

METERING ICF PACKAGE

FINAL REPORT AND DETERMINATION

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EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the National Electricity Rules (NER) consultation process conducted by AEMO in respect of proposed amendments to the following National Electricity Market (NEM) metering procedures and other documents (Package Documents):

- Meter Data File Format Specification NEM12 & NEM13 (MDFF Specification).
- Metrology Procedure: Part A (Metrology Procedure Part A).
- Metrology Procedure: Part B (Metrology Procedure Part B).
- Market Settlements and Transfer Solution (MSATS) Procedures: Consumer Administration and Transfer Solution (CATS) Procedure Principles and Obligations (CATS Procedure).
- NEM Retailer of Last Resort (RoLR) Processes Part A - MSATS Procedure: RoLR Procedures and Part B – B2B Procedure (RoLR Processes).
- Retail Electricity Market Procedures – Glossary and Framework (Glossary and Framework).
- Service Level Procedure Meter Provider Services (SLP MP).
- Standing Data for MSATS document.

The Draft Report, published on 9 October 2020, detailed these proposed amendments.

AEMO received 11 submissions from retailers, Local Network Service Providers (LNSPs), Meter Providers (MPs), Metering Data Providers (MDPs) and intending participants. AEMO also met with CitiPower, Powercor and United Energy on 6 November 2020.

Overall, respondents indicated broad support of the proposed amendments.

AEMO has identified the following two material issues, based on these submissions, as well as AEMO's own analysis:

- Verification of Metering Data for Meters with Remote Capabilities (ICF_019).
- Revision of Definitions of SMALL and LARGE NMI Classifications (ICF_031).

Accordingly, AEMO's Final Determination amends the Package Documents in the form published with this Final Report. AEMO proposes that the amended Package Documents will come into effect in line with the effective dates in respect of Five Minute Settlement / Global Settlement (5MS/GS) and the MSATS Standing Data Review (MSDR).



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1. STAKEHOLDER CONSULTATION PROCESS

AEMO consulted on the proposed amendments to the Package Documents in accordance with the Rules consultation procedures in rule 8.9, as required by clause 7.16.7.

The table below outlines the consultation steps AEMO has undertaken.

Deliverable	Indicative date
Issues Paper published	6 August 2020
Submissions due on Issues Paper	11 September 2020
Draft Report published	9 October 2020
Submissions due on Draft Report	26 October 2020
Final Report published	7 December 2020

The publication of this Final Report marks the completion of the consultation and presents AEMO's response to the feedback received.

A glossary of terms used in this Final Report is at Appendix A.

2. BACKGROUND

2.1. NER requirements

AEMO is responsible for the establishment and maintenance of metering procedures specified in NER Chapter 7, except for procedures established and maintained under Rule 7.17.

The procedures authorised by AEMO under NER Chapter 7 must be established and amended by AEMO in accordance with the Rules consultation procedures.

2.2. Context for this consultation

AEMO engages on AEMO's Retail Electricity Market Procedures through the Electricity Retail Consultative Forum (ERCF). The forums and groups specific to NEM Electricity Retail are detailed on AEMO's website: <https://aemo.com.au/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups>.

The Electricity Retail Consultative Forum (ERCF) has reviewed a number of changes which industry participants, as well as AEMO, proposed in 2019 and 2020. These are itemised in the table below (Table 1).

Table 1 Proposed changes

ID	Subject	Document changing
ICF_013	Change Cancellation Timeframe for CR6800	CATS Procedure
ICF_016	Reinstatement of MC Objection of "BadParty" for Victorian SMALL NMIs	CATS Procedure
ICF_019	Verification of Metering Data for Meters with Remote Capabilities	Metrology Procedure: Part A



ICF_020	Clarification of Use of Terms Validation and Verification	SLP MP Metrology Procedure: Part B
ICF_021	Removal of End User Details from the Inventory Table	Metrology Procedure: Part B
ICF_025	Removal of 'N' Metering Data Quality Flag	Metrology Procedure: Part B; MDFF Specification
ICF_027	Average Daily Load at Datastream	Standing Data for MSATS Document; Glossary and Framework
ICF_028	Remove Failed Retailer MSATS User Access	RoLR Processes
ICF_029	Amendment or Reversion of Definition of Register ID Field in MSATS	CATS Procedure; MSATS Procedures: Procedure for the Management of Wholesale, Interconnector, Generator and Sample (WIGS) NMIS (WIGS Procedure); Standing Data for MSATS document
ICF_031	Revision of definitions of SMALL and LARGE NMI Classifications	CATS Procedure

2.3. First stage consultation

On 6 August 2020, AEMO issued the Notice of First Stage Consultation and published the Issues Paper, along with the initial draft amended documents. This information is available on [AEMO's website](#).

The Issues Paper included a summary of the proposed changes, as well as details of AEMO's stakeholder engagement, including through the ERCF.

In response, AEMO received 17 submissions. AEMO met AGL on 21 August 2020 and Plus ES on 8 September 2020.

AEMO has published copies of all written submissions (excluding any confidential information) on AEMO's website at: <https://aemo.com.au/consultations/current-and-closed-consultations/metering-icf-package>.

2.4. Second stage consultation

On 9 October 2020, AEMO issued the Notice of Second Stage Consultation and published the Draft Report, along with the draft amended procedure documents. This information is available on [AEMO's website](#).

The Draft Report included a summary of the proposed changes, as well as details on AEMO's stakeholder engagement, including through the ERCF.

In response, AEMO received 11 submissions. AEMO met with CitiPower Powercor and United Energy, on 6 November 2020.



AEMO has published copies of all written submissions (excluding any confidential information) on AEMO's website at: <https://aemo.com.au/consultations/current-and-closed-consultations/metering-icf-package>.

3. SUMMARY OF MATERIAL ISSUES

The key material issues are as follows:

No.	Issue	Raised by
1.	<u>Verification of Metering Data for Meters with Remote Capabilities</u>	CitiPower Powercor and United Energy
2.	<u>Revision of Definitions of SMALL and LARGE NMI Classifications</u>	Multiple Respondents

A detailed summary of issues raised by Consulted Persons in submissions, together with AEMO's responses, is contained in Appendix B.



4. DISCUSSION OF MATERIAL ISSUES

4.1. Verification of Metering Data for Meters with Remote Capabilities (ICF_019)

4.1.1. Issue summary and submissions

The proposed change was to exclude Small customer metering installation (Type 4) and Victorian Type 5 Advanced Metering Installation (VICAMI) meters in respect of the requirements in Metrology Procedure Part A, Section 12.5, Verification of Metering Data.

In AEMO's opinion, the relevant amendment was to clarify section 12.5 by referencing whole current manually read metering installations, instead of type 4A, 5, and 6.

This change:

- Specifies the metering installations which section 12.5 is intended to cover.
- Eliminates the uncertainty which arose by referring to specific metering installation type codes.
- Better aligns to SLP MP clause 4.2(b).

In response to the Issues Paper:

- Evoenergy, IntelliHUB, Red Energy and Lumo Energy, and TasNetworks supported this change to section 12.5.
- Evoenergy suggested related changes to the heading of section 12.5, to clarify the intent of section 12.5.
- AusNet Services, CitiPower Powercor, United Energy and Jemena indicated that this change would remove the sample testing metering verification obligation from whole current VICAMI meters. Consequently, the change would require validation of large numbers of whole current VICAMI meters. Accordingly, these respondents recommended that section 12.5 should include whole current VICAMI meters (remotely read meters).
- CitiPower Powercor, United Energy and Jemena suggested changes to the Acceptance Quality Limit (AQL) approach in section 12.5 for whole current VICAMI meters.

