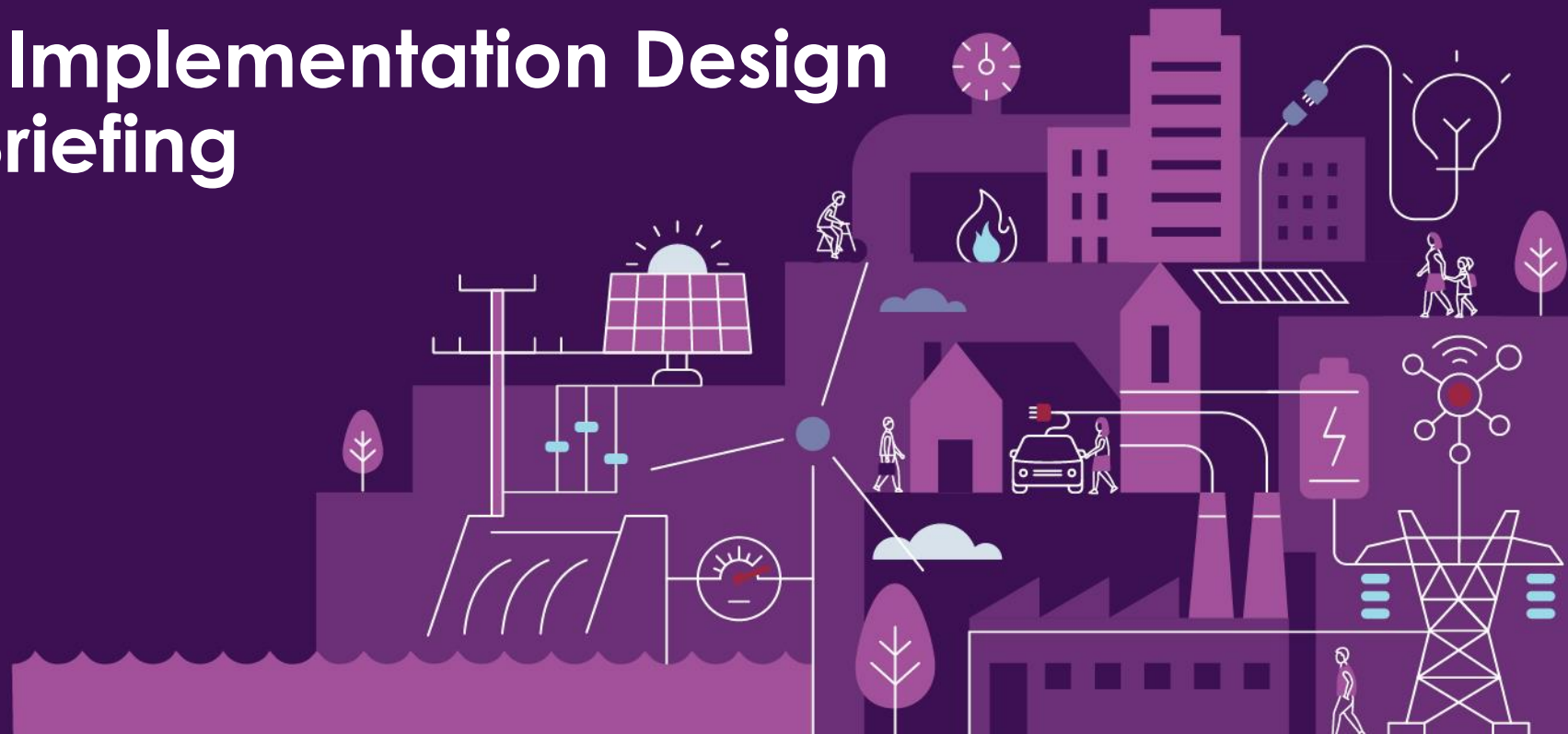


Unlocking CER Benefits Through Flexible Trading



Draft High Level Implementation Design (HLID) Industry Briefing

5 April 2024



1. Welcome

We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to their Elders past, present and emerging.

Agenda

D	Time	Topic	Presenter
1	10:00 – 10:05	Welcome and introduction	Greg Minney (Chair)
2	10:05 – 10:15	Summary	Meghan Bibby
3	10:15 – 10:35	Procedure Impacts	Justin Stute
4	10:35 – 10:50	System Impacts	David Tsang
5	10:50 – 11:05	Implementation Pathway	Dylan Volkhardt
6	11:05 – 11:35	Participant Impacts drafted for discussion	Paul Lyttle
7	11:35 – 11:55	General Questions	Open
8	12:00	Close meeting	Close

Appendix A:
Competition law meeting protocol and AEMO forum expectations

“Please note that this meeting will be recorded by AEMO and may be accessed and used by AEMO for the purpose of compiling minutes. By attending the meeting, you consent to AEMO recording the meeting and using the record for this purpose. No other recording of the meeting is permitted”

Disclaimer

This document includes material outlining AEMO's interpretation of indicative impacts of national energy market (NEM) reforms to energy market systems and processes for energy industry participants, as at 5 April 2024.

The interpretations expressed in this presentation are not binding on AEMO. The interpretation of the impact of NEM reforms may change at any time.

Anyone participating or intending to participate in the NEM should obtain detailed advice about the application of the National Electricity Rules and applicable laws, procedures and policies to their specific circumstances.

To the maximum extent permitted by law, AEMO and its employees or consultants are not liable for any statements in, or omissions from, these materials, or for any use of or reliance on them.

HLID Feedback and incorporation process – AEMO view

AEMC has issued Draft Determination

- Sets Proposed Rule Commencement Date of 2 Feb 2026
- Requests stakeholder submissions on Draft 11 April 2024
- Final determination July 2024

AEMO intends to produce a draft HLID on the basis of the policy positions included in the Draft Determination

- Planned circulation date 11th April
- Planned Participant Briefing Session – 5th April (This Session)

Participant feedback on HLID – as per next slide

- Participants can provide feedback to AEMO, & copy AEMC for visibility, up to 23rd April
- AEMO will:
 - Summarise this feedback for RDC consideration for session scheduled 3 May (TBC)
 - Incorporate participant feedback into final HLID post AEMC issue of final decision

Feedback

AEMO seeks feedback on this HLID and the proposed implementation date.

