METERING ICF PACKAGE

DRAFT REPORT AND DETERMINATION

Published: **October 2020**

NOTICE OF SECOND STAGE CONSULTATION – METERING ICF PACKAGE

National Electricity Rules – Rule 8.9

Date of Notice: 9 October 2020

This Notice of Second Stage of Rules Consultation (Notice) informs all Registered Participants, Metering Providers, Metering Data Providers, Embedded Network Managers, Ministers and the Australian Energy Regulator (AER) (Consulted Persons) that AEMO is commencing its second stage consultation on proposed changes to various metering procedure documents which relate to the National Electricity Market (NEM) to implement process improvements.

This consultation is being conducted under clause 7.16.7 of the National Electricity Rules (NER), in accordance with the Rules consultation requirements detailed in rule 8.9 of the NER.

Invitation to Make Submissions

AEMO invites written submissions on this Draft Report and Determination (Draft Report).

Please identify any parts of your submission that you wish to remain confidential and explain why. AEMO may still publish that information if it does not consider it to be confidential but will consult with you before doing so.

Consulted Persons should note that material identified as confidential may be given less weight in the decision-making process than material which is published.

Closing Date and Time

Submissions in response to this Notice should be sent by email to NEM.Retailprocedureconsultations@aemo.com.au, to reach AEMO by 5.00pm (Melbourne time) on 26 October 2020.

All submissions must be forwarded in electronic format (both pdf and Word). Please send any queries about this consultation to the same email address.

Submissions received after the closing date and time will not be valid, and AEMO is not obliged to consider them. Any late submissions should explain the reason for lateness as well as the detriment to you if AEMO does not consider your submission.

Publication

All submissions will be published on AEMO's website, other than confidential content.

EXECUTIVE SUMMARY

The publication of this Draft Report and Determination (Draft Report) commences the second stage consultation by AEMO on proposed changes to various NEM metering procedure documents to implement process improvements.

On 6 August 2020, AEMO published the Notice of First Stage Consultation and the Issues Paper.

The Issues Paper detailed the proposed amendments to:

- 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 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.

AEMO received 17 submissions from Retailers, Local Network Service Providers (LNSPs), Meter Providers (MPs), Metering Data Providers (MDPs) and intending participants. AEMO also held two meetings - with AGL on 21 August 2020 and Plus ES on 8 September 2020.

Overall, multiple respondents indicated broad support of the proposed changes.

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

- Verification of Metering Data for Meters with Remote Capabilities.
- Clarification of Use of Terms Validation and Verification in SLP and Metrology Procedure Part A.
- Amendment or Reversion of Definition of Register ID Field in MSATS.
- Revision of Definitions of SMALL and LARGE NMI Classifications.

AEMO's draft determination is to amend the metering procedure documents in the form published with this Draft Report.

CONTENTS

1. STAKEHOLDER CONSULTATION PROCESS

AEMO is consulting on proposed process improvements to various metering procedure documents in accordance with the Rules consultation procedures in rule 8.9, as required by clause 7.16.7.

AEMO's indicative timeline for this consultation is outlined below. Future dates may be adjusted depending on the number and complexity of issues raised in submissions.

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 Draft Report marks the commencement of this second stage consultation.

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

2. BACKGROUND

2.1. NER requirements

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

The procedures authorised by AEMO under 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). Details on forums and groups specific to NEM Electricity Retail are available on AEMO's website: http://www.aemo.com.au/Stakeholder-Consultation/Industry-forums-and-working-groups.

The ERCF has reviewed a number of changes which industry participants, as well as AEMO, proposed in 2019 and 2020 (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 NEM12 & NEM13
ICF_027	Average Daily Load at Datastream	Standing Data for MSATS Document; Retail Electricity Market Procedures – Glossary and Framework
ICF_028	Remove Failed Retailer MSATS User Access	NEM 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 a Notice of First Stage Consultation and published an Issues Paper and initial draft amended procedure documents. This information is available on AEMO's website.

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

In response, AEMO received 17 submissions. AEMO also held two meetings - with 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.

3. SUMMARY OF MATERIAL ISSUES

The key material issues are as follows:

No.	Issue	Raised by
1.	Verification of Metering Data for Meters with Remote Capabilities	Multiple Respondents
2.	Clarification of Use of Terms Validation and Verification in SLP and Metrology Procedure Part A	Multiple Respondents
3.	Amendment or Reversion of Definition of Register ID Field in MSATS	Multiple Respondents
4.	Revision of Definitions of SMALL and LARGE NMI Classifications	Multiple Respondents

A detailed summary of the 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 change proposal is to exclude small customer metering installation (Type 4) and Victorian Type 5 Advanced Metering Installation (AMI) meters in respect of the requirements in Metrology Procedure Part A, Section 12.5, Verification of Metering Data.

AEMO proposed to change the heading of section 12.5 to the words "Manually Read Metering Installation" to replace "types 4A, 5, 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:

- Evoenergy, IntelliHUB, RED Energy and Lumo Energy and TasNetworks supported this change.
- AusNet Services, CitiPower Powercor, United Energy and Jemena indicated that this change removed the sample testing metering verification obligation from whole current Vic AMI meters. Consequently, the change would require validation of large numbers of whole current Vic AMI meters. Accordingly, these respondents recommended that section 12.5 should include whole current Vic AMI 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 VIC AMI meters.
- Evoenergy agreed with the proposed change and further suggested changes to the section heading to clarify the intent of the section.

4.1.2. AEMO's assessment

AEMO notes that the proposed changes reflected:

- The ICF proposal and Change Information Paper (CIP) provided by United Energy.
- The intent of section 12.5 to cover manually read metering installations when referring to Type 4a, Type 5 Manually Read Interval Meters (MRIMs) and Type 6.

AEMO requests CitiPower Powercor, United Energy and Jemena to consider raising a new ICF, since the AQL-related change is beyond the scope of this consultation.

AEMO considers that the wording proposed by Evoenergy does not reflect the intent of the section 12.5.

4.1.3. AEMO's conclusion

AEMO has maintained the proposed changes to the metering installations covered by section 12.5.

4.2. Clarification of Use of Terms Validation and Verification in SLP and Metrology Procedure Part A (ICF_020)

4.2.1. Issue summary and submissions

The change proposal is to clarify the use of the terms 'verification' and 'validation' for the purpose of complying with SLP MP section 4.2.

The term:

- 'verification' refers to a one-off task to be performed by a Metering Provider Category B (MPB).
- 'validation' in contrast, refers to the ongoing task of validating the metering data as normally undertaken by a Metering Data Provider (MDP).

The requirements for data verification are set out in section 12.5 of Metrology Procedure Part A. Accordingly, the affected MPBs and MDPs could misinterpret the intention of the provisions AEMO proposes to replace 'verified' with 'Validated', 'verify' with 'Validate' and 'verification' with 'Validation' in section 4.2 of the SLP MP and section 12.5 of Metrology. AEMO defines 'Validated' and 'Validation' in the Retail Glossary and Framework.

Broadly the respondents supported the proposed change to replace 'verification' with 'Validation'.

- AusNet Services indicated that 'verification' is still suitable in Metrology Procedure Part A section 12.5.
- CitiPower Powercor and United Energy stated that the change did not remove the confusion and that the requirements had become inconsistent with the NER.
- Jemena's submission suggested including whole current Vic AMI meters or approved asset management strategies in SLP MP section 4.2.
- AGL's proposed including reciprocal obligation on the Current MP to take and deliver meter reading requested by New MP in an appropriate timeframe. Further, AGL suggested that the MP should be New MP in SLP MP clause 4.4(d).

4.2.2. AEMO's assessment

AEMO agrees with AusNet's feedback that 'verification' is still suitable in section 12.5.

In response to AGL's submission, AEMO notes that:

- The MDP is responsible for meter reading, but MP's are not accredited to take meter readings
- SLP MP Clause 4.4(d) which relates to meter churning and not the role churning and applies to both current and new MP.

AEMO identified a minor issue with SLP MP clause 4.4(e) where the MP should provide formal confirmation to the MDP, not just the New MDP.

4.2.3. AEMO's conclusion

AEMO has reviewed the usage of Validation and Verification and:

- Where appropriate, reverted the wording from 'Validation' to 'Verification' in section 12.5 of Metrology Procedure Part A, and section 9 of Metrology Procedure Part B and section 4.2 of Service Level Procedure Metering Provider Services.
- Added the definition for 'Verification'.
- Amended the definition of 'Validation' to indicate that it is done by the MDP.

- Amended clause 4.4(e) to replace 'New MDP' with 'MDP'.
- Corrected the wording in the definition of VIC AMI Meter from 'of MRIM' to 'or MRIM'.

4.3. Amendment or Reversion Definition of Register ID Field in MSATS (ICF_029)

4.3.1. Issue summary and submissions

The proposed change:

- Removes the requirement for the Register ID to match the NMI Suffix in MSATS by reverting the Register ID field definition published in version 5 of the Standing Data for MSATS document to the previous Final version 4.4. '*The RegisterID is used to identify a data source that is obtained from the meter. A single meter may provide multiple data sources*'
- Consequentially requires MDPs to provide the relationship mapping logic for the Register ID to the datastream suffix in CATS Procedures Section 2.4, given that AEMO will receive the MDFF files to use in settlement processes under the 5MS changes.

Majority of respondents sought clarification of the reasons for providing this relationship mapping logic:

- Evoenergy's submission indicated need for data cleansing and proposed an alternative.
- TasNetworks submission did not support this proposal as participants currently have system logic that maps the NMI Suffix in the NEM12 file to the corresponding meter register MDM Contributory Suffix.
- Vector Metering queried the necessity for this mapping as meter data provided in NEM12 format provides this information in the 200th row. Further, after December 2022, the link between the register and the data stream will be explicitly described in the Register_Identifier table.
- AusNet Services, Evoenergy, IntelliHUB, Plus ES and Vector Metering indicated that the Suffix definition in the Register ID table has not changed to support the revision of the requirement for the Register ID to match the datastream suffix, so was inconsistent with the proposed change.
- Vector Metering queried the reference to kilowatt hours (kWh) in relation to clause 2.4(p), suggesting the revision of the wording to apply to active energy datastream as an ADL.

4.3.2. AEMO's assessment

Currently the "mapping" occurs when a net data stream is created, that is, the MDP knows which datastreams are related to settlements and provides them to AEMO as the netted datastream(s). AEMO does not see the constituent datastream components.

AEMO will be receiving individual datastreams (E, B, K Q) for 5MS/GS. Accordingly, AEMO needs an "instruction" from the MDP as to which datastreams (set up in the CNDS table) are required for settlements. Hence the mapping requirement.

AEMO will use the data in the CATS_ NMI_ DATA_STREAM ('CNDS') table to align with the data provided in the MDFF files to determine which data should be used in settlements. Through the obligation in the CATS Procedures, AEMO is ensuring the CNDS is correct and matches the MDFF file that the MDP sends.

This exercise will enable correct assignment of meter reads for the settlement process. This exercise is a mapping activity rather than an additional table or separate piece of data from participants. AEMO refers to the 5MS CNDS and Meter Data Delivery Clarifications document which sets out details.

AEMO will use the set-up of the CNDS table to map to the MDFF, that is:

- If CNDS is set up in datastreams of E & B and a datastream type of 'I', MSATS will then take the data that relates to the datastreams of E & B in the MDFF, the MDFF should have E1 and B1 in the MDMDataStreamIdentifier field as well.
- If CNDS is set up as 'N' and a datastream type of 'I', MSATS will then take the data that relates to the datastreams of the N1 MDMDataStreamIdentifier and use the NMISuffix field in the MDFF to calculate the netting.

AEMO notes that:

- If the process were changed such that the Register ID is always the same as the datastream suffix, with the whole market consistently providing the data and every Register ID populated, then AEMO would use the MSATS standing data to do the mapping activity and not the MDFF.
- AEMO would be able to do some validation between the CNDS and the Register tables.
- Suffix definition in the Register ID table has not changed but should change to support the revision of the requirement for the Register ID to match the NMI Suffix.
- In response to Vector Metering's feedback on clause 2.4(p), in respect of the use of kWh as the unit of measure, ADL only applies to active energy datastream.

4.3.3. AEMO's conclusion

AEMO has:

- Added the wording 'The relationship mapping will occur via the CNDS table and MDFF details.' to clarify clause 2.4(s).
- Changed the definition of Suffix to compliment the reversion of the Register ID definition in the Standing Data for MSATS document.

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

4.4.1. 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").

4.4.2. 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 (Retail Electricity Market Procedures – 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)

The 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.

The 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 (National Energy Retail Law (NERL), section 16).

The 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, 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).

4.4.3. AEMO's conclusion

AEMO proposes to revise Table 4-D, to reflect the following information regarding small customers, specifically that the 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 *profile* 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
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	All
WHOLESAL		Wholesale Transmission Node Identifier	All

Note (1): These codes are used in the CATS Procedures.
Note (2): See relevant Jurisdictional regulation for full details.

This proposal 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 AGL, Endeavour Energy and Evoenergy.
- 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.
- To be informed by a materiality analysis which AEMO is performing.
- Likely to imply consequential changes to CCCs and CTCs.

Questions:

1. What other improvements could be made to Table 4-D?
2. 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?
3. What is the nature of any inconsistencies which may exist?
4. What consequential changes are necessary to the Code Information?