In response to the Draft Report, CitiPower Powercor and United Energy again recommended the inclusion of whole current VICAMI meter installations in clause 12.5, noting:

- The perceived interpretation issues in respect of the revised definition in the Glossary and Framework of VICAMI Meter, in terms of revised section 12.5 or clause 4.2.
- The revised definition of VICAMI meters refers to manually read metering installations, which could be expected to mean those meters are physically manually read, rather than being defined as Manually Read Interval Meter (MRIM).
- AEMO's reluctance to refer to VICAMI meter installations, given their direct equivalence to small customer metering installations within the Victorian NER.

4.1.2. AEMO's assessment

In light of AEMO's meeting with CitiPower Powercor and United Energy, AEMO agreed that:

- The definition of VICAMI Meter in the Glossary and Framework was revised to address a typographical error.



- Metering data verification requirements for metering installations with remote acquisition capability in the SLP MP should include whole current VICAMI meters, in addition to whole current small customer metering installations.
- Metering data verification requirements in Metrology Procedure Part A should simply, generically refer to whole current manually read metering installations.

4.1.3. AEMO's conclusion

Accordingly, AEMO has amended:

- Clause 12.5 to reference whole current manually read metering installations.
- Clause 4.2(a)(iii) to reference whole current VICAMI meters, in addition to whole current small customer metering installations.

4.2. Revision of Definitions of SMALL and LARGE NMI Classifications (ICF_031)

4.2.1. Issue summary and submissions

The proposal changes the Table 4-D, NMI Classification Codes, in the CATS Procedure, to reflect the current jurisdictional requirements and definitions of Small and Large customers.

The proposed changes would enable Metering Coordinators (MCs) to use the correct threshold, when initiating change requests to appoint themselves as new MCs. Incorrectly, MCs had been using change code requests 6300 and 6301, where the NMI classification code was SMALL. AEMO guided MCs to use Table 4-D, to define the Average Daily Load (ADL) thresholds of Small and Large customers.

In the first stage consultation, AEMO requested feedback on the following questions:

- Are there better options to accommodate the change proposals that better achieve the required objectives? What are the pros and cons of these options? How would they be implemented?
- What are the main challenges in adopting these proposed changes? How should these challenges be addressed?

In response:

- The majority of respondents supported the proposed changes, with several respondents suggesting further changes, in particular AGL.
- Endeavour Energy and Evoenergy did not support the proposed changes to Table 4-D, in essence, because they are limited to the consumption thresholds aspects of the definitions of Small and Large customer ("Customer Consumption Thresholds").

In the second stage consultation, AEMO requested feedback on the following questions:

- What other improvements could be made to Table 4-D?
- What might be any benefits/detriments of the proposed changes to Table 4-D noting that the MWh descriptions for small customers relate to business customers, but not residential customers, for whom the corresponding description is "any MWh", across "all" jurisdictions?
- What is the nature of any inconsistencies which may exist?
- What consequential changes are necessary to the Code Information?
- What, if any, are the unintended consequences of the proposed changes?

In response:

- The majority of respondents supported the proposed changes in principle.



- Several respondents suggested further changes, including in respect of the consumption thresholds aspects of the definitions of Small and Large customer (“Customer Consumption Thresholds”).
- Vector Metering suggested that Table 4-D should directly reference the National Energy Retail Law (NERL), given the significance of the relevant NERL definitions.

4.2.2. AEMO’s assessment

NMI Classification Codes (NMI CCs)

The NMI Classification Codes (NMI CCs) ‘LARGE’ and ‘SMALL’ are used in the MSATS Procedures to:

- Identify the nature of the flow of electricity through a connection point (Glossary and Framework, section 5).
- Define Change Reason Codes, application timeframes and Objection Rules (MSATS Procedures: CATS Procedure, section 4.4(a)).
- Describe Customer Consumption Thresholds in the relevant Jurisdictions, noting that the full details are in the relevant Jurisdictional regulation (CATS Procedure, Table 4-D).

In this regard:

- A NMI is a National Metering Identifier, as described in clause 7.8.2(c) (NER Chapter 10).
- NER clause 7.8.2(c) – which relates to ‘Metering installation components’ – is in Chapter 7, ‘Metering’.

Accordingly, the NMI CCs ‘LARGE’ and ‘SMALL’ describe the Customer Consumption Thresholds in the relevant jurisdictions, for the purposes of metering in the NEM.

Customer Classification Codes (CCCs), Customer Threshold Codes (CTCs)

The Customer Classification Codes (CCCs) ‘BUSINESS’ and ‘RESIDENTIAL’ are used to:

- Determine the classification of an End User (Glossary and Framework, section 5).
- Relate to a (previous) End User at a single connection point to which the NMI applies (CATS Procedure, section 4.5.1(a)).
- Describe the purpose of the primary use of the connection point by the End User, noting that the full details are in the relevant Jurisdictional regulation (CATS Procedure, Table 4-E).

The Customer Threshold Codes (CTCs) ‘LOW’ and ‘MEDIUM’ and ‘HIGH’ are used to:

- Determine the consumption for an End User at a single connection point (Glossary and Framework, section 5).
- Mandatorily code all NMIs with a NMI Status Code of ‘A’ or ‘D’, and a Customer Classification Code of ‘BUSINESS’ (CATS Procedure, section 4.5.2(a)).
- Describe customer consumption in respect of thresholds as defined in the National Energy Retail Rules (NERR) (CATS Procedure, Table 4-F).

Accordingly, in principle, the CCCs and CTCs:

- Relate to the End User, in respect of their respective customer classifications and thresholds.
- Complement the NMI CCs.
- Reflect the National Energy Customer Framework (NECF).

National Energy Customer Framework (NECF)



NECF:

- Applies in different versions in Queensland, New South Wales, South Australia, Tasmania and the Australian Capital Territory, with specific jurisdictional modifications.
- Does not apply in Victoria, which has its own framework, under the Energy Retail Code.

NECF applies to:

- The sale and supply of electricity or gas, or both, to customers.
- A retailer, to the extent the retailer sells electricity or gas, or both.
- A distributor, to the extent the distributor supplies electricity or gas, or both NERL, section 16.

NECF is being reviewed by the Australian Energy Market Commission and AEMO, in terms of its future applicability in a two-sided market.

National Energy Retail Law (NERL)

The NERL and the associated National Energy Retail Rules (NERR) are modified in their application, by state and territory laws (Victoria has not applied the NERL).

The NERL includes the following definitions:

- A "customer" is a person to whom energy is sold at a premise by a retailer, or who proposes to purchase energy for a premise from a retailer (NERL, section 5(1)).
- A "small customer" is a residential customer, or a business customer who consumes energy at business premise below the relevant annual maximum upper consumption threshold ("Small Business Customer Consumption Threshold") (NERL, section 5(2)). The Small Business Customer Consumption Threshold is specific to each jurisdiction.

Further:

- A "residential customer" is a customer who purchases energy principally for personal, household or domestic use at a premise (NERL, section 2).
 - A "small market offer customer" is a small customer who is a business customer who consumes energy at or above the lower consumption threshold (NERL, section 5(4)).
- A "large customer" is a business customer who consumes energy at business premise at or above the relevant Small Business Customer Consumption Threshold (NERL, section 5(3)), which is at, or above 100 megawatt hours (MWh) per annum (NERL section 6, National Energy Retail Rules (NERR), section 7).