- Following this session, please provide your feedback on the HLID.
 - Does it cover all the impacts?
 - Are there better ways for AEMO to implement the rule?
 - Does the implementation pathway sufficiently allow for your development timeframes?
- Implementation effective date, does it need to change to allow for:
 - Congestion (e.g., time to embed mid 2025 reforms and then prepare for 2026 changes)
 - Summer period
 - Testing
 - Consistency of releases
- Feedback on the HLID can be sent to nemreform@aemo.com.au

This briefing and documentation is not seeking feedback on the AEMC proposed draft policy, this should be provided directly into the AEMC's process by 11th April 2024.

How AEMO's HLID and other feedback will be considered by the AEMC in the rule change process on *Unlocking CER benefits through flexible trading*

- The purpose of today's industry briefing is for AEMO to present its Draft high level implementation design (HLID) in relation to the AEMC's draft rule determination on *Unlocking CER benefits through flexible trading (ERC0346)* and to seek preliminary stakeholder feedback.
- The briefing will focus on the Draft HLID, but the AEMC can answer questions on the draft rule determination.
- The AEMC will consider feedback on implementation matters as part of its rule change process through:
 - **AEMO industry briefing:** AEMO's industry briefing today (5 April 2024) on its Draft HLID and stakeholder feedback
 - **AEMO Draft HLID:** AEMO intends to publish this on 11 April 2024
 - **Submissions on the Unlocking CER benefits draft rule determination:** Due 11 April 2024
 - **RDC go live meeting:** The RDC will meet after publication of the HLID to further discuss and consolidate its feedback (considering stakeholder feedback to AEMO) on the aspects of AEMO's HLID that appear workable or may need to be amended.
 - **Direct engagement with the AEMC:** Stakeholders may contact the AEMC to discuss implementation matters related to the rule change.
- The AEMC is the decision-maker on the rule change.
- Final determination is expected to be published by 11 July 2024

2. Summary

Summary of draft changes

Flexible trading with multiple energy service providers at large customer premises

- The proposed changes would enable large customers to establish secondary settlement points and engage multiple energy service providers to manage flexible resources at these points.

Opportunities to optimise CER flexibility for small customers

- The proposed changes would enable small customers and their agents (i.e. retailers and aggregators) to identify and manage flexible CER separate from inflexible or passive energy use and would allow flexible CER to be better recognised in the energy market.

Measuring energy flows from in-built technology (e.g. streetlights, EV chargers, other street furniture)

- The proposed changes introduce arrangements for two new meter types in the NER that enable technology with in-built measurement capability to be used for settlement and billing.

3. Procedure Impacts

Procedures impacted

Registration

- Overview

Glossary and Framework

- Overview

Metering and Retail

- **Market Settlement and Transfers Solutions**
 - MSATS Procedures – CATS
 - MSATS Procedures – WIGS
 - Standing Data for MSATS
 - Meter Data Management (MDM) Procedures
 - NEM RoLR Processes
- **Metering procedures, guidelines and processes**
 - Service Level Procedure Embedded Network Manager Service
 - Service Level Procedure MDP Services
 - Service Level Procedure MP Services
 - National Metering Identifier procedure

Procedures impacted cont'd

Metering and Retail cont'd

- **Metrology Procedures and Unmetered Loads**

- Metrology Procedure Part A
- Metrology Procedure Part B
- Unmetered Load Guideline
- Guidelines for the Clarification of the National Measurement Act

- **Accreditation and Registration**

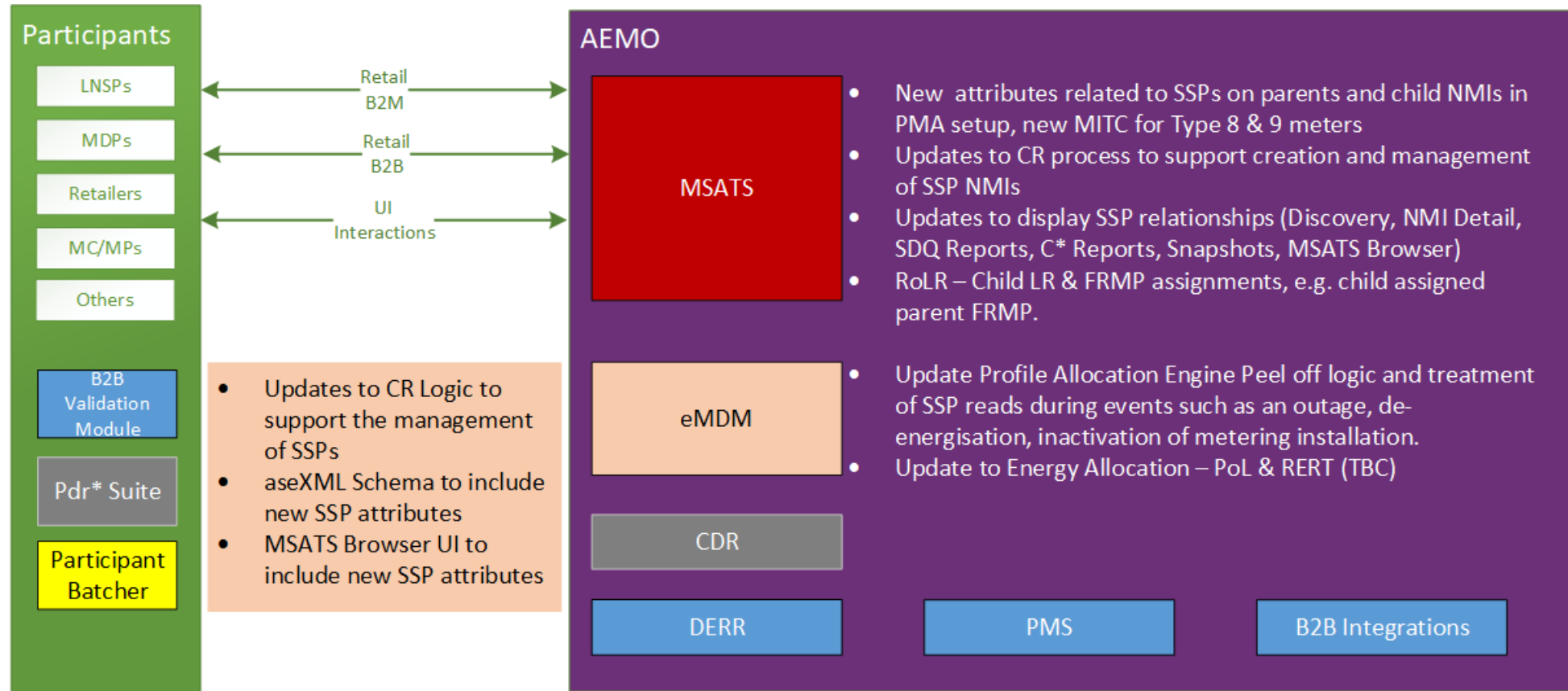
- Accreditation Checklists (Metering Providers, Metering Data Providers & Embedded Network Managers)
- Guide to the Role of the Metering Coordinator

