

B2B Working Group Meeting 09

9 August 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.

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- 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.

Agenda

1. Welcome
2. Actions Log
3. B2M Update
4. IEC ICFs
5. IESS impact on B2B procedures
6. B2B Guide Survey (Review Survey)
7. Other Business
8. Appendix
 - ERCF ICF Register
 - CDR Consultation Inclusions
 - IESS Background



Actions Log

Blaine Miner (AEMO)

Closed Actions

Action	Description	Responsible	Outcome
1005-01	Alignment between aseXML schema and the Australian standard. (This replaces action item 0803-11)	B2B-WG	ICF has been raised.
1005-05	Consider the potential impact of flexible trading arrangement and the ability for an IRP to raise a metering related service order	B2B-WG	To be considered as part of 2303-01
1207-06	Consider what additional information they may require completing their IESS impact assessments	B2B WG	Links to relevant documents provided by AEMO to the B2B WG
1207-08	Interact with David Woods to further review the DL AEMO USER GROUP email and then remove it from the distribution list	Nandu Datar (AEMO)	The email DL AEMO USER GROUP removed from B2B WG distribution list
1207-10	Perform initial analysis of the survey responses and provide a summary to the B2B WG. Also provide the actual survey response details	Nandu Datar (AEMO)	Initial Analysis completed and report made available to the B2B WG

Open Actions

Action	Description	Responsible	Due Date	Update
0803-01	Improve the B2B Guide	B2B-WG	On going	
0803-06	B2B WG members to check with their internal stakeholders and provide feedback on whether to progress the ICF for Update OWN to include NCOMUML inventory files	B2B WG	11-Apr-22	12/04 - Mark Riley (AGL) noted that this could be put on hold pending additional work to be completed for the ERCF
2303-01	The Initial high-level assessment for B2B procedures is required by 31 May 2022.	B2B WG	31-May-22	To be progressed at the Aug meeting
1406-02	Consider the implications of the proposed changes from ICF B002/22 and B004/22 re Alignment of field lengths on their organisations	B2B WG	ASAP	
1406-03	Review the amended clause in the RoLR procedure and provide feedback	B2B WG	Next B2B WG meeting	
1406-04	Take the feedback regarding RoLR communication for AEMO internal consideration	Meghan Bibby (AEMO)	TBA	
1207-01	B2B WG members to provide feedback re the proposal to combine all B2B procedures into one procedure	B2B WG	Next B2B WG meeting	
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)	When available	
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	
1207-07	Assess the potential impacts of IESS on the B2B procedures in preparation for the Aug B2B WG meeting	B2B WG	Next B2B WG meeting	



B2M Update

Blaine Miner (AEMO)

