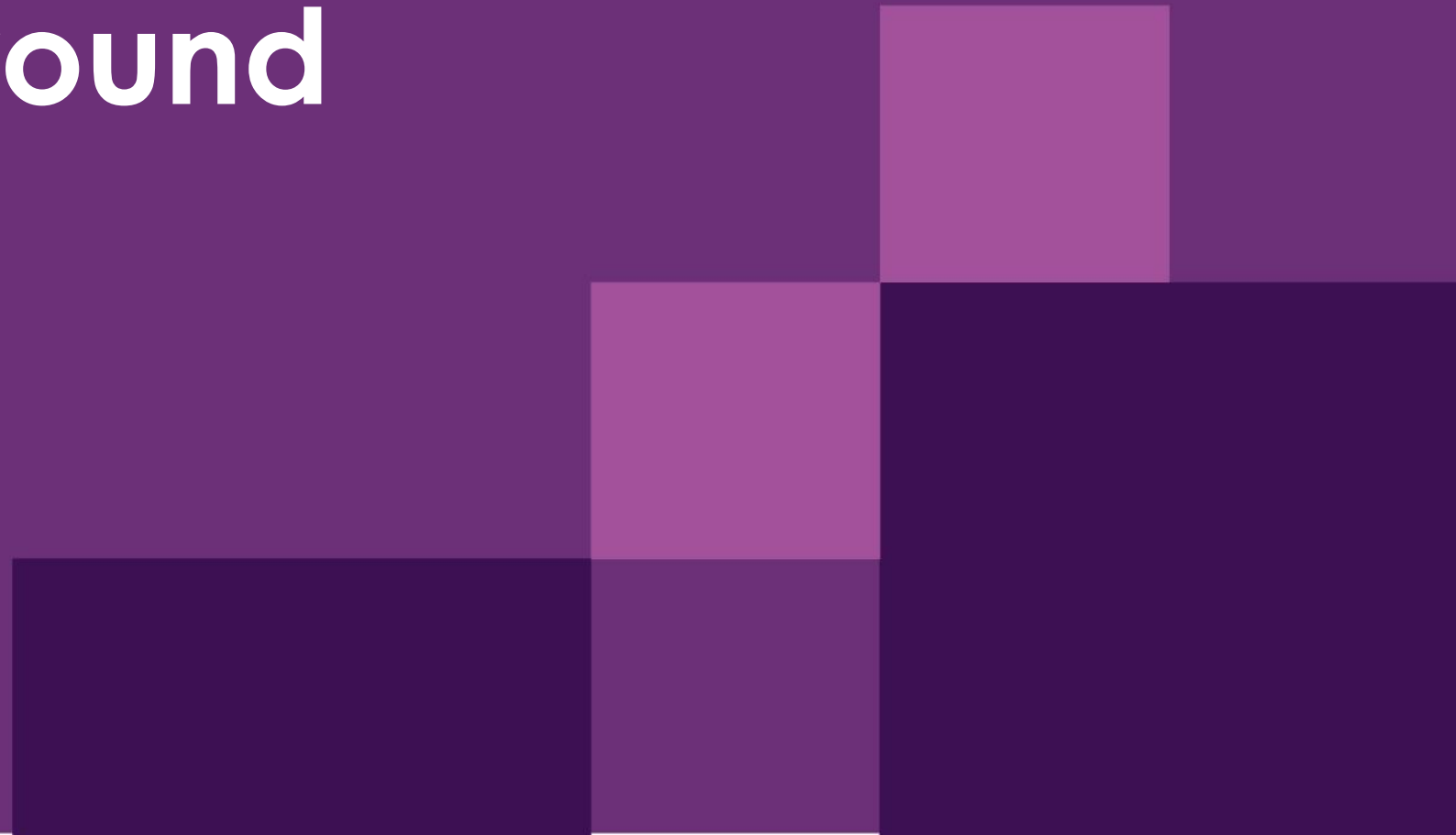
Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
<p>Addition of the 'HouseNumberToSuffix' field</p>	<p>The 'House Number To Suffix' is a part of the Australian structured address standards.</p> <p>'HouseNumberToSuffix' was added to the r42 schema in mid-November 2021 by the ASWG, the body that ensures the technical accuracy of the aseXML schema. At the time, ASWG Industry representatives suggested that, purely from an XML perspective, it would be prudent to add a 'HouseNumberToSuffix' element as a logical extension of 'HouseNumberTo'.</p> <p>While its addition to the schema may be technically valid, its addition to the Procedures is still subject to consultation.</p>	<p>Aakash Sembey (Origin Energy)</p>	<p>064</p>	<p>Included in the 'Load Profiling Methodologies' consultation</p>
<p>Removal of NMI Discovery Type 3 limitations</p>	<p>'Won in Error' process being impacted by MSATS NMI Discovery Type 3 showing an error message where a transfer completed more than 130 business days ago.</p> <p>This MSATS constraint forces market participants to rely on a manual process and retailers are left with no choice but to obtain the 'previous FRMP' details from the relevant network via email.</p> <p>Rule 7.15.5 (c) and (e) of the NER provides relevant provisions for retailers to access to energy data, including NMI Standing Data, in order to comply with its obligation. Since there are no restrictions in the NER, Origin requests AEMO to consider removing this validation from MSATS.</p>	<p>Aakash Sembey (Origin Energy)</p>	<p>065</p>	<p>Included in the 'Load Profiling Methodologies' consultation</p>