Business to Business Procedures (IEC)

- B2B Procedures: Customer and Site Details Notification Process
- B2B Procedures: Meter Data Process
- B2B Procedures: One Way Notification process
- B2B Procedures: Service Order Process
- B2B Procedures: Technical Delivery Specification

4. System Impacts

AEMO Systems Heat Map



Legend: Complexity T-Shirt Sizes

M/L
M
S
No Impacts
TBC

High level system impacts

MSATS

- Change requests – e.g. specifying a NMI is a SSP
- Standing data – e.g. attributes to identify and maintain CP and SSP relationships
- Configuration data – e.g. new metering installations
- UI, NMI discovery and Reports – e.g. inclusion/display of new attributes and NMI relationships
- RoLR – e.g. Child to be assigned to Parent FRMP

eMDM

- Meter Data - Zero metering reads when qualifying conditions, such as a network outage, occur.
- Profiling – e.g. update to peel off logic
- Energy Allocation – e.g. use of subtractive metering (as per EN)
- PoL and RERT – e.g. TBC - update to calculation baseline at the ‘primary’ NMI

B2B

- Possible impacts to B2B. An assessment needs to be undertaken by the IEC and B2BWG to evaluate potential impacts.
- Any identified impacts will form part of the final implementation impact.

High level system impacts cont'd

DERR

- Impacts to be assessed through consultation with Networks. None currently identified.

PMS

- No impacts identified. Potential impacts may be uncovered when developing the detailed requirements.

aseXML

- B2M - Schema changes related to CP and SSP attributes in a PMA setup
- B2B – Any impacts to be confirmed as per IEC and B2BWG findings.

Capacity Uplift

- Increased transaction volumes expected based on the estimated additional SSP devices added per year.