In this regard, the NER defines "small customer", as defined in:

- The NERL, in a participating jurisdiction where the NERL applies.
- The jurisdictional electricity legislation (as defined in the National Electricity Law (NEL)), in the other jurisdictions (NER Chapter 10).

These arrangements reflect the Power of Choice Review (AEMC 2012, Power of Choice Review - giving consumers options in the way they use electricity, Final Report, 30 November 2012).

4.2.3. AEMO's conclusion

Based on AEMO's assessment:

- AEMO agrees with Vector Metering's suggestion to directly reference the NERL in Table 4-D, given the significance of these relevant NERL definitions.



- Further, AEMO has retained the proposed approach in Table 4-D to small customers, in the sense that:
 - Residential customers are small customers.
 - Megawatt hour (MWh) descriptions:
 - Relate to business customers.
 - Do not relate to residential customers, for whom the corresponding description is “any MWh”, across “all” jurisdictions.

Code Information		Description ⁽²⁾	Jurisdiction
EPROFILE		External <i>profile</i> shape	All
GENERATR		Generator	All
INTERCON		Interconnector	All
LARGE ⁽¹⁾	Business Customer	>=100 MWh	Australian Capital Territory New South Wales Queensland
		>=150 MWh	Tasmania
		>=160 MWh	South Australia
			Victoria
SAMPLE		Sample Meter	All
SMALL ⁽¹⁾	Business Customer	<100 MWh	Australian Capital Territory New South Wales Queensland
		<150MWh	Tasmania
		<160MWh	South Australia Victoria
		Residential Customer	Any MWh
WHOLESALE		Wholesale Transmission Node Identifier	All

Note (1): These NMI Classification Codes: are used in the CATS Procedures; describe the customer consumption thresholds in the relevant Jurisdictions, for the purposes of metering in the NEM; are complemented by the Customer Classification Codes ‘BUSINESS’ and ‘RESIDENTIAL’, as noted in Table 4-E. This approach is consistent with the relevant definitions in the National Energy Retail Law.

Note (2): See relevant Jurisdictional regulation for full details.

This determination is:

- Supportive of the correct use of change code requests in MSATS, by reflecting the current jurisdictional requirements and definitions of small and large customers.
- Based on the feedback from Vector Metering, in light of the other feedback.
- Intended to address any inconsistencies, in respect of which, in any case, the NER/NERL prevails over the CATS Procedure (CATS Procedure section 1.1).
- Reflective of the current threshold of <160 MWh for Victoria, as opposed to the <40 MWh which is contemplated in its Energy Retail Code.



5. OTHER MATTERS

AEMO has received feedback to propose additional minor amendments to the Package Documents.

AEMO has:

- Amended the Package Documents, as shown in the track changed versions published with this Final Report, where the proposed amendments provide clarity or consistency, without changing the meaning of the relevant obligation.
- Not amended the Package Documents, where the proposed amendments are outside of the scope of this consultation. Instead, AEMO suggests that an ICF be submitted to the appropriate forum, for initial stakeholder assessment.

AEMO proposes that the amended Package Documents will come into effect in line with the effective dates in respect of Five Minute Settlement / Global Settlement (5MS/GS) and the MSATS Standing Data Review (MSDR).



6. FINAL DETERMINATION

AEMO's Final Determination is to amend the following Package Documents in the form published with this Final Report, in accordance with NER Chapter 7. There are 28 published final metering procedure documents:

- MSATS Procedures: CATS v4.94 Draft Determination Change Marked
- MSATS Procedures: CATS v4.94 Draft Determination Clean
- MSATS Procedures: CATS v4.911 Draft Determination Change Marked
- MSATS Procedures: CATS v4.911 Draft Determination Clean
- MSATS Procedures: WIGS v4.94 Draft Determination Change Marked
- MSATS Procedures: WIGS v4.94 Draft Determination Clean
- MSATS Procedures: WIGS v4.911 Draft Determination Change Marked
- MSATS Procedures: WIGS v4.911 Draft Determination Clean
- Metrology Procedure: Part A v7.31 Draft Determination Change Marked
- Metrology Procedure: Part A v7.31 Draft Determination Clean
- Metrology Procedure: Part B v7.01 Draft Determination Change Marked
- Metrology Procedure: Part B v7.01 Draft Determination Clean
- Metrology Procedure: Part B v7.03 Draft Determination Change Marked
- Metrology Procedure: Part B v7.03 Draft Determination Clean
- Metrology Procedure: Part B v7.2 Draft Determination Change Marked
- Metrology Procedure: Part B v7.2 Draft Determination Clean
- Service Level Procedure Meter Provider Services v1.5 Draft Determination Change Marked
- Service Level Procedure Meter Provider Services v1.5 Draft Determination Clean
- NEM RoLR Procedure Part A and Part B v2.1 Draft Determination Change Marked
- NEM RoLR Procedure Part A and Part B v2.1 Draft Determination Clean
- Meter Data File Format Specification v2.2 Draft Determination Change Marked
- Meter Data File Format Specification v2.2 Draft Determination Clean
- Standing Data for MSATS v4.51 Draft Determination Change Marked
- Standing Data for MSATS v4.51 Draft Determination Clean
- Retail Electricity Market Procedures – Glossary and Framework v3.11 – Change Marked
- Retail Electricity Market Procedures – Glossary and Framework v3.11 – Clean
- Retail Electricity Market Procedures – Glossary and Framework v3.41 – Change Marked
- Retail Electricity Market Procedures – Glossary and Framework v3.41 – Clean



APPENDIX A. GLOSSARY

Term or acronym	Meaning
5MS/GS	Five Minute Settlement / Global Settlement
ADL	Average Daily Load
AER	Australian Energy Regulator
AMI	Advanced Metering Installation
AQL	Acceptance Quality Limit
CATS	Consumer Administration and Transfer Solution, a part of MSATS.
CCC	Customer Classification Code
CIP	Change Information Paper
CR	Change Request
CT	Current Transformer
CTC	Customer Threshold Code
DLF	Distribution Loss Factor
EN	Embedded Network
ENM	Embedded Network Manager
FRMP	Financially Responsible Market Participant
ICF	Issue / Change Form
kWh	Kilowatt hours
LNSP	Local Network Service Provider
MC	Metering Coordinator
MDFF	Meter Data File Format
MDP	Metering Data Provider
MP	Metering Provider
MPB	Metering Provider Category B
MRIM	Manually Read Interval Meter
MSATS	Market Settlements and Transfer Solution
MWh	Megawatt hours
NECF	National Energy Customer Framework
NEL	National Electricity Law
NEM	National Electricity Market
NER	The National Electricity Rules made under Part 7 of the National Electricity Law
NERL	National Energy Retail Law
NERR	National Energy Retail Rules
NMI	National Metering Identifier
PoC	Power of Choice
RoLR	Retailer of Last Resort
RP	Responsible Person
SLP	Service Level Procedure



VICAMI	Victorian Type 5 Advanced Metering Installation
VT	Voltage Transformer
WIGS	Wholesale, Interconnector, Generator and Sample

APPENDIX B. SUMMARY OF SECOND STAGE SUBMISSIONS AND AEMO RESPONSES

Table 2 MSATS Procedures: CATS

No.	Section	Consulted person	Issue	AEMO response
1.	2.4.(s)	AGL	Noted	
2.	2.4.(s)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	2.4.(s)	AusNet Services	No issue	
4.	2.4.(s)	Origin Energy	Noted	
5.	2.4.(s)	Powermetric Metering	No comment	
6.	2.4.(s)	Red Energy and Lumo Energy	Red Energy and Lumo Energy (Red and Lumo) have no comments on this change proposal.	
7.	2.7	AGL	Noted	
8.	2.7	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
9.	2.7	AusNet Services	No issue	
10.	2.7	Origin Energy	Noted	
11.	2.7	Powermetric Metering	No comment	
12.	2.7	Red Energy and Lumo Energy	Noted	
13.	2.9.(k)	AGL	Noted	



