

# B2B Working Group IESS Meeting

26 September 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](mailto: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.
  - **This includes comments 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.

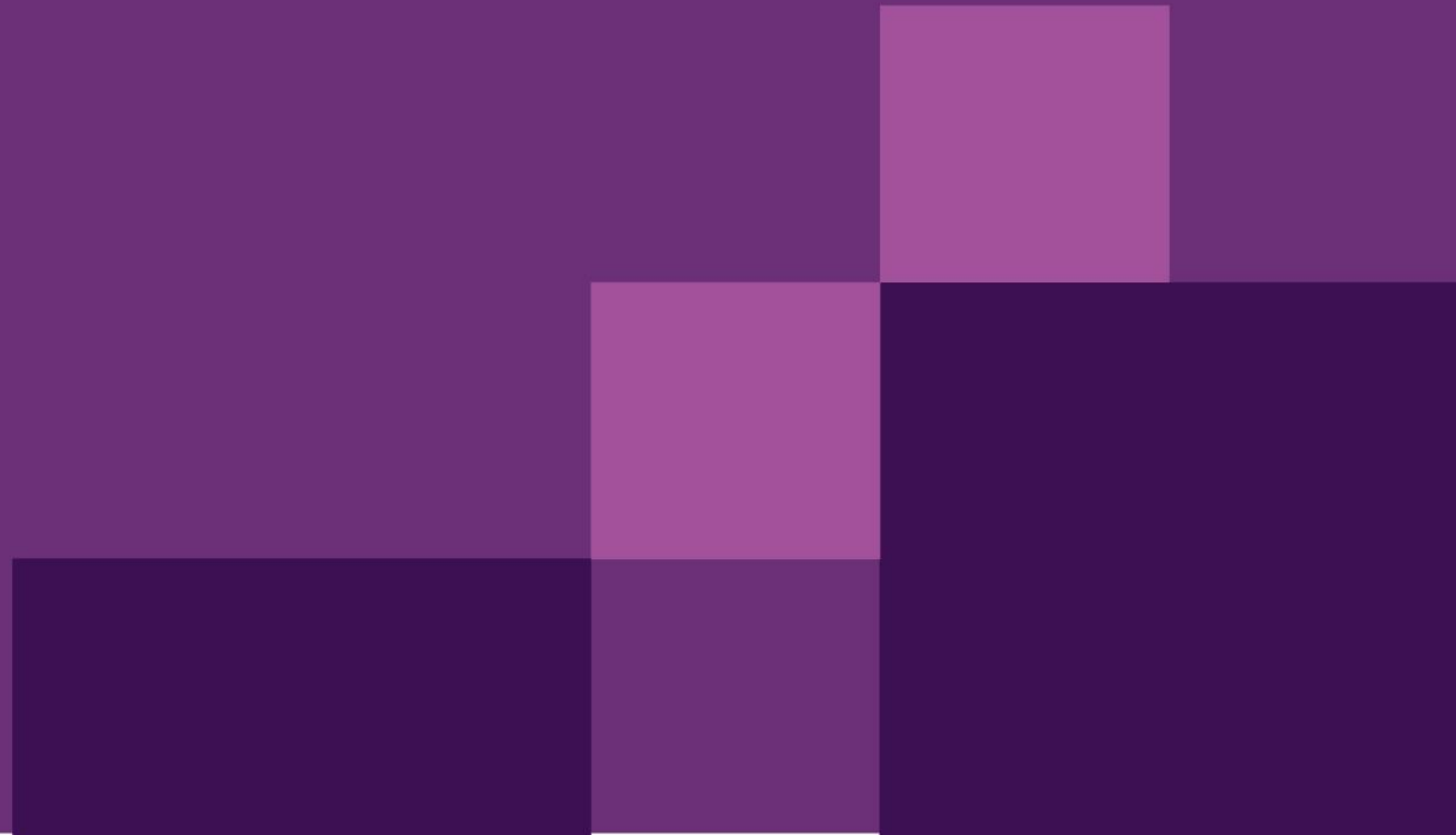
# Agenda

1. Mark's IESS Story
2. Paul's B2B Transaction Considerations
3. B2B Procedures and Guide Impact Assessment
4. Next steps

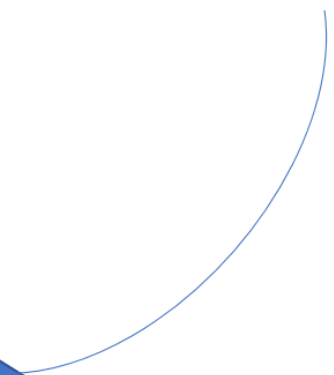
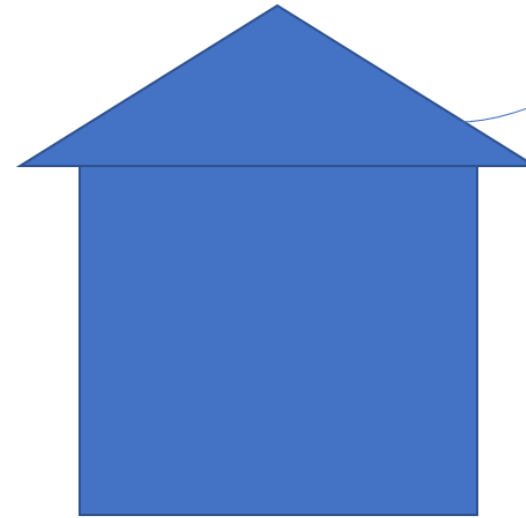