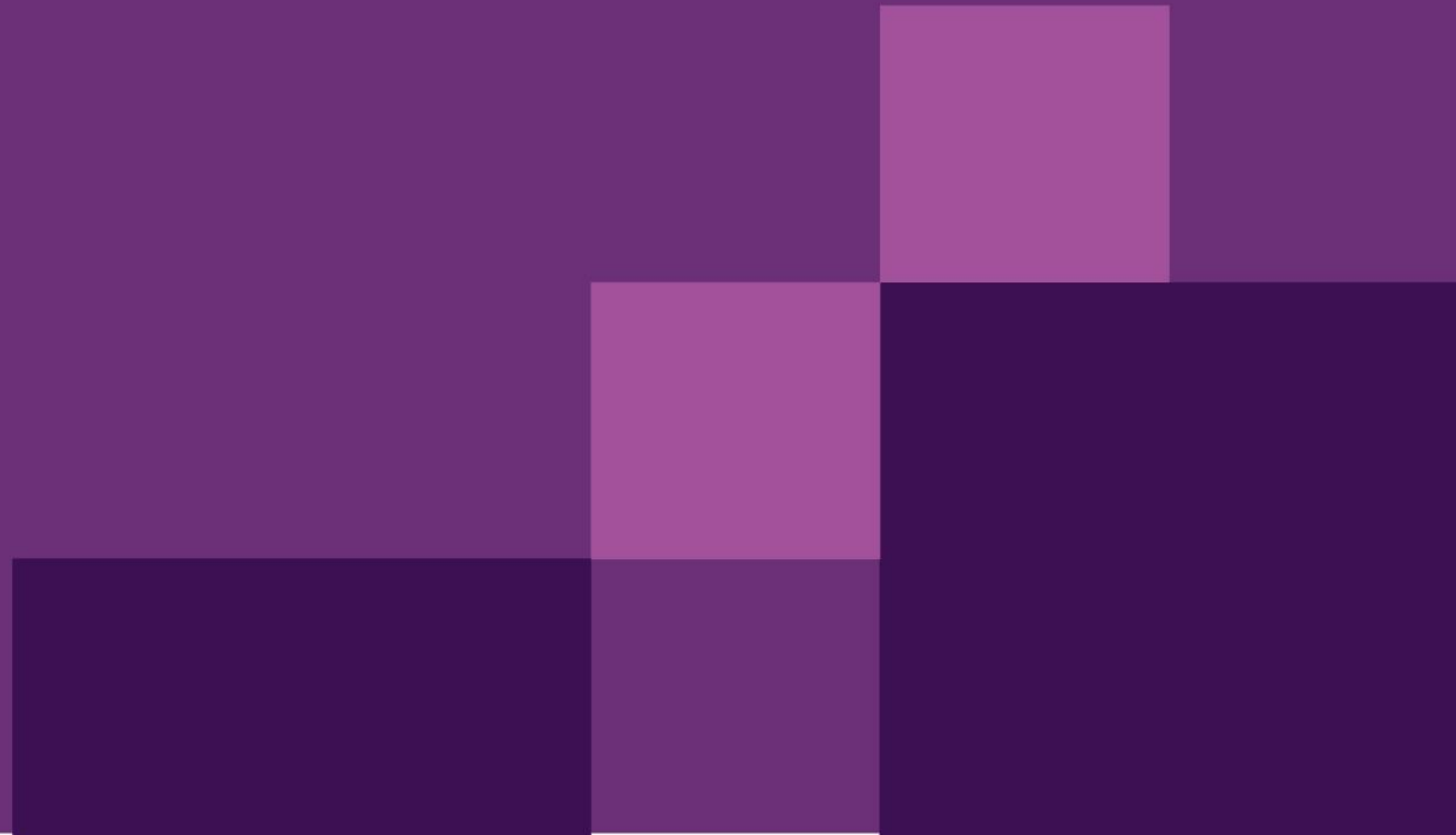
B2M Update

(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	15 Open ICFs, including 2 new 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.	<p>Third workshop held on Wed 27 July</p> <ul style="list-style-type: none"> • Consultation to be split into 2 Draft reports: <ul style="list-style-type: none"> • Part 1 – Other Matters – Various Minor Changes <ul style="list-style-type: none"> • 7 Nov 2022 effective date • Part 2 – CDR MSATS solution <ul style="list-style-type: none"> • 30 May 2023 effective date • Submissions for the Draft Report Part 1 closes Monday 15 August 2022 (extra week provided to Stakeholders) • Draft Report for Part 2 and the Final Report publishing dates TBD.
Stand-alone Power Systems (SAPS)	<ul style="list-style-type: none"> • Initially, AEMO must determine the appropriate IT design options to support the SAPS Framework, with a focus on the appropriate way to identify in MSATS that a NMI is connected to a SAPS. For this purpose, AEMO identified three options in the Issues Paper. • Subsequently, AEMO would need to consult on changes to a number of AEMO Retail Electricity Market and Settlement procedures. 	<p>Second workshop held on Tuesday 2 August 2022</p> <ul style="list-style-type: none"> • Option 3 supported by all attendees <ul style="list-style-type: none"> • AEMO to create 5min interval values where non-5min metering data is provided by the MDPs
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.	AEMO currently seeking ERCF and B2BWG feedback re proposed new NMI Classification Codes and preferred consultation timings
MSATS Standing Data Review	<p>48 new and amended MSATS fields:</p> <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"> • Proposed changes to the MSADR Data Transition Table to be discussed at the next MSADR FG meeting <ul style="list-style-type: none"> • Removal of the use of the BUT for Locality, Post Code and State fields

IEC ICFs

B2B WG



Current IEC ICFs

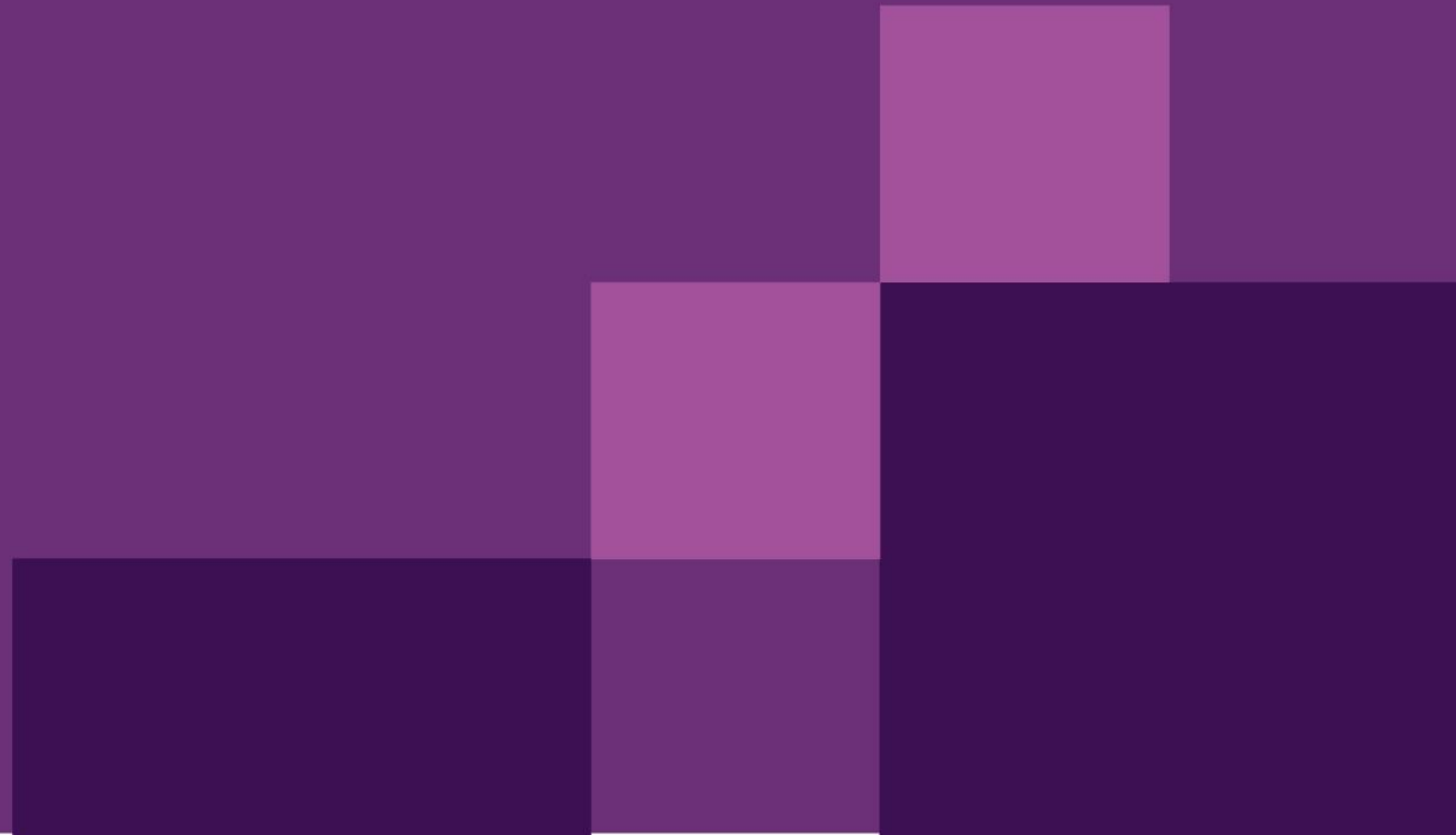
ICF No	Title	Description	Proponent	Status	Next Step
B001/22	Notification with CSV Payloads		Mark Riley (AGL)	Pending	
B002/22	Alignment of B2B field lengths to B2M Procedures/schema	Since r42 B2M schema release, there has been some inconsistent field lengths identified for the same fields in the B2B transactions. Due to this issue, the information may get truncated while using B2B transaction.	Aakash Sembey (Origin Energy)	Pending	B2B WG to consider the implications of these proposed changes on their organisations
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)	Pending	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)	Pending	B2B WG to consider the implications of these proposed changes on their organisations Suggested combining B002 and B004
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	Discrepancy between B2B SO Process and B2B Guide (V3.7)			New	To be discussed today

Proposed New ICF(s)

- B006/22
 - Discrepancy between B2B SO Process and B2B Guide (V3.7)
 - Form Reference and Form Number fields are marked as 'N' for Sub-category Re-Energisation of the ServiceOrderType (Page 44 of SO process).
 - However, the B2B guide mentions different FormReferece values to be provided depending on Jurisdiction and Scenarios (example: Required for VIC Re-Energisations where service is off-supply for more than 12 month) (Page 70 of B2B Guide)
 - In Table 13 against the field FormReference, the text in Definition column makes reference to 'Supply works Request' whereas the column headings are ' Supply Service Works'. Should it be 'Supply Service Works Request'?
- Are there any other emerging ICFs members would like to discuss?

IESB impact on B2B procedures

Blaine Miner



IESS impact on B2B procedures

- Context:
 - The IEC/B2B WG needs to consider the potential impacts of the implementation of the IESS Rule on the B2B Procedures
- Next Step:
 - Action - B2B WG to consider the potential impacts to B2B Procedures/artifacts in preparation for the Aug 2022 monthly meeting
 - IESS impact assessment to form part of the Aug B2B WG monthly meeting
 - Members provided with a template for recording potential impact on B2B procedures

Thought Starters

- Should the IRP be explicitly defined and referenced as required in the B2B Procedures, e.g. section 2.2, 2.16, 2.17 and 4.1 in the Service Order Process Procedure, or should terms like ‘retailer’ be replaced with something more generic to allow for both retailers and IRPs to perform certain B2B actions?
- Does the introduction of additional NMI Classification Codes, to enable the IESS Rule, result in any changes to the B2B artifacts?