ICF Register Update

Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
Reviewing and updating file examples in the MDFF Specification document.	The MDFF document includes example files. Some of these files have not been updated to incorporate changes in the industry including SMS and Global Settlements. AEMO Metering to review and update where required the examples in Appendix H of the MDFF Specification.	AEMO	067	Document to be updated and published for comment. Exact timing still TBD.
Enumeration Management	This ICF identifies proposed fields for their enumerations to be managed outside the Standing Data for MSATS procedure, the process to amend those enumeration lists via a Rapid change process and where those enumerations are published.	Subgroup	068	Being assessed by AEMO and seeking further feedback from the ERCF
New fields in MSATS defined by a naming convention that does not align with the procedural field name.	With the introduction of new fields into MSATS as part of the MSDR it has become known that AEMO may create the new fields in MSATS defined by a naming convention that does not align with the procedural field name. The AEMO defined the field name may be based on their database name and participants are then required to create a mapping table within their systems to associate this name with the procedural field name that is defined in the Standing Data for MSATS document.	Adrian Honey (TasNetworks)	TBD	Being assessed by AEMO



IESS Background



IESS Rule Overview

- The Commission's final rule makes a number of changes that better integrate storage into the NEM. These changes include:
 - A new **registration category**, the Integrated Resource Provider (IRP), that allows storage and hybrids to register and participate in a single registration category rather than under two different categories.
 - Clarify scheduling obligations that apply to different hybrid configurations, including DC-coupled systems. Operators of these systems will have flexibility to be **scheduled or semi-scheduled** (with some limitations).
 - Allowing hybrid systems to manage their own energy flows behind the connection point, subject to system security limitations (**aggregate conformance**)
 - Clarifying that the current approach to performance standards that are set and measured at the connection point will apply to grid-scale storage units, including when part of a hybrid system.
 - **Transferring existing small generation aggregators to the IRP category**, and requiring new aggregators of small generating and/or storage units to register in this category. **Aggregators will be able to provide market ancillary services from generation and load.**
 - Grid-scale storage will bid and be dispatched under a single DUID (20-bid bands), using a new scheduled bidirectional unit classification
 - Amending the framework to recover non-energy costs based on a participant's consumed and sent out energy over relevant intervals, irrespective of the participant category

Implementation

- The majority of changes made by the final rule will come into effect on 3 June 2024.
- **Two changes will come in earlier on 31 March 2023**, allowing:
 - Aggregators of small generating and storage units to **provide frequency control ancillary services**
 - Hybrid systems to use **aggregated dispatch conformance**
- While the **IRP category will not be available until June 2024**, participants will still be able to **register** hybrid systems in the existing categories, for example as generators and market customers, and **classify their units under the existing framework**