14.	2.9.(k)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
15.	2.9.(k)	AusNet Services	No issue	
16.	2.9.(k)	Origin Energy	<p>Origin Energy reiterates that it does not support the proposed change to 730 days to cancel/withdraw any incomplete CR 6800's.</p> <p>As per the feedback provided in the First Stage submission, the issue of CR cancellation prior to install is not a result of a failure in the market structure, but instead of poor planning of work by the MC. The MC is required to provide AEMO with a plan for resolution of the family failures. Appropriate process control to ensure only work expected to be completed within the CR window is raised, is the correct solution. An extension of the CR window also increases the risk of FRMP churn and associated role changes.</p>	<p>AEMO notes that the increase to 730 days was to allow for completion of work associated with failures related to large populations of family of meters.</p> <p>AEMO also notes that this change removes the need for administrative effort required to reinstate a change request and potentially this has no other impact on the market.</p>
17.	2.9.(k)	Powermetric Metering	No comment	
18.	2.9.(k)	Red Energy and Lumo Energy	Noted	

19.	4.4 Table 4-D	AGL	<p>AGL would suggest that keeping large / small / residential together would be more valuable for the majority of users and placing the EPROFILE to WHOLESAL as the remaining group and ensure that large / small/ residential are on the one page and not split across the page.</p> <p>As Residential can be all MWh – AGL suggests that it gets a row of its own, noting that the NMI Size can be large (ie CT) but the customer classification can still be Residential.</p> <p>Suggest also change Code Information to NMI Classification, and description and change the column headings and layout to:</p> <table><tr><th>NMI Classification</th><th>Description</th><th>Size</th><th>Jurisdiction</th></tr><tr><td>EPROFILE</td><td>External Profile</td><td>All</td><td>All</td></tr><tr><td>..</td><td></td><td></td><td></td></tr><tr><td>SAMPLE</td><td>Sample Meter</td><td></td><td>ALL</td></tr><tr><td>WHOLESAL</td><td>Wholesale Transmission Node Identifier</td><td></td><td>ALL</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td>Residential (CC)</td><td>All</td><td>ALL</td></tr><tr><td>Small</td><td>Business Customer</td><td><100</td><td>ACT NSW Qld</td></tr><tr><td></td><td></td><td>< 150....</td><td>...</td></tr><tr><td>....</td><td></td><td></td><td></td></tr><tr><td>Large</td><td>Large Business</td><td>>= 100 MWH</td><td>ACT NSW Qld</td></tr><tr><td></td><td></td><td>>=150</td><td>...</td></tr></table>	NMI Classification	Description	Size	Jurisdiction	EPROFILE	External Profile	All	All	..				SAMPLE	Sample Meter		ALL	WHOLESAL	Wholesale Transmission Node Identifier		ALL						Residential (CC)	All	ALL	Small	Business Customer	<100	ACT NSW Qld			< 150....				Large	Large Business	>= 100 MWH	ACT NSW Qld			>=150	...	<p>AEMO notes the respondent's comment. AEMO will amend Table 4-D as shown in section 4.2.3 of this Final Report.</p>
NMI Classification	Description	Size	Jurisdiction																																																	
EPROFILE	External Profile	All	All																																																	
..																																																				
SAMPLE	Sample Meter		ALL																																																	
WHOLESAL	Wholesale Transmission Node Identifier		ALL																																																	
	Residential (CC)	All	ALL																																																	
Small	Business Customer	<100	ACT NSW Qld																																																	
		< 150....	...																																																	
....																																																				
Large	Large Business	>= 100 MWH	ACT NSW Qld																																																	
		>=150	...																																																	
20.	4.4 Table 4-D	Alinta Energy	<p>Alinta Energy agrees with the proposed changes and does not have any other insights on how this table 4-D can be changed.</p>	<p>AEMO notes the respondent's support for the proposed change.</p>																																																



21.	4.4 Table 4-D	AusNet Services	<p>1. No comment</p> <p>2. The current ≥ 160MWh threshold (Small to Large) has been used for a long time and entrenched in our systems to trigger that the NMI has moved from 'Small' to 'Large' classification, which necessitates the upgrade in metering from Type 5 (VICAMI) to Type 4 for a residential customer who now exceeds the threshold (they may still not be considered a "Business", just a large residential). Therefore what triggers should be used under the change in physical metering installations where a small residential customer exceeds their current meter capability?</p> <p>3. No inconsistencies found</p> <p>4. No comment.</p> <p>5. Changes to our systems to revise CATS processing around objections would need to be revised.</p>	<p>AEMO notes the respondent's comment and provides the following response.</p> <p>2. The metering type change is covered by Metrology Procedure Part A. The customer remains residential with NMI classification of 'Small' and consumption greater than 160 MWh.</p> <p>3. Noted</p> <p>5. Noted</p>
22.	4.4 Table 4-D	Endeavour Energy	<p>We note that the new definition of Small and Large in the NMI Classification Code is effectively a duplication of the Customer Threshold Code, which makes the Customer Threshold Code redundant. Therefore, we suggest that the Customer Threshold Code be removed.</p>	<p>AEMO notes the respondent's comment and considers that the request is beyond the scope of this consultation.</p> <p>AEMO requests the respondent to raise a new ICF for the proposed change.</p>



23.	4.4 Table 4-D	Origin Energy	<ol style="list-style-type: none"> Origin Energy support aligning jurisdictional requirements with Table 4-D however the following issues need to be considered: <ul style="list-style-type: none"> The use of BUS and RES customer classification codes (CCC) has not been taken into account as it is currently based on consumption threshold. The NMI classification of SMALL now applies to all RES customers irrespective of threshold. Residential customers can not be a LARGE classification. There are detriments to legitimate RES customers who consume more than the threshold and therefore should have a classification of LARGE. Customers who have a single NMI that is multi purpose (factory where the customer lives upstairs) and above threshold could be moved to RES and will not be assigned a LARGE business tariff. The use of RES / BUS being included in the NMI classification will require an industry wide clean-up of the CCC code prior to implementation. This may result in compliance issues for participants due to inaccurate CCC and hence NMI class confusing tariff application. There will be inconsistencies between CCC and NMI class across the NEM. As per the above. No comment. 	<p>AEMO notes the respondent's comment and provides the following response.</p> <p>The Customer Classification Codes (CCCs) 'BUSINESS' and 'RESIDENTIAL' are used to:</p> <ul style="list-style-type: none"> Determine the classification of an End User (Glossary and Framework, section 5). Relate to a (previous) End User at a single connection point to which the NMI applies (CATS Procedure, section 4.5.1(a)). Describe the purpose of the primary use of the connection point by the End User, noting that the full details are in the relevant Jurisdictional regulation (CATS Procedure, Table 4-E). <p>Accordingly, in principle, the CCCs and CTCs:</p> <ul style="list-style-type: none"> Relate to the End User, in respect of their respective customer classifications and thresholds. Complement the NMI CCs. Reflect the National Energy Customer Framework (NECF). <p>AEMO also refers to the response in Table 2, item 19.</p>
24.	4.4 Table 4-D	Powermetric Metering	No comment	