Proposed new NMI Classification Code	Description	Comment
TIRS & DIRS	TNSP & DNSP registered hybrid	This would cover integrated resource systems (IRS) and replaces the current requirement for two NMIs (scheduled load, scheduled generation) and application of UFE and market fees.
DGENERATR	DNSP connected registered generator	Enables identification of DNSP connected generators for appropriate UFE application.

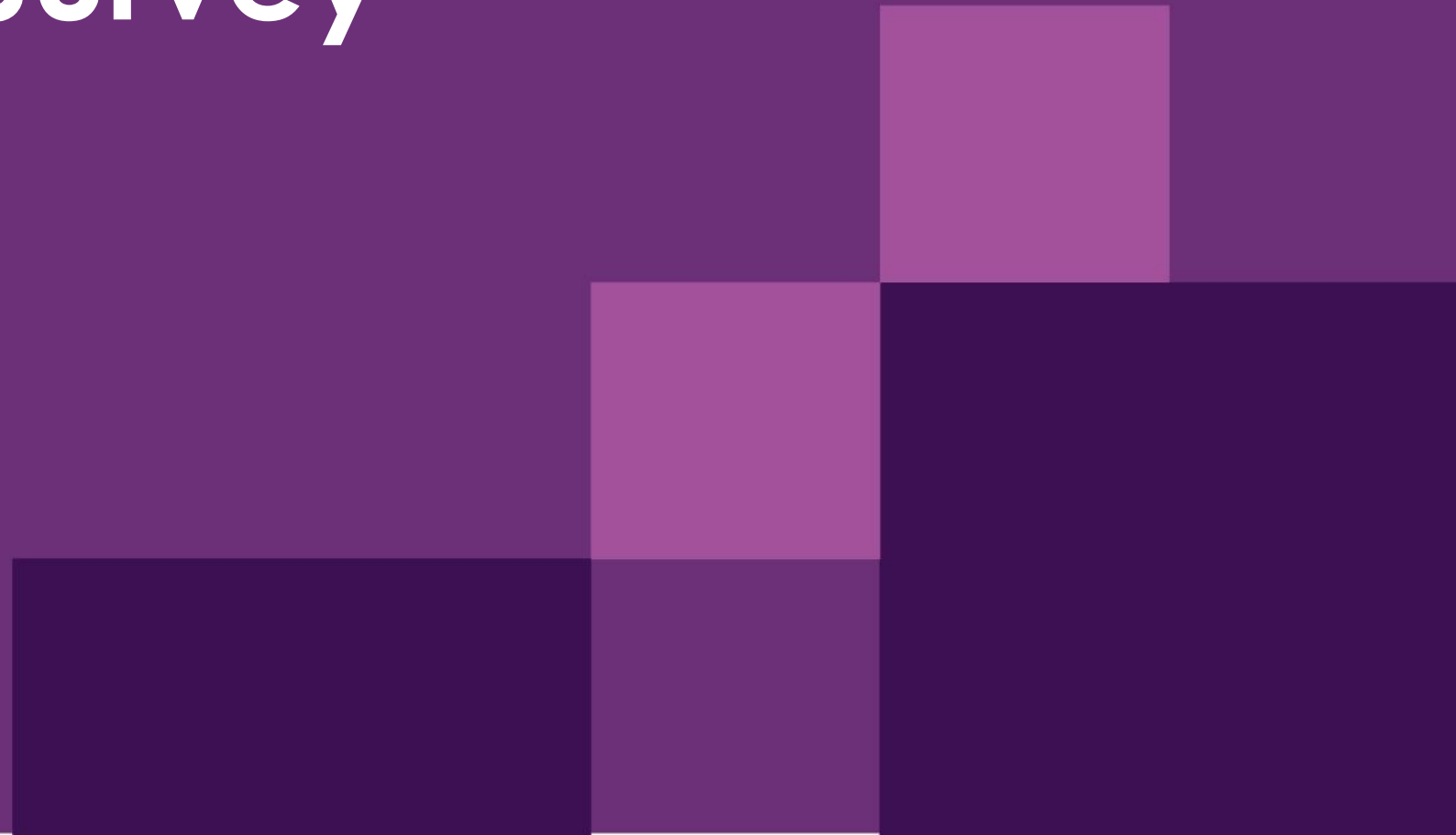
- Does the existence of a Retailer and an IRP at a customer’s site, cause any B2B impacts?
 - E.g. An IRP initiating a Re-energisation or Install Meter Service Order Request



B2B Guide Survey

(Review Survey)

Nandu Datar



B2B Guide Survey (Review Survey)

- Context:
 - Broader B2B participants have been requested to respond to the survey for improving the B2B Guide
- Update:
 - 26 responses from 18 participant organisations received
 - Retailer 12 (6 organisations)
 - Distributor 8 (8 organisations)
 - Metering 6 (4 organisations)
 - Is the sample representative of the industry?
 - AEMO performed initial analysis of the survey responses (for discussion at this meeting)

B2B Guide Survey (Review Survey)