Context



Integrating Energy Storage Systems

High Level Design

December 2021

AEMO has published a draft high-level design for IESS [\[link\]](#)

IESS rule change

- Updates NEM arrangements to better integrate storage
- Requires changes across AEMO's market processes and framework (especially for registration and dispatch)
- Major step toward the ESB's trader-services model

NEM 2025 Implementation Roadmap

- AEMO preparing IT and regulatory roadmap for ESB reform implementation. March 2022 release date.
- Reform Delivery Committee (RDC) established to guide its development:
 - Market bodies – AEMC, AER and AEMO
 - Industry participants representing – AEC, ENA and CEC
 - Consumer representatives – ECA, MEUA, EUAA and PIAC
- IESS is one of the more advanced reforms in the Roadmap.

Key dates

Activity	Date
Rule change request submitted by AEMO	23 Aug 2019
Final determination	2 Dec 2021
High-Level Design consultation	Published 16 Dec 2021 Feedback due 11 Feb 2022 Final published March/April
Transitional aspects – baseline release <ul style="list-style-type: none">• <i>Aggregate conformance for hybrid systems</i>• <i>FCAS participation for SGAs</i>	31 Mar 2023
Market trials	Feb to May 2024
Final release	3 June 2024

Integrated Resource Provider and Bidirectional Unit

New registration category: the Integrated Resource Provider (IRP)

- Use by participants with storage resource and hybrid systems
- Also technology neutral category.
- Can classify end user connection points (nominate as FRMP)

Accompanied by a new resource type – the bidirectional unit

- Resources that produce and consume energy (excluding auxiliary load)

What is classified	Label (NER)	Eligible Categories			
		IRP	Generator	Customer	DRSP
Scheduled bidirectional unit	Scheduled IRP	✓			
Non-scheduled bidirectional unit	Non-Scheduled IRP	✓			
Scheduled generating unit	Scheduled Generator	✓	✓		
Semi-scheduled generating unit	Semi-Scheduled Generator	✓	✓		
Non-scheduled generating unit	Non-Scheduled Generator	✓	✓		
Small resource connection point (small GU / small BDU)	Small Resource Aggregator	✓			
Scheduled load	Market Customer	✓		✓	
Market connection point	Market Customer	✓		✓	
Ancillary service unit	Ancillary Service Provider	✓	✓	✓	✓

Small Resource Aggregator and Ancillary Service Unit

Market Small Generation Aggregator will move to the IRP, using the label Small Resource Aggregator

- Will also be able to provide market ancillary services – **Baseline** release

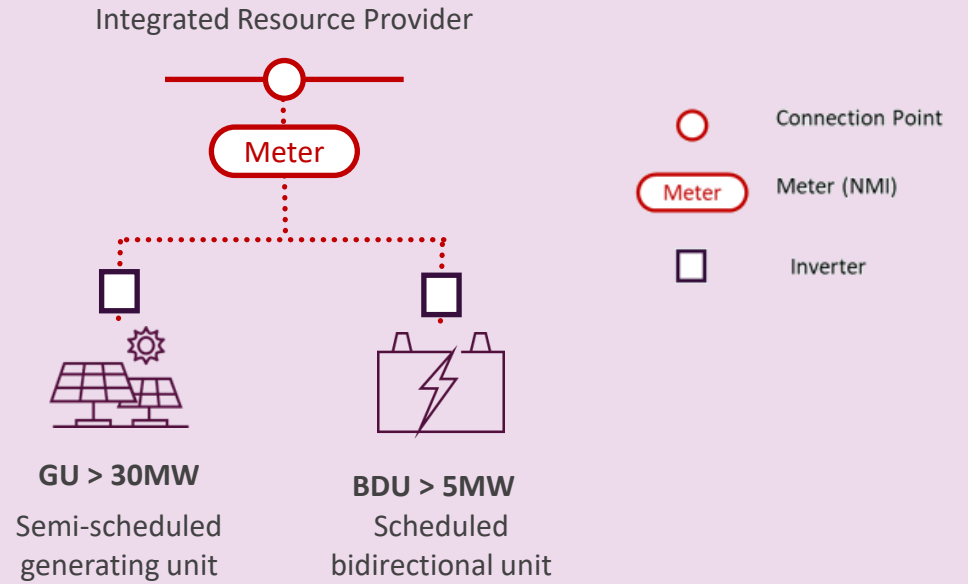
Ancillary service unit is a consolidative term – it replaces

