

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

FINAL DETERMINATION

Published: **14 October 2019**





## EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the Rules consultation process conducted by the Australian Energy Market Operator (AEMO) to consider amendments to various Metering Procedures under the National Electricity Rules (NER), for the implementation of the five-minute settlement (5MS) and global settlement (GS) Rules, referred to as 'Package 2'. The 5MS and GS Rules are referred to together as the Amending Rules.

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 were addressed in the Draft Report, and included:

- 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

On 5 August 2019, AEMO published the Notice of Second Stage Consultation and associated Consultation Paper for the Metering Package 2 Procedures.

AEMO received 18 submissions (including one late submission) to its second stage consultation (on the Draft Report). No additional material issues were identified from these submissions.

After considering the submissions and evaluating comments against the requirements of the NER and the Amending Rules, AEMO's final determination implements the following key amendments to its Metering Procedures:

- 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 where the relevant registered participants are the same for each device and all devices are of the same type.
  - Classification of NCULs
    - A 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 will be provided to metering coordinators (MCs) as to when a 'Type 7' methodology could be applied in profiling NCULs.
  - Unpredictable loads - Procedures will align as much as possible to the existing methodologies used to support retail and network billing of these supplies, in order to minimise the disruption to participants' current systems and processes. Profiling arrangements are to be agreed between the Distributor, Retailer and the Customer.
- Changes to the metering data quantity and quality requirements
  - The delivery of timelier and more accurate metering data from MDPs will result in more accurate and efficient market settlement outcomes.
- Exemption Procedure: Metering Provider Data Storage Requirements
  - The new data storage exemption procedure will allow AEMO to provide exemptions from the requirement to store 35 days of 5-minute trading interval data for an interim period in relation to eligible interval meters under the 5MS Rule. The procedure will also account for the modified application of clauses 7.1.2 and 7.8.2 of the NER to Victorian advanced metering infrastructure (AMI).
  - Data storage exemptions will only be considered for eligible interval meters with 30-34 days of storage capacity. .
- 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.



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## 1. STAKEHOLDER CONSULTATION PROCESS

As required by the NER, AEMO has consulted on a package of amendments to various Metering Procedures in accordance with clause 7.16.7 of the NER and the Rules consultation process in rule 8.9.

These amendments relate to the implementation of five-minute settlement (5MS) and global settlement (GS) and are referred to as 'Package 2' of the AEMO metering procedure changes.

AEMO's timeline for this consultation is outlined below.

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	14 October 2019

The publication of this Final Report marks the conclusion of this consultation.

In addition to public consultation, AEMO undertook targeted consultation on Package 2 through a number of 5MS program engagement channels<sup>1</sup>, namely:

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

Note that there is a glossary of terms used in this Final Report at **Appendix A**.

<sup>1</sup> 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 the B2B 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 1 July 2021, as well as Type 4 meters at all transmission connection points and distribution connection points where the relevant financially responsible Market Participant (FRMP) is a Market Generator or Small Generation Aggregator.
- All new and replacement metering installations, other than type 4A, installed from 1 December 2018 to provide five-minute data from 1 December 2022 at the latest.
- All new and replacement type 4A metering installations installed from 1 December 2019 to provide five-minute data from 1 December 2022 at the latest.
- Type 7 unmetered loads to be calculated on a five-minute basis from 1 July 2021.

For those installed types 4 and 4A, 5 and 6 meters that do not need to provide five-minute data from 1 July 2021, AEMO will profile the metering data to five-minute trading intervals using load profiles.

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. Exemptions can only apply to meters that are required to record five minute data from 1 July 2021, but were installed before that date. 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:<sup>2</sup>

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 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.

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<sup>2</sup> 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)<sup>3</sup> in settlement, including:<sup>4</sup>
  - Creating NMLs 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 load profiles 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.<sup>5</sup>

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.

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<sup>3</sup> 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>

<sup>4</sup> GS Rule, 3.15.5B.

<sup>5</sup> 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.<sup>6</sup>

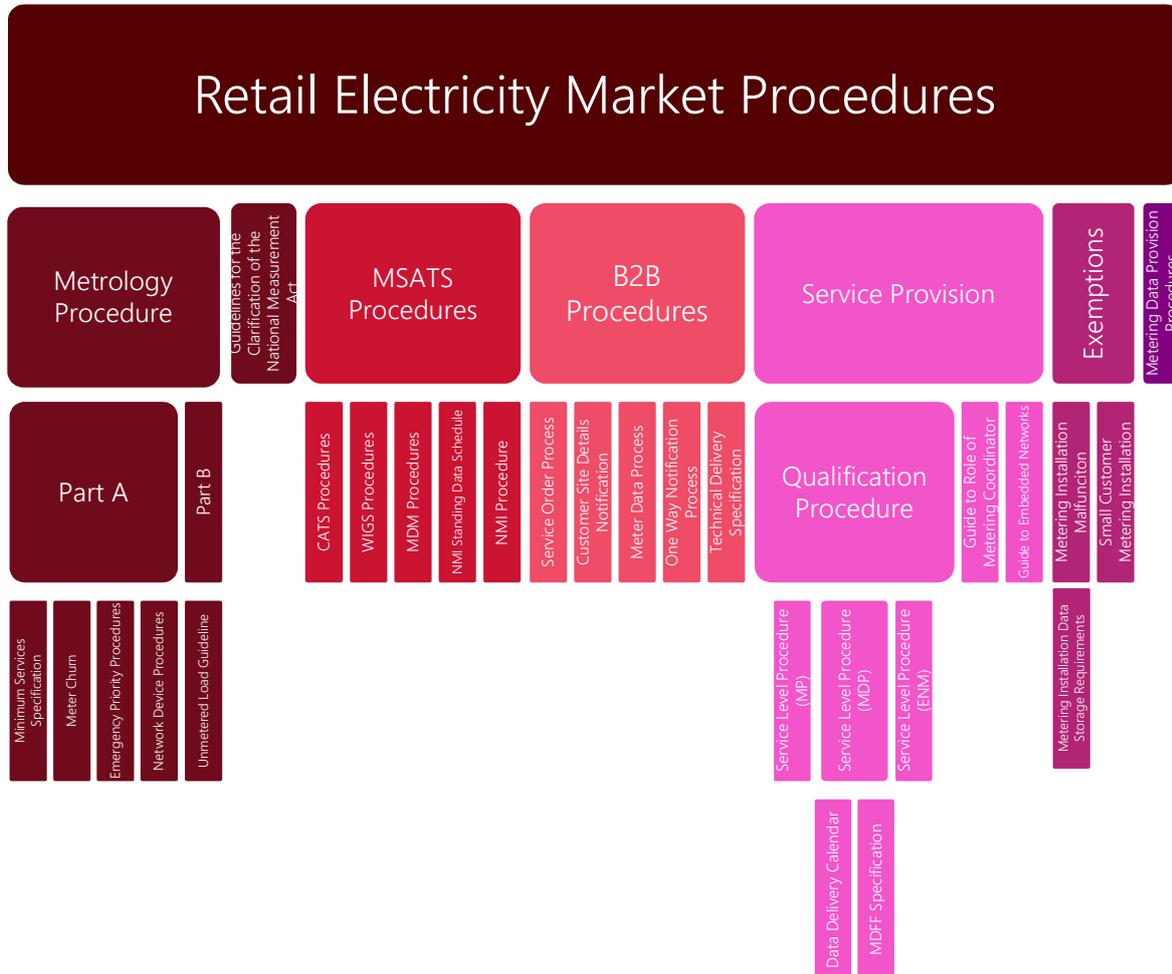
Metering Package 1 Item	AEMO determination on changes to the delivery of metering data
Meter data file format	<p>From 1 July 2021:</p> <ul style="list-style-type: none"> <li>• MDFF NEM12 files to be the required file format for all interval metering data being delivered to AEMO</li> <li>• MDFF NEM13 files to be supported by AEMO                             <ul style="list-style-type: none"> <li>– AEMO to continue to support and accept MDMF files for basic meter reads</li> </ul> </li> </ul>
Metering data resolution	<p>From 1 July 2021:</p> <ul style="list-style-type: none"> <li>• NEM12 interval metering data to be:                             <ul style="list-style-type: none"> <li>– Delivered at the register level</li> <li>– As per the meter’s configuration i.e. 5, 15 or 30-minute intervals</li> </ul> </li> </ul>
Metering data frequency	<p>From 1 July 2021:</p> <ul style="list-style-type: none"> <li>• Metering data to be delivered to AEMO on a daily basis                             <ul style="list-style-type: none"> <li>– Note, AEMO is not seeking to amend any obligations regarding the current B2B Provide Meter Data or Verify Meter Data processes</li> </ul> </li> </ul>
Metering data granularity	<p>From 1 July 2021:</p> <ul style="list-style-type: none"> <li>• Import and Export Active energy (kWh) and Import and Export Reactive energy (kVarh) will be required to be sent to AEMO, where applicable                             <ul style="list-style-type: none"> <li>– All other forms of measurement (such as volts and amps) are not required to be delivered to AEMO.</li> </ul> </li> <li>• All new records created in the CNDS table are to be created at the register level e.g. E and B.                             <ul style="list-style-type: none"> <li>– 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.</li> <li>– 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.</li> </ul> </li> </ul>
Metering data exception handling	<p>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.</p>

<sup>6</sup> Australian Energy Market Operator: [http://aemo.com.au/-/media/Files/Stakeholder\\_Consultation/Consultations/NEM-Consultations/2019/5MS-Metering/Final/Final-Determination-Report.pdf](http://aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/NEM-Consultations/2019/5MS-Metering/Final/Final-Determination-Report.pdf) P. 15

### 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.

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 0 of this Draft Report.

### 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.<sup>7</sup>

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<sup>8</sup> and minutes of working group and focus group meetings<sup>9</sup> have been published on AEMO's website.

### 2.4. Second stage consultation

On 5 August 2019, AEMO issued a Notice of Second Stage Consultation, and published a Draft Report and Determination (Draft Report) and Draft Procedures for Package 2. This information is available on AEMO's website.<sup>10</sup>

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

AEMO received 18 submissions (including one email response and one late submission) to the second stage of consultation.

Copies of all written submissions<sup>11</sup> and minutes of working group and focus group meetings<sup>12</sup> have been published on AEMO's website.

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

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

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

<sup>10</sup> AEMO website - <http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes---Package-2>

<sup>11</sup> AEMO website - <http://aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---Metering-Procedure-Changes---Package-2>

<sup>12</sup> AEMO website - <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Procedures-Workstream/Procedures-Working-Group>



### 3. SUMMARY OF MATERIAL ISSUES

The key material issues arising from the proposal and raised by Consulted Persons in the course of the consultation 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

Section **Error! Reference source not found.** discusses each of these material issues, including a summary of the views expressed in submissions at each consultation stage, AEMO's draft and final assessment of the issues and AEMO's final determination on each of them.

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

For the detailed summary of first stage consultation submissions and responses, please refer to the Draft Report.



## 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 load profiles for NCULs.

AEMO has fulfilled this requirement 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. First Stage 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.<sup>13</sup> AGL recommended that these NCULs should in fact have individual NMIs<sup>14</sup> i.e. one NMI per one connection point. AGL suggested that requiring individual NMIs would result in better connection point data management (i.e. for location, load, contract etc.) and better outage notification management.<sup>15</sup>

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

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<sup>13</sup> AGL, Submission to first stage consultation, p.4, 5 and 8

<sup>14</sup> AGL, Submission to first stage consultation, p.4

<sup>15</sup> 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.<sup>16</sup>

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.<sup>17</sup>

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.<sup>18</sup>

Some 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.<sup>19</sup>

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.<sup>20</sup>

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.<sup>21</sup>

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.<sup>22</sup>

### **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.<sup>23</sup>

Citipower/Powercor and United Energy supported the introduction of two new metering types.<sup>24</sup>

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.<sup>25</sup>

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<sup>16</sup> AGL, Submission to first stage consultation, p.28

<sup>17</sup> Citipower/Powercor, Submission to first stage consultation, p.3

<sup>18</sup> Endeavour Energy, Submission to first stage consultation, p.10

<sup>19</sup> Ausgrid, Submission to first stage consultation, p.12

<sup>20</sup> Ausnet, Submission to first stage consultation, p.12

<sup>21</sup> Endeavour Energy, Submission to first stage consultation, p.12

<sup>22</sup> Origin Energy, Submission to first stage consultation, p.18

<sup>23</sup> AGL, Submission to first stage consultation, p.6

<sup>24</sup> Citipower/Powercor, Submission to first stage consultation, p.15 and United Energy, Submission to first stage consultation, p.15

<sup>25</sup> Aurora, Submission to first stage consultation, p.18



## **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.<sup>26</sup>

AusNet 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.<sup>27</sup>

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.<sup>28</sup>

CitiPower/Powercor mentioned that they had over 4,000 Watchman lights (by NMI not lamps) consisting of 45 differing "device" types. They 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.<sup>29</sup>

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.<sup>30</sup>

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" 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.<sup>31</sup>

Citipower/Powercor also submitted that they have no control over the operation, replacement or upgrade of these devices. Nor do they have an up-to-date "inventory" of these devices. Therefore it is very difficult

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<sup>26</sup> Ausnet, Submission to first stage consultation, p.11

<sup>27</sup> Ausnet, Submission to first stage consultation, p.4

<sup>28</sup> Ausnet, Submission to first stage consultation, p.11

<sup>29</sup> Ausnet, Submission to first stage consultation, p.13

<sup>30</sup> Citipower/Powercor, Submission to first stage consultation, p.5

<sup>31</sup> Citipower/Powercor, Submission to first stage consultation, p.23



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 NCULs.<sup>32</sup>

SAPN considered 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.<sup>33</sup>

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.<sup>34</sup>

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.<sup>35</sup>

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.<sup>36</sup>

### **4.1.3. AEMO’s Draft Assessment and Conclusions**

#### ***Creating NCUL NMIs in MSATS***

AEMO recognised 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 accepted that transitioning from the current one to many model for certain distributors would represent a significant change to their current systems and processes.

AEMO 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 maintained that the introduction of a the new NMI Classification Code and associated Metering Installation Type Code of ‘NCONUML’ would adequately differentiate between non-contestable unmetered loads and type 7 unmetered supplies. AEMO did not consider there had 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:***

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

AEMO recognised 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.

<sup>32</sup> Citipower/Powercor, Submission to first stage consultation, p.27

<sup>33</sup> SAPN, Submission to first stage consultation, p.16

<sup>34</sup> TasNetworks, Submission to first stage consultation, p.5

<sup>35</sup> Endeavour Energy, Submission to first stage consultation, p.3

<sup>36</sup> Energy Australia, Submission to first stage consultation, p.20



### ***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 believed that the preferred profiling arrangements should be agreed between the Distributor, Retailer and Customer.

AEMO was 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.

#### **4.1.4. Second Stage Submissions Summary**

##### ***Creating NCUL NMIs in MSATS***

Broad support was received from respondents for AEMO's proposed approach to allow for both a one NMI to one device and a one NMI to multiple devices arrangement.

However, multiple Retailers raised concerns about the administration and communication of changes associated with one NMI to multiple device situations.

AGL noted that historically the off-market processes for a new on-market unmetered connection have been very poor, resulting in mismatches between connections, customers and loads.

AGL expected that with on-market single connection NMIs, the existing B2B processes would lead to customer and connection information being shared between DNSPs and Retailers. However, when DNSPs chose to use "bulk" NMIs for connections, there was no clear obligation or process on the DNSPs to ensure the connection information was shared with Retailers, thereby creating a disconnect.

Further, as the device was unmetered, there were no secondary triggers (e.g. meter data streams) to ensure that there was a reconciliation and activation process.

AGL strongly suggested that where an inventory table was used for non-contestable unmetered supply, the MDP must ensure that all relevant customer details and device information (including ADL, Location, load, load profile) was shared with the Retailer prior to energisation.<sup>37</sup>

Origin Energy stated that:

- AEMO should mandate in the procedures that every NCONUML created in MSATS at the meter (device) level must have the same device type, load profile and network tariff rate. This was to provide a more efficient data model that enabled transparency to the customer on the load and accurate settlement of associated charges.
- Networks should have an obligation to maintain NCONUML assets in MSATS accurately, as they do currently for Type 7 Contestable loads. A well-defined data model implemented for NCONUML would ensure MSATS is the source of truth for all standing and consumption data. This would standardise the process for all NMIs in MSATS and remove bilateral processes between market participants that are subject to potential errors.
- AEMO should specify market participant obligations in the procedures in relation to NCONUML sites for set up, maintenance and abolishment using the existing defined B2B and B2M market processes. This provided participants with certainty on the processes required to be undertaken to maintain NCONUML assets and not follow off-market processes.<sup>38</sup>

<sup>37</sup> AGL, Submission to the second stage consultation, p.8

<sup>38</sup> Origin Energy, Cover letter to their Submission to the second stage consultation, p.1



Origin also suggested that Retailers be informed of any activities that affect customer billing and provided with required customer, device load and charge details. It said that the Retailer should be earmarked as an approver of any existing and new NCUL prior to:

- them being set-up and energised, or
- any modifications or abolishment being undertaken in the MDP's database and in MSATS.<sup>39</sup>

Energy Australia noted that DNSPs should have a reasonable level of assurance or knowledge of its NCONUML inventory and undertake periodic reconciliation activities to ensure the physical inventory and calculation methodology/agreed load are aligned, keeping in mind the costs and benefits associated with these activities. This was to align with existing activities that DNSPs already undertook to ensure accuracy of the physical inventory count.<sup>40</sup>

Energy Queensland, as well as others, suggested that where there was a discrepancy between the Inventory Table held in the metering data services database for a non-contestable unmetered load and the Physical Inventory, the Physical Inventory should be taken as prima facie evidence of the actual number of Unmetered Devices.<sup>41</sup>

### **Classification of NCULs**

Citipower/Powercor stated that the introduction of the NMI Classification code of NCONUML for "Non-contestable unmetered load" risked the Small or Large underlying customer status not being easily identifiable. They suggested that AEMO consider re-defining the NMI Classification code as 'NCUML-L' and 'NCUML-S'.<sup>42</sup>

### **Providing NCUL five-minute metering data**

Endeavour Energy stated that Metrology Part B clause 13.1.2(d))(v) placed an obligation on the MC to maintain the on/off time when the 'other' method of control is used. They believed that this obligation was too complex for little value. For example, if the device was a BBQ that was controlled by a person pressing a switch prior to usage then it would be difficult to define the on/off time for this load. They therefore suggested that this clause be deleted.<sup>43</sup>

## **4.1.5. AEMO's Final Assessment and Determination**

Submissions to the draft determination generally focused on ensuring unmetered loads were treated appropriately in a manner which balances the load size, level of accuracy and implementation costs.

### **Creating NCUL NMIs in MSATS**

AEMO agrees that consideration should be given to how B2B processes and arrangements may assist in the reconciliation and communication of changes to NCULs where a one NMI to multiple devices arrangement has been applied. This suggestion has been referred to the B2B Working Group (B2BWG) for their detailed assessment.

From an AEMO Procedures perspective, AEMO maintains its draft determination position, that the applicable Metering Procedures e.g. Metrology Part A & Part B should explicitly allow for both a one NMI to one device and a one NMI to multiple devices arrangement. AEMO has however clarified that:

<sup>39</sup> Origin Energy, Submission to the second stage consultation, p.7

<sup>40</sup> Energy Australia, Submission to the second stage consultation, p.4

<sup>41</sup> Energy Queensland, Submission to the second stage consultation, p.4

<sup>42</sup> Citipower/Powercor, Submission to the second stage consultation, p.5

<sup>43</sup> Endeavour Energy, Submission to the second stage consultation, p.4



*An unmetered load NMI may contain multiple market loads or multiple non-contestable unmetered loads with the same Unmetered Device Type, but they must have the same FRMP, End User, LNSP, TNI and distribution loss factor. An unmetered load NMI cannot have multiple Unmetered Device Types.*

### **Classification of NCULs**

AEMO does not consider there is sufficient justification for the provision of a 'Small' or 'Large' reference in the proposed 'NCONUML' NMI Classification Code. This matter has been previously discussed in the 5MS Metering Focus Group and it was suggested that the use of the existing Customer Threshold Code (CTC) and Customer Classification Code (CCC) in MSATS should provide sufficient clarity to market participants.

### **Providing NCUL five-minute metering data**

#### ***Predictable Loads:***

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

The MC must ensure that details of the Inventory Table, calculation methodologies and Agreed Loads are agreed prior to implementation by relevant Registered Participants and provided to relevant Registered Participants when requested.

AEMO maintains its draft determination position 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:***

AEMO maintains its draft determination position that NCULs did not warrant complex profiling to be introduced. Retailers and distributors had previously 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.

AEMO maintains that the preferred profiling arrangements should continue to be agreed between the Distributor, Retailer and Customer and that the Procedures should align as much as possible to the existing methodologies used to support retail and network billing of these supplies, in order to minimise the disruption to existing participants' systems and processes.

## **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, leading to a reduction in the changes determined through revisions. Similarly, in the context of GS, accuracy of UFE calculation and allocation is dependent on the correctness of the underlying metering data.

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. First Stage Submissions 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.<sup>44</sup>

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.<sup>45</sup>

Plus ES added that a 100% target didn't allow for standing data or synchronisation issues or long-term communication faults.<sup>46</sup>

Vector supported the increase of Service Level Agreement (SLA) from the current level of 98%, but 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.<sup>47</sup>

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.<sup>48</sup>

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.<sup>49</sup>

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.

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<sup>44</sup> Ausgrid, Submission to first stage consultation, p.9

<sup>45</sup> Evoenergy, Submission to first stage consultation, p.18

<sup>46</sup> Plus ES, Submission to first stage consultation, p.18

<sup>47</sup> Vector, Submission to first stage consultation, p.15

<sup>48</sup> Endeavour Energy, Submission to first stage consultation, p.11

<sup>49</sup> Submission to first stage consultation, AGL p.34, Energy Queensland p.16, Origin Energy p.15, Simply Energy p.8

**4.2.3. AEMO’s Draft Assessment and Conclusions**

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

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

AEMO believed that the proposed draft requirements would strike the right balance between:

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

**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%

**4.2.4. Second Stage Submissions Summary**

Citipower, Powercor and United Energy disagreed with the proposed standards, as in Victoria, the remaining manually read sites are typically either customers refusing to have interval meters installed or sites which have access issues.