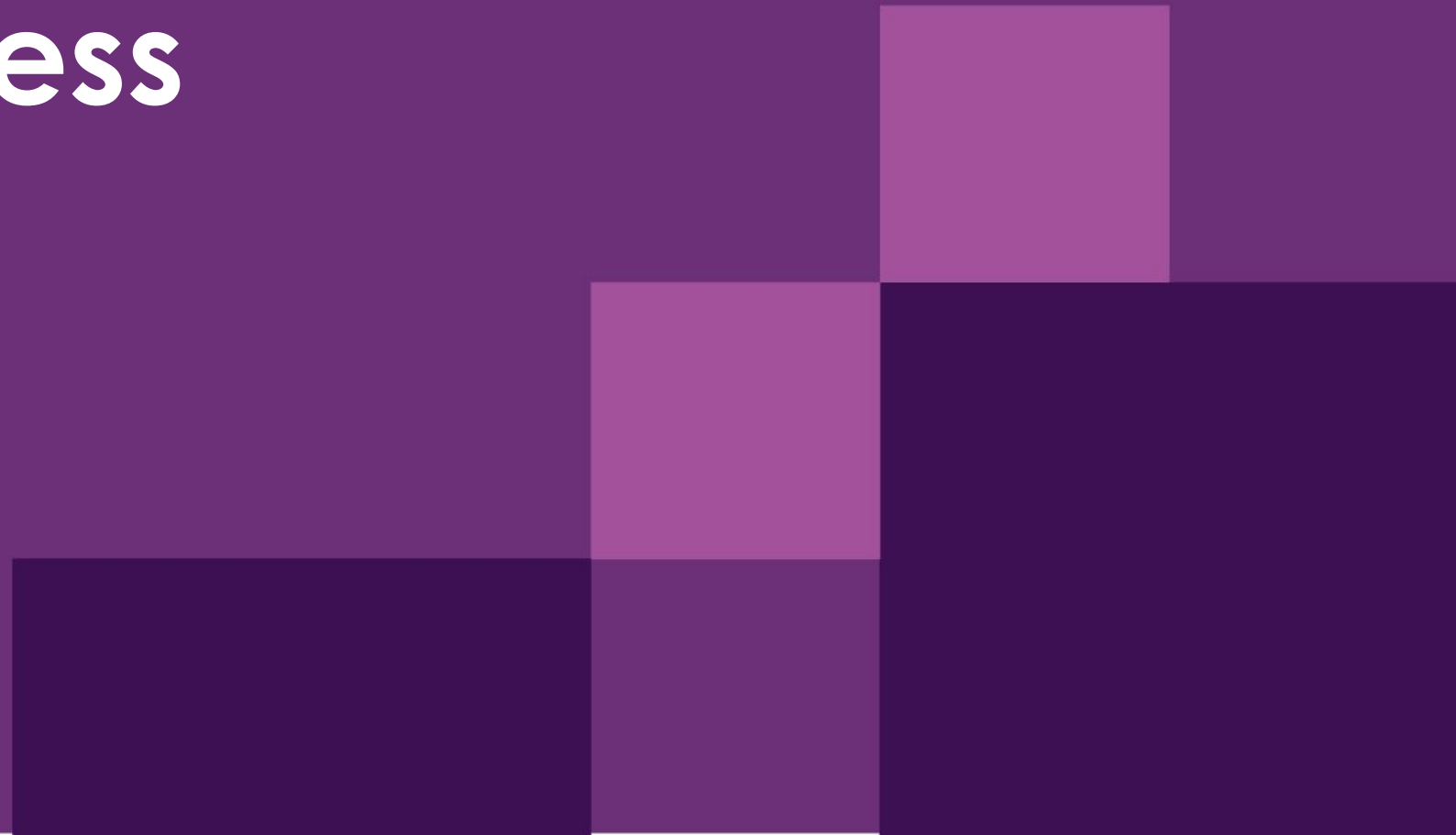
- Key themes identified from the question about suggestions for improvement
 - Reorganise/group as per procedures / jurisdictions / DB zones
 - Provide context
 - Remove replicated / outdated content
 - Explain objective / purpose
 - Review relevance of the content
 - Provide link between procedure and guide
 - Few comments not relevant to the B2B Guide
- Key themes identified from the question about additional information in the B2B Guide
 - Link to DNSP handbook / procedures
 - Request to add specific subject areas, network handbook process variations
 - More details on transaction rules

B2B Guide Survey (Review Survey)

- Key themes identified from the question about additional information in the Network Handbook
 - Unable to find the network handbook
 - Some networks do not have a handbook
 - Include diagrams like B2B Guide
 - Consistency of information between the handbook and procedures
 - Regular updates of the handbook by consulting with retailers
 - One Handbook for all Networks
 - Move network specific information to the B2B Guide
- Next Step:
 - B2B WG participants to review AEMO's analysis and provide their feedback on the survey

Other Business

Blaine Miner (AEMO)

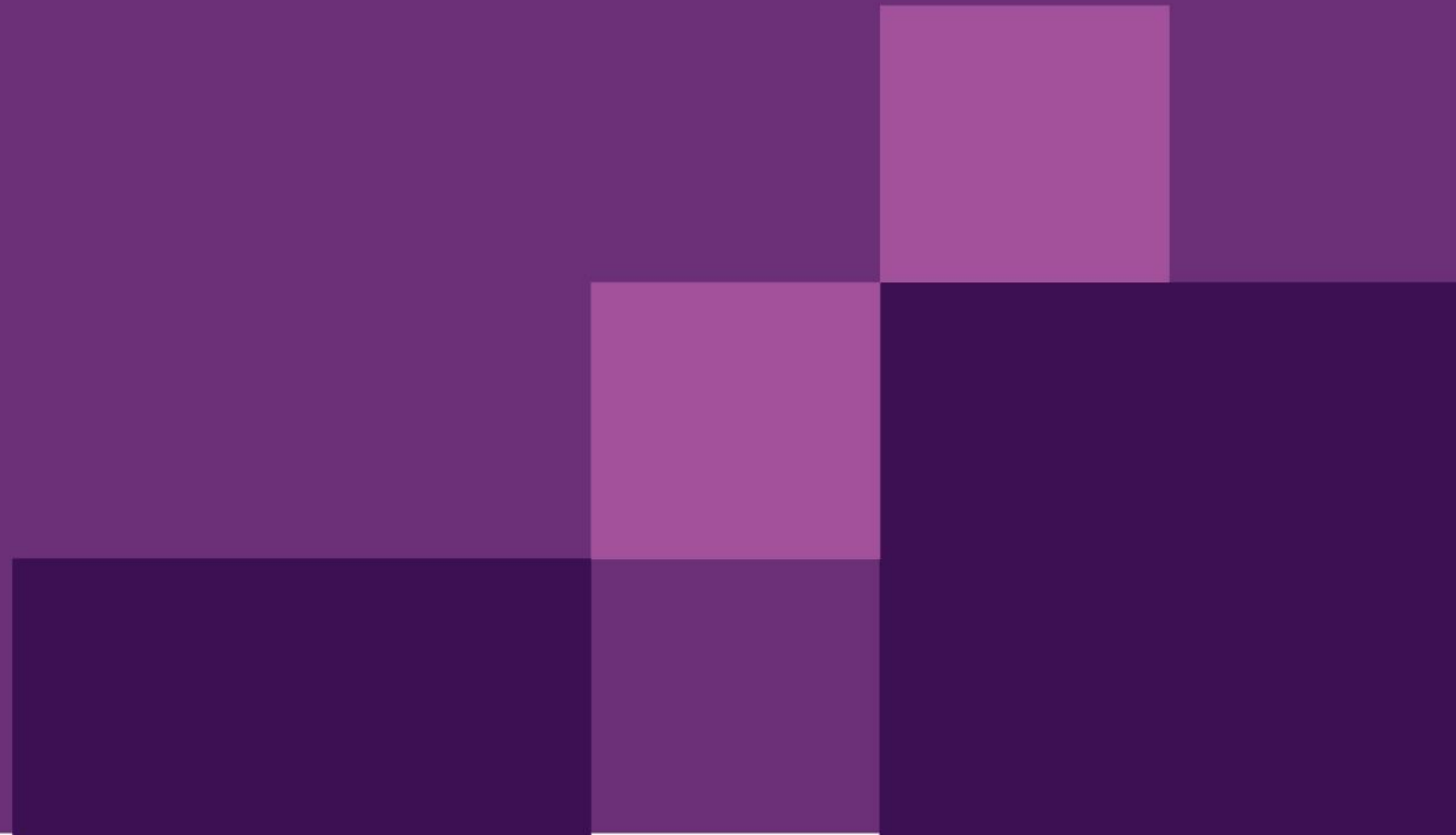


Other Business

- MSATS Outage Windows
- Any other business to raise?
- Next monthly meeting scheduled for Tues 13 September 2022
 - Any proposed agenda items?

