FIVE MINUTE & GLOBAL SETTLEMENT – METERING PROCEDURE CHANGES (PACKAGE 2)

DRAFT DETERMINATION

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NOTICE OF SECOND STAGE CONSULTATION – FIVE MINUTE SETTLEMENT – METERING PROCEDURES CHANGES (PACKAGE 2)

National Electricity Rules – Rule 8.9

Date of Notice: 5 August 2019

This notice informs all Registered Participants, Metering Providers, Metering Data Providers, Embedded Network Managers, Ministers and the AER (Consulted Persons) that AEMO is commencing the second stage of consultation on the following Metering Procedures as a result of the Five Minute Settlement and Global Settlements rule changes:

- Metrology Procedures: Part A
- Metrology Procedures: Part B
- Meter Data File Format (MDFF) Specification NEM12 & NEM13
- Metering Data Management (MDM) Procedures
- National Metering Identifier
- Service Level Procedure: Meter Data Provider Services
- CATS Procedures Principles and Obligations
- Procedures for the Management of WIGS NMIs
- ROLR Procedure: Part A
- Exemption Procedure: Metering Provider Data Storage Requirements (new)
- Retail Electricity Market Glossary and Framework

This consultation is being conducted under clauses 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 that is published.

Closing Date and Time

Submissions in response to this Notice of Second Stage of Rules Consultation should be sent by email to 5ms@aemo.com.au, to reach AEMO by 5.00pm (Melbourne time) 2 September 2019.

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 and 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 of the Rules consultation process conducted by AEMO to consider amendments to various Metering Procedures, under the National Electricity Rules (NER), for the implementation of five-minute settlement (5MS) and global settlement (GS) Rules, referred to as 'Package 2'.

On 20 May 2019, AEMO published the Notice of First Stage Consultation and associated Consultation Paper for the Metering Package 2 Procedures.

The Consultation Paper detailed key proposals that would implement:

- The 5MS Rule - for matters not considered in Metering Package 1
- The GS Rule
- Changes to the delivery, format and content of the meter data files sent to AEMO, as identified in the Metering Package 1 consultation.

AEMO received 20 submissions from Retailers, LNSPs, Meter Providers, Meter Data Providers and intending participants.

From these submissions and its own analysis, AEMO identified five material issues. These issues are addressed in this Draft Report, and include:

- The treatment and profiling of Non-Contestable Unmetered Loads (NCUL)
- Changes to the metering data quality and quality requirements
- The introduction of the Exemption Procedure: Metering Provider Data Storage Requirements
- The treatment and maintenance of the Local Retailer (LR) and Financially Responsible Market Participant (FRMP) field in MSATS from GS commencement
- The treatment of various connection point scenarios to support GS requirements

After considering the submissions and evaluating comments against the requirements of the NER and the Amending Rules, AEMO's draft determination proposes the following outcomes:

- Treatment and profiling of NCULs
    - Creation of NCUL NMIs in MSATS
        - AEMO's Metering Procedures e.g. Metrology Procedures: Part A & Part B will explicitly allow for both a one NMI to one device and a one NMI to multiple device arrangement.
    - Classification of NCULs
        - AEMO considers that the inclusion of one new NMI Classification Code of 'NCONUML' and one associated Meter Installation Type code of 'NCONUML' will adequately support the correct treatment of these supplies in the market.
    - Profiling of NCULs
        - Predictable loads - Discretion should be provided to metering coordinators (MCs) as to when a 'Type 7' methodology could be applied in profiling NCULs.

        - Unpredictable loads - Procedures should align as much as possible to the existing methodologies used to support retail and network billing of these supplies. Profiling arrangements should be agreed between the Distributor, Retailer and the Customer.

- Changes to the metering data quantity and quality requirements
    - AEMO maintains that the delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes. AEMO does however acknowledge that implementing 100% targets could result in unintended consequences and does not provide for legitimate exception scenarios.
- Exemption Procedure: Metering Provider Data Storage Requirements
    - The draft exemption procedure will account for the modifications to clauses 7.1.2 and 7.8.2 of the NER for Victorian advanced metering infrastructure (AMI), as applicable in Victoria only.
    - There is no change to the position that data storage exemptions will only be considered for applicable interval meters that just fall short of Rule 7.8.2(a)(9) of the NER i.e. 30-34 days of storage.
- Treatment and maintenance of the LR and FRMP fields
    - A new notional Market Participant ID of 'GLOPOOL' will be introduced to effectively remove the applicable LR obligations and notifications in MSATS.
- Global Settlement Connection Point Scenarios
    - Additional NMI Classification Codes will be introduced to appropriately identify and allocate various connection point loads from 1 July 2021 to support UFE publication requirements.

AEMO invites stakeholders to suggest alternative options where they do not agree that AEMO's proposals would achieve the relevant objectives.

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1. STAKEHOLDER CONSULTATION PROCESS

As required by the NER, AEMO is consulting on various Metering Procedures in accordance with the Rules consultation procedures in rule 8.9.

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 and any meetings with stakeholders.

Deliverable	Date
Issues Paper published	20 May 2019
Submissions due on Issues Paper	24 June 2019
Draft Report published	5 August 2019
Submissions due on Draft Report	2 September 2019
Final Report published	30 September 2019

AEMO has been consulting and intends to continue to consult through the 5MS program engagement channels.[1] The relevant engagement channels include:

- Program Consultative Forum (PCF)
- Procedures Working Group (PWG)
- Systems Working Group (SWG)
- Metering Focus Group (MFG)

Separation of consultation on AEMO's metering procedures

AEMO noted in its first stage issues paper that changes to various metering procedures needed to be consulted on in 2019 for a range of issues and activities, in addition to those related to 5MS and GS. To streamline these procedure consultations, AEMO proposed to conduct this 'Metering Procedure Changes (Package 2)' (MP2) consultation as a "co-consultation" in tandem with changes identified and progressed through the AEMO-convened Electricity Retail Consultative Forum (ERCF) and Electricity Retail Metrology Consultative Forum (ERMCF).

The proposed approach was intended to align the consultation periods of both metering procedures consultations, allowing stakeholders to consider these matters as a whole in a more efficient and effective manner.

However, taking into account stakeholder feedback, AEMO has decided to separate these consultations for a number of reasons, including:

- Increased complexity and confusion
- Unnecessary dependencies
- Timeline divergence, as additional time was required to consider the changes associated with MP2 compared to the ICF Package.

As a consequence of this decision, MP2 Draft Procedures will not contain any changes associated with the 'Metering ICF Package Consultation'

[1] See : http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement for details on forums and groups specific to the 5MS program.

2. BACKGROUND

2.1. NER requirements

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

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

2.2. Context for this consultation

2.2.1. Five-minute settlement

On 28 November 2017 the AEMC made a final rule to align operational dispatch and financial settlement at five minutes, starting 1 July 2021. This will reduce the time interval for financial settlement in the National Electricity Market (NEM) from 30 minutes to five minutes.

Price signals that align with physical operations lead to more efficient bidding, operational decisions and investment. Over time, this is expected to lower wholesale costs, which should lead to lower electricity prices than in a market with 30-minute settlement. Wholesale costs make up around one third of a typical electricity bill.

2.2.2. Implementing five-minute settlement

The 5MS Rule requires the collection, storage and delivery of revenue metering data based on five-minute intervals for use in energy settlement, network and retail billing.

From a metering installation capability perspective, the rule requires:

- Types 1, 2 and 3 meters to record and store five-minute data from the commencement date of the rule.
- Type 4 meters at a transmission network connection point or distribution network connection point where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator to record and store five-minute data from the commencement date of the rule.
- All other types 4, 4A, 5 and 6 meters that are already installed do not need to provide five-minute data at the commencement date. The data from these meters will be profiled to five-minute trading intervals by AEMO using load profiles.
- All new and replacement metering installations, other than type 4A, installed from 1 December 2018 must provide five-minute data from 1 December 2022 at the latest.
- All type 4A new and replacement metering installations installed from 1 December 2019 must provide five-minute data from 1 December 2022 at the latest.

The final rule also requires type 7 unmetered loads to be calculated on a five minute basis from the commencement date of the rule.

The 5MS Rule requires AEMO to make one new procedure. Under new clauses 7.8.2(a1) and (a2), AEMO may exempt certain metering installations installed prior to 1 July 2021 from the existing requirement (in clause 7.8.2(a)(9)) to have at least 35 days of interval meter data storage capacity. These are the meters that are required to record five minute data from 1 July 2021, but were installed before that date, namely:

- Types 1, 2 and 3, type 4 installed at transmission connection points

- Type 4 installed at distribution connection points where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator.

An exemption can only be granted where AEMO is reasonably satisfied that the Metering Provider will be able to otherwise satisfy the requirements of Chapter 7.

Several other metering procedures require updating so that 5MS can be implemented, including:

- Metering data management
- Profiling
- Settlements load data aggregations
- Reconciliation reporting
- Service level agreements
- Metering installation provisioning.

2.2.3. Global settlement

On 6 December 2018, the AEMC made a final rule to introduce a 'global settlement' framework for settlement of the demand side of the wholesale electricity market.

The introduction of global settlements is intended to deliver three key benefits:[2]

1. Improved transparency, leading to fewer settlement disputes between retailers and lower levels of Unaccounted for Energy (UFE) over time
2. Competition on equal terms
3. Improved risk allocation driving enhanced incentives.

What are 'settlements by difference' and 'global settlement'?

The NEM is a gross electricity pool market operated by AEMO. All electricity supplied to the market and consumed by end users is transacted at the spot price for each trading interval in each region. The market settlement process requires that for each trading interval market generators are paid for the energy they provide to the NEM and market customers pay for the energy they use. Market customers are mainly electricity retailers who purchase wholesale electricity to on-sell to their retail customers, but also include some large industrial customers.

Under the current market settlement framework, known as 'settlement by difference', electricity supplied to a distribution area is billed by AEMO to the incumbent retailer, known as the local retailer, except for the loss-adjusted metered electricity that is consumed by the customers of independent retailers within the area. This means that the local retailer for an area bears the risk of all residual electricity losses in that area, known as unaccounted for energy (UFE). UFE includes unaccounted for technical losses, commercial losses and errors in estimating the half-hourly, soon to be five-minute, consumption of basic metering installations that do not keep track of how electricity usage varies throughout the day.

Under a global settlement framework, every retailer is billed for the loss-adjusted metered electricity that is consumed by their customers within the area. UFE is then allocated to market customers (mostly retailers) on the basis of a pre-determined methodology. Under the AEMC's methodology, UFE is allocated to all market customers in a distribution network (local area), pro-rated based on their 'accounted-for' energy.

[2] Australian Energy Market Commission: https://www.aemc.gov.au/sites/default/files/2018-12/Global%20Settlement%20and%20Market%20Reconciliation%20-%20For%20publication.pdf, P. ii

2.2.4. Implementing Global Settlement

From a metering perspective, the GS Rule requires:

- AEMO to receive meter data for ALL connection points in the NEM, including first tier (local retailer) accumulation metered connection points.
- AEMO to include in its metrology procedures guidance for the inclusion of non-contestable unmetered loads (NCUL)[3] in settlement, including:[4]
  - Creating NMIs for NCULs
  - Assigning connection points relating to NCULs to the appropriate transmission node identifier (TNI) or virtual transmission node (VTN)
  - Providing data on the estimated consumption of NCULs to AEMO
  - The methodology for calculating load and a load profile for NCULs.
- AEMO to publish a UFE Reconciliation Report to enable each Market Customer in a local area to verify the UFE amounts allocated to that Market Customer's market connection points in that local area.
- AEMO, in accordance with the UFE reporting guidelines, to prepare and publish on its website a UFE trends report setting out its:
  - Summary and analysis of the total UFE amounts in each local area over the reporting period
  - Analysis of the UFE amounts in each local area in the reporting period against benchmarks determined by AEMO acting reasonably
  - Analysis of the sources of UFE in each local area
  - Recommendations to improve visibility of UFE in each local area
  - Recommended actions to reduce the amounts of UFE in each local area, including without limitation any actions that AEMO recommends ought to be taken by Market Participants, Network Service Providers, the AER or AEMO.

2.2.5. Changes to the Delivery of Metering Data to AEMO

The Metering Package 1 consultation focused on proposed changes to AEMO's profiling methodologies, including the profiling of 15- and 30-minute interval meter reads to 5-minute interval metering data, and proposed changes to the delivery of metering data to AEMO.[5]

AEMO concluded that the delivery of interval metering data should be in the form of Meter Data File Format (MDFF), superseding the current Meter Data Management File (MDMF) format.

Additionally, to fulfil its obligations under the GS Rule (in particular new clause 3.15.5B relating to the analysis and reporting of UFE trends), AEMO needed to understand the potential causes of UFE. It is likely that a key contributor to UFE will be technical losses through transformers and electrical conductors.

Technical losses are influenced by power factor and by the flows of energy within the distribution network as a consequence of distributed energy resources e.g. rooftop PV. AEMO concluded that access to active and reactive register level metering data was necessary to understand the changes in technical losses when preparing the UFE Trend reports that are mandated by the NER.

[3] It should be noted that AEMO has submitted a proposal to the AEMC that, among other things, suggests that the 'non-market unmetered loads' in the GS Rule be renamed 'non-contestable unmetered loads', as this more accurately reflects how these loads will be treated in the market. For consultation purposes, AEMO has used this preferred name subject to the AEMC's determination on AEMO's proposed rule change. See Australian Energy Market Commission: https://www.aemc.gov.au/rule-changes/5-minute-settlement-and-global-settlement-implementation

[4] GS Rule, 3.15.5B.

[5] Australian Energy Market Operator: http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes-Package-1

The requirements for transitioning to MDFF and the delivery of register level active and reactive energy to AEMO were consulted on as part of Metering Package 1 and are detailed in the associated final determination. These conclusions are the basis for the metering procedure changes consulted on in this package (Metering Package 2) and in Metering Package 3.

The following table summarises the determinations from Metering Package 1 on changes to the delivery of metering data to AEMO.[6]

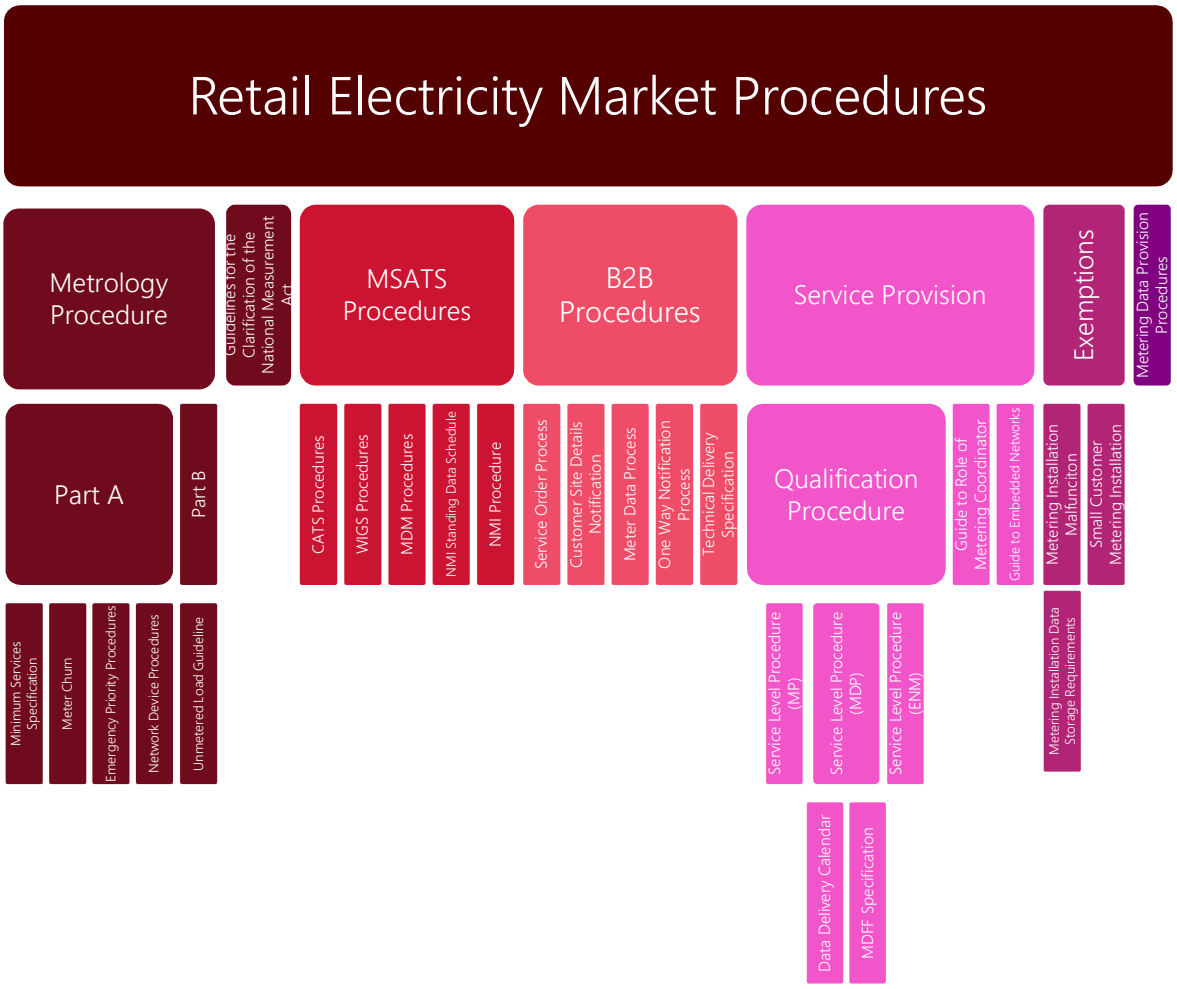
Metering Package 1 Item	AEMO determination on changes to the delivery of metering data
Meter data file format	From 1 July 2021: • MDFF NEM12 files to be the required file format for all interval metering data being delivered to AEMO • MDFF NEM13 files to be supported by AEMO – AEMO to continue to support and accept MDMF files for basic meter reads
Metering data resolution	From 1 July 2021: • NEM12 interval metering data to be: – Delivered at the register level – As per the meter's configuration i.e. 5, 15 or 30-minute intervals
Metering data frequency	From 1 July 2021: • Metering data to be delivered to AEMO on a daily basis – Note, AEMO is not seeking to amend any obligations regarding the current B2B Provide Meter Data or Verify Meter Data processes
Metering data granularity	From 1 July 2021: • Import and Export Active energy (kWh) and Import and Export Reactive energy (kVarh) will be required to be sent to AEMO, where applicable – All other forms of measurement (such as volts and amps) are not required to be delivered to AEMO but will be processed if they are provided. • All new records created in the CNDS table are to be created at the register level e.g. E and B. – Existing net datastream records can remain active post 1 July 2021, until an update to the datastream record is required e.g. meter replacement. Where an update is required to a CNDS record, the net datastream record is to be inactivated and any new active datastreams records are to be created at the register level. – Datastreams associated with import and export reactive energy e.g. Q and K do not need to be created in the CNDS table. If created, the datastreams must be established in a manner that ensures they are not included in market settlements.
Metering data exception handling	AEMO to retain the existing MDM validation/response process (MDMR notification and RM11 reports), however, where any party identifies a metering data issue, that requires a new version or resend of metering data to be delivered, all recipients are to receive this information.

2.2.6. Structure of AEMO's Retail Electricity Market Procedures

AEMO's Retail Electricity Market Procedures comprise several procedures that govern the operation of the retail market.

[6] Australian Energy Market Operator: http://aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/NEM-Consultations/2019/5MS-Metering/Final/Final-Determination-Report.pdf P. 15

Figure 1 Retail Electricity Market Procedures



2.2.7. Procedures under consultation as part of this Metering Package 2

The procedures under consultation in this Metering Package 2 include:

- Metrology Procedure: Part A
  - Also consulted on in Package 1 to consider 5MS Rule requirements
- Metrology Procedure: Part B
  - Also consulted on in Package 1 to consider 5MS Rule requirements
- Exemption Procedure: Metering Provider Data Storage Requirements
  - New procedure
- Metering Data Management (MDM) Procedures
- Meter Data File Format (MDFF) Specification NEM12 & NEM13
  - Also consulted on in Package 1 to consider 5MS Rule requirements
- CATS Procedures Principles and Obligations
- Procedures for the Management of WIGS NMIs
- ROLR Procedure: Part A
- Service Level Procedure: Meter Data Provider Services

- Retail Electricity Market Glossary and Framework
  - Also consulted on in Package 1 to consider 5MS Rule requirements
- National Metering Identifier Procedure.

The proposed changes to these procedures are described in Section 4 of this Draft Report.

Please note:

- The MDM Format & Upload Process has been removed from this consultation. This document is a technical document, rather than a procedure, and is not subject to consultation under NER 8.9. Whilst this document has been removed from the MP2 Draft Determination, feedback from stakeholders received as part of the first stage have been included and responded to in Appendix B of this report. It is currently anticipated that an updated MDM Format & Upload Process version will be published to AEMO's website for final comment only in Aug 2019.

2.3. First stage consultation

On 20 May 2019, AEMO issued a Notice of First Stage Consultation, and published an Issues Paper and initial draft procedures for Package 2. This information is available on AEMO's website.[7]

The Issues Paper included details on AEMO's stakeholder engagement in the course of developing the initial draft procedures, including various proposals that were discussed at workshops with industry representatives. The Issues Paper included a summary of the specific amendments proposed in the initial consultation pack.

AEMO received 20 submissions to the first stage of consultation.

Copies of all written submissions[8] and minutes of working group and focus group meetings[9] have been published on AEMO's website.

3. SUMMARY OF MATERIAL ISSUES

The key material issues arising from the proposal and raised by Consulted Persons are summarised in the following table:

No.	Issue	Raised by
1.	The NMI creation and profiling of NCULs	Multiple Respondents
2.	Changes to the metering data quantity and quality requirements	Multiple Respondents
3.	The introduction of the Exemption Procedure: Metering Provider Data Storage Requirements	Multiple Respondents
4.	Providing various Connection Point scenarios to support GS requirements	Multiple Respondents
5.	The treatment and maintenance of the Local Retailer field in MSATS	Multiple Respondents

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

[7] AEMO website - http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes---Package-2

[8] AEMO website - http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes---Package-2

[9] AEMO website - http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Procedures-Workstream/Procedures-Working-Group

4. DISCUSSION OF MATERIAL ISSUES

This section details the material issues AEMO identified during its analysis of submissions to the first stage consultation. It also provides AEMO's assessment of the issues and how AEMO proposes to address them.

4.1. Treatment & profiling of non-contestable unmetered loads

4.1.1. Issue Summary

Under the GS Rule, AEMO is required to include in its metrology procedures guidance on including NCULs in settlement, such as:

- Creating NMIs for NCULs
- Providing data on the estimated consumption of NCULs to AEMO
- The methodology for calculating load and a load profile for NCULs.

AEMO has proposed draft guidance through the following procedures included in this consultation:

- Metrology Part A
- Metrology Part B
- CATS Procedures Principles and Obligations
- Service Level Procedure: Metering Data Provider Services.

4.1.2. Submissions Summary

AEMO received a large number of submissions on the preferred treatment of NCULs in MSATS. The feedback concentrated on:

- Creating NCUL NMIs in MSATS
- The classification of NCULs in MSATS
- Providing NCUL five-minute metering data

Creating NMIs in MSATS

There were varying views on the most efficient and effective way of creating NMIs in MSATS. The two predominant approaches proposed were:

- One NMI to one device model
- One NMI to multiple devices model

AGL stated that multiple clauses in various metering procedures, including Metrology Part A and Part B, pre-supposed that NCULs would not have individual NMIs.[10] AGL recommended that these NCULs should in fact have individual NMIs[11] i.e. one NMI per one connection point.

To support this position, AGL believed that requiring individual NMIs would result in better connection point data management (i.e. for location, load, contract etc.) and better outage notification management.[12]

AGL was concerned that placing multiple devices against one NMI would make the following items very difficult to manage:

[10] AGL, Submission to first stage consultation, p.4, 5 and 8
[11] AGL, Submission to first stage consultation, p.4
[12] AGL, Submission to first stage consultation, p.6

- The generation of appropriate profiles
- Auditing of connections points
- Management of customer connections (Connect Service Order, Disconnect Service Order)
- Issuing of outage notifications to the relevant customer
- Customer billing.[13]

Similarly, CitiPower, Powercor, United Energy and TasNetworks all agreed that the continuation of a single NMI to single device model, that currently holds the majority of these loads today, should be adopted.[14]

Endeavour Energy also stated that the Initial Draft NMI Procedure could be read as not allowing for a NMI to be allocated to a single NCUL, which is the current approach for some networks and should be allowed to continue. It suggested that, for the avoidance of doubt, it should be made clear that a NMI can be allocated to a single NCUL.[15]

It is worth noting that other stakeholders, such as Ausgrid, did not agree with a one NMI to one device approach and instead suggested that one NMI should be able to have multiple different loads/devices associated to it.[16]

AusNet believed that both models had merit and that it was important for Distribution Network Service Providers (DNSPs) to have discretion in assigning individual NMIs to one or multiple unmetered devices, to allow for logical groupings such as End User/TNI/FRMP/DLF/Substation as required.[17]

Endeavour Energy supported AusNet's position and suggested that the initial approach for managing NCULs should minimise changes to existing industry practice and where changes are required, flexibility should be provided to allow each Network to determine the option that is most aligned with their existing systems and processes.[18]

Origin Energy recommended that prior to any NCULs NMIs being created in MSATS, that a full and comprehensive audit should be performed to ensure the associated devices and load values were proven to be correct.[19]

Classification of NCULs

A number of stakeholders stated that the introduction of an additional two metering types should be considered to support NCULs.

The two metering types suggested were:

- Type 8 - For small loads where the load profile is entirely calculated
- Type 9 – For loads where the load profile would be supported by sample meters, network devices, etc.[20]

Citipower/Powercor and United Energy supported the introduction of two new metering types.[21]

[13] AGL, Submission to first stage consultation, p.28
[14] Citipower/Powercor, Submission to first stage consultation, p.3
[15] Endeavour Energy, Submission to first stage consultation, p.10
[16] Ausgrid, Submission to first stage consultation, p.12
[17] Ausnet, Submission to first stage consultation, p.12
[18] Endeavour Energy, Submission to first stage consultation, p.12
[19] Origin Energy, Submission to first stage consultation, p.18
[20] AGL, Submission to first stage consultation, p.6
[21] Citipower/Powercor, Submission to first stage consultation, p.15 and United Energy, Submission to first stage consultation, p.15

Aurora Energy agreed in principle but only suggested the introduction of a single new metering type (8) to help identify and differentiate these loads from type 7 unmetered supplies.[22]

Providing NCUL five-minute metering data

Predictable Loads

While there was broad support for AEMO's proposed profiling approach for more predictable NCULs, such as watchman lights, AusNet Services did recommend that DNSPs should have discretion as to when to apply this 'Type 7' profiling approach i.e. a 'Type 7' profiling approach should only be applied when it was appropriate to do so and in accordance with the customers agreement.[23]

AusNet Services was concerned that AEMO's proposed changes in the Metrology Part A procedure required the publishing of load tables and on/off tables for all unmetered loads. Whilst AusNet agreed that this may be appropriate for unmetered loads the DNSP currently allows to be connected as unmetered, it was not seen as appropriate for legacy connections with unmetered equipment that are no longer permitted to be unmetered.[24]

AusNet went on to say that DNSPs needed discretion as to whether or not to apply 'light' profiling to all lights with PE cells, in a similar manner to Type 7 metering. In the case of security lights (e.g. enclosed lights) with a combination of proximity sensors, timers and PE cells, AusNet didn't believe that this would be considered appropriate.[25]

CitiPower/Powercor mentioned that they had over 4,000 Watchman lights (by NMI not lamps) consisting of 45 differing "device" types. It noted that Watchman lights are quite predictable so they can be controlled by a PE cell.

Hence, CitiPower/Powercor saw the "type 7" approach to calculating unmetered supplies as a very suitable approach for Watchman Lights. Additionally, Citipower/Powercor stated Watchman Lights are not offered as new connections in their network.

SAPN stated that in South Australia (SA) the vast majority of non-contestable unmetered loads with PE Cells are watchman lights and that these devices should be included as Type 7, as in operation they are no different to a streetlight with their operating times and most lamp types are already included in the AEMO Load Table.

Unpredictable Loads

AusNet suggested that unless the turn-off and turn-on times were actually known it was more accurate to not guess the switching arrangements and instead simply apply the average consumption over all metering data intervals.[26]

CitiPower/Powercor also recommended a flat line profile for NCULs, due to their diverse nature and volume. They mentioned that as agreed load/day values already existed, managing on/off times to profile all of these sites would result in hundreds if not thousands of profiles across the market, which would be impractical to manage.[27]

Citipower/Powercor stated that many of these existing NCULs consist of an off-market NMI with 1 or more "same" devices recorded against it, and a cumulative load or calculation to create a monthly "Agreed Load"

[22] Aurora, Submission to first stage consultation, p.18
[23] Ausnet, Submission to first stage consultation, p.11
[24] Ausnet, Submission to first stage consultation, p.4
[25] Ausnet, Submission to first stage consultation, p.11
[26] Ausnet, Submission to first stage consultation, p.13
[27] Citipower/Powercor, Submission to first stage consultation, p.5

for billing purposes. It noted that this approach is effectively a Type 6 model but without a meter asset installed and an estimate based on an agreed load occurs.[28]

Citipower/Powercor also submitted that it has no control over the operation, replacement or upgrade of these devices. Nor does it have an up-to-date "inventory" of these devices. Therefore it is very difficult for the DNSP to maintain an accurate "Inventory Table" by Device Type, consequently it is also difficult to maintain an accurate agreed Load or a reliable load profile for its NCULs.[29]

SAPN mentioned that in SA almost all NCULs without PE Cells are flat loads so the requirement to produce interval data for these loads will achieve nothing other than expense and complexity to the MDP's system and process. SAPN suggested that the requirement in the procedures should be amended so that the responsible MDP must only provide AEMO a total aggregated consumption value for each NMI and then AEMO can apply an appropriate profile as required.[30]

TasNetworks indicated that they typically limit the connection of NCULs to devices that draw a 'constant load' of less than 1kW, as the assessed consumption (unless agreed otherwise) is derived from the peak load of the installation and applied to each interval in the 24-hour period.[31]

Endeavour Energy acknowledged that it was common practice for an agreed load value to be used for NCULs, which may differ from the physical inventory's load.[32]

EnergyAustralia considered that there isn't a strong case for added complexity and cost associated to these NCULs and that DNSP provided data is often sufficient for off-market billing and in the absence of an agreed upon methodology for load profiling, this appears to be the most pragmatic solution that is sufficient for present needs.[33]

4.1.3. AEMO's assessment and conclusions

Creating NCUL NMIs in MSATS

AEMO recognises the potential benefits to industry in transitioning to a one NMI to one connection point/device arrangement e.g. to support more effective inventory and outage management processes. However, AEMO also accepts that transitioning from the current one to many model for certain distributors would represent a significant change to their current systems and processes.

AEMO has therefore updated the applicable Metering Procedures e.g. Metrology Part A & Part B to explicitly allow for both a one NMI to one device and a one NMI to multiple devices arrangement.

Classification of NCULs

AEMO maintains that the introduction of a the new NMI Classification Code and associated Metering Installation Type Code of 'NCONUML' will adequately differentiate between non-contestable unmetered loads and type 7 unmetered supplies.

Therefore, AEMO does not believe there has been sufficient evidence provided to support the introduction of 2 new metering installation type codes, type 8 and type 9.

Providing NCUL five-minute metering data

Predictable Loads:

[28] Citipower/Powercor, Submission to first stage consultation, p.23
[29] Citipower/Powercor, Submission to first stage consultation, p.27
[30] SAPN, Submission to first stage consultation, p.16
[31] TasNetworks, Submission to first stage consultation, p.5
[32] Endeavour Energy, Submission to first stage consultation, p.3
[33] Energy Australia, Submission to first stage consultation, p.20

Stakeholders strongly supported AEMO's position that more predictable NCULs should be managed in a similar fashion to type 7 unmetered supplies.

AEMO recognises that while a 'type 7' approach may be appropriate for this subset of NCULs, discretion should be provided to metering coordinators (MCs) as to when a MC deems this approach to be appropriate.

Unpredictable Loads:

Stakeholders were broadly in agreement that this subset of NCULs did not warrant complex profiling to be introduced. Retailers and distributors both suggested that the profiling arrangements specified in AEMO's procedures should align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies.

Based on discussions with industry through the 5MS engagement channels, AEMO believes that the preferred profiling arrangements should be agreed between the Distributor, Retailer and Customer.

AEMO is of the view that the profiling of these less predictable loads will likely become more mature over time as they are better understood and supported by evolving network device technologies.

4.2. Metering Data Quantity and Quality Requirements

4.2.1. Issue Summary

Energy settlement is reliant on the delivery of *settlements ready* data by MDPs. The timelier and more accurate the data that is provided, the more accurate the energy settlement process becomes, and the changes determined through revisions are reduced. Similarly, in the context of the GS rule, the more accurate the metering data received by AEMO, the better AEMO can calculate and allocate UFE.

In reviewing the current requirements, and taking into consideration that all connection points will be delivered to AEMO as of the commencement of the GS Rule, AEMO does not believe that the existing arrangements are adequate in achieving the desired level of accuracy in the NEM settlement process.

Further, the current requirements do not:

- Delineate between remotely read interval meters and manually read meters
- Reflect current MDP delivery levels
- Reflect the expected level of improvement in both the quantity and quality of settlement ready data delivered during the progressive settlement cycles e.g. Preliminary vs Final vs Revision 1 (R1) vs Revision 2 (R2).

4.2.2. Submission Summary

A number of participants were concerned with the proposed changes to the quantity and quality standards, especially relating to the proposed 100% targets.

Ausgrid stated that the proposed quality requirement of 100%, for remotely read metering data at first revision (R1), was arbitrary and would have a perverse effect of making market settlements less accurate, as MDPs will deliver final substitutes prematurely to meet the 100% quality obligation.[34]

Evoenergy also believed that it was impractical to set a 100% compliance target even at Revision 2. They suggested that a small proportion of exceptions should be allowed for, for example a 99.9% target would be more appropriate.[35]

[34] Ausgrid, Submission to first stage consultation, p.9
[35] Evoenergy, Submission to first stage consultation, p.18

Plus ES added that a 100% target didn't allow for standing data or synchronisation issues or long-term communication faults.[36]

Vector supported the increase of SLA from the current level of 98%, however, they did not believe that it was reasonable to expect 100% Quality ('A','F') compliance for Remotely and Manually Read meters. They stated that the collection of metering data, in a small number of situations, could be protracted and problematic and that communication and access issues can be time consuming to resolve. They suggested that MDPs would prefer not to issue final substitutions until they have exhausted all efforts. They also mentioned that requiring a 100% SLA would likely encourage MDPs to providing final substitutes to comply with the SLA as opposed to endeavouring to recovery actuals. Vector believed that 99.9% for Quality was a more reasonable SLA for Final, Revisions 1 and 2 settlement runs.[37]

Endeavour Energy suggested that the Remotely Read Metering Data category be sub-categorised to cover the type 1-3 and subset of type 4 installations with a higher percentage than other type 4 metering installations. They also suggest that the remotely read meters have a quantity percentage that is equal or better than a manually read meter given the importance of interval metering data for settlements and UFE calculations.[38]

Although there were some concerns with the 100% targets, a number of participants did support the proposed changes, such as: AGL, Energy Queensland, Origin Energy and Simply Energy.[39]

Energy Queensland supported the proposed changes to data quality to enable improved DUoS billing outcomes.

Origin recommended that for remotely read interval metered sites that a data quality standard of 99.5% should be set for Final Settlement. They stated that the Victorian Government target for AMI meters was 99.9% actual data at 10 days. Origin believed a 99% target was achievable and would provide more confidence in Final Settlement calculations.

Origin also suggested that a 99.9% quality target for Revision 1 would cater for outlier sites that are being investigated prior to final substitutions being delivered, a 100% target for Revision 2 was supported.

Simply Energy agreed with the objective of improving market settlements by increasing data accuracy.

4.2.3. AEMO's assessment and conclusions

AEMO maintains that the delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes. AEMO does however acknowledge that implementing 100% targets could result in unintended consequences, as highlighted by a number of stakeholders in submissions.

AEMO's draft determination allows for a small number of exceptions in the Service Level Procedure: Metering Data Provider Services draft procedure requirements.

AEMO believes that the proposed draft requirements will strike the right balance between:

- MDPs delivering timelier and more accurate metering data, leading to improved market and customer outcomes
- Ensuring that the requirements do not introduce unreasonable costs or unintended consequences.

[36] Plus ES, Submission to first stage consultation, p.18
[37] Vector, Submission to first stage consultation, p.15
[38] Endeavour Energy, Submission to first stage consultation, p.11
[39] Submission to first stage consultation, AGL p.34, Energy Queensland p.16, Origin Energy p.15, Simply Energy p.8

Figure 2 Proposed draft determination Quantity and Quality standards

Metering Data Type	Aspect	Preliminary	Final	Revision 1 (R1)	Revision 2 (R2)
Remotely Read Interval Metering Data	Quantity of Settlements Ready Data	98%	99%	99.5%	99.9%
	Quality of Settlements Ready Data with 'A' or 'F' quality flag	95%	98%	99.5%	99.9%
Manually Read Metering Data	Quantity of Settlements Ready Data	98%	99%	99.5%	99.9%
	Quality of Settlements Ready Data with 'A' or 'F' quality flag	-	-	98%	99.9%

4.3. Exemption Procedure: Metering Provider Data Storage Requirements

4.3.1. Issue Summary

In accordance with the NER and procedures authorised by the NER, a Metering Provider must ensure that a metering installation includes facilities for storing interval energy data for a period of:

- At least 35 days if the metering installation is registered as a type 1, 2, 3 or 4 metering installation.
- At least 200 days or such other period as specified in the metrology procedure if the metering installation is registered as a type 4A or type 5 metering installation.

Under new clause 7.8.2(a2), introduced by the 5MS Rule, AEMO must publish a procedure for applying for an exemption from these storage requirements. AEMO may only exempt metering installations installed prior to 1 July 2021 that are types 1, 2 and 3, type 4 installed at transmission connection points, or type 4 installed at distribution connection points where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator. These are the meters that will be required to record five minute data from 1 July 2021.

4.3.2. Submission Summary

Citipower/Powercor and United Energy stated that the Victorian NEVA Order in Council (GG2018S474) modified the NER in relation to AEMO's obligation to create and extend an exemption procedure to Victorian AMI Meters. Citipower/Powercor believed that this should be recognised as a jurisdictional requirement in the procedure.[40]

Energy Queensland noted that the proposed change appears unnecessarily restrictive and sought clarification as to why this exemption only applied for meters holding between 30 and 34 days of data.[41]

Evoenergy and AGL also questioned what the significance of the 30 days specified in the initial draft procedure. Evoenergy suggested that the proposed wording be changed to "....for a period less than NER clause 7.8.2(a)(9).".[42]

[40] Submission to first stage consultation, Citipower/Powercor p.21, United Energy p.20
[41] Energy Queensland, Submission to first stage consultation, p.17
[42] Submission to first stage consultation, Evoenergy p.19 and AGL p.39

Vector mentioned that the rule allowed for an exemption on meeting memory requirements if all other regulations can be met. Vector recommended that the 30-day limit be removed and that AEMO assesses each application on its own merits.[43]

4.3.3. AEMO's assessment

Victorian NEVA Order in Council

AEMO agrees with Citipower/Powercor and United Energy that this exemption procedure needs to account for the modifications to clauses 7.1.2 and 7.8.2 of the NER, as applicable in Victoria only. Clause 7.1.2 was inserted by Ministerial Order dated 11 October 2017 and published in the Victoria Government Gazette No. S346 on 12 October 2017. The application of clause 7.8.2 (as amended by the 5MS Rule) was modified for Victoria by Ministerial Order dated 8 October 2018 and published in the Victoria Government Gazette No. S474 on 12 October 2018.

Minimum number of days for exemption consideration

NER 7.8.2(a)(9) requires interval meters to locally store 35 days' worth of metering data. Interval meters typically have significantly more data storage capacity than is required for 35 days of history. The extra space is used for discretionary features, such as multi-part tariffs, calendars and power quality.

In its final determination on the 5MS Rule the AEMC stated that:

- "One way to reduce replacement costs for meters that when recalibrated to collect five minute data fall short of the meter storage requirements, is for AEMO to grant an exemption on a case by case basis. This means **meters that fall a day or two short of the storage requirements** (but which would otherwise satisfy the requirements for that meter type in the NER) would not need to incur the costs of meter replacement. This was also suggested as a means to avoid the Victorian AMI meter storage issue."[44]
- "To minimise costs for existing type 1 to 3 and type 4 meters that are required to be reconfigured to five minute granularity from the commencement date, **but fall just short of the storage requirement,** the final rule empowers AEMO to grant exemptions to a metering provider from the metering storage requirements set out in clause 7.8.2(a)(9) of the rules. This can be done by AEMO if it is reasonably satisfied that the metering provider will otherwise be able to comply with the requirements in Chapter 7 of the Rules."[45]

These two references suggest that the AEMC's intent was to only allow interval meters that fall just short of NER 7.3.1(a)(10) to be eligible for potential exemption by AEMO.

4.3.4. AEMO's Conclusion

AEMO has updated the draft exemption procedure to account for the possibility of exemption applications in respect of Victorian AMI meters. It is noted, however, that pre-existing AMI meters are not required under the 5MS Rule to be reconfigured to record five minute data from 1 July 2021.

AEMO maintains that data storage exemptions should only be considered for applicable interval meters who just fall short of Rule 7.3.1(a)(10) of the NER, i.e. 30-34 days storage. This is consistent with the policy intent of substantial compliance as set out in the 5MS Rule and as expressed by the AEMC.