# IESS Story

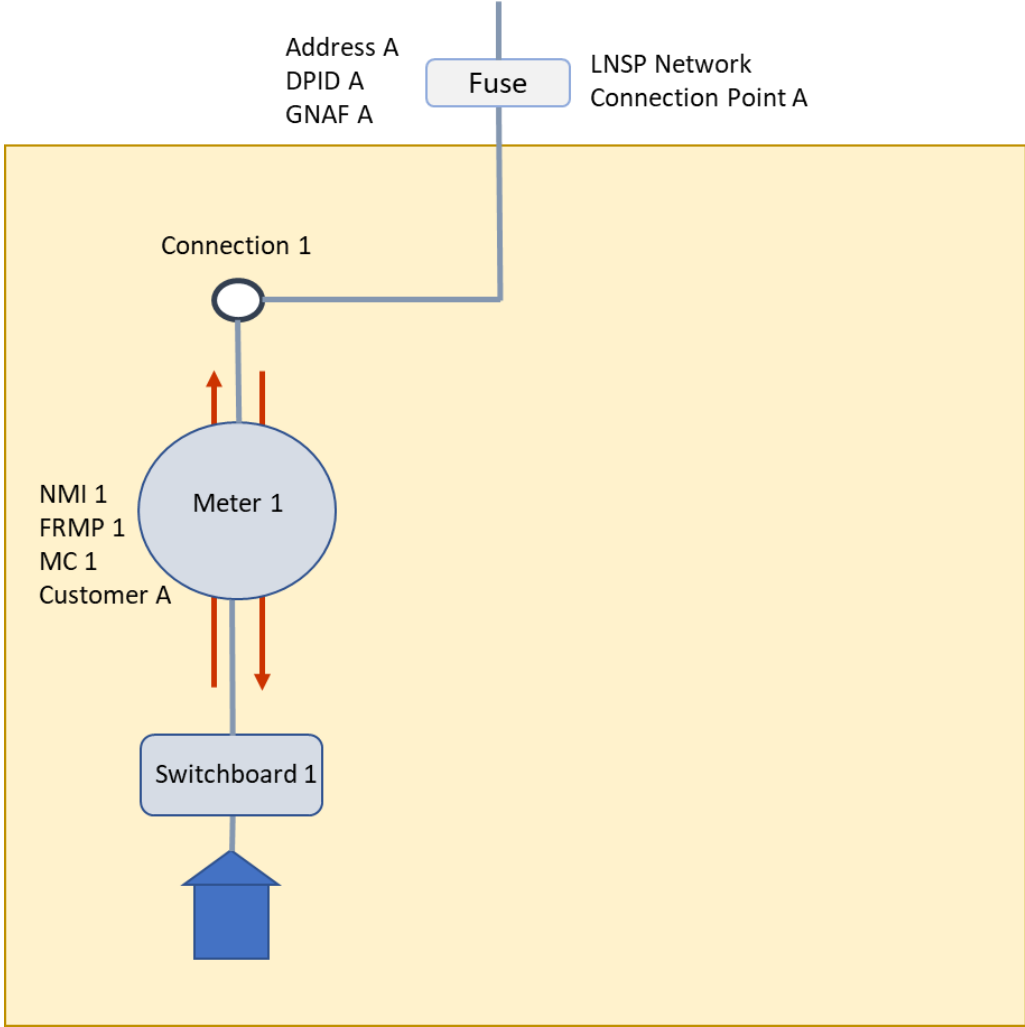
Mark Riley (AGL)