25.	4.4 Table 4-D	Red Energy and Lumo Energy	<p>At this stage, Red and Lumo do not have any feedback in relation to the specific questions raised regarding Table 4-D. However, we offer the following commentary:</p> <ul style="list-style-type: none">• The NMI classification code table as presented in the draft report, section 4.4.3, does not contain the threshold for Large Victoria Business Customers. However, this is present in the MSATS CATS Procedures v4.94 (which is correct). Please rectify in the AEMO consultation report.• As this change is to clarify the threshold of what is considered as SMALL and LARGE NMI classification, could this not be implemented in an earlier version and date, as opposed to the current proposed date of March 2022?	<p>AEMO notes the respondent's comment and agrees with threshold for Large Victoria Business Customers.</p> <p>AEMO notes the respondent's comment about changing the implementation date and notes that it is unable to change the date.</p>
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26.	4.4 Table 4-D	Vector Metering	<p>It is unclear to Vector Metering that NMI CLASSIFICATION is to reflect the customer classification as determined by the NERL. There are clauses in the NEL that also define small customer and could be equally applied.</p> <p>If NCC is to be consistent with the customer definition in the NERL then there should be a direct link.</p> <p>The current definition of NCC in the glossary gives no clarity as it just refers back to the CATS procedure (note: the reference appears to be incorrect)</p> <div><div>NMI Classification Code</div><div>A code used in MSATS that identifies the nature of the flow of electricity through a connection point. See section 4.10 of the CATS Procedures.</div></div> <p>Suggested redrafting of the table as per below may help clarify</p> <table><tr><th>Customer Description</th><th>Jurisdiction</th><th>Annual Consumption</th><th>NMI Classification</th></tr><tr><td rowspan="6">Residential Customer (as per NERL)</td><td>Australian Capital Territory</td><td rowspan="6">Any</td><td rowspan="6">SMALL</td></tr><tr><td>New South Wales</td></tr><tr><td>Queensland</td></tr><tr><td>Tasmania</td></tr><tr><td>South Australia</td></tr><tr><td>Victoria</td></tr></table> <table><tr><th>Customer Description</th><th>Jurisdiction</th><th>Annual Consumption</th><th>NMI Classification</th></tr><tr><td rowspan="8">Business Customer (as per NERL)</td><td rowspan="2">Australian Capital Territory</td><td><100 MWH</td><td>SMALL</td></tr><tr><td>>=100 MWH</td><td>LARGE</td></tr><tr><td rowspan="2">New South Wales</td><td><150 MWh</td><td>SMALL</td></tr><tr><td>>=150 MWh</td><td>LARGE</td></tr><tr><td rowspan="2">Queensland</td><td><160 MWh</td><td>SMALL</td></tr><tr><td>>=160 MWh</td><td>LARGE</td></tr><tr><td rowspan="2">Tasmania</td><td><150 MWh</td><td>SMALL</td></tr><tr><td>>=150 MWh</td><td>LARGE</td></tr><tr><td rowspan="2">South Australia</td><td><160 MWh</td><td>SMALL</td></tr><tr><td>>=160 MWh</td><td>LARGE</td></tr><tr><td rowspan="2">Victoria</td><td><160 MWh</td><td>SMALL</td></tr><tr><td>>=160 MWh</td><td>LARGE</td></tr></table> <table><tr><th>Customer/Site Description</th><th>NCC</th></tr><tr><td>Generator</td><td>GENERATR</td></tr><tr><td>External profile shape</td><td>EPROFILE</td></tr><tr><td>Interconnector</td><td>INTERCON</td></tr><tr><td>Wholesale Transmission</td><td>WHOLESAL</td></tr></table>	Customer Description	Jurisdiction	Annual Consumption	NMI Classification	Residential Customer (as per NERL)	Australian Capital Territory	Any	SMALL	New South Wales	Queensland	Tasmania	South Australia	Victoria	Customer Description	Jurisdiction	Annual Consumption	NMI Classification	Business Customer (as per NERL)	Australian Capital Territory	<100 MWH	SMALL	>=100 MWH	LARGE	New South Wales	<150 MWh	SMALL	>=150 MWh	LARGE	Queensland	<160 MWh	SMALL	>=160 MWh	LARGE	Tasmania	<150 MWh	SMALL	>=150 MWh	LARGE	South Australia	<160 MWh	SMALL	>=160 MWh	LARGE	Victoria	<160 MWh	SMALL	>=160 MWh	LARGE	Customer/Site Description	NCC	Generator	GENERATR	External profile shape	EPROFILE	Interconnector	INTERCON	Wholesale Transmission	WHOLESAL	<p>AEMO notes the respondent's comment and agrees that the reference to 4.10 of the CATS Procedures in the Glossary and Framework is incorrect and will amend it to 4.4 of the CATS Procedures.</p> <p>AEMO also refers to the response in Table 2, item 19.</p>
Customer Description	Jurisdiction	Annual Consumption	NMI Classification																																																											
Residential Customer (as per NERL)	Australian Capital Territory	Any	SMALL																																																											
	New South Wales																																																													
	Queensland																																																													
	Tasmania																																																													
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Generator	GENERATR																																																													
External profile shape	EPROFILE																																																													
Interconnector	INTERCON																																																													
Wholesale Transmission	WHOLESAL																																																													
27.	12.6.3	AGL	Noted																																																											



28.	12.6.3	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
29.	12.6.3	AusNet Services	No issue	
30.	12.6.3	Origin Energy	Noted	
31.	12.6.3	Powermetric Metering	No comment	
32.	12.6.3	Red Energy and Lumo Energy	Noted	

Table 3 MSATS Procedures: WIGS

No.	Section	Consulted person	Issue	AEMO response
1.	Version	AGL	Noted	
2.	Version	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	Version	AusNet Services	No issue	
4.	Version	Origin Energy	Noted	
5.	Version	Powermetric Metering	No comments	
6.	Version	Red Energy and Lumo Energy	Noted	

**Table 4 Metrology Procedure: Part A**

No.	Section	Consulted person	Issue	AEMO response
1.	12.5	AGL	Noted	
2.	12.5	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	12.5	AusNet Services	Agree with reversion of wording.	AEMO notes the respondent's support for the proposed change.