[43] Vector, Submission to first stage consultation, p.16
[44] AEMC, Five-minute settlement final determination, p.106.
[45] AEMC, Five-minute settlement final determination, p.119

4.4. Global Settlement Connection Point Scenarios

4.4.1. Issue Summary

The introduction of the GS Rule represents a significant change in the variety and volume of connection points AEMO and its systems will need to effectively manage, as part of its market settlement and UFE processes.

In order to ensure that all of the known connection point variations have been considered appropriately, AEMO conducted a comprehensive review.

4.4.2. Submission Summary

This review had not been completed prior to the publishing of the First Stage consultation and therefore no submissions were received on this content.

The findings of this review have subsequently been socialised and discussed with various 5MS engagement channels including the Metering Focus group and the Systems Working Group.

4.4.3. AEMO's assessment

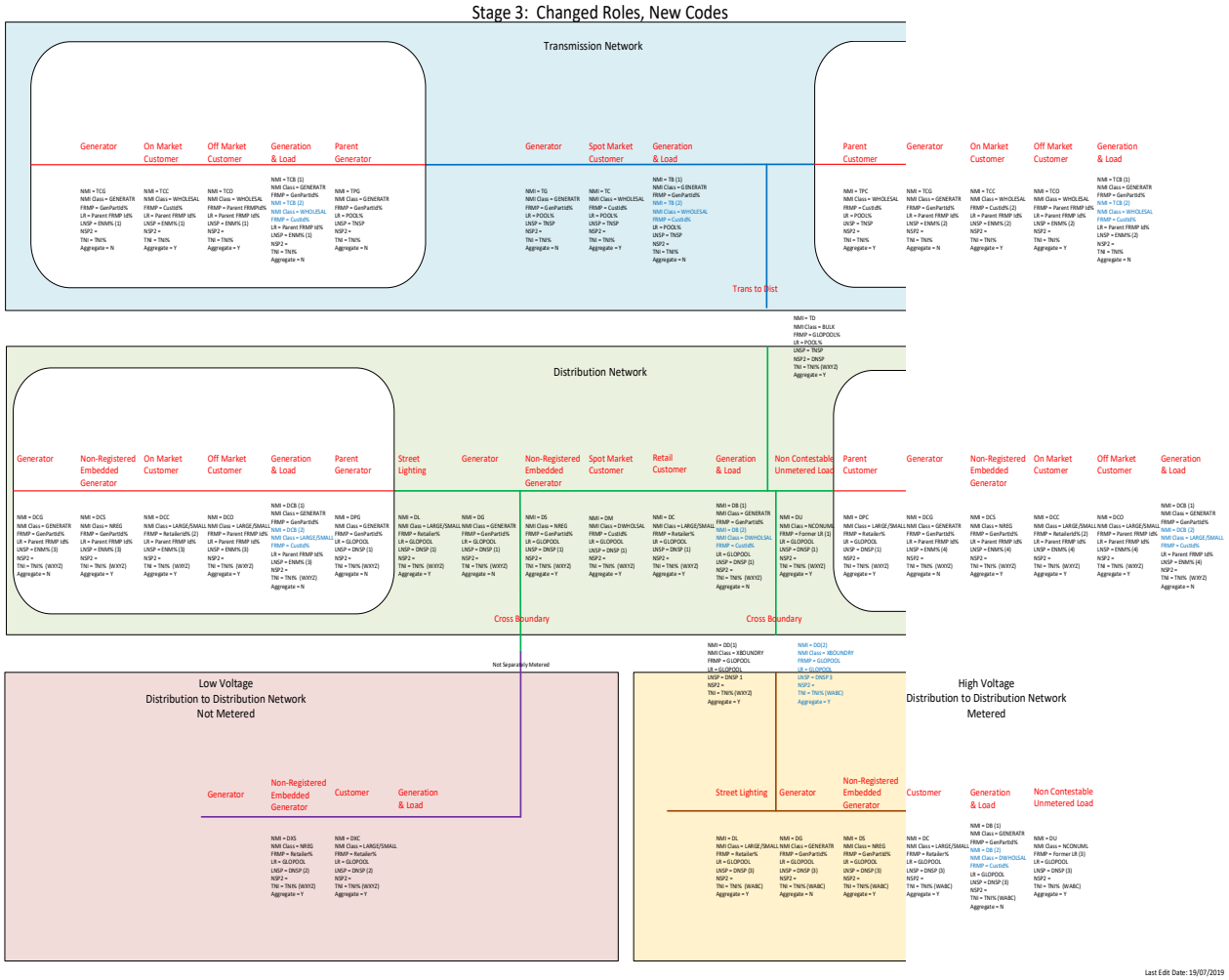
AEMO identified over 30 unique connection point variations (see Figure 4 below for more detail) which must be catered for to ensure accurate:

- UFE data publication by 1 July 2021
- NEM settlements from 6 February 2022

In considering these variations, AEMO contemplated circumstances where a connection point may be:

- Connected to a transmission network
- Connected to a distribution network
- Connected to an embedded network
- Associated with a cross-boundary supply

Figure 3 AEMO identified connection point variations



The results of this analysis has formed the basis of the proposed changes to the applicable draft procedures contained within this consultation:

- NMI procedure
- CATS Procedures Principles and Obligations
- Procedures for the Management of WIGS NMIs.

4.4.4. AEMO's conclusion

AEMO has determined that the most effective and efficient way of managing these connection point variations is to introduce additional NMI Classification Codes, held within MSATS.

These new codes have been included in the draft NMI procedure (Appendix E), CATS Procedures Principles and Obligations (Table 4-E) and the Procedures for the Management of WIGS NMIs, contained within this consultation.

New Code	Description [2]
BULK	*Connection point* where a *Transmission Network* connects to *Distribution Network* - also termed 'Bulk Supply Point'
DWHOLSAL	*Distribution network connection point* where energy is directly purchased from the *spot market* by a *Market Customer*

New Code	Description [2]
NCONUML[1]	*Non-contestable unmetered load*
NREG	*Connection point* associated with a *non-registered embedded generator*, i.e. a *generating unit* that is not classified by a registered *Market Generator* with AEMO, but may be classified by a *Small Generation Aggregator* as a *market generating unit*.
XBOUNDRY	*Distribution Network* to *Distribution Network connection point*

Please note that AEMO has decided not to proceed with two of the proposed codes suggested in the first stage CATS Initial Draft Procedure, "DHYBRID" and "THYBRID". These codes are being deferred until the requirements associated with the Energy Storage System initiative have been finalised.

AEMO also considered introducing a new NMI Classification Code of SGA, to better identify and manage small scale generators (SGA). However, feedback received from distributors indicated that they typically were not able to identify SGAs through their current connection application process and would therefore not be able to apply the SGA code with any confidence at time of creating a NMI in MSATS. Taking this feedback into consideration, AEMO has instead introduced a new code of NREG (Non-Registered Embedded Generator) which distributors can identify, which will assist in the accurate allocation of these connection points.

4.5. Treatment of the Local Retailer field in MSATS from 6 February 2022

4.5.1. Issue Summary

The AEMC's GS Rule Determination referred to various arrangements that needed to change as a result of the removal of the local retailer (LR) role.[46]

In order to implement this requirement, the Local Retailer (LR) and Financially Responsible Market Participant (FRMP) field values associated with all NMIs, need to be evaluated.

4.5.2. AEMO's assessment

In determining the most efficient and effective way of implementing the GS Rule requirements, AEMO considered existing MSATS mechanisms.

A similar requirement exists for connection points which are directly connected to the transmission networks i.e. the use of a notional Market Participant ID of 'POOLxxx' is used to ensure that no particular Retailer has LR obligations associated with these particular loads.

With that in mind, AEMO proposes an additional notional Market Participant ID called 'GLOPOOL' to:

- Satisfy the intent of the Rule
- Ensure that no Retailer has LR obligations associated with a variety of connection point scenarios.

AEMO leveraged the scenarios described in Figure 4 in its analysis of which connection points needed to be updated to 'GLOPOOL', for either the FRMP or LR fields.

The resultant role population and notification requirements have been specified in the draft NMI procedure, CATS Procedures Principles and Obligations and the Procedures for the Management of WIGS NMIs, contained within this consultation.

[46] AEMC, Rule Determination-National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 No. 14, p.74

4.5.3. AEMO's conclusion

AEMO has proposed that the most effective option in removing the applicable LR obligations in MSATS, in accordance with the GS Rule, is to introduce a new notional Market Participant ID of 'GLOPOOL'.

This new participant ID would be applied through the draft NMI procedure, CATS Procedures Principles and Obligations and the Procedures for the Management of WIGS NMIs, contained within this consultation.

5. DRAFT DETERMINATION

Having considered the matters raised in submissions, AEMO's draft determination is to make a new Exemption Procedure: Metering Provider Data Storage Requirements and amend ten other metering procedures in the form published with this Draft Report (11 procedures, each in clean and marked-up versions):

- Metrology Procedures: Part A
- Metrology Procedures: Part B
- Meter Data File Format (MDFF) Specification NEM12 & NEM13
- Metering Data Management (MDM) Procedures
- National Metering Identifier
- Service Level Procedure: Meter Data Provider Services
- CATS Procedures Principles and Obligations
- Procedures for the Management of WIGS NMIs
- ROLR Procedure: Part A
- Exemption Procedure: Metering Provider Data Storage Requirements (new)
- Retail Electricity Market Glossary and Framework

The table below sets out the date on which each procedure will come into effect.

Procedure	Effective Date	Requirement
Metrology Procedures: Part A	6 February 2022	Updated to incorporate Global Settlement Rule Obligations
Metrology Procedures: Part B	6 February 2022	Updated to incorporate Global Settlement Rule Obligations
Meter Data File Format (MDFF) Specification	1 July 2021	Updated to include AEMO as a recipient of MDFF
Metering Data Management (MDM) Procedures	1 July 2021	Updated to incorporate both Five-Minute Settlements and Global Settlement Rule Obligations e.g. five-minute profiling, calculation of UFE and changes to RM reports
National Metering Identifier	1 July 2021	Updated to incorporate Global Settlement Rule Obligations e.g. AEMO's obligation to publish UFE from 1 July 2021
Service Level Procedure: Meter Data Provider Services	1 July 2021	Updated to specify the changes in the delivery of metering data to AEMO and to incorporate Global Settlement Rule Obligations e.g. changes to the format and content of metering data files sent to AEMO and the provisioning for Non-contestable Unmetered Load (NCUL)

CATS Procedures Principles and Obligations	6 February 2022	Updated to specify the substantive obligations associated to the Global Settlement Rule e.g. removal of the LR obligations and the inclusion of the ENLR obligations
Procedures for the Management of WIGS NMIs	6 February 2022	Updated to specify the substantive obligations associated to the Global Settlement Rule e.g. removal of the LR obligations and the inclusion of the ENLR obligations
Exemption Procedure: Metering Provider Data Storage Requirements	Late 2019	Initial publication required under NER clause 7.8.2(a2)
Retail Electricity Market Glossary and Framework	1 July 2021	Updated to incorporate Five-Minute Settlements and Global Settlement Rule Obligations e.g. provisioning for the new Data Storage Requirements exemption procedure and various terms including ENLR
ROLR Procedure: Part A	6 February 2022	Updated to incorporate Global Settlement Rule obligations e.g. removal of the LR and 'second tier' references

APPENDIX A - GLOSSARY

Term or acronym	Meaning
5MS	Five-Minute Settlement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
API	Application Programming Interface
B2B	Business to business
B2M	Business to market
CATS	Customer Administration and Transfer Solution
CLP	Controlled load profile
DNSP	Distribution Network Service Provider
ENLR	Embedded Network Local Retailer
FRMP	Financially Responsible Market Participant
GS	Global Settlement
LNSP	Local Network Service Provider
LR	Local Retailer
MDFF	Meter Data File Format
MDM	Meter Data Management
MDMF	Meter Data Management Format
MDP	Metering Data Provider
MP	Meter Provider
MSATS	Market Settlements and Transfer Solution
NER	National Electricity Rules
NMI	National Metering Identifier
NSLP	Net System Load Profile
PE cells	Photoelectric cells
TNI	Transmission Node Identifier
UFE	Unaccounted for energy
VTN	Virtual transmission node
WIGS	Wholesale, Interconnector, Generator and Sample

APPENDIX B - DETAILED RESPONSES TO SUBMISSIONS

Please note: The MDM Format & Upload Process has been removed from this consultation. This document is a technical document, rather than a procedure, and is not subject to consultation under NER 8.9. Whilst this document has been removed from the MP2 Draft Determination, feedback from stakeholders received as part of the first stage have been included and responded to the Appendix. It is currently anticipated that an updated MDM Format & Upload Process version will be published to AEMO's website for final comment only in Aug 2019.

TABLE 1 – METROLOGY PROCEDURE: PART A

<table>
<tr><th>#</th><th>RESPONDENT</th><th>CLAUSE</th><th>HEADING/ DEFINITION</th><th>PARTICIPANT COMMENT</th><th>AEMO RESPONSE</th></tr>
<tr><td>1.</td><td>Origin</td><td></td><td>General</td><td>Please note, not all links work which reference related documents. E.g. In metrology Part A and B.
Pages cannot be found.</td><td>Links corrected.</td></tr>
<tr><td>2.</td><td>Red Lumo</td><td></td><td></td><td>Red and Lumo note that the term non-contestable unmetered load is sometimes capitalised and other times not. Also, footer suggests that it commences on both 1 July 2021 and 6 February 2022. Please review and correct prior to issuing the next version.</td><td>All instances lower case.

Footer correct in clean version.</td></tr>
<tr><td>3.</td><td>AGL</td><td>3.1(d)</td><td>Update to include International Standards covered in 3.1.(b) and 3.1.(c).</td><td>The Feb 22 version does not include the updates made to the May 20 version for IEC standards etc.</td><td>Standards included.</td></tr>
<tr><td>4.</td><td>Evoenergy</td><td>3.4</td><td>Table</td><td>This table is set-up differently to 3.4 (b) & 3.5 (b). Should standardise this table to:<table><tr><th>Jurisdiction</th><th>Variation in accordance with Jurisdictional policy</th></tr><tr><td>New South Wales
Australian Capital Territory
Queensland</td><td>Value of “x” is 100 MWh per annum</td></tr><tr><td>South Australia</td><td>Value of “x” is 160 MWh per annum</td></tr><tr><td>Tasmania</td><td>Value of “x” is 150 MWh per annum</td></tr><tr><td>Victoria</td><td>Value of “x” is zero (0) MWh per annum</td></tr></table></td><td>Agreed, table in clause 3.4(d) configured consistently with tables in clauses 3.4(b) and 3.5(b).</td></tr>
<tr><td>5.</td><td>Energy Queensland</td><td>12.2(e)(3)</td><td>“Notwithstanding (2), an Interval Meter installed where the flow of electricity is greater than or equal to 100 MWh per annum and where the connection point has never had a customer with a negotiated retail contract will be read as an Accumulation Meter by the metering data provider. “</td><td>Energy Queensland considers that this segment does not support GS and the removal of Tier 1 role (assuming this is what is defined as ‘negotiated contract’).</td><td>Jurisdictional material can only be changed at the direction of the Jurisdiction. To be reviewed with Jurisdiction.</td></tr>
<tr><td>6.</td><td>AGL</td><td>12.3, 12.4, 12.7</td><td>Provisions for non-contestable unmetered loads</td><td>Noting the AEMC comment that UMS could be contestable in the future, AGL suggests that the word non-contestable be removed.
This clause pre-supposes that non-contestable unmetered loads will not have individual NMIs (i.e. will use inventory tables) and only require On/Off tables.
AGL would expect that these loads should have individual NMIs and that the 5ms profiles may be more complex than simple On/Off, and may require load variation and seasonal adjustments.
As such, AGL believes that this amendment may not be suitable, and may drive solutions (e.g. bulk NMIs, inventory tables) which are not appropriate for the non-type 7 UMS devices.</td><td>Metrology Procedure: Part B to be amended to provide for the creation of individual non-contestable unmetered load NMIs and will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.</td></tr>
<tr><td>7.</td><td>Ausgrid</td><td>12.3, 12.4, 12.7</td><td>Provisions for non-contestable unmetered loads</td><td>Ausgrid believes there is merit in AEMO profiling non-contestable UM (NC-UM) loads. Each MC currently has a DAL (kwh) for each NC-UM load NMI, if this was linked with a UM profile shape (e.g. flat or switched) then AEMO would be the only participant would be required to develop profiling for NC-UM loads.
12.4 - If AEMO is to profile non-contestable UM loads then only accumulated metering data should be provided.</td><td>The role of the MDP is to provide metering data, including calculated metering data, not just a single consumption value that must be subsequently converted to 5-minute metering data.</td></tr>
</table>

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
8.	AusNet Services	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	In reference to section 12.3, AusNet Services is concerned the proposed procedures require the publishing of load tables and on/off tables for all unmetered loads. While this is appropriate for unmetered loads the distribution network service provider (DNSP) currently allows to be connected as unmetered, it is not appropriate for legacy connections with unmetered equipment that are no longer permitted to be unmetered. Publishing equipment in load tables creates the strong impression with customers that the DNSP would permit their proposed unmetered connection with such equipment. Also publishing load tables for unmetered devices no longer supported (i.e. legacy non-contestable unmetered load) is unnecessary, because the agreed average daily demands (ADLs) are already transparent to the customer and retailer. Therefore, we recommend the following alterations to section 13.1.2. (b) The Load Tables, Inventory Tables and On/Off Tables for type 7 metering installations and non-contestable unmetered loads must be stored within the metering data services database, for all but legacy non-contestable unmetered loads.	Metrology Procedure: Part B to be amended to preserve any confidential arrangements that are already in place for non-contestable unmetered loads.
9.	CitiPower Powercor	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Clause 12.3 (b) requires the non-contestable unmetered loads (NC-UMS) to have “Load Tables”, “Inventory Tables” and “On/Off Tables” that are stored within the metering data services database. It effectively prescribes the movement of all existing and future NC-UMS into the existing type 7 processing engine, it doesn’t support the continued use of a single NMI/device model that currently holds the majority of these loads. It is difficult to see how an efficient and reliable new connections process can work that adds the device details itself onto the DNSPs GIS on a daily or weekly basis, without generating specialist manual labour costs for the DNSP, other than requiring the REC seeking to make a UMS connection to identify the UMS customer by a “UMS Customer Code” and then the device by “UMS Device Code”, and providing the spacial location geometry, to allow automatic addition of that data to the correct Inventory table, but also to the GIS connection point. CitiPower Powercor recommends that clause 12.3 (b) should allow for both single NMI per device approaches as well as single NMI to many device approaches Also a new clause, 12.3 (c) should require the customer requesting connection of a type 7 or non-contestable unmetered load to be required to provide additional information including the customers “UMS Customer Code” (evidencing pre-approval to connect a UMS) and the “UMS Device Code” which should evidence and identify the previously approved “Agreed Load” and “Profile Table” associated with the proposed customer device. (See discussion in section 14) Clauses 12.7 (a) (ii) & (iii) & (c) require the MC (or AEMO) to test that the calculated metering data for NC-UMS loads reflects the physical inventory, and to conduct the test within 15 business days and that the Physical Inventory is the prima facie evidence of the actual number. This closely replicates the current treatment of type 7 loads, and pre-disposes that the existing type 7 structure of Inventory table is present, this doesn’t easily cater for a single NMI/device method where the device count is implicitly “1” and hence not maintained in an “inventory table” structure?	Refer to response to AusNet Item 8.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
10.	Endeavour Energy	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	a) Clause 12.7.a.ii suggests that the calculated metering data for non-contestable unmetered load reflects the physical inventory. However it is common practice for an agreed load value to be used for non-contestable unmetered load, which may differ from the physical inventory's load. For clarity we suggest that clause 12.7.a.ii be updated to: arrange to test that the calculated metering data stored in the metering data services database reflects the agreed load value for the non-contestable unmetered load; b) Clause 12.4 has been updated so that the MDP must send all metering data for market loads. However the effective start date of the document is 6 February 2022, we believe for the global settlement soft start to be successful this new obligation should start 1 July 2017.	Metrology Procedure: Part B to be amended to provide for the creation of individual non-contestable unmetered load NMIs and will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
11.	Energy Australia	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	The transfer of non-contestable unmetered load data is dependent on AEMO's decision on the framework for calculating and storing this in MSATS. Should AEMO choose to treat non-contestable unmetered load with and without PE (photoelectric cells) differently a review of these clauses might be warranted.	Metrology Procedure: Part B to be amended to provide for the creation of individual non-contestable unmetered load NMIs and will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
12.	Energy Queensland	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Energy Queensland notes that the separation of NCONUML from Type 7 has been discussed in working groups and questions if this distinction should be reflected in the procedures (throughout section 12).	Metrology Procedure: Part B to be updated to clearly distinguish between type 7 and NCONUML.
13.	Evoenergy	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Agree with changed wording except 12.4 (see notes below)	AEMO notes comment, also refer to response to Evoenergy Item 31.
14.	Flow Power	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Noted 12.7 b) If there is a major variance between physical inventory and data can we use the historical usage to get the exact usage.	Metering data would be recalculated based on the agreed physical inventory.
15.	Jemena	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Noted	AEMO notes the respondent's support for the proposed change.
16.	Origin	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	12.7 (b) and (c) Recommend that procedures (i.e. SLP) provide service level to accordingly update the inventory within 5 business days	Inventory Table updates are already prescribed in Metrology Procedure: Part B 13.2.2.
17.	Red Lumo	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Red and Lumo accept the proposal for unmetered loads to be processed through MSATS. Under the current settlement by differencing regime, non-contestable unmetered loads are basically served by a local retailer and are thus effectively part of Unaccounted for Energy (UFE). However under global settlements, these non-contestable unmetered loads need to be accounted for in settlements and removed from UFE to avoid all retailers being charged for loads that the local retailer is already being paid for. We request that all unmetered loads are visible in MSATS.	Non-contestable unmetered loads to be identified in CATS using NCONUML NMI Classification Code to be applied to non-contestable unmetered loads.
18.	SAPN	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	No comment	AEMO notes respondent's comment.
19.	Simply Engie	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Definition of 'non-contestable unmetered loads' missing in Glossary.	AEMO expects that Global Settlements amending Rule will include a definition of "non-contestable unmetered load".
20.	Stanwell	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
21.	TasNetworks	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	12.3: Agreed 12.4: Agreed 12.7: Agreed	AEMO notes the respondent's support for the proposed change.
22.	United Energy	12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Clause 12.3 (b) requires the non-contestable unmetered loads (NC-UMS) to have "Load Tables", "Inventory Tables" and "On/Off Tables" that are stored within the metering data services database.	Refer to CitiPower Powercor response – Item 9.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				It effectively prescribes the movement of all existing and future NC-UMS into the existing type 7 processing engine, it doesn't support the continued use of a single NMI/device model that currently holds the majority of these loads. It is difficult to see how an efficient and reliable new connections process can work that adds the device details itself onto the DNSPs GIS on a daily or weekly basis, without generating specialist manual labour costs for the DNSP, other than requiring the REC seeking to make a UMS connection to identify the UMS customer by a "UMS Customer Code" and then the device by "UMS Device Code", and providing the spacial location geometry, to allow automatic addition of that data to the correct Inventory table, but also to the GIS connection point. United Energy recommends that clause 12.3 (b) should allow for both single NMI per device approaches as well as single NMI to many device approaches Also a new clause, 12.3 (c) should require the customer requesting connection of a type 7 or non-contestable unmetered load to be required to provide additional information including the customers "UMS Customer Code" (evidencing pre-approval to connect a UMS) and the "UMS Device Code" which should evidence and identify the previously approved "Agreed Load" and "Profile Table" associated with the proposed customer device. (See discussion in section 14) Clauses 12.7 (a) (ii) & (iii) & (c) require the MC (or AEMO) to test that the calculated metering data for NC-UMS loads reflects the physical inventory, and to conduct the test within 15 business days and that the Physical Inventory is the prima facie evidence of the actual number. This closely replicates the current treatment of type 7 loads, and pre-disposes that the existing type 7 structure of Inventory table is present, this doesn't easily cater for a single NMI/device method where the device count is implicitly "1" and hence not maintained in an "inventory table" structure?	
23.	AGL	12.4	Provisions for non-contestable unmetered loads	AGL supports this change.	AEMO notes the respondent's support for the proposed change.
24.	Aurora	12.4	Provisions for non-contestable unmetered loads	Aurora Energy has no comment	AEMO notes respondent's comment.
25.	CitiPower Powercor		General	CitiPower Powercor recommends a flat line profile for non-contestable unmetered supplies due to their diverse nature and volume. Given they have been at an agreed load/day in the market to date, managing on/off times to profile all of these sites would result in hundreds if not thousands of profiles across the market and be impractical to manage. The introduction of UFE should confirm if these sites are identified as an issue in the future.	Metrology Procedure: Part B to be amended to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
26.	United Energy			United Energy recommends a flat line profile for non-contestable unmetered supplies due to their diverse nature and volume. Given they have been at an agreed load/day in the market to date, managing on/off times to profile all of these sites would result in hundreds if not thousands of profiles across the market and be impractical to manage. The introduction of UFE should confirm if these sites are identified as an issue in the future.	Refer to Citipower Powercor response – Item 25.
27.	AGL	12.4	Removal of 'First Tier' references	Noted – AGL supports the change.	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
28.	Aurora	12.4	Removal of 'First Tier' references	Aurora Energy has no comment	AEMO notes respondent's comment.
29.	Energy Australia	12.4	Removal of 'First Tier' references	No comment	AEMO notes respondent's comment.
30.	Energy Queensland	12.4	Removal of 'First Tier' references	Energy Queensland notes that the references to First-Tier in the jurisdictional material in section 12.8.2 will also require attention.	Refer to Energy Queensland response – Item 5.
31.	Evoenergy	12.4	Removal of 'First Tier' references	12.4 (b) now does not need to have the 3rd dot point as all loads must be transferred. Reword to: (b) The MC must ensure that metering data from the following is transferred to AEMO: (i) interval metering data for all loads, and (ii) accumulated metering data for all loads.	Agree, however current wording to be retained to remove any uncertainty about metering data type to be delivered.
32.	Flow Power	12.4	Removal of 'First Tier' references	Is that also including Type 6 Basic meters?	12.4(b)(ii) plus 12.4(b)(iii) covers all type 6 Basic (accumulation) meters.
33.	Jemena	12.4	Removal of 'First Tier' references	Noted	AEMO notes respondent's comment.
34.	Origin	12.4	Removal of 'First Tier' references	Noted	AEMO notes respondent's comment.
35.	SAPN	12.4	Removal of 'First Tier' references	No comment	AEMO notes respondent's comment.
36.	Simply Engie	12.4	Removal of 'First Tier' references	In Section 12.8.2 (a) and (c), there is a reference to 'first-tier controlled load' that needs to be reworded in line with section 12.4. There are references to first-tier loads all throughout section 3 that might also require amendments.	Refer to Energy Queensland response – Item 5.
37.	Stanwell	12.4	Removal of 'First Tier' references	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
38.	TasNetworks	12.4	Removal of 'First Tier' references	12.4: Agreed	AEMO notes the respondent's support for the proposed change.
39.	AGL	12.5(a)		Verification amendments not shown	Verification amendments to be included after ICF consultation on this matter has concluded.
40.	AGL	12.7	Provisions for non-contestable unmetered loads	AGL notes the changes for this clause but suggests that clause (c) is insufficient and pre-supposes that unmetered loads do not have individual NMIs identifying an agreed load and load profile. AGL suggests that a further clause dealing with load and load profile should be added here. See also comments below. AGL suggests that the framework for non-contestable unmetered load requires further development and the proposed changes are not sufficient. See notes below.	Metrology Procedure: Part B to be amended to provide for the creation of individual non-contestable unmetered load NMIs and will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
41.	AGL		Non-Contestable Unmetered Load - General Comments	AGL believes that unmetered loads will require individual NMIs to manage the connection point data (i.e. location, load, contract etc.) and the obligations for issuing outage notices. AGL has suggested that given the potential for a substantial number of very small load connections or large numbers of identical devices, that consideration be given to creating an additive parent child relationship, so that the connection point data can be managed at an individual NMI level, but that profiles, network bills and customer billing can be managed at a virtual parent NMI level. In terms of the metrology for these unmetered loads, AGL does not support them being blocked into the Type 7 category (which presupposed very predictable loads) but rather suggests that there be two further categories – Type 8 and Type 9. For instance: • Type 8 would be small loads where the load profile is entirely calculated; • Type 9 would be where the load profile would be supported by sample meters, network devices etc. This differentiation would provide clarity to participants and customers on the issues associated with the load profile and billing.	Metrology Procedure: Part B to be amended to provide for the creation of individual non-contestable unmetered load NMIs and will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place. NCONUML NMI Classification Code and NCONUML Metering Installation Type Code to be introduced to distinguish between type 7 and non-contestable unmetered loads.

TABLE 2 – METROLOGY PROCEDURE: PART B

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	2.2, 2.5, 3.2, 3.3.6, 3.3.8, 4.2, 4.3.3, 4.3.5, 4.3.6, 5.2.1, 5.2.6, 5.3.4, 5.3.6, 6.1, 6.2.4, 14.2.2, 14.3	Provisions for embedded network local retailers (ENLR)	AGL notes the proposed change for Global settlements but considers that a substantial change to any site (T1 or T2) will impact all retailers through changes to the UFE calculations. AGL suggests that this process needs discussion and potentially reporting for parties to manage their position.	AEMO acknowledges that the current provisions for "affected" parties to agree or be notified of meter data changes, however notes that these were not intended to apply to participants only impacted by changes to the allocation of UFE. A minor change to the provisions may be necessary to avoid any ambiguity, which will be considered as part of publishing the final procedure.
2.	Aurora		Provisions for embedded network local retailers (ENLR)	Aurora Energy has no comment	AEMO notes respondent's comment.
3.	CitiPower Powercor		Provisions for embedded network local retailers (ENLR)	CitiPower Powercor as an LNSP does not have any ongoing involvement within embedded network. However, currently, as an MC/MP/MDP it still has a number of its meters left inside some newly converted brownfield sites, or pre-December 2017 sites where the Victorian Government extended MC roles under its Order in Council, this is a transitionary situation.	AEMO notes respondent's comment.
4.	Energy Australia		Provisions for embedded network local retailers (ENLR)	Administratively it should be noted that this also effectively removes the LR references and we note AEMO has taken a similar approach to the other procedures.	AEMO notes respondent's comment.
5.	Energy Queensland		Provisions for embedded network local retailers (ENLR)	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
6.	Evoenergy		Provisions for embedded network local retailers (ENLR)	Replacing LR with ENLR does not address the change in (LR) role obligations. Where previously all NMIs would have an LR assigned, post 5MS, not all NMIs will have an ENLR role assigned. Wording as is indicates MDPs must still consult or notify in all instances, however will no longer be applicable in all cases. Suggest include "…ENLR (where applicable)…"	Consistently added "affected" to clarify that the ENLR (where appropriate) is to be notified.
7.	Flow Power		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
8.	Origin		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
9.	SAPN		Provisions for embedded network local retailers (ENLR)	No comment	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
10.	Stanwell		Provisions for embedded network local retailers (ENLR)	These amendments generally seem reasonable and in accordance with the intent of the GS Rule. We do note however that an ENLR's involvement is only required where relevant (and not where the relevant connection point is not part of an embedded network).	Correct. The LR field in CATS will be populated with the appropriate ENLR Participant ID (i.e. parent FRMP) for market child connection points and non-embedded network connection points will have the LR fields populated with "GLOPOOL".
11.	TasNetworks		Provisions for embedded network local retailers (ENLR)	Agreed	AEMO notes the respondent's support for the proposed change.
12.	Evoenergy	3.3.12	*NEW* Type 22 – Five-minute conversion historical data and churn	Where a 15- or 30-minute actual interval is replaced with a five-minute interval based on calculation applied to actual historical 15- or 30-minute interval provide new flag to identify. Intent is where data is converted from 15- or 30-minute intervals to five-minute intervals for purpose of churn MDPs can identify where actual data has been manipulated.	Type 21 substitution is not used to replace historical 15 or 30 minute metering data, the substitution method is used when 5-minute metering data is to be substituted and there are no historical 5 minute metering data upon which a substitution can be made.
13.	AGL	6.1, 11.4, 12.3, 13.1.2, 13.1.3, 13.1.4, 13.2.1, 13.3.1	Provisions for non-contestable unmetered loads	AGL notes the inclusion of provisions for non-contestable unmetered load in these sections, but the amendments pre-suppose that these connections will not have individual NMIs, but rather operate on inventory tables. AGL believes that UMS needs further discussion to cover the process from customer request through to customer billing. See previous comments. Overall, AGL believes that the UMS framework needs further discussion prior to procedural changes to ensure a flexible but accurate regime. Non-Type 7 UMS loads may have more variance in load characteristics than standard type 7, including seasonal load increase (e.g. cabinet fans) seasonal load decrease, seasonal usage (e.g. BBQs) and so forth. AGL does not believe that simple On-Off is adequate.	13.1, 13.2 and 13.4 to be amended to provide for the creation of individual non-contestable unmetered load NMIs.
14.	Aurora		Provisions for non-contestable unmetered loads	Aurora Energy has no comment	AEMO notes respondent's comment.
15.	Ausgrid		Provisions for non-contestable unmetered loads	Are the provisions in clause 11.2 classified as jurisdictional material and only able to be modified by the jurisdiction? 13.1.2 – Publish is a italicised term but there is no definition in the glossary. When does AEMO intend by stating load table must be published, if so, what is their content and format? Also should the references be MC rather than LNSP.	11.2 provisions came from the original Jurisdictional Metrology Procedures; therefore they are Jurisdictional Material. Italicised terms are defined in the NER (refer to NER Chapter 10) The Glossary and Framework document also states this in clause 1.2.1.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				13.1.4 (b) – suggest that each NMI for NC-UM load also have a profile shape as a mandatory parameter, i.e. cannot have load with flat and switched loads contained in same NMI. For example a council that has NC-UM lighting which is switched will have a switched profile where as other loads (parking meters) will be a flat profile. 13.2& 13.3 – AEMO should develop this profile for NC-UM NMIs.	Following feedback from Participants, 13.1, 13.2 and 13.3 will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
16.	AusNet Services		Provisions for non-contestable unmetered loads	In reference to section 13.1.2, AusNet Services is concerned the proposed procedures require the publishing of lists and load tables for all unmetered loads. While this is appropriate for unmetered loads the DNSP currently allows to be connected as unmetered, it is not appropriate for legacy connections with unmetered equipment that are no longer permitted to be unmetered. Publishing equipment in load tables creates the strong impression with customers that the DNSP would permit their proposed unmetered connection with such equipment. Also publishing load tables for unmetered devices no longer supported (i.e. legacy non-contestable unmetered load) is unnecessary, because the agreed average daily demands (ADLs) are already transparent to the customer and retailer. Therefore, we recommend the following alterations to section 13.1.2. (b) LNSPs must publish a list of non-contestable unmetered loads and keep this list up to date, for all but legacy non-contestable unmetered loads. (c) LNSPs must publish a Load Table for non-contestable unmetered loads and keep this Load Table up to date, for all but legacy non-contestable unmetered loads.	Following feedback from Participants, 13.1, 13.2 and 13.3 will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
17.	CitiPower Powercor		Provisions for non-contestable unmetered loads	Clause 6.1(c) requires the existence of an "Inventory Table" for NC-UMS connections (i.e. a type 7 style of UMS processing) and subsequently doesn't support or consider a NMI/device and ADL based process. CitiPower Powercor recommends 6.1 (c) should allow for both a single NMI per device approach as well as a single NMI to many device approach. CitiPower Powercor believes 13.1.2 would be enhanced by AEMO/AER publishing a NC-UMS Guideline that requires customers seeking to operate a device unmetered to	Following feedback from Participants, 13.1, 13.2 and 13.3 will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place. 6.1(c) to also be included in the above review.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				register as a UMS-Customer and receive a "UMS Customer Code" and for the Customer to provide suitable inventory, load consumption and usage profile data in relation to approved devices to the DNSP to meet the requirements of 13.1.2(b). Those approved devices would then be given a "UMS Device Code" that would standardise the agreed load and load profile for that device. 13.1.4 (b) - Noting this capability "may" exist for an inventory table based model, it doesn't specifically preclude a single NMI/device model – or require a table model to mix different types of loads, CitiPower Powercor Supports the Change. 13..2.1 – this algorithm for calculating meter data relies on the type 7 inventory/load/on-off table processing model and doesn't account for a load profile table that includes partial or dimmed capacity other than off and on, and needs to allow for the 1 NMI / 1 Device ADL approach. 13.2.2 specifically requires a "separate Inventory table" for each NMI and hence doesn't allow for the 1 NMI/1 device ADL approach. 13.2.3 On / Off Table, clauses (a) (b) and (c) do not allow for the future development of an "estimated" on-off table (load profile) for seasonal devices such as BBQs or watering sprinkler / irrigation systems that may be estimated to exist under user defined control rather than physically exist and be evidenced. 13.3 does not exclude NC-UMS and hence would then appear to make AEMO responsible for determining the annual energy consumption in accordance with 13.1.5, which would seem then to make 13.1.2 and its obligations on the DNSP in relation to NC-UMS redundant?	