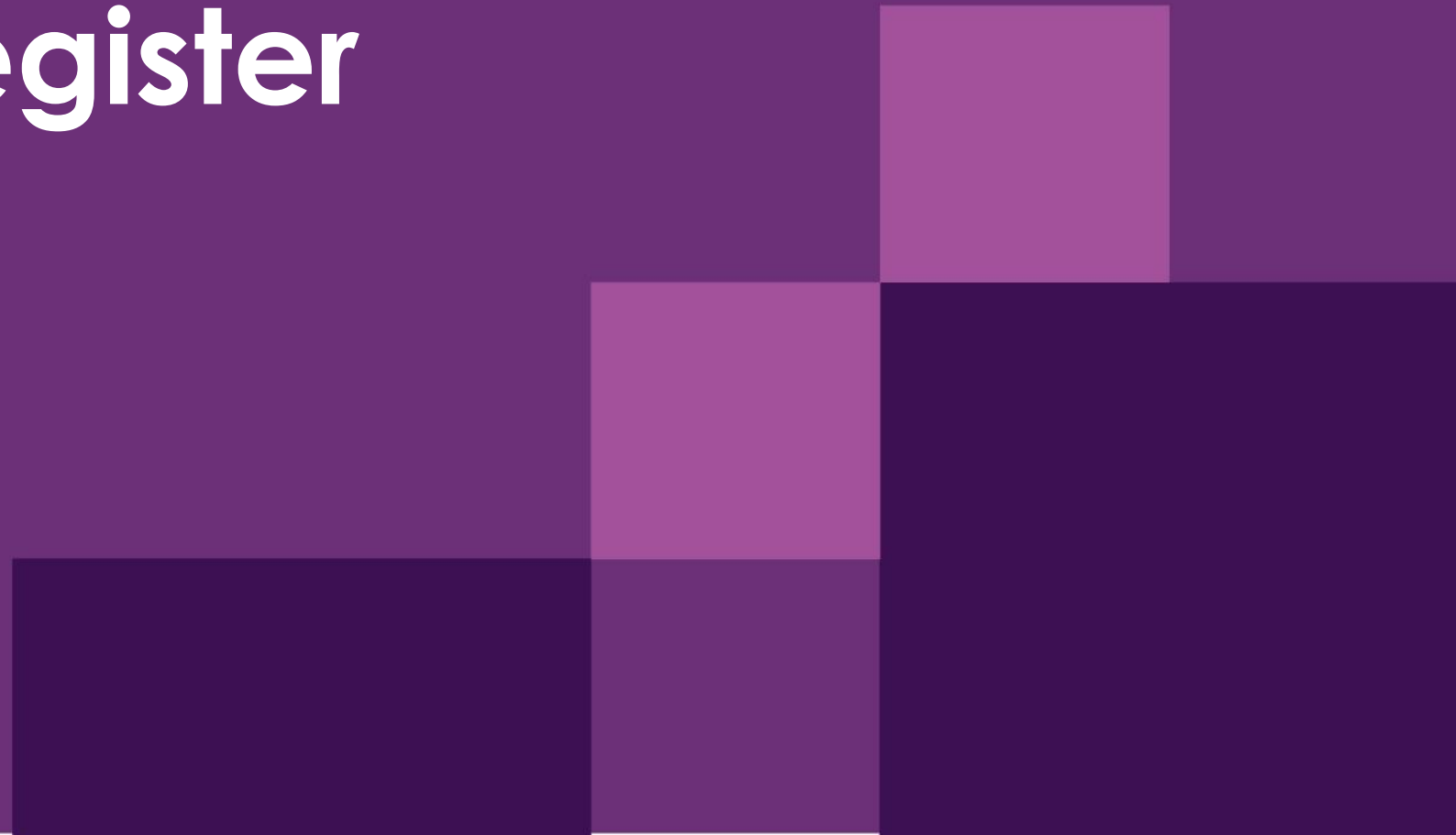


Appendix





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. PlusES coordinating the establishment of high-level process flows.
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	'Substitution Type review' workshop has been scheduled for 30 Aug, proposed agenda items and content being requested from ERCF members
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	AEMO proposed solution provided to proponent for their consideration
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. Next steps being considered by the proponent.

ICF Register Update

Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
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 had its first meeting on Fri 5 August
'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	Subgroup formed. AEMO to provide subgroup methodology data. Methodology likely to be implemented May 2023. Delays in the provision of data being caused by environment availability issues.
Incorrect 'Meter Manufacturer' and 'Meter Model' obligations associated to CR305x transactions in CATS Procedures v5.3	<p>From 7 Nov 2022, 'Meter Manufacturer' and 'Meter Model' will become Mandatory fields in MSATS. An issue has been identified in the application of this obligation associated to situations where a new MPB needs to remove a meter from MSATS where these fields have not been previously populated.</p> <p>CATS Procedures v5.3, effective date 7 Nov 2022, states that for CR3004/5 transactions that 'Meter Manufacturer' and 'Meter Model' are only required when the status code is 'C' (Current), however, this is not stated for CR305x transactions, the procedure currently states that these fields must always be supplied, even for a removal.</p> <p>AEMO is recommending for this misalignment to be fixed as part of the next REMP consultation.</p>	Jackie Krizmanic (AEMO)	061	Included in the CDR Consultation