5. What, if any, are the unintended consequences of the proposed changes?

5. OTHER MATTERS

A number of respondents have proposed additional minor amendments to the various procedure documents within the Metering ICF Package.

AEMO has:

- Amended the procedure documents, as shown in the track changed versions published with this draft determination where the proposed amendments provide clarity or consistency, without changing the meaning of the relevant obligation; or
- Not amended the procedure documents, where the proposed amendment is 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 metering procedure documents will come into effect in line with the Five Minute Settlement / Global Settlement (5MS/GS) effective dates and the MSATS Standing Data Review (MSDR) effective dates.

6. DRAFT DETERMINATION

AEMO's draft determination is to amend the following metering procedure documents in the form published with this Draft Report, in accordance with Chapter 7 of the NER.:

- MSATS Procedures: CATS v4.8 Draft Determination Change Marked
- MSATS Procedures: CATS v4.8 Draft Determination Clean
- MSATS Procedures: WIGS v4.8 Draft Determination Change Marked
- MSATS Procedures: WIGS v4.8 Draft Determination Clean
- Metrology Procedure: Part A v6.05 Draft Determination Change Marked
- Metrology Procedure: Part A v6.05 Draft Determination Clean
- Metrology Procedure: Part B v6.1 Draft Determination Change Marked
- Metrology Procedure: Part B v6.1 Draft Determination Clean
- Service Level Procedure Meter Provider Services v1.4 Draft Determination Change Marked
- Service Level Procedure Meter Provider Services v1.4 Draft Determination Clean
- NEM RoLR Procedure Part A and Part B v1.8 Draft Determination Change Marked
- NEM RoLR Procedure Part A and Part B v1.8 Draft Determination Clean
- Meter Data File Format Specification v1.1 Draft Determination Change Marked
- Meter Data File Format Specification v1.1 Draft Determination Clean
- Standing Data for MSATS v1.1 Draft Determination Change Marked
- Standing Data for MSATS v1.1 Draft Determination Clean
- Retail Electricity Market Procedures – Glossary and Framework – Change Marked
- Retail Electricity Market Procedures – Glossary and Framework - 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

VT	Voltage Transformer
WIGS	Wholesale, Interconnector, Generator and Sample

APPENDIX B. SUMMARY OF SUBMISSIONS AND AEMO RESPONSES

Table 2 MSATS Procedures: CATS

No.	Section		Consulted person	Issue	AEMO response
1.	2.4.(p)		Vector Metering	This clause refers to kWH which suggests that it is assuming that the DataStream is related to *active energy* only. i.e. E, B. Under 5MS this is no longer the case (see below in section 9 for comments on ADL). Suggest this wording be revised to only apply to active energy DataStream as a ADL for other units has no practical use (see below).	AEMO notes that the use of kWH as the unit of measure for ADL is due to ADL only applying to active energy datastreams.
2.	2.4.(s)		AGL	Noted	
3.	2.4.(s)		Alinta Energy	Alinta Energy supports this amendment.	AEMO notes the respondent's support for the proposed change.
4.	2.4.(s)		AusNet Services	AusNet Services challenges the need to provide this mapping since the Register_Identifer table explicitly provides the relationship between RegisterID and Datastream Suffix for Interval meters. MDPs already have an obligation to now provide register level data under 5MS which further enhances the population of this table. The proposed obligation does not describe the form, or manner, in which the relationship mapping between Register ID and Datastream Suffix is to be provided. What does this mapping entail? Through what mechanism will the MDP convey the Register ID to Datastream Suffix relationships to AEMO and how often?	AEMO notes that currently the "mapping" occurs when a net data stream is created, i.e the MDP knows which datastreams are related to settlements and sends them to AEMO as the netted datastream(s). AEMO does not see the constituent datastream components. As AEMO will be receiving individual datastreams (E, B, K Q) for 5MS/GS, AEMO needs an "instruction" from MDPs related to which datastreams are required for settlements, hence the mapping requirement. This will be an instruction from the MDP. AEMO will use the data in the CATS_ NMI_ DATA_STREAM ('CNDS') table to align with the data provided in the MDFF files to determine which data should be used in settlements. Through the obligation in the MSATS Procedures CATS, AEMO is ensuring the CNDS is correct and

					matches the MDFF file that the MDP sends. This will enable correct assignment of meter reads for the settlement process. This exercise is a mapping activity rather than an additional table or separate piece of data from participants. AEMO refers to the 5MS CNDS and Meter Data Delivery Clarifications document for details on how this mapping activity operates. AEMO will use the set up of the CNDS table to map to the MDFF, that is: • If CDNS is set up E & B and a datastream type of I the system will then take the data that relates to the datastreams of E & B in the MDFF, the MDFF should have E1 and B1 in the MDMDataStreamIdentifier field as well. • If CDNS is set up N and a datastream type of I the system will then take the data that relates to the datastreams of that have N1 MDMDataStreamIdentifier and use the NMISuffix field in the MDFF to work out the netting. AEMO observes that if the process changed to Register Id is the same as the suffix, with the whole market consistently providing the data and every Register Id populated then AEMO would use the MSATS standing data to do the mapping activity and not the MDFF. AEMO would also be able to do some validation between the CNDS and the Register tables. To clarify clause 2.4.(s), AEMO has added the wording: 'The relationship mapping will occur via the CNDS table and MDFF details.'

5.	2.4.(s)		Endeavour Energy	The wording of this new obligation is ambiguous. However, we understand it is meant be that a MDP must correctly maintain datastream records and provide complete and correct information in the NEM12 metering data file so that AEMO can map the metering data provided in a NEM12 file to a datastream. If this is correct, then we suggest that this clause be reworded to make this clearer. However, if our understanding is incorrect then we suggest that AEMO makes it clearer what is expected of the MDP.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
6.	2.4.(s)		Energy Queensland	Ergon Energy and Energex seek clarity as to how this relationship mapping information is to be provided by MDPs to AEMO / relevant Participants.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
7.	2.4.(s)		Evoenergy	Disgree with addition. AEMO need to do a data cleanse with existing MPB's to update missing or N1 MDM Contributory Suffix values, as these are legacy issues. Obligation should be that the MDP notifies the MPB as per 2.4(r) and the MPB updates MSATS with the correct values in the field "MDM Contributory Suffix" in the Cr30xx (which is what they do now for each register) which then matches the MDFF 200 line RegisterID and NMISuffix (which is what they do now) and then eventually the MDMDataStreamIdentifier (which will be E1,Q1 etc) also.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
8.	2.4.(s)		Intellihub	We need clarification on what is meant by NMI suffix and we need clarification from AEMO as to what this requirement is referencing to. It is important to note that 7/12/2020 is when this document is finalised, and until then we will not know for sure that ICF 029 will still be a part of the changes.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
9.	2.4.(s)		Jemena	We are not clear on the mapping logic. We request further information.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
10.	2.4.(s)		Origin Energy	AEMO's proposed change to revert the definition is supported by Origin. The new definition is yet to be implemented (1/5/22) as part of the version 5.0 of the Standing Data for MSATS. Due to the 5MS project, AEMO will require MDPs to provide relationship mapping between the Register ID and the Datastream Suffix earlier (1/10/21).	AEMO notes the respondent's support for the proposed change.

11.	2.4.(s)		PLUS ES	PLUS ES proposes that further clarification is provided for this obligation, with respect to MDPs providing relationship mapping between the Register ID and Datastream Suffix.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
12.	2.4.(s)		Powermetric Metering	No comment	
13.	2.4.(s)		Red Energy and Lumo Energy	Red Energy and Lumo Energy (Red and Lumo) have no comments on this change proposal.	
14.	2.4.(s)		Simply Energy	No comment	
15.	2.4.(s)		TasNetworks	TasNetworks supports the reversion of the requirement to match Register ID with NMI Suffix, however, does not support the requirement to provide a mapping of Register ID to Datastream Suffix. TasNetworks expects that participants would currently have system logic that maps the NMI Suffix in the NEM12 file to the corresponding meter register MDM Contributory Suffix record as these have to match, so does not see any value in having to provide additional relationship mapping details. It is understood that AEMO also do not need such mapping details for their new 5MS MDM solution or for settlement purposes to map the NEM12 file with the respective meter register record based on the NMI Suffix. TasNetworks therefore question the need for MDP's to provide a register mapping guide.	AEMO notes respondent's comment and refers to the response in Table 1, item 4.
16.	2.4.(s)		Vector Metering	Unclear why this is necessary. • Meter Data provided in NEM12 format provides this information in the 200 row. Recipients of meter data routinely use this to establish the components of a 'N'ett DataStream. • By Dec 2022 or shortly after most interval Meters will be established in NDS table at a register level and the link between the register and the data stream will be explicitly described in the Register _Identifier table	AEMO notes respondent's comment and refers to the response in Table 1, item 4.

17.	2.7		AGL	Check reference link	AEMO notes respondent's comment and proposes to amend the procedure to fix the issue with reference link.
18.	2.7		PLUS ES	(refer to section 0~~13.6~~). Typo; references section 0.	AEMO notes respondent's comment and refers to response in Table 1, item 17
19.	2.9.(k)		AGL	Grammar – 'incomplete change requests types if it.. - types is plural, should be 'types if it they exceeds…' Suggest that for clarity the number of days be defined as calendar days – eg '730 calendar days, 220 calendar days .' Suggest that the note be extended to refer to the report(s) that will be issued of upcoming CRs which will be cancelled and a cross reference to the report specification.	AEMO notes respondent's comment and proposes to amend the wording as follows, 'incomplete Change Request types if ~~it~~they exceed…' AEMO does not agree with adding the word 'calendar' as the word 'day' is a defined term in the NER which means calendar days. AEMO notes that the reports were interim and will no longer be generated once this change is implemented.
20.	2.9.(k)		Alinta Energy	Alinta Energy Supports the proposed increase in the timeframe before an incomplete CR6800 is cancelled. We note that Participants may be able to manage to the current process and avoid any non-compliance however by increasing the time allowed before the CR6800's cancelled will ensure the duplication of effort is avoided/reduced and avoid non-compliance in some instances.	AEMO notes the respondent's support for the proposed change.
21.	2.9.(k)		AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
22.	2.9.(k)		Energy Queensland	No comment	
23.	2.9.(k)		Evoenergy	Agree with change	AEMO notes the respondent's support for the proposed change.
24.	2.9.(k)		Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
25.	2.9.(k)		Jemena	The increase from 220 days to 730 seems an excessive timeframe to keep CRs open. We propose the timeframe to be increased to 365 days.	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.

26.	2.9.(k)		Origin Energy	Origin does not support the proposed change and recommends the timeframe (220 days) remains unchanged. This 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.	AEMO notes respondent's comment and refers to response in Table 1, item 25.
27.	2.9.(k)		PLUS ES	PLUS ES support the increase in the timeframe for cancelling an incomplete CR6800. The statement in the issue paper is a generalisation and potentially incorrect. *However, with respect to CR6800 transactions specifically, this means that the 220 days automatic cancellation will cancel the EOL work order in the MC's systems which in turn cancels the service order back to the retailer.* It depends on the participant's processes. For example, the MC could raise another CR6800, if the same MPB were to be nominated in the role. No non-compliance to maintain the B2B SO nor is it required to NOT Complete the SO to the retailer.	AEMO notes the respondent's support for the proposed change.
28.	2.9.(k)		Powermetric Metering	No comment	
29.	2.9.(k)		Red Energy and Lumo Energy	Red and Lumo support the proposal to update MSATS's overnight auto cancellation of open CR6800 when the CR has remained 'open' for 730 days calendar days.	AEMO notes the respondent's support for the proposed change.
30.	2.9.(k)		Simply Energy	Supportive of the change to increase the number of days to cancel an open Change Request for CR 6800 (Multiple Changes) from 220 days to 730 days (2 years). This could also be extended to the wider CR 6xxx series, as required, including CR 6700 and CR 6300.	AEMO notes the respondent's support for the proposed change. AEMO requests the respondent to raise new ICF for extending the change to the wider CR 6xxx.
31.	2.9.(k)		TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.

32.	4.3 Table 4-C		AGL	Noted: Suggest checking with Victorian DBs as there may be border crossings which are applicable, in which case the usage should be amended to the Victorian DBs Distribution areas, as opposed to a jurisdiction.	AEMO notes that none of the small customer NMIs are across borders and hence the usage will remain as jurisdictional.
33.	4.3 Table 4-C		Alinta Energy	Alinta Energy conditionally supports this proposal. The ability for the MC to object to small NMI's in Victoria should be time based and linked to the current order in council. AEMO may want to consider if making this state based is the best solution, it may be better making this DB based to ensure the is no confusion in state border regions.	AEMO notes the respondent's support for the proposed change. AEMO also refers to response in Table 1, item 32.
34.	4.3 Table 4-C		AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
35.	4.3 Table 4-C		CitiPower Powercor	CitiPower Powercor supports the reintroduction of this objection code.	AEMO notes the respondent's support for the proposed change.
36.	4.3 Table 4-C		Energy Queensland	No comment	
37.	4.3 Table 4-C		Evoenergy	No comment	
38.	4.3 Table 4-C		Intellihub	N/A	
39.	4.3 Table 4-C		Origin Energy	Origin supports the proposed change. The change could also be expanded to allow only the FRMP to object as BADPARTY for all SMALL NMI's. Under the Rules, an MC is not allowed to self-appoint to any small NMI, but no control exists to prevent it. Data can be provided to show that MC's are still self-appointing to small NMIs in all States. This variation could also be applied in the large market as Origin reports that MCs occasionally self nominate in this market too.	AEMO notes the respondent's support for the proposed change. AEMO requests the respondent to raise a new ICF to allow only the FRMP to object as BADPARTY for all SMALL NMI's.