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				13.3.1 requires the Energy Calculation of NC-UMS to be calculated in accordance with an Algorithm based on the existence of the Load Table and Inventory Table and On/Off table – this again predisposes the use of a type 7 UMS process, and doesn't allow for the 1 NMI/1 device ADL approach. 13.2.2 does not exclude NC-UMS and hence would require the of the Load Table and Inventory Table and On/Off table – this again predisposes the use of a type 7 UMS process, and doesn't allow for the 1 NMI/1 device ADL approach.	
18.	Endeavour Energy		Provisions for non-contestable unmetered loads	a) Clauses 13.1.2.b and 13.1.2.c requires the LNSP to publish a list of non-contestable unmetered loads and a Load Table for non-contestable unmetered loads. We note that the term 'publish' is defined term in the NER and in this context requires the list to be "… made available to Registered Participants electronically". We believe that these listings should only be made available to the FRMP and not any Registered Participant. b) We note that clauses 13.1.2.b, 13.1.2.c, 13.1.2.d and 13.1.e place obligations on the LNSP. However these responsibilities more closely align with obligations of an MDP because clause 12.3 of the Metrology Part A states that this information must be stored within the metering data services database. Accordingly, we suggest that clauses 13.1.2.b, 13.1.2.c, 13.1.2.d and 13.1.e be updated as follow: (b) MDPs must create and maintain a list of non-contestable unmetered loads. (c) MDPs must create and maintain a Load Table for non-contestable unmetered loads. (d) MDPs must create and maintain an Inventory Table, in accordance with 13.2.2, for each non-contestable unmetered load NMI. (e) The MDP must provide the Inventory Table to the FRMP when requested. c) Clause 13.1.3.b should be a subclause under 13.1.3.a. We suggest renumbering 13.1.3.b to 13.1.3.a.iii and rewording to: Non-contestable unmetered loads result from the operation of Unmetered Devices that are not included in (i) or (ii)	Refer to responses to AusNet and CitiPower Powercor Items 16 and 17.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				d) To minimise changes and cost, Networks should be able to assign a NMI to a single non-contestable unmetered load. Therefore, for the avoidance of any doubt clause 13.1.4.a should be updated to reflect this – we suggest that this clause be reworded to: Metering data for an unmetered load is calculated by NMI DataStream. A NMI can be assigned for a single non-contestable unmetered load or for each unique combination of:	
19.	Energy Australia		Provisions for non-contestable unmetered loads	See comments above relating to Provisions for non-contestable unmetered loads for Metrology Procedures Part A. 11.4 – this assumes that non-contestable unmetered load will be profiled on a 5minute basis and the distribution loss factors and marginal loss factors (DLF and MLF) computed on that basis as well – or is DLF and MLF to be calculated by aggregating the intervals? (please clarify). This also appears inconsistent with 12.4(c) – "The metering data for individual NMIs is adjusted by MLF and DLF for NSLP calculations, but is not adjusted by MLF and DLF for UFE calculations" Our suggestion is that losses should be applied to the calculation of UFE. @ 13.1.2, 13.1.4 – agreed and support We also note there is an assumption that unmetered non-contestable load is calculated the same way as Type 7 (i.e. profiled using a formula) and, similar to our comments above, believe a review of this might be warranted if AEMO's position on UFE and unmetered non-contestable load changes.	Non-contestable unmetered load metering data calculation to be reviewed – refer to response to AusNet Item 16. 12.4 revised to be consistent with 11.4.
20.	Energy Queensland		Provisions for non-contestable unmetered loads	Energy Queensland notes that section 13.3 indicates that annual energy consumption is determined by AEMO. However, there appears to be contradiction with regards to the party responsible for management of the load tables (AEMO) and the party responsible for calculating energy consumption (the Metering Coordinator). Energy Queensland requests AEMO to confirm the process for those uncontrolled devices that operate for less than 24 hours per day.	Refer to response to AusNet Item 16.
21.	Evoenergy		Provisions for non-contestable unmetered loads	13.1.2(a) (p39 of marked document) Rules clause reference is incorrect and should be 7.16.3(c)(6A) What are the reasons behind publishing a Load Table and Inventory table for non-contestable loads (largely insignificant loads)? This is not required currently unless they are "market loads" (therefore contestable). The proposed change will not be cost	Refer to response to AusNet Item 16.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				effective and does not appear to benefit customers or the market. Seeking to understand rationale behind proposal. NER only refers to the metrology procedure to include arrangements for the "market loads". Suggest removal of dot points (b) and (c) only.	
22.	Flow Power		Provisions for non-contestable unmetered loads	Noted	AEMO notes respondent's comment.
23.	Jemena		Provisions for non-contestable unmetered loads	Clauses 13.1.2 (b) & (c) – Require LNSPs to publish a list of non-contestable unmetered loads and the Load Table for non-contestable unmetered loads. We are aware AEMO is responsible for publishing Load Tables for type 7 devices. The load value is used by all LNSPs to calculate type 7 metering data. AEMO's initial Load Table originated from the load in the Load Tables published by jurisdictional regulators. As new type 7 load devices were introduce over time, it was AEMO's responsibility to update the Load Tables based on load and power consumption tests agreed by AEMO, the relevant Registered Participants and end-user. Publication of the Load Table adds value as LNSPs across the NEM use the Load Table to calculate the energy consumption of the devices. It is not clear to us why LNSPs are required to publish the Load Table of non-contestable unmetered loads as it adds no value. Moreover, it is not clear to us who would benefit from the publication of the list of non-contestable unmetered loads by LNSPs. Currently, LNSPs do not publish a list of type 7 loads – so why the need to publish a list of non-contestable unmetered loads. JEN proposes the requirement to 'publish' be amended to 'maintain' in Clauses 13.1.2 (b) & (c).	Refer to response to AusNet Item 16.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Clause 13.1.2 (e) is unnecessary because of 13.1.2 (d) points to clause 3.2.2 sub clause (f) "The MC must provide the Inventory Table to relevant Registered Participants when requested." We suggest subclause Clause 13.1.2 (e) be deleted. 13.3 Uncontrolled Unmetered Devices Section 13.3 was original written for uncontrolled type 7 metering installations and the form of on/off control was 24 hours per day (as per clause 13.3.3). A simple amendment, inserting the words "or non-contestable unmetered load", appears in the first instance to be a neat solution, but we find clause 13.3.2 (c) [reproduced below] problematic. "Each MC must develop the initial Inventory Table for the NMIs for which it is responsible. The initial Inventory Table must be agreed with the affected Registered Participants, AEMO and the relevant End User." We have thousands of non-contestable unmetered devices (security lights, public BBQ's, NBN cabinets, bus shelters, illuminated signs, cable amplifiers, etc) all of which were initially connected following negotiated agreements on the load/energy consumption between the local retailer, LNSP and the end-user. Noteworthy, the AEMC understanding is the same in its consultation paper "Five minute settlement and global settlement implementation amendments, 13 June 2019", notes: "…non-market unmetered loads that do not meet the criteria for type 7 metering installation include sports ground lighting, public BBQ's, NBN cabinets and bus shelters. These loads are non-contestable customers that are settled out of the market through a negotiated agreement. The consumption and costs of those loads are agreed between the local retailer, local network service provider and the local council or telecommunications company." We believe it is not practical to renegotiated and seek the requisite agreements from the parties in accordance with clause 13.3.2 (c) to establish the initial Inventory Table. We	

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				propose the existing non-contestable unmetered loads as agreed between the local retailer, LNSP and the end-user be used to establish the initial Load Table. We believe the reason the jurisdictions did not classify the myriad of other small unmetered devices as market loads is not to burden LNSPs with costly application of the type 7 metering criteria. We do not believe non-contestable unmetered loads should be subjected to the same criteria of type 7 metering installations, because: • the volume of non-contestable unmetered devices are small in comparison to type 7 metering installations, • the type of devices are not commonly deployed in the NEM (such as street lights), • the energy consumption per NMI is miniscule in comparison to the energy consumption per NMI of type 7 installations, and • the cost of applying the type 7 criteria to these non-contestable unmetered devices would outweigh the benefit improving the accuracy of the UFE. We believe the Load Table for all existing non-contestable unmetered loads be based on the agreed energy consumption values.	
24.	Origin		Provisions for non-contestable unmetered loads	In NER the term 'publish' refers to the distributor publishing information on their website. For non-contestable unmetered loads this is not warranted. Suggest rewording for 13.2.1 (b) and (c). Replace 'publish" with, "provide to the relevant registered participant"	Refer to response to AusNet Item 16.
25.	SAPN		Provisions for non-contestable unmetered loads	No comment	AEMO notes respondent's comment.
26.	Stanwell		Provisions for non-contestable unmetered loads	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
27.	TasNetworks		Provisions for non-contestable unmetered loads	6.1: Agreed 11.4: Agreed 12.3: Agreed 13.1.2: (b) and (c): TasNetworks believes that the LNSP obligation should be to maintain a List and a Load Table, and does not agree that the LNSP needs to publish the List and Load Table. TasNetworks maintains, and will continue to maintain, a List and a Load Table which contains all non-contestable load devices and their respective assessed wattage	Refer to response to AusNet Item 16.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				which is calculated in accordance with local jurisdictional procedures (i.e. LNSP Service & Installation Rules). 13.1.3: Agreed 13.1.4: Disagree. TasNetworks requests that non-contestable unmetered loads be allocated on the basis of an individual unmetered device per NMI. The reason for this is to facilitate effective management of planned outage notifications as it will be extremely difficult to provide appropriate advice to customers if multiple devices are attached to a single NMI. TasNetworks, upon FRC, registered in MSATS, all non-contestable market loads located in Tasmania on an individual non-contestable device load to single NMI basis, and has continued to do so as additional loads are connected. 13.1.5: This clause appears to only apply to market loads and as such the heading should be like 'Load Table for market loads'. TasNetworks suggests that Load Tables for non-contestable unmetered loads of each respective LNSP should contain information that meets the format required for the methodology employed by their respective jurisdictional instrument. 13.2.1: Agreed, however suggest that the Device Wattage be determined in accordance with the respective LNSP jurisdictional instrument. 13.3.1: Agreed, however suggest that the Device Wattage be determined in accordance with the respective LNSP jurisdictional instrument. TasNetworks typically limit the connection of unmetered non-contestable loads to devices that draw a 'constant load' of less than 1kW, as the assessed consumption (unless agreed otherwise) is derived from the peak load of the installation and applied to each interval in the 24 hour period.	
28.	United Energy		Provisions for non-contestable unmetered loads	Clause 6.1(c) requires the existence of an "Inventory Table" for NC-UMS connections (i.e. a type 7 style of UMS processing) and subsequently doesn't support or consider a NMI/device and ADL based process.	Refer to response to CitiPower Power Item 17

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				United Energy recommends 6.1 (c) should allow for both a single NMI per device approach as well as a single NMI to many device approach. United Energy believes 13.1.2 would be enhanced by AEMO/AER publishing a NC- UMS Guideline that requires customers seeking to operate a device unmetered to register as a UMS-Customer and receive a "UMS Customer Code" and for the Customer to provide suitable inventory, load consumption and usage profile data in relation to approved devices to the DNSP to meet the requirements of 13.1.2(b). Those approved devices would then be given a "UMS Device Code" that would standardise the agreed load and load profile for that device. 13..2.1 this algorithm for calculating meter data relies on the type 7 inventory/load/on-off table processing model and doesn't account for a load profile table that includes partial or dimmed capacity other than off and on, and needs to allow for the 1 NMI / 1 Device ADL approach. 13.2.2 specifically requires a "separate Inventory table" for each NMI and hence doesn't allow for the 1 NMI/1 device ADL approach. 13.2.3 On / Off Table, clauses (a) (b) and (c) do not allow for the future development of an "estimated" on-off table (load profile) for seasonal devices such as BBQs or watering sprinkler / irrigation systems that may be estimated to exist under user defined control rather than physically exist and be evidenced. 13.3 does not exclude NC-UMS and hence would then appear to make AEMO responsible for determining the annual energy consumption in accordance with 13.1.5, which would seem then to make 13.1.2 and its obligations on the DNSP in relation to NC-UMS redundant?	

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				13.3.1 requires the Energy Calculation of NC-UMS to be calculated in accordance with an Algorithm based on the existence of the Load Table and Inventory Table and On/Off table – this again predisposes the use of a type 7 UMS process, and doesn't allow for the 1 NMI/1 device ADL approach. 13.2.2 does not exclude NC-UMS and hence would require the of the Load Table and Inventory Table and On/Off table – this again predisposes the use of a type 7 UMS process and doesn't allow for the 1 NMI/1 device ADL approach.	
29.	CitiPower Powercor	10.2	Validations against a nominated maximum value.	10.2 (a) & (b) (ii) require a nominated maximum value initially set to the maximum rating of whole current meters to be used to validate the energy volume recorded in each 30 minute trading interval. This is effectively 12kWh for a single phase meter and 36kWh for a three phase meter, and results any load interval exceeding that quantity to fail validation and to result in a substitution, usually of past metering data of a lower value – this is effectively rewarding a customer who is using 'more' than they should, with a bill that charges for less than they actually used. In a 30 minute interval, a single customer "may" have used 150A through the meter for 15 minutes but only 50A for the remaining 15 minutes and would hence register 12kWh and pass validation, were the customer to use 150A throughout the 30 minute interval they would physically consume an actual use of 18kWh however this exceeds the 12kWh maximum and will likely be substituted with historical data of 12kWh or less. This is a perverse signal to send to the customer who is consuming more not less than should be permitted, and it also does nothing to respond to the actual overloading of the meter, and wiring on the site. This will only get worse under 5 minute interval whereby the example above of 150A for 15 minutes and 50A for a further 15 minutes will not be hidden but will instead result in 3 consecutive 5 minute intervals exceeding the maximum rating value of 2kWh ,and again be substituted for a lower historical value.	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				While meters are only certified to 100A for metrology purposes, recent changes to the safety requirements in Australian Metering Standards have required meters to withstand 128A for 2 hours, and hence the maximum load should be set at least at 128/130A (i.e. 18kWh for a 30 minute interval, or 3kWh for a 5 minute interval for a single phase meter and 46kWh for a 30 minute interval and 8 kWh for a 5 minute interval for a three phase meter. There is also a safety issue to the meter and the connection point, and instead of substituting the data, any load recording 130% or more of the meter rating should immediately be referred to the MC for investigation.	
30.	United Energy	10.2		10.2 (a) & (b) (ii) require a nominated maximum value initially set to the maximum rating of whole current meters to be used to validate the energy volume recorded in each 30 minute trading interval. This is effectively 12kWh for a single phase meter and 36kWh for a three phase meter, and results any load interval exceeding that quantity to fail validation and to result in a substitution, usually of past metering data of a lower value – this is effectively rewarding a customer who is using 'more' than they should, with a bill that charges for less than they actually used. In a 30 minute interval, a single customer "may" have used 150A through the meter for 15 minutes but only 50A for the remaining 15 minutes and would hence register 12kWh and pass validation, were the customer to use 150A throughout the 30 minute interval they would physically consume an actual use of 18kWh however this exceeds the 12kWh maximum and will likely be substituted with historical data of 12kWh or less. This is a perverse signal to send to the customer who is consuming more not less than should be permitted, and it also does nothing to respond to the actual overloading of the meter, and wiring on the site. This will only get worse under 5 minute interval whereby the example above of 150A for 15 minutes and 50A for a further 15 minutes will not be hidden but will instead result in 3 consecutive 5 minute intervals exceeding the maximum rating value of 2kWh ,and again be substituted for a lower historical value.	Refer to response to CitiPower Powercor Item 29.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				While meters are only certified to 100A for metrology purposes, recent changes to the safety requirements in Australian Metering Standards have required meters to withstand 128A for 2 hours, and hence the maximum load should be set at least at 128/130A (i.e. 18kWh for a 30 minute interval, or 3kWh for a 5 minute interval for a single phase meter and 46kWh for a 30 minute interval and 8 kWh for a 5 minute interval for a three phase meter. There is also a safety issue to the meter and the connection point, and instead of substituting the data, any load recording 130% or more of the meter rating should immediately be referred to the MC for investigation.	
31.	AGL	11.1.2, 11.1.3, 11.2.2, 11.2.3, 11.3.1, 11.3.2, 11.3.3, 11.4, 11.5, 12.3, 12.4	Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.
32.	Aurora		Removal of 'First Tier' and 'Second Tier' references	Aurora Energy has no comment	AEMO notes respondent's comment.
33.	Energy Australia		Removal of 'First Tier' and 'Second Tier' references	It might be appropriate to clarify how sample meter NMIs are going to be classified under the new NMI classification codes.	They will still be classified as "SAMPLE".
34.	Energy Queensland		Removal of 'First Tier' and 'Second Tier' references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
35.	Evoenergy		Removal of 'First Tier' and 'Second Tier' references	Agree	AEMO notes the respondent's support for the proposed change.
36.	Flow Power		Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.
37.	Jemena		Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.
38.	Origin		Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
39.	SAPN		Removal of 'First Tier' and 'Second Tier' references	No comment	AEMO notes respondent's comment.
40.	Stanwell		Removal of 'First Tier' and 'Second Tier' references	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
41.	TasNetworks		Removal of 'First Tier' and 'Second Tier' references	11.1.2: No comment 11.1.3: No comment (NSW) 11.2.2: No comment (QLD) 11.2.3: No comment (SA) 11.3.1: No comment (NSW & QLD) 11.3.2: No comment (SA) 11.3.3: No comment (SA) 11.4: Agreed 11.5: Agreed 12.3: Agreed 12.4: Agreed	AEMO notes the respondent's support for the proposed change.
42.	AGL	11.2.1	Removal of 'Local Retailer (LR)' references	Noted	AEMO notes respondent's comment.
43.	Aurora	11.2.1	Removal of 'Local Retailer (LR)' references	Aurora Energy has no comment	AEMO notes respondent's comment.
44.	Energy Queensland	11.2.1	Removal of 'Local Retailer (LR)' references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
45.	Evoenergy	11.2.1	Removal of 'Local Retailer (LR)' references	Ok	AEMO notes the respondent's support for the proposed change.
46.	Flow Power	11.2.1	Removal of 'Local Retailer (LR)' references	Noted	AEMO notes respondent's comment.
47.	Jemena	11.2.1	Removal of 'Local Retailer (LR)' references	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
48.	Origin	11.2.1	Removal of 'Local Retailer (LR)' references	Noted	AEMO notes respondent's comment.
49.	SAPN	11.2.1	Removal of 'Local Retailer (LR)' references	No comment	AEMO notes respondent's comment.
50.	Stanwell	11.2.1	Removal of 'Local Retailer (LR)' references	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
51.	Tas Networks	11.2.1	Removal of 'Local Retailer (LR)' references	No comment (NSW)	AEMO notes respondent's comment.
52.	AGL	11.3.3, 11.4, 12.4, 13.2.5	Change in formulas	Noted	AEMO notes respondent's comment.
53.	Aurora		Change in formulas	11.4 Should there not be a formula for 5 minute, the existing 15, 30 has been updated, but there is no inclusion for 5 minute - $-\Sigma$(TI $metering\ data$ for 30–minute $metering\ installations\ in$ Profile Area)$y \times MLFyzy = 1 \times DLFy$	The first subtracted term "TI load (including type 7) in Profile Area" captures 5-minute metered metering data.
54.	Ausgrid		Change in formulas	13.2 – AEMO should develop this profile for NC-UM NMIs.	Refer to response to AusNet Item 16.
55.	Energy Australia		Change in formulas	See comments on 11.4 above	AEMO notes respondent's comment.
56.	Energy Queensland		Change in formulas	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
57.	Evoenergy		Change in formulas	Ok	AEMO notes the respondent's support for the proposed change.
58.	Flow Power		Change in formulas	Noted	AEMO notes respondent's comment.
59.	Jemena		Change in formulas	Noted	AEMO notes respondent's comment.
60.	Origin		Change in formulas	Noted	AEMO notes respondent's comment.
61.	SAPN		Change in formulas	No comment	AEMO notes respondent's comment.
62.	Stanwell		Change in formulas	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
63.	TasNetworks		Change in formulas	11.3.3: No comment 11.4: Agreed	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				12.4: Agreed 13.2.5: Agreed	
64.	AGL	11.4(d)		Noted	AEMO notes respondent's comment.
65.	AGL	11.4, 12.3	Provisions for 'bulk supply'	Noted – formula on p34, 4th line uses the term 'constable unmetered ..' not 'non-contestable …'	The term appears as "Non-contestable unmetered load".
66.	Aurora	11.4, 12.3	Provisions for 'bulk supply'	Aurora Energy has no comment	AEMO notes respondent's comment.
67.	Ausgrid	11.4, 12.3	Provisions for 'bulk supply'	AEMO should define these new NMI Classifications in the Glossary so participant know when and what they are used for.	New NMI Classification Codes will, as usual, be defined in CATS Procedures and their use will be detailed in the NMI Procedure.
68.	Energy Queensland	11.4, 12.3	Provisions for 'bulk supply'	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
69.	Evoenergy	11.4, 12.3	Provisions for 'bulk supply'	Agree Suggest the definition of bulk supply point is included in glossary, or the National Metering Identifier procedure that provides the definition is referenced	Refer to response to Ausgrid Item 67.
70.	Flow Power	11.4, 12.3	Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
71.	Jemena	11.4, 12.3	Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
72.	Origin	11.4, 12.3	Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
73.	SAPN	11.4, 12.3	Provisions for 'bulk supply'	No comment	AEMO notes respondent's comment.
74.	Stanwell	11.4, 12.3	Provisions for 'bulk supply'	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
75.	TasNetworks	11.4, 12.3	Provisions for 'bulk supply'	11.4: Agreed 12.3: Agreed	AEMO notes the respondent's support for the proposed change.
76.	AGL	12.4	Provisions for UFE (unaccounted for energy)	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
77.	Aurora	12.4	Provisions for UFE (unaccounted for energy)	Aurora Energy has no comment	AEMO notes respondent's comment.
78.	Energy Australia	12.4	Provisions for UFE (unaccounted for energy)	See comments above on 11.4 – clarification requested on whether MLF/DLF is to be applied to UFE and/or its components (i.e. unmetered non-contestable load)	Refer to response to Energy Australia Item 19.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
79.	Energy Queensland	12.4	Provisions for UFE (unaccounted for energy)	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
80.	Evoenergy	12.4	Provisions for UFE (unaccounted for energy)	Agree	AEMO notes the respondent's support for the proposed change.
81.	Flow Power	12.4	Provisions for UFE (unaccounted for energy)	Please include some instructions on how UFE will be calculated.	UFE calculation to be performed in accordance with NER 3.15.4 and 3.15.5.
82.	Jemena	12.4	Provisions for UFE (unaccounted for energy)	Noted	AEMO notes respondent's comment.
83.	Origin	12.4	Provisions for UFE (unaccounted for energy)	Noted	AEMO notes respondent's comment.
84.	SAPN	12.4	Provisions for UFE (unaccounted for energy)	No comment	AEMO notes respondent's comment.
85.	Stanwell	12.4	Provisions for UFE (unaccounted for energy)	These amendment seems reasonable and in accordance with the calculation of UFE under the GS Rule. We do note however that some of the elements of the UFE formula are adjusted by the DLF only.	UFE is confined to the distribution network, therefore the calculation of the UFE energy volume does not include MLF adjustment.
86.	TasNetworks	12.4	Provisions for UFE (unaccounted for energy)	Agreed	AEMO notes the respondent's support for the proposed change.
87.	AGL	13.1.2	NCUL	Noted. AGL does not believe that these proposed provisions are necessarily appropriate or sufficient. The proposed obligations require the LNSP to 'publish' a list of loads, a load table and manage an inventory table – it is not clear why this is required to be a pubic list, given that these devices are presently non-contestable. There is an assumption that each group of devices within this category will fit into a load group, which AGL disagrees with. The obligations pre-suppose an inventory table not individual NMIs for each connection; These devices have become part of this group of devices as a result of being varied and less predictable. For example, each Council will have multiple devices which are garden sprinklers with varying loads. AGL has proposed a NMI parent-child additive framework to allow individual devices to be connected, registered and identified, but grouped by customer and profile to	Refer to response to AusNet Item 16.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				efficiently manage numerous similar loads and simplify network, market and customer billing.	
88.	AGL	13.1.4(b)		AGL does not agree with this requirement for non-contestable unmetered loads. At the very least the NMI would also have to have the same 5ms profile, but this would not resolve the issue of connection point management or management of outage notices to end users. AGL's parent-child NMI proposal meets these requirements and allows for individual connection management through on-market service orders, including connection, abolishment and de-energisation. While this framework may be suitable for public lighting where the network manages the inventory and asset, AGL does not believe that it is suitable for an environment where the customer can change individual assets.	Refer to response to AusNet Item 16.
89.	AGL	13.2.1		AGL has previously noted that it believes that the NMI classification of NCONUML defines the type of connection, but that these connections should be broken into a metering Type 8 and Type 9 classification to differentiate between purely profiled, or profiles based on sample meters or network devices.	New MeteringInstallationType Code "NCONUML" will also be introduced to differentiate non-contestable unmetered loads from type 7 unmetered loads.

TABLE 3 – METER DATA FILE FORMAT SPECIFICATION NEM12 & NEM13

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	1.1	Include AEMO as a relevant party	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
2.	Aurora	1.1	Include AEMO as a relevant party	Aurora Energy has no comment	AEMO notes respondent's comment.
3.	AusNet Services	1.1	Include AEMO as a relevant party	Agree with proposed change	AEMO notes the respondent's support for the proposed change.
4.	Endeavour Energy	1.1	Include AEMO as a relevant party	We note that the proposed effective start date of this document is 1 December 2020. We understand that this is to allow MDPs to start sending MDFF to AEMO from this date onwards, thus providing MDPs a transition period. However, a consequence of bringing the effective start date forward is that it also allows MDPs to send 5-minute metering data to registered participants prior to 1 July 2021 without an agreement from the registered participant. For the avoidance of any doubt we suggest a clause be added into this document that states 5-minute metering data cannot be sent to registered participants prior to 1 July 2021 without prior agreement.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
5.	Energy Australia	1.1	Include AEMO as a relevant party	As the MDFF file format is now going to be used for delivery from the MDP to AEMO and to market participants via B2B, we suggest that further work be undertaken by AEMO to make consistent, where possible, processes and terminology, and that this can be done through guidance or explanatory statements in other documents. An example can be a consistent understanding of timing for updating substituted reads, and responding to exception processes.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
6.	Energy Queensland	1.1	Include AEMO as a relevant party	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
7.	Evoenergy	1.1	Include AEMO as a relevant party	Agree	AEMO notes the respondent's support for the proposed change.
8.	Flow Power	1.1	Include AEMO as a relevant party	Noted	AEMO notes respondent's comment.
9.	Jemena	1.1	Include AEMO as a relevant party	Noted	AEMO notes respondent's comment.
10.	Origin	1.1	Include AEMO as a relevant party	Noted	AEMO notes respondent's comment.
11.	Red Lumo	1.1	Include AEMO as a relevant party	As per our comments to stage 1, we do not support AEMO receiving the same files as retailers and networks from MDPs. We consider that AEMO should only obtain what is required for settlements. Further, we recommend that an obligation be added that AEMO destroy all off-market data, that is not required for settlements, it receives in error. This should not be utilised by AEMO without the prior consent of the retailer and MDP.	AEMO's use of active and reactive metering data for settlements and UFE analysis was detailed in Section 4.2.6 of the Procedure Package 1 Final Determination Report.
12.	SAPN	1.1	Include AEMO as a relevant party	No comment	AEMO notes respondent's comment.
13.	Simply Engie	1.1	Include AEMO as a relevant party	The only comment is around version control as also raised by other participants in last few workshops. Although it's trivial for the ones who are aware of the sequence of changes, from logical and administrative perspective, it's not appropriate to have v2.1 being made effective ahead of version 2.0 (which could be read as v2.0 is virtually effective from 1 Dec 2020, ahead of 5ms Rule Change). Since v2.0 is not officially effective yet (or published), Simply Energy suggests v2.1 to be renamed as v1.07 and markup to be done on v1.06 copy instead of v2.0 copy.	Version 2.1 to have Effective Date 1 July 2021.
14.	Stanwell	1.1	Include AEMO as a relevant party	These amendments seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
15.	TasNetworks	1.1	Include AEMO as a relevant party	Agreed	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
16.	Energy Queensland		Additional comments	Energy Queensland requests AEMO to confirm if interval length should be defined as '05' where mandatory field format = Numeric (2).	As a numeric field "5" is the correct representation of this.
17.	Origin	4.3	NMI data details record (200) Field: RegisterID	Update the Definition to make the Register ID mandatory for all metered sites. All meter types should be treated the same, apart from Type 7. Interval Meter register identifier. Defined the same as the RegisterID field in the CATS_Register_Identifier table. The value should match the value in MSATS. e.g. "1", "2", "E1", "B1". Origin recommends Rewording to: The RegisterID is: Mandatory for type 1-3, 4, 4A and type 5 metering data when the sender of the MDFF file is the Current MDP. Not required for types 7 or when sending metering data to another MDP (e.g. Meter Churn data).	This item is out of scope for 5-minute and Global Settlement Rule changes and should be raised through BAU change request processes.
18.	Origin	4.3	NMI data details record (200) Field: Meter SerialSerialNumber	Currently, there are Meter Providers who have AEMO exemptions from the meter serial in the MDFF not requiring to meet the meter serial in MSATS. As part of the change to 5MS, Origin request that by 1/7/2021, these exemptions should be end dated and no longer applicable. MSATS should accordingly be updated with the correct serial number. Furthermore, Removal "Historical Data" from exiting wording. Historical request for meter data returns the current meter serial number as installed today and not the meter serial number at the time the meter data relates to. Current wording: Not required for type 7 metering installations, logical meters, Historical Data, or where multiple meters are summated to form a single RegisterID. New wording: Not required for type 7 metering installations, logical meters or where multiple meters are summated to form a single RegisterID	AEMO does not provide these types of exemptions. The timing for updating Standing Data (including meter serial number) following meter churn will, for a short term, produce a mis-match between meter serial number in the MDFF metering data file and CATS.

TABLE 4 – MSATS PROCEDURES: MDM PROCEDURES

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	1.3	Inclusion of the MDM File Format and Load Process document	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
2.	Aurora	1.3	Inclusion of the MDM File Format and Load Process document	Aurora Energy has no comment	AEMO notes respondent's comment.
3.	Energy Queensland	1.3	Inclusion of the MDM File Format and Load Process document	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
4.	Evoenergy	1.3	Inclusion of the MDM File Format and Load Process document	Agree	AEMO notes the respondent's support for the proposed change.
5.	Flow Power	1.3	Inclusion of the MDM File Format and Load Process document	Noted	AEMO notes respondent's comment.
6.	Jemena	1.3	Inclusion of the MDM File Format and Load Process document	Noted	AEMO notes respondent's comment.
7.	Origin	1.3	Inclusion of the MDM File Format and Load Process document	Noted	AEMO notes respondent's comment.
8.	SAPN	1.3	Inclusion of the MDM File Format and Load Process document	No comment	AEMO notes respondent's comment.
9.	Stanwell	1.3	Inclusion of the MDM File Format and Load Process document	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
10.	TasNetworks	1.3	Inclusion of the MDM File Format and Load Process document	Agreed	AEMO notes the respondent's support for the proposed change.
11.	AGL	3.2.11, 3.2.14, 3.2.15, 3.2.16, 9.3	Removal of 'First Tier' and 'Second Tier' references	Noted. AGL notes that the file size/volume for metering transactions has been specified, but that the B2B file sizes have not, and understands that this size/volume is yet to be tested and may be amended once tested. AGL is unsure how this information will be amended particularly if the change needs to be undertaken quickly as it is now hard wired into a procedure. AGL also suggests that this information needs to clearly state that it impacts meter data files only and that other transactions (especially B2B) are defined elsewhere.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
12.	Aurora		Removal of 'First Tier' and 'Second Tier' references	Aurora Energy has no comment	AEMO notes respondent's comment.
13.	Energy Queensland		Removal of 'First Tier' and 'Second Tier' references	Energy Queensland considers that profiling the NSLP by bulk supply subtraction of NOPROF is unlikely to equate to the aggregation of NMI level estimated NSLP data. Existing methodologies do not appear to be suitable for global settlements with the injection of mass volumes of previously unpublished Type 6 data. Energy Queensland therefore request that AEMO undertake more consultation for settlement load aggregation.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
14.	Evoenergy		Removal of 'First Tier' and 'Second Tier' references	Agree	AEMO notes the respondent's support for the proposed change.
15.	Flow Power		Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.
16.	Jemena		Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.
17.	Origin		Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
18.	SAPN		Removal of 'First Tier' and 'Second Tier' references	No comment	AEMO notes respondent's comment.
19.	Stanwell		Removal of 'First Tier' and 'Second Tier' references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
20.	TasNetworks		Removal of 'First Tier' and 'Second Tier' references	3.2.11: Agreed 3.2.14: Agreed 3.2.15: Agreed 3.2.16: Agreed 9.3: Agreed	AEMO notes the respondent's support for the proposed change.
21.	AGL	3.2.14, 3.2.16, 9.5, 9.6, 9.7	Inclusion of five-minute provisions	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
22.	Aurora		Inclusion of five-minute provisions	Aurora Energy has no comment	AEMO notes respondent's comment.
23.	Energy Australia		Inclusion of five-minute provisions	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
24.	Evoenergy		Inclusion of five-minute provisions	Agree	AEMO notes the respondent's support for the proposed change.
25.	Flow Power		Inclusion of five-minute provisions	Can we add that Type 6 will be excluded from 5 minute reads unless changed to COMMS.	Net System Load Profile (NSLP) is the 5-minute profile shape that is applied to Basic Metering data datastreams to facilitate the generation of a 5-minute representation of Basic metering data that is to be used in the settlements process.
26.	Jemena		Inclusion of five-minute provisions	Noted	AEMO notes respondent's comment.
27.	Origin		Inclusion of five-minute provisions	Noted	AEMO notes respondent's comment.
28.	SAPN		Inclusion of five-minute provisions	No comment	AEMO notes respondent's comment.
29.	Stanwell		Inclusion of five-minute provisions	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
30.	TasNetworks		Inclusion of five-minute provisions	3.2.14: Agreed 3.2.16: Agreed 9.5: Agreed 9.6: Agreed 9.7: Agreed	AEMO notes the respondent's support for the proposed change.
31.	AGL	3.2.15, 3.2.16	Provisions for 'bulk supply'	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
32.	Aurora		Provisions for 'bulk supply'	Aurora Energy has no comment	AEMO notes respondent's comment.
33.	Energy Queensland		Provisions for 'bulk supply'	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
34.	Evoenergy		Provisions for 'bulk supply'	Agree Suggest the definition of bulk supply point is included in glossary, or the National Metering Identifier procedure that provides the definition is referenced	New NMI Classification Codes will be defined in CATS Procedures and their use will be detailed in the NMI Procedure.
35.	Flow Power		Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
36.	Jemena		Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
37.	Origin		Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
38.	Red Lumo		Provisions for 'bulk supply'	There is no definition for 'bulk supply'. Please include one in the glossary. Also, in the glossary, the term 'bulk supply' is supposed to only be used in the WIGS procedure, however the term is also used in the MDM. Please also update this in the glossary.	Refer to response to Evoenergy Item 34.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
39.	SAPN		Provisions for 'bulk supply'	No comment	AEMO notes respondent's comment.
40.	Stanwell		Provisions for 'bulk supply'	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
41.	TasNetworks		Provisions for 'bulk supply'	3.2.15: Agreed 3.2.16: Agreed	AEMO notes the respondent's support for the proposed change.
42.	AGL	3.2.15, 3.2.16, 9.2, 9.3, 9.4, 9.5, 9.6, 9.8, 9.9, 9.10	Provisions for embedded network local retailers (ENLR)	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
43.	Aurora		Provisions for embedded network local retailers (ENLR)	Aurora Energy has no comment	AEMO notes respondent's comment.
44.	Energy Queensland		Provisions for embedded network local retailers (ENLR)	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
45.	Evoenergy		Provisions for embedded network local retailers (ENLR)	Replacing LR with ENLR does not address the change in (LR) role obligations. Where previously all NMIs would have an LR assigned, post 5MS, not all NMIs will have an ENLR role assigned. Wording as is indicates MDPs must still consult or notify in all instances, however will no longer be applicable in all cases. Suggest change to "…LR or ENLR (where applicable)…"	Procedure changed to clarify use of LR for Embedded Networks.
46.	Flow Power		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
47.	Jemena		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
48.	Origin		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
49.	SAPN		Provisions for embedded network local retailers (ENLR)	No comment	AEMO notes respondent's comment.
50.	Stanwell		Provisions for embedded network local retailers (ENLR)	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
51.	TasNetworks		Provisions for embedded network local retailers (ENLR)	3.2.15: Agreed 3.2.16: Agreed 9.2: Agreed 9.3: Agreed 9.4: Agreed 9.5: Agreed 9.6: Agreed 9.8: Agreed 9.9: Agreed 9.10: Agreed	AEMO notes the respondent's support for the proposed change.
52.	AGL	3.2.16,	Removal of 'Local Retailer (LR)' references	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
53.	Energy Queensland	3.2.16,	Removal of 'Local Retailer (LR)' references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
54.	Evoenergy	3.2.16,	Removal of 'Local Retailer (LR)' references	see above	AEMO notes respondent's comment.
55.	Flow Power	3.2.16,	Removal of 'Local Retailer (LR)' references	Noted	AEMO notes respondent's comment.
56.	Jemena	3.2.16,	Removal of 'Local Retailer (LR)' references	Note	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
57.	Origin	3.2.16,	Removal of 'Local Retailer (LR)' references	Noted	AEMO notes respondent's comment.
58.	SAPN	3.2.16,	Removal of 'Local Retailer (LR)' references	No comment	AEMO notes respondent's comment.
59.	Stanwell	3.2.16,	Removal of 'Local Retailer (LR)' references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
60.	TasNetworks	3.2.16,	Removal of 'Local Retailer (LR)' references	3.2.16: Agreed	AEMO notes the respondent's support for the proposed change.
61.	Energy Queensland	6.2	Update to MDP obligations related to Data Collection Type Code (DCTC)	Energy Queensland considers that this section should change to allow for energy values in units other than kilowatt-hours and the removal of the DCTC code.	MTRD MeterDataNotifications Energy Values can be provided in the following units MWh, kWh, Wh units. Upon moving to MTRD MeterDataNotifications Participants will no longer be required to submit DCTC. This is a requirement from 1/07/2021.
62.	AGL	6.3, 6.4	Removal of aseXML csv payload tag reference	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
63.	Aurora	6.3, 6.4	Removal of aseXML csv payload tag reference	Aurora Energy has no comment	AEMO notes respondent's comment.
64.	Energy Queensland	6.3, 6.4	Removal of aseXML csv payload tag reference	Energy Queensland considers there is no need to remove the reference to the CSV payload tag, as it will still be used, but instead to change MDM to MTRD.	MTRD MeterDataNotifications will not support the aseXML CSVDataType of <csvProfileData>. Once a participant has moved to MTRD MeterDataNotifications sample meter data should be submitted under the <csvIntervalData> aseXML CSVDataType and the equivalent Datastream type defined in CATS defined with "P".
65.	Evoenergy	6.3, 6.4	Removal of aseXML csv payload tag reference	Agree	AEMO notes the respondent's support for the proposed change.
66.	Flow Power	6.3, 6.4	Removal of aseXML csv payload tag reference	Noted	AEMO notes respondent's comment.
67.	Jemena	6.3, 6.4	Removal of aseXML csv payload tag reference	Noted	AEMO notes respondent's comment.
68.	Origin	6.3, 6.4	Removal of aseXML csv payload tag reference	Noted	AEMO notes respondent's comment.
69.	SAPN	6.3, 6.4	Removal of aseXML csv payload tag reference	No comment	AEMO notes respondent's comment.
70.	Stanwell	6.3, 6.4	Removal of aseXML csv payload tag reference	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
71.	TasNetworks	6.3, 6.4	Removal of aseXML csv payload tag reference	6.3: Agreed 6.4: Agreed	AEMO notes the respondent's support for the proposed change.
72.	AGL	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
73.	Aurora	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Aurora Energy has no comment	AEMO notes respondent's comment.
74.	Energy Australia	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Removal of 9.5/6 report – See above points on 4. Meter Data File Format (MDFF) Specification NEM12 & NEM13. This is an example of information which should have a consistent understanding regardless of whether the MDP is delivering MDFF to AEMO or a market participant.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
75.	Energy Queensland	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
76.	Evoenergy	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Agree	AEMO notes the respondent's support for the proposed change.
77.	Flow Power	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
78.	Jemena	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Noted	AEMO notes respondent's comment.
79.	Origin	9.5	Removal of MDM RM14 MDP Data Version Comparison report	Noted	AEMO notes respondent's comment.
80.	SAPN	9.5	Removal of MDM RM14 MDP Data Version Comparison report	No comment	AEMO notes respondent's comment.
81.	Stanwell	9.5	Removal of MDM RM14 MDP Data Version Comparison report	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
82.	TasNetworks	9.5	Removal of MDM RM14 MDP Data Version Comparison report	9.5: Agreed	AEMO notes the respondent's support for the proposed change.
83.	AGL	9.6	Removal of MDM RM15 Multiple Versions report	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
84.	Aurora	9.6	Removal of MDM RM15 Multiple Versions report	Aurora Energy has no comment	AEMO notes respondent's comment.
85.	Energy Australia	9.6	Removal of MDM RM15 Multiple Versions report	Removal of 9.5/6 report – See above points on 4. Meter Data File Format (MDFF) Specification NEM12 & NEM13. This is an example of information which should have a consistent understanding regardless of whether the MDP is delivering MDFF to AEMO or a market participant.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
86.	Energy Queensland	9.6	Removal of MDM RM15 Multiple Versions report	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
87.	Evoenergy	9.6	Removal of MDM RM15 Multiple Versions report	Agree	AEMO notes the respondent's support for the proposed change.
88.	Jemena	9.6	Removal of MDM RM15 Multiple Versions report	Noted	AEMO notes respondent's comment.
89.	Origin	9.6	Removal of MDM RM15 Multiple Versions report	Note	AEMO notes respondent's comment.
90.	SAPN	9.6	Removal of MDM RM15 Multiple Versions report	No comment	AEMO notes respondent's comment.
91.	Stanwell	9.6	Removal of MDM RM15 Multiple Versions report	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
92.	TasNetworks	9.6	Removal of MDM RM15 Multiple Versions report	9.6: Agreed	AEMO notes the respondent's support for the proposed change.
93.	Energy Queensland	9.6	Removal of MDM RM15 Multiple Versions report	Energy Queensland notes that additional reports and/or modifications to Reconciliation Reports (RM21/27) listed under 9.8 are under discussion with Settlement Focus Groups.	AEMO notes respondent's comment.
94.	Flow Power	9.6	Removal of MDM RM15 Multiple Versions report	Noted	AEMO notes respondent's comment.
95.	AGL	9.9	Removal of MDM RM18 Electricity Interval Data report	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
96.	Aurora	9.9	Removal of MDM RM18 Electricity Interval Data report	Aurora Energy has no comment	AEMO notes respondent's comment.
97.	Energy Queensland	9.9	Removal of MDM RM18 Electricity Interval Data report	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
98.	Evoenergy	9.9	Removal of MDM RM18 Electricity Interval Data report	Agree	AEMO notes the respondent's support for the proposed change.
99.	Flow Power	9.9	Removal of MDM RM18 Electricity Interval Data report	Noted. Could you include in the document that AEMO will provide a weekly report for missing data, as previously proposed? We understand the weekly report will include the below RM reports-	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				RM37 – High Priority Missing Data Report – for Wholesale, generator and interconnector NMI's RM38 – DataStream Missing Data Report – DataStream level (NEM12) missing readings RM39 – Mismatch Data Report – identifies where AEMO has received readings that do not match the standing data. RM43 – UFE Factors by Profile Area – profile area data used to calculate UFE.	
100.	Jemena	9.9	Removal of MDM RM18 Electricity Interval Data report	Noted	AEMO notes respondent's comment.
101.	Origin	9.9	Removal of MDM RM18 Electricity Interval Data report	Noted	AEMO notes respondent's comment.
102.	SAPN	9.9	Removal of MDM RM18 Electricity Interval Data report	No comment	AEMO notes respondent's comment.
103.	Stanwell	9.9	Removal of MDM RM18 Electricity Interval Data report	These amendments seem reasonable.	AEMO notes the respondent's support for the proposed change.
104.	TasNetworks	9.9	Removal of MDM RM18 Electricity Interval Data report	9.9: Agreed	AEMO notes the respondent's support for the proposed change.
105.	AGL	Appendix A	Provisions for FTP and API delivery method	Noted. AGL Supports the change.	AEMO notes the respondent's support for the proposed change.
106.	Aurora	Appendix A	Provisions for FTP and API delivery method	Aurora Energy has no comment	AEMO notes respondent's comment.
107.	Energy Queensland	Appendix A	Provisions for FTP and API delivery method	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
108.	Evoenergy	Appendix A	Provisions for FTP and API delivery method	Agree	AEMO notes the respondent's support for the proposed change.
109.	Flow Power	Appendix A	Provisions for FTP and API delivery method	Noted	AEMO notes respondent's comment.
110.	Jemena	Appendix A	Provisions for FTP and API delivery method	Noted – Jemena intends to stay with current FTP mechanism	AEMO notes respondent's comment.
111.	Origin	Appendix A	Provisions for FTP and API delivery method	Noted	AEMO notes respondent's comment.
112.	SAPN	Appendix A	Provisions for FTP and API delivery method	No comment	AEMO notes respondent's comment.
113.	Simply Engie	Appendix A	Provisions for FTP and API delivery method	Minor amendment to include 'API' reference in the below sentence: Following is a summary of the transactions for each participant in a metering data exchange to MDM, via FTP or e-Hub API, in order of operation.	Appendix A details the message exchange for FTP only. The e-Hub API actions differ slightly and are detailed in the MDM File Format and Process Load technical guide.
114.	Stanwell	Appendix A	Provisions for FTP and API delivery method	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
115.	TasNetworks	Appendix A	Provisions for FTP and API delivery method	App A: Agreed	AEMO notes the respondent's support for the proposed change.