They were concerned that by separating out manually read quality standards that this would result in an increase in Final substitutions to satisfy quality requirements. They also stated that in many scenarios, these Final substitutions would then be replaced by Actuals as meters were subsequently accessed.

Citipower, Powercor and United Energy proposed that AEMO should provide exemptions for those manually read interval meters where customers have refused to have interval meters installed or where ongoing access issues have been encountered.<sup>50</sup>

Vector were also concerned that introducing a Quality SLA requirement for manually read meters would incentivise the MDP to deliver Final ‘F’ substitution data where a read cannot be obtained on the next scheduled read date (NSRD).

<sup>50</sup> Citipower/Powercor, Submission to the second stage consultation, p.9



Vector recommended that a Quality SLA for manually read meters only be applicable for R2, noting that the Quantity SLA would ensure a read for use in settlements is available.<sup>51</sup>

Endeavour Energy suggested that for completeness, calculated metering data for type 7 and non-contestable unmetered loads should be included in the standards table. They believed that the delivery of this metering data should be aligned with the Manually Read Metering Data because these loads were generally processed monthly and therefore the quality metric for preliminary and final should not apply. They also suggested the metering data type for the standards table should be updated to say, "Manually Read and Calculated Metering Data".<sup>52</sup>

#### **4.2.5. AEMO's Final Assessment and Determination**

AEMO maintains 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.

AEMO agrees with Endeavour Energy that calculated metering data for type 7 and non-contestable unmetered loads should be included in the standards table and that it should be aligned with the Manually Read Metering Data. These changes have been applied to the Final Procedure.

AEMO disagrees that the Quality SLA for manually read meters should only be applicable for R2, to allow for issues such as access issues for example, as this would result in a reduction in the existing AEMO standards, which have a 98% standard for R1 Actuals and Final substitutions.

### **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. First Stage Submissions 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.<sup>53</sup>

<sup>51</sup> Vector, Submission to the second stage consultation, p.10

<sup>52</sup> Endeavour Energy, Submission to the second stage consultation, p.9

<sup>53</sup> Submission to first stage consultation, Citipower/Powercor p.21, United Energy p.20



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.<sup>54</sup>

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).”<sup>55</sup>

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.<sup>56</sup>

#### 4.3.3. AEMO's Draft Assessment

##### Victorian NEVA Order in Council

AEMO agreed with Citipower/Powercor and United Energy that this exemption procedure needed 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.”<sup>57</sup>
- “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.”<sup>58</sup>

These two references suggested 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 Draft Conclusion

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

<sup>54</sup> Energy Queensland, Submission to first stage consultation, p.17

<sup>55</sup> Submission to first stage consultation, Evoenergy p.19 and AGL p.39

<sup>56</sup> Vector, Submission to first stage consultation, p.16

<sup>57</sup> AEMC, [Five-minute settlement final determination](#), p.106.

<sup>58</sup> AEMC, [Five-minute settlement final determination](#), p.119



AEMO maintained 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 was consistent with the policy intent of substantial compliance as set out in the 5MS Rule and as expressed by the AEMC.

#### **4.3.5. Second Stage Submissions Summary**

Responses were generally supportive of the content in the Draft exemption procedure, feedback received was primarily minor edits and clarifications.

AGL did however suggest that existing Cross Boundary Metering Installations should also be eligible to apply for an exemption and that the 30 day lower limit was potentially too severe for a residential VicAMI meter.

AGL considered that a lower threshold would be more appropriate for a residential meter as long as the Victorian DNSP had the ability to attend, download and rectify any comms issues prior to the data being overwritten.<sup>59</sup>

#### **4.3.6. AEMO's Final Assessment and Determination**

AEMO's current understanding is that the majority of cross boundary metering installations are type 1-3 and are therefore already accommodated for under the draft exemption procedure.

In relation to AGL's proposal to reduce the day lower limit for residential VICAMI meters, AEMO has not received any information or feedback from Meter Coordinators or Meter Providers to suggest that these meters will not be able to satisfy the existing data storage Rule requirements.

Therefore, 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 and needs to account for the modifications to clauses 7.1.2 and 7.8.2 of the NER, as applicable in Victoria only.

## **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. First Stage Submissions 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 Draft Assessment**

AEMO identified over 30 unique connection point variations (see Figure 3 below for more detail) which must be catered for to ensure accurate:

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<sup>59</sup> AGL, Submission to the second stage consultation, p.31



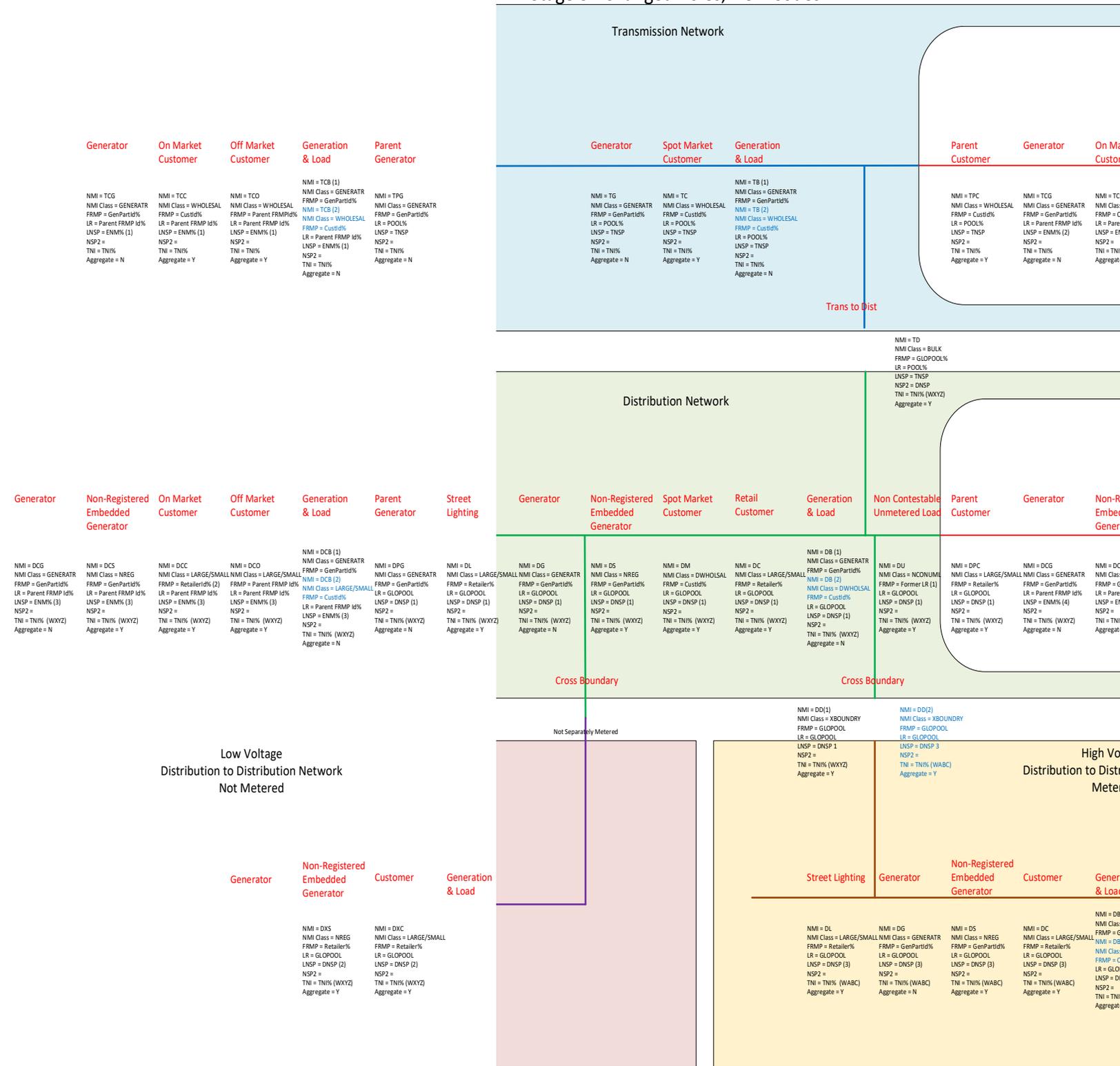
- UFE data publication by 1 July 2021
- NEM settlements from 6 February 2022

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

Stage 3: Changed Roles, New Codes





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

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

**4.4.4. AEMO’s Draft Conclusion**

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

These new codes were 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 the consultation.

New Code	Description <sup>(2)</sup>
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
NCONUML <sup>(1)</sup>	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

AEMO 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 has 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 instead introduced a new code of NREG (Non-Registered Embedded Generator) which distributors could identify, which would assist in the accurate allocation of these connection points.

**4.4.5. Second Stage Submissions Summary**

Responses were generally supportive of AEMO’s proposed scenarios, including associated NMI Classification Codes.

Citipower, Powercor and United Energy did however suggest that embedding a reference to ‘Small’ or ‘Large’ in the NCUL NMI Classification Code would assist in the determination of retail contract obligations and the boundary for contestable metering within Victoria. Without these references they were concerned that there may be confusion, particularly in situations where one NMI is associated to multiple unmetered devices.<sup>60</sup>

<sup>60</sup> Citipower/Powercor, Submission to the second stage consultation, p.5



Endeavour Energy mentioned that additional clarification regarding who is expected to apply certain NMI Classification Codes e.g. DWHOLSAL, NREG and GENERATR would be beneficial.<sup>61</sup>

#### **4.4.6. AEMO's Final Assessment and Determination**

AEMO does not consider there is sufficient justification for the provision of a 'Small' or 'Large' reference in the proposed 'NCONUML' NMI Classification Code. This matter has been previously discussed in the 5MS Metering Focus Group and it was suggested that the use of the existing Customer Threshold Code (CTC) and Customer Classification Code (CCC) in MSATS should provide sufficient clarity to market participants.

The DNSP is responsible for the application of NMI Classification Codes. If the site has gone through a registration process with AEMO and it believes the NMI Classification Code has been applied incorrectly, AEMO will raise a change request to rectify the issue.

Subject to this clarification, AEMO maintains its draft determination positions.

### **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.<sup>62</sup>

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 Draft 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 proposed 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 3 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 had been specified in the draft NMI procedure, CATS Procedures Principles and Obligations and the Procedures for the Management of WIGS NMIs, contained within the consultation.

#### **4.5.3. AEMO's Draft Conclusion**

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

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<sup>61</sup> Endeavour Energy, Submission to the second stage consultation, p.5

<sup>62</sup> AEMC, Rule Determination-National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 No. 14, p.74



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 the consultation.

#### **4.5.4. Second Stage Submissions Summary**

Responses were generally supportive of AEMO's proposed approach.

A few respondents, such as Red Energy, did however mention that they believed there needed to be a clear delineation of where LR refers to Embedded Network Local Retailer (ENLR) and where it refers to GLOPOOL.<sup>63</sup>

#### **4.5.5. AEMO's Final Assessment and Determination**

AEMO maintains 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'.

AEMO has endeavoured to better delineate between the LR and ENLR references in the Final Procedures.

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<sup>63</sup> Red Energy/Lumo Energy, Submission to the second stage consultation, p.7



## 5. FINAL DETERMINATION

Having considered the matters raised in submissions, AEMO determines that, the new Exemption Procedure: Metering Provider Data Storage Requirements and amendments to ten other metering procedures in the form published with this Final Report (11 procedures, each in clean and marked-up versions), reflect the principles and content of the Australian Energy Market Commission’s Final Rule Determinations:

- National Electricity Amendment (Five Minute Settlement) Rule 2017 No. 15
- National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 No. 14
- National Electricity Amendment (Five minute settlement and global settlement implementation amendments) Rule 2019 No. 7):

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	15 October 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
NSP	Network service provider
PE cells	Photoelectric cells
SLA	Service level agreement
TNI	Transmission Node Identifier
UFE	Unaccounted for energy
VTN	Virtual transmission node
WIGS	Wholesale, Interconnector, Generator and Sample

**APPENDIX B - DETAILED RESPONSES TO SUBMISSIONS**

**Table 1 – Metrology Procedure: Part A**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	3.1	Requirements under National Measurement Act and Use of Standards	Agree	AEMO notes respondent’s support for the proposed change.
2.	Energy Queensland	3.1		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
3.	Evoenergy	3.1		Noted	AEMO notes respondent’s comment.
4.	Flow Power	3.1		We suggest that requirements should mention that meters need to be 5-minute compliant and that any new/replacement meters after 1 Dec 2018 must be 5-minute compliant.	Requirements related to timing for metering installations to produce 5-minute metering data are not included in Procedures as the NER already provides these requirements. Refer to 5MS Rule 7.8.2A, 7.10.5(a), 11.103.1, 11.103.3, 11.103.4, 11.103.6.
5.	Intellihub	3.1		No Comment	AEMO notes respondent’s comment.
6.	Origin Energy	3.1		Noted	AEMO notes respondent’s comment.
7.	Red and Lumo	3.1		Red and Lumo have no comment on this change	AEMO notes respondent’s comment.
8.	Tango Energy	3.1		Agree	AEMO notes respondent’s support for the proposed change.
9.	TasNetworks	3.1		Noted.	AEMO notes respondent’s comment.
10.	Vector AMS	3.1		Agreed	AEMO notes respondent’s support for the proposed change.
11.	AGL	3.4	“x” values – Calculation and Use	Agree	AEMO notes respondent’s support for the proposed change.
12.	Energy Queensland	3.4		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
13.	Evoenergy	3.4		Noted	AEMO notes respondent’s comment.
14.	Flow Power	3.4		For ACT we have specified if there is a variance. Annual consumption plus an allowance of 2%. Flow Power requires confirmation that no other states have the 2% allowance except ACT?  <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <p>Australian Capital Territory The volume threshold for a <i>connection point</i> must be determined from:                      (1) the annual consumption over the most recent 12-month period,                      (2) the annual consumption over the most recent 12-month period plus an allowance of 2%; or</p> </div> If there is an allowance for any other state can that be specified as well please.	Table in 3.4(f) details the complete calculation requirement for each Jurisdiction. ACT is the only Jurisdiction that requires a 2% allowance.
15.	Intellihub	3.4		No Comment	AEMO notes respondent’s comment.
16.	Origin Energy	3.4		Noted	AEMO notes respondent’s comment.
17.	Red and Lumo	3.4		Red and Lumo have no comment on this change however are unsure of its necessity as it appears to only change formatting?	Formatting change for consistency with other Tables.
18.	Tango Energy	3.4		Agree	AEMO notes respondent’s support for the proposed change.
19.	TasNetworks	3.4		Noted.	AEMO notes respondent’s comment.
20.	Vector AMS	3.4		Agreed	AEMO notes respondent’s support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
21.	AGL	12.3, 12.7	Provisions for non-contestable unmetered loads	<p>12.3 Agree</p> <p>12.7 (c) – AGL is unclear exactly how this amendment would work or what it means.</p> <p>We would understand the calculation methodology and agreed load for an unmetered device to be the formula used to establish effectively the daily load and profile of a device, e.g. Device A, Device B etc.</p> <p>The inventory table should describe the location of each connection of these devices the relevant customer, the number of devices connected and designated as Device A, Device B etc., as there may be multiple customers with the same device at multiple locations (e.g. multiple councils with multiple watchman lights at multiple locations). Assuming a single NMI per customer – the section of inventory table should confirm customer by device.</p> <p>There needs to be a reconciliation of the number of actual devices held within an inventory table, and a mechanism to establish what and where devices are connected and for which customer, and a link from that to the load calculation for that device type. Egg All device A’s have a specified load (and load profile), all Device Bs have their load and load profile etc.</p> <p>AGL suggests that the clause be re-worded as:</p> <p>(c) Where there is a discrepancy between the Inventory Table or NMI listing held in the <i>metering data services database</i> for a <i>non-contestable unmetered load</i> and the <a href="#">physical inventory</a>, then <del>calculation methodology and Agreed Load</del> <a href="#">Physical Inventory</a>, the <del>calculation methodology and Agreed Load</del> <a href="#">Physical Inventory</a> is to be taken as prima facie evidence of the actual number of Unmetered Devices.</p> <p><a href="#">(d) Each item in an inventory table or NMI listing should have an agreed load and load profile calculation associated with it, together with a clear record of the relevant customer, and asset location</a></p> <p>All the metrology procedures are predicated on the assumption that any connection undertaken within the NEM is done so through the market processes, and therefore the retailer has arrangements with the customer and authorised the energisation (e.g. NER 5A.F.7).</p> <p>Within the provisions for Non-Contestable Unmetered Load the metrology procedures are allowing for individual on-market NMI connections and use of bulk NMIs for multiple connections.</p> <p>AGL notes that historically the off-market processes for a new on-market unmetered connection have been very poor, resulting in mismatches between connections, customers and loads.</p> <p>AGL expects that with on-market single connection NMIs the existing B2B processes lead to customer and connection information being shared between DB and RB. However, when DBs</p>	<p>AEMO notes respondent’s support for the proposed change.</p> <p>Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2</p>

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				<p>choose to use bulk NMIs for connections, there is no clear obligation or process on the DBs to ensure the connection information is shared with the RB, thereby creating a disconnect.</p> <p>Further, as the device is unmetered, there are no secondary triggers (e.g. meter data streams) to ensure that there is a reconciliation and activation process.</p> <p>AGL strongly suggests that an additional clause be added to 12.3:</p> <p><u>(c) Where an inventory table is used for non-contestable unmetered supply, the MDP must ensure that all relevant customer details and device information (including ADL, Location, load, load profile) is shared with the Retailer prior to energisation;</u></p> <p><u>(d) For a non-contestable unmetered supply, the Distributor must ensure that the Retailer has authorised the energisation.</u></p>	<p>AEMO expects that non-contestable unmetered load NMIs will be registered in MSATS in the same way as all other NMIs, i.e. include Datastreams, ADL, etc.</p> <p>Proposed enhancements to the B2B framework should be referred to IEC (and B2BWG on their behalf) to review.</p>
22.	Energy Australia	12.3, 12.7		<p>It is not clear what the justification is for moving from physical inventory to calculation methodology/Agreed Load as the source of truth if a discrepancy exists.</p> <p>Given that NCONUML are likely to be less predictable load (as compared to Type 7), some form of periodic review of calculation methodology would be desirable. If the Agreed Load and calculation methodology becomes the “source of truth”, this might reduce an incentive to review and keep the calculation methodology updated as needed.</p> <p>This also creates an inconsistency with Type 7 metering (clause 12.7(b)), which is similar in nature to predictable NCONUML load, where the “source of truth” is the physical inventory. We note comments in the draft determination (4.1.2, Unpredictable Loads) that DNSPs may not have up to date inventories or an accurate agreed load or reliable load profile for NCONUML. This might result in exacerbation of inaccurate inventory.</p> <p>Our suggestion is that DNSPs should have a reasonable level of assurance or knowledge of its NCONUML inventory and undertake periodic reconciliation activities to ensure the physical inventory and calculation methodology/Agreed Load are aligned, keeping in mind the cost benefits associated with these activities. This should align with existing activities that DNSPs already undertake to ensure accuracy of the physical inventory count. These obligations already exist within Metrology Procedure B (clause 13).</p> <p>Suggested change:</p> <p>Revert 12.7(c) to:</p> <p>(c) Where there is a discrepancy between the Inventory Table held in the metering data services database for a non-contestable unmetered load and the calculation methodology and Agreed</p>	<p>Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2</p>

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE												
				Load, the <del>calculation methodology and Agreed Load</del> Physical Inventory is to be taken as prima facie evidence of the actual number of Unmetered Devices.													
23.	Energy Queensland	12.3, 12.7		<p>Section 12.3 (b) – Energy Queensland seeks confirmation on why devices were not mentioned in this paragraph when Metrology Procedure: Part B section 13.1.2 (d) indicates a listing must be maintained. We suggest the wording be updated to: “... And calculation methodologies, non-contestable unmetered load physical inventory tables and Agreed Loads”.</p> <p>Section 12.7(c) – Energy Queensland does not agree with the changes proposed to section 12.7(c) given the calculation methodology will be applied from the inventory table. Energy Queensland suggests the wording be updated to “Where there is a discrepancy between the Inventory Table held in the metering data services database for a non-contestable unmetered load and the Physical Inventory, the Physical Inventory is to be taken as prima facie evidence of the actual number of Unmetered Devices.”</p>	Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.												
24.	Evoenergy	12.3, 12.7		Noted	AEMO notes respondent’s comment.												
25.	Flow Power	12.3, 12.7		We note that there is incorrect reference to the NER with respect to the data storage. This is dealt with 7.11.3 in the NER rather than 7.10 mentioned in the document.	7.10.1 is the correct reference for the provision of a metering data services database. NER 7.11.3 describes the circumstances under which changes can be made to the metering data held in the metering data services database.												
26.	Intellihub	12.3, 12.7		No comment	AEMO notes respondent’s comment.												
27.	Origin Energy	12.3, 12.7		<p>Origin Energy notes that it may be appropriate to provide LNSP’s with the flexibility to use the Type 7 model for some non-contestable unmetered loads where deemed appropriate, and to use a standard single NMI to device model for other non-contestable unmetered loads. Origin Energy recommends that the procedures be drafted so that if a non-contestable unmetered load NMI contains different Unmetered Device types that have varying load profiles and network tariff rates then each load must be uniquely identifiable in MSATS. Uniqueness means taking into consideration the Device Type, the load profile of that device and the network tariff rate for the consumption from that device type so that the data aligns with the MSATS Standing data model. Only then will the load be fit for use by the B2M/B2M customer, service, metering, billing, reconciliation and settlements market processes as is used for other on market NMIs in MSATS.</p> <p>This is required as summation of data from these unmetered loads arbitrarily;</p> <ol style="list-style-type: none"> <li>1) Causes distortion of UFE</li> <li>2) Results in Disputes as the data is not reconcilable</li> <li>3) Cannot be used to bill customers</li> <li>4) Cannot be used to settle network charges</li> <li>5) Cannot be used by market B2B and B2M processes</li> </ol> <p>For example;</p> <ol style="list-style-type: none"> <li>1) If NMI: x000000001 has 16 units of unmetered devices consisting of 1 device type (i.e. 16 x M125 Light Device) then each of these devices have the same load profile (e.g. Flat) and Network tariff rate and must be represented in MSATS in a 1 NMI to 1 Device model as follows;</li> </ol> <table border="1" data-bbox="905 1732 1795 1858"> <thead> <tr> <th>NMI</th> <th>METER</th> <th>Register ID</th> <th>NTC</th> <th>Suffix</th> <th>Network Additional Information</th> </tr> </thead> <tbody> <tr> <td>x000000001</td> <td>Meter 1</td> <td>E1</td> <td>M125</td> <td>E1</td> <td>10</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>2) If NMI: x000000002 has 6 units of unmetered devices consisting of 1 device type (i.e. 6 x M50 Light Device) then each of these devices have the same load profile</li> </ol>	NMI	METER	Register ID	NTC	Suffix	Network Additional Information	x000000001	Meter 1	E1	M125	E1	10	<p>Metrology Procedure: Part B 13.2.1(b) provides flexibility to use the type 7 methodology to calculate metering data for non-contestable unmetered loads.</p> <p>Metrology Procedures are drafted to provide flexibility for non-market unmetered load NMIs to have single or multiple unmetered devices.</p> <p>Network billing and B2B process changes should be referred to IEC (and B2BWG on their behalf) to review.</p>
NMI	METER	Register ID	NTC	Suffix	Network Additional Information												
x000000001	Meter 1	E1	M125	E1	10												