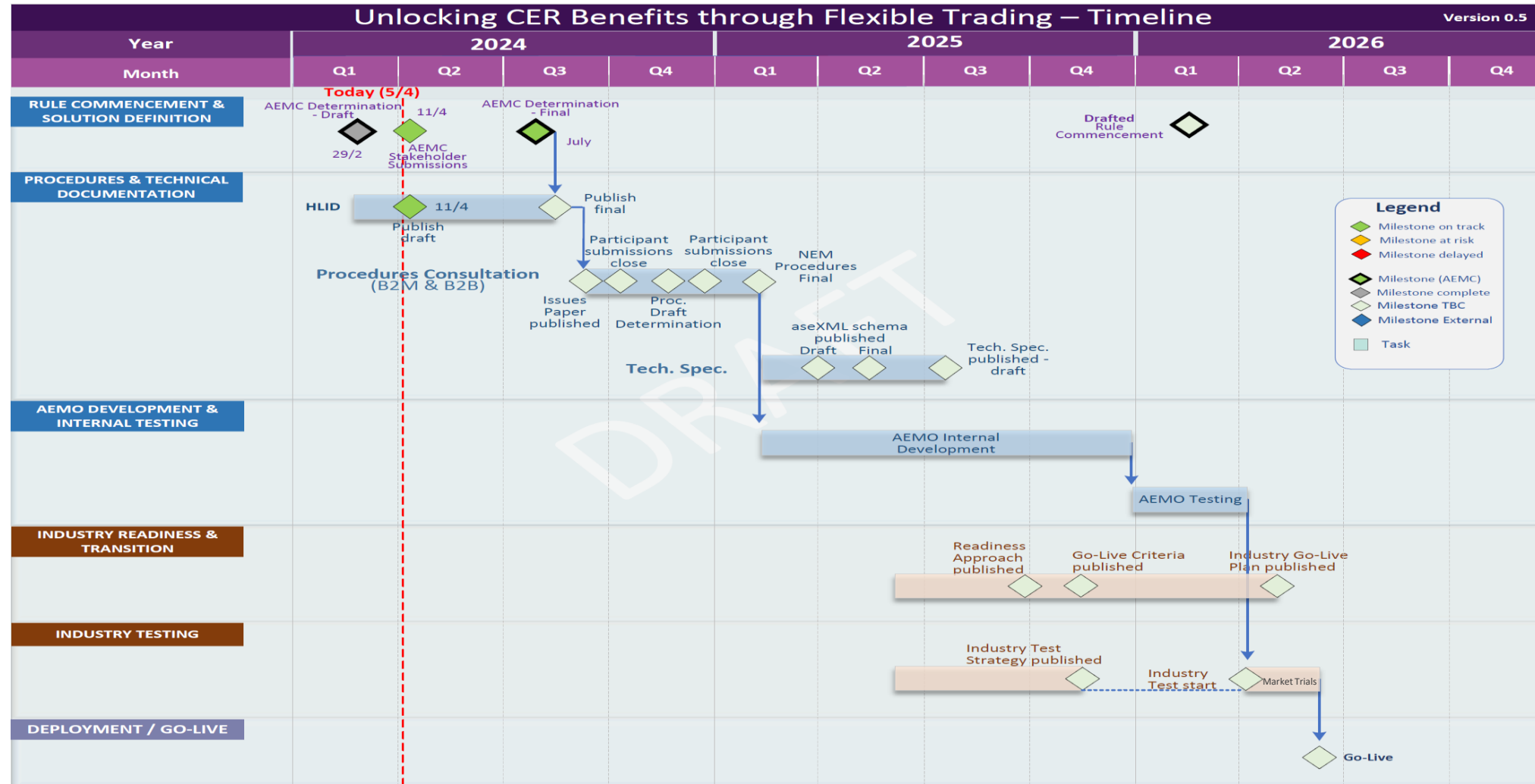
System Impact Assumptions

- CDR – No impacts assumed as no changes have been made by the Data Standards Body.
- CDP – No changes to include new attributes.
- No new market interfaces/integration points need to be developed (e.g. Retail/DERR/CDR). Existing interfaces will be enhanced for the payload formats where necessary.
- No changes or impacts to Wholesale systems.
- Procedure validations may be implemented as system validations or via Standing Data Quality reports.

5. Implementation Pathway

AEMO Proposed Indicative Timeline

Considering the scale of change for AEMO and participants based on impact assessment of the draft rule change determination, May 2026 is AEMO's strong recommendation for a rule commencement date, to reduce delivery risk and costs.



- Considerations**
- Market Trials 2-3 month window.
 - Summer change freeze and shutdown periods. Duplicate test environments needed to be maintained for standard releases increasing costs.
 - AEMO has previously socialised twice-yearly releases (~May and ~November).
 - Adequate window for 2025 releases such as Metering Service Review (MSR).
 - Instability across summer periods requires focus on operations rather than reform change.
 - AEMO support for participant development timeframes.
 - Participant support for market trials.
 - Participant development lead time.

Key Implementation Considerations

AEMO considered the drafted February 2026 rule commencement date.

- AEMO's assessment indicates that this project meets the criteria for Market Trials. This means that there should be a requirement for coordinated testing across multiple participant types. This will typically require a 2–3-month window in the schedule.
- Orchestrating Market Trials and any timely defect fix releases over the December, January period and when the resource focus could be diverted to any operational instability issues over Summer increases the likelihood of the rule commencement date not being met. The flow on effects would be increased costs for AEMO and participants.
- Duplicate test environments would need to be maintained by AEMO and participants to cover the standard May and November 2025 releases and the February 2026 Rule Change release increasing costs and overheads for AEMO and industry.
- AEMO has previously socialised and gained industry agreement to move to a twice-yearly release strategy (mid-year ~May and end of year ~November) and strongly recommends a system delivery timeframe for this rule change that aligns to this strategy.

Key Implementation Considerations

AEMO considered a November 2025 system delivery timeframe

- AEMO's assessment indicates that November 2025 would not provide sufficient time to deliver this change, assuming that a final determination is provided in July 2025.
- Market Trials would require a 2–3 month window in the schedule as there is a requirement for coordinated testing across multiple participant types.
- Time for participant development to meet the rule change and be ready for Market Trials would be reduced.
- Reduces the consultation period with industry, significantly increasing the likelihood of a suboptimal design and implementation resulting in increased costs for AEMO and industry.
- Significantly increases the likelihood of quality issues and rework resulting in increased costs for resolution for AEMO and industry.
- Insufficient window for 2025 releases, allowing time for other slated reforms to be delivered such as the Metering Services Review (MSR).
- Insufficient time for AEMO to publish comprehensive specs to support participant development including draft and final aseXML specification and draft and final tech specification/s.

6. Participant Impacts drafted for discussion

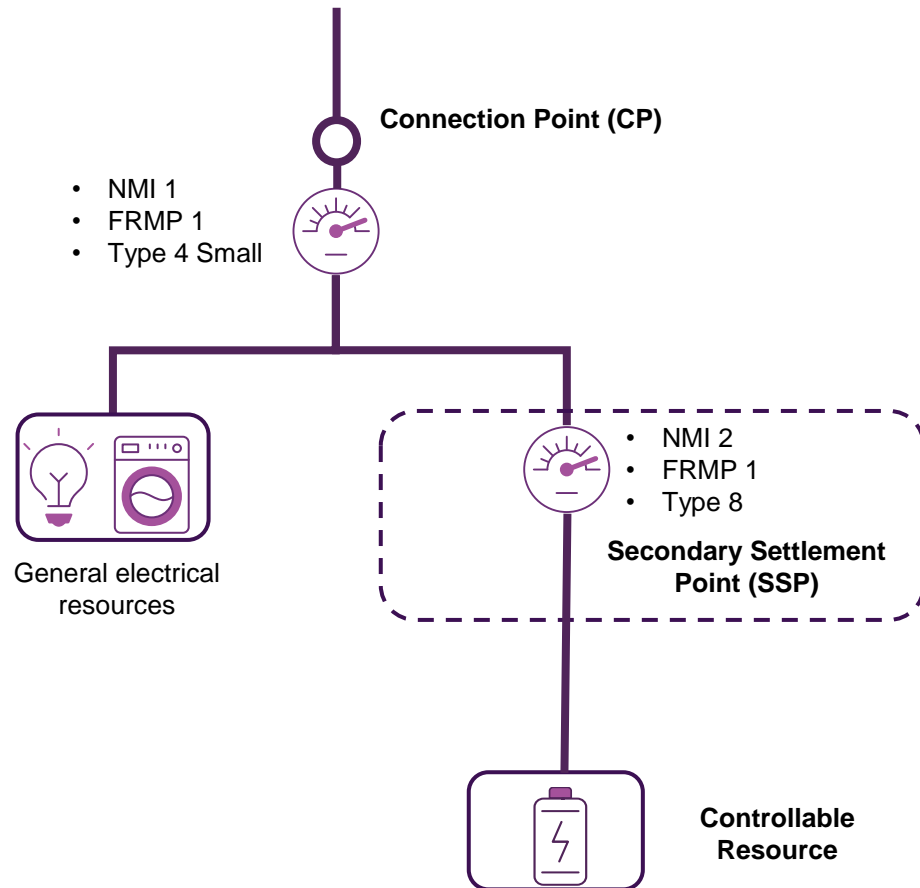
Indicative high-level impacts

The information presented here is general in nature. AEMO encourages industry participants to undertake their own due diligence to assess energy market reform impacts on their respective organisations.