TABLE 5 – MSATS PROCEDURES: MDM FILE FORMAT AND LOAD PROCESS

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	Endeavour Energy		General	This document has a proposed effective start date of December 2020. From December 2020 to 30 June 2021 AEMO is proposing to accept interval metering via both MDM and NEM12, and from 1 July 2021 only via the NEM12. However, references to interval metering via MDM has been deleted. We suggest that this document be reviewed to ensure it reflects AEMO's intent for managing the transition.	AEMO notes respondent's comment. Version revised in response to this comment that includes MDMT (MDMF) interval MeterDataNotifications.
2.	Red Lumo			General comment regarding the Procedure: As per our comments to stage 1, we do not support AEMO receiving the same files as retailers and networks from MDPs. We consider that AEMO should only obtain what is required for settlements. Further, we recommend that an obligation be added that AEMO destroy all off-market data it receives in error. This should not be utilised by AEMO without the prior consent of the retailer and MDP. Finally, in this document AEMO uses the terms "MDMT and MTRD" and "MDMT or MTRD" interchangeably. Red and Lumo recommend that AEMO review whether it is an 'and' or an 'or' in all circumstances across the process.	AEMO's use of active and reactive metering data for settlements and UFE analysis was detailed in Section 4.2.6 of the Procedure Package 1 Final Determination Report. AEMO currently stores (B2B) MTRD and (B2M) MDMT MeterDataNotifications with all data held within the aseXML message unadulterated to satisfy settlement audit and archiving requirements. This practice will continue. Wording revised in regard to "MDMT and MTRD" and "MDMT or MTRD" in response to this comment in the Final technical guide.
3.	AGL	1.1, 2.2, 3.1, 3.3, 3.4, 3.5, 3.7, 3.9, 3.10, 5.2, 5.2.5, 6	Provisions for MDFF (Meter Data File Format)	Noted	AEMO notes respondent's comment.
4.	Aurora		Provisions for MDFF (Meter Data File Format)	Aurora Energy has no comment	AEMO notes respondent's comment.
5.	AusNet Services		Provisions for MDFF (Meter Data File Format)	AusNet Services agrees with provisions in section 5.2.1 that allow the MDPs to replace existing metering data records with new metering data records, as long as the 'UpdateDateTime' for the new data record must be greater than or equal to the 'UpdateDateTime' of the existing record. This avoids the cost and complexity of filtering which retailer requested metering data gets sent to AEMO.	AEMO confirms that for MTRD MeterDataNotificaitons it will accept replacement reads that are greater than or equal to the 'UpdateDateTime' of an existing record.
6.	Endeavour Energy		Provisions for MDFF (Meter Data File Format)	AEMO should consider how they want to manage metering data with a 'N' flag. AEMO could reject the metering data and not load it or load the metering data but include it in the RM11 report as missing data.	AEMO will accept and load reads for all suffixes supported by the NEM12 and NEM13 specification. It will however settle only on active energy suffixes in the CNDS table. The RM11 report will continue to detail suffixes that are listed in the CNDS table but for which *metering data* has not been received. In the case of an 'Nx' suffix, the RM11 report will list this as missing if no reads with a MDMDataStream identifier of 'Nx' have been received for the NMI and IntervalData.
7.	Energy Queensland		Provisions for MDFF (Meter Data File Format)	Energy Queensland is concerned that (based on notes in the HLIA) AEMO appears to be replacing the current MDM database and separating it from MSATS. With such a change, participants will be unable to view metering data in the MSATS browser and run RM reports against this data. Energy Queensland requests AEMO to confirm the architecture and proposed solution. Energy Queensland also questions referencing Gas standards for aseXML.	AEMO will be implementing as part of the 5MS architecture an Enterprise Service Bus (ESB) to ensure that existing MSATS Browser and RM reports functionality is maintained. Electricity aseXML Schema to be referenced correctly in the Final technical guide
8.	Evoenergy		Provisions for MDFF (Meter Data File Format)	The Figure and Table number references starting from section 4 appear to be out of alignment e.g. 4.1 MDMT Messaging Exchange Figure 7 and Table 8 provide…	Figure numbers revised in response to this comment in the Final technical guide.

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				But directly underneath that reference is Figure 6 and Table 7	
9.	Flow Power		Provisions for MDFF (Meter Data File Format)	Noted	AEMO notes respondent's comment.
10.	Jemena		Provisions for MDFF (Meter Data File Format)	Noted	AEMO notes respondent's comment.
11.	Origin		Provisions for MDFF (Meter Data File Format)	Noted	AEMO notes respondent's comment.
12.	Plus ES		Provisions for MDFF (Meter Data File Format)	PLUS ES seeks clarification: With the Term MDFF added to Section 3.3. c) it appears that all Datastreams must be in the CNDS Table. This is not what AEMO have been conveying previously in their forums; the understanding was that only new metering was required in CNDS. PLUS ES suggests the following for Section 2.2 (Paragraph 3) which also supports MDP SLP section 3.12.4 PLUS ES believes the obligations on the MDP to deliver metering data to AEMO are ambiguous. Clause 3.12.4, requiring the MDP to deliver 'all Datastreams' to AEMO, does not support commitments made by AEMO to allow MDPs to 'transition' to the NEM12 format. Further, PLUS ES encourages AEMO to reconsider its position with regard to the delivery of metering data to MSATS. In short, the delivery of metering data in the MDM format should be validated against the NMI Datastream, and the delivery of metering data in the NEM12 format should be delivered against the NMI Suffix recorded against the meter register. There are a number of reasons for this approach: - 1. Clause 2 (c) of the MDFF specification requires an MDP to include 'all NMI suffixes associated with a NMI for any IntervalDate' in the same 100-900 block. Experience tells us this does not always happen. Without validating all suffixes/registers are included for the IntervalDate, AEMO risks incorrectly calculating settlement data. 2. Current recipients of the NEM12 file format typically validate against the registers. It would be prudent for AEMO to exercise similar validation to ensure consistency across the market. 3. How will AEMO deal with the removal of a contributing suffix from a Net calculation? Whilst this is a relatively rare occurrence, a suffix being made inactive does not require metering data to be re-sent for the remaining suffix, and even if it were, it would be rejected on account of a duplicate version date/time. 4. There is no reason why an MDP should be required to replicate information recorded in the meter register, information that forms part of the structure and validation of the NEM12 file, in the datastream table. 5. And, at some time in the future, the datastream table should become redundant. If AEMO is to allow a transitional approach to the delivery of metering data, the obligations specified in MDL SLP clause 3.12.4 need to be modified such that they allow for, and articulate, the transitional arrangements.	Section 2.2 (Paragraph 3) revised in response to this comment to make it clear what suffixes must be entered in the CNDS table. 1-2. AEMO will not be performing this validation on meter data load. This does not mean that AEMO will not perform "after the fact" reporting to validate against the register index table in the future. 3. Wording revised in response to this comment in the Final technical guide to make it clear that where a contributing active (Ex, Bx) or reactive energy suffix (Kx, Qx) has been added or removed the MDP must resend the metering data for that read date with the remaining suffixes. It's also worth noting that for MDFF, AEMO will no longer reject reads with the same read date/time as a previously sent read. 4. In relation to the datastream table, the only obligation on MDPs is to populate the table with active energy (E/B) suffixes.
13.	SAPN		Provisions for MDFF (Meter Data File Format)	No comment	AEMO notes respondent's comment.
14.	Stanwell		Provisions for MDFF (Meter Data File Format)	Table 2 and Table 4 contradict themselves. Table 2 states the Meter Type for the MDMT Transaction Type is accumulation only. Table 4 states it is for interval and accumulation.	Wording revised in Table 4 in response to this comment in the Final technical guide.
15.	Tasnetworks		Provisions for MDFF (Meter Data File Format)	1.1: Agreed 2.2: Agreed 3.1: Agreed 3.3: Agreed 3.4: Agreed	Figure numbers revised in response to this comment in the Final technical guide.

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				3.5: Clause 3.5 and information in table 2 should indicate that MDMT Transaction Type can be used for interval meter types for provision of data for reading dates up to and including 30 June 2021. 3.7: Clause 3.7 and information in Table 4 should indicate that MDMT Transaction Type can be used for interval data for provision of data for reading dates up to and including 30 June 2021. 3.9: Agreed 3.10: Agreed 5.2: In 5.2.3 heading, 'Filer' should be 'File'. 5.2.4 Table 10 should have a separate row for IntervalDate. It is included with IntervalLength. 5.2.5: Agreed 6: Agreed	
16.	AGL	1.3	Inclusion of additional 'Related Documents'	Noted	AEMO notes respondent's comment.
17.	Aurora	1.3	Inclusion of additional 'Related Documents'	Unsure why aseXML Schema is referencing the GAS schema web page	Electricity aseXML Schema to be referenced correctly in the Final technical guide
18.	Energy Queensland	1.3	Inclusion of additional 'Related Documents'	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
19.	Evoenergy	1.3	Inclusion of additional 'Related Documents'	Agree	AEMO notes the respondent's support for the proposed change.
20.	Flow Power	1.3	Inclusion of additional 'Related Documents'	Noted	AEMO notes respondent's comment.
21.	Jemena	1.3	Inclusion of additional 'Related Documents'	Noted	AEMO notes respondent's comment.
22.	Origin	1.3	Inclusion of additional 'Related Documents'	Noted	AEMO notes respondent's comment.
23.	SAPN	1.3	Inclusion of additional 'Related Documents'	No comment	AEMO notes respondent's comment.
24.	Stanwell	1.3	Inclusion of additional 'Related Documents'	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
25.	TasNetworks	1.3	Inclusion of additional 'Related Documents'	1.3: Agreed	AEMO notes the respondent's support for the proposed change.
26.	Plus ES		Removed/deleted Clause 1.3	Clause 1.3 This clause appears to be deleted but the DCTC Code is still present in the examples. PLUS ES suggests AEMO takes the least change approach. OK, if the DCTC are not being used but do not make amendments to the MDM form to reflect this change.	Example (MDM) Metering Data File with DCTC is also deleted in change marked version of the Procedure. Clean version of document clarifies the deletion.
27.	AGL	3.6	Changes to table content	Noted	AEMO notes respondent's comment.
28.	Aurora	3.6	Changes to table content	Aurora Energy has no comment	AEMO notes respondent's comment.
29.	Energy Queensland	3.6	Changes to table content	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
30.	Evoenergy	3.6	Changes to table content	Approved	AEMO notes the respondent's support for the proposed change.
31.	Flow Power	3.6	Changes to table content	Noted	AEMO notes respondent's comment.
32.	Jemena	3.6	Changes to table content	Noted	AEMO notes respondent's comment.
33.	Origin	3.6	Changes to table content	Noted	AEMO notes respondent's comment.
34.	SAPN	3.6	Changes to table content	No comment	AEMO notes respondent's comment.

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35.	Stanwell	3.6	Changes to table content	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
36.	TasNetworks	3.6	Changes to table content	3.6: Agreed	AEMO notes the respondent's support for the proposed change.
37.	AGL	3.7, 3.8, 3.9, 3.12, 4.4.1	Removal of sections, including references to netting and aggregating to 30-minute	Noted	AEMO notes respondent's comment.
38.	Aurora		Removal of sections, including references to netting and aggregating to 30-minute	No reference to Q1,K1 which could be included in the file in table 4 Figure 4 is referenced twice for 2 different file types of read types both accumulation and interval	Wording revised in Table 4 in response to this comment in the Final technical guide.
39.	Energy Queensland		Removal of sections, including references to netting and aggregating to 30-minute	In relation to the proposed change in Section 3.7, Energy Queensland queries why interval data streams are acceptable data type in the MDM transaction given MDM will be for accumulating metering only. Also, in relation to Table 4 (in Data Type row), we question whether this should be updated to indicate that we are delivering validated consumption only. In relation to Section 3.8, we question why netting is listed as applicable for accumulated meter reading data. However, we agree that the meter reading may be a signed reading.	From 01/07/21 the netting and aggregating to 30-minute will no longer be supported for Interval metering data sent to AEMO Wording revised in Table 4 in response to this comment in the Final technical guide.
40.	Evoenergy		Removal of sections, including references to netting and aggregating to 30-minute	Agree	AEMO notes the respondent's support for the proposed change.
41.	Flow Power		Removal of sections, including references to netting and aggregating to 30-minute	Noted	AEMO notes respondent's comment.
42.	Jemena		Removal of sections, including references to netting and aggregating to 30-minute	Noted	AEMO notes respondent's comment.
43.	Origin		Removal of sections, including references to netting and aggregating to 30-minute	Noted	AEMO notes respondent's comment.
44.	SAPN		Removal of sections, including references to netting and aggregating to 30-minute	No comment	AEMO notes respondent's comment.
45.	Stanwell		Removal of sections, including references to netting and aggregating to 30-minute	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
46.	TasNetworks		Removal of sections, including references to netting and aggregating to 30-minute	3.7: Agreed 3.8: Typographical errors in 3.8.1: 'a DataStream' and 'profiled to into TIs.' 3.9: Agreed 3.12: No comment 4.4.1: Agreed.	AEMO notes the respondent's support for the proposed change. Wording revised in 3.8.1 in response to this comment in the Final technical guide.
47.	AGL	3.8, 5.1	Changes to MDMF content	Noted	AEMO notes respondent's comment.
48.	Aurora	3.8, 5.1	Changes to MDMF content	Aurora Energy has no comment	AEMO notes respondent's comment.
49.	Energy Queensland	3.8, 5.1	Changes to MDMF content	In relation the proposed change to Section 3.8 , Energy Queensland queries why netting is listed as applicable for accumulated meter reading data. However, we agree that the meter reading may be a signed reading.	Wording revised in 3.8 in response to this comment in the Final technical guide.
50.	Evoenergy	3.8, 5.1	Changes to MDMF content	Accepted	AEMO notes the respondent's support for the proposed change.
51.	Flow Power	3.8, 5.1	Changes to MDMF content	Noted	AEMO notes respondent's comment.
52.	Jemena	3.8, 5.1	Changes to MDMF content	Notes	AEMO notes respondent's comment.
53.	Origin	3.8, 5.1	Changes to MDMF content	Noted	AEMO notes respondent's comment.
54.	SAPN	3.8, 5.1	Changes to MDMF content	No comment	AEMO notes respondent's comment.

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55.	Stanwell	3.8, 5.1	Changes to MDMF content	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
56.	TasNetworks	3.8, 5.1	Changes to MDMF content	3.8: As per typographical errors noted above. 5.1: Agreed	AEMO notes the respondent's support for the proposed change.
57.	AGL	3.11	Inclusion of file size references	Noted	AEMO notes respondent's comment.
58.	Aurora	3.11	Inclusion of file size references	I was unaware that the file size and number of transactions had been agreed, however Aurora Energy supports this statement	AEMO notes the respondent's support for the proposed change.
59.	AusNet Services	3.11	Inclusion of file size references	We support the proposed file size upper limits.	AEMO notes the respondent's support for the proposed change.
60.	Energy Queensland	3.11	Inclusion of file size references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
61.	Evoenergy	3.11	Inclusion of file size references	Agree	AEMO notes the respondent's support for the proposed change.
62.	Flow Power	3.11	Inclusion of file size references	Noted	AEMO notes respondent's comment.
63.	Jemena	3.11	Inclusion of file size references	Noted – 10 MB file size for MTRD and MDMT won't be an issue	AEMO notes the respondent's support for the proposed change.
64.	Origin	3.11	Inclusion of file size references	Noted	AEMO notes respondent's comment.
65.	Red Lumo	3.11	Inclusion of file size references	Recommend that section 3.11 is removed. As this belongs in the technical specifications. Duplicating obligations in multiple procedures results in confusion if one is updated and not the other.	AEMO has reclassified the MDM File Format and Load Process from a Procedure to a technical guide. The published MSATS Release and Technical Specification is intended as a implementation document only and will not be updated after the 5MS program has been closed down.
66.	SAPN	3.11	Inclusion of file size references	No comment	AEMO notes respondent's comment.
67.	Simply Engie	3.11	Inclusion of file size references	Suggest inclusion of 'unzipped' in the below statement for consistency with current world: Participants must ensure that Messages containing aseXML Transactions do not exceed an unzipped and uncompressed Message size of 10 MB for MTRD and 10 MB for MDMT. Also the transaction limit of 1000 is a newer concept and would require changes in the backend (perhaps at the gateway during bundling of transactions) so this needs to be tested during market-testing/trial phases and ensure that 1000 is a safe limit, else needs to be relooked. Hence, Simply Energy would suggest keeping '1000' as an arbitrary number until market testing has concluded. This could essentially be done by removing the transaction limit from 5ms Procedures and leaving it in the tech spec, unless AEMO is willing to make changes to the transaction limit at a later stage.	AEMO makes use of the generic term 'uncompressed' to indicate that data compression has not been applied to a file. The term zipped/unzipped refers to a specific file format for data compression (file extensions .zip) which sits alongside other data compression file archive formants such as rar, 7z, and tar.
68.	Stanwell	3.11	Inclusion of file size references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
69.	TasNetworks	3.11	Inclusion of file size references	3.11: The transaction limit seems excessive. Is this volume expected to create performance issues for participants or AEMO? Can AEMO provide any information based on internal testing?	AEMO undertook a round of testing in the Pre-Production environment on the 7-11 Jan. The file testing indicated that where that 10MB message was comprised of a large (over 50K) number of transactions, the MSATS Browser could not process the message. AEMO has not undertaken or supervised Participant to Participant testing. AEMO does however acknowledge that the Transaction limit is ceiling that would best be defined by the B2B IEC working group as it is only applicable to NMID and CATS transactions where a one message to multiple transactions relationship is common. Until market-trial the 1000 transaction limit is somewhat arbitrary. AEMO will remove the transaction limit from the MDM File Format and Load Process and ask that the B2B IEC working group consider transaction limits for NMID and CATS transactions.

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70.	AGL	4	Inclusion of Meter data messaging exchange content	Noted	AEMO notes respondent's comment.
71.	Aurora	4	Inclusion of Meter data messaging exchange content	Page 36 • Event code 1090 represents the error 'There is a record in the system that overlaps this record with a Version Date that is after the Version Date of this record.' • Event code 2002 [Actual MSATS event code TBA] represents the error 'There is a record in the system that overlaps this record with a Version Date that is after the Version Date of this record.' These 2 codes seem to be advising the same thing – is the new event code still required?	Wording revised in 4.4 in response to this comment in the Final technical guide.
72.	Energy Queensland	4	Inclusion of Meter data messaging exchange content	In relation to Sections 4.0, 4.1 and 4.2, Energy Queensland suggests that Step 9-10 is changed to: 'the MDP recreates a MDMT Data Notification'. The MDP would only resend the applicable data not the whole data file.	Wording revised in Table 7 in response to this comment in the Final technical guide.
73.	Evoenergy	4	Inclusion of Meter data messaging exchange content	Agree	AEMO notes the respondent's support for the proposed change.
74.	Flow Power	4	Inclusion of Meter data messaging exchange content	Noted	AEMO notes respondent's comment.
75.	Jemena	4	Inclusion of Meter data messaging exchange content	Noted	AEMO notes respondent's comment.
76.	Origin	4	Inclusion of Meter data messaging exchange content	Noted	AEMO notes respondent's comment.
77.	SAPN	4	Inclusion of Meter data messaging exchange content	No comment	AEMO notes respondent's comment.
78.	Stanwell	4	Inclusion of Meter data messaging exchange content	This is a good inclusion however it would be even better if it extended to the delivery of messages to other market participants. For example, should an MDP send data to a FRMP if the data failed validation?	The scope of this document is to cover the provision of metering data to AEMO (NEMMCO participant) for the purpose of market settlements only. The obligation for an MDP to send metering data to a FRMP and respond to validation failures, PMD/VMDs remains under the B2B procedures. AEMO is expecting MDPs to deliver updated meter reads, to participants who have access rights to the data, as per the existing Chapter 7 obligations plus AEMO procedures, including Met Part A, Met Part B and the SLP:MDP.
79.	TasNetworks	4	Inclusion of Meter data messaging exchange content	4: References to Figure and Table numbers are not correct. 4.3: Reference to Figure 10 should be to Figure 9. Reference to Table 9 should be to Table 8. In the first paragraph of the text under the heading, 'MDMT' should be 'MTRD'. Can AEMO please confirm that MTRD files are able to be loaded via Batch by both the B2M Participant Inbox (as per MDMT files) or alternatively by the B2B Inbox as stated in Table 8 step 1? 4.4: Figure numbering/referencing in text is incorrect.	Figure and Table numbers revised in response to this comment in the Final technical guide. Figure and Table numbers as well as the MDMT text have been revised in response to this comment in the Final technical guide. For MTRD files for Market Settlements should be loaded the same way as a B2B file is loaded. For batch there are two folder structures that Participants can have (see below), where the Participants inbox has the directory structure of '/B2B/Inbox' a MTRD files for Market Settlements must be placed in this directory and not in the directory '/Inbox' as this intended for MDMT, CATS and NMID messages only. Option 1: /Inbox /Outbox /Stopbox /Inbox_archive /Archive Option 2: /B2B

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					/B2B/Inbox /B2B/Outbox /Stopbox /Inbox /Outbox /Inbox_archive /Archive
80.	AGL	3.1, 3.3, 3.10, 3.12, 4.2	Provisions for FTP and API delivery method	Noted	AEMO notes respondent's comment.
81.	Aurora		Provisions for FTP and API delivery method	Aurora Energy has no comment	AEMO notes respondent's comment.
82.	Energy Queensland		Provisions for FTP and API delivery method	Section 4.0, 4.1 and 4.2 – Energy Queensland suggests that Step 9-10 is changed to 'the MDP recreates a MDMT Data Notification'. The MDP would only resend the applicable data not the whole data file.	Wording revised in Table 7 in response to this comment in the Final technical guide.
83.	Evoenergy		Provisions for FTP and API delivery method	Agree	AEMO notes the respondent's support for the proposed change.
84.	Flow Power		Provisions for FTP and API delivery method	Noted	AEMO notes respondent's comment.
85.	Jemena		Provisions for FTP and API delivery method	Noted – Jemena intends to stay with current FTP mechanism	AEMO notes respondent's comment.
86.	Origin		Provisions for FTP and API delivery method	Noted	AEMO notes respondent's comment.
87.	SAPN		Provisions for FTP and API delivery method	No comment	AEMO notes respondent's comment.
88.	Stanwell		Provisions for FTP and API delivery method	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
89.	TasNetworks		Provisions for FTP and API delivery method	3.1: Agreed 3.3: Agreed 3.10: Agreed 3.12: No comment 4.2: Agreed	AEMO notes the respondent's support for the proposed change.
90.	Energy Queensland	4.3	Update to MTRD Message Exchange section	Energy Queensland suggests that the reference to 'MDMT' in the first sentence should be replaced with 'MTRD'	Wording revised in 4.3 in response to this comment in the Final technical guide.
91.	Energy Queensland	4.4	Update to MTRD Transaction Acknowledgement Validation Response section	Energy Queensland suggests that Step 8-9 be changed to: 'the MDP recreates a MDMT Data Notification'. The MDP would only resend the applicable data not the whole data file.	Wording revised in Table 8 in response to this comment in the Final technical guide.
92.	Energy Queensland	5.2.3	Update to section heading for 5.2.4	Energy Queensland considers the heading for 5.2.3 should be 'MTRD Data File Validations'	Wording in response to this comment in the Final technical guide.

TABLE 6 – MSATS PROCEDURES: CATS PROCEDURE PRINCIPLES AND OBLIGATIONS

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Noted. AGL Supports the change.	AEMO notes the respondent's support of the proposed change.
2.	Aurora	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Aurora Energy has no comment	AEMO notes the respondent's comment.
3.	EA	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Removal of Change Request (CR) 6401 – how will child NMIs be fixed if the ENLR is assigned incorrectly? What about for future requests, will any validation for LR or ENLR be provided in MSATS for CR? AEMO might need to consider if CR6421 will allow the change of ENLR prospectively and whether there is a use case for this (e.g. change of parent NMI meter FRMP, resulting in change in ENLR), and whether a analogous CR for the ENLR to CR6400 Change LR is needed for a prospective change (i.e. how CR6401 is being replaced by CR6421 for the ENLR function).	AEMO: The CR6421 has not been decommissioned so this will be used to change ENLR and correct any errors for ENLR. Validations on this CR have not and will not change. AEMO do not believe there is a use case to create a corresponding prospective CR6421. There is already an automated CR (ECLR) and this will update the ENLR of the children when the FRMP of the parent changes.
4.	Energy QLD	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	In relation to CR64xx, Energy Queensland requests confirmation that AEMO will be responsible for fixing incorrect LR assignments through the CR51xx notifications.	AEMO: if any corrections to the LR are needed after go-live, AEMO will correct Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
5.	Evo Energy	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Agree with changes except 6400 & 6401. LR is still part of the registered participant roles, and therefore can still be nominated. You have removed any method of changing the LR if nominated incorrectly, past or future. Otherwise, drop the LR role completely, so it is not mandatory or optional in any change request, only mandatory for Embedded Networks.	AEMO: if any corrections to the LR are needed after go-live, AEMO will correct Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
6.	Flow Power	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Noted	AEMO notes the respondent's comment.
7.	Jemena	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091– Removed as part of Power of Choice program 6400,6401 – Removed as LR entity would not be applicable for 5MS	AEMO notes the respondent's support of the proposed change.
8.	Origin	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Noted	AEMO notes the respondent's comment.
9.	SAPN	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	No Comment	AEMO notes the respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
10.	Stanwell	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
11.	TasNetworks	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Quick Reference Guide: Agreed 3.4: Agreed 3.7: Agreed 3.7.2: Agreed 4.2: Agreed	AEMO notes the respondent's support of the proposed change.
12.	VectorAMS	Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	Agreed	AEMO notes the respondent's support of the proposed change.
13.	AGL	Quick Reference Guide, 2.2, 2.6, 3.6, 4.2, 4.3, 4.15, 9.5, 12.8, 15.7, 16.7, 17.7, 18.8, 19.8, 20.7, 21.7, 22.7, 23.7, 25.9, 25.10, 27.7, 28.7, 30.7, 31.8, 32.7, 33, 34.7, 35.8, 36.9, 37.1, 37.5, 39.7	Provisions for embedded network local retailers (ENLR)	Noted. AGL Supports the change.	AEMO notes the respondent's comment.
14.	Aurora		Provisions for embedded network local retailers (ENLR)	Table 9-B – Objection Rules – should LR be changed ENLR as the current LR can object 12.4 ENM Requirements should the LR be changed to ENLR 14.4 ENM Requirements should the LR be changed to ENLR Table 14-C Change LR to ENLR? 25.4. LNSP Requirements (5001 only) – should LR be changed to ENLR 25.5. ENM Requirements (5021 only) - should LR be changed to ENLR Table 411-D – CATS Standing Data Access Rules for Meter Register has reference to LR	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated.
15.	EA		Provisions for embedded network local retailers (ENLR)	In the scenario where an on-market NMI goes off-market, currently the FRMP for the off market customer is listed as Parent FRMP. Roles and responsibilities for child NMIs should be clarified, for example the responsibility for raising a CR1XXX when a child connection point moves from on-market (with a NEM registered retailer) to off-market. We understand AEMO has incorporated expected rule changes in embedded networks and support this approach, and request AEMO consider if the above scenarios have been adequately considered for assigning the ENLR.	AEMO: as per conversation with EA, this process does not happen today. When a child returns back to the EN, the NMI status is updated by the ENM to N. This will exclude this NMI from our settlement process and energy will be charged at the parent. FRMP roles do not change when a child returns back to the EN.
16.	Energy QLD		Provisions for embedded network local retailers (ENLR)	Energy Queensland notes that the requirement to provide the LR has not been removed from CRs 5001, 5021, 5100 and 5101.	AEMO will update and separate the CRs as the ENLR is still entitled to the notification under the CR5021 scenario.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Energy Queensland requests AEMO to explain why this is the case.	5100/5101 have been updated to ENLR
17.	Evo Energy		Provisions for embedded network local retailers (ENLR)	Why is 25.5 not included as part of this change? Agree, except for the following clauses where wording should be updated to reflect "…ENLR (where applicable…" as per previous comments re: ENLR role. 2.6, 9.5, 15.7, 16.7, 17.7, 18.8, 19.8, 20.7, 21.7, 22.7, 23.7, 25.10, 27.7, 30.7, 31.8, 32.7, Old 33, Old 35.7, Old 36.8, Old 37.9, Old 40.7	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated. 2.6 had been updated to ENLR and is correct 9.5 had been changed to ENLR and is correct 15.7 has been changed to ENLR as there is no specific CR to create a meter for an EN and the MP would use CR3001 and the ENLR is entitled to notifications. 16.7 same as 15.7 17.7 same as 15.7 18.8 same as 15.7 19.8 same as 15.7 20.7 same as 15.7 but instead of metering it's the network tariff. 21.7 same as 15.7 but instead of metering it's the data stream. 22.7 same as 21.7 23.7 same as 21.7 25.10 refer to response 16 27.7 same as 15.7 but instead of metering it's the classification code 30.7 same as 15.7 but instead of metering it's a role change 31.8 same as 30.7 32.7 same as 30.7 Old 33.7 is the change LR role CR and this has been removed. Old 35.7 same as 30.7 Old 36.7 same as 30.7 Old 37.7 same as 30.7 Old 40.7 same as 15.7 but could be any standing data that's changed. No need to update 25.5 LR/ENLR is not mentioned in the section.
18.	Flow Power		Provisions for embedded network local retailers (ENLR)	Noted. Embedded Network off market child customer will have a NMI assigned as proposed in the Metering focus group. ENM must start receiving CES for solar etc. The onus has come on ENM now instead of the DB.	AEMO: Allocation of NMIs for Child NMIs has been an obligation since the implementation of POC. Off-Market child NMIs will require a NMI when the new rules are implemented for ENs. External processes between participants is via agreement.
19.	Jemena		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes the respondent's comment.
20.	Origin		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes the respondent's comment.
21.	SAPN		Provisions for embedded network local retailers (ENLR)	No Comment	AEMO notes the respondent's comment.
22.	Stanwell		Provisions for embedded network local retailers (ENLR)	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
23.	TasNetworks		Provisions for embedded network local retailers (ENLR)	2.2: Agreed 2.6: Agreed 3.6: Agreed 4.2: Agreed 4.3: Agreed 4.15: Agreed 9.5: Agreed 12.8: Agreed 15.7: Agreed 16.7: Agreed	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated. Agree 9.8 tables 9-B & 9-C should be updated to ENLR Agree 12 table 12-B should be updated to ENLR Agree 14 Tables 14-B & 14-C should be updated to ENLR

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				17.7: Agreed 18.8: Agreed 19.8: Agreed 20.7: Agreed 21.7: Agreed 22.7: Agreed 23.7: Agreed 25.9: Agreed 25.10: Agreed 27.7: Agreed 28.7: Agreed 30.7: Agreed 31.8: Agreed 32.7: Agreed 33: Agreed 34.7: Agreed 35.8: Agreed 36.9: Agreed 37.1: Agreed 37.5: Agreed 39.7 Agreed Section 9.8, tables 9-B and 9-C should have 'LR' changed to 'ENLR'. Section 12, 'LR' in table 12-B should change to 'ENLR'. Section 14, 'LR' in tables 14-B and 14-C should change to 'ENLR'.	
24.	VectorAMS		Provisions for embedded network local retailers (ENLR)	CR 6421 still references LR Child. Should be ENLR. ~~6400, 6401~~ ~~Change LR~~ ~~Sec 33, Page 132~~ 6421 Change LR Child NMI Sec ~~33~~34, Page ~~137~~134	AEMO – agree Quick reference table updated
25.	AGL	2.1 (h)		AGL notes that only some, but not all, of the proposed changes to v6.8 (inclusion of words 'for which') have been made to this Draft v7. AGL assumes this is the effectively a typo	AEMO: The consultations have been decoupled. 5MS and Global consultation will be published minus any changes made since the initial draft of version 4.8 of the CATS Procedures.
26.	AGL	2.3 (e)		AGL suggests that the obligation to update the Customer Threshold Code be extended from NMI status 'A','D' to include NMI Register Codes as well, as it is expected over time that customer energisation will more frequently be done by Register Status rather than NMI.	AEMO: Out of scope for 5MS and Global. Please raise ICF and refer to ERCF.
27.	AGL	2.3 (h)/(i)		AGL suggest that five business days to update a NMI status Code is too long, and suggest that this be **one** business day.	AEMO: Out of scope for 5MS and Global. Please raise ICF and refer to ERCF
28.	AGL	2.10 (m)/(n)		AGL suggest that five business days to update a NMI status Code is too long, and suggest that this be **one** business day. AGL also queries if there are or can be any accumulation meters (either parent or child) within an embedded network, or if they are, then they should be replaced over a defined period with interval meters.	AEMO: Out of scope for 5MS and Global. Please raise ICF and refer to ERCF AEMO believes there may be accumulation meters in place on embedded networks. Something may be included in the AEMC's embedded network review that is underway.
29.	AGL	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Noted. AGL Supports the change.	AEMO notes the respondent's support of the proposed change.
30.	Aurora	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Aurora Energy has no comment	AEMO notes the respondent's comment.
31.	Energy QLD	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Energy Queensland offers no comments on this change.	AEMO notes the respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
32.	Evo Energy	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Agree	AEMO notes the respondent's support of the proposed change.
33.	Flow Power	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes the respondent's comment.
34.	Jemena	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes the respondent's comment.
35.	Origin	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Noted	AEMO notes the respondent's comment.
36.	SAPN	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	No Comment	AEMO notes the respondent's comment.
37.	Stanwell	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
38.	TasNetworks	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	2.9: Agreed 3.2: Agreed 3.3(b) has an invalid section reference. 4.11.2: Agreed.	AEMO: will correct, looks like it errored when converting to PDF
39.	VectorAMS	2.9, 3.2, 4.11.2	Removal of 'First Tier' and 'Second Tier' references	Agreed	AEMO notes the respondent's support of the proposed change.
40.	AGL	2.9(b)		AGL suggest that this be extended from 'LNSP' to 'LNSP and ENM' for management of DLF codes.	AEMO: Out of scope for 5MS and Global. Please refer to raise ICF and refer to ERCF
41.	AGL	3.2, 3.4, 4.15, 7.5, 11.4, 11.7, 11.8, 13.4, 13.6, 13.7, 25.9, 26.7, 29.7, 33	Removal of Local Retailer (LR) references	Noted. AGL Supports the change.	AEMO notes the respondent's comment.
42.	Aurora		Removal of Local Retailer (LR) references	LR Role still exists in various tables for example should the LR role not be populated with GLOPOOL In Change Requests where a LR is to be notified this will be the ENLR for a child NMI. – Table 41-D to 41-I– CATS Standing Data Access Rules has reference to allow LR to access particular data Table 41-K – Common NMI Standing Data items returned for an MC Standing Data Search- has reference to allow LR	AEMO: MSATS will require the population by participants of GLOPOOL or POOLXXX whichever is relevant when the NMI is created. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. Table 41-D to 41-I. Correct Standing Data Access will be available for the ENLR for a Child NMI. AEMO will update the section to state ENLR Table 41-K will also be updated to EN was not updated as LR in this context refers to the field. Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
43.	EA		Removal of Local Retailer (LR) references	Removal of 3.2(i), MSATS will not notify the LR at the time a change of FRMP occurs – does this clause need to cater for the ENLR? We suggest there might be value in AEMO making validations and responsibilities for populating the LR field as "GLOPOOL" consistent across TNSP and DNSP level should there be a future need to reconcile UFE at those levels – we consider this as an "easy win" for future proofing should UFE levels be high in future. We request clarity be provided in the MSATS Procedures (perhaps through an explanatory statement) that while the references to Local Retailer (LR) are removed, this does not mean the LR field is going to be removed but rather, the field is going to be populated with GLOPOOL.	AEMO do not believe this needs to be updated as we could not identify a scenario where the ENLR would need to know about a FRMP change. If there is such a scenario, please provide feedback in the next round of consultation. MSATS will require the population by participants of GLOPOOL or POOLXXX whichever is relevant when the NMI is created. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				We request clarity on whether the FRMP field will be changed for cross boundary sites currently assigned to the LR and what an appropriate treatment for this is. 33 – see above comments on CR 6421	Refer to response 3 Standard Notification process will remain i.e. AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
44.	Energy QLD		Removal of Local Retailer (LR) references	In relation to section 11.4 – Energy Queensland would like AEMO to confirm who populates the LR/ENLR field in MSATS, and with what, if it is no longer provided by the LNSP on the CR2001 transaction? In relation to section 13.4 – Energy Queensland requests AEMO to confirm who is responsible for populating the LR/ENLR field in MSATS, and with what, if it is no longer provided by the LNSP on the CR2501 transaction?	AEMO: MSATS will require the population by participants of GLOPOOL or POOLXXX whichever is relevant when the NMI is created. Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
45.	Flow Power		Removal of Local Retailer (LR) references	Noted	AEMO notes the respondent's comment.
46.	Jemena		Removal of Local Retailer (LR) references	Noted	AEMO notes the respondent's comment.
47.	Origin		Removal of Local Retailer (LR) references	Origin asks: where the LNSP does not populate the LR in Create NMI Change Request, what will be the outcome when we receive CATS Notifications, Standing Data Responses, C4 and C1 Standing Data from MSATS in such a scenarios on a newly created NMI post 5 minute/GS go live. Can we as the FRMP expect an LR role to be always provided in the standing data (possibly defaulted by MSATS when it is not populated by the LNSP) on all existing and new (post 5mins/GS) NMI's as is currently the case OR do we need to make changes to our systems and processes to cater for this LR data being provided optionally as per the LNSP obligations	AEMO: MSATS will require the population by participants of GLOPOOL or POOLXXX whichever is relevant when the NMI is created. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
48.	Red/Lumo		Removal of Local Retailer (LR) references	**4.15 Change Request Status Notification Rules** The Change Request Status Notification Rules define which Roles are to be advised when a Change Request undergoes a change in status. In Change Requests where a LR is to be notified this will be the ENLR for a *child NMI*. The sentence added to 4.15 does not make sense. Does AEMO mean that where the CR has an LR it should apply the ENLR, but only for child NMIs? Or does it mean that where the NMI is a child NMI, the ENLR = the LR? Please clarify the intent of the obligation in your next round of drafting. This is particularly unclear when the tables continue to have LR except for 16-B, 17-B, 18-C, 19-C, 20-B, 21-B etc, and then 25-B has LR for one CR type and ENLR for another. In 11.4 and 13.4, wouldn't AEMO want the LNSP to populate the LR in all circumstances, so that it has the information available should a RoLR event occur. Irrespective of whether the LR receives data. In table 41-1D on standing data it is unclear why the LR can access: AddlSiteInfo, MeterInstall Code, MeterPoint, MeterReadType, MeterSerial, MeterStatus and NextSchRead Date. If this is intended to apply to the ENLR, then update the heading in the table. In table 41-E, 41-F, 41-G, 41-H - the LR should only have access to those items in their FRMP capacity. If this is intended to apply to the ENLR, then update the heading in the table to state it.	AEMO: the intention of this wording was to advise that where a notification is provided to the LR it is done under the auspice of being an ENLR not an LR. You will note the tables may still have LR but there are no objections allowed nor are there any notifications to LR except when those notifications are required as the ENLR. For example 3xxx series, as there is not a specific CR of this type just for ENs the ENLR will receive the notifications for these CR types. Refer to new clause 4.4. AEMO have removed this wording and new clause and tables have been updated accordingly. Refer to AEMO response for 11.4 and 13.4 in response no 47 Refer to AEMO response in response no 42 for tables 41D etc Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
49.	SAPN		Removal of Local Retailer (LR) references	No Comment	AEMO notes the respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
50.	Stanwell		Removal of Local Retailer (LR) references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
51.	TasNetworks		Removal of Local Retailer (LR) references	3.2: Agreed 3.4: Agreed 4.15: Agreed 7.5: Agreed 11.4:Agreed 11.7: Agreed 11.8: Agreed 13.4: Agreed 13.6: Agreed 13.7: Agreed 25.9: Agreed 26.7: Agreed 29.7: Agreed 33: Agree Are AEMO considering to configure MSATS to reject Change Requests if incorrect LR role is allocated (e.g. CR2001 is created for distribution NMI with existing LR participant ID instead of GLOPOOL)? With reference to section 25.4(c) and (e), similar to section 11.4(c) and (e), should the LR role be optional on a CR5001?	AEMO will be performing validations on creation of NMIs to ensure that the LR field has been populated with the correct input. E.g. GLOPOOL or POOLXXX depending on the NMI Classification. LR will be a mandatory field as it is today. MSATS will require the population by participants of GLOPOOL or POOLXXX whichever is relevant when the NMI is created. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
52.	VectormAMS		Removal of Local Retailer (LR) references	Agreed	AEMO notes the respondent's support of the proposed change.
53.	AGL	3.7.1, 3.7.2	Changes in table references	Noted. AGL Supports the change.	AEMO notes the respondent's comment.
54.	Aurora	3.7.1, 3.7.2	Changes in table references	Aurora Energy has no comment	AEMO notes the respondent's comment.
55.	Energy QLD	3.7.1, 3.7.2	Changes in table references	Energy Queensland offers no comments on this change.	AEMO notes the respondent's comment.
56.	Flow Power	3.7.1, 3.7.2	Changes in table references	Noted	AEMO notes the respondent's comment.
57.	Jemena	3.7.1, 3.7.2	Changes in table references	Noted	AEMO notes the respondent's comment.
58.	Origin	3.7.1, 3.7.2	Changes in table references	Noted	AEMO notes the respondent's comment.
59.	SAPN	3.7.1, 3.7.2	Changes in table references	No Comment	AEMO notes the respondent's comment.
60.	Stanwell	3.7.1, 3.7.2	Changes in table references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
61.	TasNetworks	3.7.1, 3.7.2	Changes in table references	3.7.1: Agreed 3.7.2: Agreed	AEMO notes the respondent's support of the proposed change.
62.	VectorAMS	3.7.1, 3.7.2	Changes in table references	Agreed	AEMO notes the respondent's support of the proposed change.
63.	PlusES	3.3	Transaction Types (b)	Section 3.3(b): Reference of Section 0. Typo?	AEMO: will correct, looks like it errored when converting to PDF
64.	AGL	4.9	Addition to and modification of NMI Classification Codes	Noted. AGL Supports the change, however, suggests that definitions which require changes to Classification types (e.g. DHYBRID) need to be specific where the load boundary point is. The use of 'significant' is rather ambiguous, and likely to lead to the classification not being used correctly. Also, noting that industry has other obligations to define customers as small/Large, if these new characteristics can be applied to small and large sites, then there will need to be a further sub-designation, or the classification description should define that they only apply to Large.	AEMO: refer to CitiPower/Powercor response no 68
65.	Aurora	4.9	Addition to and modification of NMI Classification Codes	SGA and DGENRATR are not in table If a Small or Large customer is reclassified to DHYBRID – the CATS procedures do not allow Churn unless Small or Large. How will a retailer be able to identify if the	AEMO: At time of publication these two classifications had not been approved. They will be included in the Draft Determination version of the Procedure.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				customer was Small or Large and what affect does this have on the NERR as they only cater for SMALL and LARGE NMI Classes None of the new classification codes for 1xxx,2XXX, 3XXX, 4XXX, 5XXX,6XXX are not permitted only Small or Large are considered – this is the same in the WIGS only WHOLESAL, INTERCON, GENERATR or SAMPLE are catered for. Page 60 note 8 Please note that "not SMALL" refers to LARGE, WHOLESAL, INTERCON, GENERATR or SAMPLE NMIs. Should include the new NMI classification codes	DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. DGENRATR will not be included in the consultation AEMO considers it's no longer required. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated.
66.	Ausgrid	4.9	Addition to and modification of NMI Classification Codes	WHOLESAL – suggestion to make it clear that this is to be used for a customer NMI connected to the transmission network.	AEMO: Descriptions have been updated.
67.	AusNet	4.9	Addition to and modification of NMI Classification Codes	AusNet Services does not agree with the proposed inclusion of the DHYBRID NMI Classification Code and description. The proposed description's reference to significant bi-directional energy flows could include residential or small commercial batteries. This information should be captured in the DER register, and duplicating it in the CATS Procedures will create inefficiencies in managing this data in accordance with the customers' connection processes. Therefore, we recommend altering the description to specify the DHYBRID is to only apply for sites with greater than 5 MW capacity or are otherwise register generators or scheduled market loads.	AEMO: DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated.
68.	CitiPower/Powercor	4.9	Addition to and modification of NMI Classification Codes	These changes introduce NCONUML for "Non-Contestable Unmetered Supplies" and also "DGENERATR", "SGA" and "DHYBRID" for other specific customer metered connections. This utilises the classification code previously used for Small and Large, and while these preclude those being used, the market is still required to identify and manage connections differently based on that small/large criteria. There is a benefit in incorporating an S / L into the mnemonic, i.e. there is a benefit in considering the following: DHYBRDL DHYBRDS SGA- L SGA-S NCONUMS (should always be considered Small) DGENERATRL (should always be considered Large) AEMO has previously advised that Small Generator Aggregators will need to have the solar systems gross metered (i.e. separate to the consumption load) and on its own NMI. CitiPower Powercor seeks clarification why this is not mentioned anywhere in the Metrology or NMI procedures?	AEMO does not believe that NCONUML needs to have a Small after it. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. DGENRATR will not be included in the consultation as AEMO considers it's no longer required. After consideration, the NMI Classification of SGA will not be used but a new NMI Classification of NREG has been added with a relevant description. The NER 2.3A provides the rules for SGAs. AEMO does not duplicate Rules in procedures.
69.	Endeavour	4.9	Addition to and modification of NMI Classification Codes	We support AEMO introducing new NMI Classification Codes to allow for better calculations of settlements and UFE. However we believe to gain the benefit of these new codes and existing codes that are re-defined then more detail needs to be provided for each of the code to ensure that they are used appropriately and	AEMO does not believe this detailed information is required in the procedures. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated.