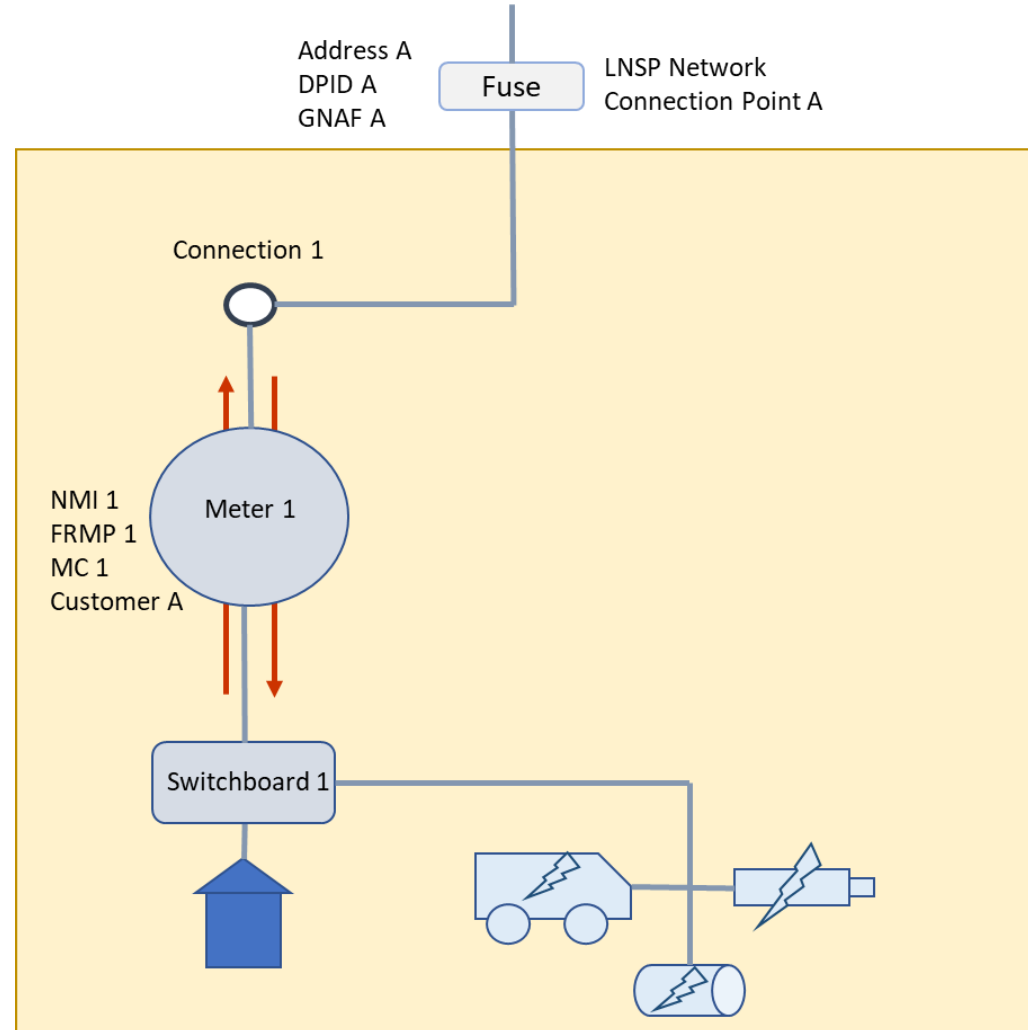
# Starting State



# Beginning State

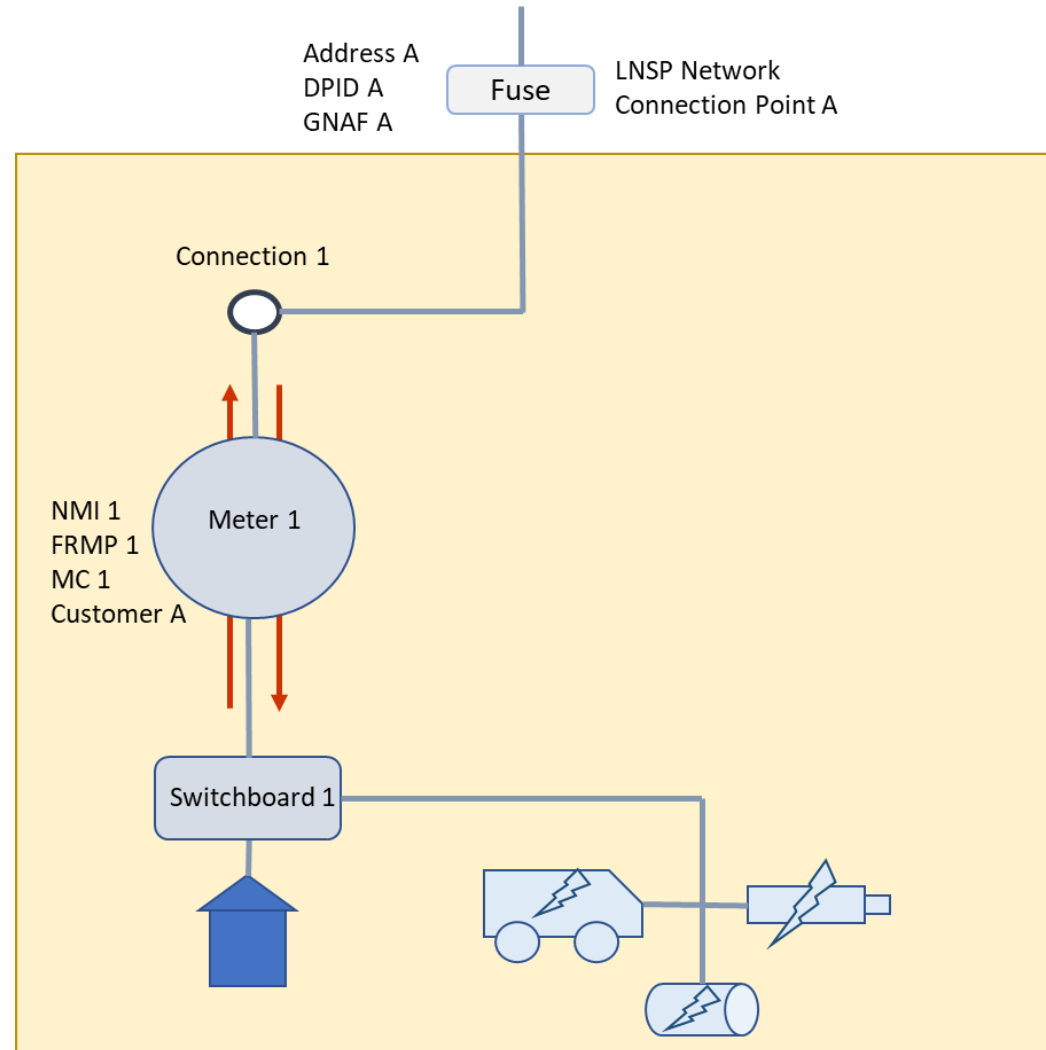


# Customer buys equipment

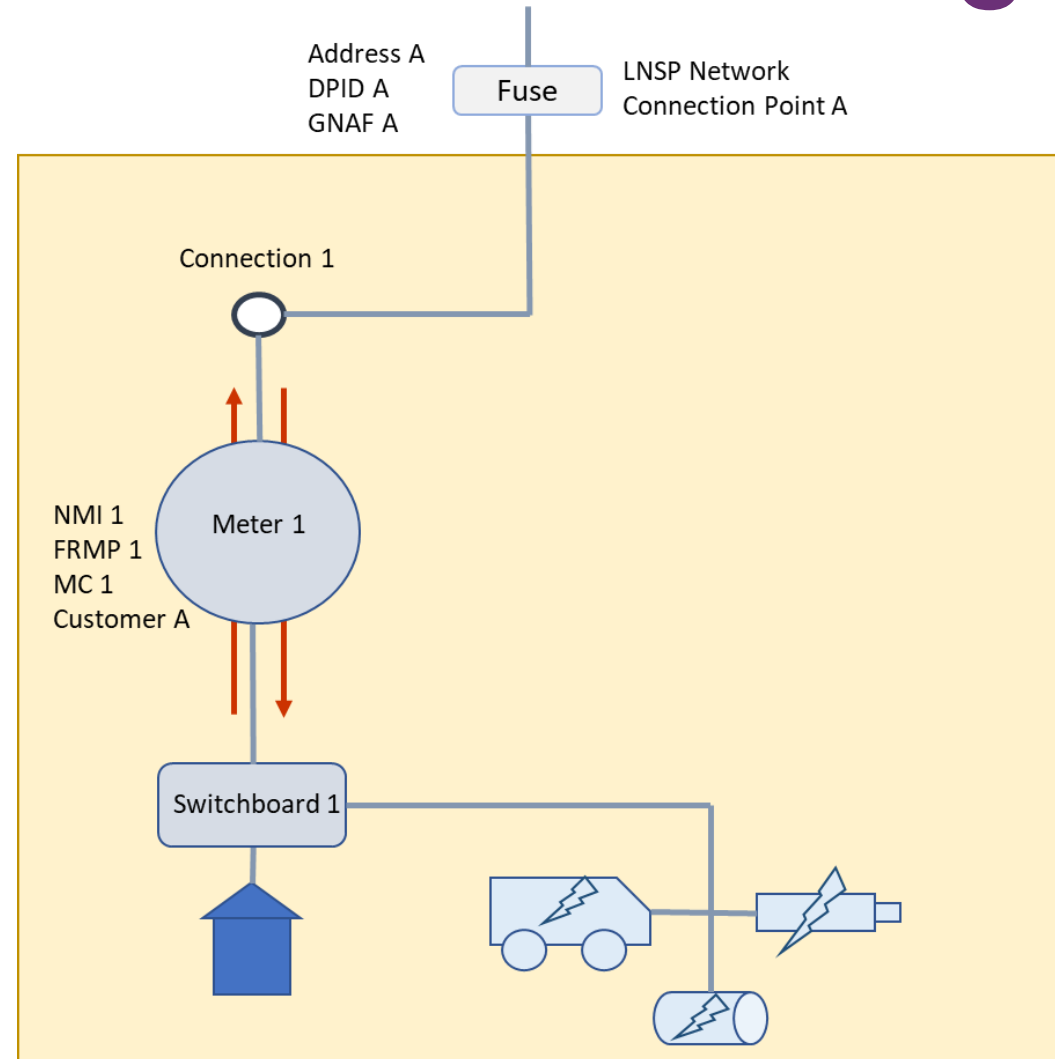