INDICATIVE FUNCTION	AFFECTED PARTICIPANTS									
	FRMP	LR	LNSP	ENM	MC	MP	MDP	DRSP	RECs	
NMI Creation (secondary settlement point)	✓		✓	✓	✓	✓	✓			
Retailer Assignment	✓	✓	✓	✓	✓	✓	✓			
NMI Discovery	✓		✓							
Installation and Malfunction (type 8)	✓				✓	✓	✓			
Installation type 9 single measurement device					✓	✓	✓			
Public lighting	✓		✓			✓	✓			
MC Appointment	✓				✓					
Energy Allocation	✓	✓	✓	✓						
Reports	✓		✓	✓			✓			
aseXML	✓	✓	✓	✓	✓	✓	✓			
Service Orders	✓	✓	✓	✓	✓	✓	✓			
Accreditations						✓	✓			
Distributed Energy Resources Register (DERR)			✓						✓	

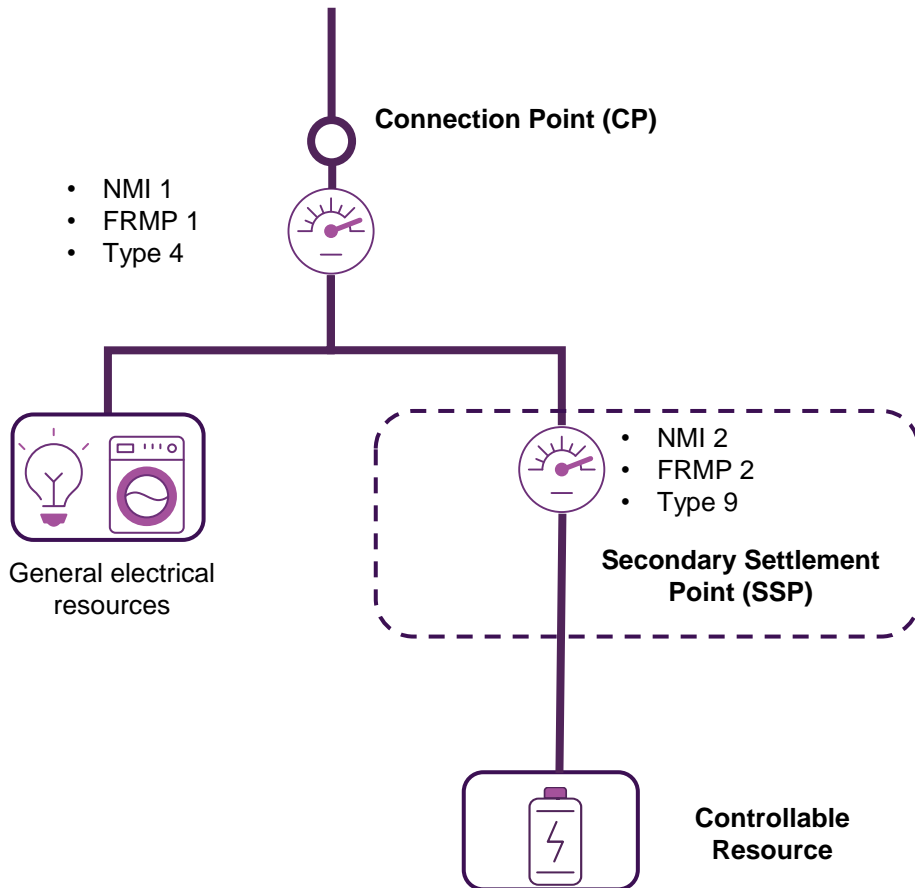
Assumed Impact Level: ✓ - High ✓ - Medium ✓ - Low

Small customers – multiple settlement points



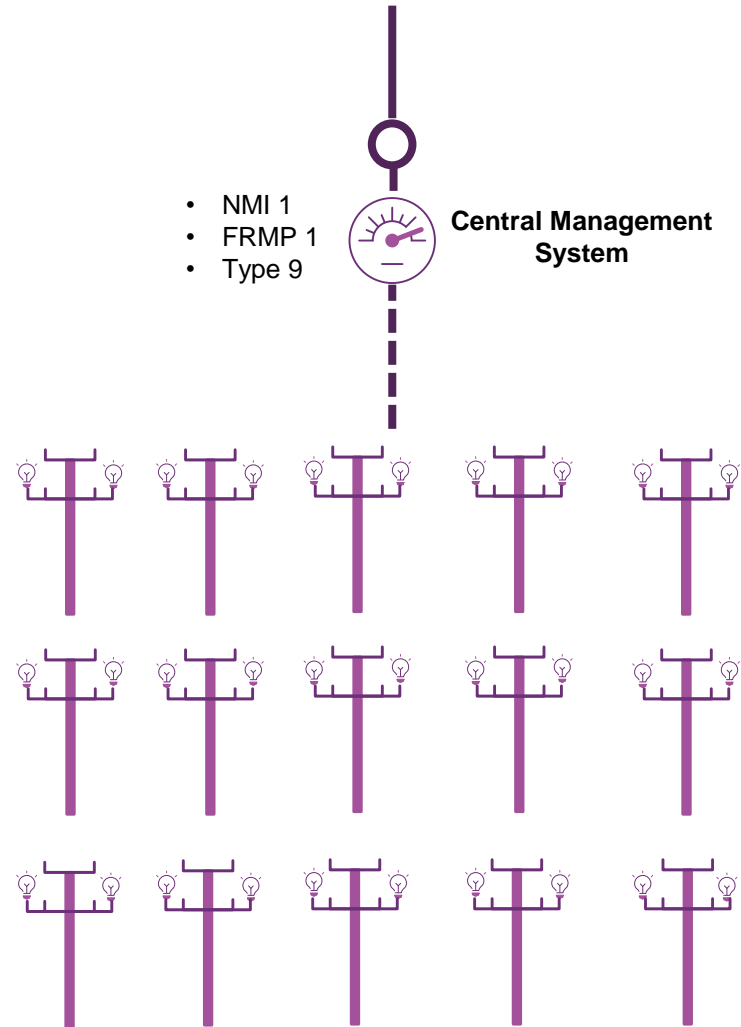
- A Small customer can have a secondary connection point
- A Small customer must have the same FRMP for the primary and secondary connection point
- The FRMP appoints the MC for the secondary settlement point, most likely the same MC, however the MC, MP and MDP can be different
- The secondary settlement point can be metered with a Type 8 meter or Type 4 meter
- Subtractive processes apply for Connection Point e.g. CP net – SSP net