ICF Register Update

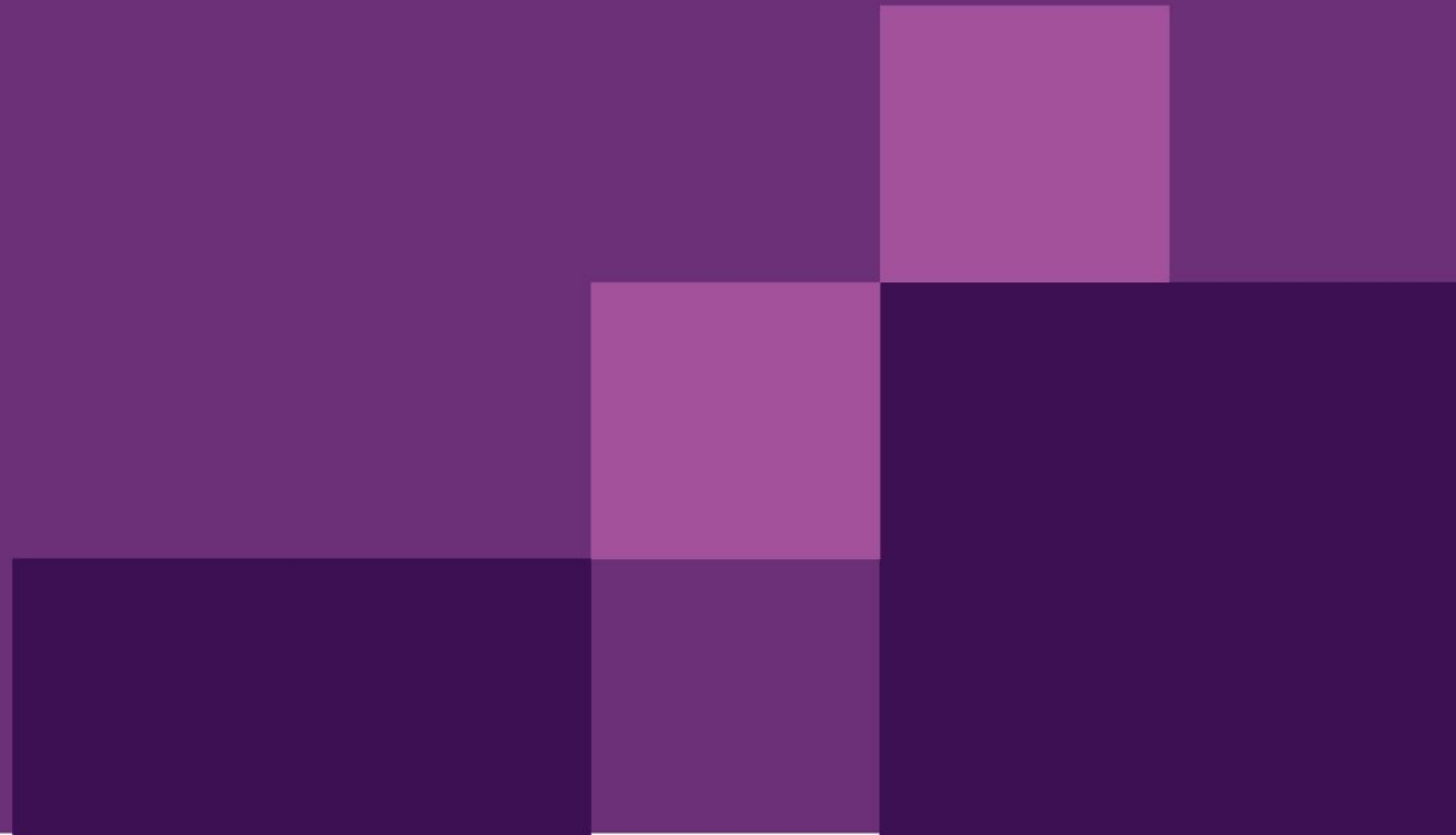
Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
GPS Coordinates Value where no GPS coverage is available at the metering installation.	PLUS ES proposes the following to mitigate unnecessary handling of GPS Coordinates. <ul style="list-style-type: none"> • All MPBs must use a specific value which will indicate to the industry that GPS coverage was not available at the metering installation • The proposed value is 0.00000 (5-7 decimal places) to align with the format specified in the NMI Standing Data Procedure. • GPSCoordinatesLat, GPSCoordinatesLong field description to be updated in the NMI Standing Data Procedure to reflect the proposed value and prerequisite for its use. 	Helen Vassos (PLUS ES)	062	Included in the CDR Consultation
Additional Transformer Valid Values	There are several values missing from the transformer enumerated field lists in the “STANDING DATA FOR MSATS V5.2” document. Some are common values which will impact most metering participants, e.g., CT Ratio (Connected) = 3000:5	Steven Thomson (Intellihub)	063	Included in the CDR Consultation
Addition of the ‘HouseNumberToSuffix’ field	The ‘House Number To Suffix’ is a part of the Australian structured address standards. ‘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’. While its addition to the schema may be technically valid, its addition to the Procedures is still subject to consultation.	Aakash Sembey (Origin Energy)	064	AEMO systems impact currently being conducted. Potential Consultation and Release dates TBD.

New Proposed ICF

Issue/Change Title	Short Description	Proponent	ICF Ref#	Current Status/Update
Removal of NMI Discovery Type 3 limitations	<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>	Aakash Sembey (Origin Energy)	065	AEMO systems impact currently being conducted. Potential Consultation and Release dates TBD.
New 'CT Ratio Available' field values requested	<p>New 'CT Ratio Available' field values are being requested by PlusES:</p> <ul style="list-style-type: none"> • 1250:01 • 60000:05 • 1000/1200/1600:5 • 1000/1500/2000:5 • 400/1400/1600/2400:1 • 600/750:1 • 200/600/900/2400:1 • 15/25/40/60:5 • 50/75/100/150:5 	Linda Brackenbury (PlusES)	066	AEMO systems impact currently being conducted. Potential Consultation and Release dates TBD.