# Customer contracts with IESS

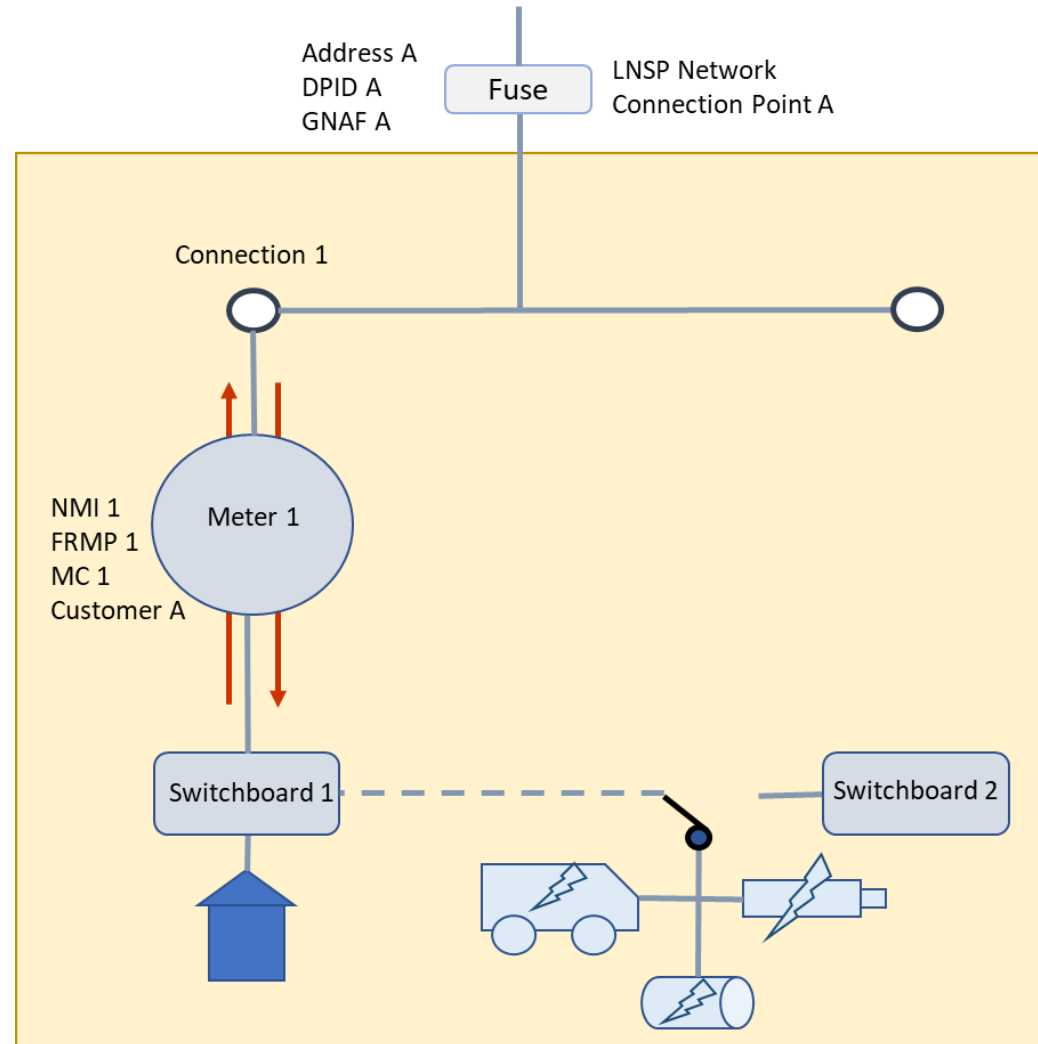


# IESS requests Meter and changeover switch



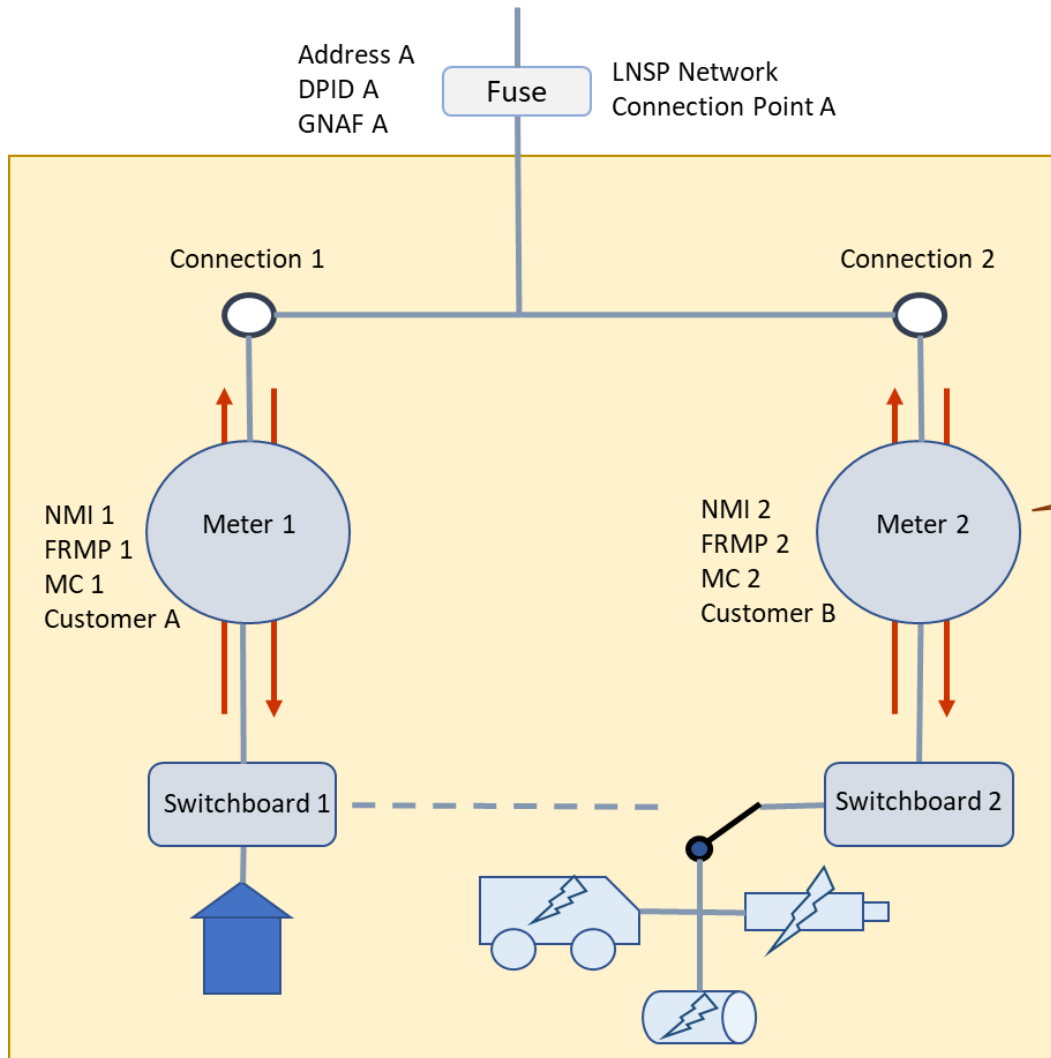
- IESS Requests NMI from DB

# IESS commences site works



- IESS Contracts REC to install new equipment

# End State



- Sends SO to MC to install new meter
- MC installs new Type 4 meter

# B2B Transaction Considerations

Paul Greenwood (Vector)