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE																														
				<p>(e.g. Flat) and Network tariff rate and must be represented in MSATS in a 1 NMI to 1 Device model as follows;</p> <table border="1"> <thead> <tr> <th>NMI</th> <th>METER</th> <th>Register ID</th> <th>NTC</th> <th>Suffix</th> <th>Network Additional Information</th> </tr> </thead> <tbody> <tr> <td>x000000002</td> <td>Meter 1</td> <td>E1</td> <td>M50</td> <td>E1</td> <td>6</td> </tr> </tbody> </table> <p>3) If NMI: x000000003 has 32 units of unmetered devices consisting of 2 device type (i.e. 20 x M125 Light Device, 12 x M50 Light Device) and each of these device types have a different load profile (e.g. Flat) and Network tariff rates then this must be represented in MSATS in a 1 NMI to Many Device model as follows;</p> <table border="1"> <thead> <tr> <th>NMI</th> <th>METER</th> <th>Register ID</th> <th>NTC</th> <th>Suffix</th> <th>Network Additional Information</th> </tr> </thead> <tbody> <tr> <td>x000000003</td> <td>Meter1</td> <td>E1</td> <td>M125</td> <td>E1</td> <td>20</td> </tr> <tr> <td>x000000003</td> <td>Meter2</td> <td>E2</td> <td>M50</td> <td>E2</td> <td>12</td> </tr> </tbody> </table> <p>Notes:                      1) The <b>Network Additional Information</b> field in the MSATS Meter Register table could be used to reflect the number of physical devices that are associated to the consumption from that Device/Register.                      2) The NTC Description field in the MSATS CATS_NETWORKTARIFF_CODES table could be used to reflect the description of the NTC as well as the Type of Device it relates to.</p>	NMI	METER	Register ID	NTC	Suffix	Network Additional Information	x000000002	Meter 1	E1	M50	E1	6	NMI	METER	Register ID	NTC	Suffix	Network Additional Information	x000000003	Meter1	E1	M125	E1	20	x000000003	Meter2	E2	M50	E2	12	
NMI	METER	Register ID	NTC	Suffix	Network Additional Information																														
x000000002	Meter 1	E1	M50	E1	6																														
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28.	Red and Lumo	12.3, 12.7		Red and Lumo have no comment on this change	AEMO notes respondent’s comment.																														
29.	Tango Energy	12.3, 12.7		Agree	AEMO notes respondent’s support for the proposed change.																														
30.	TasNetworks	12.3, 12.7		12.7 Agree  12.7 (c) This clause refers to the Inventory Table, which may not be in use for a non-contestable unmetered load. Suggest rewording clause.  Possible wording may be:  “Where there is a discrepancy between the, calculation methodology and Agreed Load or Load Table, whichever the case may be, held in the <i>metering data services database</i> for a <i>non-contestable unmetered load</i> and the expected load at the connection point, the calculation methodology and Agreed Load is to be taken as prima facie evidence of the load.”	AEMO notes respondent’s support for the proposed change.  Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.																														
31.	Vector AMS	12.3, 12.7		No comment.	AEMO notes respondent’s comment.																														
32.	Origin Energy	12.3	Metering Data Storage	Origin Energy suggest adding clauses 12.3 (c) as follows to ensure that for non-contestable unmetered sites, the customer details are also captured due to the nature, process and relationship of the LNSP with these non-contestable unmetered site customers. <b>12.3 (c ) For non-contestable unmetered loads, the LNSP must also record the details of the customer.</b>	Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.																														
33.	Origin Energy	12.7	Request for Test of Calculated Metering Data	Origin Energy suggest rewording 12.7.(c) as follows. as in its current form, it is unclear as to what is being compared. 12.7.(c) Where there is a discrepancy between the Inventory Table held in the metering data services database for a non-contestable unmetered load and <del>the calculation methodology and Agreed Load</del> Physical Inventory, the <del>calculation methodology and Agreed Load</del> Physical Inventory	Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.																														

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				<p>is to be taken as prima facie evidence of the actual number of Unmetered Devices as off the effective date of the discrepancy.</p> <p>We suggest that the Retailer is informed of any activities that impact the billing of the customer and is provided with required customer, device load and charge details. We also suggest that the Retailer is earmarked as an approver of any existing and new loads prior to them being setup and energised or prior to any modifications or abolishment being undertaken in the MDP’s database and in MSATS.</p> <p>Given the above, Origin Energy suggest adding clause 12.7 (d) as follows to ensure that for non-contestable unmetered supply, there are minimal or no discrepancies as is the case for contestable metered supply, to avoid any adverse impacts on UFE.</p> <p>12.7.(d) The MC must use all efforts to ensure that all the non-contestable unmetered supply load assets are identified and reflected in MSATS. Any changes to these assets must only be made with the prior approval of the MC, the Retailer and the Customer using existing B2B and related B2M processes/transactions.</p> <p>Further to the above, we also recommend that the creation, energisation, modification and abolishment of non-contestable unmetered supply sites are performed via existing B2B and related B2M processes/transactions and that a B2B Guide is developed and published to clarify applicability or modifications of existing B2B and B2M processes/sub process/transactions for these NCONUML and other new Installation Types.</p> <p>Refer to Appendix A which contains a table of B2B Transactions and Typical Participant combinations with applicability to new SMS/GS Installation Types</p>	<p>Metrology Procedure: Part B 13.2.2(c), 13.3.2(c) and 13.5.2(c) require Inventory Table changes to be agreed by affected Registered Participants.</p> <p>Proposed enhancements to the B2B framework should be referred to IEC (and B2BWG on their behalf) to review.</p>

**Table 2 – Metrology Procedure: Part B**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	6.1(d)	Amendments	AGL is unclear how clause (d)(i) operates. When a device is installed, there should be an agreed load and load profile. That device may be subsequently changed, but until the DB and RB are aware of such a change, the initial load and load profile would be deemed to be correct until a change is identified or notified, in which case the data is substituted from the change date and possibly clause (d)(ii) operates, or possibly the meter data is re-released with new actuals (given the output of a calculation is always an actual).	6.1(d)(i) provides for the situation where an existing calculation methodology or Agreed Load is to be changed for the period concerned but that change has not been updated at the time the calculated metering data is produced.
2.	Energy Queensland	6.1(d)	Substitution rules for non-contestable unmetered loads	Energy Queensland is of the view that section 6.1(d) does not cater for where additional devices are added to an existing National Meter Identifier (NMI) (one NMI for multiple device scenario). We suggest that the wording be updated to include the concept of Physical Inventory / Device Inventory updates.	Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.
3.	AGL	6.1(e)	Notification of substituted Data	AGL believes that clause 6.1(e) is not sufficient in cases where bulk NMIs are being used. Where unmetered supplies have a single NMI allocation, changes to the meter data file can be directly associated with the device and customer. However, when changes to a load are made to an element of a bulk NMI, it is not possible to identify the impacted device(s) without additional information. AGL believes that a further clause is required to ensure that the affected FRMP is advised of the element which has changed and the reasons for that change. AGL suggest a clause such as: <a href="#">(e)(ii) Where changes are made to non-contestable unmetered loads recorded in inventory tables, the MDP must provide supporting information which details the relevant changes.</a>	Metrology Procedure: Part B 13.2.2(c), 13.3.2(c) and 13.5.2(c) require Inventory Table changes to be agreed by affected Registered Participants.
4.	TasNetworks	Substitution Rules		Subclauses contain two (f) clauses. Second (f) to be (g), (g) to be (h).	Sub-clause identification changed.
5.	Energy Queensland	11.5	Accumulation Meter Profiler – Net System Load Profile	Ergon Energy Retail remains of the view that the Net System Load Profile (NSLP) methodology has not been revisited since the market commenced. In our view the NSLP should be calculated at the Transmission Node Identifier rather than distributor jurisdiction.	Clause 11.5 is related to the application of the NSLP to NMI Datastreams – 11.5(c). Calculation of NSLP is detailed in 11.4, which is at Profile Area level.
6.	AGL	12.3	Profile Area five-minute load profile calculation	Agree Although AGL notes its previous comments about the quality of the proposed methodology.	AEMO notes respondent’s support for the proposed change.
7.	Energy Australia	12.3		Noted	AEMO notes respondent’s comment.
8.	Energy Queensland	12.3		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
9.	Evoenergy	12.3		Noted	AEMO notes respondent’s comment.
10.	Flow Power	12.3		The energy inflows are a sum of bulk supply or should it be GLOPOOL because LR will be replaced by GLOPOOL.	Energy inflows for a Profile Area are related to the sum of energy flows at bulk supply TNIs for that Profile Area. As the FRMP role will be populated with GLOPOOL (currently the LR for the DB) for every bulk supply TNI in the NEM, the TNIs for a specific Profile Area must be identified.
11.	Intellihub	12.3		No comment	AEMO notes respondent’s comment.
12.	Origin Energy	12.3		Origin Energy agrees with the proposed calculations.	AEMO notes respondent’s support for the proposed change.
13.	Red and Lumo	12.3		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
14.	Tango Energy	12.3		Agree	AEMO notes respondent’s support for the proposed change.
15.	TasNetworks	12.3		Noted.	AEMO notes respondent’s comment.
16.	Vector AMS	12.3		No comment	AEMO notes respondent’s comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
17.	AGL	12.4	Applying 5-minute profile to 15-min and 30-min metering data for a Profile Area	Agree Although AGL notes its previous comments about the quality of the proposed methodology.	AEMO notes respondent's comment.
18.	Energy Australia	12.4		Noted	AEMO notes respondent's comment.
19.	Energy Queensland	12.4		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
20.	Evoenergy	12.4		Agree	AEMO notes respondent's support for the proposed change.
21.	Flow Power	12.4		See we note that clause 12.4 provide guidance on the calculation on 5 -minute profile regarding the actual metering data but was silent on guidance related to UFE. We submit that AEMO should include guidance on the calculation of UFE to allow participants to setup their systems. In addition, we request confirmation that UFE will not have DLF or TLF included. Can that be specified more clearly.	UFE calculations are described in NER 3.15.4 and 3.15.5. MLF (TLF) is not applied as UFE is contained within a Local Area. Application of DLF is also detailed in these NER clauses.
22.	Intellihub	12.4		No comment	AEMO notes respondent's comment.
23.	Origin Energy	12.4		Noted.	AEMO notes respondent's comment.
24.	Red and Lumo	12.4		Red and Lumo support this change and have no further comment	AEMO notes respondent's support for the proposed change.
25.	Tango Energy	12.4		Agree	AEMO notes respondent's support for the proposed change.
26.	TasNetworks	12.4		Noted.	AEMO notes respondent's comment.
27.	Vector AMS	12.4		No comment	AEMO notes respondent's comment.
28.	Energy Australia	13	Non-contestable unmetered loads	Suggested changes:  1) Amend: 13.1.2 (b) MCs must ensure that <del>a list</del> <i>the inventory table</i> of non-contestable unmetered loads is maintained and kept up to date. Reasoning: Consistency with Metrology Procedure A.  2) Add: <i>(d)(vi) Customer and site details at a sufficient level of detail for the MC to locate the load/device</i> Reasoning: Customer or site details would assist the MC to ensure the physical inventory is kept up to date. This could be provided at a geographical location level or, if suitable, at postcode level (as determined by the MC) as long as it is sufficiently meaningful for the MC to locate the load/device.  3) Clarification requested: We would appreciate clarification on whether AEMO will require any obligations on legacy unmetered loads.	Inventory Table has been reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.  Metrology Procedures provide flexibility to recognise legacy arrangements for non-contestable unmetered loads through the introduction of "calculation methodologies" and "Agreed Loads" in the Draft Determination versions of the Procedures.
29.	Endeavour Energy	13		Clause 13.1.2.d.v: This clause places an obligation on the MC to maintain the on/off time when the 'other' method of control is used. We believe that this obligation is overly too complex for little value. For example, if the device was a BBQ that is controlled by a person pressing a	13.1.2(d) has been revised and refers to existing Inventory Table requirements. Presumably BBQs will be considered flat 24hr loads until industry agrees on a

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				<p>switch prior to usage then it would be difficult to define the on/off time for this load. We suggest that clause 13.1.2.d.v be deleted.</p> <p>Clause 13.1.3.a: we note that S7.4.3.item5 of the NER allows AEMO to classify a connection point as a type 7 metering installation (subject to consultation with the MC and the conditions listed under S7.4.3.item5). For future flexibility we suggest that ‘any Unmetered Device classified by AEMO as a type 7 metering installation’ be added as clause 13.1.3.a.iii. This would allow AEMO to classify a connection point with an unmetered device as a type 7 metering installation without having to go through formal consultation on this procedure.</p> <p>Clause 13.1.5.c: Unmetered Devices can be used as a non-contestable unmetered load however they will not be published in the Load Table. Therefore, for the avoidance of any confusion this clause should be updated to reflect this. We suggest the following wording: “No Registered Participant may use an Unmetered Device as a type 7 market load for which there is no load data in a Load Table”</p>	<p>different approach. Application of On/Off arrangements under 13.3.2 could be applied.</p> <p>Type 7 unmetered loads are contestable. Jurisdictions have only classified the devices listed under 13.1.3(a) as contestable. For a non-contestable unmetered load to be contestable, Jurisdiction would need to classify them as such.</p> <p>Proposed change made.</p>
30.	Energy Queensland	13		<p>Section 13.1.2(c) - Energy Queensland is of the view that this section does not adequately reflect the requirement to keep the physical inventory/device listing up to date. Energy Queensland suggests that the wording be updated to include the concept of keeping the non-contestable device inventory listing current as well as the calculation methodology and agreed load. The term non-contestable device inventory should be added to the Glossary and Framework document.</p> <p>Section 13.1.2(d) - Energy Queensland indicates that this section currently suggests every device is controlled. We suggest that the wording be updated to remove the "at least" part of the first sentence and insert "where applicable" into this sentence, allowing for uncontrolled non-contestable unmetered loads.</p> <p>Section 13.1.2(e) - Energy Queensland is of the view that section 13.1.2(e) does not adequately reflect the requirement to provide to participants the physical inventory/device counts that are stored and used in calculations. We suggest that the wording be updated to include the requirement to have the device counts available for each device when requested.</p> <p>Section 13.1.3 – Energy Queensland is of the view that the definitions are no longer clear as it appears some items are transitional, yet others are end state post rule change. Energy Queensland suggest wording changes to capture end state only.</p> <p>Section 13.3.1 (c) - Energy Queensland is of the view that section 13.3.1 (c) contradicts the introductory statement in section 13.3 which indicates that AEMO will determine the annual consumption. Energy Queensland suggests the wording be updated to accommodate the Metering Coordinator providing the calculation methodology as agreed (albeit approved by AEMO).</p>	<p>13.1.2(d) has been revised and requires Inventory Table to be kept up to date.</p> <p>13.1.2(d) has been revised and refers to existing Inventory Table requirements. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.</p> <p>Inventory Table has been reinstated.</p> <p>13.3 amended to clarify requirements.</p>
31.	Evoenergy	13		Agree with new wording	AEMO notes respondent’s support for the proposed change.
32.	Flow Power	13		Noted.	AEMO notes respondent’s comment.
33.	Intellihub	13		No comment	AEMO notes respondent’s comment.
34.	Red and Lumo	13		Red and Lumo support this change and have no further comment	AEMO notes respondent’s support for the proposed change.

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35.	Tango Energy	13		Agree	AEMO notes respondent's support for the proposed change.
36.	TasNetworks	13		<p>13.1.4(c) With reference also to section 2.3 of the MSATS NMI Procedure, a single market load should only be allocated to an individual NMI where there is only a single device using the unique combination of attributes. If more than one market load device with the same set of attributes, then multiple devices should be added to the same NMI. A NMI for non-contestable unmetered loads may contain single or multiple devices using unique combination of attributes. (i.e. TasNetworks were expecting the existing rules to continue for market loads, and for non-contestable load NMI's allow for 1:1 or 1:many combinations). It appears this clause as is may not encompass the procedure for allocation of NMI's for Type 7 metering installations?</p> <p>13.2.1(a) The words 'or non-contestable unmetered loads' should be removed in the 2nd line as these are now catered for in (b) and (c). If left in (a) then it implies the algorithm <u>must</u> be used for NCONUML NMI's.</p> <p>13.3.1(a) The words 'or non-contestable unmetered loads' should be removed in the 2nd line as these are now catered for in (b) and (c). If left in (a) then it implies the algorithm <u>must</u> be used for NCONUML NMI's.</p> <p>With respect to 13.2.1(c) and 13.3.1(c) as per the definition of Agreed Load this is agreed between the LNSP, FRMP and End User, therefore TasNetworks believe it may be onerous to also have AEMO approve the methodology unless required by the Rules. If required, can AEMO please include how approval is sought? What information is required to be provided? TasNetworks currently detail the methodology in its service and installation rules.</p>	<p>13.1.4(b) makes provision for multiple devices per NMI and 13.1.4(c) makes provision for single device per NMI.</p> <p>Proposed change made.</p> <p>Proposed change made.</p> <p>Calculation methodologies and Agreed Loads are held in the MDP's metering data services database. AEMO needs to approve these to support the audit processes applied to MDP activities.</p>
37.	Vector AMS	13		No comment	AEMO notes respondent's comment.
38.	Origin Energy	13.1.2		<p>Origin Energy suggest adding new clause 13.1.2(f) as follows to ensure that this data is provided in an agreed industry standard format, which we propose must be defined in a B2B Guide (along with other relevant 5MS/GS process impacts/guidance) to ensure clarity and consistency for impacted participants;</p> <p><b>"13.1.2(f) The MC must ensure that details of the calculation methodologies and Agreed Loads are provided when requested to relevant Registered Participants in an agreed industry standard format."</b></p>	Proposed enhancements to the B2B framework should be referred to IEC (and B2BWG on their behalf) to review.
39.	AGL	13.1.2(b)	Non-contestable unmetered loads	<p>It is unclear what the procedures what information would be required for a 'list' of non-contestable unmetered supplies. AGL would prefer that the data elements be specified in a file format so that there is a consistent approach by all MCs (DNSPs) which would allow lists to be uploaded and properly managed. It is expected that this list should contain information relating to the</p> <ul style="list-style-type: none"> <li>• Customer;</li> <li>• connection point;</li> <li>• device Identifier;</li> <li>• device load and profile (which may be linked via a device ID);</li> <li>• Connection location;</li> </ul>	13.1.2(d) has been revised and refers to existing Inventory Table requirements. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.

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				<p>Device Identifiers should be an agreed identifier and load / load profile must be agreed between parties prior to energisation.</p> <p>This list would provide the inventory of what is connected, where it is connected, and who the customer is.</p>	
40.	AGL	13.1.2(d)	Non-contestable unmetered loads	<p>AGL does not believe that this information is sufficient.</p> <p>This table / information should contain the:</p> <ul style="list-style-type: none"> <li>• load of the device;</li> <li>• load profile;</li> <li>• location; and</li> <li>• customer;</li> </ul> <p>The customer needs to be identified for each device as multiple customers can have similar devices (e.g. CATV Power supplies, Council Sprinkler systems etc.) and the device identifier may be the same, but agreed load may be different, due to different operating requirements or different operating environments (e.g. higher ambient temperatures).</p>	13.1.2(d) has been revised and refers to existing Inventory Table requirements. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.
41.	AGL	13.1.2(e)	Non-contestable unmetered loads	<p>AGL does not believe that this obligation is adequate.</p> <p>AGL believes that all calculation methodologies should be agreed with the FRMP prior to energisation as well as being made available to the FRMP on request, or even provided annually to ensure load information is consistent and reconciled.</p> <p>AGL does not believe that the clause should identify relevant Registered Participants (as this could include all Retailers in a distribution area, as a result of the impact on UFE) but rather the FRMP.</p> <p>The agreed load calculation methodologies would provide commercial information which would not be public.</p> <p>AGL does consider that this information could be reviewable by AEMO, if requested by a participant, to ensure that the arrangements are not detrimental to other participants through UFE, although AGL notes that this issue is no different to MDPs adjusting meter data and not advising the market.</p> <p>AGL suggests:</p> <p>(e) The MC must ensure that details of the calculation methodologies and Agreed Load <a href="#">are agreed prior to energisation and are</a> provided to relevant <del>Registered Participants</del> <a href="#">FRMP</a> when requested and <a href="#">annually in any case</a>.</p>	<p>Metrology Procedure: Part B 13.2.2(c), 13.3.2(c) and 13.5.2(c) require Inventory Table changes to be agreed by affected Registered Participants.</p> <p>Inventory Table details contemplated in Metrology Procedures are related to individual NMIs. Only the parties directly related to the individual NMI are the affected Participants.</p> <p>Calculation methodologies and Agreed Loads are held in the MDP’s metering dataservices database. AEMO needs to approve these to support the audit processes applied to MDP activities.</p> <p>13.1.2(e) wording revised.</p>
42.	Origin Energy	13.1.3		<p>Origin Energy suggest addition of new clause 13.1.3 (f) as given below in order to ensure LNSP’s create non-contestable unmetered devices at the level of granularity to enable them to create devices and provide meter reads which facilitate the accurate generation of Network changes which can be used by Retailers and LNSP’s to be able to service and bill customers and reconcile network charges accordingly in an end to end manner as per standard MSATS B2B and B2M processes that are currently used to bill and reconcile other type of contestable sites”</p>	Refer to response to Metrology Procedure: Part A Item 27.