- ancillary service generating unit
- ancillary service load

What is classified	Label (NER)	Eligible Categories			
		IRP	Generator	Customer	DRSP
Scheduled bidirectional unit	Scheduled IRP	✓			
Non-scheduled bidirectional unit	Non-Scheduled IRP	✓			
Scheduled generating unit	Scheduled Generator	✓	✓		
Semi-scheduled generating unit	Semi-Scheduled Generator	✓	✓		
Non-scheduled generating unit	Non-Scheduled Generator	✓	✓		
Small resource connection point (small GU / small BDU)	Small Resource Aggregator	✓			
Scheduled load	Market Customer	✓		✓	
Market connection point	Market Customer	✓		✓	
Ancillary service unit	Ancillary Service Provider	✓	✓	✓	✓

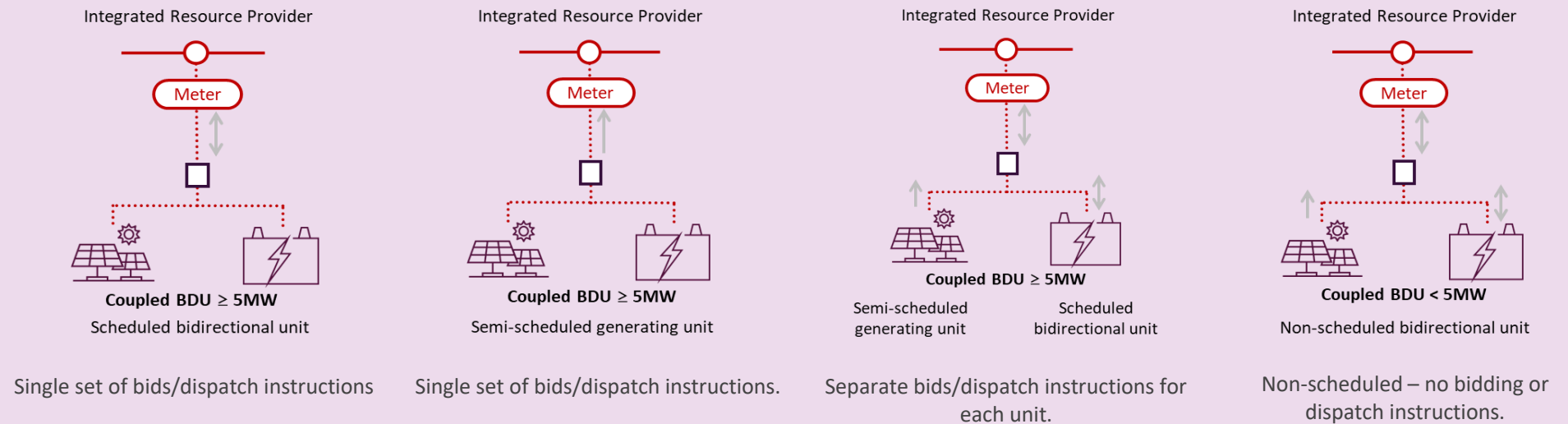
Hybrid integrated resource systems:

- Classification, bidding & scheduling at unit level
- Aggregate dispatch conformance introduced (Baseline release)



Coupled production units (DC-coupled systems):