# B2B Transaction Considerations

- Refer to Paul's spreadsheet

# B2B Procedures and Guide Impact Assessment



B2BWG

# Service Order Process

Section	Detail



# Customer and Site Details Notification Process



Section	Detail

# One Way Notification

Section	Detail

# B2B Guide

Section	Detail

# Technical Delivery Specification

Section	Detail

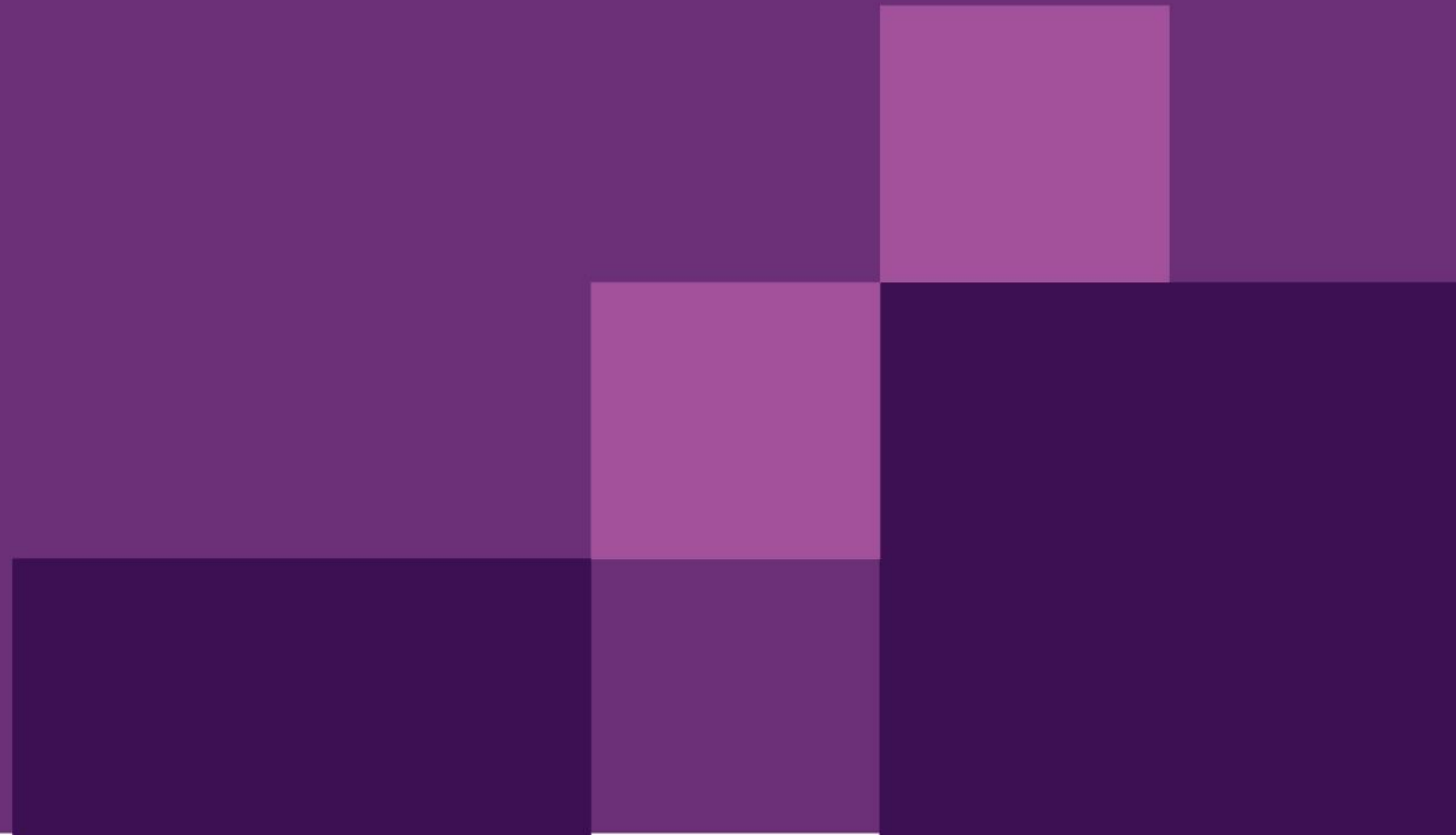
# Next steps

Blaine Miner (AEMO)

# Next steps

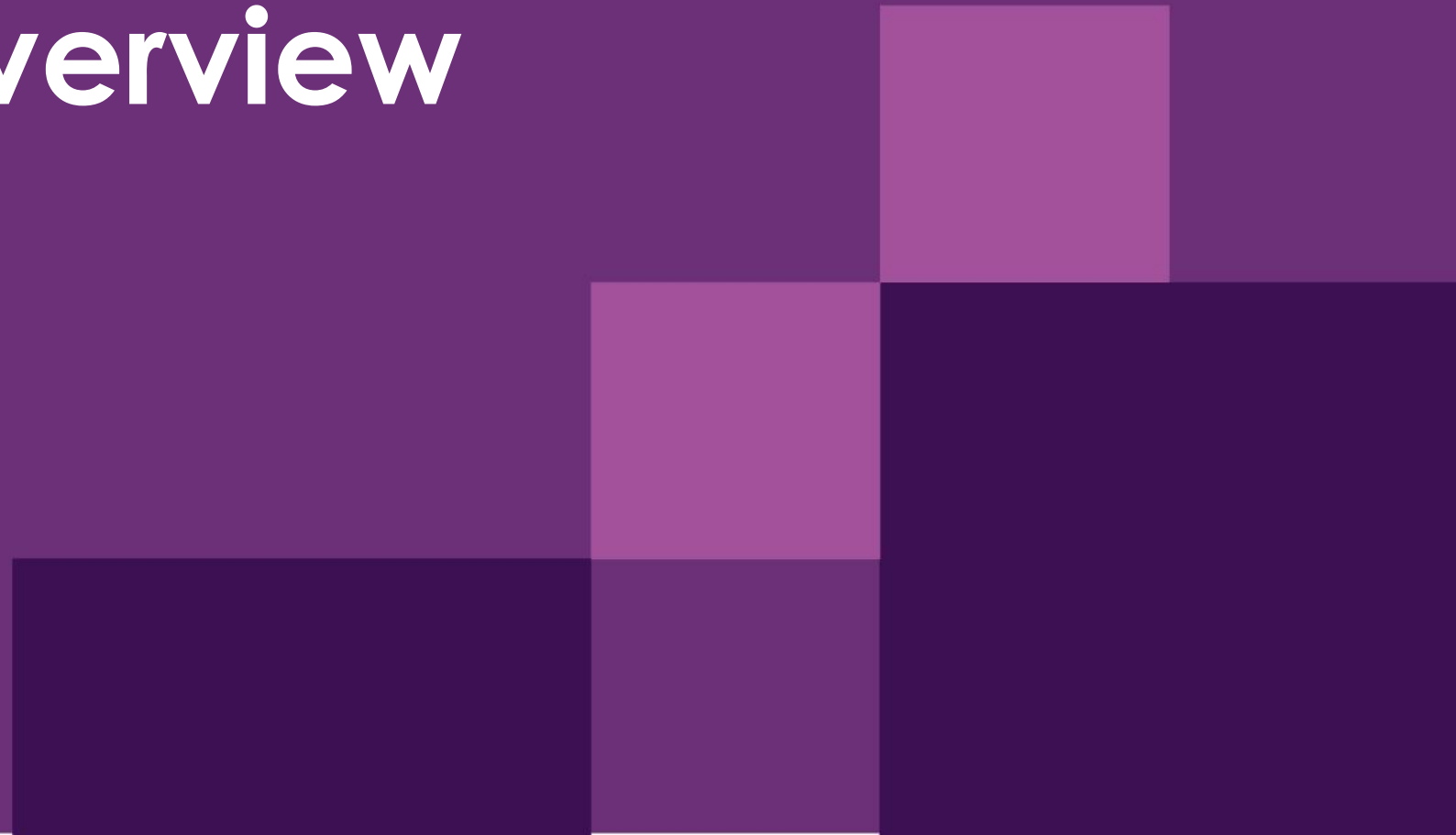


# Appendix



# IESS Rule Overview

Blaine Miner (AEMO)





# 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**

# Release 1 – 31 March 2023

- Aggregators of small generating and storage units to **provide ancillary services**
  - Under IESS, operators currently registered as MSGAs will be able to provide ancillary services in respect of their small generating units where they meet the MASS and classify the relevant plant as ancillary service units. They will have no change to their scheduling or dispatch obligations for energy.
  - The interim arrangement allows MSGAs to be deemed a Market Customer in respect of the connection point at which the small generating unit is located. It can then apply to AEMO for approval to classify the connection point as an ancillary service load and, upon approval, be taken as an Ancillary Service Provider.
- Hybrid systems to use **aggregated dispatch conformance**
  - The rule allows for early application of aggregated dispatch conformance (for systems that include multiple scheduled or semi-scheduled generating unit and/or scheduled load) from the end of March 2023, ahead of the commencement of the remainder of the rule in June 2024.