Large customer - multiple energy service providers



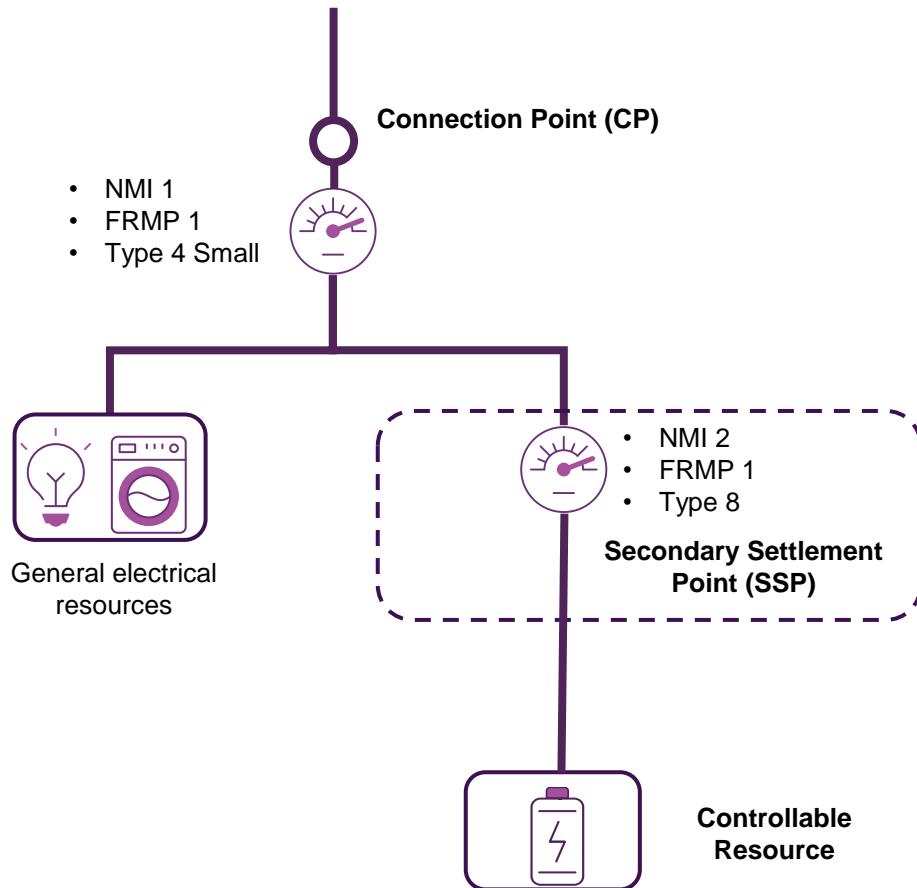
- A Large customer can have a secondary settlement point
- A Large customer can have a different FRMP for the secondary settlement point compared to the primary
- The secondary settlement point can be metered with a Type 9 or Type 4 meter
- The FRMP appoints the MC for the secondary settlement point, therefore the MC, MP and MDP may be different
- Subtractive processes apply for Connection Point e.g. CP net – SSP net
- LR on secondary settlement point will be the connection point FRMP, therefore FRMP1 will receive metering data for the secondary settlement point
- Network service charges will be applied to the connection point for the whole premise

Street lighting - measuring energy flows from in-built technology



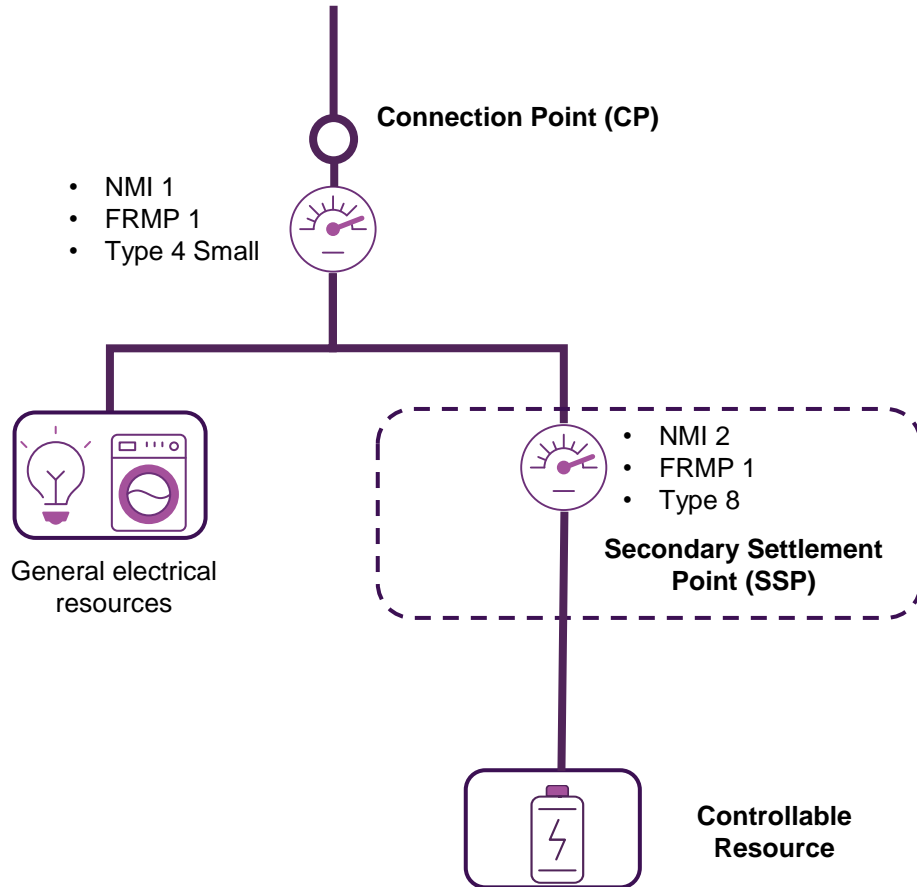
- Street Lighting / Unmetered supplies metering installations may include a Central Management System that collects electronic signal from multiple measurement devices and packages them into trading intervals
- This would be a Type 9 metering installation with one NMI
- This design removes the need for type 7 metering