4.	12.5	CitiPower Powercor	<p>We note that AEMO acknowledges concerns raised by all 5 Victorian networks in section 4.1.1 of the draft determination report but then does not address them in its assessment or conclusion in sections 4.1.2 and 4.1.3 and the drafting of this section and relevant clause is left unchanged.</p> <p>We do note the revision of the Retail Glossary definition of VICAMI meters referred to in table 4, item 3, against similar concerns over clause 12.5, but it is not clear how AEMO then considers this to be interpreted in terms of clause 12.5 (or the Service Level Procedure Meter Provider clause 4.2).</p> <p>In the interest of removing any doubt we recommend the following clauses be amended to explicitly state:</p> <p>12.5. Verification of Metering Data for whole current Small Customer Metering Installations, <u>whole current VICAMI meter Installations</u>, Manually Read Metering Installations and Type 7 Metering Installations</p> <p>To facilitate the Verification of <i>metering data</i> for whole current <i>small customer metering installations</i>, <u>whole current VICAMI meter Installations</u>, manually read <i>metering installations</i> and type 7 <i>metering installations</i>:.....</p> <p>While it's clear that AEMO procedures accept and define VICAMI meters as 'MRIM' within MSATS, (MRIM is an abbreviation for 'Manually Read Interval Meter' and equated to 'Type 5' in the original wording of clause 12.5), the revised wording refers to manually read metering installations, and subsequently could be expected to mean those meters are physically 'manually read' rather than those defined as 'MRIM'.</p> <p>It is unclear why AEMO specifically calls out 'small customer metering installations' but is reluctant to specifically call out 'VICAMI meter installations' given they are the direct equivalents within the Victorian NER?</p> <p>Equally, it's not clear why these coupled requirements for undertaking Verifications need to be spread across two separate procedures in the form of clause 4.2 in the SLP Meter Provider and clause 12.5 in the Metrology Procedure Part A?</p>	<p>AEMO notes the respondent's comment and will make the following amendments to reflect the outcome of the meeting with the participant.</p> <p>Service Level Procedure – Metering Provider Services Clause 4.2(a)(iii)</p> <p>(a) Where a metering installation has remote acquisition capability:</p> <p>(iii) For whole current small customer metering installations <u>and whole current VICAMI meters</u>, metering data is <u>may be</u> Verified in accordance with section 12.5 of Metrology Procedure: Part A;</p> <p>Metrology Procedure Part A Clause 12.5</p> <p>12.5. Verification of Metering Data for whole current Small Customer Metering Installations, Manually Read Metering Installations and Type 7 Metering Installations</p> <p>To facilitate the Verification of metering data for whole current small customer metering installations, manually read metering installations and type 7 metering installations:</p>
5.	12.5	Origin Energy	Origin Energy support the reverted wording from 'Validation' to 'Verification'.	AEMO notes the respondent's support for the proposed change.
6.	12.5	Powermetric Metering	No comments	



7.	12.5	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
8.	12.5	United Energy	<p>We note that AEMO acknowledges concerns raised by all 5 Victorian networks in section 4.1.1 of the draft determination report but then does not address them in its assessment or conclusion in sections 4.1.2 and 4.1.3 and the drafting of this section and relevant clause is left unchanged.</p> <p>We do note the revision of the Retail Glossary definition of VICAMI meters referred to in table 4, item 3, against similar concerns over clause 12.5, but it is not clear how AEMO then considers this to be interpreted in terms of clause 12.5 (or the Service Level Procedure Meter Provider clause 4.2).</p> <p>In the interest of removing any doubt we recommend the following clauses be amended to explicitly state:</p> <p>12.5. Verification of Metering Data for whole current Small Customer Metering Installations, <u>whole current VICAMI meter Installations</u>, Manually Read Metering Installations and Type 7 Metering Installations</p> <p>To facilitate the Verification of <i>metering data</i> for whole current <i>small customer metering installations</i>, <u>whole current VICAMI meter Installations</u>, manually read <i>metering installations</i> and type 7 <i>metering installations</i>:.....</p> <p>While it's clear that AEMO procedures accept and define VICAMI meters as 'MRIM' within MSATS, (MRIM is an abbreviation for 'Manually Read Interval Meter' and equated to 'Type 5' in the original wording of clause 12.5), the revised wording refers to manually read metering installations, and subsequently could be expected to mean those meters are physically 'manually read' rather than those defined as 'MRIM'.</p> <p>It is unclear why AEMO specifically calls out 'small customer metering installations' but is reluctant to specifically call out 'VICAMI meter installations' given they are the direct equivalents within the Victorian NER?</p> <p>Equally, it's not clear why these coupled requirements for undertaking Verifications need to be spread across two separate procedures in the form of clause 4.2 in the SLP Meter Provider and clause 12.5 in the Metrology Procedure Part A?</p>	AEMO notes the respondent's comment and refers to the response in Table 4, item 4.
9.	12.6	AGL	Noted	



10.	12.6	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
11.	12.6	AusNet Services	Agree with reversion of wording.	AEMO notes the respondent's support for the proposed change.
12.	12.6	Origin Energy	Origin Energy support the amended wording from 'Validation' to 'Verification'.	AEMO notes the respondent's support for the proposed change.
13.	12.6	Powermetric Metering	No comments	
14.	12.6	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.

Table 5 Metrology Procedure: Part B

No.	Section	Consulted person	Issue	AEMO response
1.	9	AGL	Noted	
2.	9	Alinta Energy	Alinta Energy has no comment on the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	9	AusNet Services	Agree with reversion of wording.	AEMO notes the respondent's support for the proposed change.
4.	9	Origin Energy	Origin Energy support the amended wording from 'Validation' to 'Verification'.	AEMO notes the respondent's support for the proposed change.
5.	9	Powermetric Metering	No comments	
6.	9	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.

Table 6 Service Level Procedure Meter Provider Services

No.	Section	Consulted person	Issue	AEMO response
1.	4.2	AGL	Noted	
2.	4.2	Alinta Energy	Alinta Energy has no comment on the proposed changes	
3.	4.2	AusNet Services	Agree with change to "Verification"	AEMO notes the respondent's support for the proposed change.
4.	4.2	CitiPower Powercor	As per our feedback above (in relation to Metrology Procedure Part A clause 12.5), and to remove any ambiguity in relation to the applicability to VICAMI meters, we recommend the following changes to the below portions of clause 4.2 of the Metering Provider Service Level Procedure: (ii) For a <i>metering installation</i> that is not a whole current <i>small customer metering installation</i> <u>or whole current VICAMI meter Installation</u> ,..... (iii) For whole current <i>small customer metering installations</i> and <u>whole current VICAMI meter Installations</u> ,	AEMO notes the respondent's comment and refers to the response in Table 4, item 4.
5.	4.2	Origin Energy	Origin Energy support the amended wording from 'Validated' to 'Verified'.	AEMO notes the respondent's support for the proposed change.
6.	4.2	Powermetric Metering	No comment	
7.	4.2	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
8.	4.2	United Energy	As per our feedback above (in relation to Metrology Procedure Part A clause 12.5), and to remove any ambiguity in relation to the applicability to VICAMI meters, we recommend the following changes to the below portions of clause 4.2 of the Metering Provider Service Level Procedure: (ii) For a <i>metering installation</i> that is not a whole current <i>small customer metering installation</i> <u>or whole current VICAMI meter Installation</u> ,..... (iii) For whole current <i>small customer metering installations</i> and <u>whole current VICAMI meter Installations</u> ,	AEMO notes the respondent's comment and refers to the response in Table 4, item 4.



9.	4.2.(a)(ii)	AGL	Noted	
10.	4.2.(a)(ii)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
11.	4.2.(a)(ii)	AusNet Services	Agree with change to "Verified"	AEMO notes the respondent's support for the proposed change.
12.	4.2.(a)(ii)	Origin Energy	Origin Energy support the amended wording from 'Validated' to 'Verified'.	AEMO notes the respondent's support for the proposed change.
13.	4.2.(a)(ii)	Powermetric Metering	No comment	
14.	4.2.(a)(ii)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
15.	4.2.(a)(iii)	AGL	Noted	
16.	4.2.(a)(iii)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
17.	4.2.(a)(iii)	AusNet Services	Agree with change to "Verified"	AEMO notes the respondent's support for the proposed change.
18.	4.2.(a)(iii)	Origin Energy	Origin Energy support the reverted wording from 'Validated' to 'Verified'.	AEMO notes the respondent's support for the proposed change.
19.	4.2.(a)(iii)	Powermetric Metering	No comment	
20.	4.2.(a)(iii)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
21.	4.2.(b)	AGL	Noted	
22.	4.2.(b)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
23.	4.2.(b)	AusNet Services	Agree with change to "Verified"	AEMO notes the respondent's support for the proposed change.
24.	4.2.(b)	Origin Energy	Origin Energy support the reverted wording from 'Validated' to 'Verified'.	AEMO notes the respondent's support for the proposed change.
25.	4.2.(b)	Powermetric Metering	No comment	