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				<p>“13.1.3 (f) If a non-contestable unmetered load NMI contains different Unmetered Device types that have varying load profiles and network tariff rates then each load must be uniquely identifiable taking into consideration the Device Type, the load profile of that device and the network tariff rate for the consumption from that device type.”</p>	
43.	AGL	13.1.4	Non-contestable unmetered loads	<p>AGL suggests that a further clause is required to ensure each device is individually identified and the connection location registered.</p> <p><u>(d) Where an unmetered load NMI contains a non-contestable unmetered load of different types, the MC must ensure that there is supporting information identifying the different devices, device loads, load profiles, connection locations and customer.</u></p>	<p>13.1.2(d) has been revised and refers to existing Inventory Table requirements. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.</p>
44.	AGL	13.2.1, 13.3.1	Non-contestable unmetered loads	<p>(b) AGL agrees</p> <p>(c) AGL does not agree with clause (c), which requires an AEMO approval.</p> <p>The unmetered load calculations are based on a variety of issues, commercial and technical, and may be adjusted over time as more information is obtained, which would make an approval process more time consuming and unnecessary to the outcome.</p> <p>AGL does understand that the calculation should not impact other participants through UFE but considers that this is minor and does not warrant AEMO approval.</p> <p>AGL accepts that AEMO may review the calculation on request of another participant to ensure that the calculation is not detrimental to other participants, but that should be the extent of the response.</p> <p>As AGL has noted, the procedures have not dealt with changes to meter data (e.g. as a result of incorrect CT ratios) and the impact on UFE as a result of these changes, which AGL would consider to be a more substantial problem and warrant an appropriate processes.</p> <p>AGL has suggested that where devices are being rolled out nationally (e.g. NBN, Telstra) that it would be useful for a small party chaired by AEMO to establish the load and load profile for these devices so that the load and load profile can be consistently applied by networks and retailers across the NEM in an efficient manner</p>	<p>AEMO notes respondent’s support for the proposed change.</p> <p>Calculation methodologies and Agreed Loads are held in the MDP’s metering dataservices database. AEMO needs to approve these to support the audit processes applied to MDP activities.</p> <p>AEMO notes respondent’s comment.</p>
45.	Origin Energy	13.2.2	Inventory Table	<p>Origin Energy suggest the following additions/changes to 13.2.2 as highlighted below;</p> <ul style="list-style-type: none"> <li>Include new clause 13.2.2 (i.1) to include the actual Unmetered Device Load:  <p>“13.2.2 (xi) The Unmetered Device Load”</p> </li> <li>Include new clauses to 13.2.2 as given below to ensure that appropriately time sliced data is provided to Retailers to enable us to bill customers correctly especially when retrospective changes occur to the Unmetered Device Load and/or to the number of Unmetered Devices.  <p>“13.2.2 (vii.1) The Effective Start Date of number of such Unmetered Devices installed                      13.2.2 (vii.2) The Effective End Date of number of such Unmetered Devices installed                      13.2.2 (xi.1) The Effective Start Date of Unmetered Device Load of such Unmetered Devices installed                      13.2.2 (xi.2) The Effective End Date of Unmetered Device Load of such Unmetered Devices installed</p> </li> </ul>	<p>Included in revised 13.1.2(d).</p> <p>The start and end dates for Inventory Table Records are already covered by 13.2.2(a)(viii) and (ix).</p>

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				<p><b>13.2.2 (xi.3) The End use Customer Details of such Unmetered Devices installed</b></p> <ul style="list-style-type: none"> <li>Modify existing clause 3.2.2(f) as highlighted below to ensure that the data is provided in an agreed industry standard format, which we propose must be defined in a 5MS/GS B2B Guide (along with other relevant 5MS/GS process impacts/guidance) to ensure clarity and consistency for impacted participants;</li> </ul> <p>“13.2.2(f) The MC must provide the Inventory Table to relevant Registered Participants when requested <b>in an agreed industry standard format.</b>”</p> <ul style="list-style-type: none"> <li>Add new clause 3.2.2(g) as highlighted below to ensure that the data is published in MSATS.</li> </ul> <p><b>“13.2.2(g) The MC must ensure that MSATS is updated to reflect the details in the Inventory Table as soon as any material changes are identified”</b></p>	<p>Proposed enhancements to the B2B framework should be referred to IEC (and B2BWG on their behalf) to review.</p> <p>Inventory Tables will be held in MDP’s metering data services database.</p>
46.	AGL	Various	Inclusion of the word “affected”	<p>AGL notes that in multiple clauses the word affected has been included where MDPs make data substitutions. However, as previously raised, a material substitution (e.g. incorrect CT Ratios) can impact the UFE calculation and all affected retailers.</p> <p>While AGL generally do not see value in having multiple parties (e.g. 50 retailers) advised every time a substitution is made, where a material change is made which can affect UFE, AGL does however consider that there needs to be a process to ensure AEMO is advised of such changes, so that there can be a consideration of the impact on settlement of UFE. Further, while individual adjustments may not be material in each individual case, the impact of all the adjustments in a period could be material and warrant a revision.</p> <p>AGL suggests that annually a revision is undertaken with a longer period to deal with all these minor changes.</p> <p>AGL also suggests that further analysis of managing these outcomes is needed, particularly those which occur outside of regular settlement cycles.</p>	<p>Metering data Substitutions contemplated in Metrology Procedures are related individual NMIs. Only the parties directly related to the individual NMI are the affected Participants.</p> <p>Development of processes to deal with long-term metering installation corrections should be included in future reconciliation workshops proposed in MSATS Procedures: MDM Procedure Item 42</p>
47.	Evoenergy	Various		<p>AEMO consultation response was:</p> <p><i>Consistently added “affected” to clarify that the ENLR (where appropriate) is to be notified.</i></p> <p>Also note that Stanwell commented with:</p> <p><i>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).</i></p> <p>“Affected” has not been added throughout as noted by AEMO, so still some ambiguity over interpretation, especially around notifying or getting agreements for ‘Agreed method’ types or Type 18 – Alternative. Adding affected or where applicable would remove that ambiguity.</p>	<p>ENLR “(where appropriate)” added to document.</p>
48.	Energy Queensland	Various		<p>Energy Queensland offers no comment on this change.</p>	<p>AEMO notes respondent’s comment.</p>
49.	Flow Power	Various		<p>Noted.</p>	<p>AEMO notes respondent’s comment.</p>
50.	Intellihub	Various		<p>No comment</p>	<p>AEMO notes respondent’s comment.</p>
51.	Origin Energy	Various		<p>Noted</p>	<p>AEMO notes respondent’s comment.</p>

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52.	Red and Lumo	Various		Red and Lumo support this change and have no further comment	AEMO notes respondent's support for the proposed change.
53.	Tango Energy	Various		Agree	AEMO notes respondent's support for the proposed change.
54.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
55.	Vector AMS	Various		Agreed	AEMO notes respondent's support for the proposed change.

**Table 3 – MSATS Procedures: MDM Procedures**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	3.2.10	R30 – NSL Freeze	Noted	AEMO notes respondent’s comment.
2.	AGL	3.2.15, 3.2.17	Unaccounted for energy (UFE)	<p>Noted</p> <p>However, the description of the calculation does not accommodate any non-market generation flows. Given the very high levels of Solar generation in some areas, the exclusion of this quantity from the calculation may distort the UFE calculation.</p> <p>Given that AEMO is receiving all meter data from 1 July, AGL suggest that in a small confined area (AGL would suggest Victoria due to the installation of AMI metering), that a calculation of UFE be undertaken including and excluding the solar generation to determine if the solar exclusion is impacting UFE.</p> <p>AGL also suggest that for Victoria (as a result of the AMI metering) that UFE be first calculated at a 30-minute level prior to the profiling of the 30 min data to 5-minute data., to determine what level of influence the profiling is having on the UFE calculations.</p> <p>Again, this could be undertaken in the same area.</p> <p>AGL believes that this greater understanding will prove beneficial when considering UFE impacts outside Victoria, where the greater use of accumulation metering and profiling will occur.</p>	<p>AEMO notes respondent’s comment.</p> <p>Non-contestable unmetered load energy flows are included in “load energy flows”. 3.2.15 and 3.2.17 Step 11 to be changed to “known load energy flows” to clarify that non-contestable unmetered loads are accommodated.</p> <p>AEMO to consider undertaking alternative UFE calculations that are defined through transition and readiness activities.</p>
3.	Energy Queensland	3.2.15, 3.2.17		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
4.	Evoenergy	3.2.15, 3.2.17		Noted	AEMO notes respondent’s comment.
5.	Flow Power	3.2.15, 3.2.17		Noted	AEMO notes respondent’s comment.
6.	Intellihub	3.2.15, 3.2.17		No comment	AEMO notes respondent’s comment.
7.	Origin Energy	3.2.15, 3.2.17		Noted	AEMO notes respondent’s comment.
8.	Red and Lumo	3.2.15, 3.2.17		Red and Lumo have no comment on this change	AEMO notes respondent’s comment.
9.	Tango Energy	3.2.15, 3.2.17		Agree	AEMO notes respondent’s support for the proposed change.
10.	TasNetworks	3.2.15, 3.2.17		<p>3.2.15 Noted.</p> <p>3.2.17 Noted.</p>	AEMO notes respondent’s comment.
11.	Vector AMS	3.2.15, 3.2.17		No Comment	AEMO notes respondent’s comment.
12.	AGL	5.2	MDP Obligations	Noted	AEMO notes respondent’s comment.
13.	Energy Queensland	5.2		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
14.	Evoenergy	5.2		Why is point 5.2(c) in this document? Should be included in the CATS Procedures as it relates to updating MSATS, and need to define clearer rules.	5.2(c) retained to complete MDP data load requirements.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Propose add to CATS section 4 new 4.12.5 (see proposed wording in CATS procedures response), and exclude from this document.  Why does Datastream now have a capital S? No other procedure has this. Is intent for DataStreamType to be referred to as one word?	The DataStreamType Codes in MSATS and MDM Procedure are 'I', 'C', 'P' and 'N', as defined in Standing Data for MSATS document (Table 12) – Procedure Package 3.  Space removed between DataStream and Type. Datastream Suffix corrected.
15.	Flow Power	5.2		Flow power understanding is that AEMO system will reject files with the same timestamp therefore we suggest that even if one interval in the read file is changed, the file should have a different timestamp as with 5-minute reads there will be 288 intervals. Because for our extremely large customers one interval can make a big \$ value difference, especially if it happens at the time of a high price event.	5.2 is related to non-interval metering data. The requirement to provide metering data with a different date and timestamp when metering data changes is prescribed MDFF Specification section 4.4 – refer to definition of UpdateDateTime field.
16.	Intellihub	5.2		No comment	AEMO notes respondent's comment.
17.	Origin Energy	5.2		Noted	AEMO notes respondent's comment.
18.	Red and Lumo	5.2		Red and Lumo support this change and have no further comment	AEMO notes respondent's comment.
19.	Tango Energy	5.2		Agree	AEMO notes respondent's support for the proposed change.
20.	TasNetworks	5.2		Noted.	AEMO notes respondent's comment.
21.	Vector AMS	5.2		Agreed	AEMO notes respondent's support for the proposed change.
22.	AGL	6	LOAD DATA – INTERVAL NMI DATASTREAM	Noted	AEMO notes respondent's comment.
23.	AusNet Services	6		AusNet Services considers allowing participants to retain net ("N") datastream arrangements after 1 July 2021 would in the long term increase our systems costs, in needing to maintain additional functionality that could be made obsolete. The proposal to allow net ("N") datastream arrangements until a metering alteration would effectively embedded the need for dual operating capabilities for decades.	This section is related to DataStreamType = N, i.e. where an interval Datastream is NOT used in settlements. This is not related to Net Datastreams.  The DataStreamType Codes in MSATS and MDM Procedure are 'I', 'C', 'P' and 'N', as defined in Standing Data for MSATS document (Table 12) – Procedure Package 3.
24.	Energy Queensland	6		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
25.	Evoenergy	6		Why does Datastream now have a capital S? No other procedure has this. Is intent for DataStreamType to be referred to as one word?  Why is point (b) in this document? Should be in the CATS Procedures, under section 4, as it relates to updating MSATS. Delete from this document.  "N" is not a current allowed value. Please provide a definition and indicate where this is listed in current published rules.	Space removed between DataStream and Type. Datastream Suffix corrected.  6.2(b) retained to complete MDP data load requirements.  The DataStreamType Codes in MSATS and MDM Procedure are 'I', 'C', 'P' and 'N', as defined in Standing Data for MSATS document (Table 12) – Procedure Package 3.
26.	Flow Power	6		Noted	AEMO notes respondent's comment.
27.	Intellihub	6		No comment	AEMO notes respondent's comment.
28.	Origin Energy	6		Noted	AEMO notes respondent's comment.
29.	Red and Lumo	6		Red and Lumo support this change and have no further comment	AEMO notes respondent's support for the proposed change.
30.	Tango Energy	6		Agree	AEMO notes respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE																
31.	TasNetworks	6		Noted.	AEMO notes respondent's comment.																
32.	Vector AMS	6		<p>6.2.(b)(ii) indicates a CATS DataStream Type of 'N'. Is this a new code? Standing Data for MSATS states:</p> <p><b>Table 12 - Valid Datastream Type Codes</b></p> <table border="1"> <thead> <tr> <th>Datastreamtype</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>Interval</td> </tr> <tr> <td>C</td> <td>Basic</td> </tr> <tr> <td>P</td> <td>Profile Data</td> </tr> <tr> <td>1</td> <td>Non-Market Active Import</td> </tr> <tr> <td>2</td> <td>Non-Market Active</td> </tr> <tr> <td>3</td> <td>Non-Market Reactive Import</td> </tr> <tr> <td>4</td> <td>Non-Market Reactive</td> </tr> </tbody> </table>	Datastreamtype	Description	I	Interval	C	Basic	P	Profile Data	1	Non-Market Active Import	2	Non-Market Active	3	Non-Market Reactive Import	4	Non-Market Reactive	The DataStreamType Codes in MSATS and MDM Procedure are 'I', 'C', 'P' and 'N', as defined in Standing Data for MSATS document (Table 12) – Procedure Package 3.
Datastreamtype	Description																				
I	Interval																				
C	Basic																				
P	Profile Data																				
1	Non-Market Active Import																				
2	Non-Market Active																				
3	Non-Market Reactive Import																				
4	Non-Market Reactive																				
33.	AGL	9.11-9.14	MDM RM Reports	AGL notes the new reports, but does question why the MC does not have access to these reports (as the MC has the obligation to ensure the MDP is undertaking their work) or the Retailer where the retailer appoints the MC (as the retailer has both a contractual and settlement interest) in this data.	<p>FRMP added as a recipient of RM37, RM38 and RM39.</p> <p>FRMP is already a recipient of RM43.</p>																
34.	Energy Queensland	9.11-9.14		Energy Queensland does not agree that the NMI or Sequence Number should be mandatory for RM38 – DataStream Missing Data Report or RM39 – Mismatch Data Report. We suggest that the wording be updated from "must" to "may".	Last sequence number removed from "Information that must be submitted with report request".																
35.	Evoenergy	9.11-9.14		Noted	AEMO notes respondent's comment.																
36.	Flow Power	9.11-9.14		Noted	AEMO notes respondent's comment.																
37.	Intellihub	9.11-9.14		No comment	AEMO notes respondent's comment.																
38.	Origin Energy	9.11-9.14		<p>1) Can AEMO please confirm that the MDM RM43 – UFE Values by Profile Area report will include the following data fields? If not, can the 3 fields listed below be included in this report to assist Retailers in identifying Settlement Run Type and Settlement Period for the UFE?</p> <p>&lt;FromDate&gt;0001-09-23&lt;/FromDate&gt;                  &lt;ToDate&gt;0001-09-30&lt;/ToDate&gt;                  &lt;SettlementRun&gt;PRELIMINARY&lt;/SettlementRun&gt;</p> <p>2) Can AEMO please include the UFE Percentage for each Time Interval field in the MDM RM43 – UFE Values by Profile Area report as per details below to assist Retailers with consuming this data?</p> <p>UFE Percentage for each Time Interval (in S999.99999 format, where S is the sign) – The Percentage of Unaccounted for Energy for each time Interval allocated to the specified FRMP for the TNI and Profile area for each settlement run.</p> <p>3) Can AEMO please include a definition and data format of any new fields being specified in the MDM procedures like UFE Time Intervals?</p>	<p>Settlements Case includes these dates.</p> <p>RM43 report now provides a UFE factor that can be applied to NMI level metering data to obtain UFEA.</p> <p>Changes to the RM43 report and the development of other RM reports to support reconciliation will be disseminated through the transition and readiness activities and reconciliation workshops.</p> <p>UFE Time Interval removed from RM43 report.</p>																

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
39.	PlusES	9.11-9.14		<p>PlusES is of the understanding from working groups and communications that AEMO was to remove the requirement to include the Last Sequence Number in RM Report Requests.</p> <p>PlusES proposes the Last Sequence Number to be removed as required information for the RM Report Requests. The reports are as follows:</p> <ul style="list-style-type: none"> <li>• RM 9</li> <li>• RM 11</li> <li>• RM 13</li> <li>• RM 16</li> <li>• RM 17</li> <li>• RM 20</li> <li>• RM 21</li> <li>• RM 27</li> <li>• RM 22</li> <li>• RM 37</li> <li>• RM 38</li> <li>• RM 39</li> </ul>	<p>As proposed at SWG Meeting 13, AEMO will produce complete RM Reports in response to a single request from a Participant. However, since Last Sequence Number is a mandatory report input field for existing RM Reports it must be populated.</p> <p>AEMO recommended that, in order to only send one report request, Participants may need to remove automation in their systems that currently facilitates requesting the same reports with different Last Sequence Numbers.</p> <p>Report results returned to Participants may include multiple MDM report response files where the number of rows exceeds the max row count. To distinguish when a full set of data has been sent, a blank file will be sent when the number of results is equal to the max row count for an individual file.</p> <p>AEMO expects that there will be further development of RM Reports through SWG and Readiness activities where the detailed design for these developments will remove the mandatory requirement to include Last Sequence Numbers from request inputs.</p> <p>Last Sequence Number removed from RM37, RM38 and RM39.</p>
40.	Tango Energy	9.11-9.14		Agree	AEMO notes respondent's support for the proposed change.
41.	TasNetworks	9.11-9.14		The HLIA details that RM37, 38 and 39 reports will be pushed to participants. Can AEMO confirm that eligible participants will now be able to submit a report request for such reports in addition to them being pushed by AEMO?	Reports will also be available via normal request methods.
42.	AGL	9.14	RM43	<p>AGL suggests that the RM 43 report could be enhanced by having the assigned percentage added to the information. In order to reconcile this value, additional information will be required, which should be included in this report</p> <p>For example, the UFE is assigned based on the percentage of usage by our customers by FRMP/Profile area. In order reconcile this value we need to first work out the percentage used by our customers, and then ensure that the UFE assigned to us is the same percentage. We require 2 additional pieces of information to perform this;</p> <ul style="list-style-type: none"> <li>• Total injections by profile area</li> <li>• Total UFE by profile area</li> </ul> <p>Potentially this could be 2 new reports with similar information to the RM43 report.</p> <p>Also, in the Reconciliation workshop a few months ago, there was discussion about adding additional data to the RM27 - i.e. The basic read in which the profile was set.</p> <p>AGL is unclear on whether this decision has been taken. if not, AGL would propose that this be implemented. It was noted by other retailers that the more information the better for our reconciliation.</p> <p>Overall, AGL would like to suggest that a workshop be held with the retailer reconciliation teams as part of the development of these reports and any others which may be required) to ensure all necessary data is being provided for efficient settlement and reconciliation.</p>	<p>RM43 report now provides a UFE factor that can be applied to NMI level metering data to obtain UFEA.</p> <p>Changes to the RM43 report and the development of other RM reports to support reconciliation will be disseminated through the transition and readiness activities and reconciliation workshops.</p> <p>A project Change Request has been raised to add MDP data/time to the RM27 report.</p>