Standing data – new attributes



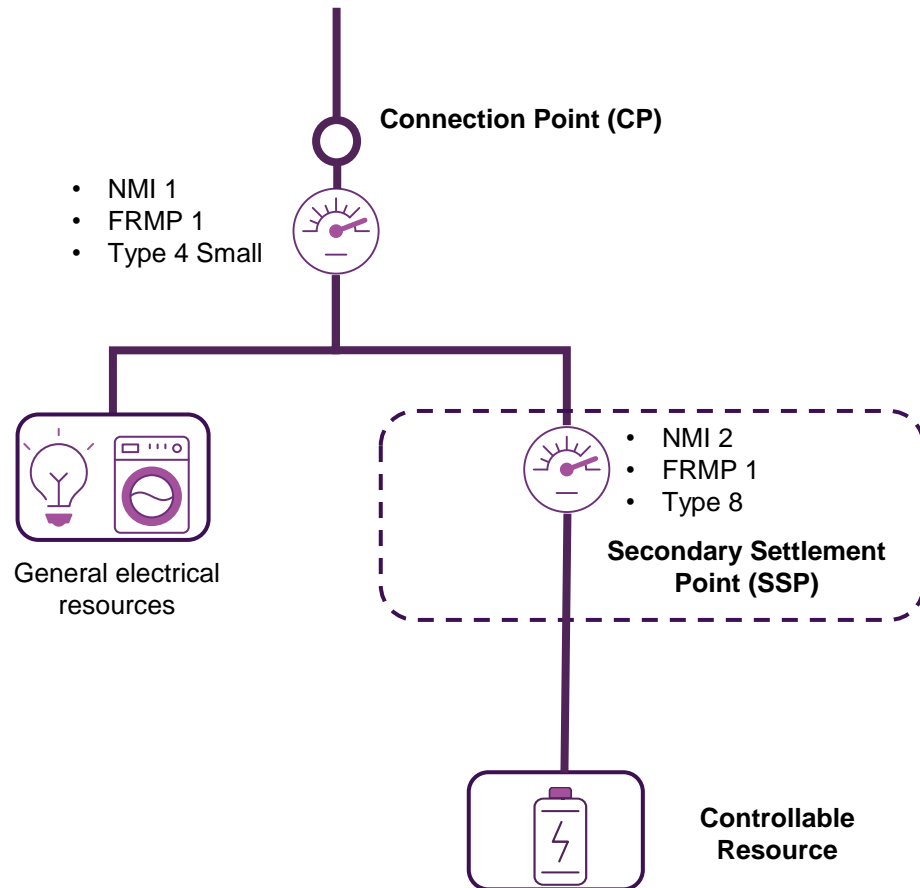
- Connection point (CP)
 - Is Parent indicator – where SSP assigned
 - Relationship field – FTA (flexible trading arrangement)
- Secondary settlement point (SSP)
 - Link to Parent – Parent NMI*
 - Relationship field – FTA (flexible trading arrangement)
- Metering
 - New MITC codes, type 8 and 9
- Embedded Networks
 - Existing embedded network parent/child fields will not be impacted by FTA.
- Other AEMO systems
 - New attributes may need to be replicated to DERR
 - No changes to PMS and CDR have been identified.

Processing impacts



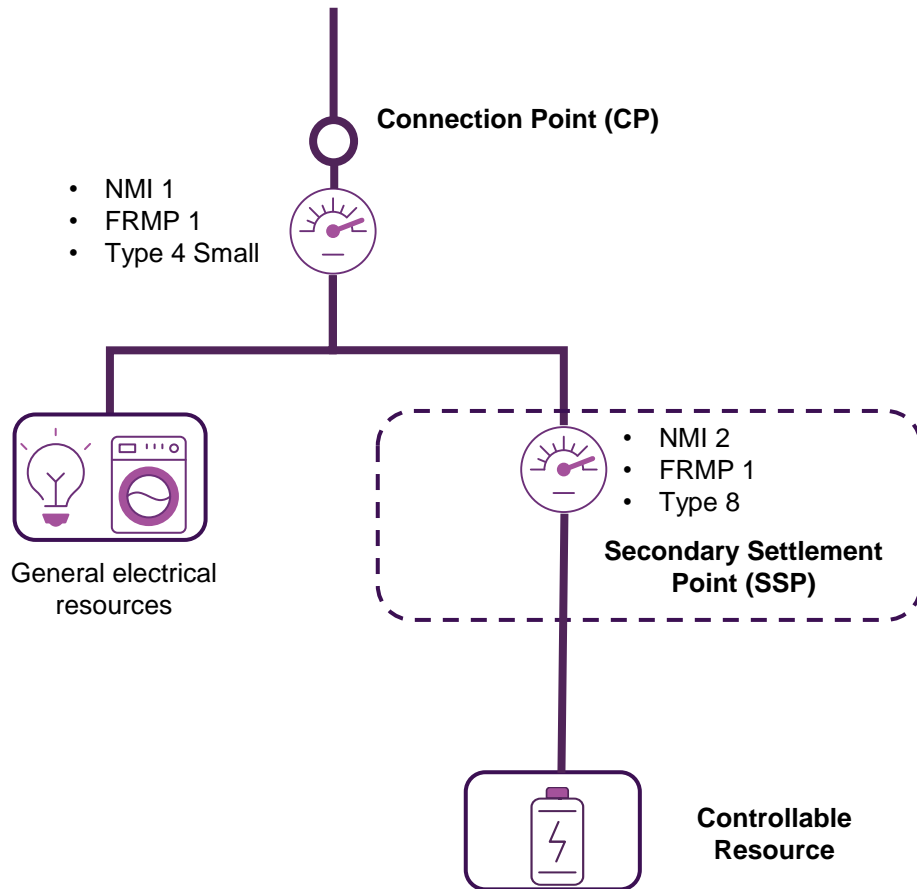
- NMI Discovery
 - Ability to identify when CP has SSP(s) assigned
 - Ability to identify NMI is an SSP
- Change Requests
 - Updated to include new attributes
 - SDQ validations where data errors exist
 - CR validations when updated existing NMIs
 - CR automation for FRMP / LR changes
- Reports
 - CATS report to include new attributes
 - Snapshots to include new attributes
- aseXML
 - Inclusion of new attributes
 - Management of schema update
- B2B
 - To be reviewed as part of B2BWG