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				consistently across the industry. We note that further information was provided, via industry forums, after the release of this consultation and believe that this valuable information should be incorporated into the procedures. We look forward to working with AEMO, via the industry forums, to help define and provide guidance on when to use each of the codes, which should include the following; 1. Making it clear what type of connection point is applicable for each code. This includes clearly defining any energy threshold, connected technology and DNSP/TNSP connection criteria 2. Making it clear that if multiple codes are applicable for a connection point then what is the rules to determine which code is to be populated in MSATS 3. Making it clear if there are any other connection point or metering installation conditions for each of the code. For example, if only 1 NMI is expected for the connection point or if 2 NMI is expected. 4. Providing pictorial guidance on the use of each code in the NMI Procedure 5. Making it clear that these new codes must be used from 1 July 2021 for existing and new NMIs 6. Provide guidance on the importance of these codes for the calculation of settlements and UFE by including the codes into the calculation formula and description clauses	NMI Procedures will be updated with scenarios for use. 5MS Readiness workstream transition planning will identify any activity (how and when) for NSPs to apply NMI classification codes. AEMO will need to provide guidance on application of codes that NSPs can use.
70.	Energy QLD	4.9	Addition to and modification of NMI Classification Codes	Energy Queensland notes that these procedures cover only SMALL and LARGE, and the WIGS procedures have not been updated to cover the new classes. We request confirmation from AEMO as to which CATS transfer procedures cover the new NMI Class codes. Energy Queensland also seeks confirmation from AEMO of what date these new classes will become available in MSATS to allow the pre-population of non-contestable unmetered load NMIs.	AEMO: New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. The transition process will be detailed via the Readiness workshops. AEMO's current position is to provide participants enough time to update NMI classification codes prior to the 5MS go live date.
71.	Evo Energy	4.9	Addition to and modification of NMI Classification Codes	Review the table 4-E as does not appear to align correctly for Large and Small annual loads. Can you please define for the new Codes “DHYBRID” and “THYBRID”, what ‘significant’ means here? Is there an X value like Large in MW? Disagree with NCONUML, already flagged in 4.12 at the Meter Installation level; it is still a Large or Small. Remove from 4.9 and include at 4.12.	AEMO: will correct formatting. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. AEMO’s UFE process requires the new NMI Classification of NCONUML.
72.	Flow Power	4.9	Addition to and modification of NMI Classification Codes	We note some of the NMI classification codes are not included in the document. Please include all the NMI classification codes including the ones discussed in Metering focus group on 14 June 2019. In relation to, DHybrid please ensure that the wording is updated to say it will reflect solar as well as batteries.	AEMO: At time of publication, not all classifications had been approved. They will be included in the Draft Determination version of the Procedure. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated.
73.	Jemena	4.9	Addition to and modification of NMI Classification Codes	Noted	AEMO notes the respondent’s comment.
74.	Origin	4.9	Addition to and modification of NMI Classification Codes	Noted	AEMO notes the respondent’s comment.
75.	PlusES	4.9	Addition to and modification of NMI Classification Codes	PLUS ES has no issue with the additional NMI Classification codes themselves. Querying the overall value they would deliver vs the cost to update systems, including the billing component: • Impacting every Mkt Participant – system validations, etc	AEMO require these new classifications to support our UFE process.

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				• Volume of NMIs compared to general population for these codes. PLUS ES suggests that these additional codes be included in a separate field: • this is the only location these codes are mentioned in the CATS document other than NCONUML • NMI Classification Code not an appropriate field.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated.
76.	Red/Lumo	4.9	Addition to and modification of NMI Classification Codes	In the additional codes: DHYBRID and THYBRID. What is the distinguishing feature of the NMI having "significant bi-directional energy flows"? Is significant 1KWh or 1TWh? Also, it is unclear where these are used. This has not been discussed in the 5MS Procedure meetings to date. For XBOUNDRY - does this mean that AEMO will maintain TNIs and DLFs, assigning them to the relevant distributor? If AEMO is not undertaking this work, it should obligate a relevant participant to undertake it.	AEMO: DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. AEMO will expect new NMI's for this category will be created and maintained by the distributors just like they are today.
77.	SAPN	4.9	Addition to and modification of NMI Classification Codes	No Comment	AEMO notes the respondent's comment.
78.	Stanwell	4.9	Addition to and modification of NMI Classification Codes	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
79.	TasNetworks	4.9	Addition to and modification of NMI Classification Codes	For DHYBRID and THYBRID, what is the definition of 'Significant bi-directional energy flows'? There may need to be a classification guideline developed (or additional information included in CATS Procedure) to guide classification of such NMI's. May also be worthwhile to include a footnote that NMI's with these codes will be regarded as a generating unit (i.e. Aggregate = N). Participants currently use SMALL and LARGE classifications to guide business processes and obligations. If NMIs can now be classified as DHYBRID or THYBRID (or SGA), participants may lose visibility of obligations required, particularly for small customers (i.e. NERR obligations). Has consideration been given to the impact of managing NMI's with these classifications in accordance with respective terms in the NERR? BULK, DHYBRID, THYBRID, SGA, DGENRATR and NCONUML classifications are not catered for in the MSATS CATS Change Request conditions (i.e. the 'conditions precedent' for change requests in CATS only relate to SMALL or LARGE NMIs). What is the reasoning behind creating the new DHYBRID and THYBRID classifications? Could these (and SGA) connections simply be classified as generating units? Are AEMO considering configuring MSATS to reject a Change of Retailer CR for a NCONUML NMI? If so, will a new rejection code be introduced? TasNetworks currently maintain an internal list of such NMI's and create an objection upon receipt of a CR1XXX request.	AEMO: After consideration, the NMI Classification of SGA will not be used but a new NMI Classification of NREG has been added with a relevant description. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. DGENRATR will not be included in the consultation as AEMO considers it's no longer required. AEMO will develop logic to reject CR10XX type change requests where the NMI Classification code is NCONUML.
80.	VectorAMS	4.9	Addition to and modification of NMI Classification Codes	Table 4-E is unclear on what it is trying to say for Victoria,NSA.ACT,SA for Large and Small. E.g.	AEMO: formatting issue, AEMO will correct

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				 What is this trying say? Is it different to the other 160MWh states? Agree with the new codes.	
81.	United	4.9	Addition to and modification of NMI Classification Codes	These changes introduce NCONUML for "Non-Contestable Unmetered Supplies" and also "DGENERATR", "SGA" and "DHYBRID" for other specific customer metered connections. This utilises the classification code previously used for Small and Large, and while these preclude those being used, the market is still required to identify and manage connections differently based on that small/large criteria. There is a benefit in incorporating an S / L into the mnemonic, i.e. there is a benefit in considering the following: DHYBRDL DHYBRDS SGA- L SGA-S NCONUMS (should always be considered Small) DGENERATRL (should always be considered Large) AEMO has previously advised that Small Generator Aggregators will need to have the solar systems gross metered (i.e. separate to the consumption load) and on its own NMI. United Energy seeks clarification why this is not mentioned anywhere in the Metrology or NMI procedures?	AEMO does not believe that NCONUML needs to have a Small after it. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. After consideration, the NMI Classification of SGA will not be used but a new NMI Classification of NREG has been added with a relevant description. DGENRATR will not be included in the consultation as AEMO considers it's no longer required. The NER 2.3A provides the rules for SGA's AEMO do not duplicate rules in procedures.
82.	AGL	4.10.2	Consumption	Should there be consideration of a UMS consumption Identifier. Noting that Unmetered connections cannot be requested by a residential party, but only by an Authority (e.g. Telco, Water etc.), Local Government (or business if Watchman lights are included), then there should be a note to specify that an unmetered connection should by definition be a 'Business' classification.	AEMO: The FRMP already has the obligation to establish and update the Classification Code, they currently do it today for contestable unmetered loads and the logic is the same. AEMO does not believe it needs to be clarified any further.
83.	AGL	4.11.1	NMI Status Codes	Noting the proposed designation of UMS, this table be updated to reflect that non-contestable UMS will now be a market load and are non-contestable.	AEMO believe description is sufficient for the CATS Procedures. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated.
84.	AGL	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Noted. AGL reiterates its position, that while UMS may be non-contestable at present, that is likely to be transitory, and therefore should be more appropriately labelled. Further, AGL suggests there be a split between UMS supported by a network device / sample meters for profile measurement and ones which have no network device, and that these be designated as UMS Types 8 and 9. AGL notes that Cl 4.12.1(a) contemplates the use of profile meters for NCONUML.	AEMO: These loads are not contestable under the current NER. If and when they become contestable AEMO will update the procedures accordingly. A framework will be discussed and decided for these in the future. AEMO believes the new metering installation type code of NCONUML is enough to differentiate these loads from contestable unmetered loads without the need

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					to have differing meter types. Just like the contestable unmetered loads, all of the relevant information to perform the calculations sits outside of CATS and this will also be the case for non-contested unmetered loads.
85.	Aurora	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Table 4-L – Metering Installation Type Codes needs a manually read flag of Y or N	AEMO: updated in draft to N/A
86.	Ausgrid	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	In table add Manually read flag for NCONUML to 'N'. 4.12.1 (b) Should allow for a NMI with a NMI status code of NCONUML to have a datastream type of 'C'. This allows the MC to deliver consumption data to AEMO to calculate and develop interval data for NCONUML NMIs.	AEMO: updated in draft to N/A
87.	Ausgrid	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	The NCONUML (or preferably NCONUMS - see 4.9 above) allows for separation of the contestable (type 7) metering installations and non-contestable 'Metering Installation' types, although it would have been simpler and more easily understood if these were divided into type 8 for purely 'agreed' UMS and type 9 for based on sample meters or network devices. Similarly, some ability to determine 1 NMI to many devices' method (i.e. the type 7 UMS inventory table method) versus the 1 NMI/device ADL method.	AEMO: refer response in no 84
88.	Endeavour	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Clause 4.12.1.a.iii should be updated to reflect that the datastream suffix is to at the register level.	AEMO: Procedure updated to reflect the end state at 6/2/2022. All type 1-3 and subset of 4 datastreams must be converted to Register level from 1/7/2021. Additionally, any new or updated interval meter datastreams also needs to be at the register level from 1 July 2021 e.g. meter exchanged, or meter re-configured and data flows have changed. Transition activity for change from net to register level datastreams will be scoped and planned as part of the 5MS Readiness metering transition plan.
89.	EA	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	We suggest that validations be provided in MSATS so that an erroneous transfer of a NCONUML site is not valid. Correcting for an erroneous transfer in these instances can often be a tedious process and result in network billing issues and complexities. See also our comments on 2.4(e) of the National Metering Identifier document. We recommend that validations take both into consideration	AEMO will develop logic to reject CR10XX type change requests where the NMI Classification code is NCONUML
90.	Energy QLD	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Energy Queensland notes that there is no Y/N flag against the new entry for NCONUML. In section 4.12.1 (iii) we consider that the definition of the data stream format for COMMS NMIs should be changed so that it includes other alpha prefixes.	AEMO: updated in draft to N/A Procedure updated to reflect the end state at 6/2/2022. All type 1-3 and subset of 4 datastreams must be converted to Register level from 1/7/2021. Additionally, any new or updated interval meter datastreams also needs to be at the register level from 1 July 2021 e.g. meter exchanged, or meter re-configured and data flows have changed. Transition activity for change from net to register level datastreams will be scoped and planned as part of the 5MS Readiness metering transition plan.
91.	Evo Energy	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Agree, but already flagged in 4.9 at the NMI level, it is still Large or Small. Remove from 4.9 and have here.	AEMO: refer to response no 71
92.	Flow Power	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Noted	AEMO notes the respondent's comment.

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93.	Jemena	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Noted	AEMO notes the respondent's comment.
94.	Origin	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Noted	AEMO notes the respondent's comment.
95.	PlusES	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Table 4-L – Metering Installation Type Codes PLUS ES recommends for clarity that the Manually Read Flag for NCONUML code is populated at minimum with a N/a, rather than left blank. Section 4.12.1 - Consequences of Allocating Certain Metering Installation Codes PLUS ES would like to suggest: For the new Metering Installation Type Code of NCONUML, the DataStreamType should be allowed to be either I (Interval) or C (Consumption) - defined in both subsections (a) and (b) This would allow the MDP the flexibility to send the Non-Contestable unmetered data as either Interval data (where it exists) or Consumption data (where DAL agreement exists with the customer)	AEMO: updated in draft to N/A As per 13.1.3 (a) of Metrology Part B non-contestable unmetered loads must be delivered as interval data. No need to have a Datastream Type of C.
96.	SAPN	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	No Comment	AEMO notes the respondent's comment.
97.	Stanwell	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
98.	TasNetworks	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	4.12: Agreed	AEMO notes the respondent's support of the proposed change.
99.	United	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	The NCONUML (or preferably NCONUMS - see 4.9 above) allows for separation of the contestable (type 7) metering installations and non-contestable 'Metering Installation' types, although it would have been simpler and more easily understood if these were divided into type 8 for purely 'agreed' UMS and type 9 for based on sample meters or network devices. Similarly, some ability to determine 1 NMI to many devices' method (i.e. the type 7 UMS inventory table method) versus the 1 NMI/device ADL method.	AEMO: refer response in no 84
100.	VectorAMS	4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	Suggest AEMO should clarify if a contestable MC can be assigned into the MC role over a NCONUML. Recommend MSATS restrict nomination to the Networks MC. Already metering providers are experiencing levels of incorrect nomination that must be reversed. Validation on these transactions at the time of raising the transaction will stop costly and unnecessary rework.	AEMO does not believe this type of validation is required as the DBs create these and know they are non-contestable they will appoint themselves. Transfers will not be allowed to happen on this NMI Classification.
101.	AGL	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Noted. AGL Supports the change.	AEMO notes the respondent's support of the proposed change.
102.	Aurora	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Aurora Energy has no comment	AEMO notes the respondent's comment.
103.	Endeavour	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Clause 4.11.2 should be updated to reflect that the datastream suffix is also used to determine if the datastream will be used in the settlements process or the calculation of UFE.	AEMO: This section is about the status of the datastream and not the make-up of the datastream. It's reiterating that the status must be A for it to be included in settlements/UFE calc, and I if it's not. New 4.13.1 provides what the make-up should be.
104.	Energy QLD	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Energy Queensland offers no comments on this change.	AEMO notes the respondent's comment.

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105.	Evo Energy	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Agree	AEMO notes the respondent's support of the proposed change.
106.	Flow Power	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Noted	AEMO notes the respondent's comment.
107.	Jemena	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Noted	AEMO notes the respondent's comment.
108.	Origin	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Noted	AEMO notes the respondent's comment.
109.	SAPN	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	No Comment	AEMO notes the respondent's comment.
110.	Stanwell	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
111.	TasNetworks	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	4.11.2: Agreed 4.17: Agreed	AEMO notes the respondent's support of the proposed change.
112.	VectorAMS	4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	Vector believes the use of NMI Datastream and NDS status codes should be revisited. Under a 'Settlement by difference' methodology NMI's included in settlements must be differentiated from those that are not. Under a Global settlement methodology this is no longer be the case. All meters will need to be settled. While maintaining the status quo regarding CATS_NMI_DATASTREAM population is the path of least resistance requiring participants continue to create a Datastream for all meters and maintain the NDS status code is redundant. The switch to Global Settlements presents the opportunity to revisit and simplify the CATS data model, removing some processes and obligations and streamlining the market. This will lead to more efficient processes and reduced costs .i.e. use meter register and register identifier to understand the datastreams coming from the meter for settlement purposes. It is strongly recommended this should be considered.	AEMO believe that the MDP is the role best placed to know the data that is being collected from the meter and the data that needs to be delivered to AEMO. Standing data for the metering installation is input by the MP and while the standing data is correct a lot of the time there is still room for error so AEMO do not believe this would be the best source of data to use for settlements. This is particularly relevant where the MDP and MP are individual businesses.
113.	Evo Energy	4.13	Table 4-M Read Type Code "SP" and "ER"	ER – We should reference here that this is really a Substituted read, as the Old FRMP will need to provide an invoice to the customer. The New FRMP needs a starting billable read. An Estimated read for types 4A, 5 and 6 are Forward Estimates in accordance with metrology procedures, so no retailer invoices on receipt of this. Change wording in Description of code only and replace "Estimated" to "Substituted". SP – The MDP or MPC (or LNSP) will not arrange for a special read until a B2B Service Order is received. This will indicate the type of special read to be undertaken, allowing appropriate charges to be applied. Reword Description of code to: Used where the New FRMP requires an End User transfer date that does not align with the scheduled reading cycle, or where other Read Type Codes do not fall within the boundaries of the End User request. The New FRMP must set the Proposed Change Date to the scheduled date as per the appropriate B2B Service Order. Applies to type 4A, 5 and type 6 metering installations. ***Note***: that if this wording is accepted, need to update HINTS AND TIPS - CATS & NMI DISCOVERY	AEMO: Out of scope for 5MS and Global. Please raise an ICF and refer to ERCF
114.	AGL	11.4 / 13 / 14	Create NMI	AGL suggests that further work is required to accommodate the creation of unmetered NMIS. Much of the required information may be irrelevant, while aspects such as customer, customer asset ID, load and load profile are crucial.	AEMO: LNSPs are already familiar with creating these types of NMIs for contestable loads and the requirements will remain exactly the same for the non-contestable loads in MSATS.

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				AGL also notes that should its proposal on parent child NMIs be accepted, Cl 14 may require updating to incorporate child UMS NMIs.	Calculations will be performed by the DBs based on the information available to them, as they currently do. Metrology Part B will be updated with the information about the creation and interval load calcs for non-contestable unmetered loads.
115.	AGL	11.7 /11.8	Objection Rules	AGL notes that the LR objections have been deleted, but queries where the requirements for the ENLR have been placed and would expect them to largely follow the various codes for the FRMP.	AEMO: For scenarios where the ENLR is allowed to object, they have not been deleted. They are not FRMP's and will not follow the same objections that are available to the FRMPs
116.	AGL	12.7		As the LR field is now being used for the ENLR, should the ENLR have the ability to object to a child NMI being allocated to it as ENLR – under code NOTRESP. Should table 12-A, 12-B be updated from LR to ENLR, as this is a child NMI creation.	AEMO: There are already validations in the system that do not allow the ENLR to be anybody else other than the FRMP of the parent so an objection would not be necessary.
117.	AGL	12.7		AGL notes that there is no inclusion of an ENLR column in these tables or many of the other tables. The market requirements for an ENLR are different from those of an LR, so these tables require further review.	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated.
118.	AGL	39	Standing Data Updates	AGL suggests that the conditions precedent for standing data updates be extended to cover the new NMI classifications being proposed – e.g. DHYBRID, THYBRID etc.	AEMO will update in WIGS Procedure
119.	AGL	Various	Updated table and section references throughout the document	AGL notes that what will become a previous version to this document (v4.8) has had the Table numbering changed e.g. from 4-A to 4-1. This change is not reflected in this version.	AEMO will ensure formats are consistent.
120.	Aurora	Various	Updated table and section references throughout the document	No mention of the new RM reports or the removal of RM9,11,21,27	AEMO: The reporting information had not been finalised prior to publishing. AEMO will update for the Draft Determination Procedure. None of the reports mentioned have been removed and will still be available.
121.	Energy QLD	Various	Updated table and section references throughout the document	Energy Queensland offers no comments on this change.	AEMO notes the respondent's comment.
122.	Flow Power	Various	Updated table and section references throughout the document	Noted	AEMO notes the respondent's comment.
123.	Jemena	Various	Updated table and section references throughout the document	Noted	AEMO notes the respondent's comment.
124.	Origin	Various	Updated table and section references throughout the document	Noted	AEMO notes the respondent's comment.
125.	Red/Lumo	Various	Updated table and section references throughout the document	3.3(b) has a section 0. Reference to be updated.	AEMO will correct, looks like it errored when converting to PDF
126.	SAPN	Various	Updated table and section references throughout the document	No Comment	AEMO notes the respondent's comment.
127.	Simply/Engie	Various	Updated table and section references throughout the document	Section 40.3, remove the reference of 'The Tier Status (not required if both the LR and FRMP are provided as selection criteria)' Table 41 G and 41 I, the highlighted 'Description' to be amended as per ENLR changes for consistency:	AEMO: agree AEMO will update for Draft Determination Procedure. Embedded Network Local Retailer has been added to the description. Data item has not changed due to this being the field name.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Table 421-G – CATS Standing Data Access Rules for Participant Relations PARTICIPANT RELATIONS Jur'n | Data Item | Description | FRMP | LR | LNSP | MDP | MPB | MPC | RP | RoLR | NEMM | NSP2 ALL | FRMP | Financially Responsible *Market Participant*, e.g. Current Retailer. | Yes | | Yes | Yes | Yes | - | Yes | - | Yes | Yes ALL | LNSP | Current Local *Network Service Provider* (or ENM for a *child connection point*). | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes ALL | LR | Current *local retailer.* | Yes | Yes | Yes | Yes | Yes | - | Yes | - | Yes | **Table 421-I – NMI Standing Data Access Rules for Participant Relations** PARTICIPANT RELATIONS Jur'n | Data Item | Description | FRMP | LR | LNSP | MDP | MPB | MPC | RP | RoLR | NEMM | NSP2 ALL | FRMP | Financially Responsible Market Participant. | Yes | - | – | – | – | - | – | - | – | – ALL | LNSP | Current Local Network Service Provider, or *Embedded Network Manager* for a *child connection point.* | – | – | – | – | – | – | – | – | – | – ALL | LR | Current Local Retailer. | – | – | – | – | – | - | – | - | – | -	
128.	Stanwell	Various	Updated table and section references throughout the document	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
129.	TasNetworks	Various	Updated table and section references throughout the document	For consistency with naming convention, Tables 411-A, 411-B and 411-D should be labelled as 41-A, 41-B, 41-D. Should the 'LR' column in tables 41D, E, F, G, H, and I be labelled 'ENLR'.	AEMO will update the tables with ENLR, the naming convention to be corrected.
130.	AGL	General		Noted. Although these have not been updated compared to v48.	AEMO notes respondent's comment.
131.	AGL	General		AGL notes that there are multiple instances (e.g. Cl 7.7 through to 42.3.4 iv) where table references have not been updated from A,B,C etc. to 1,2,3 etc. assuming v48 is authorised prior or v50.	AEMO will ensure formats are consistent.
132.	AGL	General	MSATS Field Names	AGL queries whether the LR field name will be updated to ENLR or left as LR, in the same way that RP has been left for MC, within this Procedure ?	AEMO: LR field in MSATS will remain the same and will not be changed to ENLR
133.	AGL	General	Change of Column from LR to ENLR	AGL notes that in a number of instances, there are various tabled where the column showing in one table is LR and in another it is ENLR – e.g. Tables 19-B vs 19-C. AGL suggests all these tables be reviewed.	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated.
134.	AGL	General	CR Validation for NCOMNUCL NMIs	AGL suggests that NCONUML NMI types have a validation against them to stop them being transferred via MSATS via MSATS Change Requests.	AEMO: AEMO will develop logic to reject CR10XX type change requests where the NMI Classification code is NCONUML
135.	AGL	General	Process for managing cross border NMIs	The Metering Focus Group discussed the requirements for managing cross border LV NMIs by up[dating TNI and DLF. The process seemed a simple and effective method, however, that process or an outcome, now needs to be captured and published to provide guidance to LNSPs to manage these NMIs.	AEMO: see response in no 69
136.	Origin	General	AEMO validation	As was highlighted in the MFG it would be prudent for AEMO to ensure Non-Contestable Unmetered loads when loaded into MSATS cannot be transferred to another retailer.	AEMO will develop logic to reject CR10XX type change requests where the NMI Classification code is NCONUML
137.	PlusES	General	LR vs ENLR	PLUS ES recommends that a consistent approach is used throughout the document when referencing LR & ENLR If the intent is to maintain LR code but in actual fact it represents ENLR, similar with RP and MC, then the document should reflect LR not ENLR in some sections/Tables and in others LR. A review should also ensure that Inclusion of LR will be optional moving forward i.e. mandatory for Embedded Networks	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated. LR will remain a mandatory field for all CR's as per the CATS procedure, this field will not be made optional for NMI creation CRs.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
					Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
138.	Energy QLD	Additional comment		Energy Queensland questions the reference to mandatory MDM Contributory Suffix use on new metering installations post 1 July 2021.	AEMO believe the requirement to keep this mandatory must exist until all MDP's are sending metering data to AEMO via MDFF for interval metering data.
139.	Energy QLD	Additional comment	5 - Removal of RM Reports	Energy Queensland notes the list of available RM reports may also need to be updated to remove RM14, RM15 and RM18 as per the Metrology changes.	AEMO: The reporting information had not been finalised prior to publishing. AEMO will update for the Draft Determination Procedure.
140.	Energy QLD	Additional comment	25, 39 - Update to LR role for CR5001/CR5021 Maintain NMI – Backdate a NMI – Small or Large as well as CR 5100/CR5101 AEMO Initiated Standing Data Updates	Energy Queensland requests an explanation why the requirement to provide the LR has not been removed from the CRs 5001, 5021, 5100 and 5101.	AEMO: LR will remain a mandatory field for all CR's as per the CATS procedure, this field will not be made optional for those CRs. Standard Notification process will remain, AEMO will accept and ignore notifications where GLOPOOL/POOLXXX are populated and the ENLR will receive the notification as per today.
141.	Energy QLD	Additional comment	31.7, 32.6 - Update to Objection rules for CR6200 and CR6300 from LR to ENLR	Energy Queensland considers that the reference to LR in the objection table should be changed to 'ENLR' as per other changes.	AEMO will review the sections to ensure the ENLR is updated where relevant. This will only be updated where the ENLR could potentially be in the role for CR type. Refer to new clause 4.4. Standing Data section reviewed and updated.

TABLE 7 – MSATS PROCEDURE: PROCEDURE FOR THE MANAGEMENT OF WHOLESALE, INTERCONNECTOR, GENERATOR AND SAMPLE (WIGS) NMIS

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	Various		Table re-numbering Note that the Table Numbers have been changed in v48 from 4-A to 4-1, but have reverted back in this version 5 to 4-A etc.	AEMO will ensure formatting is standard
2.	AGL	Various		Throughout this document, there are instances where LR has been updated to ENLR, and multiple places where LR remains. The changes seem inconsistent and more consideration of the role and obligations of an ENLR are different from those of an LR.	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.
3.	AGL	Various	Updated table and section references throughout the document	Noted. AGL supports the change.	AEMO notes the respondent's support of the proposed change.
4.	Aurora	Various	Updated table and section references throughout the document	None of the new classification codes for 1xxx,2XXX, 3XXX, 4XXX, 5XXX,6XXX are not permitted only Small or Large are considered – this is the same in the WIGS only WHOLESAL, INTERCON, GENERATR or SAMPLE are catered for.	AEMO will review and update accordingly for the draft
5.	Energy QLD	Various	Updated table and section references throughout the document	Energy Queensland offers no comments on this change.	AEMO notes the respondent's comment.
6.	Evo Energy	Various	Updated table and section references throughout the document	Concur	AEMO notes the respondent's support of the proposed change.
7.	Flow Power	Various	Updated table and section references throughout the document	Noted	AEMO notes the respondent's comment.
8.	Jemena	Various	Updated table and section references throughout the document	Noted	AEMO notes the respondent's comment.
9.	SAPN	Various	Updated table and section references throughout the document	No Comment	AEMO notes the respondent's comment.
10.	Stanwell	Various	Updated table and section references throughout the document	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
11.	TasNetworks	Various	Updated table and section references throughout the document	Section 3.2 (a) has a broken section cross reference.	AEMO: will correct for the draft
12.	AGL	General		This document doesn't consider the NMI types THYBRID, DHYBRID, XBOUNDRY etc. AGL would expect this Procedure to require these NMI classifications to be used and be conditions precedent for some processes.	AEMO: After consideration, the NMI Classification of SGA will not be used but a new NMI Classification of NREG has been added with a relevant description. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. DGENRATR will not be included in the consultation as AEMO considers it's no longer required.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
13.	AGL	General	Process for managing cross border NMIs	The application and requirements for using the newly created NMI types needs to be completed and AGL would expect this procedure to require those updates.	AEMO believes the descriptions of the NMI classifications is sufficient enough for the LNSP to determine what to use when creating NMIs NMI Procedures will be updated with scenarios for use
14.	Origin	General		Understanding of the ownership and complexity to install new cross boundary meters to allow for Global Settlement, and possible implications if erroneous data is uploaded into MSATS.	AEMO: cross boundary NMI's are not new to the industry and LNSPs have been creating these in MSATS but have previously been classified as WHOLESAL. LNSP's will ultimately be responsible for the creation of data and the correction when incorrect. NMI Procedures will be updated with scenarios for use.
15.	PlusES	General		PLUS ES notes that there is inconsistent references with respect to LR vs ENLR.	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.
16.	PlusES	General		The additional NMI Classification Codes BULK, THYBRID, DHYBRID, NCONUML, XBOUNDRY have not been included in the WIGs. If they have not been included in any CATS procedures and not referenced in WIGS, PLUS ES questions the value of including them in the NMI Classification Code. One would expect them to play a role in the Market, either as exclusions to processes or used within processes.	AEMO: New section created to reference CATS. DHYBRID and THYBRID will not be included in the consultation as the Energy Storage Systems (ESS) has been delayed and these Classifications may be added as part of that project. New Classifications will be added to the CATS & WIGS in the Draft. Descriptions have been updated. DGENRATR will not be included in the consultation as AEMO considers it's no longer required.
17.	AGL	3.8		Changes to CR 1080 noted.	AEMO notes the respondent's comment.
18.	AGL	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Noted. AGL supports the change. In further reviewing the change from LR to ENLR, a review of the objection codes is needed, as this role change is more of a FRMP role change than an LR role change, and the other – e.g. Table 3-C/3-3 p21	AEMO: where the ENLR is allowed to object has been kept, they have not been deleted. They are not FRMP's and will not follow the same objections that are available to the FRMPs
19.	Aurora	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Aurora Energy has no comment	AEMO notes the respondent's comment.
20.	Energy QLD	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Energy Queensland offers no comments on this change.	AEMO notes the respondent's comment.
21.	Evo Energy	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Agree with changes except 6400 & 6401. LR is still part of the registered participant roles, and therefore can still be nominated. You have removed any method of changing the LR if nominated incorrectly, past or future. Otherwise, drop the LR role completely, so it is not mandatory or optional in any change request, only mandatory for Embedded Networks.	AEMO: if any corrections to the LR are needed after go Live AEMO will correct. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
22.	Flow Energy	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Noted	AEMO notes the respondent's comment.
23.	Jemena	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Noted	AEMO notes the respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
24.	Origin	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Noted	AEMO notes the respondent's comment.
25.	SAPN	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	No Comment	AEMO notes the respondent's comment.
26.	Simply/Engie	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Errata: Table of contents still has references to LR Requirements, e.g. section 24.4	AEMO: TOC corrected.
27.	Stanwell	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
28.	TasNetworks	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Agreed	AEMO notes the respondent's support of the proposed change.
29.	VectorAMS	Quick Reference Guide, 23	Removal of Change Reason Code 1050, 1051, 6400 and 6401	Agreed	AEMO notes the respondent's support of the proposed change.
30.	AGL	9.7, 10.7, 11.7, 12.7, 13.7, 14.7, 15.7, 18.7, 20.7, 21.9, 22.7, 23, 25.8, 26.7, 27.1, 28.1, 28.5	Provisions for embedded network local retailers (ENLR)	Should Cl 27 include ENLR as a role which can be changed – e.g. 27(a) and 27.3(h) ?	AEMO reviewed 27 (a) updated, 27.3 (h) not updated as it's the field and the field name are not changing.
31.	Aurora		Provisions for embedded network local retailers (ENLR)	ENLR not changed in ,Table 3-C – Change Request Status Notification Rules, 6.1. Application [2020 2021] refers to the ENM must populate the LR should this not be the ENLR Table 6-B – Objection Rules** has reference to LR & not ENLR	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. The ENM must populate is referring to a field in MSATS and the field name is not changing so this remains as LR. Table 6-B has been updated. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.
32.	Energy QLD		Provisions for embedded network local retailers (ENLR)	Energy Queensland seeks confirmation from AEMO as to why certain CR codes have not had LR references or objections removed or changed to ENLR. For example: CR2100, CR2101, CR5110, CR5111, CR5001 and CR5021.	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.
33.	Evo Energy		Provisions for embedded network local retailers (ENLR)	Why not 2.8 & 2.9, 5.4, 5.7, 5.8, 6.4, 6.7, 7.4, 7.6, 7.7, 8.4, 8.7, 16.4, 16.5, 16.9, 17.7, 19.7, 21.8, 22.6, 24.7, 26.4, 27.1, 27.3? Agree, except for 3.8, 6.8, 9.7, 10.7, 11.7, 12.7, 13.7, 14.7, 15.7, 16.7, 18.7, 20.7, 21.9, 22.7, Old 23, 25.8, 26.7, 28.5, 29.5 Need to add wording after ENLR ENLR (where applicable)…"	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
34.	Flow Power		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes the respondent's comment.
35.	Jemena		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes the respondent's comment.
36.	Origin		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes the respondent's comment.
37.	SAPN		Provisions for embedded network local retailers (ENLR)	No Comment	AEMO notes the respondent's comment.
38.	Stanwell		Provisions for embedded network local retailers (ENLR)	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
39.	TasNetworks		Provisions for embedded network local retailers (ENLR)	6.8: Agreed 9.7: Agreed 10.7: Agreed 11.7: Agreed 12.7: Agreed 13.7: Agreed 14.7: Agreed 15.7: Agreed 18.7: Agreed 20.7: Agreed 21.9: Agreed 22.7: Agreed 23: Agreed 25.8: Agreed 26.7: Agreed 27.1: Agreed 28.1: Agreed 28.5: Agreed	AEMO notes the respondent's support of the proposed change.
40.	VectorAMS		Provisions for embedded network local retailers (ENLR)	Agreed	AEMO notes the respondent's support of the proposed change.
41.	AGL	5.7, 5.8, 7.6, 7.7, 16.9, 16.10, 17.7, 19.7, 24.7	Removal of Local Retailer (LR) references	It is unclear if there are some remaining role categories for LR (see Table 5-B/5-2) of if all LR roles are now ENLR. AGL notes that for various codes – e.g. CR2020, the ENLR is identified in the notification table (but the LR isn't identified) whereas in the objection table the LR is identified but not the ENLR. Again, AGL suggest that by changing the role of the party from LR to ENLR, further consideration is needed of notifications and objections and a review of the changes made to ensure they are applied consistently.	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.
42.	Aurora		Removal of Local Retailer (LR) references	LR Role still exists in various tables e.g. Table 2-C – Objection Rules** , Table 2-D – Change Request Status Notification Rules** Table 4-B – Change Request Status Notification Rules** 5.4, Table 5-B – Objection Rules for example should the LR role not have a statement that LR is considered GLOPOOL unless ENLR (this seems to be covered in the NMI document in 2.2) 5.4. LNSP Requirements LNSP must: populate LR should this be may as per the CATS procedure? 6.4. ENM Requirements ENM must: populate LR should this be may or must : ENLR 7.4. LNSP Requirements LNSP must: populate LR should this be may as per the CATS procedure? Table 16-C – Change Request Status Notification Rules - LR* should this not be ENLR*	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale. MSATS will require the population of GLOPOOL or POOLXXX whichever is relevant when the NMI is created.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
					Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. Procedures will be updated accordingly.
43.	Energy QLD		Removal of Local Retailer (LR) references	Energy Queensland seeks confirmation from AEMO as to why certain CR codes have not had LR references or objections removed or changed to ENLR, for example CR2100, CR2101, CR5110, CR5111, CR5001 and CR5021.	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale.
44.	Evo Energy		Removal of Local Retailer (LR) references	Drop the LR role completely, so it is not mandatory or optional in any change request, only mandatory for Embedded Networks. Not approved, see notes above	AEMO: if any corrections to the LR are needed after go Live AEMO will correct. Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. LR will remain a mandatory field in MSATS for the relevant CRs.
45.	Flow Power		Removal of Local Retailer (LR) references	Noted	AEMO notes the respondent's comment.
46.	Jemena		Removal of Local Retailer (LR) references	Noted	AEMO notes the respondent's comment.
47.	Origin		Removal of Local Retailer (LR) references	Noted	AEMO notes the respondent's comment.
48.	SAPN		Removal of Local Retailer (LR) references	No Comment	AEMO notes the respondent's comment.
49.	Stanwell		Removal of Local Retailer (LR) references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support of the proposed change.
50.	TasNetworks		Removal of Local Retailer (LR) references	5.7: Agreed 5.8: Agreed 7.6: Agreed 7.7: Agreed 16.9: Agreed. In Table 16-B (CR5021) change LR to ENLR. 16.10: Agreed. In Table 16-C change LR to ENLR. 17.7: Agreed 19.7: Agreed 24.7: Agreed	AEMO will update and separate the CRs as the ENLR is still entitled to the notification under the CR5021 scenario.
51.	VectorAMS		Removal of Local Retailer (LR) references	Agreed	AEMO notes the respondent's support of the proposed change.
52.	AGL	7/9.5		AGL notes that the CR 3000/3001 – Create Metering Installation includes the ENLR but not the LR, whereas the CR 2500/2501 Create NMI, Metering Installation Details and NMI Datastream includes the LR but not the ENLR. Is this correct ?	AEMO will review the tables and update to ENLR where relevant. AEMO did not update the objection tables if the ENLR could not object or the notification tables when the ENLR would not hold a role for example the CR2000/01 CR. Refer to Clause 4.4 of CATS Procedures to view AEMO's rationale. As MSATS will be updated with GLOPOOL/POOLXXX and new NMIs created with GLOPOOL/POOLXXX the notifications and objections for LR's only apply to CRs where and ENLR holds a role.