40.	4.3 Table 4-C		Powermetric Metering	No comment	
41.	4.3 Table 4-C		Red Energy and Lumo Energy	Red and Lumo support this change, noting the mention of exclusion for NMI's which have a legitimate contestable MC as is the case in VIC: *'this excludes cases where the NMIs have legitimate contestable MCs, an example of those NMIs are the ones that had contestable MCs before VIC AMI (i.e. pre- 1 July 2009) who are still permitted to be the MCs for the NMIs under the VIC AMI Orders in Council.'*	AEMO notes the respondent's support for the proposed change.
42.	4.3 Table 4-C		Simply Energy	Supportive of the change as long as it excludes cases where the NMIs have legitimate contestable MCs, including contestable MCs before VIC AMI (i.e. pre- 1 July 2009) who are still permitted to be the MCs for the NMIs under the VIC AMI Orders in Council.	AEMO notes the respondent's support for the proposed change.
43.	4.3 Table 4-C		TasNetworks	No comment.	
44.	4.3 Table 4-C		United Energy	United Energy supports the reintroduction of this objection code.	AEMO notes the respondent's support for the proposed change.

<table>
<tr><td>45.</td><td>4.4 Table 4-D</td><td></td><td>AGL</td><td>This table seems to duplicate information in the amended sections, as the jurisdiction is named in both the load column and the jurisdiction column and the definition of the MWhr limits isn't shown.
Suggest the table could look something like this:<table><tr><td>Code</td><td>Description</td><td>Jurisdiction</td></tr><tr><td>Large</td><td>Annual Load >=100 MWh</td><td>Australian Capital Territory
New South Wales
Queensland</td></tr><tr><td></td><td>Annual Load >=150 MWh</td><td>Tasmania</td></tr><tr><td></td><td>Annual Load >=160 MWh</td><td>South Australia
Victoria</td></tr><tr><td></td><td></td><td></td></tr><tr><td>Small</td><td>Annual Load <100 MWh</td><td>Australian Capital Territory
New South Wales
Queensland</td></tr><tr><td></td><td>Annual Load <150MWh</td><td>Tasmania</td></tr><tr><td></td><td>Annual Load <160MWh</td><td>South Australia
Victoria</td></tr></table></td><td>AEMO will apply the statement "The NMI Classification Codes 'LARGE' and 'SMALL' are based on the total annual load of the NMI as per Table 4-D' and rationalise the table as per Section 4.4.3 of the Draft Report.</td></tr>
<tr><td>46.</td><td>4.4 Table 4-D</td><td></td><td>Alinta Energy</td><td>Alinta Energy supports this amendment.</td><td>AEMO notes the respondent's support for the proposed change.</td></tr>
<tr><td>47.</td><td>4.4 Table 4-D</td><td></td><td>AusNet Services</td><td>No Issue with this amendment</td><td>AEMO notes the respondent's support for the proposed change.</td></tr>
<tr><td>48.</td><td>4.4 Table 4-D</td><td></td><td>Endeavour Energy</td><td>AEMO described the issue being that MCs were using, as per AEMO's guidance, the NMI Classification Code to determine if a customer is a small or large. However, the definition of the NMI Classification Code does not align with the definition of a small and large customer as per the NERL (noting that NERR defines who is a small and Large customer with jurisdictional instruments define the threshold that separates a small and large customer). Hence, AEMO is proposing to redefine the</td><td>AEMO notes the respondent's feedback.

The NMI Classification Codes are intended to be complemented by the Customer Classification Codes ('CCCs') and Customer Threshold Codes ('CTCs'). The CCC and CTC fields reflect the NECF.</td></tr>
</table>

				definition of the NMI Classification Code to align with the jurisdictional thresholds. NSW defines small customer as: • all residential customers (regardless of how much energy they consume); and • a business customer who consumes less than 100MWh of energy per year And a large customer as: • a business customer who consumes 100MWh or more energy per year; or • a business customer who, in aggregate of 2 or more business premises, consume in total 100MWh or more energy per year As defined, the determination of a small or large customer is dependent not only on the annual consumption, but also the type of customer and whether more than one business premises are to be considered. Therefore, we believe that redefining the NMI Classification Code will be insufficient as it only focuses on the consumption threshold part of the small or large customer definition. We note that when the National Energy Consumer Framework (NECF) was implemented, which introduced the definition of small and large customers, AEMO created two new fields in MSATS to accommodate this – the NMI Customer Classification Code (CCC) and the NMI Customer Threshold Code (CTC). The CCC is used by the FRMP to define whether the customer is residential or business and the CCC is used by the LNSP to define the annual consumption for a business customer. We believe that the most optimal solution is for the MC to reference the two fields and recommend that AEMO monitors compliance through weekly performance reports or via the annual MC audit.	The NERL includes the following definitions: • A "small customer" is a residential customer, or a business customer who consumes energy at business premises 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 different jurisdiction. • A "large customer" is a business customer who consumes energy at business premises at or above the relevant Small Business Customer Consumption Threshold (NERL, section 5(3)). AEMO proposes to revise Table 4-D to the current jurisdictional requirements and definitions This proposal is: • 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 <40 MWh.** • To be informed by a materiality analysis which AEMO is performing. • Likely to imply consequential changes to CCCs and CTCs.

49.	4.4 Table 4-D		Energy Queensland	No comment	
50.	4.4 Table 4-D		Evoenergy	Disagree with change. The National Energy Retail Regulations (and NERL & NERR) were created for Consumer Protections and contractual arrangements, thus setting the boundaries on what retailer and distributor standing offers and contracts were applicable. It was questioned during the consultation process 2011 why these were not aligned to metrology levels. Answer was the above. From these Rules, new fields were added to MSATS to accommodate the thresholds (CTC and CCC). The NER v76 had the classification of Small and Large Customers added (Nov 2015) that referred to the NERL for the first time. Does this mean that the CATS Procedures, and MSATS, have been non-compliant since then? I say no as this CATS clause is non-relational to contractual thresholds but aligned to metering type thresholds. Aligning this will mean that all Residential customers must be classified as Small (see NERL Sec 5), regardless of their connection size or consumption level. This means new transfer rules, new reports etc that AEMO must put in place to ensure this applies. I thought MSATS was agnostic to Residential or Commercial? It also means you need a new classification for those small business customers between 40 and 100 MWh. Must now introduce new category of "MEDIUM". Must now have new transfer rules to apply to this category. This will add duplicate locations now with CTC and NMI Classification. Remove the CTC as it is no longer required. Will this trigger a Metrology Threshold Breach as it is linked to same field and values? Are Retailers ready for the large volume of MFIN that will come from this?	AEMO notes respondent's comment and refers to the response in Table 1, item 48.
51.	4.4 Table 4-D		Intellihub	N/A	

52.	4.4 Table 4-D		Origin Energy	Origin does not support this change as most Participant systems are built around the current table in the MSATS Procedures with 160/100MWh as the threshold between small and large customer annual consumptions.	AEMO notes respondent's comment. The proposal changes the MSATS Procedures: CATS, Table 4-D NMI Classification Codes, to reflect the current jurisdictional requirements and definitions of Small and Large customers. Currently, Table 4-D does not reflect these jurisdictional requirements and definitions
53.	4.4 Table 4-D		Powermetric Metering	No comment	
54.	4.4 Table 4-D		Red Energy and Lumo Energy	Red and Lumo support the change to Table 4-D NMI Classification Codes to reflect the current jurisdictional requirements of Small and Large customers. Furthermore, table 4-D should have *'VIC'* in the description column instead of *'Victoria'*, which aligns also with the jurisdictions codes also from table 4-B. Procedure	AEMO notes the respondent's support for the proposed change and refers to the response in Table 1, item 45.
55.	4.4 Table 4-D		Simply Energy	No comment	
56.	4.4 Table 4-D		TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
57.	12.6.3		AGL	Check Reference	AEMO notes respondent's comment and refers to response in Table 1, item 17.
58.	13.3.6 Table 13-H		AGL	Noted	
59.	13.3.6 Table 13-H		Alinta Energy	Alinta Energy supports this amendment.	AEMO notes the respondent's support for the proposed change.
60.	13.3.6 Table 13-H		AusNet Services	AusNet Services supports the reinstatement of BADPARTY objection code to allow the current MC to object to a change of Responsible Person (RP) role where the NMI classification is 'SMALL' for Victoria only.	AEMO notes the respondent's support for the proposed change.

				Making this change gives Victorian DNSPs the ability to correct retailer or MC breaches of the Victorian Electricity Industry Act, without initiating change requests as MC to appoint themselves as new MCs via change code requests 6300 and 6301, which may contravene the CATS procedures.	
61.	13.3.6 Table 13-H		CitiPower Powercor	CitiPower Powercor supports the reintroduction of this objection code.	AEMO notes the respondent's support for the proposed change.
62.	13.3.6 Table 13-H		Energy Queensland	No comment	
63.	13.3.6 Table 13-H		Evoenergy	Agree with change	AEMO notes the respondent's support for the proposed change.
64.	13.3.6 Table 13-H		Intellihub	N/A	
65.	13.3.6 Table 13-H		Origin Energy	See above (under 4.3 table 4-C).	AEMO notes the respondent's support for the proposed change.
66.	13.3.6 Table 13-H		Powermetric Metering	No comment	
67.	13.3.6 Table 13-H		Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
68.	13.3.6 Table 13-H		Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
69.	13.3.6 Table 13-H		TasNetworks	No comment.	

70.	13.3.6 Table 13-H		United Energy	United Energy supports the reintroduction of this objection code.	AEMO notes the respondent's support for the proposed change.

Table 3 MSATS Procedures: WIGS

No.	Section	Consulted person	Issue	AEMO response
1.	Version	AGL	Noted	
2.	Version	Alinta Energy	Alinta Energy supports this amendment.	AEMO notes the respondent's support for the proposed change.
3.	Version	AusNet Services	No Issue with this amendment	
4.	Version	Energy Queensland	No comment	
5.	Version	Evoenergy	No comment	
6.	Version	Intellihub	N/A	
7.	Version	Origin Energy	Origin supports the change to align version numbering across the two Procedures, MSATS & WIGS.	AEMO notes the respondent's support for the proposed change.
8.	Version	Powermetric Metering	No comment	
9.	Version	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
10.	Version	Simply Energy	No comment	
11.	Version	TasNetworks	Noted	

Table 4 Metrology Procedure: Part A

No.	Section	Consulted person	Issue	AEMO response
1.	12.5	AGL	Noted	
2.	12.5	Alinta Energy	No comment	
3.	12.5	AusNet Services	Changes to section 12.5 of the Metrology Procedure Part A may inadvertently remove the sample testing metering verification obligation from AMI meters, and therefore require more onerous on-site verification coordinated with back office staff, as required by the MDP SLP 4.2 when conditions for clause 4.2(b) are not met. The proposed obligation to data validate (verify) "all Vic AMI Meters" at time of commissioning (i.e. all New and Replacement meters) lifts the data verification volumes to at 15-20,000 per year. This is well in excess of the 3,000 per year undertaken currently across all 3 Networks under the existing 12.5 sampling regime. Sample Metrology Testing and sample Verification Testing, have been accepted approaches for all whole current "mass market" metering assets, there is no justification to now exclude the VicAMI Meters from those testing regimes. AusNet Services does not consider that there is any requirement identified in the NER, that should require AEMO to now cause remotely read whole current Vic AMI Meters to be treated differently to Whole Current Small Customer Metering Installations, or in fact different to a Manually read Vic AMI Meter in terms of performing sample Verification/Validations. We believe this was not intended with the proposed change, and accordingly we recommend the words "type 4A, 5 and 6" to "manually read metering installations", or alternatively making refer to VIC AMI specifically. AusNet Services considers that "verification" is still suitable wording under section 12.5. Obligations to verify metering data are effective in ensuring MCs undertake all necessary checks. Replacing verification with Validation may just imply the use of MDP Validation rules on metering data collected. Counterintuitively, this may result in less robust processing of sample tests. What are AEMO's intentions and expectations by introducing "Validation" as a term in this section? Please explain and specify.	AEMO notes respondent's comment and agrees to revert the wording to 'Verification' and has also added a definition for 'Verification'. AEMO has reverted the wording to Verification, verify etc. in relevant sections, clauses and procedures. AEMO has amended the definition of 'Validation' to indicate that it is done by the MDP. AEMO has corrected the wording in the definition of VICAMI Meter from 'of MRIM' to 'or MRIM'. AEMO notes that the changes proposed in Metrology Procedure Part A reflected the ICF proposal and CIP provided by United Energy and reflects the intent of section 12.5 to cover manually read metering installations when referring to Type 4a, Type 5 (MRIMs) and Type 6.