**Table 4 – MSATS Procedures: CATS Procedure Principles and Obligations**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	2.3	Local Network Service Provider	AGL notes this clause, but questions whether is this adequate as an LNSP (by definition) also includes an ENM (see Glossary 2.10).  AGL also notes the amendment in cl 2.10(g).	AEMO notes while the ENM may take on the role of LNSP in MSATS, then ENM also has its own obligations within the CATS procedures.
2.	Energy Australia	2.3		Noted	AEMO notes respondent’s comment.
3.	Energy Queensland	2.3		Section 2.3 (b) - Energy Queensland seeks confirmation why POOLXXX is discussed in this paragraph when it does not apply to LARGE, SMALL or NCONUML NMIs. This is covered in the MSATS Procedure: WIGS document.	AEMO advised it is in this section as WIGS does not have an obligations section for the roles. WIGS needs to be read in conjunction with CATS, as WIGS only provides the actual CR’s and none of the information that is supplied in CATS.
4.	Evoenergy	2.3		Agree, wording is clear and concise	AEMO notes respondent’s support for the proposed change.
5.	Flow Power	2.3		Noted	AEMO notes respondent’s comment.
6.	Intellihub	2.3		No comment	AEMO notes respondent’s comment.
7.	Origin Energy	2.3		Noted	AEMO notes respondent’s comment.
8.	Red and Lumo	2.3		Red and Lumo note that AEMO is retaining the reference to LR instead of ENLR or GLOPOOL. We believe that there needs to be a clear delineation of where LR refers to ENLR and where it refers to GLOPOOL rather than amending some reference tables to ENLR when MSATS will continue to present to LR (similar to the changes under Power of Choice of RP = MC)	AEMO as suggested AEMO have reverted everything back to LR as the field name is not changing. 2.3 (b) wording has remained the same but 2.10 (g) wording has been amended. Clause 4.4 has been reworded  Where ENLR is in any tables this has also been referred back to LR.
9.	Tango Energy	2.3		Please confirm if there are now two distinct roles; LR and ENLR. If not and the LR field also applies to the ENLR, then only the LR needs to be referenced throughout the Procedures. I.e.  LR = GLOPOOL or POOLXXX or FRMP of the Parent NMI.  Suggest all Objection and Status Notification columns to be titled LR.  Also, for Change Requests not related to an embedded network and where the LR does not receive any notifications or have the ability to object, it is suggested these columns could be removed from these Change Requests.	Refer to responses no 8.  Columns have not been removed
10.	TasNetworks	2.3		Noted.	AEMO notes respondent’s comment.
11.	Vector AMS	2.3		Agreed	AEMO notes respondent’s support for the proposed change.
12.	AGL	3.3	Transaction Types	Possible typo in amendment. Is there a section 0 ?	AEMO: corrected
13.	AGL	Various	Reference to NMI Procedures Appendix E	Noted	AEMO notes respondent’s comment.
14.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
15.	Evoenergy	Various		Noted	AEMO notes respondent’s comment.
16.	Flow Power	Various		Noted	AEMO notes respondent’s comment.
17.	Intellihub	Various		No comment	AEMO notes respondent’s comment.
18.	Origin Energy	Various		Refer to NMI Procedure. Noted	AEMO notes respondent’s comment.
19.	Tango Energy	Various		Agree	AEMO notes respondent’s support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
20.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
21.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
22.	Vector AMS	Various		Agreed	AEMO notes respondent's support for the proposed change.
23.	Evoenergy	4.1	New wording added	Noted to refer to CATS	AEMO notes respondent's comment.
24.	AGL	4.4	Use of LR/ENLR within this Procedure	AGL notes the proposed change, but as a LR will be GLOPOOL / POOLXXX then there is no specific participant to object to a change or receive notification of a change.  As such, AGL suggests for clarity that the tables should only identify the activities which would only affect an ENLR	AEMO: clause reworded also refer to response in No 8.
25.	Energy Australia	4.4		Noted	AEMO notes respondent's comment.
26.	Energy Queensland	4.4		Energy Queensland notes in section 4.4 an additional "is" has been left in the second sentence which requires removal.	AEMO: clause has been reworded
27.	Evoenergy	4.4		This sentence does not read well "Where an ENLR is has no role in the Change Request, the relevant field specifies LR."  Proposed reword to: <i>If an ENLR has no role in the Change Request, the relevant field specifies LR.</i>	AEMO: clause has been reworded
28.	Flow Power	4.4		Noted	AEMO notes respondent's comment.
29.	Intellihub	4.4		No comment	AEMO notes respondent's comment.
30.	Origin Energy	4.4		Noted	AEMO notes respondent's comment.
31.	PlusES	4.4		PlusES note in what circumstances will the LR be relevant if not meaning ENLR in future?  What is the value-add of populating a default mandatory field in the Market?	AEMO: AEMO require the population of this field for its settlement processes.
32.	Red and Lumo	4.4		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
33.	Tango Energy	4.4		Suggest the following change: <b>4.4. Use of LR within this Procedure</b>  The Local Retailer (LR) field can specify either LR or the Embedded Network Local Retailer (ENLR).  Where the Change Request is associated with an embedded network, the LR as the ENLR will receive Change Request Status Notifications. Objection Rules may also apply allowing the LR as the ENLR to lodge an objection.  For all other Change Requests the LR field in both the Objection Rules and Change Request Status Notifications Rules tables would not be populated or removed as suggested above.	AEMO: clause has been reworded using Tango's wording
34.	TasNetworks	4.4		Noted. Remove word 'is' after ENLR in the 3rd line.	AEMO: clause has been reworded
35.	Vector AMS	4.4		Noted	AEMO notes respondent's comment.
36.	AGL	4.10	NMI Classification Codes	Noted  We also note that this CATS change is not scheduled to go live until Feb 2022, and consider this should be live Dec 20.	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
37.	CitiPower Powercor	4.10		<p>Use of mnemonic classification codes should still define these mnemonic classifications to include Small or Large.</p> <p>The NMI Classification has previously been used to identify small or large customers for the determination of retail contract obligations and the boundary for contestable metering within Victoria.</p> <p>However the introduction of the mnemonic NMI Classification code of NCONUML for “Non-contestable unmetered load” risks the small or large status not being easily identified. This will occur where such loads are being connected to both small or large NMI’s (Small, where an single agreed load UMS for a single customer occurs) or (Large, where a number of agreed load NC-UMS are allocated via a load table and inventory table to a single NMI for an enterprise customer like Vic Roads, Telstra or Melbourne City Council etc).</p> <p>It would be more informative to re-define the mnemonic NMI Classification codes to be:</p> <p>NCUML – L for Non Contestable Un-metered Load – Large  NCUML – S for Non Contestable Un-metered Load – Small</p> <p>It is assumed all the other special mnemonic NMI Classification codes such as “Bulk” &amp; “Generator” are either able to be defined as Large “by definition”, or do not warrant a Large / Small option such as “Sample”.</p> <p>CitiPower Powercor also proposes for consistency that the new meter type code for non-contestable unmetered loads be updated to NCUML.</p>	<p>AEMO doesn’t consider any value would be added splitting them into small and large. As these sites are not contestable and the contracts will only be with the local retailer the need to know whether the site is small or large is not required.</p> <p>If these sites become contestable in the future then they will move into the same category as the unmetered contestable loads today.</p>
38.	Energy Australia	4.10		<p>Clarifications sought:</p> <p>Will LARGE and SMALL classifications be applied to the NCONUML classification?</p> <p>NREG:</p> <p>We understand this is only intended to apply to generators above &gt;5MW. Can AEMO please confirm and provide specific examples of scenarios where NREG would apply?</p> <p>Also refer to comments on Appendix E in the NMI Allocation Procedure.</p>	<p>AEMO: refer to response in 37</p> <p>The allocation of NREG will apply to all generation units that do not require to be registered under the NER and section 2 of AEMO’s Generator Exemption and Classifications Guide.</p> <p>Definition of NREG has be reworded for more clarity.</p>
39.	Endeavour Energy	4.10		<p>Clause 4.10: We note that new NMI Classification Codes of DWHOLSAL and NREG have been introduced and the existing code of GENERATR has been redefined. However it is not clear who is expected to apply these codes, whether it is the LNSP or AEMO.</p> <p>With regards to the DWHOLSAL, NREG and GENERATR codes, the definition of these are dependent on parties, not related to the LNSP, deciding how they classify their generating unit or how they purchase energy. We believe that AEMO would become aware of these decisions because AEMO is involved in the registration/classification when such decisions are made. Therefore, for efficiency we expect that AEMO would be responsible for managing and updating these new NMI Classification Codes.</p> <p>To remove any confusion we suggest that clauses 2.9 be updated to clearly define AEMO being responsible for updating the NMI Classification Code of DWHOLSAL, NREG and GENERATR.</p>	<p>AEMO: new clause 2.9 (K) has been added to clarify that AEMO will manage the updating of NMI Classifications where the site has gone through a registration process and AEMO believes the NMI Classification is incorrect.</p>
40.	Energy Queensland	4.10		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
41.	Evoenergy	4.10		Noted	AEMO notes respondent’s comment.
42.	Flow Power	4.10		Noted	AEMO notes respondent’s comment.
43.	Intellihub	4.10		No comment	AEMO notes respondent’s comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT		AEMO RESPONSE
44.	Origin Energy	4.10		<p>BULK Connection point where a transmission network connects to a distribution network - also termed 'Bulk Supply Point'</p>	<p>Noted</p>	<p>AEMO: Definition of NREG has been reworded for more clarity. An SGA is a participant classification for market generating units, these generating units themselves do not need to be registered. AEMO believe that when participants are applying for an exemption they should be referring to AEMO's Generator Exemption and Classification Guide and it doesn't need to be repeated in the CATS Procedures.</p> <p>AEMO will review the Generator Exemption and Classification Guide to see if updating is required.</p>
				<p>NREG Connection point associated with a non-registered embedded generator, i.e. a generating unit that is not classified by a Market Generator, but may be classified by a Small Generation Aggregator as a market generating unit.</p>	<p>Origin's suggests that the current wording is ambiguous and that the wording should be:  <b>"Connection point associated with a non-registered embedded generator, i.e. a generating unit that is not classified as a Market Generator but may be classified as a Small Generation Aggregator as an off market generating unit."</b></p> <p>In addition, AEMO should provide the following additional clarification:  <b>"In order to be non-registered, the total output has to be &lt; 5MW, or &lt;30 and &gt; 5MW."</b></p> <p>Origin has taken this position based on referring to the "GUIDE TO GENERATOR EXEMPTIONS" V3.1, Effective Date 20 November 2018, produced by AEMO in which the classification of generating units and the exemption from certain categories is detailed below:  <i>"Exemption categories</i>  <i>Exemptions from the requirement to register as a Generator may be granted based either on the characteristics of the generating system (nature, size, type and operation), or on the registration of an intermediary as the Generator, as follows:</i>  <i>Standing exemptions are available to persons who own, operate or control a generating system with a nameplate rating of less than 5 MW when fully connected to a transmission or distribution system.</i>  <i>Applications for exemption may be made by persons who own, operate or control generating systems (other than those that include battery storage facilities) with a nameplate rating of at least 5 MW but less than 30 MW.</i>  <i>( c ) Applications for exemption may be made by persons who own, operate or control generating systems with a nameplate rating over 30 MW:</i></p>	

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT		AEMO RESPONSE
					<p>(i)if the purpose for which exemption is sought is the provision of unscheduled reserve in accordance with an unscheduled reserve contract; or</p> <p>(ii) for existing generating systems in exceptional circumstances at AEMO's absolute discretion.</p> <p>(d)Temporary notifiable exemptions may be available to persons who own, operate or control generating systems to which no other exemptions apply, during initial testing and commissioning where the aggregate nameplate rating of the connected generating units is less than 5 MW at any time.</p> <p>( e )Applications for exemption must be made by persons who own, operate or control a generating system, but have proposed an eligible person (an intermediary) to be registered as a Generator for that generating system on their behalf."</p> <p>Origin notes that the guide has not been updated to cater for the NREG NMI classification and would request that AEMO does so.</p>	
				XBOUN DRY	<p>Connection point where a distribution network connects to another distribution network</p> <p>Origin supports the views presented in the notes from the XBoundary workshop held on 07/08:-</p> <ol style="list-style-type: none"> <li>1. Scenario 4: HV feeder DB-DB cross boundary supplies to be metered by 01/07/2012 (once metered to go to scenario 3)</li> <li>2. Scenario 4a: HV feeder DB-DB cross boundary supplies to be metered by 01/07/2012</li> <li>3. Scenarios 4b, 5, 6 meter data to be provided to NSP (1) to allow accurate UFE calculation</li> </ol>	
45.	Red and Lumo	4.10		Red and Lumo have no comment on this change.		AEMO notes respondent's comment.
46.	Tango Energy	4.10		Agree		AEMO notes respondent's support for the proposed change.
47.	TasNetworks	4.10		Is it expected that the LNSP will assign a classification of NREG or will this code also be assigned by AEMO, and if so will this be done via a CR5101? Is there any further guidance as to what loads shall be classified as NREG?		<p>AEMO: as most of these will have a standing exemption on them and will not need to go through a registration process AEMO will not be privy to them and will not know that these are to be classified as NREG. Participants will need to liaise with each other to ensure the correct NMI Classification is applied.</p> <p>Participants should refer to AEMO's Generator Exemption and Classification Guide. If AEMO become aware that the classification is incorrect they will raise a change request and correct it.</p>

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
48.	United Energy	4.10		<p>Use of mnemonic classification codes should still define these mnemonic classifications to include Small or Large.</p> <p>The NMI Classification has previously been used to identify small or large customers for the determination of retail contract obligations and the boundary for contestable metering within Victoria.</p> <p>However the introduction of the mnemonic NMI Classification code of NCONUML for “Non-contestable unmetered load” risks the small or large status not being easily identified. This will occur where such loads are being connected to both small or large NMI’s (Small, where an single agreed load UMS for a single customer occurs) or (Large, where a number of agreed load NC-UMS are allocated via a load table and inventory table to a single NMI for an enterprise customer like Vic Roads, Telstra or Melbourne City Council etc).</p> <p>It would be more informative to re-define the mnemonic NMI Classification codes to be:</p> <p>NCUML – L for Non Contestable Un-metered Load – Large  NCUML – S for Non Contestable Un-metered Load – Small</p> <p>It is assumed all the other special mnemonic NMI Classification codes such as “Bulk” &amp; “Generator” are either able to be defined as Large “by definition”, or do not warrant a Large / Small option such as “Sample”.</p> <p>United Energy also proposes for consistency that the new meter type code for non-contestable unmetered loads be updated to NCUML.</p>	AEMO: refer to response 37
49.	Vector AMS	4.10		Agreed.	AEMO notes respondent’s support for the proposed change.
50.	AGL	4.12.2	Datastream Status Codes	Noted	AEMO notes respondent’s comment.
51.	Energy Australia	4.12.2		Minor comment – typo in “DataStreamm”	AEMO: corrected
52.	Energy Queensland	4.12.2		Section 4.12.2 (b) - Energy Queensland notes that in section 4.12.2 (b) Data Stream has been misspelt. We note that the "of" in section 4.12.2 (b) has also been misspelt.	AEMO: corrected
53.	Evoenergy	4.12.2		<p>Where is the DataStream type table to describe the correct use.</p> <p>Correct spelling of datastreamm to datastream</p>	AEMO: corrected
54.	Flow Power	4.12.2		Noted	AEMO notes respondent’s comment.
55.	Intellihub	4.12.2		No comment	AEMO notes respondent’s comment.
56.	Origin Energy	4.12.2		Noted	AEMO notes respondent’s comment.
57.	PlusES	4.12.2		<p>Typo:</p> <p>Table 4-I Code A: Description of code :“Datastreamm”;</p> <p>Table 4-I Code I: Description of code :“ calculation fo UFE”</p>	AEMO: corrected
58.	Red and Lumo	4.12.2		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
59.	Tango Energy	4.12.2		<p>Agree</p> <p>The ‘r’ is left off the word ‘for in the extract below.</p> <p>I Inactive NMI Datastream Applies when the NMI Datastream Suffix is not to be used in settlements or the calculation for UFE.</p>	AEMO: corrected

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE																														
60.	TasNetworks	4.12.2		Noted.	AEMO notes respondent’s comment.																														
61.	Vector AMS	4.12.2		Agreed.	AEMO notes respondent’s support for the proposed change.																														
62.	Evoenergy	4.12.5	Datastream Type Codes	<p>New clause, with current allowed values. Wording should be</p> <p>4.12.5. Datastream Type Codes</p> <p>(a) In the MDM process, the Datastream Status Code is used in combination with the Datastream Type Code to determine whether a Datastream suffix is to be used in the settlements process or where any other metering data has been configured to support the calculation of Unaccounted for Energy (UFE).</p> <p>(b) The Datastream Type Codes in MSATS are defined in Table 4-xx</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Name of code</th> <th>Description of code</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>Interval data</td> <td>Applies when a Datastream at the NMI is included in NEM <i>settlements</i> calculation</td> </tr> <tr> <td>C</td> <td>Consumption data</td> <td>Applies when a Datastream at the NMI is an accumulation meter and where Datastream is included in NEM <i>settlements</i> calculation.</td> </tr> <tr> <td>1</td> <td>Non-market Active Import</td> <td>Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.</td> </tr> <tr> <td>2</td> <td>Non-market Active</td> <td>Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.</td> </tr> <tr> <td>3</td> <td>Non-market Reactive Import</td> <td>Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.</td> </tr> <tr> <td>4</td> <td>Non-market Reactive</td> <td>Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.</td> </tr> <tr> <td>P</td> <td>Profile Data</td> <td>Applies when a Datastream at the NMI is for loading sample metering data.</td> </tr> <tr> <td>N</td> <td><b>**please define for N as applicable**</b></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Code	Name of code	Description of code	I	Interval data	Applies when a Datastream at the NMI is included in NEM <i>settlements</i> calculation	C	Consumption data	Applies when a Datastream at the NMI is an accumulation meter and where Datastream is included in NEM <i>settlements</i> calculation.	1	Non-market Active Import	Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.	2	Non-market Active	Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.	3	Non-market Reactive Import	Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.	4	Non-market Reactive	Applies when a Datastream at the meter is not included in NEM <i>settlements</i> calculation.	P	Profile Data	Applies when a Datastream at the NMI is for loading sample metering data.	N	<b>**please define for N as applicable**</b>					AEMO: This table appears in the NMI Standing Data Procedure. AEMO have referred to that table in these procedures. Footnote at the bottom of page 46 and additional text added in 4.12.2 (c).
Code	Name of code	Description of code																																	
I	Interval data	Applies when a Datastream at the NMI is included in NEM <i>settlements</i> calculation																																	
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N	<b>**please define for N as applicable**</b>																																		
63.	AGL	4.13.1	Consequences of Allocating Certain Metering Installation Codes	Noted	AEMO notes respondent’s comment.																														
64.	Energy Queensland	4.13.1		Section 4.13 - Energy Queensland seeks confirmation as to why the Manually Read Flag on Metering Installation Type code NCONUML is indicated as N/A.	AEMO: As these sites are not contestable a transfer can’t happen on these sites. AEMO have changed it to N for consistency																														
65.	Evoenergy	4.13.1		Refer to the above	AEMO: Refer to response 62																														
				Do you propose to reduce this down to the 4 (i.e.: 1, 2, 3, and 4) if so, please provide additional detail and rationale.																															