26.	4.2.(b)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
27.	4.2.(c)	AGL	Noted	
28.	4.2.(c)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
29.	4.2.(c)	AusNet Services	Agree with change	AEMO notes the respondent's support for the proposed change.
30.	4.2.(c)	Origin Energy	Origin Energy support the amended wording from 'Validated' to 'Verified'.	AEMO notes the respondent's support for the proposed change.
31.	4.2.(c)	Powermetric Metering	No comment	
32.	4.2.(c)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
33.	4.2.(c)(ii)	AGL	Noted	
34.	4.2.(c)(ii)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
35.	4.2.(c)(ii)	AusNet Services	Agree with reversion to "verify".	AEMO notes the respondent's support for the proposed change.
36.	4.2.(c)(ii)	Origin Energy	Origin Energy support the reverted wording from 'Validate' to 'Verify'.	AEMO notes the respondent's support for the proposed change.
37.	4.2.(c)(ii)	Powermetric Metering	No comment	
38.	4.2.(c)(ii)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
39.	4.2.(d)	AGL	Noted	
40.	4.2.(d)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
41.	4.2.(d)	AusNet Services	Agree with reversion to "verify".	AEMO notes the respondent's support for the proposed change.



42.	4.2.(d)	Origin Energy	Origin Energy support the reverted wording from 'Validate' to 'Verify'.	AEMO notes the respondent's support for the proposed change.
43.	4.2.(d)	Powermetric Metering	No comment	
44.	4.2.(d)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
45.	4.4.(e)	AGL	Noted	
46.	4.4.(e)	Alinta Energy	Alinta Energy has no comment on the proposed changes	
47.	4.4.(e)	AusNet Services	No issue.	
48.	4.4.(e)	Origin Energy	Noted	
49.	4.4.(e)	Powermetric Metering	No comment	
50.	4.4.(e)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.

Table 7 NEM RoLR Processes Part A and Part B

No.	Section	Consulted person	Issue	AEMO response
1.	11.2.(h)(v)	AGL	Noted	
2.	11.2.(h)(v)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	11.2.(h)(v)	AusNet Services	No issue	
4.	11.2.(h)(v)	Origin Energy	Noted	



5.	11.2.(h)(v)	Powermetric Metering	No comment	
6.	11.2.(h)(v)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
7.	11.2.(i)	AGL	Noted	
8.	11.2.(i)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
9.	11.2.(i)	AusNet Services	No issue	
10.	11.2.(i)	Origin Energy	Noted	
11.	11.2.(i)	Powermetric Metering	No comment	
12.	11.2.(i)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
13.	11.2.(j)	AGL	Noted	
14.	11.2.(j)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
15.	11.2.(j)	AusNet Services	No issue	
16.	11.2.(j)	Origin Energy	Noted	
17.	11.2.(j)	Powermetric Metering	No comment	
18.	11.2.(j)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
19.	11.2.(k)	AGL	Noted	



20.	11.2.(k)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
21.	11.2.(k)	AusNet Services	No issue	
22.	11.2.(k)	Origin Energy	Noted	
23.	11.2.(k)	Powermetric Metering	No comment	
24.	11.2.(k)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
25.	13.3.(k)	AGL	Noted	
26.	13.3.(k)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
27.	13.3.(k)	AusNet Services	No issue	
28.	13.3.(k)	Origin Energy	Noted	
29.	13.3.(k)	Powermetric Metering	No comment	
30.	13.3.(k)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
31.	13.3.(l)	AGL	Noted	
32.	13.3.(l)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
33.	13.3.(l)	AusNet Services	No issue	
34.	13.3.(l)	Origin Energy	Noted	



35.	13.3.(l)	Powermetric Metering	No comment	
36.	13.3.(l)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
37.	17.2.(c)	AGL	Noted	
38.	17.2.(c)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
39.	17.2.(c)	AusNet Services	No issue	
40.	17.2.(c)	Origin Energy	Noted	
41.	17.2.(c)	Powermetric Metering	No comment	
42.	17.2.(c)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.

Table 8 Meter Data File Format Specification

No.	Section	Consulted person	Issue	AEMO response
1.	3.3.1(b)	AGL	Agree	
2.	3.3.1(b)	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	3.3.1(b)	AusNet Services	No issue	



4.	3.3.1(b)	Endeavour Energy	<div><div>(b) Where no Interval values exist, the <u>IntervalValue</u> field must contain a value of zero (0)-and the <u>QualityFlag</u> field must have a value of "N". A null value is not allowed in the quantity field of the NEM13 file.</div></div> <div>We note that the purpose of ICF_025 was to remove the ability for a MDP to send 'null' metering data and that the approach AEMO took was to remove the 'N' flag. Therefore, should a MDP wish to communicate metering data that does not exist then they must obtain the actual metering data or substitute the metering data.</div> <div>AEMO has decided to re-instate parts of clause 3.3.1.(b), however this conflicts with AEMO's objective for raising ICF_025 because it allows for zero to be populated when interval meter data does not exist. To make matters worse, the 'N' flag is removed but a quality flag is still required for the metering data – this will result in a non-compliant MDFF or an inappropriate quality flag used which will cause confusion.</div> <div>For consistency with the objective of ICF_025 we suggest that the whole of 3.3.1.(b) be deleted.</div>	AEMO notes the respondent's comment. Participants can continue to use actual zero or substituted zero in the quantity field. The ICF was for removing the quality flag N and not for removing the need to send zero values in the metering data.
5.	Title page	Endeavour Energy	<div>Effective Date</div> <div><div>PREPARED BY:</div><div>AEMO Markets</div></div> <div><div>DOCUMENT REF:</div><div></div></div> <div><div>VERSION:</div><div>2.2</div></div> <div><div>EFFECTIVE DATE:</div><div>1 October 2022</div></div> <div><div>STATUS:</div><div>DRAFT</div></div> <div>The effective date is shown as 2022, which does not align with the 5MS start date. We suggest that this be corrected to 1 October 2021.</div>	AEMO agrees with respondent's comment and will amend the year in Effective Date to 2021.



6.	4.4	Endeavour Energy	<div>UpdateDateTime field</div> <table><tr><td><u>UpdateDateTime</u></td><td>DateTime(14)</td><td>M/N</td><td>The latest date/time that any updated <u>IntervalValue</u> or <u>QualityMethod</u> for the <u>IntervalDate</u>. This is the MDP's version date/time that the <i>metering data</i> was created or changed. This date and time applies to data in this 300 record. <i>This field is not required if the <u>QualityMethod</u> is 'N'.</i></td></tr></table> <div>Given that the last sentence is deleted, we suggest that the field requirement be changed from 'M/N' to 'M'.</div>	<u>UpdateDateTime</u>	DateTime(14)	M/N	The latest date/time that any updated <u>IntervalValue</u> or <u>QualityMethod</u> for the <u>IntervalDate</u> . This is the MDP's version date/time that the <i>metering data</i> was created or changed. This date and time applies to data in this 300 record. <i>This field is not required if the <u>QualityMethod</u> is 'N'.</i>	AEMO notes the respondent's comment and agrees to amend the field requirement to 'M'.
<u>UpdateDateTime</u>	DateTime(14)	M/N	The latest date/time that any updated <u>IntervalValue</u> or <u>QualityMethod</u> for the <u>IntervalDate</u> . This is the MDP's version date/time that the <i>metering data</i> was created or changed. This date and time applies to data in this 300 record. <i>This field is not required if the <u>QualityMethod</u> is 'N'.</i>					
7.	3.3.1(b)	Origin Energy	Noted					
8.	3.3.1(b)	Powermetric Metering	No comment					
9.	3.3.1(b)	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.				