4.	12.5	CitiPower Powercor	CitiPower Powercor note the objective of ICF19 is to better define which metering installations, in section 12.5 of the Metrology Procedure Part A, the obligation applies to and to set mandatory requirements for a specific sample testing methodology. We believe the proposed changes have resulted in exclusion of whole current Victorian AMI metering installations (on the basis they are 'remotely read') from accessing clause 12.5 of this procedure. It is unclear, to our business, why reference to type 5 metering has been removed and replaced with terminology relating to 'manually read metering installations' but at the same time still retaining the inclusion of 'remotely read' whole current small customer metering installations (i.e. allowance for both remotely read and manually min spec meters but not remotely read AMI meters). As Vic AMI metering installations are not *small customer metering installations*, as defined by the NER, proposed changes will result in them all being validated as per the requirements of Service Level Procedure Metering Provider (SLP MP) Services clause 4.2(a)(ii) (i.e. all of them on commissioning). CitiPower Powercor do not agree with the decision to exclude whole current Vic AMI meters from the sample based verification/validation processes laid out in section 12.5 of the Metrology Procedure Part A, nor the sample based verification/validation processes laid out in clause 4.2 (a) (iii) of the SLP Metering Provider Services. The proposed obligation to data to validate (verify) 'all Vic AMI meters' at time of commissioning (i.e. all new and replacement meters) lifts the data verification volumes to approximately 30k p.a., well in excess of the approximately 2k p.a. undertaken currently across all both networks under the existing 12.5 sampling regime. Sample metrology testing and sample verification testing, have been accepted approaches for all whole current 'mass market' metering assets, there is no justification to now exclude the Vic AMI meters from those testing regimes. Our business does not consider that there is any requirement identified in the NER, that should require AEMO to now cause 'remotely read' whole current Vic AMI meters to be treated differently to whole current small customer metering installations, or in fact different to a manually read Vic AMI meters in terms of performing sample verification/validations. NER Ch 10 Glossary	AEMO notes respondent's comment and refers to the response in Table 3, item 3. AEMO notes that the proposed change related to AQL is not in scope and requests the respondent to raise a new ICF for consideration by the ERCF.

small customer metering installation A metering installation in respect of the connection point of a small customer which meets the minimum services specification or which is required to meet the minimum services specification under clause 7.8.3(a), clause 7.8.4(c) or clause 7.8.4(h)(2).

NER 7.8.3 Small customer metering installations

(b) *AEMO* must establish, maintain and *publish* procedures relating to the *minimum services specification* that set out for each service specified in the *minimum service specification*:

(1) minimum service levels, including service availability and completion timeframes; and

(2) minimum standards, including completion rates against the service levels and accuracy requirements.

(c) The procedures established under paragraph (b) may also include technical requirements of one or more of the services specified in the *minimum services specification*.

MSATS CATS Procedures

VIC AMI a relevant *metering installation* as defined in clause 9.9C of the NER.

We also believe the prposed changes are inconsistent with the NER as defined within Victoria under the Victorian Government NEVA Order in Council:

National Electricity (Victoria) Act 2005

2017 MINISTERIAL ORDER UNDER SECTION 16BA

relevant metering installation, in relation to a *Local Network Service Provider*, means a *metering installation* for a small customer connected to the Provider's network but does not include a *metering installation* of that kind that:

a) was installed before 1 July 2009 and in respect of which, as at that date, the *financially responsible Market Participant* was the responsible person; or

b) was installed on or after 1 July 2009, by a *financially responsible Market Participant* as part of the *financially responsible Market Participant's* ordinary replacement cycle of *metering installations* of that kind and in respect of which the *financially responsible Market Participant* was, as at 1 July 2009, the responsible person; or

c) is a type 1 metering installation; or

d) is a type 2 metering installation; or
e) is a type 3 metering installation; or
f) is a type 7 metering installation; or
g) is located at a high voltage connection point.

small customer means a *retail customer* with an annual volume consumption of electricity of less than 160 MWh.

Victorian Specifications means the Functionality Specification and the Service Levels Specification within the meaning of the AMI (Obligations to Install Meters) Order.

volume consumption means the volume of energy consumed by a customer at the relevant *connection point* calculated in accordance with clause 3.5(d) of the metrology procedure Part A as amended from time to time.

(b) In this Chapter 7, a relevant metering installation that, but for it being capable of remote acquisition, would be a type 5 or type 6 metering installation is taken to be a type 5 or type 6 metering installation respectively.

(c) The minimum services specifications referred to in this Chapter 7 do not apply in Victoria in respect of relevant metering installations. Schedule 7.5 does not apply in Victoria in respect of relevant metering installations. The Victorian Specifications apply in Victoria in respect of relevant metering installations.

(e) In this Chapter 7, for the purposes of clause 7.8.9(b) and (c), a relevant metering installation with a complying remotely read interval meter is a type 5 metering installation that has been altered to make it capable of remote acquisition.'

Remotely read whole current Vic AMI meters have no greater data accuracy risk than remotely read whole current min spec meters (in fact it would be argued that due to the homogenous mesh radio network the risk of data transposition due to sim card ID etc is actually far less), are applied to the same <160MWh size of small customers and have the same meter class accuracy. Neither does the mesh create a greater risk for a remotely read Vic AMI meter than a Vic AMI meter being operated as a manually read interval meter (type 5).

CitiPower Powercor therefore recommend the following amendments be incorporated in this section:

12.5. Validation of Metering Data for whole current Small Customer Metering Installations, whole current Vic AMI installations, Manually Read Metering Installations and Type 7 Metering Installations

			To facilitate the Validation of metering data for whole current small customer metering installations, whole current Vic AMI installations, manually read metering installations and type 7 metering installations: (i) Unless the MC has developed an asset management strategy that meets the intent of this clause and is approved by AEMO, the validations must be in accordance with this clause. (ii) (a) Each MC must ensure that a Sample Test Plan is established and maintained in accordance with *Australian Standards* "AS 1199: Sampling procedures for inspection by attributes – Sampling schemes indexed by Acceptance Quality Limit (AQL) for lot-by-lot inspection". (b) Each MC must ensure that the Sample Test Plan is set at General Inspection Level II and initially selected to be a normal inspection sample size using an AQL of 1.5, or Special Inspection Level S4 with AQL 1.0. * Following on from the above proposed changes we recommend clause 4.2 of the SLP Meter Provider Services be updated as follows: 4.2. Metering Data Validation Requirements (a) Where a *metering installation* has *remote acquisition* capability: (iii) For whole current *small customer metering installations*, and whole current Vic AMI installations, that *metering data* is verified in accordance with section 12.5 of Metrology Procedure: Part A; or (iv) otherwise accordance with the MC asset management strategy that meets the intent of this clause and is approved by AEMO.	
5.	12.5	Energy Queensland	No comment	
6.	12.5	Evoenergy	Agree with change Please reconsider if the heading and first sentence here is relevant. If you removed the word "Data" from the heading and add it the first sentence, it would make this clause a lot more relevant to what the requirements are below. Alternatively have "…metering and metering data…" as the header Suggested Header Validation of Metering for whole current Small Customer Metering Installations, Manually Read Metering Installations Type 4A, 5, 6, and Type 7 Metering Installations First sentence to now read	AEMO notes the respondent's support for the proposed change and refers to the response in Table 3, item 3.

			To facilitate the Validation of *metering* and *metering data*:	
7.	12.5	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
8.	12.5	Jemena	AEMO has excluded whole current Victorian AMI Metering installations from accessing section 12.5 of the procedure, by removing reference to type 5 metering and replacing it with terminology relating to "Manually Read Metering Installations", but retaining "whole current small customer metering installations". We do not support AEMO's decision to exclude whole current Victorian AMI Meters from the sample based Validation processes laid out in section 12.5 of the Metrology Procedure A, nor the sample based Verification/Validation processes laid out in clause 4.2 (a) (iii) of the SLP Metering Provider Services. We note Victorian AMI metering installations are not *small customer metering installations*, as defined by the NER. The procedures must allow AMI meters to be validated as per the requirements of Service Level Procedure Metering Provider Services clause 4.2(a)(ii). We propose the below amendment to include VIC AMI in 12.5. 12.5. Validation of Metering Data for whole current Small Customer Metering Installations, whole current Vic AMI installations, Manually Read Metering Installations and Type 7 Metering Installations Unless the Metering Coordinator has developed an asset management strategy that meets the intent of this clause and is approved by AEMO, the validations must be in accordance with this clause. To facilitate the Validation of *metering data* for whole current *small customer metering installations*, whole current Vic AMI installations, manually read *metering installations* and type 7 *metering installations*: (a) Each MC must ensure that a Sample Test Plan is established and maintained in accordance with *Australian Standards* "AS 1199: Sampling procedures for inspection by attributes – Sampling schemes indexed by Acceptance Quality Limit (AQL) for lot-by-lot inspection". (b) Each MC must ensure that the Sample Test Plan is set at General Inspection Level II and initially selected to be a normal inspection sample size using an AQL of 1.5, or Special Inspection Level S4 with AQL 1.0. * Note* This reflects Jemena's existing sampling rate based on its already approved Variables Sample Testing.	AEMO does not agree with the proposed change, as according to the Service Level Procedure Metering Provider Services, the process must be followed under certain types of metering installations. AEMO notes that the proposed change related to AQL is not in scope and requests the respondent to raise a new ICF for consideration by the ERCF.

			The references to an approved asset management strategy in 12.5(i) above and 4.2 (a) (iv) below would remove the need to explicitly address it within 12.5 (b).	
9.	12.5	Origin Energy	Origin supports the change to align MSATS terminology with SLPs.	AEMO notes the respondent's support for the proposed change.
10.	12.5	Powermetric Metering	No comment	
11.	12.5	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
12.	12.5	Simply Energy	No comment	
13.	12.5	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
14.	12.5	United Energy	United Energy note the objective of ICF19 is to better define which metering installations, in section 12.5 of the Metrology Procedure Part A, the obligation applies to and to set mandatory requirements for a specific sample testing methodology. We believe the proposed changes have resulted in exclusion of whole current Victorian AMI metering installations (on the basis they are 'remotely read') from accessing clause 12.5 of this procedure. It is unclear, to our business, why reference to type 5 metering has been removed and replaced with terminology relating to 'manually read metering installations' but at the same time still retaining the inclusion of 'remotely read' whole current small customer metering installations (i.e. allowance for both remotely read and manually min spec meters but not remotely read AMI meters). As Vic AMI metering installations are not *small customer metering installations*, as defined by the NER, proposed changes will result in them all being validated as per the requirements of Service Level Procedure Metering Provider (SLP MP) Services clause 4.2(a)(ii) (i.e. all of them on commissioning). United Energy do not agree with the decision to exclude whole current Vic AMI meters from the sample based verification/validation processes laid out in section 12.5 of the Metrology Procedure Part A, nor the sample based verification/validation processes laid out in clause 4.2 (a) (iii) of the SLP Metering Provider Services.	AEMO notes respondent's comment and refers to the response in Table 3, item 3.

The proposed obligation to data to validate (verify) 'all Vic AMI meters' at time of commissioning (i.e. all new and replacement meters) lifts the data verification volumes to approximately 30k p.a., well in excess of the approximately 2k p.a. undertaken currently across all both networks under the existing 12.5 sampling regime.

Sample metrology testing and sample verification testing, have been accepted approaches for all whole current 'mass market' metering assets, there is no justification to now exclude the Vic AMI meters from those testing regimes.

Our business does not consider that there is any requirement identified in the NER, that should require AEMO to now cause 'remotely read' whole current Vic AMI meters to be treated differently to whole current small customer metering installations, or in fact different to a manually read Vic AMI meters in terms of performing sample verification/validations.

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small customer metering installation A metering installation in respect of the connection point of a small customer which meets the minimum services specification or which is required to meet the minimum services specification under clause 7.8.3(a), clause 7.8.4(c) or clause 7.8.4(h)(2).

NER 7.8.3 Small customer metering installations

(b) *AEMO* must establish, maintain and *publish* procedures relating to the *minimum services specification* that set out for each service specified in the *minimum service specification*:

(1) minimum service levels, including service availability and completion timeframes; and

(2) minimum standards, including completion rates against the service levels and accuracy requirements.

(c) The procedures established under paragraph (b) may also include technical requirements of one or more of the services specified in the *minimum services specification*.

MSATS CATS Procedures

VIC AMI a relevant *metering installation* as defined in clause 9.9C of the NER.

We also believe the prposed changes are inconsistent with the NER as defined within Victoria under the Victorian Government NEVA Order in Council:

National Electricity (Victoria) Act 2005

2017 MINISTERIAL ORDER UNDER SECTION 16BA

relevant metering installation, in relation to a *Local Network Service Provider*, means a *metering installation* for a small customer connected to the Provider's network but does not include a *metering installation* of that kind that:

a) was installed before 1 July 2009 and in respect of which, as at that date, the *financially responsible Market Participant* was the responsible person; or

b) was installed on or after 1 July 2009, by a *financially responsible Market Participant* as part of the *financially responsible Market Participant's* ordinary replacement cycle of *metering installations* of that kind and in respect of which the *financially responsible Market Participant* was, as at 1 July 2009, the responsible person; or

c) is a type 1 metering installation; or

d) is a type 2 metering installation; or

e) is a type 3 metering installation; or

f) is a type 7 metering installation; or

g) is located at a high voltage connection point.

small customer means a *retail customer* with an annual volume consumption of electricity of less than 160 MWh.

Victorian Specifications means the Functionality Specification and the Service Levels Specification within the meaning of the AMI (Obligations to Install Meters) Order.

volume consumption means the volume of energy consumed by a customer at the relevant *connection point* calculated in accordance with clause 3.5(d) of the metrology procedure Part A as amended from time to time.