TABLE 8 – MSATS PROCEDURE: NATIONAL METERING IDENTIFIER

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	General		This procedure needs to include the concepts identified in CATS v7.1 for the new NMI types, in particular the boundary crossing NMIs and associated procedures.	New NMI Classification Codes will, as usual, be defined in CATS Procedures and their use will be detailed in the NMI Procedure.
2.	AGL	2.2	Updates to LR population e.g. 'GLOPOOL'	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
3.	Aurora	2.2	Updates to LR population e.g. 'GLOPOOL'	CATS procedure for 2001 indicates LNSP "may" not "must" 3. NMI STRUCTURE - (g) (LR = POOL*) but no foot note for * but 7.2 shows LR = POOL* (where the "*" is a wildcard for the region)	MSATS will require the population by participants of GLOPOOL or POOLXXX whichever is relevant when the NMI is created – refer to response to Aurora Table 6 Item 42. CATS Procedures has been updated to reflect mandatory LR role.
4.	Ausgrid	2.2	Updates to LR population e.g. 'GLOPOOL'	In the proposed CATS procedure the population of LR is optional (i.e. may Populate (clause 11.4 (c)) , yet here it is mandatory.	Refer to response to Aurora Item 3.
5.	Endeavour Energy	2.2	Updates to LR population e.g. 'GLOPOOL'	We believe that this would be more appropriate in section 2.3 of the CATS Procedures. Also it should make it clear that the population of the LR role is option and if the LR role was to be populated then value must be "GLOPOOL"	Refer to response to Aurora Item 3.
6.	Energy Australia	2.2	Updates to LR population e.g. 'GLOPOOL'	See comments on 7. MSATS Procedures: CATS Procedure Principles and Obligations relating to removal of LR references	Refer to response to Aurora Item 3.
7.	Energy Queensland	2.2	Updates to LR population e.g. 'GLOPOOL'	Energy Queensland notes that this statement appears to contradict the changes to the CATS Procedures where the mandatory requirement for the LNSP to populate the LR field in the CR2001 transaction has been removed.	Refer to response to Aurora Item 3.
8.	Evoenergy	2.2	Updates to LR population e.g. 'GLOPOOL'	Should reword 2.2 from (d) to include all variations 2.2 (d) For Transmission connection points, the NSP must populate the LR field (*) with the appropriate jurisdictional participant ID e.g. POOLxxx. (e) For child connection points the ENM must populate the LR field (*) with the Parent FRMP Participant ID (this will be the ENLR). (f) For all other connection points, the LNSP must populate the LR field with GLOPOOL. ** to be updated to ENLR dependent on previous comments*	Refer to response to Aurora Item 3.
9.	Flow Power	2.2	Updates to LR population e.g. 'GLOPOOL'	We agree to use the code GLOPOOL as advised by AEMO.	AEMO notes the respondent's support for the proposed change.
10.	Jemena	2.2	Updates to LR population e.g. 'GLOPOOL'	Noted	AEMO notes respondent's comment.
11.	Origin	2.2	Updates to LR population e.g. 'GLOPOOL'	Noted	AEMO notes respondent's comment.
12.	Plus ES	2.2	Updates to LR population e.g. 'GLOPOOL'	Section 2.2 (d): this clause effectively makes the population of LR mandatory for the LNSP. PLUS ES suggests this is an optional and call out the instances/conditions in which the requirement would be mandatory to update. i.e. Embedded network child, boundary connection point etc .	Refer to response to Aurora Item 3.
13.	SAPN	2.2	Updates to LR population e.g. 'GLOPOOL'	No comment	AEMO notes respondent's comment.
14.	Stanwell	2.2	Updates to LR population e.g. 'GLOPOOL'	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
15.	TasNetworks	2.2	Updates to LR population e.g. 'GLOPOOL'	2.2(d): Agreed, however the CATS Procedures now has the LR role as optional on a Create NMI CR, therefore this should be reflected in the wording of this obligation. Possibly add 'if provided' to the end of the sentence?	Refer to response to Aurora Item 3.
16.	AGL	2.2	Provisions for embedded network local retailers (ENLR)	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
17.	Energy Queensland	2.2	Provisions for embedded network local retailers (ENLR)	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
18.	Evoenergy	2.2	Provisions for embedded network local retailers (ENLR)	Agree, see above	AEMO notes the respondent's support for the proposed change.
19.	Flow Power	2.2	Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
20.	Jemena	2.2	Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
21.	Origin	2.2	Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
22.	SAPN	2.2	Provisions for embedded network local retailers (ENLR)	No comment	AEMO notes respondent's comment.
23.	Stanwell	2.2	Provisions for embedded network local retailers (ENLR)	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
24.	TasNetworks	2.2	Provisions for embedded network local retailers (ENLR)	2.2(e): Agreed	AEMO notes the respondent's support for the proposed change.
25.	TasNetworks	2.3.1		Clause 2.3.1 should also include a requirement for population of LR role to be populated with 'GLOPOOL' if provided.	Refer to response to Aurora Item 3.
26.	AGL	2.4, 7	Provisions for non-contestable unmetered loads	As these devices are now on-market, AGL would expect normal market processes (including B2B Service Orders) to now operate in the same way that that they would for any other on market NMI. As such, AGL believes that each NMI should support a single connection and no more. AGL has proposed a structure which allows individual connections to be added together to form a larger virtual NMI for devices with the same profile (Parent-Child additive NMI framework) to make profile application, network and customer billing simpler. AGL is concerned that placing multiple devices, with varying profiles will make the generation of appropriate profiles difficult, make auditing of connections and profiles for connections close to impossible to audit, will make management of customer connections (Connect Service Order, Disconnect Service Order) difficult – and in some cases impossible (e.g. disconnect a single device in a bulk NMI), issuing of outage notification to the relevant customer impossible and customer billing very difficult. AGL accepts that for Public Lighting, where the network manages the inventory, the connection and maintenance/replacement of type 7 loads, that a bulk NMI is acceptable. However, AGL does not support multiple customer devices being managed via a bulk NMI. 2.4(f) AGL does not understand why the allocation of NMIs for non-contestable unmetered loads would now be different to a contestable metered load, and why LSNPs would require a separate process, unless this pre-supposes that only bulk NMIs exist.	Metrology Procedure Part B provisions related to an unmetered load NMI containing different market loads or different device types will be retained to provide flexibility for NMI creation. AEMO will be updated 2.4 (b) to clarify single or multiple devices which can be associated to a NMI.
27.	Aurora	2.4, 7	Provisions for non-contestable unmetered loads	2.4 (b) advises "One NMI is required for each non-contestable unmetered load" Some DB's have advised they have multiple devises per single NMI 2.4 (e) A change of one attribute (FRMP, TNI, DLF, LNSP), or a change of End User, will not of its own require an abolition of the NMI. better wording	Metrology Procedure Part B to be amended to provide for the creation of individual non-contestable unmetered load NMIs and will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
28.	Ausgrid	2.4, 7	Provisions for non-contestable unmetered loads	2.4(a) - Should also be mandatory that the same profiling method (e.g. flat or switched) can only be used. 2.4 (b) – If this means one NMI for each NC-UM load, Ausgrid does not agree, One NMI should be able to have multiple different loads. Suggested rewording. 2.4 (f) - AEMO expects that each MC that has NMIs with a classification of NCONUML, has a procedure for the allocation of NMIs for non-contestable unmetered loads, which will be available for review by the Jurisdiction or AEMO on request.	Metrology Procedure Part B provisions related to an unmetered load NMI containing different market loads or different device types will be retained to provide flexibility for NMI creation. AEMO will be updated 2.4 (b) to clarify single or multiple devices which can be associated to a NMI.
29.	AusNet Services	2.4, 7	Provisions for non-contestable unmetered loads	The proposed wording in section 2.4(f) of expecting "each LNSP has a procedure for the allocation of NMIs for non-contestable unmetered loads…" is poorly worded as an	AEMO notes comments however this obligation is only "on request".

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				obligation and creates an overly bureaucratic oversight obligation on LNSPs and AEMO. Instead, we suggest: "Each LNSP must only allocate new NMIs for non-contestable unmetered loads in accordance with policies and procedures." Then any regulatory authority could manage compliance through their normal compliance and enforcement framework.	
30.	CitiPower Powercor	2.4, 7	Provisions for non-contestable unmetered loads	In regard to clause 2.4 (b) it is noted this capability to have different loads under the same NMI "may" exist for an inventory table based model, it doesn't specifically preclude a single NMI/device model or require a table model to mix different types of loads, CitiPower Powercor supports the change.	Metrology Procedure Part B provisions related to an unmetered load NMI containing different market loads or different device types will be retained to provide flexibility for NMI creation. AEMO will be updated 2.4 (b) to clarify single or multiple devices which can be associated to a NMI.
31.	Endeavour Energy	2.4, 7	Provisions for non-contestable unmetered loads	Clause 2.4.a, 2.4.b and 2.4.c could be read as not allowing for a NMI to allocated to a single non-contestable unmetered load, which is the current approach for some Networks and should be allowed to continue. We suggest that for the avoidance of any doubt it should be made clear that a NMI can be allocated to a single non-contestable unmetered load. Please see our other comment in the Other Issues Related to Consultation Subject Matter section below.	Metrology Procedure Part B provisions related to an unmetered load NMI containing different market loads or different device types will be retained to provide flexibility for NMI creation. AEMO will be updated 2.4 (b) to clarify single or multiple devices which can be associated to a NMI.
32.	Energy Australia	2.4, 7	Provisions for non-contestable unmetered loads	*2.4(e) A change of one attribute (FRMP, TNI, DLF, LNSP), or a change of End User, will not of its own require an abolition of the NMI.* AEMO will need to determine if a new CR (or a CR with appropriate validations) is needed, that minimises the likelihood of participants erroneously transferring non-contestable unmetered load if a change in an attribute is needed for the NMI E.g. in 2.4(g). Suggested alternatives are either a new CR, or appropriate validations. Also refer to our comments on 4.12 of the MSATS Procedures: CATS Procedure Principles and Obligations. Overall, we consider that the provisions appear to be sensible at this stage.	AEMO will develop logic to reject CR10XX type change requests where the NMI Classification code is NCONUML.
33.	Energy Queensland	2.4, 7	Provisions for non-contestable unmetered loads	Energy Queensland notes that AEMO have recently concluded that this issue is to be resolved by the parties and offers no comment on this change.	2.4 will be updated to align with Metrology Procedure: Part B 13.1, 13.2 and 13.3 changes.
34.	Evoenergy	2.4, 7	Provisions for non-contestable unmetered loads	Disagree with creating a whole section that copies the previous section, where common requirements across all as these are still Type 7 loads. Remove (h) and (I) from Common, move to new 2.3.2 as (a) and (b) 2.3.2 Contestable unmetered loads 2.4 should be 2.3.3, and only list the differences, so remove all dot points except (f) Add words to 7 (a) …*type 1 to 5 or 7 (contestable and non-contestable) loads.*	2.4 will be updated to align with Metrology Procedure: Part B 13.1, 13.2 and 13.3 changes.
35.	Flow Power	2.4, 7	Provisions for non-contestable unmetered loads	Noted	AEMO notes respondent's comment.
36.	Jemena	2.4, 7	Provisions for non-contestable unmetered loads	Jemena have NMIs and TNIs already allocated to the unmetered loads – therefore, it is not a significant issue for us	AEMO notes the respondent's support for the proposed change.
37.	Origin	2.4, 7	Provisions for non-contestable unmetered loads	Noted	AEMO notes respondent's comment.
38.	SAPN	2.4, 7	Provisions for non-contestable unmetered loads	No comment	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
39.	Simply Engie	2.4, 7	Provisions for non-contestable unmetered loads	Is section 6.2 still accurate?	Definition of net is still correct.
40.	Stanwell	2.4, 7	Provisions for non-contestable unmetered loads	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
41.	TasNetworks	2.4, 7	Provisions for non-contestable unmetered loads	2.4: Should also include a requirement that the LR field must be populated with 'GLOPOOL' if provided. TasNetworks opposes the grouping of multiple unmetered device loads onto a unique NMI, as planned interruption notifications will not be able to be achieved without significant change to impacted systems and processes. The current approach that TasNetworks has adopted since FRC is to allocate a single non-contestable unmetered device load to a single NMI. TasNetworks requests AEMO to consider NMI allocation on the basis of a single non-contestable unmetered load to a single NMI. 7: Agreed	Metrology Procedure Part B provisions related to an unmetered load NMI containing different market loads or different device types will be retained to provide flexibility for NMI creation. AEMO will be updated 2.4 (b) to clarify single or multiple devices which can be associated to a NMI.
42.	AGL	3, 7.2	Provisions for 'bulk supply'	Noted. Here should be provisions to explain other cross border requirements. See earlier comments.	Refer to response to AGL Item 1.
43.	Aurora	3, 7.2	Provisions for 'bulk supply'	Aurora Energy has no comment	AEMO notes respondent's comment.
44.	Energy Queensland	3, 7.2	Provisions for 'bulk supply'	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
45.	Evoenergy	3, 7.2	Provisions for 'bulk supply'	Seeking clarification on difference between a wholesale point and a bulk supply point. Are they both transmission connection points? If so, suggest using one term for both throughout all documents.	Wholesale connection point is related to a party with a financial responsibility for energy flows at the connection point. Bulk supply connection points (i.e. transmission to distribution connection points) currently have the LR as the financially responsible party and are currently Wholesale. Wholesale connection points will still be applicable for Market Customers who purchase energy directly from the Pool. With the removal of LR there is no longer a party with financial responsibility of a bulk supply connection point, therefore a new NMI Classification is to be used.
46.	Flow Power	3, 7.2	Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
47.	Jemena	3, 7.2	Provisions for 'bulk supply'	**7.2. Wholesale and Bulk Supply Connection Points** (a) A wholesale or bulk supply connection point is a transmission network connection point where: LR = POOL* (where the "*" is a wildcard for the region) (b) For a wholesale or bulk supply connection point a NMI must be assigned to each individual physical or logical metering point that contributes to the wholesale or bulk supply connection point. This requirement is to facilitate a drill down to Datastreams where AEMO is obliged to audit or otherwise investigate energy flows for a wholesale or bulk supply connection point. Why does AEMO reference wholesale keyword? All other procedures have replaced wholesale with 'bulk supply' keyword	Refer to response to Evoenergy Item 45.
48.	Origin	3, 7.2	Provisions for 'bulk supply'	Noted	AEMO notes respondent's comment.
49.	Red Lumo	3, 7.2	Provisions for 'bulk supply'	There is no definition for 'bulk supply'. Please include one in the glossary. Also, in the glossary, the term 'bulk supply' is supposed to only be used in the WIGS procedure, however the term is also used in the MDM. Please also update this in the glossary.	Refer to response to AGL Item 1.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
50.	SAPN	3, 7.2	Provisions for 'bulk supply'	No comment	AEMO notes respondent's comment.
51.	Stanwell	3, 7.2	Provisions for 'bulk supply'	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
52.	TasNetworks	3, 7.2	Provisions for 'bulk supply'	3(g): Agreed 7.2(a): Agreed 7.2(b): Agreed	AEMO notes the respondent's support for the proposed change.
53.	TasNetworks	3.(a)(iii)	Additional item from TasNetworks – "W" for wholesale NMI's	It is expected that existing wholesale NMIs that are transferred to BULK NMI classification will remain with "W" as the fifth character. Will "W" continue to be used in allocation of new BULK NMI's?	Fifth NMI character can continue to be "W" for NMIs classified as "BULK" where the NMI alphanumeric
54.	AGL	7, 9.3	Removal of net data and net datastream references	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
55.	Aurora	7, 9.3	Removal of net data and net datastream references	Aurora Energy has no comment	AEMO notes respondent's comment.
56.	Energy Queensland	7, 9.3	Removal of net data and net datastream references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
57.	Evoenergy	7, 9.3	Removal of net data and net datastream references	Agree with change, but add to end of 6.2 (c) for clarity … Net = Export – Import (E-B).	AEMO has updated NMI Procedures: 6.2 (c) with '– (E – B)'
58.	Flow Power	7, 9.3	Removal of net data and net datastream references	Noted	AEMO notes respondent's comment.
59.	Jemena	7, 9.3	Removal of net data and net datastream references	Noted	AEMO notes respondent's comment.
60.	Origin	7, 9.3	Removal of net data and net datastream references	7- still has reference to Net data	Definition of net is still correct.
61.	SAPN	7, 9.3	Removal of net data and net datastream references	No comment	AEMO notes respondent's comment.
62.	Stanwell	7, 9.3	Removal of net data and net datastream references	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
63.	TasNetworks	7, 9.3	Removal of net data and net datastream references	7: Agreed 9.3: Agreed	AEMO notes the respondent's support for the proposed change.
64.	Aurora	7, 9.3	Removal of meter data to AEMO requirements	Aurora Energy has no comment	AEMO notes respondent's comment.
65.	Energy Queensland	7, 9.3	Removal of meter data to AEMO requirements	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
66.	Evoenergy	7, 9.3	Removal of meter data to AEMO requirements	Agree	AEMO notes the respondent's support for the proposed change.
67.	Flow Power	7, 9.3	Removal of meter data to AEMO requirements	Noted	AEMO notes respondent's comment.
68.	Jemena	7, 9.3	Removal of meter data to AEMO requirements	Noted	AEMO notes respondent's comment.
69.	Origin	7, 9.3	Removal of meter data to AEMO requirements	Noted	AEMO notes respondent's comment.
70.	Red Lumo	7, 9.3	Removal of meter data to AEMO requirements	Consistent with our submissions to package 1, we consider that AEMO should only receive net data streams. As such, we support retaining the provisions in these sections. Participants should, at a minimum, be able to choose whether their MDP provides net or export/import data to AEMO	AEMO's use of active and reactive metering data for settlements and UFE analysis was detailed in Section 4.2.6 of the Procedure Package 1 Final Determination Report.
71.	SAPN	7, 9.3	Removal of meter data to AEMO requirements	No comment	AEMO notes respondent's comment.
72.	Stanwell	7, 9.3	Removal of meter data to AEMO requirements	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
73.	TasNetworks	7, 9.3	Removal of meter data to AEMO requirements	7: Agreed 9.3: Agreed	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
74.	Plus ES	7.1		PLUS ES suggests: (a) – adding *"noncontestable unmetered loads*" to the list of metering installations allowed for Accumulating Data Streams (as per the comment for MSATS Procedures section 4.12.1)	Non-contestable unmetered load metering data is to be provided as 5-minute interval metering data.
75.	AGL	App A		AGL suggests that diagrams to explain how HV and LV cross border, hybrid and unmetered NMIs etc. work would be a useful addition to this document.	AEMO has created Appendix E providing for worked example.
76.	Evoenergy		A18	Remove references to a specific type 7, heading to read: *Type 7 contestable and non-contestable metering installation* Change words "lamp" to "device"	AEMO has created Appendix A19 & A20 diagram for Non-contestable unmetered loads.

TABLE 9 – NEM ROLR PROCESSES – PART A

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	2, 4.3.2, 6.1, 11.3, 12.3	Removal of Local Retailer (LR) references	Noted. 4.3.2 AGL supports the change, but notes the updating of LR (as ENLR for child NMIs) may be required.	AEMO notes respondent's comment. AEMO will review and remove where appropriate
2.	Aurora		Removal of Local Retailer (LR) references	Aurora Energy has no comment	AEMO notes respondent's comment.
3.	Ausgrid		Removal of Local Retailer (LR) references	In Part B is the number bulleting supposed to start at 101?	AEMO: Part B is not being consulted on. This will be consulted on via the IEC but AEMO believe it was done this way to separate it from Part A
4.	Energy QLD		Removal of Local Retailer (LR) references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
5.	Evo Energy		Removal of Local Retailer (LR) references	Will AEMO do a BCT and update the LR to "GLOPOOL" on a failure or before? Need to list what is going to happen with the LR role, as was not included or clear in the Issues Paper released with this consultation, nor in any of the changed procedures.	AEMO: Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
6.	Flow Power		Removal of Local Retailer (LR) references	Noted	AEMO notes respondent's comment.
7.	Jemena		Removal of Local Retailer (LR) references	Noted	AEMO notes respondent's comment.
8.	Origin		Removal of Local Retailer (LR) references	Noted	AEMO notes respondent's comment.
9.	Red/Lumo		Removal of Local Retailer (LR) references	Given that Victoria has not applied the NERL or NERR, it is unclear whether AEMO should be removing all references to the LR becoming the ROLR in every clause. In Victoria, the LR = the ROLR. Should AEMO leave the struck out clauses, and state that they apply to VIC only? This also needs to be considered for the reports produced under Part B - it seems that the reports provided will sometimes refer to the LR and other times to the ENLR.	AEMO: MSATS will no longer have the traditional participant name as the LR. It will be GLOPOOL or POOLXXX as relevant to the NMI, except in the case of an embedded network.
10.	SAPN		Removal of Local Retailer (LR) references	No Comment	AEMO notes respondent's comment.
11.	Stanwell		Removal of Local Retailer (LR) references	These amendments generally seem reasonable and in accordance with the intent of the GS Rule	AEMO notes the respondent's support for the proposed change.
12.	TasNetworks		Removal of Local Retailer (LR) references	2: Agreed 4.3.2: Agreed 6.1: Agreed, except 6.1(d) refers to section 13 which has now been deleted in the following sub clause. 11.3(b): Agreed 12.3: Agreed	AEMO: section 13 still exists in the document
13.	VectorAMS		Removal of Local Retailer (LR) references	Agreed	AEMO notes the respondent's support for the proposed change.
14.	AGL	3		AGL believes that this diagram needs updating to reflect that Tier 1 no longer exists, that LR is for child NMIs and all NMIs are Tier 2. e.g. • Fig 2 / Step 10.3 & 11.3 specifies changes to the LR • Fig 2/Step 9.3 and 11.3 is repeated • Fig 3 identifies LR and considers Tier1 and Tier 2	AEMO will update the diagrams for the draft
15.	AGL	2, 3, 6.1, 7.1, 11.2, 12, 13, 15.1, 18.2, Appendix 1	Provisions for embedded network local retailers (ENLR)	Noted.	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
16.	Aurora		Provisions for embedded network local retailers (ENLR)	Aurora Energy has no comment	AEMO notes respondent's comment.
17.	Energy QLD		Provisions for embedded network local retailers (ENLR)	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
18.	Evo Energy		Provisions for embedded network local retailers (ENLR)	Disagree but dependent on above actions. Note: LR role still exists in the NEM, so are you sure that a blanket replacement of LR to ENLR is correct 100%, even for BULK and WHOLSALE Would it be better to state "LR (or ENLR where applicable)" in most of these? Or maybe add under 1.2 "Any reference to LR in this document also refers to ENLR where applicable." Similar to how you refer to the ENM as the LNSP in child NMI's. Section 12 Agree with changes.	AEMO: MSATS will no longer have the traditional participant name as the LR. It will be GLOPOOL or POOLXXX as relevant to the NMI, except in the case of an embedded network.
19.	Flow Power		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
20.	Jemena		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
21.	Origin		Provisions for embedded network local retailers (ENLR)	Noted	AEMO notes respondent's comment.
22.	SAPN		Provisions for embedded network local retailers (ENLR)	No Comment	AEMO notes respondent's comment.
23.	Simply/Engie		Provisions for embedded network local retailers (ENLR)	Section 13, 'Embedded Network Local Retailer' to be italicised.	AEMO: Embedded Network Local Retailer is not a rules term so will not be italicised however we will include it in the Glossary and Framework document
24.	Stanwell		Provisions for embedded network local retailers (ENLR)	These amendments generally seem reasonable and in accordance with the intent of the GS Rule. We do note however that an ENLR's involvement is only required where relevant (and not where the relevant connection point is not part of an embedded network).	AEMO notes respondent's comment.
25.	TasNetworks		Provisions for embedded network local retailers (ENLR)	2: Agreed 3: Fig 2 and Fig 3 still have references to LR and Tier 2. 6.1: Agreed 7.1: Agreed 11.2: Agreed 12: Agreed 13: Agreed 15.1: Agreed 18.2:Table 18-A refers to CR6401 which has been removed from CATS. Appendix 1: Agreed	AEMO will update the diagrams for the Draft Determination Procedure. Removed any references to CR6401.
26.	VectorAMS		Provisions for embedded network local retailers (ENLR)	Figure 2 continues to reference LR. Should this be changed?	AEMO will update the diagrams for the Draft Determination Procedure.
27.	AGL	6.1, 12	Removal of Second Tier references	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
28.	Aurora	6.1, 12	Removal of Second Tier references	Appendix 1 still refers to First and second tier NMI's	AEMO will review and remove where appropriate
29.	Energy QLD	6.1, 12	Removal of Second Tier references	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
30.	Evo Energy	6.1, 12	Removal of Second Tier references	Agree Clarification sought on why references to First or Second Tier have been added in sections 11, 12, 13, 102.3, 103.2, 105.3, Appendix 1	AEMO doesn't believe these have been added to the sections but do believe that sections 11, 12, 13 and Appendix A need to be reviewed with respect to Victoria not being part of NECF. Sections 102.3 and 103.2 will be consulted on separately as this is part of the B2B Procedures and the IEC will be running the consultation
31.	Flow Power	6.1, 12	Removal of Second Tier references	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
32.	Jemena	6.1, 12	Removal of Second Tier references	Noted	AEMO notes respondent's comment.
33.	Origin	6.1, 12	Removal of Second Tier references	Noted	AEMO notes respondent's comment.
34.	SAPN	6.1, 12	Removal of Second Tier references	No Comment	AEMO notes respondent's comment.
35.	Simply/Engie	6.1, 12	Removal of Second Tier references	Section 12.1 and 12.2 still has a number of references to 'Second tier' NMIs.	AEMO will review and update where appropriate
36.	Stanwell	6.1, 12	Removal of Second Tier references	These amendments generally seem reasonable and in accordance with the intent of the GS Rule.	AEMO notes the respondent's support for the proposed change.
37.	TasNetworks	6.1, 12	Removal of Second Tier references	6.1: Agreed 12: Agreed 12.2(d) refers to CR6401 that have been removed from CATS procedure.	AEMO: 12.2(d)iii(A) updated and Table 18-A references to CR6401 have been removed
38.	VectorAMS	6.1, 12	Removal of Second Tier references	Agreed	AEMO notes the respondent's support for the proposed change.
39.	AGL	12		AGL notes that LR has been changed to ENLR through the procedure, but Tables 12-A,12-B only show the LR. Should the Participant Role in this table be updated from LR to ENLR ?	AEMO will review and update where appropriate
40.	AGL	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
41.	Aurora	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Table still refers to First and second tier NMI's	AEMO will review and update where appropriate
42.	EA	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	What time period does the ADL relate to? While ADL should be sufficient for understanding the load profile of mass market customers, ADL is insufficient for a ROLR to understand the profile of a large customer (e.g. industrial) that has been transferred as a result of the ROLR event. In normal circumstances, a retailer would need at least 12 months of interval data to be able to fully understand a large customer's profile shape. Rather than Average Daily Load, a retailer needs the daily profile and maximum demand to prudently manage price risk for a large customer load as a retailer needs to know the magnitude of its exposure to high prices. Further, understanding a customer's seasonal profile and maximum demand is critical for accurately pricing a customer during the transfer process. We request that additional historical data relating to the profile shape of the transferred customers be provided to the ROLR, at least for large customers. We propose that at least a month of energy data at 30 or 5 minute granularity (as appropriate) and a maximum demand (MW) be included. This can be either included in the ROLR_013 (for maximum demand) report, or provided by AEMO, which is now receiving MDFF files directly from the MDP. An appropriate threshold would be by customer classification, or an appropriate consumption threshold considered by AEMO.	AEMO: The ADL will be the current ADL in MSATS at the time the reports are run. AEMO believes that it or the current MDP is not in a position to provide data to the ROLR without explicit informed consent from the customer. Once the ROLR has become the FRMP they can then request this consent from the customer to obtain the historical meter data from the LNSP as per the MDPP.
43.	Energy Qld	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Energy Queensland notes that the references to First and Second Tier have not been removed from Appendix 1 - Specifications for ROLR Reports.	AEMO will review and update where appropriate
44.	Evo Energy	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Agree	AEMO notes the respondent's support for the proposed change.
45.	Flow Power	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Noted	AEMO notes respondent's comment.
46.	Jemena	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
47.	Origin	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Noted	AEMO notes respondent's comment.
48.	SAPN	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	No Comment	AEMO notes respondent's comment.
49.	Stanwell	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	This amendment seems reasonable.	AEMO notes the respondent's support for the proposed change.
50.	TasNetworks	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Agreed	AEMO notes the respondent's support for the proposed change.
51.	VectorAMS	Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	Agreed but note that ROLR reports still reference first and second tier in the description. Under GS this concept not long exists.	AEMO will review and update where appropriate
52.	AGL	General		AGL notes that the Table numbering in MSATS: CATS was changed from a format style of 1-A to 1-1. Will this format style be applied to other documents such as the RoLR Procedures ?	AEMO will ensure formats are consistent.
53.	Energy QLD	Additional comment	Section 3. Figure 1	Energy Queensland notes that Section 3. Figure 1 is missing the role of MC in the context of open service orders.	AEMO: AEMO will update the diagrams for the draft

TABLE 10 – SERVICE LEVEL PROCEDURE: METERING DATA PROVIDER SERVICES

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	Plus ES	General	Version Release History Table	Typo: Effective Date should be 1 December 2020 not 2010.	AEMO have updated Version Release History.
2.	AGL	1.3	Inclusion of additional related document	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
3.	Aurora	1.3	Inclusion of additional related document	Aurora Energy has no comment	AEMO notes respondent's comment.
4.	Energy Queensland	1.3	Inclusion of additional related document	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
5.	Evoenergy	1.3	Inclusion of additional related document	Agree	AEMO notes the respondent's support for the proposed change.
6.	Flow Power	1.3	Inclusion of additional related document	Noted	AEMO notes respondent's comment.
7.	Jemena	1.3	Inclusion of additional related document	Noted	AEMO notes respondent's comment.
8.	Origin	1.3	Inclusion of additional related document	Noted	AEMO notes respondent's comment.
9.	SAPN	1.3	Inclusion of additional related document	No comment	AEMO notes respondent's comment.
10.	Simply Engie	1.3	Inclusion of additional related document	Typo: 2.0 | 1 December 2010 | Updated to incorporate: National Electricity Amendment (Five Minute Settlement) Rule 2017 No.15 and National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 No. 14	AEMO: Refer to response to Plus ES Item 1
11.	Stanwell	1.3	Inclusion of additional related document	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
12.	TasNetworks	1.3	Inclusion of additional related document	1.3: Agreed	AEMO notes the respondent's support for the proposed change.
13.	AGL	2.4.1	Inclusion of 5 February 2022 reference	AGL notes that this change is to accommodate global settlements and hence UFE calculations. As AEMO has an obligation to report UFE from 1 July 2021, AGL seeks to understand the quality of information available from 1 July 2021 to 5 Feb 2022. AGL would expect that for the UFE reporting from 1 July 2021 to have any value, that changes such as this would apply prior to 1 July 2021. AGL notes that there has been some discussion about AEMO being able to support UFE calculations in the net market and would appreciate a paper detailing how this will happen to more clearly understand AEMOs proposed processes. 2.4.1(xii)B – AGL would like clarity on what the change to this clause means. We think it means that first-tier accumulation NMIS can have their datastream de-activated up until 5 Feb 2022, after which the data streams cannot be deactivated as they are not first tier. But notes the issue of UFE calculations, AGL seeks greater understanding as to how this impacts UFE reporting between 1 July 21 and 5 Feb 22.	AEMO: In order to avoid any confusion, AEMO has: - removed term 'only' from 2.4.1 (a) (xiii) description - removed 2.4.1 (a) (xiii) B
14.	Aurora	2.4.1	Inclusion of 5 February 2022 reference	Aurora Energy has no comment	AEMO notes respondent's comment.
15.	CitiPower Powercor	2.4.1	Inclusion of 5 February 2022 reference	2.4.1(a)(xxii) – CitiPower Powercor recommends that this clause be updated by removing the word 'only' to clearly articulate point D, to make a datastream inactive where the service fuse is removed (physical/local disconnection). This will allow for accurate identification of illegal use, clearly identify connection points to be included in market settlements and reduce UFE where substitute or erroneous data is being sent to the market for inactive sites.	AEMO: Refer to response to AGL Item 13.
16.	Endeavour Energy	2.4.1	Inclusion of 5 February 2022 reference	We note that this document is be effective from 1 December 2020 therefore clause 2.4.1.a.xii.B should not be referencing a future date of 5 February 2022. We suggest this new date reference be removed.	AEMO: Refer to response to AGL Item 13.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
17.	Energy Queensland	2.4.1	Inclusion of 5 February 2022 reference	Energy Queensland notes that in accordance with (xii) B. First Tier load is to be published to MSATS for Global Settlements. As such it is unclear why this is referenced as de-activate as at 5 February 2022. Energy Queensland requests AEMO to confirm the need to de-activate the datastreams for accumulation meters on 5 February 2022.	AEMO: Refer to response to AGL Item 13.
18.	Evoenergy	2.4.1	Inclusion of 5 February 2022 reference	Disagree (x) and (xi) reword to: "(x) deliver validated metering data, in accordance with the requirements of the relevant procedures, to: A. market participants with responsibilities for that NMI, and B. AEMO, when Data streams are active in MSATS." (xii) B. Why are you still referring to First Tier when it has been removed from every other document? Remove this dot point.	AEMO: Refer to response to AGL Item 13.
19.	Flow Power	2.4.1	Inclusion of 5 February 2022 reference	Noted	AEMO notes respondent's comment.
20.	Jemena	2.4.1	Inclusion of 5 February 2022 reference	Noted	AEMO notes respondent's comment.
21.	Origin	2.4.1	Inclusion of 5 February 2022 reference	Noted	AEMO notes respondent's comment.
22.	Plus ES	2.4.1	Inclusion of 5 February 2022 reference	Clause 2.4.1 (a) (xii) B: PLUS ES suggests this clause to be removed. It contradicts Metrology Procedure B updates for GS, where Datastreams need to be made Active for first Tier Loads.	Refer to response to AGL Item 1.
23.	Plus ES	2.4.1	Inclusion of 5 February 2022 reference	Clause 2.4.1 (a)(xii) C.: PLUS ES suggests removing or alternatively making the action optional. Why is it a must to deactivate Datastreams for NMIs that are not abolished?	AEMO: In the situation an 'on-market' child NMI transitions to 'off-market', the deactivation of DataStreams ensures the DataStream suffixes are not included in NEM Settlement calculations.
24.	Plus ES	2.4.1	Inclusion of 5 February 2022 reference	Clause 2.4.1 (a)(xii) D.: PLUS ES suggests removing or alternatively making the action optional. Why is it a must to deactivate Datastreams for NMIs that are not abolished?	AEMO: The NMI and Datastream status are expected to reflect the physical site conditions. Therefore, when a service fuse is removed (and the site is physically disconnected) then the DataStream must be inactive in the MSATS CATS system.
25.	SAPN	2.4.1	Inclusion of 5 February 2022 reference	SA Power Networks suggest the following modification to Clause 2.4.1 (xii): the word "only" should be removed from the end of the first line as this will make the full intent of the clause clearer.	AEMO: Refer to response to AGL Item 13.
26.	Stanwell	2.4.1	Inclusion of 5 February 2022 reference	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
27.	TasNetworks	2.4.1	Inclusion of 5 February 2022 reference	2.4.1(a)(xi): Agreed 2.4.1(a)(xii)B: Suggest changing wording to 'up to and including 5 February 2022', or similar, rather than 'as at 5 February 2022'.	AEMO: Refer to response to AGL Item 13.
28.	United Energy	2.4.1(a)(xii)		United Energy recommends that this clause be updated by removing the word 'only' to clearly articulate point D, to make a datastream inactive where the service fuse is removed (physical/local disconnection). This will allow for accurate identification of illegal use, clearly identify connection points to be included in market settlements and reduce UFE where substitute or erroneous data is being sent to the market for inactive sites.	AEMO: Refer to response to AGL Item 13.
29.	AGL	3.7.1	References to MDM format and MDMT transaction groups	Noted. AGL supports the change. ** MR – check MDM details and how net / global data will be delivered and settled	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
30.	Aurora	3.7.1	References to MDM format and MDMT transaction groups	Should this not be 5 minute not aggregated to 30 minute as it discusses interval meter data.	AEMO: Interval metering data delivered under the MDMT transaction can only be 30-minute metering data.
31.	Energy Queensland	3.7.1	References to MDM format and MDMT transaction groups	In relation to (e), Energy Queensland requests confirmation from AEMO why connection point data is aggregated to 30 minute interval net datastream.	AEMO: Refer to response to Aurora Item 30.
32.	Evoenergy	3.7.1	References to MDM format and MDMT transaction groups	Can refine this further, suggest reword to: (e) aggregate interval metering data for a connection point into a 30-minute interval net data stream prior to delivery to AEMO, as required by the MSATS, MDM and NMI Procedures, when interval metering data is delivered to AEMO in the MDMT Transaction Group;	AEMO: Terms currently used in this clause align with Glossary and Framework terms.
33.	Flow Power	3.7.1	References to MDM format and MDMT transaction groups	Noted	AEMO notes respondent's comment.
34.	Jemena	3.7.1	References to MDM format and MDMT transaction groups	Noted	AEMO notes respondent's comment.
35.	Origin	3.7.1	References to MDM format and MDMT transaction groups	It is noted that AEMO require MDPs to ensure standing data contained within the 200 record of the MDFF is accurate to enable alignment and validation against MSATS. Origin recommend this is stipulated in service level procedures under 3.7.1 General.	AEMO have created new clause referencing provision of accurate standing data within 200 record
36.	SAPN	3.7.1	References to MDM format and MDMT transaction groups	No comment	AEMO notes respondent's comment.
37.	Stanwell	3.7.1	References to MDM format and MDMT transaction groups	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
38.	TasNetworks	3.7.1	References to MDM format and MDMT transaction groups	3.7.1(e): Agreed	AEMO notes the respondent's support for the proposed change.
39.	AGL	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	AGL does not believe that the obligations in Cl 3.10 are sufficient. The non-Type 7 loads are more variable than Type 7 UMS loads will require a profile which may be seasonal or have variations which go beyond ON/OFF, and which may include load changes – e.g. operation of cabinet fans in warmer weather. The inventory table will need to include information regarding the device profile which can be used to drive the estimation and act as a reference point for network, retail and market allocations. IN saying this AGL notes that it does not support multiple devices on a single NMI. Further, AGL is proposing that some may be supported by Network devices to support profile derivation. AGL has proposed the creation of types 8 and 9, to support loads which are purely profile loads and loads where the profile is supported by sample meters or network devices. As such, the framework needs to be agreed before these procedural changes can be finalised.	AEMO: Metrology Procedure: Part B 13.1, 13.2 and 13.3 will be reviewed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place. Appropriate changes to 3.10 will be included in this review.
40.	Aurora	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Aurora Energy has no comment	AEMO notes respondent's comment.
41.	Ausgrid	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	3.10.1 (b) (ii)– AEMO is assuming there will only be 2 profile shapes for NC-UM load, controlled and non-controlled as per metrology procedure part B? 3.10.1 (b) (iii)– NC-UM load tables are not published by AEMO.	AEMO: Refer to response to AGL Item 39.
42.	CitiPower Powercor	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Clause 3.10 requires the existence of an "Inventory Table" for NC-UMS connections (i.e. a type 7 style of UMS processing) and a as a result doesn't support or consider a NMI/Device and ADL based process. AEMO: CitiPower Powercor recommends Clause 3.10 should allow for both single NMI per device as well as single NMI to many devices approaches.	AEMO: Refer to response to AGL Item 39.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
43.	Evoenergy	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	3.11 (a) end sentence with *…and 7 contestable and non-contestable unmetered loads. (consider if non-contestable unmetered loads be referred to as type 7a for clarity (as per 4 ad 4a))* 3.11 (b)(ii) point C not required, suggest just reword B to: B. from the date of the last calculation to a period beyond the next scheduled calculation for type 7 contestable and non-contestable unmetered loads. 3.12.2 (f) suggest same as above rewording (f) For metering installation types 4A, 5, 6 and 7 (contestable and non-contestable unmetered) loads, …	AEMO: Proposal for non-contestable unmetered loads to have Metering Installation Type Code "NCONUML" to meet requirement of Rule Final Determination that non-contestable unmetered loads are not type 7.
44.	Flow Power	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Noted	AEMO notes respondent's comment.
45.	Jemena	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Noted	AEMO notes respondent's comment.
46.	Origin	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Noted	AEMO notes respondent's comment.
47.	SAPN	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	No comment	AEMO notes respondent's comment.
48.	Stanwell	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
49.	TasNetworks	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	3.10: Agreed 3.11: Agreed 3.12.2(f): Agreed	AEMO notes the respondent's support for the proposed change.
50.	United Energy	3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Clause 3.10 requires the existence of an "Inventory Table" for NC-UMS connections (i.e. a type 7 style of UMS processing) and a as a result doesn't support or consider a NMI/Device and ADL based process. United Energy recommends Clause 3.10 should allow for both single NMI per device as well as single NMI to many devices approaches.	AEMO: Refer to response to AGL Item 39.
51.	AGL	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Noted. AGL notes the discussion held at the metering workshop and would be concerned that setting the readiness and quality targets would lead to MDPS submitting final substitutions even when actual data may be available somewhat later. In terms of quality reporting, the increase in intervals from 48 to 288 / day means that there is likely to be errors at some level in meter data. AGL would expect that the quality of meter data would be related to a proportion of intervals and potentially sequential or close intervals. Substitution of 1 x 5 min interval in a day may not be as relevant as substitution of 100 x 5 min intervals. AGL believes that the targets can be established that provide appropriate quality without engendering poor practices. AGL has noted, that as a result of undertaking UFE calculations and the likely processes to rectify issues identified through UFE reporting, that the amendments are likely to span beyond current settlement periods, and consideration should be given to extending the settlements periods or undertaking an annual revision each year until industry believes that the majority of errors have been corrected.	AEMO notes respondent's comment.
52.	Aurora	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any	Aurora Energy has no comment	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
			other metering data configured in the metering installation to support UFE calculations		
53.	Energy Queensland	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
54.	Evoenergy	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Agree	AEMO notes the respondent's support for the proposed change.
55.	Flow Power	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Noted	AEMO notes respondent's comment.
56.	Jemena	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Noted	AEMO notes respondent's comment.
57.	Origin	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Noted	AEMO notes respondent's comment.
58.	Plus ES	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	PLUS ES believes the obligations on the MDP to deliver metering data to AEMO are ambiguous. Clause 3.12.4, requiring the MDP to deliver 'all Datastreams' to AEMO, does not support commitments made by AEMO to allow MDPs to 'transition' to the NEM12 format. Further, PLUS ES encourages AEMO to reconsider its position with regard to the delivery of metering data to MSATS. In short, the delivery of metering data in the MDM format should be validated against the NMI Datastream, and the delivery of metering data in the NEM12 format should be delivered against the NMI Suffix recorded against the meter register. There are a number of reasons for this approach: - 1. Clause 2 (c) of the MDFF specification requires an MDP to include 'all NMI suffixes associated with a NMI for any IntervalDate' in the same 100-900 block. Experience tells us this does not always happen. Without validating all suffixes/registers are included for the IntervalDate, AEMO risks incorrectly calculating settlement data. 2. Current recipients of the NEM12 file format typically validate against the registers. It would be prudent for AEMO to exercise similar validation to ensure consistency across the market. 3. How will AEMO deal with the removal of a contributing suffix from a Net calculation? Whilst this is a relatively rare occurrence, a suffix being made inactive does not require metering data to be re-sent for the remaining suffix, and even if it were, it would be rejected on account of a duplicate version date/time.	AEMO: Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.