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
66.	Flow Power	4.13.1		Noted	AEMO notes respondent's comment.
67.	Intellihub	4.13.1		No comment	AEMO notes respondent's comment.
68.	Origin Energy	4.13.1		Noted	AEMO notes respondent's comment.
69.	Red and Lumo	4.13.1		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
70.	Tango Energy	4.13.1		Agree	AEMO notes respondent's support for the proposed change.
71.	TasNetworks	4.13.1		Noted.	AEMO notes respondent's comment.
72.	Vector AMS	4.13.1		Indicates a CATS DataStream Type of 'N'. Is this a new code?  It may be worth adding a table of valid DatastreamType code into the MDM procedure. Seems an obvious omission.	AEMO: Refer to response 62
73.	Energy Queensland	4.17	Maintenance of Codes and Rules	Energy Queensland suggest that the "Maintenance of Codes and Rules" line should be displayed as a heading as per Metering Package 2 - Stage 1 consultation.	AEMO: corrected
74.	AGL	5	MSATS REPORTS	Noted	AEMO notes respondent's comment.
75.	CitiPower Powercor	5		With the introduction of NCONUML, CitiPower Powercor, would like to request that the C4 - NMI Master Report - Master selection criteria be updated to allow for the input of meter type. (As per our response in clause 4.10 above)	AEMO: Meter type is not required for this report, NMI Classification of NCONUML should be sufficient enough to bring back any NMI's with this classification as long as the participant is entitled to the data.
76.	Energy Queensland	5		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
77.	Evoenergy	5		Looks nice	AEMO notes respondent's comment.
78.	Flow Power	5		Noted	AEMO notes respondent's comment.
79.	Intellihub	5		No comment	AEMO notes respondent's comment.
80.	Origin Energy	5		Noted	AEMO notes respondent's comment.
81.	Red and Lumo	5		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
82.	Tango Energy	5		Agree	AEMO notes respondent's support for the proposed change.
83.	TasNetworks	5		Noted.	AEMO notes respondent's comment.
84.	United Energy	5		With the introduction of NCONUML, United Energy, would like to request that the C4 - NMI Master Report - Master selection criteria be updated to allow for the input of meter type. (As per our response in clause 4.10 above)	AEMO: refer to response 75
85.	Vector AMS	5		Agreed	AEMO notes respondent's support for the proposed change.
86.	AGL	Various	References to LR and ENLR	Noted – see above comment  Also, AGL questions the standards that are being used by AEMO within the CATS documents for Roles.  During PoC, AEMO strongly argued that the Role column was to be left as RP, as this was the field name. AEMO now seems to be defining the LR field by role, not field name.  Will AEMO be updating the system field name from LR to ENLR, and if so, why can't the RP role be updated to MC ?	AEMO: All fields in the tables have been reverted back to LR and clause 4.4 has been reworded. See response no 8.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				If not, then AGL suggest that for the consistency that AEMO argued for that the field name be left as LR, and AEMO will need another mechanism to identify ENLR allocations.	
87.	Energy Australia	Various		Noted	AEMO notes respondent's comment.
88.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
89.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
90.	Flow Power	Various		Noted	AEMO notes respondent's comment.
91.	Origin Energy	Various		Noted	AEMO notes respondent's comment.
92.	Red and Lumo	Various		Red and Lumo note that AEMO is retaining the reference to LR instead of ENLR or GLOPOOL. We believe that there needs to be a clear delineation of where LR refers to ENLR and where it refers to GLOPOOL rather than amending some reference tables to ENLR when MSATS will continue to present to LR (similar to the changes under Power of Choice of RP = MC)	AEMO: Clause 4.4 has been reworded. Tables have been updated to reflect LR. See response no 8
93.	Tango Energy	Various		<p>Refer section 9.8 (Change Retailer Child NMI). According to the Objection Rules tables the ENLR can object using the code NOTAPRD. The definition of NOTAPRD is as follows:</p> <p>NOTAPRD Used by the LNSP where a Participant is not accredited or authorised to operate within the LNSP area, most typically applying to the Role of MP.</p> <p>Please confirm the ENLR use of this objection and update the definition to reference the ENLR if confirmed.</p> <p>Refer to section 9.9 (Change Retailer Child NMI). The column titled LR does not receive any Status Notification updates. Yet the Objection Rules allow the ENLR (as identified by the column title) to object. The LR should receive all Status Notification updates if the objection is applicable, receiving only Completed if the objection is not permitted.</p> <p>Refer to section 12.7 (Create Child NMI). The ENLR cannot object. However, is it possible the ENM may nominate the incorrect Parent FRMP as the ENLR? If so then the LR as ENLR would need to lodge an objection to the Change Request. The objection code of NOTRESP could be used.</p> <p>Refer section 14.6 (Create NMI, Metering Installation Details and MDM Datastreams - Child NMI). As for 12.7 above.</p> <p>Refer Section 29.7 (Change Parent Name). As this relates to an embedded network, should the LR as ENLR receive a Completed notification?</p> <p>Refer 30.6, 30.7, 31.7, 31.8, 32.6, 32.7, 36.8 and 36.9 The column headings are a mixture of LR and ENLR. As suggested above the column headings should be LR and where the LR does not receive any notifications or have the ability to object, it is suggested these columns could be removed from these Change Requests.</p>	<p>AEMO: This objection has been removed as AEMO believe an LR can't object to a change for FRMP.</p> <p>There is validation in the system that does not allow a child NMI to be created with an incorrect LR. Validation is done against the parent NMI using the EN Code</p> <p>No as the LR for the parent will be GLOPOOL</p> <p>Columns have not been removed but all fields in the tables have been changed back to LR.</p>
94.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
95.	Vector AMS	Various		Agreed	AEMO notes respondent's support for the proposed change.
96.	AGL	9.6	MC Requirements	Likely typo in amendments	Typo corrected.
97.	AGL	11, 13, 15, 16, 17, 20,	Inclusion of NCONUML	<p>Suggest amend LR for clarity as these cannot be embedded UMS.</p> <p>i.e. LR <a href="#">(as GLOPOOL)</a></p>	AEMO: Obligations on the LNSP in clause 2.3 advise them that they are required to populate the LR field with the relevant element as per the NMI Procedure document.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
		21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		AGL also notes that the timeframe rules for creating a NMI have not been updated to include a NCONUML. AGL would suggest the same period would apply to a small NMI.  AGL also notes that the objection rules have not been updated for a NCONUML.	2.3 (a) provides the obligation to initiate a create NMI change request within 2 business days etc, it does not stipulate a NMI Classification so all NMIs fall under this obligation regardless of Classification type.  AEMO do not believe there are specific objections just for NCONUML classification. Where the NMI Classification in the objection rules table is ALL that includes NCONUML when applicable.
98.	Energy Australia	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		Noted	AEMO notes respondent's comment.
99.	Endeavour Energy	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		For consistency and completeness, NCONUML should be added to sections 35 and 36. Although there is no meter for NCONUML and therefore the concept of having a MPB or MPC is redundant, it is common practice to align the participant of these roles with the MDP role.	AEMO: agree
100.	Energy Queensland	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		Section 39 - Energy Queensland seeks confirmation as to why certain change request (CR) transactions have been excluded for NCONUML e.g. CR68XX MDP (calculation methodology) role change.	AEMO: NCONUML has been added to section 35 & 36 as per response 99.
101.	Evoenergy	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		Noted	AEMO notes respondent's comment.
102.	Flow Power	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26,		Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
		27, 30, 31, 32, 39, 40			
103.	Intellihub	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		No comment	AEMO notes respondent’s comment.
104.	Origin Energy	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		<p>Origin Energy strongly recommends that AEMO create a B2B Guide to confirm/clarify the applicability and relationship of the B2B and B2M processes to ensure that all impacted participants’ (e.g. LNSP’s, Retailers, MC,MDP, NCONUML End use Customers {as they too need to be involved in following the new process for it to work}, etc.) are aware of their obligations to manage these new installation types especially the non-contestable unmetered loads in the market. This removes any avoidance of doubt with participants and will result in a positive outcome for all impacted market participants.</p> <p>The guide needs to define the applicability of other B2B Processes like Service Orders, Customer &amp; Site Details, Meter Data, Network Settlements, etc. for the new Installation Types being defined as part 5MS/GS.</p> <p>The guide could be in the form of table of B2B Transaction with applicability to new 5MS/GS Installation Types as per Appendix A.</p> <p>Origin Energy requests that AEMO state within the procedures that the existing B2B Service Order and B2M CATS processes will apply to the New NMI Classification Code Types being created under 5MS/GS, especially the NCONUML code.</p> <p>Origin proposes that the following B2B and related B2M processes be extended to the new NMI Classification codes where applicable especially the NMI Classification of NCONUML:</p> <ol style="list-style-type: none"> <li>1) Creation of new sites via the <a href="#">NEW CONNECTION B2B process</a> that utilises the following B2M transactions; <ul style="list-style-type: none"> <li>11 CREATE NMI – CREATE A NMI – SMALL, OR LARGE OR NCONUML,</li> <li>13 CREATE NMI – CREATE NMI, METERING INSTALLATION DETAILS AND NMI DATASTREAM – SMALL, OR LARGE OR NCONUML,</li> <li>15 MAINTAIN METERING – CREATE METERING INSTALLATION DETAILS – SMALL, OR LARGE OR NCONUML</li> </ul> </li> <li>2) Modification of existing sites via the <a href="#">ADDS &amp; ALTS B2B process</a> that utilises the following B2M transactions; <ul style="list-style-type: none"> <li>17 MAINTAIN METERING – EXCHANGE OF METERING INFORMATION – SMALL, OR LARGE OR NCONUML,</li> <li>20 MAINTAIN METERING – CHANGE NETWORK TARIFF CODE – SMALL, OR LARGE OR NCONUML,</li> <li>22. MAINTAIN DATASTREAM – EXCHANGE OF DATASTREAM INFORMATION SMALL, OR LARGE OR NCONUML,</li> </ul> </li> </ol>	AEMO: AEMO do not have the authority to create a B2B Guide this will need to be arranged via the IEC, please have your representative on the IEC recommend this to the rest of the representatives.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				<p>23. MAINTAIN DATASTREAM – CHANGE NMI DATASTREAM – SMALL, OR LARGE OR NCONUML,</p> <p>25. MAINTAIN NMI – BACKDATE A NMI – SMALL, OR LARGE OR NCONUML,</p> <p>27. MAINTAIN NMI – CHANGE A NMI – CUSTOMER CLASSIFICATION CODE – SMALL, OR LARGE OR NCONUML,</p> <p>30. CHANGE ROLE – CHANGE LNRP – SMALL OR LARGE OR NCONUML,</p> <p>31. CHANGE ROLE – CHANGE MDP – SMALL, OR LARGE OR NCONUML,</p> <p>32. CHANGE ROLE – CHANGE MC – SMALL OR LARGE OR NCONUML,</p> <p>39. AEMO ONLY – AEMO-INITIATED STANDING DATA UPDATES – SMALL, OR LARGE OR NCONUML</p> <p>40. AEMO ONLY – CHANGE ROLE, TNI OR DLF CODE – BULK CHANGE TOOL (BCT) – SMALL, OR LARGE OR NCONUML</p> <p>3) Abolishment of existing sites via the <a href="#">Abolishment B2B process</a> that utilises the following B2M transaction;</p> <p>26. MAINTAIN NMI – CHANGE A NMI – SMALL, OR LARGE OR NCONUML,</p>	
105.	Red and Lumo	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		Red and Lumo support this change.	AEMO notes respondent’s support for the proposed change.
106.	Tango Energy	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		Agree	AEMO notes respondent’s support for the proposed change.
107.	TasNetworks	11, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 39, 40		<p>24. TasNetworks consider that NCONUML is not required for a CR5070/5071</p> <p>34. TasNetworks propose that NCONUML should be added in CR6500/6501 to allow for correction of role allocations</p> <p>35. TasNetworks propose that NCONUML should be added in CR6700/6701 to allow for correction of role allocations</p> <p>36. TasNetworks propose that NCONUML should be added in CR6800/6801 to allow for correction of role allocations</p>	<p>AEMO: AEMO believe this falls into the same category as the unmetered contestable space because as per the SLP clause 3.11 (c) the MDP needs to create a block of calculated data beyond the next scheduled calculation.</p> <p>Agreed, NCONUML added to section 34,35 &amp; 36</p>
108.	Vector AMS	11, 13, 15, 16, 17, 20, 21, 22,		Agreed	AEMO notes respondent’s support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
		23, 24, 25, 26, 27, 30, 31, 32, 39, 40			
109.	Energy Queensland	Various	Updated table references	Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
110.	Flow Power	Various		Noted	AEMO notes respondent's comment.
111.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
112.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
113.	Tango Energy	Various		Agree	AEMO notes respondent's support for the proposed change.
114.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
115.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
116.	AGL	15 / 16 / 17 / 20 / 21 / 22 / 23 / 27 /	Inclusion of NCONUML	AGL notes that the requirements for this transaction for a NCONUML NMI require details for multiple fields (e.g. meter ID, data stream, Dial format, multiplier value etc.) which do not exist and would therefore be populated with 'dummy' data or no data.  AGL suggests that for consistency that a table be established for all these fields so that the MDP is populating them consistently, noting that there may be different options for bulk Load NMIs vs single load NMIs.	AEMO expect these sites would be created by the LNSPs using the same dummy information they use to create contestable unmetered loads today.
117.	AGL	24	Inclusion of NCONUML	AGL is unsure why an unmetered NMI would need to have a next scheduled read updated. AGL would expect that the data streams for these devices would be issued daily, as they must be provided as 5 min interval data and the same timetables should apply.	AEMO: As per the MDP SLP the MDP's need to calculate blocks of metering data just like they do for contestable unmetered loads. These blocks are calculated monthly and forward calculations are provided beyond the next calculation date.  These will not be daily they will be exactly the same as contestable unmetered loads.
118.	AGL	25	Inclusion of NCONUML	AGL notes that with the inclusion of NCONUML the DLF is now considered relevant information as part of the NMI data.  Historically, DLFs have not been considered when establishing NCONUML load / load profiles.  AGL seeks clarity, as this may have an impact on the current arrangements customers have with networks and host Retailers for the provision of unmetered load and may require re-negotiation of agreed load.	AEMO: as DLF is a mandatory field for the creation of a NMI the DLF will not be removed as a field that needs to be populated. DLFs will be applied to non-contestable sites exactly like the contestable UMS NMIs. They will be applied using the physical connection properties and the location of the NMI.
119.	AGL	30	Inclusion of NCONUML	AGL does not support this change for a NCONUML.  Connections for Unmetered supplies are agreed between the three – including upper load size, load and load profile.  If a NCONUML is to be transferred between LNSPs, then the connection will have to be reviewed and potentially a new contact established between all parties.  AGL suggests that for NCONUML that this would be best handled by NMI abolishment and new NMI creation.	AEMO: AEMO do not expect this to happen but has included it in the CR's to allow for error corrections
120.	AGL	31		AGL does not support this change for NCONUML as the LNSP is the only MDP which can provide the data.	AEMO: AEMO do not expect this to happen but has included it in the CR's to allow for error corrections.

**Table 5 – MSATS Procedure: Procedure for the Management of Wholesale, Interconnector, Generator and Sample (WIGS) NMIs**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	1.4	WIGS Codes and Rules for a Change Request	Noted	AEMO notes respondent’s comment.
2.	Energy Queensland	1.4		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
3.	Evoenergy	1.4		Noted to refer to CATS	AEMO notes respondent’s comment.
4.	Flowpower	1.4		Noted	AEMO notes respondent’s comment.
5.	Intellihub	1.4		No comment	AEMO notes respondent’s comment.
6.	Origin Energy	1.4		Noted	AEMO notes respondent’s comment.
7.	Red and Lumo	1.4		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
8.	TasNetworks	1.4		Noted.	AEMO notes respondent’s comment.
9.	Vector AMS	1.4		Noted	AEMO notes respondent’s comment.
10.	AGL	Various		AGL notes that change from LR to ENLR in various tables and refers AEMO to the CATS comment about column naming.	AEMO as suggested in CATS AEMO have reverted everything back to LR as the field name is not changing. CATS clauses 2.3 (b) wording has remained the same but 2.10 (g) wording has been amended. Clause 4.4 has been reworded  Where ENLR is in any tables this has also been referred back to LR.
11.	AGL	Various	Inclusion of “NREG” NMI Classification Code	Noted	AEMO notes respondent’s comment.
12.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
13.	Evoenergy	Various		Noted	AEMO notes respondent’s comment.
14.	Flow Power	Various		Noted	AEMO notes respondent’s comment.
15.	Intellihub	Various		No comment	AEMO notes respondent’s comment.
16.	Origin Energy	Various		See Comments under ‘Other’	AEMO notes respondent’s comment.
17.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
18.	TasNetworks	Various		TasNetworks proposes that NREG, BULK, XBOUNDRY and DWHOLSAL should still be included in 25.2 (b) to allow for role changes.	AEMO: added to allow for error corrections.
19.	Vector AMS	Various		Noted	AEMO notes respondent’s comment.
20.	AGL	Various	Inclusion of “BULK” NMI Classification Code	Noted	AEMO notes respondent’s comment.
21.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
22.	Evoenergy	Various		Noted	AEMO notes respondent’s comment.
23.	Flow Power	Various		Noted	AEMO notes respondent’s comment.
24.	Intellihub	Various		No comment	AEMO notes respondent’s comment.
25.	Origin Energy	Various		See Comments under ‘Other’	AEMO notes respondent’s comment.
26.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
27.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
28.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
29.	AGL	Various	Inclusion of "XBOUNDARY" NMI Classification Code	Noted	AEMO notes respondent's comment.
30.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
31.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
32.	Flow Power	Various		Noted	AEMO notes respondent's comment.
33.	Intellihub	Various		No comment	AEMO notes respondent's comment.
34.	Origin Energy	Various		See Comments under 'Other'	AEMO notes respondent's comment.
35.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
36.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
37.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
38.	AGL	Various	Inclusion of "DWHOLSAL" NMI Classification Code	Noted – see comments in CATS response  Are roles and fields being changed and will RP also be changed ?	AEMO: see response 10
39.	Endeavour Energy	Various		Clause 2.2.b: for completeness we suggest that DWHOLSAL be added to this clause. In addition, we suggest that SAMPLE be removed from this clause as the FRMP for a sample metering installation should never be allowed to change.  Clause 4.2: Similarly, for completeness we suggest that DWHOLSAL be added to this clause. In addition, we suggest that SAMPLE be removed from this clause as the FRMP for a sample metering installation should never be allowed to change.  Clause 25.2.b: for completeness we suggest that NREG, BULK, XBOUNDARY and DWHOLSAL be added to this clause	AEMO: agreed DWHOLSAL added and SAMPLE removed. 25.2 b updated to include NREG, BULK, XBOUNDARY and DWHOLSAL.
40.	Energy Queensland	Various		Section 3.2 (b) - From analysis of the MSATS Procedure: NMI, Energy Queensland is of the view that CR108X transfers should allow for the NMI classification of DWHOLSAL to be included.  Section 4.2 (c) – From analysis of the MSATS Procedure: NMI, Energy Queensland is of the view that CR1500 should allow for the NMI classification of DWHOLSAL to be included.	AEMO: agreed
41.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
42.	Flow Power	Various		Noted	AEMO notes respondent's comment.
43.	Intellihub	Various		No comment	AEMO notes respondent's comment.
44.	Origin Energy	Various		See Comments under 'Other'	AEMO notes respondent's comment.
45.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
46.	TasNetworks	Various		DWHOLSAL should be added to Conditions Precedent section 2.2(b) for CR1000/1020.  DWHOLSAL should be added to Conditions Precedent section 4.2(c) for CR1500.	AEMO: see response 39
47.	Vector AMS	Various		Noted	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
48.	Energy Queensland	Various	Provisions for embedded network local retailers (ENLR)	Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
49.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
50.	Flow Power	Various		Noted	AEMO notes respondent's comment.
51.	Intellihub	Various		No comment	AEMO notes respondent's comment.
52.	Origin Energy	Various		Noted	AEMO notes respondent's comment.
53.	Red and Lumo	Various		Red and Lumo support this change	AEMO thanks Red/Lumo for their support
54.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
55.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
56.	AGL	Various	Removal of Local Retailer (LR) references	See comments in CATS response	AEMO see response 10
57.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
58.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
59.	Flow Power	Various		Noted	AEMO notes respondent's comment.
60.	Intellihub	Various		No comment	AEMO notes respondent's comment.
61.	Origin Energy	Various		Noted	AEMO notes respondent's comment.
62.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
63.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
64.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
65.	Origin Energy	Other	2.2 (b) FRMP – 1000, 1020  The NMI Classification Code is WHOLESAL, INTERCON, GENERATR, NREG, or SAMPLE	Origin Energy suggest inclusion of DWHOLESAAL for these transactions	AEMO agree see response 39
66.	Origin Energy	Other	Ref Sec 3.2(b) Child NMI – 1080, 1082  6.2(b) – Create NMI – Child NMI – 2020, 2021  18.2 (b) – Change NMI – Embedded Child – 5060, 5061  23.2 (b) Change ENLR – Child NMI – 6421	Origin Energy suggests consistency across all of the below transactions for embedded child for the new NMI “3.2(b) has The NMI Classification Code is WHOLESAL, NREG or GENERATR  6.2 (b) has The NMI Classification Code is WHOLESAL, INTERCON, GENERATR, NREG, BULK, XBOUNDRY, DWHOLSAL or SAMPLE.  18.2 (b) has The NMI Classification Code is WHOLESAL, NREG, DWHOLSAL OR GENERATR  23.2 (b) The NMI Classification Code is GENERATR, NREG, DWHOLSAL or WHOLESAL”  23.6 Origin suggests inclusion of WHOLESAL in this section	AEMO: INTERCON, BULK, XBOUNDRY or SAMPLE will never be child NMIs and only NMI Classifications that can use the CR have been included for each CR type.          AEMO 23.6 agree changed to ALL.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
			23.6 – Objection		
67.	Energy Queensland	6.7	CR 202X transactions	Section 6.7 – Energy Queensland notes that WHOLESAL is not currently included in the available NMI classifications for objections of CR202X transactions (section 6.7). Energy Queensland suggest that WHOLESAL be added into the NMI classification list given it is included in section 6.2 (b) as an available NMI classification code.	AEMO: agree updated to ALL
68.	Energy Queensland	23.6	CR 642X transactions	Section 23.6 – Energy Queensland note that WHOLESAL has not been included in the NMI classification list for Objections even though it is allowed on the CR as per section 23.2 (b).	AEMO: agree updated to ALL
69.	Energy Queensland	25.2	CR 670X transactions	Energy Queensland queries why four NMI classifications (NREG, BULK, XBOUNDARY and DWHOLSAL) have been removed from the list of NMI Classification Codes under which it is possible to change MPB. We question why there is a restriction on changing MPB (Metering Provider – Category B) for these metering types? We suggest including these NMI classifications back into the CR670X transactions.	AEMO: agree updated to include them
70.	Origin Energy	Other	25.2 (b) – Change MPB, MPC, both 6700, 6701	Origin Energy questions why the NMI classifications of NREG, BULK, XBOUNDARY, DWHOLSAL are excluded from this section considering they have been included in other metering related role transactions?	AEMO: agree updated to include them
71.	Energy Queensland	General	Document overview	Energy Queensland notes there is nothing in this document which explicitly indicates what NMI classification codes this Procedure relates to. We suggest the inclusion of something similar to that stipulated in MSATS Procedure: CATS document section 4.10 NMI Classification Codes.	AEMO: clause 1.4 of this document advises users to refer to CATS Section 4 for use of codes and rules for Change Requests.

**Table 6 – MSATS Procedure: National Metering Identifier**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE					
1.	AusNet Services	VRH	Effective date updated to 1 July 2021	AusNet Services suggests that AEMO gives careful consideration, and consults with impacted participants, on the timing effective date of the Global Settlement provisions in the NMI Procedures. DNSPs making the changes to LR assignments on 1 July 2021 may cause problems with the wholesale market and industry systems. The Procedures appear to require the change at this earlier date, which reduces DNSP implementation costs. However, it would not be cost efficient for DNSPs to make these changes on July 2021 only to have to wind them back and then re-implement in Feb 2022.	Changes to LR role assignments are applicable only from the 6/2/22. This will be consulted on via the 5MS / GS Readiness Working group.					
2.	Endeavour Energy	VRH		Clause 7.2.a: delete the redundant “L”	“L” deleted.					
3.	Energy Queensland	VRH		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.					
4.	Evoenergy	VRH		Noted	AEMO notes respondent’s comment.					
5.	Flow Power	VRH		Noted	AEMO notes respondent’s comment.					
6.	Intellihub	VRH		No Comment	AEMO notes respondent’s comment.					
7.	Origin Energy	VRH		Noted	AEMO notes respondent’s comment.					
8.	Red and Lumo	VRH		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.					
9.	Tango Energy	VRH		Agree	AEMO notes respondent’s support for the proposed change.					
10.	TasNetworks	VRH		Noted.	AEMO notes respondent’s comment.					
11.	Vector AMS	VRH		Noted	AEMO notes respondent’s comment.					
12.	AusNet et Services	Appendix E	Inclusion of appendix to better communicate NMI Classification and Role requirements	AusNet Services suggests that AEMO gives careful consideration, and consults with impacted participants, on the timing effective date of the Global Settlement provisions in the NMI Procedures. DNSPs making the changes to LR assignments on 1 July 2021 may cause problems with the wholesale market and industry systems. The Procedures appear to require the change at this earlier date, which reduces DNSP implementation costs. However, it would not be cost efficient for DNSPs to make these changes on July 2021 only to have to wind them back and then re-implement in Feb 2022.	Changes to LR role assignments are applicable only from the 6/2/22. This will be consulted on via the 5MS / GS Readiness Working group.					
13.	Energy Australia	Appendix E		Clarification requested for: in what scenarios would the retailer be FRMP for NREG?	An SGA can be the FRMP for a NREG. Appendix E updated with clarification.					
14.	Endeavour Energy	Appendix E		<p>Table 5 in Appendix E: We note that some of the new NMI Classification Codes are only effective from 06/02/2022 however they are shown in several scenarios prior to 06/02/2022. We suggest that for consistency these scenarios should be updated to only use appropriate values that available prior to 06/02/2022.</p> <p>Table 5 in Appendix E: for the below scenarios we note that the FRMP is LR%. However any Retailer is allowed to be the FRMP for this scenario. We suggest that the LR% be replaced with RetailerID%</p> <table border="1" data-bbox="908 1675 1745 1839"> <tr> <td rowspan="2">Contestable Unmetered Load</td> <td>N/A</td> <td>Retail Customer</td> </tr> <tr> <td></td> <td>NCC: SMALL or LARGE FRMP: LR% LR: LR%</td> </tr> </table>	Contestable Unmetered Load	N/A	Retail Customer		NCC: SMALL or LARGE FRMP: LR% LR: LR%	<p>The MSATS CATS Procedures will be effective from the 6/2/22 however, in order to allow for transition to 5MS Go-Live (1/7/21) and GS Go-Live (6/2/22), all new NMI Classification Codes will be available for industry population from the date the MSATS CATS system is released into production environment (where the MSATS CATS System availability date will be confirmed via the 5MS Readiness Workstream).</p> <p>AEMO have updated Appendix E appropriately.</p>
Contestable Unmetered Load	N/A	Retail Customer								
		NCC: SMALL or LARGE FRMP: LR% LR: LR%								