(b) In this Chapter 7, a relevant metering installation that, but for it being capable of remote acquisition, would be a type 5 or type 6 metering installation is taken to be a type 5 or type 6 metering installation respectively.

(c) The minimum services specifications referred to in this Chapter 7 do not apply in Victoria in respect of relevant metering installations. Schedule 7.5 does not apply in Victoria in respect of relevant metering installations. The Victorian Specifications apply in Victoria in respect of relevant metering installations.

(e) In this Chapter 7, for the purposes of clause 7.8.9(b) and (c), a relevant metering installation with a complying remotely read interval meter is a type 5

			metering installation that has been altered to make it capable of remote acquisition.' Remotely read whole current Vic AMI meters have no greater data accuracy risk than remotely read whole current min spec meters (in fact it would be argued that due to the homogenous mesh radio network the risk of data transposition due to sim card ID etc is actually far less), are applied to the same <160MWh size of small customers and have the same meter class accuracy. Neither does the mesh create a greater risk for a remotely read Vic AMI meter than a Vic AMI meter being operated as a manually read interval meter (type 5). United Energy therefore recommend the following amendments be incorporated in this section: 12.5. Validation of Metering Data for whole current Small Customer Metering Installations, whole current Vic AMI installations, Manually Read Metering Installations and Type 7 Metering Installations To facilitate the Validation of metering data for whole current small customer metering installations, whole current Vic AMI installations, manually read metering installations and type 7 metering installations: (i) Unless the MC has developed an asset management strategy that meets the intent of this clause and is approved by AEMO, the validations must be in accordance with this clause. (ii) (a) Each MC must ensure that a Sample Test Plan is established and maintained in accordance with *Australian Standards* "AS 1199: Sampling procedures for inspection by attributes – Sampling schemes indexed by Acceptance Quality Limit (AQL) for lot-by-lot inspection". (b) Each MC must ensure that the Sample Test Plan is set at General Inspection Level II and initially selected to be a normal inspection sample size using an AQL of 1.5, or Special Inspection Level S4 with AQL 1.0. * Following on from the above proposed changes we recommend clause 4.2 of the SLP Meter Provider Services be updated as follows: 4.2. Metering Data Validation Requirements (a) Where a *metering installation* has *remote acquisition* capability: (iii) For whole current *small customer metering installations*, and whole current Vic AMI installations, that *metering data* is verified in accordance with section 12.5 of Metrology Procedure: Part A; or	

			(iv) otherwise accordance with the MC asset management strategy that meets the intent of this clause and is approved by AEMO.	

Table 5 Metrology Procedure: Part B

No.	Section	Consulted person	Issue	AEMO response
1.	2.4	AGL	Noted	
2.	2.4	Alinta Energy	Alinta Energy supports this amendment.	AEMO notes the respondent's support for the proposed change.
3.	2.4	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
4.	2.4	Endeavour Energy	We believe that the effective start date for this change should be 9 March 2021 when AEMO will be accepting NEM12 files in MSATS production.	AEMO notes that the changes are aligned to the 5MS effective date of 1 October 2021 and are optional for use prior to 1 October 2021.
5.	2.4	Energy Queensland	No comment	
6.	2.4	Evoenergy	Strongly Agree	AEMO notes the respondent's support for the proposed change.
7.	2.4	Intellihub	Agree as not currently used	AEMO notes the respondent's support for the proposed change.
8.	2.4	Origin Energy	Origin supports the change to remove the 'N' Quality Flag as it is superfluous in the current market Procedures.	AEMO notes the respondent's support for the proposed change.
9.	2.4	Powermetric Metering	No comment	
10.	2.4	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
11.	2.4	Simply Energy	Supports the change to remove the redundant flag 'N' from Section 2.4 of the Metrology Procedure Part B and Appendix C of the MDFF Specification NEM12 & NEM13.	AEMO notes the respondent's support for the proposed change.
12.	2.4	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
13.	13.2.2 (a)(v)	AGL	Noted	

14.	13.2.2 (a)(v)	Alinta Energy	No comment	
15.	13.2.2 (a)(v)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
16.	13.2.2 (a)(v)	Endeavour Energy	We support removing the 'End User Details' from the Inventory Table	AEMO notes the respondent's support for the proposed change.
17.	13.2.2 (a)(v)	Energy Queensland	No comment	
18.	13.2.2 (a)(v)	Evoenergy	Strongly endorse change	AEMO notes the respondent's support for the proposed change.
19.	13.2.2 (a)(v)	Intellihub	N/A	
20.	13.2.2 (a)(v)	Origin Energy	Origin supports the change to remove the requirement for 'End User Details' from the Inventory Table. This attribute should be flagged as optional for Market Participants as development may be completed in systems already per the 5MS project in some cases.	AEMO notes the respondent's support for the proposed change. As there is no optional available, the attribute is either removed or not, AEMO intends to remove the requirement.
21.	13.2.2 (a)(v)	Powermetric Metering	No comment	
22.	13.2.2 (a)(v)	Red Energy and Lumo Energy	Red and Lumo have no comments on this change proposal.	
23.	13.2.2 (a)(v)	Simply Energy	No impact/comments, as it related to non-contestable unmetered loads only.	
24.	13.2.2 (a)(v)	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
25.	13.3.2 (a)(iii)	AGL	Noted	
26.	13.3.2 (a)(iii)	Alinta Energy	No comment	
27.	13.3.2 (a)(iii)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.

28.	13.3.2 (a)(iii)	Endeavour Energy	We support removing the 'End User Details' from the Inventory Table	AEMO notes the respondent's support for the proposed change.
29.	13.3.2 (a)(iii)	Energy Queensland	No comment	
30.	13.3.2 (a)(iii)	Evoenergy	Strongly encourage change	AEMO notes the respondent's support for the proposed change.
31.	13.3.2 (a)(iii)	Intellihub	N/A	
32.	13.3.2 (a)(iii)	Origin Energy	Origin supports the change to remove the requirement for 'End User Details' from the Inventory Table. This attribute should be flagged as optional for Market Participants as development may be completed in systems already per the 5MS project in some cases.	AEMO notes the respondent's support for the proposed change. AEMO refers to the response in Table 4, item 20.
33.	13.3.2 (a)(iii)	Powermetric Metering	No comment	
34.	13.3.2 (a)(iii)	Red Energy and Lumo Energy	Red and Lumo have no comments on this change proposal.	
35.	13.3.2 (a)(iii)	Simply Energy	No impact/comments, as it related to non-contestable unmetered loads only.	
36.	13.3.2 (a)(iii)	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
37.	13.5.2 (a)(v)	AGL	Noted	
38.	13.5.2 (a)(v)	Alinta Energy	No comment	
39.	13.5.2 (a)(v)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
40.	13.5.2 (a)(v)	Endeavour Energy	We support removing the 'End User Details' from the Inventory Table	AEMO notes the respondent's support for the proposed change.
41.	13.5.2 (a)(v)	Energy Queensland	No comment	

42.	13.5.2 (a)(v)	Evoenergy	Strongly support this change	AEMO notes the respondent's support for the proposed change.
43.	13.5.2 (a)(v)	Intellihub	N/A	
44.	13.5.2 (a)(v)	Origin Energy	Origin supports the change to remove the requirement for 'End User Details' from the Inventory Table. This attribute should be flagged as optional for Market Participants as development may be completed in systems already per the 5MS project in some cases.	AEMO notes the respondent's support for the proposed change. AEMO refers to the response in Table 4, item 20.
45.	13.5.2 (a)(v)	Powermetric Metering	No comment	
46.	13.5.2 (a)(v)	Red Energy and Lumo Energy	Red and Lumo have no comments on this change proposal.	
47.	13.5.2 (a)(v)	Simply Energy	No impact/comments, as it related to non-contestable unmetered loads only.	
48.	13.5.2 (a)(v)	TasNetworks	Agreed	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(a)(iii) & (b)	AGL	Noted	
2.	4.2(c)(ii) & (d)	AGL	Noted	
3.	4.2(a)(iii) & (b)	Alinta Energy	No comment	
4.	4.2(c)(ii) & (d)	Alinta Energy	No comment	
5.	4.2(a)(iii) & (b)	AusNet Services	Changes to section 4.2 of the MDP SLP would have perverse and costly implications. The new obligation to Validate meter data when commissioning a meter would be costly as it increases meter testing for AusNet Services almost five-fold. AusNet Services considers that "verification" is still suitable wording under section 12.5. Obligations to verify metering data are effective in ensuring MCs undertake all necessary checks. Replacing verification with Validation may just imply the use of MDP Validation rules on metering data collected. Counterintuitively, this may result in less robust processing of sample tests. What are AEMO's expectations by introducing "Validation" as a term in this section? Please explain and specify.	AEMO notes respondent's comment and refers to response in Table 3, item 3.
6.	4.2(c)(ii) & (d)	AusNet Services	Changes to section 4.2 of the MDP SLP would have perverse and costly implications. The new obligation to Validate meter data when commissioning a meter would be costly as it increases meter testing for AusNet Services almost five-fold. AusNet Services considers that "verification" is still suitable wording under section 12.5. Obligations to verify metering data are effective in ensuring MCs undertake all necessary checks. Replacing verification with Validation may just imply the use of MDP Validation rules on metering data collected. Counterintuitively, this may result in less robust processing of sample tests.	AEMO notes respondent's comment and refers to response in Table 3, item 3.

			What are AEMO's expectations by introducing "Validation" as a term in this section? Please explain and specify.	
7.	4.2(a)(iii) & (b)	CitiPower Powercor	As stated in the consultation "AEMO has reviewed the usage of the terms 'validation' and 'verification' across the SLP MP Services and Metrology Procedure Part A. To eliminate confusion for the purpose of complying with Section 4.2 of the SLP MP Services, replaced 'verified' with 'Validated', 'verify' with 'Validate' and 'verification' with 'Validation' in Section 12.5 of Metrology Procedure Part A and Section 4.2 of the SLP MP. AEMO defines 'Validated' and 'Validation' in the Retail Electricity Market Procedures – Glossary and Framework. The term 'verification' refers to a one-off task to be performed by a Metering Provider Category B (MPB). However, the term 'validation' is an ongoing task of validating the metering data and normally is undertaken by a Metering Data Provider (MDP)". The requirements for verification of data have been prescribed under Section 12.5 of Metrology Procedure Part A, which potentially results in affected MPBs and MDPs in misinterpretation of the intention of the clause. CitiPower Powercor notes the objective of ICF-020 is to eliminate confusion between the terms 'validation' and 'verification' within the various metrology and service level procedures. However, we don't believe the confusion has been eliminated by removing all references to 'verification' and replacing it with 'validation'. In doing so, we believe the obligation has become inconsistent with the specific requirements of the NER. Previously, the activity associated with type 1 to 4 RRIM's was known as 'data commissioning' but it is now more correctly titled 'Verification' in the NER. 'Data commissioning' of each the Victorian AMI meters was considered onerous at the time of the AMI rollout and subsequently the Victorian Metrology Procedure and later Metrology Procedure Part A clause 12.5 was developed to allow for a sampling verification process to be applied to whole current mass market meters installed on small customers. The National Electricity Rules are quite clear as to the activity undertaken by the MPB in terms of undertaking 'Verification' at time of commissioning and at times of inspections and testing.	AEMO notes respondent's comment and refers to response in Table 3, item 3.

			S7.2.3 Capabilities of Metering Providers for metering installations types 1, 2, 3, 4 and 4A (e) Verification of *metering data* and *check metering data*, as follows: (1) on commissioning *metering data*, verification of all readings, constraints (adjustments) and multipliers to be used for converting raw data to consumption data; and (2) on inspection, testing and/or maintenance, verification that readings, constants and multipliers are correct by direct conversion of *meter* readings and check against the *metering database*. The intent of the NER is for Verification of 'all readings' to be taken to include Display and Index Registers and Interval Data (*Energy Data*). The National Electricity Rules are also prescriptive as to the activity undertaken by the MDP in terms of undertaking 'Verification' at time of commissioning (in conjunction with the MP) (see S7.3.3 (f) (1) and that this is separate to the processes of ongoing 'Validation' as part of the collection, processing and delivery of *metering data* to the market (see 7.3.3 (f) (2). S7.3.3 Capabilities of Metering Data Providers (f) Systems for the processing of *metering data* including: (1) processes for the verification and commissioning of *metering data* and relevant *NMI Standing Data* pertaining to each *metering installation* into the *metering data services database*; (2) processes for validation, substitution and estimation of *metering data;* (3) processes for the storage, adjustment and aggregation of *metering data*; and (4) the secure storage of historical data. We believe, the intent of the NER is for 'Verification' and commissioning of *metering data* in (f) (1) is different to 'Validation' of *metering data* in (f) (2). CitiPower Powercor recommends that AEMO align its procedures and glossary definitions with the described activities of the MPB and the MDP as outlined in the NER Schedule S7.2.3 & S7.3.3 (extracts above) and adopt the amendments as proposed below (excluding other amendments proposed in relation to ICF_019).	