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				4. There is no reason why an MDP should be required to replicate information recorded in the meter register, information that forms part of the structure and validation of the NEM12 file, in the datastream table. 5. And, at some time in the future, the datastream table should become redundant. If AEMO is to allow a transitional approach to the delivery of metering data, the obligations specified in MDL SLP clause 3.12.4 need to be modified such that they allow for, and articulate, the transitional arrangements.	
59.	Red Lumo	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	Support the proposed upgrades to Section 3.12.4 (b) of the MDP Service Level Procedure which alters dates and periods of the Data Delivery calendar and changes the quantity and quality of settlements data. The updates are required as it will result in: ● Timelier and more accurate data which is required in the settlement process. ● More accurate data being delivered to AEMO which will allow them to improve the accuracy of their allocation of UFE. This is particularly crucial with the transition to global settlements • More accurate data for over a quarter of the small customers in the NEM with remotely read interval meters.	AEMO notes the respondent's support for the proposed change.
60.	SAPN	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	No comment	AEMO notes respondent's comment.
61.	Stanwell	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
62.	TasNetworks	3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	3.12.4(a): Agreed 3.12.4(b): Agreed, space missing between 'calculations' and 'applicable' in second line.	AEMO notes the respondent's support for the proposed change. Space added.
63.	AGL	3.12.4	Changes to metering data quantity and quality requirements	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change. Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.
64.	Aurora	3.12.4	Changes to metering data quantity and quality requirements	Aurora Energy has no comment	AEMO notes respondent's comment. Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.
65.	Ausgrid	3.12.4	Changes to metering data quantity and quality requirements	3.12.4 (b) – The increase in quantity of settlement ready data to 99% for Manually read metering data should remain as is, as this will increase costs for little benefit. AEMO's procedures also apply a significant restriction of MDPs producing final substitutions on MRIM data and then receiving Actuals, which would make this metric unachievable.	AEMO do not regard the minor increase from 98% to 99% as significant for the quantity of metering data as MDPs should already have a process to substitute metering data where actual data has not been obtained. AEMO recognise this minor increase will improve the NEM settlement processes whereby the MDP provides, where applicable, more substituted interval data (versus AEMO producing substitutions using limited substitution methods).
66.	AusNet Services	3.12.4	Changes to metering data quantity and quality requirements	The proposed quality requirement of 100% at first revision (R1) is arbitrary and will have a perverse effect of making the market less accurate. The reason for this, is that	AEMO have updated R1 quality requirement to 99.5%. Please note that AEMO

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				MDPs struggling to remotely read meters with remote communication issues and/or no access issues would have to final substitute when they run out of time. It can often take 4-6 months to negotiate the necessary access arrangements with customers to collect actual metering data. Settlements would be made less accurate due to the anticipated increase in final substitutes provided by MDPS to meet the 100% quality obligation at R1. AusNet Services recommends retaining the quality requirement at first revision (R1) for remotely read meters to 98%, which provides some contingency to deal with exceptional issues across MDPs metering fleet. We support the remainder of the proposed MDP SLPs changes.	do not regard R1 as arbitrary. AEMO will use all metering data received in NEM Settlements - regardless of the quality flag. AEMO recognise this minor increase will improve the NEM settlement processes whereby the MDP provides, where applicable, more substituted interval data (versus AEMO producing substitutions using limited substitution methods)
67.	CitiPower Powercor	3.12.4	Changes to metering data quantity and quality requirements	CitiPower Powercor strongly disagrees with the proposed changes to the delivery obligations for Vic AMI meters . The proposed measurements don't allow for issues relating to the delivery of meter data or allow for any exception management. There is an ongoing potential of meter/network communication issues, IT system issues or customer access issues that will impact participants' ability to meet the 100% target. Any of these issues may require a nominal level of Substituted data in the market that shouldn't be marked as quality flag of 'F'. Additionally, with the increase of remotely read metering requirements for both quantity and quality this doesn't consider the meter memory and possibility to obtain/recover data from meters in excess of 200 Days. This is also the case for manually read meters with the introduction of 99% quantity for Prelim and Final and 100% for R1 & R2 and quality at 100% for R2 does not consider current meter memory capacities of 200+ day's vs 6 months. To enable ongoing exception management CitiPower Powercor recommendation is to retain current obligations.	AEMO: Refer to response to AusNet Services Item 66. AEMO further note that should the recovery of actual data beyond 200 days (i.e. exceeding R2 data delivery date), AEMO expect this data to be used in off market settlement calculations.
68.	Endeavour Energy	3.12.4	Changes to metering data quantity and quality requirements	We believe that metering data from types 1, 2, 3 metering installations and type 4 metering installations at a transmission network connection point or distribution network connection point where the FRMP is a Market Generator or Market Small Generation Aggregator are important for the calculation of settlements and UFE. We suggest that the Remotely Read Metering Data category be sub-categorised to cover the above metering installations with a higher percentage than other type 4 metering installations. We also suggest that the remotely read meters have a quantity percentage that is equal or better than a manually read meter given the importance of interval metering data for settlements and UFE calculations. Please see below in the appendix for proposed changes to the table in clause 3.12.4.b.	AEMO have considered this reporting suggestion however AEMO do not consider this amendment to MDP Quality and Quantity update necessary at this time.
69.	Energy Australia	3.12.4	Changes to metering data quantity and quality requirements	We suggest that AEMO should clarify that service levels should align with the additional intervals (for remotely read metering data); i.e. a 2% estimation and "A" or "F" quality flag threshold should be applied to the total number of intervals, e.g.: • For 15 min intervals -> 96 intervals a day X 90 days (Quarterly Billing frequency) = 8640 Intervals -> @2% Estimation threshold, we expect 8468 Intervals to be with Actual reads. • For 30 min intervals -> 48 intervals a day X 90 days (Quarterly Billing frequency) = 4320 Intervals -> @2% Estimation threshold, we expect 4234 Intervals to be with Actual reads. • For 05 min Intervals -> 288 Intervals a day X 90 days (Quarterly Billing frequency) = 6912 Intervals -> @2% Estimation threshold, we expect 6774 Intervals to be with Actual reads.	AEMO: Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
70.	Energy Queensland	3.12.4	Changes to metering data quantity and quality requirements	Energy Queensland supports the proposed changes to Data Quality to be 100 per cent at R1 for remotely metered sites as this is a current issue with data delivered to the LNSP for DUoS billing.	AEMO notes the respondent's support for the proposed change. Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.
71.	Evoenergy	3.12.4	Changes to metering data quantity and quality requirements	Whilst intent to drive more accurate market settlements is understood, it is impractical to set a 100% compliance target even at R2. Is AMEO able to provide insights into how current performance is expected to change to consistently achieve 100%? A small proportion of exceptions should be allowed for, for example a 99.9% target.	AEMO: Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.
72.	Flow Power	3.12.4	Changes to metering data quantity and quality requirements	Noted	AEMO notes respondent's comment.
73.	Jemena	3.12.4	Changes to metering data quantity and quality requirements	Noted	AEMO notes respondent's comment.
74.	Origin	3.12.4	Changes to metering data quantity and quality requirements	The proposed arrangement for Data quantity and quality SLA provide a greater confidence level on data quality used for settlement. Origin recommend that for RRMD Final data, this should be 99.5% A or F quality. Victorian Government targets for AMI meters is 99.9% Actual data at 10 days. Origin believes 99% for final Q or F is achievable and will provide more confidence in Settlement Final calculation. Revision 1 proposed target is recommended to be 99.9% A or F quality; this is to cater for the outlier of sites that are being investigated prior to final substitutions being delivered. 100% A or F for Revision 2 is supported. In reference to the AEMO notes following the MFG; A & F are not the same quality. F substituted reads do not carry the same level of accuracy as an actual. Origin therefore recommends that for greater accuracy in settlement, additional targets are applied against actual data delivered. Actual Data Quality targets for RRIMs: Preliminary 98%, Final 99%, Rev1 99.5% and Rev2 99.9%	AEMO: Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.
75.	Plus ES	3.12.4	Changes to metering data quantity and quality requirements	PLUS ES does not support the quantity and quality SLA for settlements ready data, as proposed in the table Section 3.12.4 (b). • There are always going to be some standing data or sync issues or long-term Comms faults that would prevent 100%. A 100% target will drive behaviours to final sub without recovering actual data. • Manually Read Metering Data: there will be instances where endeavours to manually read these meters for one or more billing cycles produce no actual meter reads. • Current quantity and quality requirements for settlements ready data does not make a distinction between collection methods. For the reasons above PLUS ES proposes that the current values of 98% are maintained for Remotely Read Meter Data and a maximum for Manually Read Metering Data.	AEMO: Refer to response to AusNet Item 66.
76.	SAPN	3.12.4	Changes to metering data quantity and quality requirements	SA Power Networks recommend that the Quantity & Quality of Manually Read Metering Data should remain at 98%, nothing has changed in this area as a result of MC to warrant a change in the delivery KPI's.	AEMO: Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
77.	Simply Engie	3.12.4	Changes to metering data quantity and quality requirements	Simply Energy agrees with the objective to improve market settlements by increasing data accuracy however the reference to 95% is a step backwards. The Quality of Settlements Ready Data , regardless of the quality flag type should be left at 98% in Preliminary for RRIM and R1 for Manually Reads meters.	AEMO: Metering data quantity and quality table revised to reflect realistic quantity and quality improvements over time.
78.	Stanwell	3.12.4	Changes to metering data quantity and quality requirements	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
79.	TasNetworks	3.12.4	Changes to metering data quantity and quality requirements	3.12.4 (table): Agreed	AEMO notes the respondent's support for the proposed change.
80.	United Energy	3.12.4	Changes to metering data quantity and quality requirements	United Energy strongly disagrees with the proposed changes to the delivery obligations for Vic AMI meters . The proposed measurements don't allow for issues relating to the delivery of meter data or allow for any exception management. There is an ongoing potential of meter/network communication issues, IT system issues or customer access issues that will impact participants' ability to meet the 100% target. Any of these issues may require a nominal level of Substituted data in the market that shouldn't be marked as quality flag of 'F'. Additionally, with the increase of remotely read metering requirements for both quantity and quality this doesn't consider the meter memory and possibility to obtain/recover data from meters in excess of 200 Days. This is also the case for manually read meters with the introduction of 99% quantity for Prelim and Final and 100% for R1 & R2 and quality at 100% for R2 does not consider current meter memory capacities of 200+ day's vs 6 months. To enable ongoing exception management United Energy recommendation is to retain current obligations.	AEMO: Refer to response to CitiPower Powercor Item 67.
81.	AGL	3.12.5, 3.14.1, 3.14.2	Changes to method of delivery of data	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
82.	Aurora		Changes to method of delivery of data	Aurora Energy has no comment	AEMO notes respondent's comment.
83.	Energy Queensland		Changes to method of delivery of data	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
84.	Evoenergy		Changes to method of delivery of data	3.12.5 (c) phrasing is ambiguous. Please clarify; suggested wording below (d) The MDP may, deliver interval metering data to AEMO in MDFF format from a date agreed with AEMO, but must deliver interval metering data to AEMO in MDFF format from 1 July 2021. 3.14.2 (c) why name only these procedures as they may change, what about the technical procedures, or new ones added, suggest reword to: (c) Each MDP must manage any batch file transfers to MSATS in accordance with the relevant procedures.	AEMO have updated 3.12.5 (c) with similar proposed wording.
85.	Flow Power		Changes to method of delivery of data	Noted	AEMO notes respondent's comment.
86.	Jemena		Changes to method of delivery of data	Noted	AEMO notes respondent's comment.
87.	Origin		Changes to method of delivery of data	Noted	AEMO notes respondent's comment.
88.	SAPN		Changes to method of delivery of data	No comment	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
89.	Stanwell		Changes to method of delivery of data	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
90.	TasNetworks		Changes to method of delivery of data	3.12.5: Agreed 3.14.1: Agreed 3.14.2: Agreed	AEMO notes the respondent's support for the proposed change.
91.	AGL	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	AGL notes the proposed amendments to the churn scenarios. AGL notes the issues of Jurisdictional metrology procedures, but these apply to Type 6 meters. As such, since only 5 minute meters can be installed from 1 July 2021, and these procedures apply from Feb 2022, is there any reason to retain the scenarios for 15/30 min meter churns except that the jurisdictions have not provided further comment ?	AEMO: These scenarios are retained in the absence of direction from the SA Jurisdiction. AEMO is pursuing this with the SA Jurisdiction.
92.	Aurora	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	Should this not say "to be sent to AEMO, and other relevant participants"	AEMO has updated Section 5.1.
93.	Energy Australia	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	We request that a consistent understanding of fields, including the *UpdateDateTime* (in the 300 record in the MDFF file), be adopted so as to harmonise the delivery of MDFF files to participants and AEMO. Timeframes for AEMO to request that an MDP amend or correct data should also ideally be harmonised with the B2B framework for providing PMD/VMD transactions. It would also be useful to clarify how a meter churn scenario is reflected in the MDFF files technically (i.e. whether 2 separate MDFF files are used or 1) in delivery to AEMO.	AEMO have not updated the description of the *UpdateDateTime* (in the 300 record in the MDFF file) nor has the use/intention of this field changed. AEMO expect that an MDP will create one MDFF file and send that MDFF file to all parties, including AEMO, to ensure harmonious delivery of MDFF files and data.
94.	Energy Queensland	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	In relation to Scenario 4 (v) & (vi) meter churn 30/15 minute to 5 minute (type 1, 2, 3, 4, 4A, or 5 metering installation to a new type 1, 2, 3, 4, 4A, or 5 metering installation), Energy Queensland notes that immediately following the commissioning of new metering installation (i.e. on churn day), the installation will be ready for 5 minute trading intervals. We consider that any reads performed prior to commissioning on churn day should be derived (i.e. divided by six for 30 minute or divided by two for 15 minute reads) for the replaced meter. Under the proposed change, retailers would be expected to create a new billing profile for only one day at 30 minutes, and another new billing profile for subsequent days based on 5 minutes for the same new meter. This change would create added complexity and confusion for data provision to customers.	AEMO: Proposed changes were based on MDPs dealing with interval metering data and already having interval aggregation facilities. Otherwise all MDPs dealing with interval metering data would need to build interval disaggregation/profiling capabilities.
95.	Evoenergy	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	Agree	AEMO notes the respondent's support for the proposed change.
96.	Flow Power	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	Noted	AEMO notes respondent's comment.
97.	Jemena	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	Noted	AEMO notes respondent's comment.
98.	Origin	5.1	Changes to meter churn scenio content, including the provision for having to send associated	Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
			MDFFs to AEMO as well as to participants		
99.	SAPN	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	No comment	AEMO notes respondent's comment.
100.	Simply Engie	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	Scenario 1 'Type 6 replaced with a new type 6' and Scenario 3 'Internal meter with a new type 6' are no longer valid/practical scenarios as SAPN is no longer installing type 6s anymore despite its reference in the South Australia Jurisdictional metrology material. Unless Scenario 1 is deleted from this document, there must be a statement upfront about the use-case of this scenario instead of in the 'comment' line.	AEMO has inserted a note in Scenario 1 and Scenario 3 for clarification purposes.
101.	Stanwell	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	These amendments seem reasonable and in accordance with the intent of the 5MS Rule and GS Rule.	AEMO notes the respondent's support for the proposed change.
102.	TasNetworks	5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	5.1: Agreed	AEMO notes the respondent's support for the proposed change.

TABLE 11 – EXEMPTION PROCEDURE: METERING INSTALLATION DATA STORAGE REQUIREMENTS (NEW PROCEDURE)

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL		General	AGL notes that the Rule (Amendment 5MS 2017 No 15 schedule 4) granting AEMO the exemption powers only comes into effect on 1 July 2021, which means that AEMO actions resulting from this this procedure cannot formally commence until 1 July 2021, although it is understood that the procedure will commence in 2019. AGL suggest that this may be problematic in terms of the 1 July 2021 obligations.	The commencement date for the 5MS Final Rule Schedules are 1 July 2021 for Schedules 1-6, and 19 December 2017 for Schedule 7. 11.103.6 is included in Schedule 7 of the 5MS Final Rule and requires the metering installation data storage exemption procedure to be published by 1 December 2019.
2.	AGL		General	AGL notes that the meters under consideration in this procedure are Types 1-3 and 4 at a: (i) transmission network connection point; or (ii) distribution network connection point where the FRMP is a Market Generator or Market Small Generation Aggregator. Given the types of meters and the number of meters impacted may not be insignificant, the ability to source replacement meters may be limited, and the resources to replace those meters are also limited. It is unclear to AGL what happens if an MP is not granted an extension, but only has an obligation to affect a meter change for 1 July 2021.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans. AEMO has, through procedures forums and workshops, been encouraging MCs and MPs to develop their re-configuration/replacement planning for these metering installation types.
3.	AGL		General	AGL notes that this exemption does not apply to Distribution cross border meters. Again, these are large type 4 installations which are unlikely to be replaced in 10 b/days' time. The reasoning behind this exemption procedure seems to be to minimise those meters which need to be replaced only due to a limitation in on board memory capability. AGL suggests that distribution cross boundary metering be included and recognises that this will require a rule change to 7.8.2 (a)(1).	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
4.	AGL		General	AGL notes that this exemption cannot be applied to other small customer meters, which may not meet the 35 day memory requirements once configured to 5 MS (e.g. converting a 4 quadrant meter – e.g. small customer with Solar). This issue has varied impacts not just on the 5ms and global rule, but can impact Distributed Energy Program development, Virtual Power Plant growth and slow down other programs while these sites are re-metered. While AGL understands that this requires a Rule change, AGL would suggest that AEMO work with industry to identify the various classes of meters and suitable criteria for an exemption as part of the development of an extension to the existing rule in order to meet the objectives of the NEO. Noting this, AGL would see value in allowing smaller loads (e.g. small consumer solar sites with ongoing communications capability) to have a reduced limit on the basis that the MP would attend and rectify / download the data before the storage period is exceeded.	AEMO notes respondent's comment.
5.	Aurora		New Procedure	Aurora Energy has no comment	AEMO notes respondent's comment.
6.	Energy Queensland		New Procedure	Energy Queensland notes that the proposed change appears unnecessarily restrictive and seeks clarification from AEMO why this only applies for meters holding between 30 and 34 days of data .	The AEMC Final Determination states that the exemption would be for meters that when re-configured "fall a day or two short of the storage requirements" (Final Determination page 106) or "fall just short of the storage requirement" (Final Determination page 119).
7.	Flow Power		New Procedure	Noted	AEMO notes respondent's comment.
8.	Jemena		New Procedure	Noted	AEMO notes respondent's comment.
9.	Origin		New Procedure	Noted	AEMO notes respondent's comment.
10.	Red Lumo		New Procedure	We support the establishment of a procedure by AEMO that sets out the requirement for a proposed exemption procedure from the Metering Provider data storage requirements for the metering installations set out in clause 7.8.2(a2). The proposal to	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				restrict the exemption to the Metering Provider data storage requirements under the NER for the metering installations set out in clause 7.8.2 (a2) is consistent with the intention of the five minute settlement rule proposal. We note that there has already been an update to the AMI Orders to provide an overarching exemption to Victorian DNSPs for all AMI meters. If this is the reason why this new Procedure exists, we do not consider it relevant. At a NMI level, this information should be published in MSATS that the exemption exists and its relevant expiry date.	Exemption Procedure has been amended to include provisions of Vic AMI OIC S474. AEMO does not propose to include an exemption indicator as there is no indicator currently for exemptions.
11.	SAPN		New Procedure	No comment	AEMO notes respondent's comment.
12.	Stanwell		New Procedure	This procedure seems more relevant to a Metering Provider, as such Stanwell has no feedback in relation to it.	AEMO notes respondent's comment.
13.	TasNetworks		New Procedure	Section 2.5(a)(i) is missing a space between 'final' and 'reconfiguration'. TasNetworks has no other comment on this procedure document.	Space added.
14.	AGL	1.1, 2.1		AGL notes that in clauses 1.1 and 2.1, the storage requirements for holding meter data (35 days) are not specified. AGL suggest that as the majority of the rule is specified in the procedure, the procedure would be more readable if this lower limit (35 days) were specified prior to noting the exemption period of 30 days. For instance: Rule 7.8.2(a)(9) sets a minimum of 35 days storage when reconfigured for 5 MS. AEMO will only consider meters for an exemption which have a storage capability of between 30 and <35 days. If a meter has a storage capability of <30 days, then an exemption will not be granted. Application (a) The Rules require a meter to have a storage capability of 35 or more days for the 5 MS market; (b) this procedure only applies to a reconfigured meter with a storage capability of between 30 and <35 days in the 5 MS market; (c) If a meter has less than 30 days storage it will not be granted an exemption	AEMO considers that clauses 1.1, 2.1 and 2.2 articulate the points raised in this comment.
15.	AGL	1.12.4		A second issue for further explanation is why was 30 days selected. These meters are all ongoing comm meters, so the issue is about losing comms vs storing data, and AGL would consider that non-functioning comms for these size meters is rather important, and would expect the MC to attend a failed comm site fairly quickly and restore comms, and upload the missing data. The more important issue is dealing with a failed / by passed meter. Given the cost of these installations, and in the interests of the NEO and not wasting resources unnecessarily, AGL would suggest that there is value in discussing the 30 day limitation further.	Refer to response to Energy Queensland Item 6.
16.	Evoenergy	2.1(a)		What is the significance of 30 days? Rather than stating any period, reword end of dot point to the following to align to current requirements "…for a period less than NER clause 7.8.2(a)(9).	Refer to response to Energy Queensland Item 6.
17.	Evoenergy	2.1(b)		Change words to: (b) An exemption will not be granted by AEMO for a metering installation with less than an agreed storage level days of five-minute interval energy data for all configured Data streams.	Refer to response to Energy Queensland Item 6.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
18.	CitiPower Powercor	2.1(c)		The Victorian NEVA Order in Council modifies the NER in relation to AEMO's obligation to create and extend an Exemption procedure to Victorian AMI Meters, this should hence be recognised as a jurisdictional requirement.	Order In Council provisions for Vic AMI meters included in Procedure
19.	United Energy			The Victorian NEVA Order in Council modifies the NER in relation to AEMO's obligation to create and extend an Exemption procedure to Victorian AMI Meters, this should hence be recognised as a jurisdictional requirement.	Refer to response to CitiPower Powercor Item 18.
20.	Evoenergy	2.2(b)		Remove end of sentence after NER clause 7.8.2(a)(9) as should align, or should only state it in 2.1	Evoenergy's proposal would result in all meter re-configurations, where less than 35 days of data storage is expected, would be the subject of an exemption application. 30 days retained to ensure clarity of Procedure provision.
21.	Evoenergy	2.6(b)		Remove end of sentence capacity as should not state a limit, or should only state it in 2.1 (b) The metering installation reconfiguration referred to in the application does not meet the requirement to have the minimum storage capacity.	30 days retained to ensure clarity of Procedure provision.

TABLE 12 – RETAIL ELECTRICITY MARKET GLOSSARY AND FRAMEWORK

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	1.3	Inclusion of an addition related document	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
2.	Aurora			Aurora Energy has no comment	AEMO notes respondent's comment.
3.	Energy Queensland	1.3	Inclusion of an addition related document	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
4.	Evoenergy	1.3	Inclusion of an addition related document	Ok	AEMO notes the respondent's support for the proposed change.
5.	Flow Power	1.3	Inclusion of an addition related document	Noted	AEMO notes respondent's comment.
6.	Jemena	1.3	Inclusion of an addition related document	Noted	AEMO notes respondent's comment.
7.	Origin	1.3	Inclusion of an addition related document	Noted	AEMO notes respondent's comment.
8.	SAPN	1.3	Inclusion of an addition related document	No comment	AEMO notes respondent's comment.
9.	Simply Engie	1.3	Inclusion of an addition related document	Definition of 'non-contestable unmetered loads' missing in Glossary.	AEMO anticipates that "non-contestable unmetered loads" will be defined in the NER following the publication of the 5MS/GS Amendment Rule.
10.	Stanwell	1.3	Inclusion of an addition related document	This amendment seems reasonable.	AEMO notes the respondent's support for the proposed change.
11.	TasNetworks	1.3	Inclusion of an addition related document	Agreed	AEMO notes the respondent's support for the proposed change.
12.	AGL	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	Noted. AGL supports the change. Please note previous comments in relation to this matter.	AEMO notes the respondent's support for the proposed change.
13.	Aurora	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	Aurora Energy has no comment	AEMO notes respondent's comment.
14.	Energy Queensland	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
15.	Evoenergy	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	2.7.7 Has too much information. Should only state what it is there for. Reword to: (b) Exemption Procedure – Metering Installation Data Storage Requirements. This Procedure sets out the process by which a Current MP may apply for an exemption from complying with the requirements of NER clause 7.8.2(a)(9) for the storage of interval energy data for metering installations installed before 1 July 2021.	Wording simplified.
16.	Flow Power	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	Noted	AEMO notes respondent's comment.
17.	Jemena	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	Noted	AEMO notes respondent's comment.
18.	SAPN	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	No comment	AEMO notes respondent's comment.
19.	Stanwell	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	This amendment seems reasonable.	AEMO notes the respondent's support for the proposed change.
20.	TasNetworks	2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	2.2: Agreed 2.7.7: Agreed	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
21.	AGL	2.6.2	Inclusion of bulk supply and/or cross boundary references	Noted. AGL supports the change.	AEMO notes the respondent's support for the proposed change.
22.	Aurora			Aurora Energy has no comment	AEMO notes respondent's comment.
23.	Energy Queensland			Energy Queensland offers no comments on this change.	AEMO notes respondent's comment.
24.	Evoenergy	2.6.2	Inclusion of bulk supply and/or cross boundary references	Ok	AEMO notes the respondent's support for the proposed change.
25.	Flow Power	2.6.2	Inclusion of bulk supply and/or cross boundary references	Noted. We request a new NMI classification code for cross boundary TNIs (X Boundary).	New NMI Classification Code "XBOUNDRY" is proposed to be added to CATS and NMI Procedure.
26.	Jemena	2.6.2	Inclusion of bulk supply and/or cross boundary references	Noted	AEMO notes respondent's comment.
27.	Plus ES	2.6.2	Inclusion of bulk supply and/or cross boundary references	PLUS ES notes that in this section bulk supply and cross boundary have been added but these have not been mentioned in the WIGS.	WIGS has been updated to reference codes published in CATS Section 4.
28.	SAPN	2.6.2	Inclusion of bulk supply and/or cross boundary references	No comment	AEMO notes respondent's comment.
29.	Stanwell	2.6.2	Inclusion of bulk supply and/or cross boundary references	Without a clear definition of what these terms represent it is difficult to confirm, however for this specific purpose it doesn't seem to represent a material amendment.	Description of NMI Classifications will be documented in the NMI Procedure.
30.	TasNetworks	2.6.2	Inclusion of bulk supply and/or cross boundary references	2.6.2: Agreed	AEMO notes the respondent's support for the proposed change.
31.	AGL	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	Noted.	AEMO notes respondent's comment.
32.	Aurora	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	Aurora Energy has no comment	AEMO notes respondent's comment.
33.	Energy Australia	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	a definition should be included for Non contestable unmetered load	Refer to response to Simply Engie Item 9.
34.	Energy Queensland	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	Energy Queensland considers the use/description of Tier 1 Load/Site and LR in the Glossary could be improved. Further, we suggest inclusion of a definition of non-contestable unmetered load.	Tier 1/Tier 2 etc. to be retained as Glossary Effective Date will be 1 July 2021, therefore these concepts will still be in place. Non-contestable unmetered loads – refer to response to Simply Engie Item 9.
35.	Evoenergy	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	Please remove references to First and Second Tier loads and Sites Do we need to define what the LR really is now for Wholesale and Bulk and interconnector etc. sites?	Refer to response to Energy Queensland Item 34. Description of NMI Classifications will be documented in the NMI Procedure.
36.	Flow Power	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	Noted	AEMO notes respondent's comment.
37.	Jemena	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	Noted	AEMO notes respondent's comment.
38.	Plus ES	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	PLUS ES notes that the below have not been amended in the Glossary: - Remove LR - Since the participant will not exist and ENLR has been added to the Glossary? - Remove Tier 1 Site - Remove Tier 2 Site - Remove from RoLR Event Affected MSATS Participant:	Refer to response to Energy Queensland Item 34.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				o If the Failed Retailer is a LR, the replacement LR.	
39.	SAPN	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	No comment	AEMO notes respondent's comment.
40.	Stanwell	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	These amendments seem reasonable.	AEMO notes the respondent's support for the proposed change.
41.	TasNetworks	5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	5: Agreed	AEMO notes the respondent's support for the proposed change.

TABLE 13 – OTHER ISSUES RELATED TO CONSULTATION SUBJECT MATTER

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	Aurora		Implementing and transitioning to the changes in delivery of metering data to AEMO	Aurora Energy has no comment	AEMO notes respondent's comment.
2.	TasNetworks		Implementing and transitioning to the changes in delivery of metering data to AEMO	With reference to the document FIVE MINUTE & GLOBAL SETTLEMENT – METERING PROCEDURE CHANGES (PACKAGE 2) ISSUES PAPER	
3.	AGL		• Do the proposed changes in the applicable initial draft change-marked procedures implement the required changes in section 2.2.5 in an effective manner?	AGL notes the proposed changes but suggests that there is a great deal of complexity to these changes, due to timing and transition. AGL suggests that a high-level description be provided of the data delivery processes covering the current arrangements through to the post 6 Feb environment. AGL also suggest that this description needs to cover how market revisions will be undertaken. It is assumed that processes which are applicable to certain periods still need to be maintained for a revision cycle. Which in turn means that participants need to maintain various systems operationally as we transition through 30ms to 5ms through to 5ms global.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
4.	Aurora			Aurora Energy opinion is yes	AEMO notes respondent's comment.
5.	AusNet Services			The proposed procedures are deficient in describing the changes that must occur for Global Settlements to wholesale NMI assignments by what day. Leaving this level of prescription to the currently drafted NMI Procedures is inadequate because the scope of the procedures is limited to creating NMIs as contemplated in n clauses 7.8.2(d)(2), and 7.8.2(ea) (eb) & (ec) of the National Electricity Rules. As drafted, it only specifies what the requirements are for new NMIs not all NMIs.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
6.	Energy Australia			Where AEMO is required to make clauses effective prior to "go-live" of 1 July 2021, for example, the collection of UFE data 6 months prior, this should be made more explicit for ease of participant implementation. We expect that coordination and responsibility for NMI classification changes (from participants) and FRMP to LR bulk changes (performed by AEMO) will be addressed in the Readiness Working Groups, and request that this information be published or widely circulated prior where available.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
7.	Energy Queensland			Energy Queensland notes that AEMO's use of MDFF rather than net values will assist with settlement processes. However, we are concerned that estimation methods of type 6 meters and NSLP calculations are likely to mask or even contribute to false UFE. Energy Queensland also notes discrepancies between section 2.2.5 (in the section regarding no changes to B2B delivery for PMDs and VMDs) and the actual changes in the HLIA document version 8.0 (which states MDPs must also send PMD/VMD data to AEMO). There appears to be some contradictions between 2.2.5 and the HLIA document regarding the need to deliver Q and K channels and create data streams for them. Energy Queensland notes that discussions in forums suggested AEMO would accept Q and K channels even if the data streams did not exist in MSATS. We consider that transitional changes will be improved if the new NMI classifications and ability to create non-netted interval data streams are introduced to MSATS prior to 1 July 2021	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
8.	Evoenergy			Yes	AEMO notes respondent's comment.
9.	Flow Power			Yes	AEMO notes respondent's comment.
10.	SAPN			No comment	AEMO notes respondent's comment.
11.	Stanwell			Stanwell is comfortable with the changes.	AEMO notes the respondent's support for the proposed change.
12.	TasNetworks			In general, the marked changes reflect the required changes. However it is difficult to identify the changes given the multiple versions being reviewed.	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
13.	AGL		• Will the proposed transitional arrangements assist MDPs and other market participants in transitioning to the new procedural requirements?	AGL notes that the while industry has been reviewing procedural changes to accommodate the transition from a 30ms to 5 MS to global market settlement regime, which is based on AEMO's understanding of the transition from 30ms to global. AGL suggest that there is not the same clarity across all of industry and that what is missing is the high level description of what processes continue, what processes need to be adjusted (and by when). The high level assessments are very useful in this process.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
14.	Energy Queensland			Energy Queensland notes the need for new versions of metering data be sent to the LR after the implementation of Global Settlement where data supports settlement revisions. Energy Queensland also considers that transitional arrangements need to be extended to data streams and NMI classification types. This will allow MDPs and LNSPs to prepare in advance for 5MS and Global Settlements by updating standing data prior to 1st July 2021 implementation.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
15.	Evoenergy			Yes, see note below	AEMO notes respondent's comment.
16.	Flow Power			Yes rules need to be clearer around UFE	AEMO notes respondent's comment.
17.	SAPN			No comment	AEMO notes respondent's comment.
18.	Stanwell			Stanwell is comfortable with the changes.	AEMO notes the respondent's support for the proposed change.
19.	TasNetworks			Having a transitional window is useful for participants readiness activities. However, more decisions are needed to be understood. For example, the creation of current Tier 1 type 6 datastreams, creation of register level interval datastreams, transition 'N' data streams etc. This may become clearer as we work through the transitional and readiness activities.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
20.	AGL		• Is including transitional arrangements in the relevant procedures the most effective way of implementing transitional arrangements? If not, what would be the preferred alternative approach?	AGL believes that it is necessary to manage not just the transitional needs, but also manage the requirements during the various settlement revision phases, which will cover multiple markets.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
21.	Aurora			Aurora Energy opinion is yes	AEMO notes respondent's comment.
22.	AusNet Services			Including clear transitional arrangements is essential in managing the transition to 5 Minute Settlements and Global Settlements. These arrangements must be written in enforceable legal instruments and not guidelines that are not enforceable under the National Electricity Rules. Procedures must be very clear to say what all Registered Participants must do and by what day.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
23.	Evoenergy			This approach has been taken in the past allowing participants to successfully transition to new arrangements in a staged manner. Any transitional arrangements included in a procedure should be clearly time bound allowing removal without consultation post end date.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
24.	Flow Power			We request 2 reports (one in 5 minute and other in 30 minutes) for the week starting on 01/07/2021 .This is required to enable participants performing proper reconciliations. Please provide an estimate for UFE.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
25.	Red Lumo			Red and Lumo are broadly supportive of the changes proposed by AEMO that are associated with the delivery of metering data to AEMO by MDPs.	AEMO notes the respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				The procedures that enable the implementation of these changes include: • Service Level Procedure: Metering Data Provider Services • Meter data File Format Specification NEM 12 & 13 • MDM File Format and Load Process • National Metering Identifier Procedure We are comfortable with AEMO's proposal to include transitional arrangements in the relevant procedures. This will allow MDPs to move to the new arrangements prior to that date, even though the proposed new delivery requirements are scheduled to come into effect on 1 July 2021.	
26.	SAPN			No comment	AEMO notes respondent's comment.
27.	Simply Engie			Including transitional arrangement in the relevant procedure is perhaps effective however since these transitional clauses are short-lived and have a limited lifecycle, these are generally (as well as historically) included in a sub-section of each relevant clause with a clear heading 'transitional requirement'. Along with this, there needs to be an overarching statement added at the beginning of the document to provide the effective date and cessation of the transitional clauses.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
28.	Stanwell			Stanwell is comfortable with the changes.	AEMO notes the respondent's support for the proposed change.
29.	TasNetworks			Transitional arrangements need to be included in procedures, but need to be complemented with a transition plan that shows all transitional activities that will be documented by the RWG. The transition plan may need to be specific by type of participant because requirements will be different according to role – retailer, DNSP, MDP will have different requirements.	Transitional and cutover activities will be considered by AEMO in consultation with the 5MS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.
30.	AGL		Non-contestable Unmetered Loads	AGL has made substantial comment on UMS through the various procedures. AGL notes the substantial discussion that took place at the recent metering focus group and notes that there are still widely varied views over managing UMS. AGL suggests that now that industry has had an opportunity to consider the various proposed changes, that AEMO host a specific industry meeting focussed on dealing with UMS which must cover the process from customer request through to customer bill and outage management. AGL believes that any of the proposed changes in these procedures have been predicated on the existing fleet of devices, have not contemplated new connections nor the r5equirements for managing end customers efficiently. The current proposals largely focus on inventory tables for UMS devices. AGL would note that this is the framework that has been in place for some years, and industry is well aware that this framework has substantial process and data gaps. \Given the requirements of global settlements and an expectation of further rollouts in this environment, AGL is seeking to ensure that the future UMS framework is more efficient for all parties, and less error prone.	Proposed changes to the metrology framework, related to non-contestable unmetered loads, are intended to provide flexibility to include changes to this part of the market as industry knowledge of these unmetered device types matures.
31.	Evoenergy		Non-contestable Unmetered Loads	Evoenergy already publish contestable and non-contestable Type 7 NMI's to the market, i.e. treated the same, and send the calculated metering data to MSATS and market participants.	AEMO notes respondent's comment.
32.	Ausgrid		Non-contestable Unmetered Loads	Ausgrid believes there is merit in AEMO profiling non-contestable UM (NC-UM) loads. Each MC currently has a DAL (kwh) for each NC-UM load NMI, if this was linked with a UM profile shape (e.g. flat or switched) then AEMO would be the only participant would be required to develop profiling for NC-UM loads.	The metrology framework is to be developed to provide flexibility for non-contestable unmetered load metering data calculation and to preserve any confidential arrangements that are in place.
33.	Energy Queensland		Non-contestable Unmetered Loads	Energy Queensland supports articulating transitional arrangements and 'grandfathering' processes.	Refer to response to AGL Item 30.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				We also consider that transitional arrangements should be defined separately to avoid the need to amend those procedures once the change is implemented.	
34.	AGL		• How should non-~~market~~/contestable unmetered loads be processed and maintained in MSATS? ○ Should non-contestable unmetered loads with photoelectric (PE) cells be treated in a similar manner to Type 7 unmetered loads and why? ○ Should non-contestable unmetered loads which do not have photoelectric (PE) cells be treated differently to those that do? If yes, how should these loads be treated?	The new framework for UMS loads will require further development and AGL is concerned that attempting to bolt these loads onto the existing type 7 arrangements is not the best outcome. For those loads such as watchman lights with simple switching (e.g. photocell) there is no reason not to manage them through a similar process to type 7 loads (noting that in general the equipment is often identical to other street lighting equipment). These loads exist because they do not meet the type 7 requirements of predictability. AGL has proposed that types 8 & 9 be implemented to identify UMS loads which are purely profiled and UMS loads which have sample meters/network devices to support profiles. Further, unlike public lighting, where the network manages the inventory and changes to the devices, these UMS devices are managed by customers who can alter the connected device without advice to the retailer or network. AGL believes that in this environment each UMS device should have an individual NMI which can have an appropriate profile assigned to it. Further, as these devices are individually customer managed, it will be important for retailers to individually identify these connections and for networks to individually manage these connections, including facilities access and outage notifications. AGL re-iterates that a focussed workshop on UMS prior to round 2 would be highly beneficial.	Non-contestable unmetered loads are to have Metering Installation Type Code "NCONUML" to differentiate from type 7. This does not preclude the use of type 7 calculation methodologies being used for calculating metering data for non-contestable unmetered loads, where applicable.
35.	Aurora			Aurora Energy opinion is that both non-contestable unmetered loads with photoelectric (PE) cells and non-contestable unmetered loads which do not have photoelectric (PE) cells should be treated the same, if a non-contestable unmetered loads with photoelectric (PE) cells be treated in a similar manner to Type 7 unmetered loads – a type 7 needs to have a consistent usage and any PE cells will vary depending on the weather conditions.	Refer to responses to AGL Item 32 and Ausgrid Item 34.
36.	Ausgrid			How will these loads be processed through MSATS? • Non-contestable unmetered loads with photoelectric (PE) cells be treated in a similar manner to Type 7 unmetered loads? Potentially but these could also have 2 consumption values (similar to RMS traffic light dimming), e.g. Bus shelter displays are dimmed. Currently Ausgrid calculates base load, undimmed load and dimmed load, use metrology procedure to calculate switching times like they do for Type 7 and create a DAL in kWh. How should industry calculate switching time when it's a timer and not a PE cell. AEMO should have a rule that only specific switching time are allowed when using a timer (i.e. same times as metrology procedure for PE cells)? This then limits the customers options for NC-UM loads. Allowing different time would open the door for a large number of different profile shapes. If a customer has switching times outside the NC-UM load shape, they need to install a meter or change timer to suit metrology procedure. • Non-contestable unmetered loads which do not have photoelectric (PE). How should these loads be treated? The moment Ausgrid calculates max kW of the proposed load and in turn calculates a DAL in kWh. Ausgrid calculates the Max kWh if the load is variable. • How will the treatment of these unmetered loads improve over time? Ausgrid policy ES1 – Premise Connection Requirements, currently require full electrical specifications for devices and have done so for quite a number of years.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Ausgrid would be comfortable that the DAL is very close to correct for connection over the past decade (legacy load prior to this policy may not be as accurate). Ausgrid Inspectors confirm that the connected load meets the connection application approved load. Ausgrid also allow a capacity UM load, where the load is limited by a circuit breaker. e.g. a 2A load which may not be consuming 2A but the DAL is calculated at 2A at 24Hrs. • How will the load profile and size of these loads be agreed between the customer, DNSP, retailer and AEMO. Is AEMO proposing to have a national load table for this UM supplies, if not why does AEMO need to be involved in the calculation and development of the load tables for NC-UM supplies? The DNSP/MC and applicant should agree the load using an UM procedure published by AEMO giving high level rules around load calculation and associated profiles. Involving the FRMP would just add another step in the process (and another step if AEMO was involved) and would the FRMP want to be involved? If AEMO and FRMPs were involved in the load table calculation, there would need to be timing obligations on the FRMP and AEMO so DSNPs can meet NECF requirements. • What would be the most accurate methodology for calculating and applying a load profile to non-contestable unmetered loads? A flat profile and a switched profile using the metrology procedure Part B would be the minimum requirement as a starting point. We would need to ensure that the number of profiles does not get out of hand. • What are the main challenges DNSPs are encountering? Dimmed signs under a profile situation will be challenging and this would require system changes. When DNSP receive an application for an existing approved bus shelter with dimmed displays do we have to retrospectively alter all prior connections or only ones going forward? There would need to be a NMI for each profile (e.g., a council with PE controlled sites and non PE Controlled). • How will DNSPs administer these loads going forward? Connection applicant provides Ausgrid with all of the electrical technical specifications and the DAL calculated. If AEMO is responsible for calculating the profile DNSP changes would be minimal as DNSPs just need to provide accumulated data for the period and the associated profile shape.	
37.	AusNet Services			For predictable unmetered load, it is clear global settlements require all the unmetered load on each TNI to be accounted for in the market. In developing the requirements for accurate global settlements, it not essential to prescribe rules that require NMIs for each unmetered device or bundling. It is important, that DNSPs have discretion to assign individual NMIs to unmetered device or to bundle into a single NMI into logical groups based on the requirements of the Customer (for example a Council bundling multiple public BBQs). Similarly, DNSPs need discretion whether or not to apply light profiling to all lights with PE cells, in the same way as Type 7 metering. In the case of security lights (e.g. enclosed lights) with a combination of proximity sensors, timers and PE cells, this is not appropriate. For these reasons, AusNet Services recommends allowing DNSP the discretion to assign group NMIs or individual NMIs and the discretion to apply Type 7 profiling only when it is appropriate to do so and in accordance with the customers agreement.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.