Table 9 Standing Data for MSATS

No.	Section	Consulted person	Issue	AEMO response
1.	8 Table 7	AGL	Agree	AEMO notes the respondent's support for the proposed change.
2.	8 Table 7	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
3.	8 Table 7	AusNet Services	No issue	



4.	8 Table 7	Endeavour Energy	<table><tr><td>AveragedDailyLoad</td><td>The <i>energy delivered</i> <u>or generation delivered via through a datastream connection point or metering point</u> over an extended period normalised to a "per day" basis (kWh).</td><td>MANDATORY</td></tr></table> <p>For consistency with the definition defined in the glossary we suggest that the words '(kWh)' be removed.</p>	AveragedDailyLoad	The <i>energy delivered</i> <u>or generation delivered via through a datastream connection point or metering point</u> over an extended period normalised to a "per day" basis (kWh).	MANDATORY	AEMO notes the respondent's comment and will reconcile both documents to ensure descriptions are consistent by including kWh in the Glossary document as follows: Average Daily Load: The energy delivered or generation delivered via a datastream over an extended period normalised to a "per day" basis (kWh).
AveragedDailyLoad	The <i>energy delivered</i> <u>or generation delivered via through a datastream connection point or metering point</u> over an extended period normalised to a "per day" basis (kWh).	MANDATORY					
5.	8 Table 7	Origin Energy	Noted				
6.	8 Table 7	Powermetric Metering	No comment				
7.	8 Table 7	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.			
8.	8 Table 7	Vector Metering	As indicated in the first round, the requirements of setting an ADL for 'reactive' energy datastreams should be clearly specified. While some examples are illustrated in the 'AEMO 5MS/GS CNDS & Meter Data Delivery Clarifications' power point presentation, this document is not a procedure or a guideline. AEMO should add relevant examples into the Standing data for MSATS procedure. Requirements to populate the ADL in the NDS row should clearly indicate that an ADL value is not required for non Active Energy datastreams.	AEMO notes the respondent's comment and provides the following response. Reactive energy data could use the same logic as the active energy data. It is determined by the MDP.			
9.	9 Table 8	AGL	Noted				
10.	9 Table 8	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.			
11.	9 Table 8	AusNet Services	Agree with change.	AEMO notes the respondent's support for the proposed change.			



12.	9 Table 8	Endeavour Energy	<p>RegisterID</p> <p>We agree with AEMO in that the definition of RegisterID should be flexible to cater for scenarios where RegisterID is same as Suffix and RegisterID is not same as Suffix. However, from experience we note that some MDPs provide a RegisterID value that looks like the Suffix but it does not align with the Suffix, for example a RegisterID of E1 and a Suffix of E3. This causes confusion amongst market participant because the wrong value is quoted or it is not clear which field the participant is referring to during enquiries and complaints. We suggest that for market efficiencies, the following be added to the description:</p> <p>If the RegisterID has a value as per the 'Datastream Suffix for Interval Metering Data' section of the NMI Procedure, then it must be the same as the Suffix field in the CATS_REGISTER_IDENTIFIER table.</p>	<p>AEMO notes the respondent's comment and agrees to amend the description of RegisterID to include the following:</p> <p><u>If the RegisterID has a value as per the 'Datastream Suffix for Interval Metering Data' section of the NMI Procedure, then it must be the same as the Suffix field in the CATS_REGISTER_IDENTIFIER table.</u></p>
13.	9 Table 8	Origin Energy	Noted	
14.	9 Table 8	PLUS ES	<p>PLUS ES suggests the Suffix value must be unique for each meter register not just the meter. Hence propose the addition of the word register to the following sentence:</p> <p><i>The Suffix value must be unique for each meter register.</i></p>	<p>AEMO notes the respondent's comment and agrees to amend the description of Suffix to include the word 'register' as suggested.</p>
15.	9 Table 8	Powermetric Metering	No comment	
16.	9 Table 8	Red Energy and Lumo Energy	Red and Lumo support this change.	<p>AEMO notes the respondent's support for the proposed change.</p>

Table 10 Retail Electricity Market Procedures – Glossary and Framework

No.	Section	Consulted person	Issue	AEMO response
1.	5	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
2.	5	AusNet Services	Agree with definition change	AEMO notes the respondent's support for the proposed change.



3.	5	Origin Energy	Origin Energy support the amended definition of 'Validation'.	AEMO notes the respondent's support for the proposed change.
4.	5	Powermetric Metering	No comment	
5.	5	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
6.	5	AGL	<p>Noted – Please check typo on word 'installed' 'eg Commissioned' is not relevant and the word first could be removed, as a meter relocation / board replacement would see the meter installed. A meter (per se) is not likely to be modified in field but may be reconfigured.</p> <p>AGL suggests:This process typically occurs when the meter is installed or reconfigured.</p>	<p>AEMO notes the respondent's comment and agrees with the typo for 'installed' and will also amend the definition of 'Verification' as follows:</p> <p>A process to compare <i>energy data</i> held in the <i>metering installation</i> with <i>metering data</i> held in the <i>metering data services database</i> inclusive of scaling constants. This process typically occurs when a <i>metering installation</i> is first installed or, modified or reconfigured (i.e. commissioned), or when the <i>metering installation</i> is tested.</p>
7.	5	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
8.	5	AusNet Services	Agree with definition change	AEMO notes the respondent's support for the proposed change.
9.	5	CitiPower Powercor	Please amend 'installaed' to installed.	AEMO notes the respondent's comment and refers to the response in Table 10, item 6.
10.	5	Origin Energy	Origin Energy support the added new definition for Verification.	AEMO notes the respondent's support for the proposed change.
11.	5	PLUS ES	<p>Typo:</p> <p>...is first installaed ...</p> <p>amend to installed</p>	AEMO notes the respondent's comment and refers to the response in Table 10, item 6.
12.	5	Powermetric Metering	No comment	



13.	5	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.
14.	5	United Energy	Please amend 'installaed' to installed.	AEMO notes the respondent's comment and refers to the response in Table 10, item 6.
15.	5	AGL	Noted, although it may be prudent to edit the statement: ' ... MRIM with RWD* ReadType Code... ' to recognise that RWD is being extended to 4 characters.	AEMO notes the respondent's comment and agrees to amend the definition of VICAMI Meter and change 'RWD' to 'RWD*' with * signifying the fourth character.
16.	5	Alinta Energy	Alinta Energy agrees with the proposed changes	AEMO notes the respondent's support for the proposed change.
17.	5	AusNet Services	Agree with definition change	AEMO notes the respondent's support for the proposed change.
18.	5	Origin Energy	Origin Energy support the amended definition of 'VICAMI Meter'.	AEMO notes the respondent's support for the proposed change.
19.	5	Powermetric Metering	No comment	
20.	5	Red Energy and Lumo Energy	Red and Lumo support this change.	AEMO notes the respondent's support for the proposed change.

Table 11 Other Issues Related to Consultation Subject Matter

No.	Consulted person	Issue	AEMO response
1.	Alinta Energy	Alinta Energy has no further comment.	
2.	AusNet Services	No further comment	
3.	Powermetric Metering	No comment	