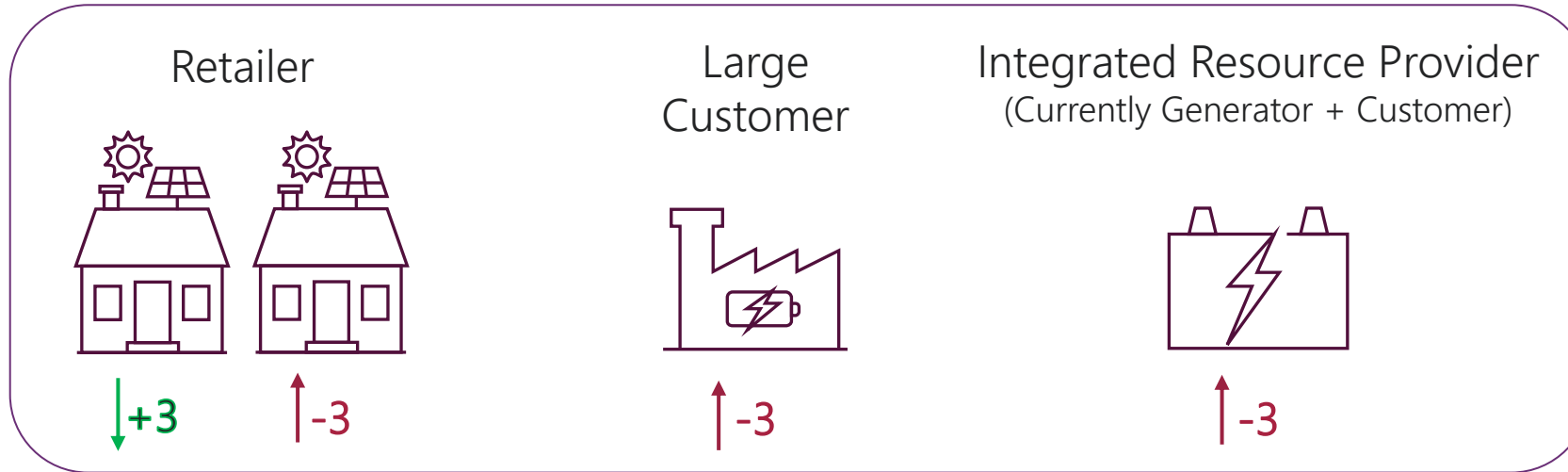
- Rule change provides for flexibility in registration & classification for production units with separate plant that share equipment (e.g., inverter – DC coupled).



Non-energy cost recovery framework

- NECR updated, removing existing differences due to registration category.
- Cost recovery based on participant's **gross consumed energy and/or gross sent out energy** in an interval across its connection points
- The two required data streams will be available in May 2022 with global settlements:
 - Adjusted Consumed Energy (ACE)
 - Adjusted Sent Out Energy (ASOE)
- Remaining type 6 accumulation metering installations → retain current arrangements until replaced with smart meters.

Non-Energy Cost Recovery Example



Participant	Net Consumption	Gross Consumption
Retailer	0	-3
Large Customer	-3	-3
Integrated Resource Provider	-3	-3
Total	-6	-9

Current arrangements: Large Customer and IRP each pay 50% of the relevant NECR charges.

IESS arrangements: Retailer, Large Customer and IRP each pay 33%.

Integration: Retail and Metering

- IRPs can classify end-user connection points, subject to retail authorisation requirements.
- IRPs will be incorporated into the Markets, Settlements and Transfer Solution (MSATS) system.
 - Will be able to be nominated as the FRMP for a connection point by a customer; and
 - Will have access to MSATS functions such as NMI discovery and end-user transfer rights.
- IESS progresses Flexible Trading Arrangements Model 1, by extending the SGA framework to bidirectional flows (storage, EVs).
 - The IRP for the secondary small resource connection point will be treated as a FRMP in MSATS, as above.

Other issues

RRO

- IRPs liable entities if aggregate annual load exceeds 10GWh in particular NEM region.

Intervention compensation framework

- IRPs integrated.

Network charges

- Current framework retained.

Performance standards

- Maintains existing approach of measuring performance standards at connection point.