Energy allocation



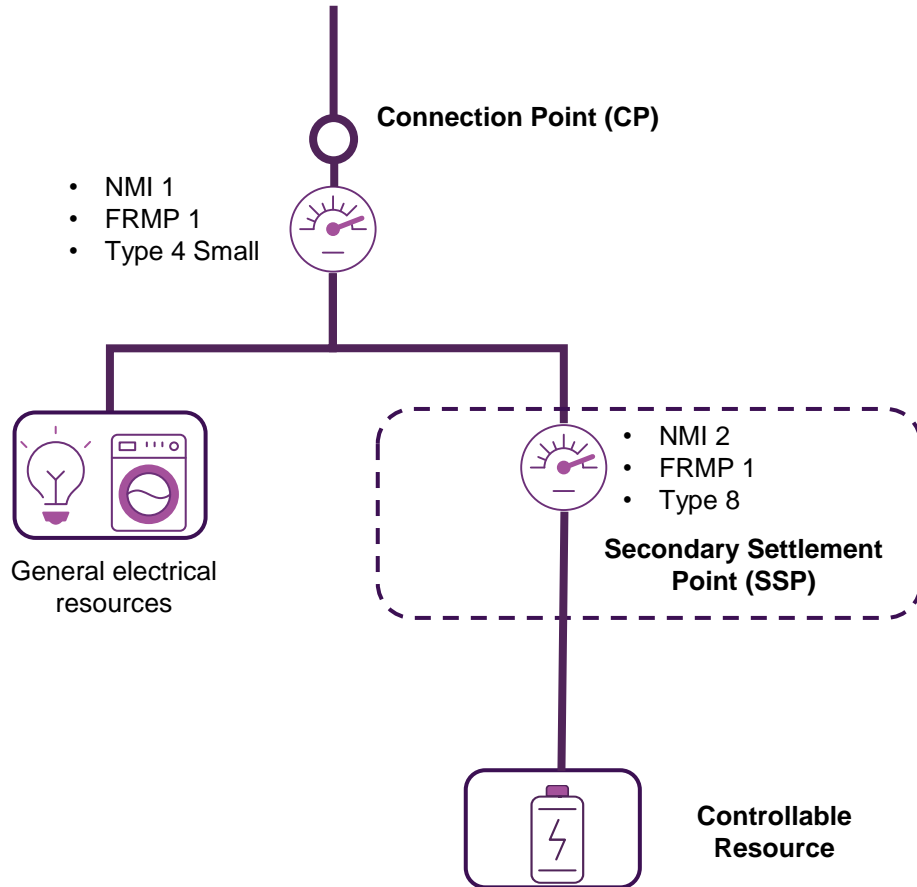
- Settlement Reports
 - No changes to RM reports
- Metering Reads
 - AEMO to set SSP reads to 0 when CP is not active e.g. network outage, disconnected, de-energised
- Allocation
 - Subtractive metering calculation used for CP
 - CP allocation = CP net – SSP(s) net
 - SSP allocation = SSP net
- Example
 - CP: ds E = 10, ds B = 2
 - SSP: ds E = 2, ds B = 6
 - $CP\ allocation = (10 - 2) - (2 - 6)$
 $= 8 - (-4) = 12$
 - $SSP\ allocation = (2 - 6)$
 $= -4$

Participant requirements



- LNSP / ENM
 - Creation of SSPs
- FRMP
 - SSP must have the same FRMP for Small Customers
 - SSP may have a different FRMP for Large Customers
 - CP FRMP will be the LR on the SSP
 - Responsible for notifying customer for malfunction repairs

Participant requirements cont'd



- MC
 - Must be appointed to the SSP
- MP
 - Must be accredited for types 8 and/or 9 to provide service
 - May contract 3rd parties to support accreditation
 - Will require assessment and auditability of CSM
 - Responsibility to ensure devices support minimum requirements and sufficiently documented to support auditability
- MDP
 - Must be accredited for types 8 and/or 9 to provide service

7. General Questions



NEMReform@aemo.com.au



Appendix

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.

Glossary

Term	Definition
B2B	Business-to-business
B2M	Business-to-market
BDU	Bi-directional unit
BESS	Battery energy storage system
CER	Consumer energy resources
CMS	Central management system
CR	Change request
DER	Distributed energy resources
DERR	Distributed energy resource register
DRSP	Demand response service provider
ENM	Embedded Network Manager
FRMP	Financially responsible market participant
FTA	Flexible trading arrangements
IRP	Integrated resource provider
IRS	Integrated resource system
IPRR	Integrating price responsive resource

Term	Definition
LNSP	Local network service provider
MC	Metering coordinator
MDP	Metering data provider
MP	Metering provider
MSATS	Market settlements and transfer solutions
NCC	NMI classification code
NMI	National metering identifier
PAE	Profiling and allocation engine
PMA	Private metering arrangement
PMS	Portfolio management system
ROLR	Retailer of last resort
UFE	Unaccounted for energy
WDR	Wholesale demand response



For more information visit

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