			Additionally, the 'Verification' process is not performing 'Validation' for settlements ready data as defined in the NER Ch10: *Settlements ready data* *The metering data that has undergone a validation and substitution process by AEMO for the purpose of settlements and is held in the metering database.* The Verification processes in clause 12.5 of Metrology Procedure Part A and clause 4.2 of the SLP Meter Provision Services are not producing 'settlements ready data' and have not gone through the Validation processes laid down in the Metrology Process Part B sections 8 and 10. CitiPower Powercor recommends the following amendments: <u>Metrology Procedure Part A</u> The following are describing 'Verification' activities undertaken by the MPB in accordance with NER S7.2.3 (e) (i) & (ii) 12.5. Validation Verification of Metering Data for whole current Small Customer Metering Installations, Manually Read Metering Installations and Type 7 Metering Installations To facilitate the Validation Verification of *metering data* for whole current *small customer metering installations*, manually read *metering installations* and type 7 *metering installations*: (c) A test sample is deemed to have passed the Validation Verification test when the *metering data* stored in the *metering data services database* is consistent with the *energy data* stored in the *metering installation*. If the *metering data* stored in the *metering data services database* does not match the energy data stored in the *metering installation*, then the test sample is deemed to have failed the Validation Verification test and must be rectified. (d) Each MC must ensure the following steps are taken after each round of Validation Verification: (i) If the Sample Test Plan passes the acceptance number (Ac) criteria at a normal inspection sample size, continue to test using the normal inspection sample size for the next round. (e) Validation Verification tests must be conducted in accordance with the Sample Test Plan, at least once every 12 months. <u>Service Level Procedure – Meter Provision Services</u> The following are describing "Verification" activities undertaken by the MPB (with the assistance of the MDP) in accordance with NER S7.2.3 (e) (i) & (ii) 4.2. Metering Data Validation Verification Requirements	

			The MP must develop, maintain and operate processes and procedures for the Validation Verification of *interval metering data* with the Metering Data Provider (MDP) upon the installation or alteration of that *metering installation*, which must include processes to ensure that: (ii) For a *metering installation* that is not a whole current *small customer metering installation*, the measured and stored *interval energy data* within the *meter's* buffer is Validated Verified with the *interval metering data* as remotely read and stored within the MDP's *metering data services database*; or (b) For manually read *metering installations*, *metering data* is verified in accordance with clause 12.5 of the Metrology Procedure: Part A; (c) Where Validation Verification has failed or cannot reasonably be undertaken, the MP must inform the MDP and the Metering Coordinator (MC) that the *metering installation* cannot be Validation Verified and undertake wiring checks which visibly verify correct connection and phase relationships of *voltage* and current circuits and also undertake one or more of the following alternative measurements and commissioning checks to enable the MC and MP to confirm that the *metering installation* complies with the NER: Metrology Procedure Part B The 'Validation' activities undertaken in accordance with NER 7.3.3 (f) (2) are addressed in sections 2, 7, 8 and 10 of the Metrology Procedure Part B. The following are describing 'Verification' activities undertaken by the MDP (in conjunction with the MPB) in accordance with NER S7.3.3 (f) (1) 9. ~~VALIDATION~~ VERIFICATION AS PART OF THE REGISTRATION PROCESS 9.1. ~~Validation~~ Verification of Metering Installations – General Requirements MDPs must confirm that the *NMI* is registered in MSATS after any installation or change to a *metering installation* prior to the distribution of any *interval metering data* to AEMO or *Registered Participants* for the purposes of *settlements*. 9.2. ~~Validation~~ Verification of Metering Installations with Remote Acquisition of Metering Data MDPs must carry out the following Validations Verifications after any installation or change to a *metering installation* with *remote acquisition* of	

			metering data prior to the distribution of any *interval metering data* to AEMO or *Registered Participants* for the purposes of *settlements*: 9.3. ~~Validation~~ Verification for Manually Read Interval Metering Installations The MDP must carry out the following Validations Verifications in conjunction with the MP for manually read interval *metering installations* after any changes to a *metering installation* prior to the distribution of any *interval metering data* to AEMO or *Registered Participants* for the purposes of *settlements*: 9.4. Validation Verification for Metering Installations with Accumulated Metering Data 9.5. Validation Verification for Metering Installations with Calculated Metering Data MDPs must Validate Verify the *calculated metering data* on registration of all *metering installations* to verify ensure that the Inventory Tables, Load Tables and On/Off Tables are complete and correct for the specifics of the *metering installation*. AEMO definitions of 'Validated' and 'Validation' are listed below. Retail Electricity Market Procedures – Glossary and Framework *Validated* — *Metering data* that has passed Validation. *Validation* — A process to test the veracity and integrity of *metering data*. CitiPower Powercor recommends that this issue would be better resolved defining 'Verification'. Additionally, a definition for 'Verification' and 'Verified' be created that is consistent with the activities described in the NER S7.2.3 and NER S7.3.3. We recommend the following definitions be considered for use in Retail Electricity Market Procedures – Glossary and Framework: Validation is an ongoing process to determine the quality of '*Actual*' meter data to be sent to the market, or where *Validation* fails, to cause it to be '*Substituted*'. Verification is a one off process (by data commissioning at time of installation or via an approved sampling program) to confirm that the *energy data* stored in the *metering installation* (which is the prime facia data for the market) is	

			ensured to be the same as the *meter data* recorded in the *metering data services database* following the collection or reading process and inclusive of any scaling constants (i.e. it is still yet to be 'validated').	
8.	4.2(c)(ii) & (d)	CitiPower Powercor	See response to 4.2(a)(iii) & (b)	AEMO notes respondent's comment and refers to response in Table 3, item 3.
9.	4.2(a)(iii) & (b)	Energy Queensland	No comment	
10.	4.2(c)(ii) & (d)	Energy Queensland	No comment	
11.	4.2(a)(iii) & (b)	Evoenergy	Agree with change	AEMO notes the respondent's support for the proposed change.
12.	4.2(c)(ii) & (d)	Evoenergy	Agree with change	AEMO notes the respondent's support for the proposed change.
13.	4.2(a)(iii) & (b)	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
14.	4.2(c)(ii) & (d)	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
15.	4.2	Jemena	4.2. Metering Data Validation Requirements The MP must develop, maintain and operate processes and procedures for the Validation of *interval metering data* with the Metering Data Provider (MDP) upon the installation or alteration of that *metering installation*, which must include processes to ensure that: (a) Where a *metering installation* has *remote acquisition* capability: (iii) For whole current *small customer metering installations*, and whole current Vic AMI installations, *metering data* is verified in accordance with section 12.5 of Metrology Procedure: Part A; or (iv) Otherwise in accordance with the Metering Coordinators asset management strategy that meets the intent of this clause and is approved by AEMO.	AEMO notes respondent's comment and refers to response in Table 3, item 3.

16.	4.2(a)(iii) & (b)	Origin Energy	Origin supports the change in definition to eliminate any confusion between MP and MDP roles	AEMO notes the respondent's support for the proposed change.
17.	4.2(c)(ii) & (d)	Origin Energy	Origin supports the change in definition to eliminate any confusion between MP and MDP roles	AEMO notes the respondent's support for the proposed change.
18.	4.2(a)(iii) & (b)	Powermetric Metering	No comment	
19.	4.2(c)(ii) & (d)	Powermetric Metering	No comment	
20.	4.2(a)(iii) & (b)	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
21.	4.2(c)(ii) & (d)	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
22.	4.2(a)(iii) & (b)	Simply Energy	No comment	
23.	4.2(c)(ii) & (d)	Simply Energy	No comment	
24.	4.2(a)(iii) & (b)	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
25.	4.2(c)(ii) & (d)	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
26.	4.2(a)(iii) & (b)	United Energy	As stated in the consultation "AEMO has reviewed the usage of the terms 'validation' and 'verification' across the SLP MP Services and Metrology Procedure Part A. To eliminate confusion for the purpose of complying with Section 4.2 of the SLP MP Services, replaced 'verified' with 'Validated', 'verify' with 'Validate' and 'verification' with 'Validation' in Section 12.5 of Metrology Procedure Part A and Section 4.2 of the SLP MP. AEMO defines 'Validated' and 'Validation' in the Retail Electricity Market Procedures – Glossary and Framework. The term 'verification' refers to a one-off task to be performed by a Metering Provider Category B (MPB). However, the term 'validation' is an ongoing task of	AEMO notes respondent's comment and refers to response in Table 3, item 3.

validating the metering data and normally is undertaken by a Metering Data Provider (MDP)".

The requirements for verification of data have been prescribed under Section 12.5 of Metrology Procedure Part A, which potentially results in affected MPBs and MDPs in misinterpretation of the intention of the clause.

CitiPower Powercor notes the objective of ICF-020 is to eliminate confusion between the terms 'validation' and 'verification' within the various metrology and service level procedures.

However, we don't believe the confusion has been eliminated by removing all references to 'verification' and replacing it with 'validation'. In doing so, we believe the obligation has become inconsistent with the specific requirements of the NER.

Previously, the activity associated with type 1 to 4 RRIM's was known as 'data commissioning' but it is now more correctly titled 'Verification' in the NER.

'Data commissioning' of each the Victorian AMI meters was considered onerous at the time of the AMI rollout and subsequently the Victorian Metrology Procedure and later Metrology Procedure Part A clause 12.5 was developed to allow for a sampling verification process to be applied to whole current mass market meters installed on small customers.

The National Electricity Rules are quite clear as to the activity undertaken by the MPB in terms of undertaking 'Verification' at time of commissioning and at times of inspections and testing.

S7.2.3 Capabilities of Metering Providers for metering installations types 1, 2, 3, 4 and 4A

(e) Verification of *metering data* and *check metering data*, as follows:

(1) on commissioning *metering data*, verification of all readings, constraints (adjustments) and multipliers to be used for converting raw data to consumption data; and

(2) on inspection, testing and/or maintenance, verification that readings, constants and multipliers are correct by direct conversion of *meter* readings and check against the *metering database*.

The intent of the NER is for Verification of 'all readings' to be taken to include Display and Index Registers and Interval Data (*Energy Data*).

The National Electricity Rules are also prescriptive as to the activity undertaken by the MDP in terms of undertaking 'Verification' at time of commissioning (in

conjunction with the MP) (see S7.3.3 (f) (1) and that this is separate to the processes of ongoing 'Validation' as part of the collection, processing and delivery of *metering data* to the market (see 7.3.3 (f) (2).

S7.3.3 Capabilities of Metering Data Providers

(f) Systems for the processing of *metering data* including:

(1) processes for the verification and commissioning of *metering data* and relevant *NMI Standing Data* pertaining to each *metering installation* into the *metering data services database*;

(2) processes for validation, substitution and estimation of *metering data*;

(3) processes for the storage, adjustment and aggregation of *metering data*; and

(4) the secure storage of historical data.

We believe, the intent of the NER is for 'Verification' and commissioning of *metering data* in (f) (1) is different to 'Validation' of *metering data* in (f) (2).

CitiPower Powercor recommends that AEMO align its procedures and glossary definitions with the described activities of the MPB and the MDP as outlined in the NER Schedule S7.2.3 & S7.3.3 (extracts above) and adopt the amendments as proposed below (excluding other amendments proposed in relation to ICF_019).

Additionally, the 'Verification' process is not performing 'Validation' for settlements ready data as defined in the NER Ch10:

Settlements ready data

The metering data that has undergone a validation and substitution process by AEMO for the purpose of settlements and is held in the metering database.

The Verification processes in clause 12.5 of Metrology Procedure Part A and clause 4.2 of the SLP Meter Provision Services are not producing 'settlements ready data' and have not gone through the Validation processes laid down in the Metrology Process Part B sections 8 and 10.

CitiPower Powercor recommends the following amendments:

Metrology Procedure Part A

The following are describing 'Verification' activities undertaken by the MPB in accordance with NER S7.2.3 (e) (i) & (ii)

			12.5. Validation Verification of Metering Data for whole current Small Customer Metering Installations, Manually Read Metering Installations and Type 7 Metering Installations To facilitate the Validation Verification of *metering data* for whole current *small customer metering installations*, manually read *metering installations* and type 7 *metering installations*: (c) A test sample is deemed to have passed the Validation Verification test when the *metering data* stored in the *metering data services database* is consistent with the *energy data* stored in the *metering installation*. If the *metering data* stored in the *metering data services database* does not match the energy data stored in the *metering installation*, then the test sample is deemed to have failed the Validation Verification test and must be rectified. (d) Each MC must ensure the following steps are taken after each round of Validation Verification: (i) If the Sample Test Plan passes the acceptance number (Ac) criteria at a normal inspection sample size, continue to test using the normal inspection sample size for the next round. (e) Validation Verification tests must be conducted in accordance with the Sample Test Plan, at least once every 12 months. Service Level Procedure – Meter Provision Services The following are describing "Verification" activities undertaken by the MPB (with the assistance of the MDP) in accordance with NER S7.2.3 (e) (i) & (ii) 4.2. Metering Data Validation Verification Requirements The MP must develop, maintain and operate processes and procedures for the Validation Verification of *interval metering data* with the Metering Data Provider (MDP) upon the installation or alteration of that *metering installation*, which must include processes to ensure that: (ii) For a *metering installation* that is not a whole current *small customer metering installation*, the measured and stored *interval energy data* within the *meter's* buffer is Validated Verified with the *interval metering data* as remotely read and stored within the MDP's *metering data services database*; or (b) For manually read *metering installations*, *metering data* is verified in accordance with clause 12.5 of the Metrology Procedure: Part A; (c) Where Validation Verification has failed or cannot reasonably be undertaken, the MP must inform the MDP and the Metering Coordinator (MC) that the *metering installation* cannot be Validation Verified and undertake	

wiring checks which visibly verify correct connection and phase relationships of *voltage* and current circuits and also undertake one or more of the following alternative measurements and commissioning checks to enable the MC and MP to confirm that the *metering installation* complies with the NER:

Metrology Procedure Part B

The 'Validation' activities undertaken in accordance with NER 7.3.3 (f) (2) are addressed in sections 2, 7, 8 and 10 of the Metrology Procedure Part B.