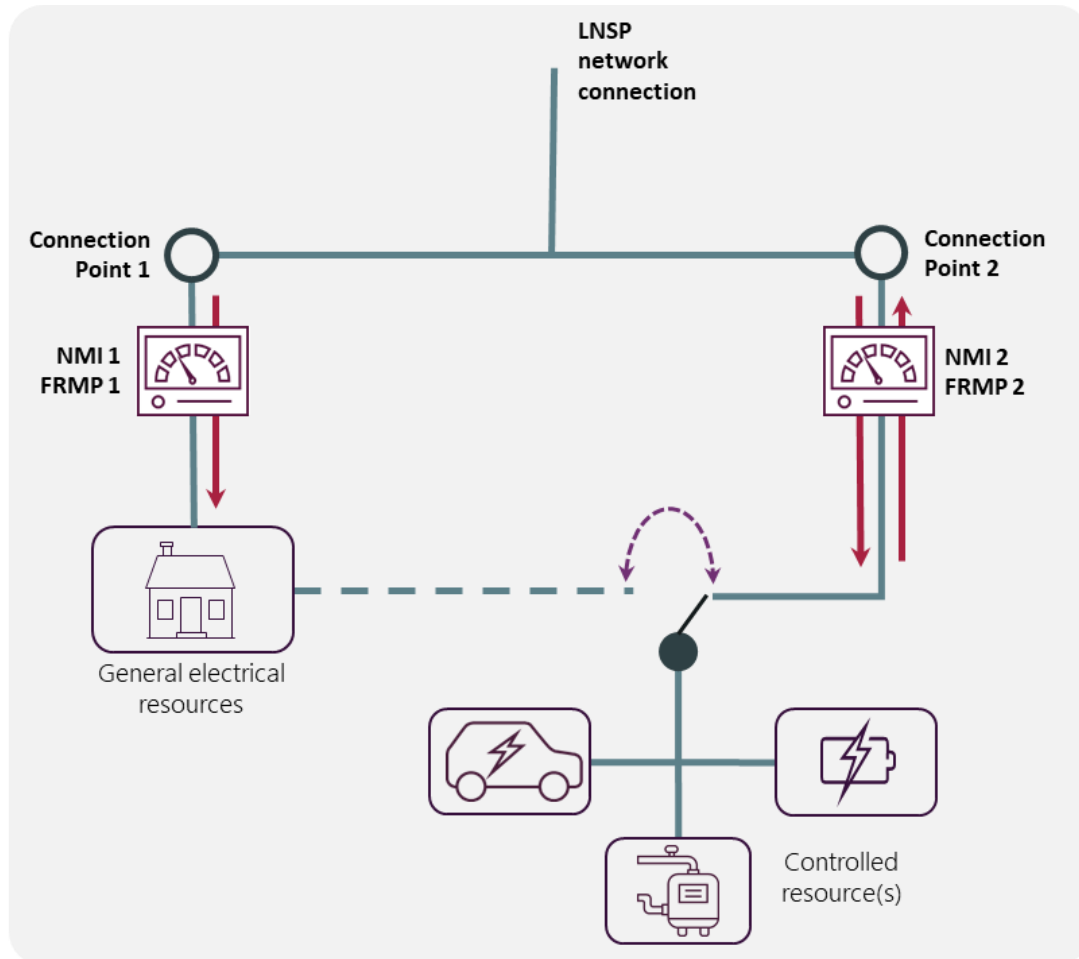
Aggregation & ramp rates

- Addresses inconsistencies & removes 6 MW threshold for aggregating semi-scheduled units.

Minor & administrative changes

- IESS contains many terminology changes to reduce technology-specific language etc
- Final transitional rule (clause 11.145.9) allows for minor and administrative changes without normally-prescribed consultation processes.
 - But does not define ‘minor & administrative’.
- AEMO’s Regulation group:
 - Developing guidance and a process for efficiently processing these changes.

Small Resource Aggregator



- SGAs will transition to IRPs under the label ‘Small Resource Aggregator’
- Model (mostly) already exists in market systems and catered for in settlement
 - Now explicitly bidirectional
 - Non-energy cost recovery changes
 - Can provide ancillary services subject to the MASS (baseline release)



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