# Responses to the previous B2B WG questions

Blaine Miner (AEMO)



# Responses to the previous B2B-WG questions

B2B-WG Question	AEMO Response
Can an existing retailer be an IRP?	Yes, however it is unclear what the motivation would be, except possibly to classify small resource connection points.
Will the NEM2025 Roadmap replace the Regulatory Industry Roadmap?	AEMO intends to publish version 1 of the NEM2025 Implementation Roadmap at the end of March and will then integrate the roadmaps by mid-year.
How do IRPs relate to demand response providers?	An IRP can hold the role of a FRMP at a connection point – in this way the relationship is the same as any FRMP to DRSP relationship
Will there be a new NMI classification?	Not expected at this stage, however, this will be confirmed as part of AEMO’s implementation process
How will the IRP be related to a NMI in MSATS?	IRP is currently expected to take on the FRMP role, however, this will be confirmed as part of AEMO’s implementation process
Will we be moving away from identifying certain participant type by looking at certain patterns, e.g. looking for SGA at the end of the participant ID to identify SGA, and instead move towards having a field/flag instead?	This is being explored, but a resolution will be determined through procedure consultation and further internal AEMO investigation.
Does IESS apply to over 5MW only or residential or small sites as well?	An IRP is able to operate as a FRMP at a connection point, and to do so needs to meet the licensing, registration and other requirements necessary for the services they are offering – this includes operation at small customer connection points.
Proposed approach to industry engagement. Is there a IESS industry forum/project led by AEMO that we can join?	AEMO is finalising its approach to industry engagement and will provide further details soon
Noting the main go live date is June 2024 do you already have high level deliverables/ milestones and dates for us to achieve the go live date?	The IESS High Level Design provides an indicative approach and timelines. See slide 10.
Is the intent of IESS to maintain a one-to-one relationship between a NMI and a FRMP or is it moving to a multiple FRMPs to NMI arrangement?	The IESS rule does not enable multiple FRMPs at a NMI.

# 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

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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"><li>• <i>Aggregate conformance for hybrid systems</i></li><li>• <i>FCAS participation for SGAs</i></li></ul>	<b>31 Mar 2023</b>
Market trials	Feb to May 2024
Final release	<b>3 June 2024</b>

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# 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

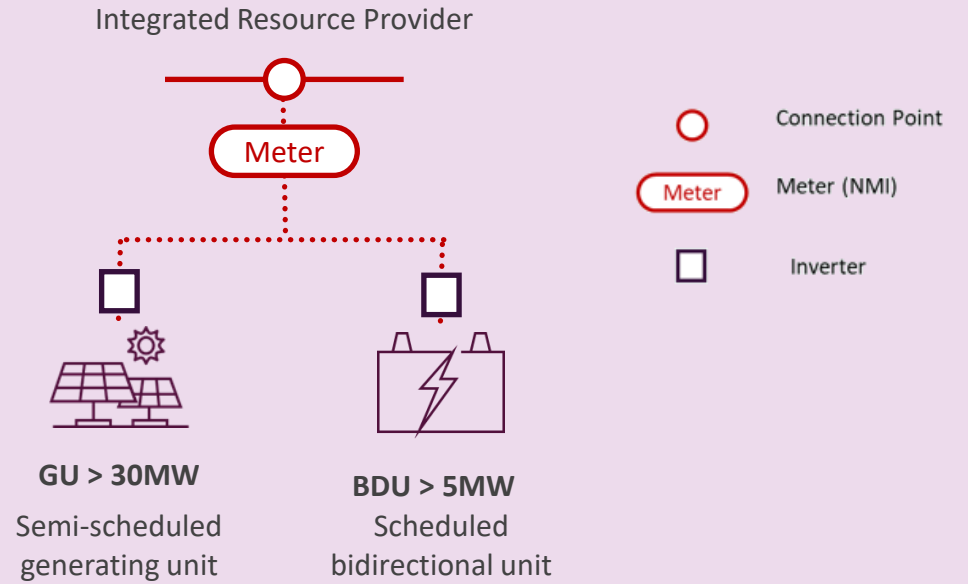
Ancillary service unit is a consolidative term – it replaces

- 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	✓	✓	✓	✓

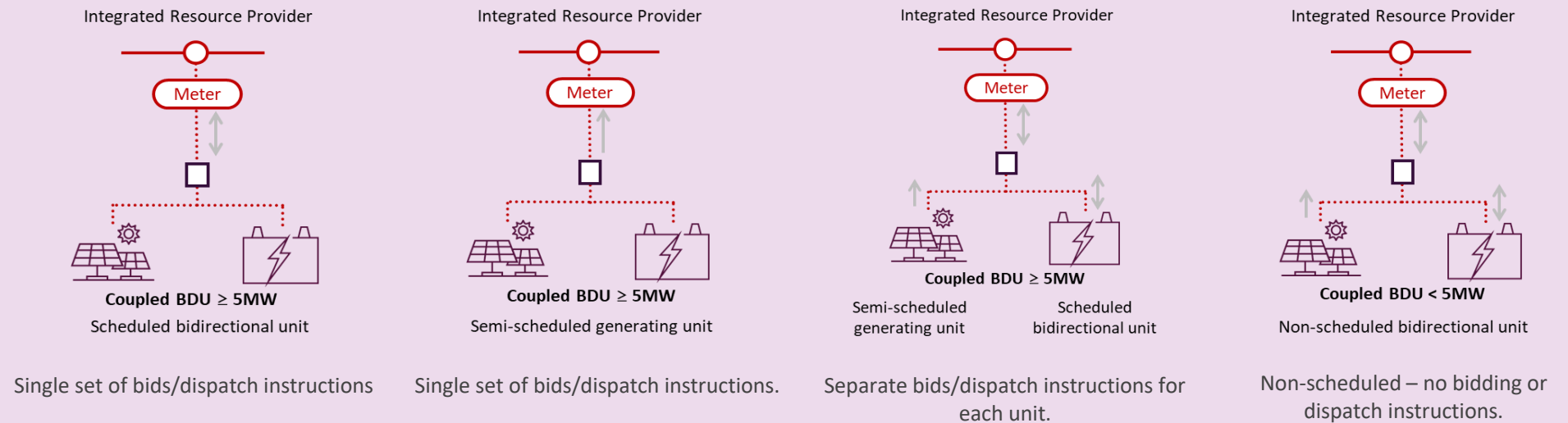
# Hybrid integrated resource systems:

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



# Coupled production units (DC-coupled systems):

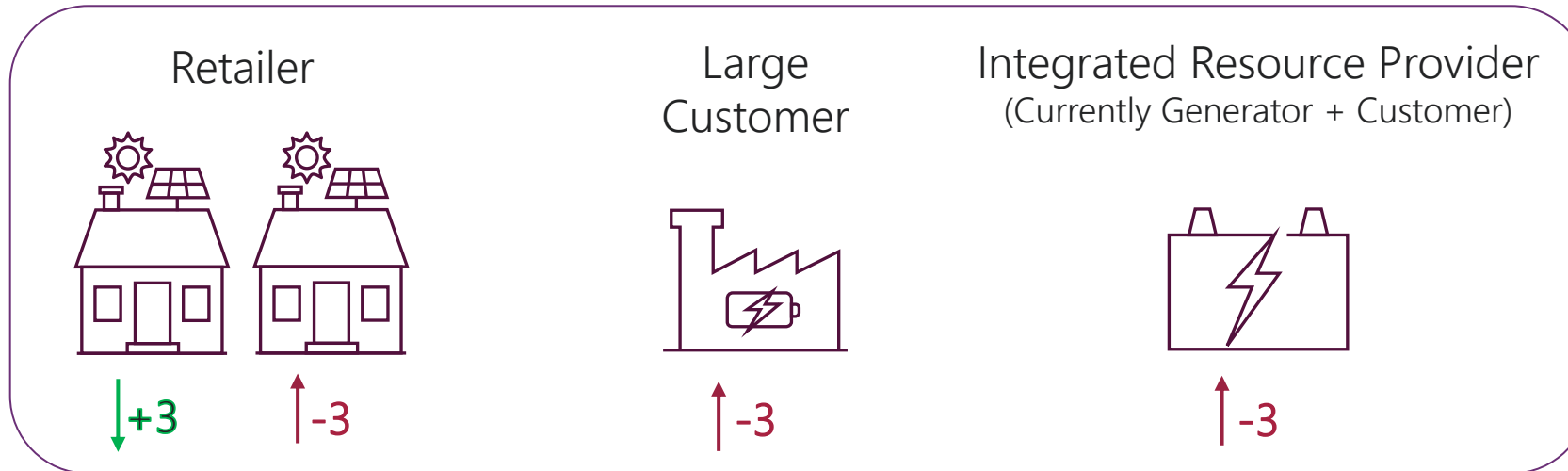
- Rule change provides for flexibility in registration & classification for production units with separate plant that share equipment (e.g., inverter – DC coupled).



# 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
<b>Total</b>	<b>-6</b>	<b>-9</b>

**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.

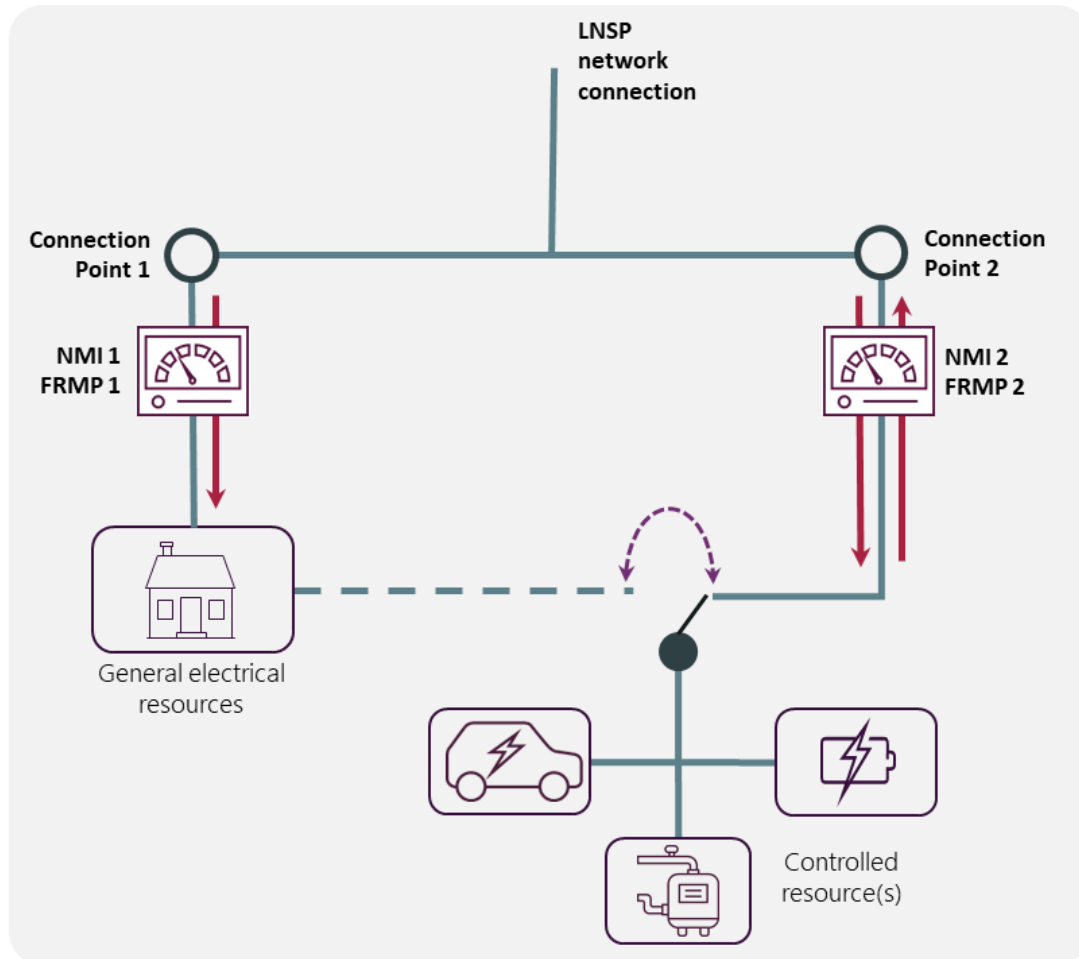
## Aggregation & ramp rates

- 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

[aemo.com.au](http://aemo.com.au)