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE												
				<p>Table 5 in Appendix E: for the below scenarios we note that the FRMP is LR%. However any Retailer is allowed to be the FRMP for this scenario prior to 06/02/2022. We suggest that the LR% be replaced with RetailerID%</p> <table border="1"> <tr> <td rowspan="2">Distribution to Distribution</td> <td rowspan="2">N/A</td> <td>X2 connection points</td> </tr> <tr> <td>                     NCC: XBOUNDRY                      FRMP: LR%                      LR: LR%                 </td> </tr> <tr> <td></td> <td></td> <td>                     NCC: XBOUNDRY                      FRMP: LR%                      LR: LR%                 </td> </tr> </table>	Distribution to Distribution	N/A	X2 connection points	NCC: XBOUNDRY FRMP: LR% LR: LR%			NCC: XBOUNDRY FRMP: LR% LR: LR%	The participant ID populated in the FRMP field for a Cross Boundary Connection point can only be an LR%. No change to Appendix E.					
Distribution to Distribution	N/A	X2 connection points															
		NCC: XBOUNDRY FRMP: LR% LR: LR%															
		NCC: XBOUNDRY FRMP: LR% LR: LR%															
15.	Energy Queensland	Appendix E		Energy Queensland's comments are included in A.19 & A.20 below.	AEMO notes respondent's comment.												
16.	Evoenergy	Appendix E		Noted	AEMO notes respondent's comment.												
17.	Flow Power	Appendix E		Noted	AEMO notes respondent's comment.												
18.	Intellihub	Appendix E		No Comment	AEMO notes respondent's comment.												
19.	PlusES	Appendix E		<p>Typo: Table 5 WHOLESALE to WHOLESAL</p> <p>Typo: Table 5 WHOLESALE to WHOLESAL</p> <table border="1"> <thead> <tr> <th colspan="3">Embedded Network (within Transmission Network)</th> </tr> <tr> <th>Parent</th> <th>On market Child</th> <th>Off market Child</th> </tr> </thead> <tbody> <tr> <td>Retail Customer N/A</td> <td>Retail Customer N/A</td> <td>Retail Customer N/A</td> </tr> <tr> <td>Spot Market Cust. NCC: WHOLESALE FRMP: CustID% LR: POOL%</td> <td>Spot Market Cust. NCC: WHOLESAL FRMP: CustID% LR: ParentFRMPID%</td> <td>Spot Market Cust. NCC: WHOLESAL FRMP: ParentFRMPID% LR: ParentFRMPID%</td> </tr> </tbody> </table> <p>&amp; Contestable UML – should the FRMP=RetailerID% instead of LR%? If not, why does it change post 6th Feb to RetailerID%?</p>	Embedded Network (within Transmission Network)			Parent	On market Child	Off market Child	Retail Customer N/A	Retail Customer N/A	Retail Customer N/A	Spot Market Cust. NCC: WHOLESALE FRMP: CustID% LR: POOL%	Spot Market Cust. NCC: WHOLESAL FRMP: CustID% LR: ParentFRMPID%	Spot Market Cust. NCC: WHOLESAL FRMP: ParentFRMPID% LR: ParentFRMPID%	AEMO have updated Appendix E appropriately.
Embedded Network (within Transmission Network)																	
Parent	On market Child	Off market Child															
Retail Customer N/A	Retail Customer N/A	Retail Customer N/A															
Spot Market Cust. NCC: WHOLESALE FRMP: CustID% LR: POOL%	Spot Market Cust. NCC: WHOLESAL FRMP: CustID% LR: ParentFRMPID%	Spot Market Cust. NCC: WHOLESAL FRMP: ParentFRMPID% LR: ParentFRMPID%															

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE			
				<table border="1"> <tr> <td>Contestable Unmetered Load</td> <td>N/A</td> <td>Retail Customer NCC: SMALL or LARGE FRMP: LR% LR: LR%</td> </tr> </table>	Contestable Unmetered Load	N/A	Retail Customer NCC: SMALL or LARGE FRMP: LR% LR: LR%	
Contestable Unmetered Load	N/A	Retail Customer NCC: SMALL or LARGE FRMP: LR% LR: LR%						
20.	Red and Lumo	Appendix E		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.			
21.	Tango Energy	Appendix E		Agree	AEMO notes respondent's support for the proposed change.			
22.	TasNetworks	Appendix E		Noted.	AEMO notes respondent's comment.			
23.	Vector AMS	Appendix E		Noted	AEMO notes respondent's comment.			
24.	AGL	2.3.1(b)	Common Requirements across the NEM	<p>AGL does not believe that this clause is adequate as it stands. If a NMI is to contain multiple unmetered devices, then it must have a supporting inventory list which contains all relevant information.</p> <p>AGL suggests that (b) be extended as such:</p> <p>(b) The NMI may contain different agreed Unmetered Device loads or Unmetered Device types. One NMI is required for each type 7 metering installation. Individual Unmetered Device loads may be added to and removed from the NMI without the need to change the NMI. <a href="#">There must be a detailed inventory table to support the use of such a NMI.</a></p>	Inventory Table reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.			
25.	AGL	2.3.1(g)		<p>AGL believes that this is too generic. AGL would prefer a standardised approach across the NEM, but at the very least, the procedure should involve the FRMP, i.e.:</p> <p>AEMO expects that each LNSP has a procedure <a href="#">which has been agreed with the FRMP</a> for the allocation of NMIs for Unmetered Device supplies, which will be available for review by the Jurisdiction or AEMO on request.</p>	Wording amended to include FRMP agreement.			
26.	AGL	2.4	Allocation of NMIs for non-contestable unmetered loads	<p>See related comments regarding supporting inventory lists. AGL suggest the inclusion of a new clause after (b) which aligns with the proposed clauses for Metrology A</p> <p><a href="#">(c) Where a NMI is used for multiple devices, there must be an inventory table to support the allocated load on that NMI and the MDP must ensure that all relevant customer details and device information (including ADL, Location, load, load profile) is shared with the FRMP to support changes to devices assigned to the NMI.</a></p>	Inventory Table reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.			
27.	Energy Queensland	2.4		Section 2.4(c) - Energy Queensland is of the view that sections 2.4 (c) and 2.4 (b) are inconsistent and recommend either the removal of 2.4 (c) or the wording to include the clarification 'unless NMIs relate to a single device'.	2.4(c) deleted.			
28.	Evoenergy	2.4		Noted	AEMO notes respondent's comment.			
29.	Flow Power	2.4		Noted	AEMO notes respondent's comment.			
30.	Intellihub	2.4		No comment	AEMO notes respondent's comment.			
31.	Origin Energy	2.4		In relation to clause 2.4, Origin Energy request AEMO to confirm how the Inventory Table for non-contestable unmetered load is expected to work together with the existing B2B and related B2M processes for New connections (i.e. Clause 2.4 (c)), Modifications -Add & Alts (i.e. Clause 2.4 (b) and Abolishment's (i.e. Clause 2.4 (d)) for the New Installation Types being created as part 5MS/GS, especially for NCONUML.	Inventory Table reinstated. Content of Inventory Table is detailed in Metrology Procedure: Part B 13.2.2, 13.3.2 and 13.5.2.			

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Recommend AMEO create a B2B Guide to confirm/clarify the above mentioned processes to ensure that all impacted participants' (e.g. LNSP's, Retailers, MC,MDP, NCONUML Customers {as they too need to be involved in following the new process for it to work}, etc.) are aware of their obligations and which also defines the applicability of other B2B Processes like Meter Data, Network Settlements, etc. for the new Installation Types being defined as part 5MS/GS.	Proposed enhancements to the B2B framework should be referred to IEC (and B2BWG on their behalf) to review.
32.	Red and Lumo	2.4		Red and Lumo support this change and have no further changes.	AEMO notes respondent's support for the proposed change.
33.	Tango Energy	2.4		Agree	AEMO notes respondent's support for the proposed change.
34.	TasNetworks	2.4		Section 2.4(c) no longer holds true with NMI's now being able to be allocated on a 1:1 device basis. Thus, this subclause needs to allow for multiple NMI's with the same set of attributes.	Refer to response to Item 27.
35.	Vector AMS	2.4		Noted	AEMO notes respondent's comment.
36.	TasNetworks	3		Based on AEMO response to item 53 of initial draft, should section 3(a)(iii) be updated to indicate that "W" is reserved for wholesale <u>and bulk</u> transmission connection metering points only?	Wording revised to include Bulk Supply Point.
37.	AGL	6	Changes to DATASTREAM SUFFIX	Noted	AEMO notes respondent's comment.
38.	Energy Queensland	6		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
39.	Evoenergy	6		Agree	AEMO notes respondent's support for the proposed change.
40.	Flow Power	6		Noted	AEMO notes respondent's comment.
41.	Intellihub	6		No Comment	AEMO notes respondent's comment.
42.	Origin Energy	6		Noted	AEMO notes respondent's comment.
43.	Red and Lumo	6		Red and Lumo support this change and have no further changes.	AEMO notes respondent's support for the proposed change.
44.	Tango Energy	6		Agree	AEMO notes respondent's support for the proposed change.
45.	TasNetworks	6		Noted.	AEMO notes respondent's comment.
46.	Vector AMS	6		Noted	AEMO notes respondent's comment.
47.	AGL	A19, A20	Non Contestable Unmetered Load – One NMI With Multiple Devices	<p>AGL suggest some re-wording</p> <p><b>A.19 Non Contestable Unmetered Load – One NMI With Multiple Devices</b></p> <ul style="list-style-type: none"> <li>Multiple non contestable unmetered connections, multiple devices</li> <li>All devices have the same <b>TNI</b>, DLF, FRMP and LNSP for a given customer</li> <li>Three End Users</li> <li>Three NMI's</li> </ul> <p>Typo in point 1 – 'multiple'</p> <p>Dot point 2 is redundant as it is covered by dot point 3</p>	AEMO have updated typo and deleted dot point 2.
48.	AusNet Services	A19, A20		AusNet Services supports the 2 possible proposed Non Contestable Unmetered Load arrangements as provided the necessary level flexibility.	AEMO notes respondent's support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
49.	Energy Australia	A19, A20		<p>A.19 Minor – typo in Multiple</p> <p>For clarity – suggest the diagram is set up as such: within distribution network LNSP1’s area where FRMP1 is the LR, end users (customers) are allocated to a NMI each. Suggest: NMI 5555666601 = END USER 1</p> <ul style="list-style-type: none"> <li>- FRMP1</li> <li>- LNSP1</li> <li>- TNI1</li> <li>- DLF123</li> </ul> <p>NMI 5...2 = END USER 2</p> <ul style="list-style-type: none"> <li>- FRMP1</li> <li>- LNSP1</li> <li>- TNI1</li> <li>- DLF123</li> </ul> <p>NMI 5...3 = END USER 3</p> <p>... and so on.</p>	<p>AEMO have updated typo.</p> <p>AEMO have added “End User” to each NMI within the illustration as suggested.</p>
50.	Energy Queensland	A19, A20		<ul style="list-style-type: none"> <li>• Appendix E - Energy Queensland is of the view that in Table 5 for Contestable Unmetered Loads the FRMP should be RetailerID% rather than LR% as per the diagram.</li> <li>• In Table 5, the off market child of a Registered Generator and Spot Market Customer in the Transmission Network with an LNSP = ENM% (2), Energy Queensland seeks confirmation whether the FRMP = ParentFRMPID% (per Table 5) or GenPartID%/CustID% (per the diagram).</li> <li>• In Table 5, the Registered and Unregistered off market child of a Generator in the Distribution Network with an LNSP = ENM% (4), Energy Queensland seeks confirmation whether the FRMP = ParentFRMPID% (per Table 5) or GenPartID%/PartID% (per the diagram)</li> <li>• In Table 5, the Generation and Load child of a Generator in the Distribution Network with an LNSP = ENM% (3), Energy Queensland seeks confirmation whether the FRMP = RetailerID% (per Table 5) or CustID% (per the diagram).</li> <li>• In Table 5, the Generation and Load child of a Generator in the Distribution Network with an LNSP = ENM% (4), Energy Queensland seeks confirmation whether the FRMP = ParentFRMPID% (per Table 5) or GenPartID%/CustID% (per the diagram).</li> <li>• In the On Market Customer in the Embedded Network Manager (ENM) in the Distribution Network with an LNSP = ENM% (4), the NMI should have a NMI Class = LARGE/SMALL/DWHOLSAL as per Table 5 – Customer\Embedded Network (within Distribution Network)\On market child\Retail customer.</li> <li>• Energy Queensland suggests that the Transmission to Transmission scenarios for NMI classification INTERCONN as well as the Sample scenario for NMI classification SAMPLE be added to both Appendix E diagrams for completeness.</li> </ul>	<p>AEMO have updated Appendix E appropriately.</p> <p>AEMO has updated Appendix E, Table 5, to reflect that the scenario of an Off market customer (Registered Generator + Spot Market) in an embedded network is not applicable.</p> <p>AEMO has updated Appendix E, Table 5, to reflect that the scenario of an Off market customer (Registered Generator + Spot Market) in an embedded network is not applicable.</p> <p>AEMO have updated Appendix E appropriately.</p> <p>AEMO have updated Appendix E appropriately.</p> <p>AEMO acknowledge illustration provided in Appendix E does not cater for ‘DWHOLSAL’ NMI Classification code for on market customers within an embedded network (distribution connected).</p> <p>INTERCONN and SAMPLE scenarios are included in Appendix E, Table 5. No change to document.</p>

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
51.	Evoenergy	A19, A20		Agree	AEMO notes respondent’s support for the proposed change.
52.	Flow Power	A19, A20		We suspect the section reference is missing as we are unable to locate it. As such we are unable to provide comments.	As is the case for all Appendices, A19 and A20 are provided within the document Navigation. No change to document.
53.	Intellihub	A19, A20		No comment	AEMO notes respondent’s comment.
54.	Origin Energy	A19, A20		<p>Origin proposes that under section A.19 Non Contestable Unmetered Load – One NMI With Multiple Devices should be expanded to contain 2 scenarios as given below, which illustrate Origin Energy’s feedback that non-contestable unmetered devices must be ideally be set up in MSATS keeping in mind the load profile of the device and the Network Tariff rate at a minimum (in addition to other conditions like TNI,DLF,FRMP and Customer) as follows;</p> <p><b>A.19.1 Non Contestable Unmetered Load – One NMI With Multiple Devices</b></p> <ul style="list-style-type: none"> <li>• Multiple non contestable unmetered connections, multiple market connection points</li> <li>• All devices are supplied from a single transmission node</li> <li>• Each device has a unique profile load and network tariff rate associated to it and hence the register ids cannot be consolidated.</li> <li>• All devices have the same TNI, DLF, FRMP and LNSP for a given customer</li> <li>• Three End Users</li> <li>• Three NMI’s</li> <li>• Allocated NMIs: <ul style="list-style-type: none"> <li>○ 5555666601</li> <li>○ 5555666602</li> <li>○ 5555666603</li> </ul> </li> <li>• Identity of individual interrogated metering data: should be as follows: <ul style="list-style-type: none"> <li>○ 5555666601E1</li> <li>○ 5555666602E1</li> <li>○ 5555666603E1</li> <li>○ 5555666603E2</li> <li>○ 5555666603E3</li> </ul> </li> </ul>	If Unmetered Devices have different profiles and network tariff rates, the FRMP could request that separate NMIs are created.
55.	PlusES	A19, A20		Typo: Section A.19 – dot point one “ <b>mulitle</b> market connection points”	Typo corrected.
56.	Red and Lumo	A19, A20		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
57.	Tango Energy	A19, A20		Agree	AEMO notes respondent’s support for the proposed change.
58.	TasNetworks	A19, A20		Noted. Typo in first dot point of A19 and A20 - ‘mulitle’.	Typo corrected.
59.	Vector AMS	A19, A20		Noted	AEMO notes respondent’s comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
60.	AGL	A20		<p>AGL suggests that the descriptions are not correct:</p> <p><b>A.20 Non Contestable Unmetered Load – One NMI with One Device</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Single Connection, single or multiple devices</a></li> <li>• <a href="#">All devices have the same TNI, DLF, FRMP and LNSP for a given customer</a></li> <li>• Three end users</li> <li>• Five NMI's</li> </ul>	Headings corrected to clarify where single and multiple devices are related to one NMI.

**Table 7 – NEM RoLR Processes – Part A**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	Various	Removal of first and/or second tier references	AGL notes the removal of first and second Tier but suggests that some consideration of the changes and impacts on the upcoming embedded network regime may require the first/second tier functionality and processing.  As these procedures recognise ENLRs, they will also need to recognise second tier customers and processes related to second tier customers.	AEMO: AEMO do not believe the calling out of first tier and second tier is necessary for ENLR effected customers as the process will be the same for both first and second tier where the ENLR is the failed retailer.
2.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
3.	Evoenergy	Various		Not removed from following clauses  103.2 (a)(ii) Note  105-A table	AEMO: we are only consulting on part A, the IEC/B2BWG will arrange to consult on Part B as this is B2B related.
4.	Flow Power	Various		We note that in the index on page 4 points 12 & 13 refer to term LR instead of ENLR. This needs to be changed.	AEMO: Index showed ENLR when change marking was removed.
5.	Intellihub	Various		No comment	AEMO notes respondent's comment.
6.	Origin Energy	Various		Noted	AEMO notes respondent's comment.
7.	Red and Lumo	Various		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
8.	Tango Energy	Various		Refer Table 105-A First Tier, Second Tier and LR references require updating.  Refer to the note after 103.2 - Note: These would be notifications for change of LR for Second Tier NMIs where the Suspended Retailer was the LR.	Refer to response to Item 3.
9.	TasNetworks	Various		Noted.  6.1(d) in the first line refers to sections 11, 12 and 13, however the following steps (i), (ii) and (iii) only refer to section 11 and 12. Thus either section 13 should be removed from the first line, or old sub clause (iii) should be reinstated (albeit modified as necessary)	AEMO: removed 13.
10.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
11.	AGL	Various	Provisions for ENLR	Noted.	AEMO notes respondent's comment.
12.	Energy Queensland	Various		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
13.	Evoenergy	Various		Noted	AEMO notes respondent's comment.
14.	Flow Power	Various		Noted	AEMO notes respondent's comment.
15.	Intellihub	Various		No comment	AEMO notes respondent's comment.
16.	Origin Energy	Various		Noted	AEMO notes respondent's comment.
17.	Red and Lumo	Various		Red and Lumo support this change and have no further changes.	AEMO notes respondent's support for the proposed change.
18.	Tango Energy	Various		Please confirm if there are now two distinct roles; LR and ENLR. If not and the LR role also applies to the ENLR, then only the LR needs to be reference throughout the Procedures. I.e.  LR = FRMP of the Parent NMI	AEMO: As this refers to the roles and not the field in MSATS like the CATS procedures the ENLR role will remain. The definition of ENLR is in the Glossary and Framework document.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
19.	TasNetworks	Various		Noted.	AEMO notes respondent's comment.
20.	Vector AMS	Various		Noted	AEMO notes respondent's comment.
21.	Energy Australia	Appendix 1	Average Daily Loads (ADL) in the ROLR_013 report	<p>In our submission on the consultation paper we raised concerns that ADL was insufficient for a ROLR to take on the market risk of a large customer as it was insufficient for accurately profiling and pricing a customer, and requested that historical load be provided for a 12 month period as this would help the ROLR mitigate risk.</p> <p>We would like to reiterate these concerns. ROLR events are likely to occur during periods of market volatility, and insufficient information to contract a (large) customer promptly, while putting them on the spot price, will expose a ROLR and potentially the market to risk. For a large customer making an offer promptly is necessary, and not having sufficient information to do so may put the ROLR at risk.</p> <p>It's unclear what the privacy or consent concern is as the customer's ADL would be provided anyway. If this is a concern perhaps other descriptive statistics that could help the ROLR in this situation could be provided, e.g. peak load/max demand in the past year in addition to ADL, and total energy consumption in the past year.</p>	<p>AEMO: Clause 7.15.5 (c) of the NER specifies who is entitled to metering data. Until you have a financial interest (you don't have this until you are appointed) you are not entitled to the metering data. Under 7.15.5 (e) a Retailer may access standing data and the ADL forms part of standing data as per NMI Discovery.</p>