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38.	CitiPower Powercor			Clause 12.3 (b) requires the non-contestable unmetered loads (NC-UMS) to have "Load Tables","Inventory Tables" and "On/Off Tables" that are stored within the metering data services database. It effectively prescribes the movement of all existing and future NC-UMS into the existing type 7 processing engine (1 NMI to many devices), it doesn't support the continued use of a single NMI/device model that currently holds the majority of these loads. While this allows for the NC-UMS to adopt the type 7 style UMS calculator that most Distributors already have for public lighting, those systems usually allow for many devices to be recorded against a single NMI, and hold the connection point record within the DNSP's GIS system, and also holds details of the device type in GIS. The device type (250W MV etc.) allows for a reliable allocation of value into the "Load Table", allows for automatic "count" of like "Devices" into the "Inventory table" that maintenance of the GIS records is an implicit task of the DNSP in managing its records of assets that it owns and maintains. The same template then is very suitable to inclusion of "Watchman Lights" as these are very similar to public lights, and hence predicable, controlled by PE Cell, and owned and maintained by the DNSP. The problem arises with UMS assets owned by other parties. Historically, many of these existing NC-UMS records consist of an off-market NMI with 1 or more "same" devices recorded against it, and a cumulative load or calculation to create a monthly "Agreed Load" for billing purposes. It's effectively a Type 6 model but without a meter asset installed and an estimate based on "Agreed Load" (ADL) occurs. However, that individual NMI model has its own limitations and can generate significant manual workloads to audit and maintain its accuracy. Where the "same" device for the same customer is across multiple NMIs there is no process to allow alignment or update of consistent device descriptions or loadings when those assets are upgraded or replaced. Once a device has been given a supply connection, there is no incentive on the customer to provide update asset details to the DNSP, or give any notification of any works on site particularly where that results in increased load, yet the activity is effectively an Addition/Alteration, and replacement/change of the "Agreed Load" is effectively requiring notification similar to a NOMW in terms of the impact on billing accuracy. In an "ideal" world, the other party would have its own engineering/planning processes that records its assets in a GIS database of some sort, and could provide the DNSP with a download of such data for all of their existing "Devices" inclusive of details of their name plate ratings and their spacial locations. Device Number (unique key) Purpose /Description Owner/Customer (UMS Customer Code?) Make / Supplier	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Device Type/Model “UMS Device Code” Locality (council area, post code, TNI) Location geometry (Lat/Long etc.) In the above example, the “UMS Device Code” could be a key or proxy for the “Agreed Load” value and its associated “on-off table”, allow the allocation into an inventory count and allocation into NMI’s per Owner/Customer and TNI. In the future, the “On-Off table” might become a seasonal/daily load profile including fractional loading i.e. a multiplier between 0 (off) and 1 (on fully) and 0.1 steps in between (to allow for dimming or other “agreed” load variation. However, the problems come about in migrating to such a model, i.e. it requires the identification of each existing unique device/connection into a “UMS Device Code”. This is significant work if done by the DNSP as they have no expertise in recognising the customer’s unique device types and in any case the customer / asset owner is best placed to do this work and should be the party to bear the cost. For CitiPower Powercor, the majority of NC-UMS connections are provided to large corporations or statutory bodies, rather than small residential / commercial customers (who are primarily only involved with Watchman lights) While a project to transition from the single NMI/Connection/Device model to an “inventory table” built up from devices recorded in a layer of the DNSP’s GIS could be undertaken with the co-operation of the customer and their provision of GIS ready data, it may not be provided and updated in a timely manner and in any case not revisited other than on a quarterly or annual basis, and hence not cover field works by the customer that upgrades / replaces their assets without notification to the DNSP other than through this GIS update, which may within their own business lag the physical works by many months etc. Those lags will affect UFE. Even worse is how such a system adds a new connection to the pre-existing NMI and Inventory Table? Currently, NC-UMS connections are created at time of connection, the single NMI per connection model allocates a physical special record in GIS for all NMIs regardless of the metering arrangements and so the only issue is identifying the device in terms allocation of the correct “Agreed Load” and “On-Off table”. It is difficult to see how an efficient and reliable new connections process can work that adds the device details itself onto the DNSPs GIS on a daily or weekly basis, without generating specialist manual labour costs into the DNSP, other than requiring the REC seeking to make a UMS connection to identify the UMS customer by a “UMS Customer Code” and then the Device by “UMS Device Code”, and providing the Spacial location geometry. CitiPower Powercor 12.3 (b) should allow for both single NMI per device as well as single NMI to many device approaches.	

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				Also a 12.3 (c) should require the customer requesting connection of a type 7 or non-contestable unmetered load to provide additional information including the customer's "UMS Customer Code" (evidencing pre-approval to connect a UMS) and the "UMS Device Code" which should evidence and identify the previously approved "Agreed Load" and "Profile Table" associated with the proposed customer device. Ideally, these matters should as be standardised through the creation of an AEMO (or AER?) Non-Contestable UMS Guideline which can then be incorporated in each DNSPs connection requirements and "LR" retailers retail contract requirements. The saving on the costs of the metering installation for the customer should not translate to higher manual recording and auditing costs within the DNSP and LR. There is a need to establish a UMS Focus Group to urgently resolve these issues if all existing and ongoing new connections of NC-UMS devices are to orderly and reliably migrate to MSATS on 1 July 2021.	
39.	Endeavour Energy			We understand that the purpose of making non-contestable unmetered loads as market loads is to help with the calculation of Unaccounted for Energy (UFE). We also agree with AEMO's assessment that determining the most appropriate way to managing these loads will require several iterations as the industry learn and better understand how these loads impact the UFE. In addition, it has been acknowledged by AEMO and industry that the calculated metering data for these loads will never truly reflect the actual consumption or load profile and that the option of installing a meter is always the better option from a UFE calculation perspective. On this basis we suggest that the initial approach for managing non-contestable unmetered loads should be minimal changes to existing industry practice and where changes ae required then flexibility is provided to allow each Network to determine the option that is more aligned with their existing systems and processes. Once the UFE reports are published by AEMO during the global settlements soft start period industry can assess the impact of non-contestable unmetered loads on the UFE. We believe that the risk of such an impact will be very low given the small total volume of load from non-contestable unmetered loads. However, if the impact is significant enough then a review of managing non-contestable unmetered loads can be undertaken and further procedure changes can be introduced. This proposed approach allows for network business to focus on more important changes required for 5-minute settlements and global settlements and to ensure any investment on changes to the current approach for managing non-contestable unmetered loads will provide measurable industry benefits.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
40.	Energy Australia			We consider that while non-contestable unmetered loads remain non-contestable, AEMO's current proposed framework for setting up a NMI (contained within the consultation documents) suffices for present needs. While differences in profiling methodology for NCONUML with and without PE cells might be warranted should there be sufficient quality data, we consider that currently, there isn't a strong case for the added complexity and cost of allocating this specific subset to different NMIs, and would need to be further considered by AEMO as to whether the cost and justification was warranted, together with other solutions (e.g. metering a subset of similar loads, and using statistical extrapolation to similar loads).	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.

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				We consider that DNSP provided data is often sufficient for off-market billing and in the absence of an agreed upon methodology for load profiling, this appears to be the most pragmatic solution that is sufficient for present needs. We recommend that AEMO formally reviews whether further work is needed in this area after sufficient UFE trend reports are produced to determine whether UFE has risen materially, and whether more granular visibility of unmetered load in MSATS is warranted. A further solution that is appropriate with additional complexity and cost, can be considered by AEMO and DNSPs should there be further developments in this area.	
41.	Energy Queensland			Energy Queensland considers that non-contestable unmetered loads with PE cells could be treated in a similar manner to Type 7 loads. However, those that do not need to be treated differently and should be outside of the scope of the Metrology procedure as 'Other' and are calculated as agreed between the FRMP, LNSP and Customer not through any specific AEMO anticipated methodology. We also note that AEMO could consider the addition of operating hours to either Register or datastream standing data.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
42.	Evoenergy			• They are all unmetered connections to the network. • They are singularly very small loads, but when aggregated to customer/market NMI level can be large. • MSATS and Retailers require the aggregated NMI interval metering data. Each LNSP needs to manage individual connection points for outage management, notifications and customer reconciliation. • Devices and loads are agreed with the Network, either 24/7 flat loads, or on/off lighting. • Only require to maintain a national published table if contestable.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
43.	Flow Power			N/A	AEMO notes respondent's comment.
44.	Jemena			JEN supports treatment of non-contestable unmetered loads with PE cells can be treated in similar manner to Type 7 unmetered loads, (for avoidance of doubt, we are referring to security lights) Non contestable unmetered loads without PE cells should be treated differently (i.e. 24 hour loads), because of the difficulties in accurately estimating energy consumption.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
45.	Origin			Origin notes the abbreviated time provided for feedback for this first consultation round. Given this, Origin would note the following high-level concepts with regard to un-metered non-contestable loads:- Prior to upload of assets into MSATS, a full, comprehensive audit be performed, subject to SLP by the responsive entity, to ensure data published is correct that pertains to devices connected and associated load values. Another SLP obligation for regular audits to be performed by the Network MDPs to ensure that data maintained in MSATS is accurate. Failure to do so leads to poor customer experience; disputes during Network Settlements; billing errors and ongoing rebilling as a result of amended Inventory reports. A further SLP obligation on the LNSP/MDP is to communicate to the FRMP when work is undertaken at an UMS site; often this is bypassed the FRMP and may only be identified at the time a reconciliation is undertaken by FRMP.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer. Any audit requirements regarding data integrity should be discussed as part of the 5MS Readiness workstream/RWG.

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				The approach to calculation of UMS profiles should have a 'National' approach, rather than a jurisdictional approach. In reviewing the types of UMS that Origin is responsible for, separating certain unmetered devices into profile types may be appropriate and addition of 'On/Off' data makes this more reliable. Makes sense for some metered devices due to load size and when load is used to have a flat profile assigned Origin strongly recommended that a working group is established by AEMO and development of NCONUML guidelines and AEMO published profiles. This will provide guidelines on processes for Networks and Retailers and clarity for managing the customer. The concept of 'Agreed load' by FRMP, LNSP/MDP, and Customer may be problematic, not least as FRMP may not be aware of any deltas in UMS type or count until reconciliation is undertaken.	
46.	Red Lumo			As noted above, we support all unmetered loads be added to MSATS to be visible to all participants.	AEMO notes the respondent's support for the proposed change.
47.	SAPN			In SA the vast majority of non-contestable unmetered loads with PE Cells are watchman lights, these should be included as Type 7's within the rules as in operation they are no different to a streetlight with their operating times and most lamp types are already included in the AEMO Load Table. In SA almost all non-contestable unmetered loads without PE Cells are flat loads so the requirement to produce interval data for these loads will achieve nothing other than expense and complexity to the MDP's system and process. The requirement should be amended to the responsible MDP only providing a total aggregated consumption value for each NMI and then AEMO can apply an appropriate profile as required	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
48.	Stanwell			Stanwell has no suggestions for the calculation of non-contestable unmetered loads.	AEMO notes respondent's comment.
49.	TasNetworks			As noted in our feedback above, TasNetworks recommends that non-contestable unmetered loads be maintained on a single NMI to single unmetered device load basis. We further recommend that assessed loads for these devices be calculated on a methodology agreed between the DNSP, retailer and customer and in accordance with local jurisdictional instruments without having to publish a load table for each device. Non-contestable unmetered loads with PE cells should be treated similarly to Type 7 unmetered loads, as the on-off times for these devices will be similar to those provided in the on-off tables. Yes, non-contestable unmetered loads without PE cells are deemed to have continuous 24 hour supply, therefore TasNetworks deems their load profile to be flat for every integration period during a 24 hour period.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
50.	AGL		• What should be considered in creating and assigning non-contestable unmetered NMIs in MSATS e.g. introducing a new Metering Installation Type Code (NCONUML) and why?	AGL believes that each UMS should have an individual NMI associated with it to ensure that the device, the customer, the connection management and billing (market, network, customer) can all be managed in existing market processes.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement.

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51.	Aurora			Aurora Energy agrees with the concept of new Metering Installation Type Code NCONUML but would also like to see a new meter type of type 8 to help identify the difference between UMS using type 7 metering	AEMO believes that the inclusion of one new NMI Classification Code of 'NCONUML' and one associated Meter Installation Type code of 'NCONUML' should adequately support the correct treatment of these supplies in the market.
52.	Ausgrid			• The creation and assignment of NMIs in MSATS • An unmetered load NMI may contain different market loads or different Unmetered Device types, but they must have the same FRMP, End User, LNSP, TNI and distribution loss factor. Ausgrid have multiple connection points under one NMI per TNI area, and Ausgrid's preference would be to keep this current practice for NMI with NC-UM loads. However the profile shape should also be included as a mandatory requirement for each NC-UM load NMI (e.g., one NMI for switched profile and one for flat profile).	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement.
53.	AusNet Services			AusNet Services suggests that the relevant considerations when assigning NMIs to unmetered load is ensure: • The logical grouping is End User/TNI/FRMP/DLF/Substation, or an individual NMI is created; • The assignment to unmetered load is to continue an ongoing arrangement for a legacy site; or • For new sites whether the maximum demand is suitable for an unmetered load We support the establishment of the new Meter Install Type Codes and NMI Classification codes (except DHYBRID as currently described).	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement.
54.	CitiPower Powercor			CitiPower Powercor has ~18k UMS connections recorded against ~12k 'off-market' NMIs, with some NMIs holding in the order of 1,500 devices. CitiPower Powercor has over 4k Watchman lights (by NMI not lamps) consisting of 45 differing "Device" types. Watchman lights are owned and maintained by the DNSP and so replacements or removals are maintained in the DNSP GIS as part of the DNSPs Asset Management processes and as they are quite predictable, they are controlled by a PE cell. Hence, the "type 7" UMS processing engine of "Inventory Table", "Load Table" and "On-Off" table is very suitable and relatively easy to transition to for Watchman Lights. Additionally, this is a closed off product, CitiPower Powercor does not offer new connections of Watchman Lights. That is not the same situation for the over ~8k 'Other' NC-UMS loads (by NMI not device). These do not belong to the DNSP, we have no control over the operation, replacement or upgrade of these devices. Nor an up to date "inventory" of these devices by device design, make or model or usage in actual loading or profile of usage, and hence it is very difficult for the DNSP to maintain an accurate "Inventory Table" by Device Type, and hence the maintenance of an accurate "Agreed Load" to put into a "Load Table" or a reliable load profile (on/off/dimmed) to replicate in an "On/Off" table. The problem with a many device to 1 NMI model that results from the Type 7 UMS design of Inventory Table etc., is that these loads are customer loads (not DNSP managed loads like public lighting and watchman lighting) and hence it is difficult at	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.

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				an aggregated NMI level to issue planned outage notifications or to account for individual loads to be connected or disconnected without direct manual adjustment of the inventory table. Our records and knowledge of those devices already deployed is very poor and there is little incentive or obligation for these customers to provide such data, while obligations can be placed on the DNSP via the Rules and Procedures, this simply results in the DNSP costs of undertaking investigations of these customers devices to be smeared to all other customers, while the customer benefits from the avoided cost of metering. There is no existing obligation on these customers to provide the required inventory, device and spatial location information at all, let alone in a timely and compatible format. Connecting and using electricity without a meter is a privilege not a right, it's not clear that selling electricity in kWh but without measurement through a NMI pattern approved meter is actually consistent with the requirements of the National Measurements Act, yet it continues to exist for the existing NC-UMS loads and is intended to continue permitting 'New Connections'. Hence a UMS Guideline should be issued at either the AEMO or AER level that places some obligations on a UMS customer (not unlike the EENSP guidelines). A NC-UMS customer should be identified by a "UMS Customer Code" that allows the same customer to be identified NEM wide. Approval of NC-UMS loads should result in a "UMS Device Code" that results in an evidenced/negotiated "Agreed Load" value that could then be used as the basis of a "Load Table", the obligation to provide tests and results for a "UMS Device" to receive a "UMS Device Code" should sit with the "UMS Customer". The NC-UMS customer should be obliged to provide the DNSP with updated GIS inventory data on a periodic basis no less frequent than 12 monthly and to highlight all changes of devices. A new connection post March 2022 should not permit connection of any device not already registered on an approved list of UMS Devices for that 'UMS customer'. That approved list would link via the UMS Device Code to the agreed load value and any agreed day/or seasonal load profile (on/off table). The AEMO/AER UMS Guideline should have an upper current Capacity limit set beyond which a NEM Market Meter must be installed. Currently CitiPower Powercor applies a DNSP Network connection limit of 2A (@480VA) via mandatory installation of a 2A Supply Capacity Control Device (Circuit Breaker). CitiPower Powercor has recently permitted an increased connection limit of 6A (@1440VA) where the customer provides access to monitored measurement data that can be used to better create and allocate "agreed load" values and even group	

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				loads into “Low”, Medium” and “High” groupings. That measurement data is not proposed at this time to be delivered directly into the Market. CitiPower Powercor considers that loads exceeding 6A should all be metered given the electricity meter is the default and best method for determining meter data for settlements, network billing and retailer billing. It would be possible to install a “measuring device” (UMS-Network Device) on sample sites of all existing NC-UMS connections other than Watchman Lights and to use those sampled sites to form the evidence of the “Agreed Load” and “Load Profile” of each specific group of UMS-Device.	
55.	Endeavour Energy			Adding non-contestable unmetered loads into existing clauses that mention type 7 into the procedures is creating an expectation that non-contestable unmetered loads will be managed to the same level as type 7. This contrasts with the reason why non-contestable unmetered loads were not incorporated into type 7 in the first place and it does not provide sufficient flexibility to help balance cost versus industry benefits. We also note that S7.4.3.item5 of the NER allows for AEMO and the MC to determine when an unmetered load can be classified as a type 7, therefore we suggest that guidance be provided on the process for reclassifying a non-contestable unmetered load to be a type 7. We look forward to working with AEMO, via the industry forums, to help develop the draft procedures for managing non-contestable unmetered loads.	AEMO’s Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement.
56.	Energy Australia			As with our comments above, we suggest that validations be provided in MSATS so that an erroneous transfer of a NCONUML site is not valid. Correcting for an erroneous transfer in these instances can often be a tedious process and result in network billing issues and complexities. These should be considered together with the process for changing the attributes of a NCONUML NMI if required.	AEMO is planning on implementing these validations.
57.	Energy Queensland			Energy Queensland notes that a new Metering Installation code could assist in managing NEM12 processing. Energy Queensland also requests that AEMO clarify the type of metering installation that Non-contestable Unmetered Loads be classified in MSATS - i.e. will they be classed as Type 7? If so, if an MDP is accredited for Type 7 will they therefore be assumed to be accredited for Non-contestable Unmetered Loads, or will there be a separate accreditation process? We also suggest that AEMO consider allowing pre-population of these NMIs in MSATS as it will be a very extensive process for LNSPs.	AEMO believes that the inclusion of one new NMI Classification Code of ‘NCONUML’ and one associated Meter Installation Type code of ‘NCONUML’ should adequately support the correct treatment of these supplies in the market. Accreditation updates and pre-population of NMIs will be considered as part of the 5MS Readiness workstream.
58.	Evoenergy			A new Metering installation type code is required, but not a new NMI classification code as these remain type 7	AEMO believes that the inclusion of one new NMI Classification Code of ‘NCONUML’ and one associated Meter Installation Type code of ‘NCONUML’ should adequately support the correct treatment of these supplies in the market.
59.	Flow Power			N/A	AEMO notes respondent’s comment.
60.	Jemena			Traffic light signals, bus shelters, security lights should have individual codes. All other devices should be assigned a single code In total Jemena is proposing 4 different code types for non-contestable unmetered loads.	AEMO believes that the inclusion of one new NMI Classification Code of ‘NCONUML’ and one associated Meter Installation Type code of ‘NCONUML’ should adequately support the correct treatment of these supplies in the market.
61.	Red Lumo			Why is AEMO only considering whether this new Metering Installation Type Code should be created and not ask about all the other NMI Classification Codes ones?	AEMO believes that the inclusion of one new NMI Classification Code of ‘NCONUML’ and one associated Meter Installation Type code of ‘NCONUML’

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				What happens if a NMI has more than one NMI Classification Code? Can a NMI be SMALL and DHYBRID?	should adequately support the correct treatment of these supplies in the market. Only one NMI Classification Code can be associated to a NMI at any particular point In time.
62.	SAPN			Each Non-contestable NMI assigned with a Metering Installation Type code of NCONUML should be setup within MSATS so that transfers and role changes are rejected.	AEMO is planning on implementing these validations.
63.	Stanwell			Stanwell has no suggestions for the calculation of non-contestable unmetered loads.	AEMO notes respondent's comment.
64.	TasNetworks			Ability to provide advice on planned outage notifications, hence the need for single NMI allocation per device load. TasNetworks currently maintains its own list of non-contestable NMIs (i.e. NMIs we have currently allocated which will be referred to as non-contestable unmetered loads). Therefore TasNetworks does not deem it necessary to create a new NMI classification code or Metering Installation Type Code (NCONUML) as we have capability to continue to maintain our own exclusion list and our system is configured to object should a change of retailer request be received on one of these NMIs. Consideration may also need to be given to the impact on the B2B Service Order Process and participants systems and processes, as MeterInstallCode is an allowable field in this procedure.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. AEMO believes that the inclusion of one new NMI Classification Code of 'NCONUML' and one associated Meter Installation Type code of 'NCONUML' should adequately support the correct treatment of these supplies in the market.
65.	AGL		• What would be the most accurate methodology for calculating and applying a load profile to non-contestable unmetered loads and why?	AGL has proposed that a parent-child relationship be created for UMS NMIs so that each connection is managed through normal market processes, but can be aggregated for application of profiles for network bills, market load and customer bills. In the 5ms / global environment it will be important for UMS devices to be able to have profiles which are more complex and flexible that simple ON/OFF profiles. They will need to be able to manage more complex profile rules, such as load changes and different seasonal operation. For instance, devices with fans – may have a higher general load profile North of Sydney (due to increased ambient temperature) and in summer South of Sydney.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
66.	Aurora			Aurora Energy has no comment	AEMO notes respondent's comment.
67.	AusNet Services			In the experience of AusNet Services, the total amount of unmetered load consumption on our network is dwarfed by total losses due to non-technical losses (e.g. energy theft) and that is with our extensive programs to remotely detect and resolve non-technical loss issues. It is for this reason; unmetered loads need NOT be calculated with the most accurate methodology if the costs exceed the value of any potential inaccurate measurements, money is better spent resolving energy theft. Additionally, unless the turn-off and turn-on times are actually known it is more accurate to not guess the switching arrangements and apply the average consumption over all metering data intervals. Therefore, we recommend calculations based on "inventory Count" * "ADL" * "Days" with no essential requirements for On/Off times. The ADL would be calculated based on NATA test certificate (provided by the Customer's representative) or sampled average consumption that provides an average usage patterns that vary from day to day in any case. This avoids unnecessary complexity and costs of multiple tables and formula required per UMS type. We disagree with current Metrology Procedure B proposal to make On/Off times mandatory.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
68.	CitiPower Powercor			Deployment of a sample set of measuring devices that are connected permanently in place (a UMS-Network Device) across each existing class of NC-UMS other than Watchman Lights (which are quite predictable) would provide tangible evidence of both the load and its load profile over time.	AEMO believes that the measurement and profiling of these loads will become more sophisticated over time but as at GS soft start, for more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology.

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				Given the relative low cost of such devices (at least in relation to those currently used by CitiPower Powercor, these could be included as part of the connection costs for a UMS Customer and implemented onto every new NC-UMS or at least those seeking a 6A connection. Subsequently creating a new category of "measured" unmetered supply, which although not using a NMI Pattern Approved Meter, would be far better than an arbitrary "Agreed Load" that may over time not reflect the actual consumption of devices that can be altered in terms of cards and prescriber connections as can happen in telecommunication devices. This might require the creation of a type 8 classification of NC-UMS where the load is entirely calculated using a load table and crafted on/off table (and limited to 2A for future connections), and a type 9 classification of NC-UMS where the load and profile would be supported by sample meters or network devices and limited to 6A for future connections. NMI and AEMC might even consider relaxing the pattern approval obligations for this type measuring device for loads consuming below 6A to remove local display, optical port, re-en/de-en and Load Control capabilities. Also accepting a lower metrology performance than that required for a meter but then let such readings directly produce the NEM12 data into the market, as this is far better than the current typical method of basing consumption on a snapshot of current through a clip on Ammeter of poor accuracy.	For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer. AEMO believes that the inclusion of one new NMI Classification Code of 'NCONUML' and one associated Meter Installation Type code of 'NCONUML' should adequately support the correct treatment of these supplies in the market.
69.	Energy Australia			We don't have any specific methodology to suggest, however in practice it may not be easy to get the DNSP, retailer and customer (which is often a large customer with significant bargaining power, e.g. a telco or a council) to agree on a load profile. We therefore suggest there might be merits in publishing guidelines on principles for estimating the loads in consultation with the parties involved, and further work to be done in this area for consistent methodology in estimation of UFE. A potential framework might prescribe a default methodology, with any departure from the methodology subject to agreement of all parties.	For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
70.	Energy Queensland			Energy Queensland considers that a defined procedure for NCONUML to cover end users (Telstra/local govt etc) is appropriate. However, this should include details on:. - How load is calculated, and - How to identify/reconcile load where multiple 'devices' are associated to a NMI. Further, Energy Queensland considers it appropriate that every LNSP, MDP and FRMP be allowed to develop their own set of load profiles which are specific to their own set of Non-contestable Unmetered Loads and the load they reflect.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
71.	Evoenergy			As stated above, they would be flat profile or same as streetlights	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
72.	Flow Power			N/A	AEMO notes respondent's comment.
73.	Jemena			In our view this is AEMO's responsibility and Jemena does not have a view on this	AEMO notes respondent's comment.
74.	SAPN			The existing Type 7 methodology should be used for those NMI's that require a load profile to be created (i.e. Watchman lights). All other non PE-Cell based loads could use similar methodology to create a monthly aggregated consumption figure.	For more predictable NCULs, the draft procedures will provide discretion as to when metering coordinators (MCs) will apply a 'Type 7' methodology. For less predictable NCULs, the draft procedures will align as much as possible to the existing methodologies used to support Retail and Network billing of

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					these supplies. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
75.	Stanwell			Stanwell has no suggestions for the calculation of non-contestable unmetered loads.	AEMO notes respondent's comment.
76.	TasNetworks			Ability to provide advice on planned outage notifications, hence the need for single NMI allocation per device load. TasNetworks currently maintains its own list of non-contestable NMIs (i.e. NMIs we have currently allocated which will be referred to as non-contestable unmetered loads). Therefore TasNetworks does not deem it necessary to create a new NMI classification code or Metering Installation Type Code (NCONUML) as we have capability to continue to maintain our own exclusion list and our system is configured to object should a change of retailer request be received on one of these NMIs. Consideration may also need to be given to the impact on the B2B Service Order Process and participants systems and processes, as MeterInstallCode is an allowable field in this procedure.	AEMO's Draft Metering Procedures e.g. Metrology Part A & Part B will explicitly allow for both a one NMI to one connection point and a one NMI to multiple connection point arrangement. AEMO believes that the inclusion of one new NMI Classification Code of 'NCONUML' and one associated Meter Installation Type code of 'NCONUML' should adequately support the correct treatment of these supplies in the market.
77.			Service Levels for Meter Data Provider Services		
78.	AGL		• Will AEMO's proposed arrangements likely result in more accurate market settlements and why?	See comments below regarding meter exemptions and the initial calculation of UFE at 30 min intervals in Victoria.	AEMO maintains that the delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes. AEMO does however acknowledge that implementing 100% targets could result in unintended consequences and does not provide for legitimate exception scenarios.
79.	Aurora			Aurora Energy does not believe the proposed arrangements will result in a more accurate market settlement arrangement as AEMO will be only supplying TNI level data and not the underlying NMI level information making it difficult to accurately reconcile.	AEMO maintains that the delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes.
80.	AusNet Services			The proposed quality requirement of 100% at first revision (R1) is arbitrary and will have a perverse effect of making the market less accurate. The reason for this is that MDPs struggling to remotely read meters with remote communication issues and/or no access issues would have to final substitute if and when they run out of time. It can often take 4-6 months to negotiate the necessary access arrangements with customers. Settlements will be made less accurate due to increase in final substitutes to meet the 100% SLP obligation. AusNet Services recommends retaining the quality requirement at first revision (R1) for remotely read meters to 98%, which provides some contingency to deal with exceptional issues across MDPs metering fleet. We support the remainder of the proposed MDP SLPs changes.	AEMO acknowledges that implementing 100% targets could result in unintended consequences and does not provide for legitimate exception scenarios.
81.	Energy Queensland			Energy Queensland considers that the addition of Non-contestable Unmetered Loads and the introduction of 5 minute intervals will result in more accurate settlements. However, we note that the majority of the implementation task falls to LNSPs and MDPs while the benefits are likely to accrue to the FRMP. We also note that the activation of datastream for de-energised NMI's may assist with UFE settlement, but seek clarity on the impact on SLA reporting parameters for MDP/DNSP (i.e. load detected on de-energised NMI).	AEMO notes respondent's comment.
82.	Evoenergy			No. Will this not increase unnecessary costs on the MDP to meet targets that may not be achievable, especially for a decreasing volume of manually read meters? What is the intended benefit for customers balanced against imposed costs on MDP in achieving 100% quantity and quality especially for type 5 and 6 meters?	AEMO maintains that the delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes. AEMO does however acknowledge that implementing 100% targets could result in unintended consequences and does not provide for legitimate exception scenarios.

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				How will technical complications with remote read meters be handled / allowed for. For example, comms failure resulting in no data being received? How will the need for type 4 subs be managed / monitored by AEMO? Agree with the table category breakdown. It is not reasonable nor cost effective to achieve 100% compliance particularly with manually read meter types.	
83.	Flow Power			It is difficult to assess the accuracy in the absence of UFE calculations being made available for assessment.	AEMO notes respondent's comment.
84.	Jemena			Supplying additional data have cost attached to it, however we have no visibility of the overall economic benefit of this change.	AEMO notes respondent's comment.
85.	Origin			Refer to comments in 3.12.4 to ensure targets for actual data provided to market for Settlement calculation and not meeting target by just substituting S with F data.	AEMO maintains that the delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes. AEMO does however acknowledge that implementing 100% targets could result in unintended consequences and does not provide for legitimate exception scenarios.
86.	SAPN			No comment	AEMO notes respondent's comment.
87.	Simply Engie			Feedback provided in the comments above.	AEMO notes respondent's comment.
88.	Stanwell			The proposals should result in more accuracy as all datastreams will be delivered to AEMO.	AEMO notes respondent's comment.
89.	TasNetworks			No comment	AEMO notes respondent's comment.
90.	AGL		• What other data quality mechanisms should AEMO consider to supporting improved accuracy in market settlements?	In a 5ms environment, consideration should be given to a data quality KPI that considers not just a data element replacement, but the number of elements replaced sequentially in the daily total. E.g. 6 individual 5ms segment replaced across a day is not as critical as say 6 x 5 ms sequential segments replaced (e.g. a 30 min block) in a 5ms environment. This applies to a 15 or 30 min block. Single segments are less critical than multiple sequential segments.	AEMO does not believe that this level of consideration needs to be placed into the Metrology Part B substitution requirements at this stage.
91.	Aurora			Aurora Energy believes AEMO should provide individual NMI information	This has been included in the scope of the 5MS Program but has been raised as a potential Change Request.
92.	AusNet Services			Increasing second revision (R2) from 6 month settlement period to 8-9 months to align with retailer customer re-bill regulatory timeframe would make settlements more accurate by reducing the volume of final substituted metering data.	Settlement cycles are specified in the NER and are not a procedural matter. Should a change to the second revision (R2) be required, a Rule change would need to be lodged with the AEMC.
93.	Energy Australia			We suggest data quality flags be aligned to the intervals the data is collected in (i.e. 5/15/30). See detailed comments provided on the Service Level Procedure: Metering Data Provider Services.	AEMO notes respondent's comment.
94.	Energy Queensland			Energy Queensland notes that the subtraction of interval data from bulk supply points to determine a NSLP could be masking/contributing to UFE.	UFE contributors will be analysed and considered by AEMO as part of its UFE Trend reporting obligations under the GS Rule.
95.	Evoenergy			No comment	AEMO notes respondent's comment.
96.	Origin			In light of global distribution Loss Factor calculations methodology as the market get better visibility of energy consumption with smart meter consumption.	AEMO notes respondent's comment.
97.	SAPN			No comment	AEMO notes respondent's comment.
98.	Simply Engie			Feedback provided in the comments above.	AEMO notes respondent's comment.
99.	Stanwell			Stanwell has no suggestions for this.	AEMO notes respondent's comment.
100.	TasNetworks			No comment	AEMO notes respondent's comment.

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101.			Exemption Procedure: Metering Provider Data Storage Requirements		
102.	AGL		• Do you believe that AEMO's proposed exemption procedure clearly articulates the conditions and process for applying for a data storage exemption and why?	The exemption procedures as they stand have some value, but in future market developments (VPP, DER etc.) consideration should begiven to maximising the value the relatively new fleet of AMI meters can bring, especially to Victoria which has an almost complete penetration of smart meters. AEMO has sought comment on the accuracy of settlements, and AGL believes that in both the 5ms and global market the required level of accuracy is more achievable in Victoria than anywhere else due to the high penetration of AMI meters. As such, any reasonable actions which can be taken to ensure data delivery from these meters (without having to replace them) allows all parties to concentrate their efforts on assessing market information and future market developments.	AEMO notes respondent's comment.
103.	Aurora			Aurora Energy has no comment and believes this is a comment for MDP/MP's	AEMO notes respondent's comment.
104.	AusNet Services			The proposed exemption procedure is substantially suitable for processing exemption applications.	AEMO notes respondent's comment.
105.	CitiPower Powercor			CitiPower Powercor believes it does subject to accommodation of the requirements of the Victorian NEVA OiC in relation to the Victorian Jurisdiction being recognised as a Jurisdictional requirement.	The draft exemption procedure will account for those terms defined in clause 7.1.2 of the NER, as applicable in Victoria only. .
106.	Energy Queensland			Energy Queensland believes that the procedure could be improved if it clearly stated the number of days for meter storage rather than referring to the NER.	Data storage exemptions will only be considered for applicable interval meters who just fall short of Rule 7.3.1(a)(10) of the NER i.e. 30-34 days of storage as per the AEMC's 5MS Final Determination.
107.	Evoenergy			The exemption process is required, however the limit should align to the NER to prevent additional costs being imposed on MPs where they fall below the Rule requirement but above the lower limit proposed n the exemption procedure (e.g.: between 30 and 35 days of data storage). An end date or maximum time period is required to prevent ongoing compliance with no incentive for the MP to comply with the rules.	Data storage exemptions will only be considered for applicable interval meters who just fall short of Rule 7.3.1(a)(10) of the NER i.e. 30-34 days of storage as per the AEMC's 5MS Final Determination.
108.	Flow Power			AEMO has not yet decided as to how the data will be stored for 288 intervals.	AEMO notes respondent's comment.
109.	SAPN			No comment	AEMO notes respondent's comment.
110.	Stanwell			The procedure seems reasonable for what it is trying to achieve.	AEMO notes the respondent's support for the proposed change.
111.	TasNetworks			The procedure seems adequate to meet the requirement.	AEMO notes the respondent's support for the proposed change.
112.	United Energy			United Energy believes it does subject to accommodation of the requirements of the Victorian NEVA OiC in relation to the Victorian Jurisdiction being recognised as a Jurisdictional requirement.	The draft exemption procedure will account for those terms defined in clause 7.1.2 of the NER, as applicable in Victoria only.
113.	AGL		UFE Calculation – Victoria	AGL suggests that as Victoria has extremely high penetration of interval meters, that there would be benefits in undertaking the UFE calculations at 30-minute intervals before being calculated at 5-minute intervals (following 30 min to 5 min profiling) to test against the 5 min profile impact. This may help identify calculation and process issues associated with UFE at differing interval levels.	AEMO notes respondent's comment.
114.	Endeavour Energy		Effective start date of document	We note that the effective start date of documents and the corresponding content within the documents do not support AEMO's intent, as communicated in working group forums, to allow for a transition starting from December 2020 and to start some obligations from 1 July 2021 to support the global settlements soft start. We suggest that AEMO review and update the documents to align not only with the Rule change but also the industry transition strategy, and build versions of the documents using these key milestone dates.	AEMO's draft procedures have been drafted to communicate the 'end state' to market participants. Transitional considerations will be considered as part of the 5MS Readiness workstream/RWG.

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				For example, the CATS procedure has a proposed effective start date of 6 February 2022. However there are several changes that requires it to be effective from 1 July 2021 to support the global settlements soft start. To help with the transition to 1 July 2021 AEMO may want to make some of the changes available from December 2020. Therefore this document may need to have more than one version published in the draft determination based on different effective start dates.	
115.	Endeavour Energy		Timeframe for feedback on draft determination	AEMO suggested that the draft determination be published on 5 August 2019 and feedback on this draft determination be due 19 August 2019 – a period of 10 business days. We wish to highlight that significant changes were introduced in this initial consultation, including additional late information provided via the working group, and it is expected that the draft determination will contain more changes than this initial consultation, therefore we request that the due date for feedback on the draft determination be extended. We also note that there is a desire for the final determination to still be published on 30 September 2019 so not to delay the program or delay industry system design and builds which are dependent on the final determination. We suggest that the due date for feedback for the draft determination be extended to 2 September 2019 and maintain the publication of the final determination to 30 September 2019. This would allow for 20 business days for feedback on the draft determination (this is less than the feedback on the initial consultation, which allowed for 25 business days) and 20 business days for the final determination too (this is less than what was originally planned for, which was 30 business days). We believe that this would provide an appropriate balance for managing a significant change and through collaborative work via focus groups we believe that key issues can be addressed before the final determination.	Draft Determination submissions will be accepted between 5 Aug to 2 Sept 2019, 4 weeks being provided for. The date on which AEMO will publish its Final Determination date will be dependent on the complexity of submissions received and the requirements under the NER.
116.	Endeavour Energy		Communication different versions of the procedures	We acknowledge that one of the challenges for AEMO is how best to communicate the different versions of the procedures that have changed due to this program of work and other program of work, including showing the marked changes. We believe that it is important to bundle changes to procedures based on effective start dates as this will assist industry to understand the order of changes over the next few years. Providing mark changed versions based on the order of the effective start date of the procedures (and not the date of the consultation) is also important for industry to determine the changes for each effective start date. The marked changed version should also be based on the final previous version. Currently AEMO's general approach is to accept all the changes in the draft determination and provide a mark up from the draft determination when final determination is published. This results in the industry having to manually determine the changes from the current version to the final determination. Given the volume of changes, the number of procedures that are changing and the multiple versions of the same procedure due to different effective start date, this current approach is ineffective.	The complexity of the MP2 Draft procedures has been significantly reduced due to the removal of the co-consultation with the Metering ICF package and the philosophy that the procedures should only reflect the 'end state' requirements i.e. transitional matters are to be considered separately as part of the 5MS Readiness workstream.
117.	Red Lumo		Other	In our package 1 response, we queried how AEMO would manage the following as it receives for all energy and non-energy metering data. These have not been answered in package 2. • How would additional data be stored? • Include provision of AEMO's responsibility to ensure obligations under the Privacy Act are met • What confidentiality requirements would be placed on it?	AEMO's use of active and reactive metering data for settlements and UFE analysis was detailed in Section 4.2.6 of the Procedure Package 1 Final Determination Report.

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				• Who would have access? • Will AEMO's legislated indemnity apply to data that isn't covered under the Rules or Procedures	