The following are describing 'Verification' activities undertaken by the MDP (in conjunction with the MPB) in accordance with NER S7.3.3 (f) (1)

9. ~~VALIDATION~~ VERIFICATION AS PART OF THE REGISTRATION PROCESS

9.1. ~~Validation~~ Verification of Metering Installations – General Requirements

MDPs must confirm that the *NMI* is registered in MSATS after any installation or change to a *metering installation* prior to the distribution of any *interval metering data* to AEMO or *Registered Participants* for the purposes of *settlements*.

9.2. ~~Validation~~ Verification of Metering Installations with Remote Acquisition of Metering Data

MDPs must carry out the following Validations Verifications after any installation or change to a *metering installation* with *remote acquisition* of *metering data* prior to the distribution of any *interval metering data* to AEMO or *Registered Participants* for the purposes of *settlements*:

9.3. ~~Validation~~ Verification for Manually Read Interval Metering Installations

The MDP must carry out the following Validations Verifications in conjunction with the MP for manually read interval *metering installations* after any changes to a *metering installation* prior to the distribution of any *interval metering data* to AEMO or *Registered Participants* for the purposes of *settlements*:

9.4. Validation Verification for Metering Installations with Accumulated Metering Data

9.5. Validation Verification for Metering Installations with Calculated Metering Data

			MDPs must Validate Verify the *calculated metering data* on registration of all *metering installations* to verify ensure that the Inventory Tables, Load Tables and On/Off Tables are complete and correct for the specifics of the *metering installation*. AEMO definitions of 'Validated' and 'Validation' are listed below. Retail Electricity Market Procedures – Glossary and Framework *Validated* — *Metering data* that has passed Validation. *Validation* — A process to test the veracity and integrity of *metering data*. CitiPower Powercor recommends that this issue would be better resolved defining 'Verification'. Additionally, a definition for 'Verification' and 'Verified' be created that is consistent with the activities described in the NER S7.2.3 and NER S7.3.3. We recommend the following definitions be considered for use in Retail Electricity Market Procedures – Glossary and Framework: Validation is an ongoing process to determine the quality of '*Actual*' meter data to be sent to the market, or where *Validation* fails, to cause it to be '*Substituted*'. Verification is a one off process (by data commissioning at time of installation or via an approved sampling program) to confirm that the *energy data* stored in the *metering installation* (which is the prime facia data for the market) is ensured to be the same as the *meter data* recorded in the *metering data services database* following the collection or reading process and inclusive of any scaling constants (i.e. it is still yet to be 'validated').	
27.	4.2(c)(ii) & (d)	United Energy	See response to 4.2(a)(iii) & (b)	AEMO notes respondent's comment and refers to response in Table 3, item 3.
28.	4.4	AGL	Noted However, there should also be a reciprocal obligation on the Current MP to take that meter reading requested by the New MP and deliver that meter reading in an appropriate timeframe.	AEMO notes that MP's are not accredited to take meter readings and the MDP is responsible for meter readings.
29.	4.4(d)(i)	AGL	Suggest that for consistency the MP named in cl (d) should be the 'New MP', not the 'MP'.	AEMO notes that the clause relates to meter churning and not the role churning and applies to both current and new MP.

				AEMO has also identified that the clause 4.4(e) needs to change as follows: (e) The MP must provide the ~~New~~ MDP with formal confirmation of the new *metering installation* details and commissioning times.
30.	4.4	Alinta Energy	No comment	
31.	4.4	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
32.	4.4	CitiPower Powercor	See response to 4.2(a)(iii) & (b)	AEMO notes respondent's comment and refers to response in Table 3, item 3.
33.	4.4	Energy Queensland	No comment	
34.	4.4	Evoenergy	Agree with change	AEMO notes the respondent's support for the proposed change.
35.	4.4	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
36.	4.4	Origin Energy	Origin supports the change in definition to eliminate any confusion between MP and MDP roles	AEMO notes the respondent's support for the proposed change.
37.	4.4	Powermetric Metering	No comment	
38.	4.4	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
39.	4.4	Simply Energy	No comment	
40.	4.4	TasNetworks	Agreed	AEMO notes the respondent's support for the proposed change.
41.	4.4	United Energy	See response to 4.2(a)(iii) & (b)	AEMO notes respondent's comment and refers to response in Table 3, item 3.

Table 7 NEM RoLR Processes Part A and Part B

No.	Section	Consulted person	Issue	AEMO response
1.	17.2(a)	AGL	Noted	
2.	17.2(a)	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
3.	17.2(a)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
4.	17.2(a)	Energy Queensland	No comment.	
5.	17.2(a)	Evoenergy	Agree	AEMO notes the respondent's support for the proposed change.
6.	17.2(a)	Intellihub	N/A	
7.	17.2(a)	Origin Energy	Origin supports the proposed change. As a failed Retailer is unable to participate in the market, this change is consistent with preventing further transactions by that entity.	AEMO notes the respondent's support for the proposed change.
8.	17.2(a)	Powermetric Metering	No comment	
9.	17.2(a)	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
10.	17.2(a)	Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
11.	17.2(a)	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
12.	17.2(b)	AGL	Noted	
13.	17.2(b)	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
14.	17.2(b)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.

15.	17.2(b)	Energy Queensland	No comment.	
16.	17.2(b)	Evoenergy	Agree	AEMO notes the respondent's support for the proposed change.
17.	17.2(b)	Intellihub	N/A	
18.	17.2(b)	Origin Energy	Origin supports the proposed change. As a failed Retailer is unable to participate in the market, this change is consistent with preventing further transactions by that entity.	AEMO notes the respondent's support for the proposed change.
19.	17.2(b)	Powermetric Metering	No comment	
20.	17.2(b)	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
21.	17.2(b)	Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
22.	17.2(b)	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
23.	17.2(c)	AGL	While the word 'inactivate' is legitimate, it is however generally used in other contexts, and not the system access context, and could imply that the access has atrophied, rather than being blocked. AGL would suggest that for broader/clearer understanding 'deactivate' would be a more commonly understood word when related to user access or in fact, use the expression 'remove access' as has been used in the consultation, as this would imply a definitive action undertaken to stop access.	AEMO agrees with respondent's comment and will amend the wording to 'deactivate'.
24.	17.2(c)	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
25.	17.2(c)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
26.	17.2(c)	Energy Queensland	No comment.	
27.	17.2(c)	Evoenergy	Agree	AEMO notes the respondent's support for the proposed change.

28.	17.2(c)	Intellihub	N/A	
29.	17.2(c)	Origin Energy	Origin supports the proposed change. As a failed Retailer is unable to participate in the market, this change is consistent with preventing further transactions by that entity.	AEMO notes the respondent's support for the proposed change.
30.	17.2(c)	Powermetric Metering	No comment	
31.	17.2(c)	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
32.	17.2(c)	Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
33.	17.2(c)	TasNetworks	Agreed.	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	Noted	
2.	3.3.1(b)	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
3.	3.3.1(b)	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
4.	3.3.1(b)	Endeavour Energy	We believe that the effective start date for this change should be 9 March 2021 when AEMO will be accepting NEM12 files in MSATS production	AEMO notes respondent's comment and refers to the response in Table 4, item 4.
5.	3.3.1(b)	Energy Queensland	No comment.	
6.	3.3.1(b)	Evoenergy	Strongly agree with changes	AEMO notes the respondent's support for the proposed change.
7.	3.3.1(b)	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
8.	3.3.1(b)	Jemena	We propose this change is made as part of the 5MS work program.	AEMO notes that this change is part of 5MS work program.
9.	3.3.1(b)	Origin Energy	Origin supports the change – refer ICF_025 (see Metrology Procedures Part B 2.4 comments above).	AEMO notes the respondent's support for the proposed change.
10.	3.3.1(b)	Powermetric Metering	No comment	
11.	3.3.1(b)	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
12.	3.3.1(b)	Simply Energy	The ICF is related to removal of 'N' so the subclause can be left in MDFF procedures, with reference to 'N' deleted: Where no Interval values exist, the IntervalValue field must contain a value of zero (0) ~~and the QualityFlag field must have a value of "N".~~ A null value is not allowed in the quantity field of the NEM13 file.	AEMO agrees with respondent's comment and will amend the clause as proposed in the response.

13.	3.3.1(b)	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
14.	4.4	AGL	Noted	
15.	4.4	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
16.	4.4	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
17.	4.4	Endeavour Energy	We believe that the effective start date for this change should be 9 March 2021 when AEMO will be accepting NEM12 files in MSATS production	AEMO notes respondent's comment and refers to the response in Table 4, item 4.
18.	4.4	Energy Queensland	No comment.	
19.	4.4	Evoenergy	Agree with changes	AEMO notes the respondent's support for the proposed change.
20.	4.4	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
21.	4.4	Jemena	We propose this change is made as part of the 5MS work program.	AEMO notes respondent's comment and refers to the response in Table 7, item 8.
22.	4.4	Origin Energy	Origin supports the change – refer ICF_025 (see Metrology Procedures Part B 2.4 comments above).	AEMO notes the respondent's support for the proposed change.
23.	4.4	Powermetric Metering	No comment	
24.	4.4	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
25.	4.4	Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
26.	4.4	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
27.	4.5	AGL	Noted	

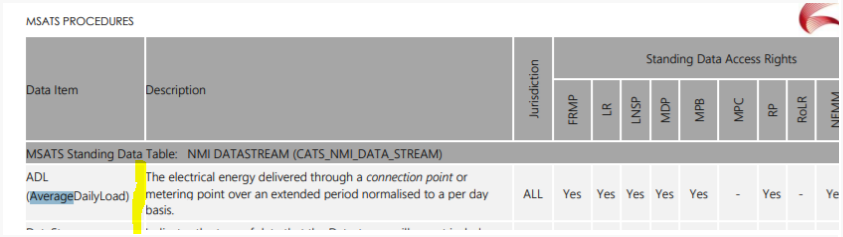
28.	4.5	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
29.	4.5	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.
30.	4.5	Endeavour Energy	We believe that the effective start date for this change should be 9 March 2021 when AEMO will be accepting NEM12 files in MSATS production	AEMO notes respondent's comment and refers to the response in Table 4, item 4.
31.	4.5	Energy Queensland	No comment.	
32.	4.5	Evoenergy	Agree with changes	AEMO notes the respondent's support for the proposed change.
33.	4.5	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
34.	4.5	Jemena	We propose this change is made as part of the 5MS work program.	
35.	4.5	Origin Energy	Origin supports the change – refer ICF_025 (see Metrology Procedures Part B 2.4 comments above).	AEMO notes the respondent's support for the proposed change.
36.	4.5	Powermetric Metering	No comment	
37.	4.5	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
38.	4.5	Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
39.	4.5	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
40.	Appendix C	AGL	Noted	
41.	Appendix C	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
42.	Appendix C	AusNet Services	No Issue with this amendment	AEMO notes the respondent's support for the proposed change.

43.	Appendix C	Energy Queensland	No comment.	
44.	Appendix C	Evoenergy	Agree with changes	AEMO notes the respondent's support for the proposed change.
45.	Appendix C	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
46.	Appendix C	Jemena	We propose this change is made as part of the 5MS work program.	AEMO notes respondent's comment and refers to the response in Table 7, item 8.
47.	Appendix C	Origin Energy	Origin supports the change – refer ICF_025 (see Metrology Procedures Part B 2.4 comments above).	AEMO notes the respondent's support for the proposed change.
48.	Appendix C	Powermetric Metering	No comment	
49.	Appendix C	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
50.	Appendix C	Simply Energy	Supportive of this change	AEMO notes the respondent's support for the proposed change.
51.	Appendix C	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.

Table 9 Standing Data for MSATS

No.	Section	Consulted person	Issue	AEMO response
1.		Evoenergy	Amend the description of Suffix in Table 18 - Need to remove the dot points to align with wording in RegisterID Wording in first and second paragraph needs fixing. Suggested changes The Suffix field in the CATS_REGISTER_IDENTIFIER table is used to identify a physical data source that is obtained from the meter. The value in the Suffix field must match a valid Datastream suffix specified in the NMI Procedure.	AEMO notes respondent's comment and has changed the definition of Suffix to compliment the reversion of the Register ID definition in the Standing Data for MSATS document.
2.	8.1	AGL	Noted	

3.	8.1	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
4.	8.1	AusNet Services	What is the expectation of ADL for reactive datastreams and should this be explained within the ADL definition?	AEMO notes that the Average daily load is best determined by the MDP based on the information they receive about a site. AEMO refers to the working document 'AEMO 5MS/GS CNDS & Meter Data Delivery Clarifications' from the 5MS project that provides discussion and examples of how ADLs will work for substitution in settlement. The examples show that an ADL for generation could even be negative if that is what is required.
5.	8.1	Energy Queensland	Ergon Energy and Energex would prefer the definition of Average Daily Load to be expanded to include details on rounding considerations where the value of the daily load is less than 1, e.g. NCONUML. We support AEMO's decision to have no decimal place in this field.	AEMO notes respondent's support and does not intend to include details on rounding considerations where the value of the daily load is less than 1. The purpose of accounting for non-contestable unmetered loads is to ensure that the settlements processes remove them from UFE to avoid all retailers being charged for load that the local retailer is being paid for. Load profile and size of non-contestable unmetered loads is the subject of an agreement between the customer, LNSP and the local retailer and does not use ADL for billing purposes.
6.	8.1	Evoenergy	Change validated	AEMO notes the respondent's support for the proposed change.
7.	8.1	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
8.	8.1	Jemena		
9.	8.1	Origin Energy	Origin supports the changed definition to align across the market systems and procedures.	AEMO notes the respondent's support for the proposed change.
10.	8.1	Powermetric Metering	No comment	
11.	8.1	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.