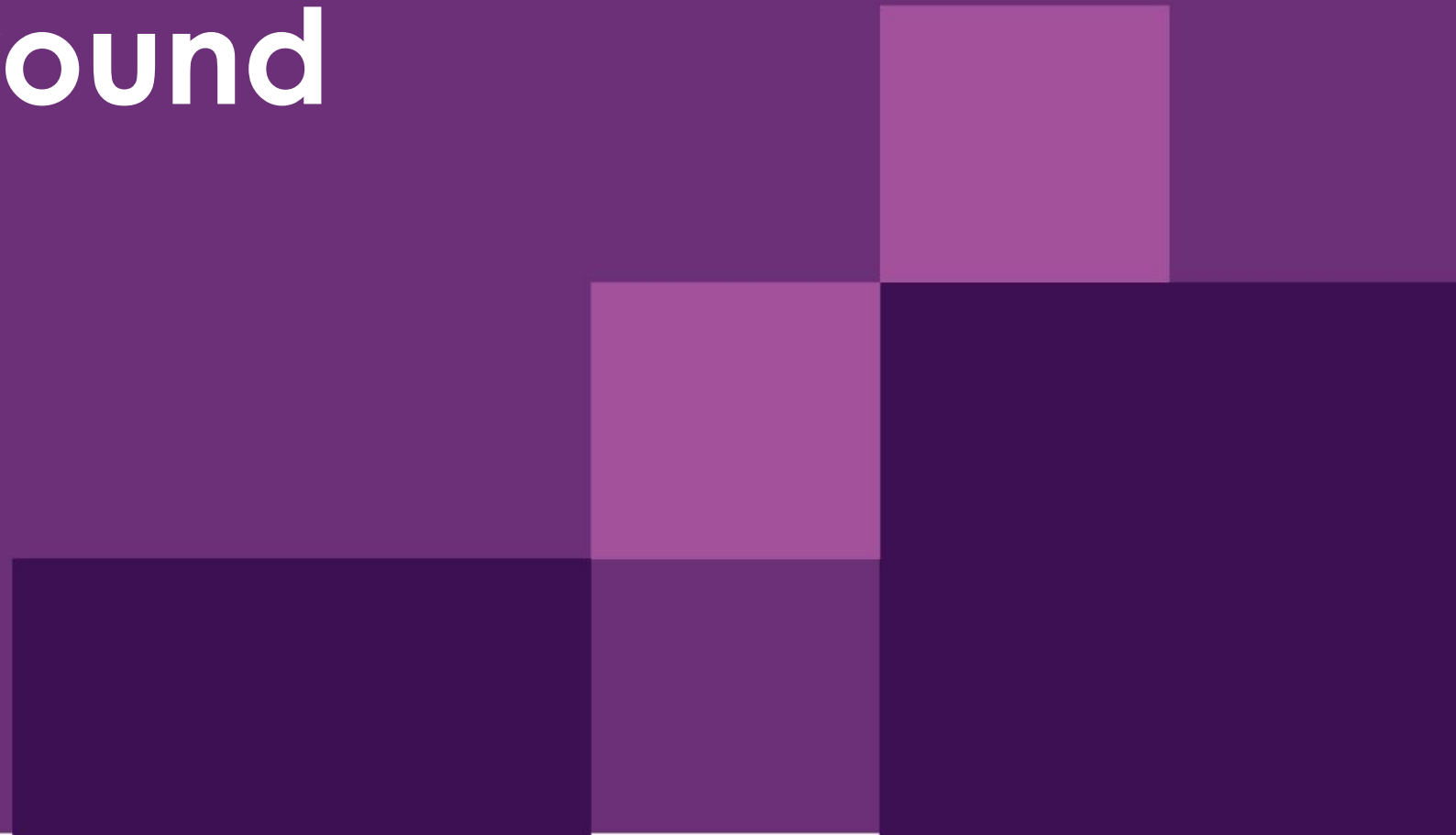
CDR Consultation Inclusions



CDR Consultation Inclusions

Item	Short Description
The addition of a “Last Consumer Change Date” field to MSATs	Treasury has requested AEMO to introduce a new data field to indicate when a National Metering Identifier (NMI) has changed account holder. This would enable AEMO to release sufficient metering data to meet use cases in circumstances where a consumer has changed retailers during the period for which they wish to share their metering data with an accredited third party. The introduction of such a field would ensure that when sharing of a consumer’s energy data occurs following authentication by the consumer’s current retailer, metering data is provided for the time that the CDR consumer was associated with the NMI. Without information about when a NMI has changed customer, AEMO can only release metering data from the time that the CDR consumer’s current retailer can verify they are associated with the NMI.
Change of enumerations to Uppercase	For the enumerations lists in the procedures, values such as ‘Sample Tested’, to be changed from mixed case to uppercase to improve implementation and validation for both AEMO and Industry.
Removal of bracketed values in Voltage Transformer Type enumerations	For the Voltage Transformer Type enumerations, to remove descriptions where they exist in brackets e.g. ‘CVT (Capacitive Voltage Transformer)’ to ‘CVT’.
Removal of spaces in ‘Ratio’ enumerations	Where Ratio enumerations exist, remove spaces between characters e.g. ‘3300 : 110’ to ‘3300:110’
“Valid Meter Use Codes” character lengths	In the CATS_METER_REGISTER table, “Valid Meter Use Codes” has a character length of 10. The enumerated values for these field cannot support words with more characters than this. e.g. for ‘Use’, INFORMATION can not be supported as it is one character longer than the field length. The enumerations for the ‘Use’ field values of ‘INFORMATION’ and ‘STATISICAL’ are to be truncated to ‘STATIS’ and ‘INFORM’ to fit within the 10 character limit.
Treatment of Special characters	There are instances where special characters exist in data which are not valid XML, resulting in a rejection by MSATS. Some other special characters, for example accents, are allowed via batch and API but are blocked by web screens; for example, Café - is blocked via web entry, but is allowed via Batch/API and in some instances are causing replication of data.
Correction of GPS GPSCoordinates format	In the CATS_Meter_Register- Browser Cross Reference, the correction of GPS GPSCoordinates format implemented in the r42 schema to be reflected in the Standing Data for MSATs document
Alignment of truncated values	In table 4 CATS_Meter_Register – Browser Cross Reference, the CurrentTransformerRatioAvailable and CurrentTransformerRatioConnected have their element names truncated in the aseXML which requires to be reflected in the Standing Data for MSATs document
Correction of VoltageTransformerTest aseXML path	In table 4 CATS_Meter_Register – Browser Cross Reference, the VoltageTransformerTest aseXML path to be corrected to ElectricityMeter/VoltageTransformerTest
Correction of ‘Meter Manufacturer’ and ‘Meter Model’ obligations	CiP_061 Incorrect ‘Meter Manufacturer’ and ‘Meter Model’ obligations associated to CR305x transactions in CATS Procedures v5.3

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

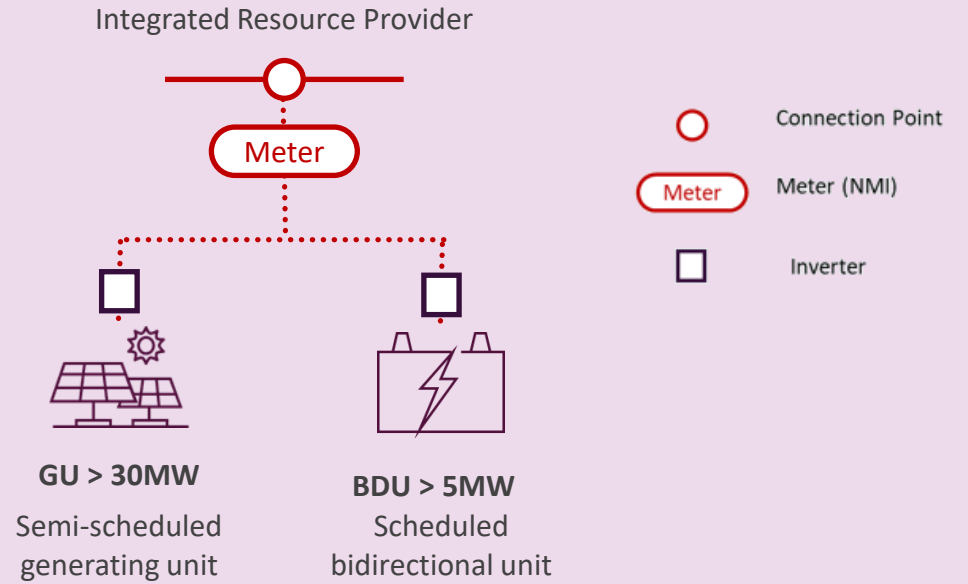
Ancillary service unit is a consolidative term – it replaces

- 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	✓	✓	✓	✓

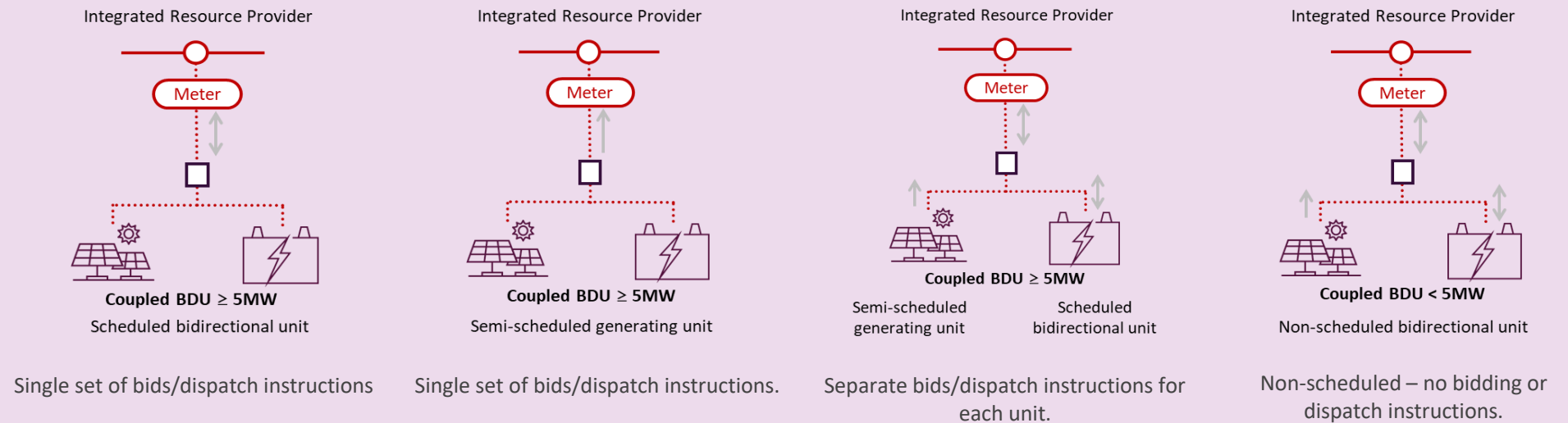
Hybrid integrated resource systems:

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



Coupled production units (DC-coupled systems):

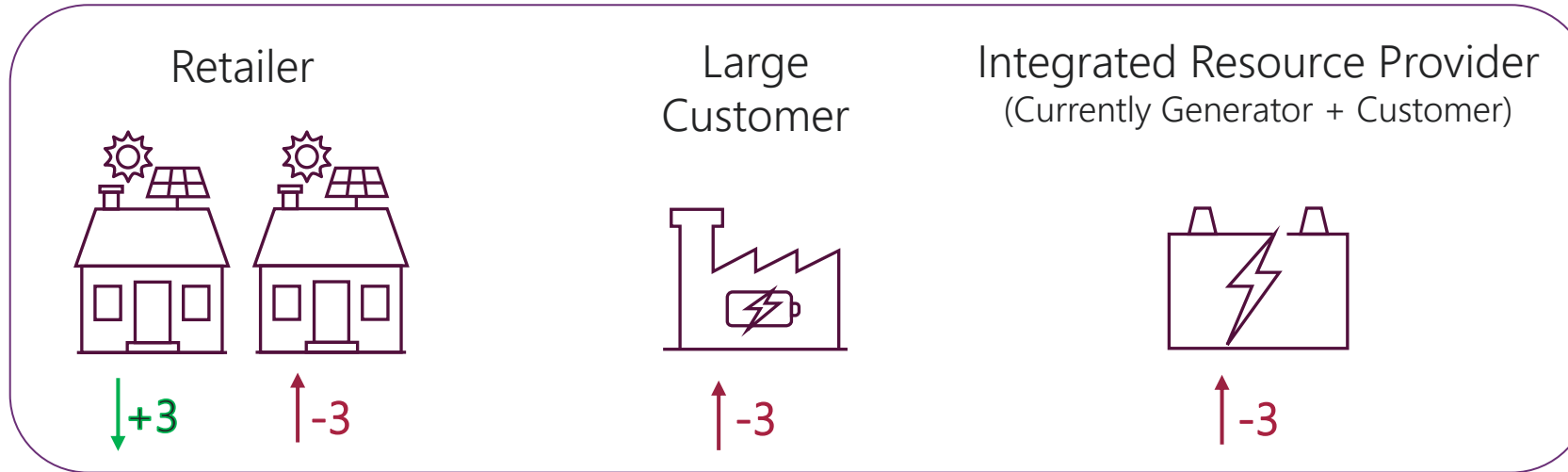
- Rule change provides for flexibility in registration & classification for production units with separate plant that share equipment (e.g., inverter – DC coupled).



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.

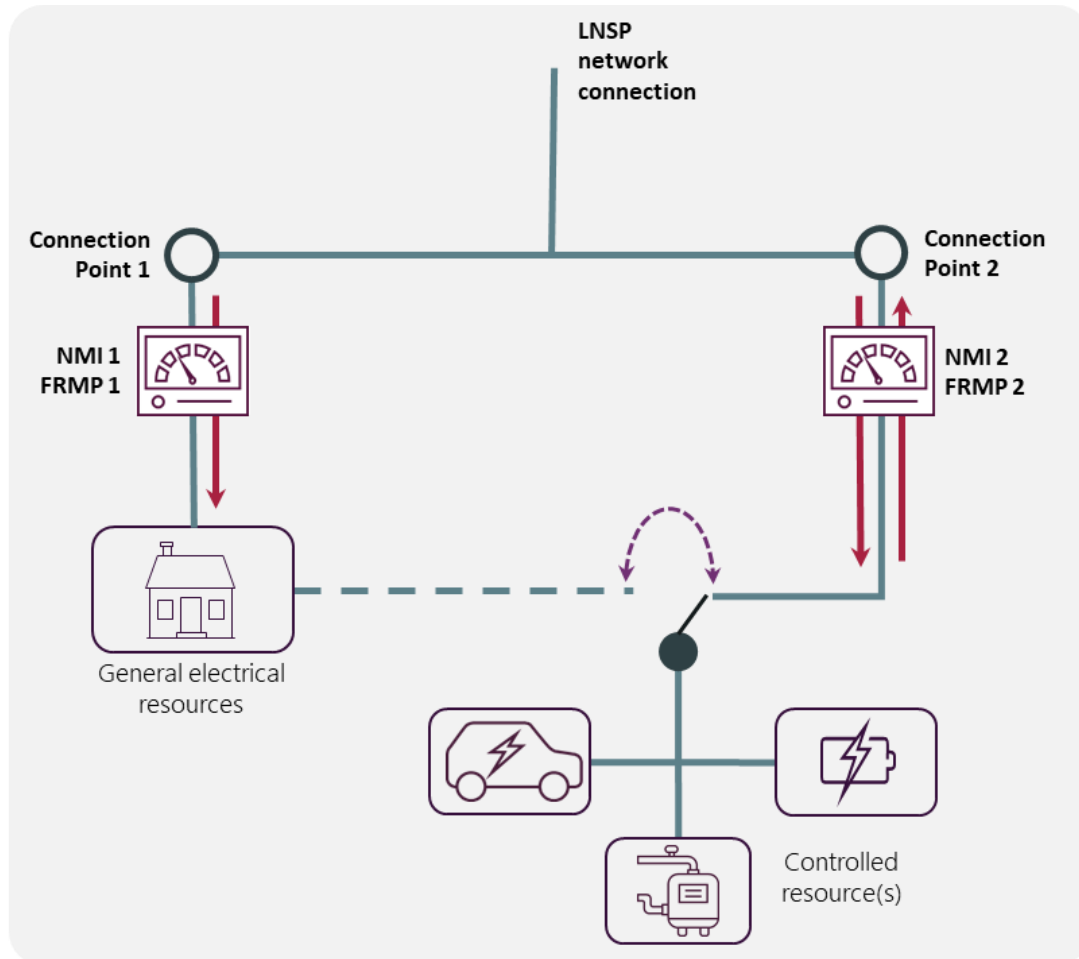
Aggregation & ramp rates

- 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)



For more information visit

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