12.	8.1	Simply Energy	No comments	
13.	8.1	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
14.	8.1	Vector Metering	As the ADL on NDS is a mandatory field and 5MS requires a DataStream to be created for reactive energy registers (Q,K) this description should provide guidance on what is required for ADL on these DataStreams. Vector cannot see a Use case for an average ADL for a reactive DataStream and recommend that this should be set to either 0 or 1. Suggested wording: The active energy delivered or generated measured by the DataStream over an extended period normalised to a "per day" basis (kWh). Where the DataStream represents non active energy e.g. reactive energy, Volts, Power Factor etc the value shall be 1. Note: Table 16C of the CATS procedures also need to change to reflect new wording. 	AEMO notes respondent's comment and refers to the response in Table 8, item 4.
15.	9.1	AGL	Noted	
16.	9.1	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
17.	9.1	AusNet Services	Fully support change and amendment as stated to the RegisterID Definition. The proposed change is important in reducing unnecessary complex requirement of matching each RegisterID to Suffix, whilst replacing it with a mapping obligation. This change would avoid unnecessary costs across Registered Participants.	AEMO notes respondent's comment and refers to the response in Table 8, item 1.

MSATS PROCEDURES

Data Item	Description	Jurisdiction	Standing Data Access Rights								
			FRMP	LR	LNSP	MDP	MPB	MPC	RP	RoLR	NEMM
MSATS Standing Data Table: NMI DATASTREAM (CATS_NMI_DATA_STREAM)											
ADL (AverageDailyLoad)	The electrical energy delivered through a *connection point* or metering point over an extended period normalised to a per day basis.	ALL	Yes	Yes	Yes	Yes	Yes	-	Yes	-	Ye

			However, the drafting in the initial draft procedures does not fully incorporate the required changes. The definition to the Suffix still states: "For Interval Meters, the Suffix in the CATS_REGISTER_IDENTIFIER table must match the RegisterID in the CATS_REGISTER_IDENTIFIER table. E.g. 'E1', 'B1' This statement should be removed (as per the removed statement within the RegisterID definition) or amended to be like Basic Meters. Otherwise it contradicts the intent of the ICF change proposal.	
18.	9.1	Endeavour Energy	We note that RegisterID is valuable for an accumulation meter but has little value for an interval meter, however this field must still be populated for interval meters. We reviewed the RegisterID and Suffix values for the 10 active contestable metering service providers operating in our network area and found that 8 out of the10 metering service providers already provide RegisterIDs that aligns with the Suffix. Therefore, we do not consider AEMOs' proposal to make RegisterID the same as the Suffix for interval meters to be unreasonable. We believe that the long-term advantage of making RegisterID the same as the Suffix for interval meters will be less confusion when referencing and linking this information with the metering data and change requests. We acknowledge that the short-term disadvantage for some metering service providers is system changes and a once off data update for existing records. We encourage AEMO and the impacted metering service providers to work together to manage the transition and agree on a transition timeframe that minimises the impacts. Therefore, we recommend that AEMO maintains the requirement for the RegisterID to be the same as the Suffix for interval meters. We also note that some metering service providers who provide RegisterIDs that aligns with the Suffix do not always do so consistently. If the RegisterID does not have to be the same as the Suffix field then it should be made clear that if a MPB did want to provide a suffix value in the RegisterID field then it must be the same as the Suffix field. This is to avoid confusion. For example:	AEMO does not agree with respondent's comment and intends to maintain the definitions to be flexible to cater for scenarios where RegisterID is same as Suffix and RegisterID is not same as Suffix.

RegisterID	Suffix	Comments
01	E1	Acceptable, RegisterID value is not an interval metering data suffix value

			<table><tr><td>E2</td><td>E2</td><td>Acceptable, RegisterID value is an interval metering data suffix value and is the same as the Suffix field</td></tr><tr><td>E1</td><td>E3</td><td>Not acceptable, RegisterID value is an interval metering data suffix value but is not the same a the Suffix field</td></tr></table> Therefore, we suggest adding the following to the definition of RegisterID if the requirement for the RegisterID to be the same as the Suffix for interval meters is not adopted: 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.	
19.	9.1	Energy Queensland	No comment.	
20.	9.1	Evoenergy	Amend the description of RegisterID in Table 18 - Agree with change	AEMO notes the respondent's support for the proposed change.
21.	9.1	Intellihub	We need clarification on what is meant by NMI suffix and we need clarification from AEMO as to what this requirement is referencing to. It is important to note that 7/12/2020 is when this document is finalised, and until then we will not know for sure that ICF 029 will still be a part of the changes.	AEMO notes respondent's comment and refers to the response in Table 8, item 1.
22.	9.1	Jemena	The removal of the detailed description may lead to mistakes and remove the clarity it currently provides on meter identifiers.	AEMO notes respondent's comment and refers to the response in Table 8, item 1.
23.	9.1	Origin Energy	Origin supports the changed definition to align across the market systems and procedures.	AEMO notes the respondent's support for the proposed change.
24.	9.1	Powermetric Metering	No comment	
25.	9.1	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
26.	9.1	Simply Energy	No comments	

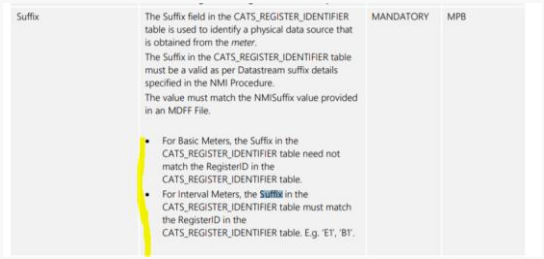
27.	9.1	TasNetworks	Agreed.	AEMO notes the respondent's support for the proposed change.
28.	9.1	Vector Metering	Description of Suffix  Should the consultation determine that the current requirement for the register ID and suffix in the register_identifier table must match, is no longer required then these two dot points should be removed. i.e. Basic meters and interval meters are treated the same…	AEMO notes respondent's comment and refers to the response in Table 8, item 1.

Table 10 Retail Electricity Market Procedures – Glossary and Framework

No.	Section	Consulted person	Issue	AEMO response
1.	5	AGL	Noted	
2.	5	Alinta Energy	Alinta Energy Supports this amendment.	AEMO notes the respondent's support for the proposed change.
3.	5	AusNet Services	What is the expectation of ADL for reactive datastreams (since register level data is now to be provided to AEMO) and should this not be explained within the ADL definition?	AEMO notes respondent's comment and refers to the response in Table 8, item 4.
4.	5	Energy Queensland	Ergon Energy and Energex would prefer the definition of Average Daily Load to be expanded to include details on rounding considerations where the value of the daily load is less than 1, e.g. NCONUML. We support AEMO's decision to have no decimal place in this field.	AEMO notes respondent's comment and refers to the response in Table 8, item 5.
5.	5	Evoenergy	Agree	AEMO notes the respondent's support for the proposed change.
6.	5	Intellihub	Agree	AEMO notes the respondent's support for the proposed change.
7.	5	Origin Energy	Origin supports the changed definition to align across the market systems and procedures.	AEMO notes the respondent's support for the proposed change.
8.	5	Powermetric Metering	No comment	
9.	5	Red Energy and Lumo Energy	Red and Lumo support this proposal.	AEMO notes the respondent's support for the proposed change.
10.	5	Simply Energy	No comments	
11.	5	TasNetworks	Agreed.	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
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?			
1.	AGL	No other options have been identified at this time.	
2.	Alinta Energy	No Comment	
3.	AusNet Services	Within Customer Switching version of the MDFF specification, there is a new ReasonCode 67 stated, this has not been included in the ICF Consultation version of the MDFF specification document.	AEMO will update the version to include the Customer Switching changes.
4.	Energy Queensland	No comment.	
5.	Evoenergy	MSATS Procedures 4.4 Why not just change the system and procedures so that an MC cannot nominate itself as the new MC where CTC is not "High". Use CTC for MC change limitations, if CTC = HIGH, allow, else REJ. This leaves all other validations in place for all other transfer types.	AEMO notes the respondent's comment and refers to response in Table 1, item 48.
6.	Origin Energy	ICF_016 Alternative: A validation on MSATS to reject a CR630x submitted on a NMI classified as SMALL unless submitted by the FRMP. This would ensure no participants are required to make system changes to support the change, outside of MSATS which would require changes to support this anyway. ICF_016 Change (if alternative not pursued): Allow the FRMP to object badparty to all small NMIs as only the FRMP has the right to nominate but has no control to prevent unwanted nomination. This allows for a unified process across all jurisdictions and better protection of small customers. ICF_027 Include a table to distinguish the requirements for CT metering versus whole current metering. This enhancement to the change in definition would assist the new connection metering assignment.	AEMO notes the respondent's comment and does not agree with the proposed alternative/change for ICF_016. AEMO requests the respondent to raise a new ICF for the proposed change to ICF_027.

7.	PLUS ES	<u>Amend or Revert Definition of the Register ID Field in MSATS (ICF_029)</u> To revert to what was in place prior to the 5MS changes, the Suffix ID description needs to be amended. With the current Suffix ID wording, the amendment to the Register ID description has effected no change. That is, the Suffix ID must equal to the NMISuffix in MDFF and the Suffix ID must equal Register ID. PLUS ES propose the following for the Suffix description: • The removal of the 2 dot points would suffice to achieve the intended outcome. • If further clarity is required, the following wording could replace the dots points: *The Suffix in the CATS_REGISTER_IDENTIFIER table need not match the Register ID in the CATS_REGISTER_IDENTIFIER table.* Additionally the wording and requirements stated in the issues paper for this topic need to be revised and amended accordingly. i.e. *…MSPs to do the following: Re-program their meter fleet to reflect the values of the NMI Suffix, which already has its own distinct field in MSATS.* Furthermore, the link needs to be clarified between the MDFF and Meter Register table if the RegisterID is no longer the link.	AEMO notes the respondent's comment and refers to the response in Table 8, item 1.
8.	Powermetric Metering	Powermetric is not aware of any better options.	AEMO notes the respondent's comment.
9.	TasNetworks	No comment.	
What are the main challenges in adopting these proposed changes? How should these challenges be addressed?			

10.	Alinta Energy	The CR68XX timeframe increase may see an increase in the number of duplicate transactions, Alinta Energy suggest that AEMO consider automatically cancelling/rejecting duplicate CR68XX transactions where:
		• the same MC has two concurrent CR68XX's, or
		• Upon change of MC a previous MC still has a CR68XX open (i.e. validation that the CR68XX is associated to current participants in the role), or
		• Two CR68XX nominates two different Parties in the same Role
		  ○ MDP
		  ○ MPB
		  ○ MPC
		It is suggested that the latest CR68XX from the current Participant should remain where 2 or more CR68XX exist on the same NMI.
			AEMO notes the respondent's comment and requests the respondent to raise a new ICF.

11.	AusNet Services	Proposed changes in this consultation are largely non-controversial and should not result in major implementation challenges for the industry.	AEMO notes the respondent's comment.
12.	Energy Queensland	Dependent on the timeframe set for delivery of this change package, we see the main challenge as being availability of resources and integration of works into current work programs, as required to develop and test the necessary market and in-house system changes (including any applicable industry testing), given the high levels of change currently underway or proposed for the industry. To assist with managing this challenge, we feel this change package should be included in the Regulatory Implementation Roadmap to ensure industry is aware of the changes and that any possible synergies or conflicts with other change projects can be identified.	AEMO notes that 5MS/GS changes are aligned to their effective dates, all other changes are aligned to MSDR Phase 1 effective date of 14 March 2022.
13.	Origin Energy	Sequencing of changes across the market systems and Procedures to avoid repetition and maximise efficiency across planned changes. Review the Road Map as required.	AEMO notes the respondent's comment and refers to the response in Table 10, item 12.

14.	PLUS ES	<u>Increase CR68xx Timeframe:</u>
		The increase in CR68xx timeframe will increase the number of duplicate transactions. PLUS ES ask for the market to automatically cancel duplicate CR68xx transactions (Similar to CR10xx logic) where:
		• Same MC has two concurrent CR68xx
		• Upon change of MC a previous MC still has a CR68xx – validation that the CR68XX is associated to current participants in the role.
		• Two CR68xx nominates two different Parties in the same Role
		  ○ MDP
		  ○ MPB
		  ○ MPC
		It is suggested that the latest CR68xx from the current MC should remain where 2 or more CR68xx exist on the same NMI.
			AEMO notes the respondent's comment and refers to the response in Table 10, item 10.

15.	Powermetric Metering	Powermetric is not aware of any major adoption challenges.	AEMO notes the respondent's comment.
16.	TasNetworks	No comment.	