**Table 8 – Service Level Procedure: Metering Data Provider Services**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	2.4	Specific obligations for MDP - Category D	Noted	AEMO notes respondent’s comment.
2.	Endeavour Energy	2.4		<p>Clause 2.4.1.a.xiii: We note that the word “only” was removed, which now makes de-activation of datastreams mandatory for the listed scenarios. Previously the inclusion of the word “only” made the listed scenarios an option, and the only option, for de-activating datastreams. We believe that the removal of the word “only” has unintended consequences, especially for the scenario where the supply of electricity has been disconnected at the service fuse. For efficiency MDPs should be given the option to leave the datastream on and send validated metering data they collect, as opposed to being forced to deactivate the datastream, when a metering installation is disconnected at the service fuse. Conversely, now that the clause no longer define the only option for deactivating datastreams, MDPs could read this clause as no longer restricting them from deactivating the datastream when the metering installation is remotely disconnected – this was one of the primary reason for wording this clause using the word “only” and listing the allowable scenarios for deactivating datastreams.</p> <p>We suggest that the word “only” be re-instated.</p>	“Only” reinstated for consistency with ICF Final Determination.
3.	Energy Queensland	2.4		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
4.	Evoenergy	2.4		Noted	AEMO notes respondent’s comment.
5.	Flow Power	2.4		Our understanding is that MDP will be required to provide the files simultaneously to all the parties when PMD is raised. We suggest this to be a part of MDP obligations.	<p>Metering Data delivery requirements related to PMDs are prescribed in B2B Procedures and are not duplicated in the MDP SLP document.</p> <p>Proposed enhancements to the B2B framework should be referred to IEC (and B2BWG on their behalf) to review.</p>
6.	Intellihub	2.4		No comment	AEMO notes respondent’s comment.
7.	Origin Energy	2.4		Noted	AEMO notes respondent’s comment.
8.	PlusES	2.4		<p>Clause 2.4.1 (a) (xiii)(C):</p> <ul style="list-style-type: none"> <li>An MDP should be enabled to use tools available to them to determine a site status without requiring to visit a site in every instance.</li> <li>MDP’s ability to identify unaccounted usage on a NMI for a disconnected site is supported by active datastreams.</li> <li>MDP will provide advice to the FRMP and MSATS of energy detected irrespective of the status.</li> <li>NMI status in MSATS does not necessarily reflect the actual status of the NMI.</li> </ul> <p>PlusES proposes the following for the reasons mentioned above :</p> <p>Remove subclause (C) from the above and create it as a new clause:</p> <p><i>The MDP may deactivate datastreams in MSATS, where the supply of electricity has been disconnected at the service fuse;</i></p>	Sub-clause (C) changed to be consistent with ICF Final Determination.
9.	Red and Lumo	2.4		Red and Lumo support this change and have no further changes.	AEMO notes respondent’s support for the proposed change.
10.	Tango Energy	2.4		Agree	AEMO notes respondent’s support for the proposed change.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
11.	TasNetworks	2.4		Noted.	AEMO notes respondent's comment.
12.	Vector AMS	2.4		Agreed	AEMO notes respondent's support for the proposed change.
13.	Vector AMS	2.4(xiii)	Specific obligations for MDP - Category D	<p>Mandatory deactivation of Datastreams should not apply if a MDP is to provide substituted meter data indicating that the site is deenergised i.e. Substitution types 19,58,68. Refer to Vector's submission to the ICF package changes.</p> <p>Suggested wording:</p> <p>(C) where the supply of electricity has been disconnected at the service fuse and the MDP will not be providing appropriately substituted metering data;</p>	Sub-clause (C) changed to be consistent with ICF Final Determination.
14.	AGL	3.7	Metering Data Processing Requirements	AGL Supports the change.	AEMO notes respondent's support for the proposed change.
15.	Energy Australia	3.7		<p><i>(f) ensure standing data contained in the 200 record of the Meter Data File Format (MDFF) file is accurate. Note: Where the MSATS Datastream table reflects a Net Level Data Stream Suffix, the standing data provided in the 200 line of an MTRD MDFF NEM12 200 line will be used by AEMO to identify the individual Register Level DataStream Suffix(s) that constitute the 'Net'.</i></p> <p>Clarification requested for:</p> <ul style="list-style-type: none"> <li>- who has responsibility for updating the standing data?</li> <li>- What does <b>Accurate</b> refer to, does this mean aligned with whatever is in MSATS?</li> </ul>	<p>MP and MDP are responsible for updating standing data in MSATS – refer to CATS_REGISTER_IDENTIFER and CATS_NMI_DATA_STREAM tables in MDFF Specification.</p> <p>“Accurate” replaced with “reflects CATS Standing Data.</p>
16.	Energy Queensland	3.7		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
17.	Evoenergy	3.7		<p>3.7 1(f) The note should be moved down a level to make it clearer, and look like this.</p> <p><i>(f) ensure standing data contained in the 200 record of the Meter Data File Format (MDFF) file is accurate.</i></p> <p>Note: Where the MSATS Datastream table reflects a Net Level Datastream Suffix, the standing data provided in the 200 line of an MTRD MDFF NEM12 200 line will be used by AEMO to identify the individual Register Level Datastream Suffix(s) that constitute the 'Net'.</p>	Note moved as suggested.
18.	Flow Power	3.7		Noted	AEMO notes respondent's comment.
19.	Intellihub	3.7		No comment	AEMO notes respondent's comment.
20.	Origin Energy	3.7		Noted	AEMO notes respondent's comment.
21.	Red and Lumo	3.7		Red and Lumo support this change and have no further changes.	AEMO notes respondent's support for the proposed change.
22.	Tango Energy	3.7		Agree	AEMO notes respondent's support for the proposed change.
23.	TasNetworks	3.7		Noted.	AEMO notes respondent's comment.
24.	Vector AMS	3.7		3.7(f) requires MDP to ensure the 200 record of the MDFF is accurate. Current MDFF specification requires the MDMDataStreamIdentifier to be provided when data is to be sent to MSATs. AEMO have indicated that there is no requirement to create Q,K datastreams in CATS_NMI_DATASTREAM. Refer to AEMO responses on MDM Load process and the determination from Metering package 1 below which is consistent with advice provided in other forums and responses	<p>Summary of Metering Package 1 determination is provided in section 2.2.5 of this Final Report.</p> <p>“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.”</p>

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE				
				<p><b>Metering data granularity</b></p> <p>From 1 July 2021:</p> <ul style="list-style-type: none"> <li>Import and Export Active energy (kWh) and Import and Export Reactive energy (kVarh) will be required to be sent to AEMO, where applicable                     <ul style="list-style-type: none"> <li>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.</li> </ul> </li> <li>All new records created in the CNDS table are to be created at the register level e.g. E and B.                     <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul> </li> </ul> <p>MDFF specification current wording requires all Datastreams to be created MSATS if data is to be sent to MSATS</p> <p>MDFF Specification says:</p> <table border="1"> <tr> <td><i>MDMDataStreamIdentifi</i> <i>er</i></td> <td>Char(2)</td> <td>M/N</td> <td>"Q1", "K1". Defined as per the suffix field in the CATS_NMI_DataStream table, e.g. "N1", "N2". The value must match the value in MSATS. The field must be provided if the <i>metering data</i> has or would be sent to MSATS by the sender. The field is not required when sending the data to another MDP.</td> </tr> </table> <p>Also the MDFF file can accommodate more than just the Active and Reactive datastreams e.g. Current (Z), PowerFactor (G) etc. Given that AEMO wants the file that is sent to the Retailer then this field needs to be optional as there is no requirement to create rows in the NDS table.</p> <p>Vector support the findings of Metering package 1 that it is not mandatory for MDP's to create K/Q datastreams in the NDS table.</p>	<i>MDMDataStreamIdentifi</i> <i>er</i>	Char(2)	M/N	"Q1", "K1". Defined as per the suffix field in the CATS_NMI_DataStream table, e.g. "N1", "N2". The value must match the value in MSATS. The field must be provided if the <i>metering data</i> has or would be sent to MSATS by the sender. The field is not required when sending the data to another MDP.	
<i>MDMDataStreamIdentifi</i> <i>er</i>	Char(2)	M/N	"Q1", "K1". Defined as per the suffix field in the CATS_NMI_DataStream table, e.g. "N1", "N2". The value must match the value in MSATS. The field must be provided if the <i>metering data</i> has or would be sent to MSATS by the sender. The field is not required when sending the data to another MDP.						
25.	AGL	3.10.2	Non-contestable Unmetered Load Calculation Methodologies and Agreed Loads	<p>Note – Typo 3.10.2(b)(ii) – change to 'Metrology'.</p> <p>AGL is unclear if these requirements are adequate, as in the case of bulk NMI, there needs to be a link between the asset count, the asset, the asset location, asset load/load profile and customer. This information and link does not presently exist within Metrology B or this procedure.</p>	<p>Spelling corrected.</p> <p>Refer to response to Metrology Procedures Part B Item 41.</p>				
26.	Energy Queensland	3.10.2		Section 3.10.2 (b) - Energy Queensland suggest that section 3.10.2 be reworded to include the concept of the Physical/Device Inventory being updated with any changes.	Refer to response to Metrology Procedures Part B Item 41.				
27.	Evoenergy	3.10.2		(b)(ii) please correct spelling error of Metrology.	Spelling corrected.				

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
28.	Flow Power	3.10.2		Noted	AEMO notes respondent's comment.
29.	Intellihub	3.10.2		No comment	AEMO notes respondent's comment.
30.	Origin Energy	3.10.2		Noted	AEMO notes respondent's comment.
31.	PlusES	3.10.2		Typo:  (b) (iii) "Mertology Procedure: Part B."	Spelling corrected.
32.	Red and Lumo	3.10.2		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
33.	Tango Energy	3.10.2		Agree	AEMO notes respondent's support for the proposed change.
34.	TasNetworks	3.10.2		Noted. Typo in 3.10.2(b)(ii) – 'Mertology' to be 'Metrology'.	Spelling corrected.
35.	Vector AMS	3.10.2		Is 'Agreed Loads' a defined term? If so, should be in italics otherwise shouldn't be in caps.	Agreed Load is capitalised and is defined in Glossary and Framework document.
36.	AGL	3.12.4	Delivery of Settlements Ready Data	AGL supports the amended completion percentage.	AEMO notes respondent's support for the proposed change.
37.	CitiPower Powercor	3.12.4		CitiPower Powercor disagrees with separation of RRIM from MRIM under type 5 as remaining MRIM sites are either customer refusals or have access issues which we have been unable to be replace with RRIM's therefore required quality standards are unlikely to be met.  The change to separate MRIM's will either see an increase in the issue of F to A's as MDP's will final sub to meet settlement quality % requirements prior to the meter memory capacity expiring or a failure to meet the required SLA's.  CitiPower Powercor proposes that AEMO provide an exemption for those MRIM NMIs that are identified as having customer refusal or have access issues from these delivery targets.	If access issues are encountered and an F Quality Flag has been applied to the metering data, there is little likelihood that Actual data will become available if there truly are chronic access issues.
38.	Energy Australia	3.12.4		We support the changes made.	AEMO notes respondent's support for the proposed change.
39.	Endeavour Energy	3.12.4		Clause 3.12.4.b: For completeness calculated metering data for type 7 and non-contestable unmetered loads should be included in the table. We believe that the delivery timeframe should be more aligned with the Manually Read Metering Data because these loads are generally processed monthly and therefore the quality metric for preliminary and final should not apply. We suggest the metering data type be updated to "Manually Read and Calculated Metering Data"	Calculated (type 7 and NCONUML) Metering Data included with Manually Read Metering Data.
40.	Energy Queensland	3.12.4		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
41.	Evoenergy	3.12.4		Agree	AEMO notes respondent's support for the proposed change.
42.	Flow Power	3.12.4		Noted	AEMO notes respondent's comment.
43.	Intellihub	3.12.4		No comment	AEMO notes respondent's comment.
44.	Origin Energy	3.12.4		Noted	AEMO notes respondent's comment.
45.	PlusES	3.12.4		PlusES notes in relation to AEMO's response on the 1st stage feedback, this consultation will be final prior to AEMO considering transitional and cutover activities with the 5MS RWG (see below).  Concern is that the MDP SLP 3.12.4 obligations may require modification to enable the transitional state.  <u>AEMO Response:</u>	Newer versions of Procedures can be created if transition and readiness activities identify the need to make further changes to Procedures.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				Transitional and cutover activities will be considered by AEMO in consultation with the SMS Readiness Work Group (RWG). Required activities will then be detailed in specific Transition and Cutover plans.	
46.	Red and Lumo	3.12.4		Red and Lumo support this change and have no further changes.	AEMO notes respondent's support for the proposed change.
47.	Tango Energy	3.12.4		Agree	AEMO notes respondent's support for the proposed change.
48.	TasNetworks	3.12.4		Noted.	AEMO notes respondent's comment.
49.	United Energy	3.12.4		<p>United Energy disagrees with separation of RRIM from MRIM under type 5 as remaining MRIM sites are either customer refusals or have access issues which we have been unable to be replace with RRIM's therefore required quality standards are unlikely to be met.</p> <p>The change to separate MRIM's will either see an increase in the issue of F to A's as MDP's will final sub to meet settlement quality % requirements prior to the meter memory capacity expiring or a failure to meet the required SLA's.</p> <p>United Energy proposes that AEMO provide an exemption for those MRIM NMIs that are identified as having customer refusal or have access issues from these delivery targets.</p>	Refer to response to CitiPower Powercor Item 37.
50.	Vector AMS	3.12.4		<p>AEMO should note that introducing a Quality SLA requirement for manually read meters will only incentivise the MDP to 'Finalise substituted data where a read cannot be obtained on the NSRD. Current 'No Access' issues encountered by Vector for Manually read meters are at levels greater than 2% on any schedule read date.</p> <p>AEMO should note that having a SLA imposed for manually read meters for R1 effectively means that the MDP must 'Finalise any substitutes should MDP fail to read a meter at the scheduled reading data (NSRD) – otherwise they will fail the SLA.</p> <p>Having to generate 'Finals only to replace them with Actuals when the access issue is resolved at the next NSRD appears to be somewhat inefficient.</p> <p>Vector recommends that a Quality SLA for manually read meters only be applicable for R2 noting that the Quantity SLA will ensure a read for use in settlements is available.</p>	Refer to response to CitiPower Powercor Item 37.
51.	AGL	3.12.5	Method of Delivery of Data	<p>Noted.</p> <p>CI 3.12.5 (c)(i) and (c)(ii) – consistency of date for 1 July 2021.</p>	Dates formatted consistently.
52.	Energy Queensland	3.12.5		Energy Queensland offers no comment on this change.	AEMO notes respondent's comment.
53.	Evoenergy	3.12.5		Noted	AEMO notes respondent's comment.
54.	Flow Power	3.12.5		Noted	AEMO notes respondent's comment.
55.	Intellihub	3.12.5		No comment	AEMO notes respondent's comment.
56.	Origin Energy	3.12.5		Noted	AEMO notes respondent's comment.
57.	PlusES	3.12.5		<p>Possible Typo:</p> <p>Currently Reads:</p> <p>"(including <b>an</b> IntervalRead dates prior to 1/7/21)"; should an be replaced by any?</p> <p>"(including <b>any</b> IntervalRead dates prior to 1/7/21)";</p>	Typo corrected.
58.	Red and Lumo	3.12.5		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
59.	Tango Energy	3.12.5		AEMO	AEMO notes respondent's comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
60.	TasNetworks	3.12.5		<p>Noted.</p> <p>3.12.5(c) Note: Suggest replacing ‘send AEMO MTRD Meter Data Notifications in either.....’ with ‘send AEMO metering data in either.....’</p> <p>3.12.5(c)(i) – Is there a cut-off IntervalRead date for AEMO accepting MDFF interval data for read dates prior to 1 July 2021 (e.g. 1 Dec 2020)?</p>	<p>AEMO notes respondent’s comment.</p> <p>Suggested change made to 3.12.5(c)</p> <p>The date from which AEMO will be able to accept 5, 15 and 30 minute metering data prior to 1 July 2021 will be confirmed through Readiness activities.</p>
61.	Vector AMS	3.12.5		Agreed	AEMO notes respondent’s support for the proposed change.
62.	AGL	5	METER CHURN DATA MANAGEMENT	AGL notes the inclusion of ‘other relevant’ participants but considers that this may be unclear and suggests that the relevant participants are listed, given the potential expansion of affected parties due to UFE allocation.	Section 5 is related to providing metering data to appropriate participants for the churn day. The only Retailer who is entitled to receive this NMI level metering data will be the Current Retailer. Individual NMI metering data is not provided to UFE affected parties as part of the UFE allocation process.
63.	Energy Queensland	5		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
64.	Evoenergy	5		Noted	AEMO notes respondent’s comment.
65.	Flow Power	5		Noted	AEMO notes respondent’s comment.
66.	Intellihub	5		No comment	AEMO notes respondent’s comment.
67.	Origin Energy	5		Noted	AEMO notes respondent’s comment.
68.	Red and Lumo	5		Red and Lumo support this change and have no further changes.	AEMO notes respondent’s support for the proposed change.
69.	Tango Energy	5		Agree	AEMO notes respondent’s support for the proposed change.
70.	TasNetworks	5		Noted.	AEMO notes respondent’s comment.
71.	VectorAMS	5		Agreed	AEMO notes respondent’s support for the proposed change.

**Table 9 – Exemption Procedure: Metering Installation Data Storage Requirements (New Procedure)**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	1.1	Purpose and scope	Noted.	AEMO notes respondent’s comment.
2.	Energy Queensland	1.1		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
3.	Evoenergy	1.1		Noted	AEMO notes respondent’s comment.
4.	Flow Power	1.1		Noted	AEMO notes respondent’s comment.
5.	Intellihub	1.1		No comment	AEMO notes respondent’s comment.
6.	Origin Energy	1.1		Noted	AEMO notes respondent’s comment.
7.	Red and Lumo	1.1		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
8.	Tango Energy	1.1		Suggest the following rewording:  This Procedure sets out the application process and conditions for exemption from complying with the requirements of NER clause 7.8.2(a)(9) for the storage of interval energy data for metering installations as referred to in NER clause 7.8.2(a1).	“Certain” deleted
9.	TasNetworks	1.1		Noted.	AEMO notes respondent’s comment.
10.	Vector AMS	1.1		Noted	AEMO notes respondent’s comment.
11.	AGL	1.2	Definitions and interpretation	Noted.	AEMO notes respondent’s comment.
12.	Energy Queensland	1.2		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
13.	Evoenergy	1.2		Please address inconsistent application of notes or footnotes; 1.2 (b) has a clarity note; 2.1 (b) has the same information re: Victorian Ministerial Order as a footnote.	While the clarifying comment in 1.2(b) and footnote 1 are similar only to the extent that the Victorian Ministerial Order is referenced, the clarifying comment in 1.2(b) identifies the enabling clause that was inserted into the NER.
14.	Flow Power	1.2		Noted	AEMO notes respondent’s comment.
15.	Intellihub	1.2		No comment	AEMO notes respondent’s comment.
16.	Origin Energy	1.2		Noted	AEMO notes respondent’s comment.
17.	Red and Lumo	1.2		Red and Lumo have no comment on this change.	AEMO notes respondent’s comment.
18.	Tango Energy	1.2		Agree	AEMO notes respondent’s support for the proposed change.
19.	TasNetworks	1.2		Noted.	AEMO notes respondent’s comment.
20.	Vector AMS	1.2		Noted	AEMO notes respondent’s comment.
21.	AGL	2	APPLICATION PROCESS	Change for VicAMI noted.	AEMO notes respondent’s comment.
22.	Energy Queensland	2		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
23.	Evoenergy	2		2.7 (b) check that there is a space after ‘days’. PDF appears to have none	Space added.
24.	Flow Power	2		Noted	AEMO notes respondent’s comment.
25.	Intellihub	2		No comment	AEMO notes respondent’s comment.
26.	Origin Energy	2		Noted	AEMO notes respondent’s comment.
27.	Red and Lumo	2		Red and Lumo support this change and have no further changes.	AEMO notes respondent’s support for the proposed change.
28.	Tango Energy	2		Agree	AEMO notes respondent’s support for the proposed change.
29.	TasNetworks	2		Noted.	AEMO notes respondent’s comment.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
30.	Vector AMS	2		Unclear what second and third paragraph in FootNote 2 is trying to say. Is second paragraph relevant? Should 'No exemption will be required for type 4..' be 'No exemption will be granted by AEMO for type 4...'	No exemption is required for non-excluded type 4 meters because they don't need to convert to 5MS until replaced, and when they do they will need to have enough storage. Wording changed to "AEMO has no power to grant exemptions for type 4..."
31.	AGL	2.1		AGL queries whether these exemptions should apply to existing Cross Boundary Metering Installations, as they have the same effect on settlements as a Bulk supply point would.	Identification of cross boundary supplies (metered and unmetered) between DNSPs will form part of 5MS/GS transition and readiness activities. Any new or replacement type 4 meters that need to be installed must have sufficient 5-minute data storage as they will be installed after 1 December 2018. An assessment of the materiality of the existence of cross boundary supplies currently with type 4 meters will also be undertaken as part of the transition and readiness activities.
32.	AGL	2.1(b)		Footnote 1 seems unnecessary, as the information is specified in Cl 1.2 Definitions.	While the clarifying comment in 1.2(b) and footnote 1 are similar only to the extent that the Victorian Ministerial Order is referenced, the clarifying comment in 1.2(b) identifies the enabling clause that was inserted into the NER.
33.	AGL	2.2	Applicant	<p>AGL notes the 30 day limit for exemptions but considers that this limit is potentially too severe for a residential VicAMI meter, and may force the replacement of an unnecessary number of meters were they to be configured for 5 ms.</p> <p>AGL considers that a lower threshold is appropriate for a residential meter as long as the Victorian DB has the ability to attend, download and rectify any comms issues which may arise prior to the data being overwritten.</p> <p>As the original Rule was based on transmission meters and the VicAMI component was added later, AGL believes that AEMO has some discretion to select a more appropriate timeframe.</p>	Meters installed before 1/12/18 and manually read before 1/12/19 do not have to be changed to 5-minute. This may not be a material issue as DBs have not made comment on
34.	AGL	2.5.2		<p>AGL supports the exemption of VicAMI meters, as a potential requirement to replace a meter for a residential customer would seem unnecessary and in contrast to the National Electricity Objective.</p> <p>AGL also believes that a different recording period is appropriate for VicAMI meters (compared to larger meters) as they are only dealing with residential load.</p>	<p>AEMO notes respondent's support for the proposed change.</p> <p>This is contrary to aligning all interval metering data to 5-minute granularity to eliminate perceived profiling differences.</p>
35.	CitiPower Powercor	2.5.2	Additional considerations for VICAMI Meters	<p>CitiPower Powercor proposes that clause (a) date be updated from 1 July 2018 to 1 July 2021.</p> <p>While it is noted that new and replacement meters installed from 1 December 2018, it is also noted that the NER rule 7.8.2(a) allows AEMO to issue Exemptions for certain types of meters installed up to 1 July 2021.</p> <p>The Victorian Government Order in Council is not prescriptive as to the limiting install date for exemption of Victorian AMI meters, however it is reasonable to at least apply the same 1 July 2021 date:</p> <p><i>(4) For clauses 7.8.2(a1)(1) and (2), substitute:</i></p> <p><i>'(1) types 1, 2, 3, and 4 metering installations installed prior to 1 July 2021;</i></p> <p><i>(2) type 4 metering installations referred to in clause 7.8.2(b1) installed prior to 1 July 2021; and ;</i></p> <p><i>(3) a relevant metering installation that is a complying remotely read interval meter.'</i></p>	<p>If the intent of the OIC was for VicAMI meters installed up to 1 July 2021 to be the subject of the Exemption Procedure, then sub-clause (3) would have been inserted after sub-clauses (1) and (2) and "installed prior to 1 July 2021" would have remained in its original position in NER 8.8.2(a1).</p> <p>As the OIC purposefully removed "installed prior to 1 July 2021" from its original position and only placed it at the end of sub-clauses (1) and(2), the timeframe related to sub-clause (3) is that stated in NER 11.103.3(a), i.e. 1 December 2018.</p>
36.	United Energy	2.5.2		United Energy proposes that clause (a) date be updated from 1 July 2018 to 1 July 2021.	Refer to response to CitiPower Powercor Item 35.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				<p>While it is noted that new and replacement meters installed from 1 December 2018, it is also noted that the NER rule 7.8.2(a) allows AEMO to issue Exemptions for certain types of meters installed up to 1 July 2021.</p> <p>The Victorian Government Order in Council is not prescriptive as to the limiting install date for exemption of Victorian AMI meters, however it is reasonable to at least apply the same 1 July 2021 date:</p> <p><i>(4) For clauses 7.8.2(a1)(1) and (2), substitute:</i></p> <p style="padding-left: 40px;"><i>'(1) types 1, 2, 3, and 4 metering installations installed prior to 1 July 2021;</i></p> <p style="padding-left: 40px;"><i>(2) type 4 metering installations referred to in clause 7.8.2(b1) installed prior to 1 July 2021; and ;</i></p> <p><i>(3) a relevant metering installation that is a complying remotely read interval meter.'</i></p>	

**Table 10 – Retail Electricity Market Glossary and Framework**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL	2.7.7	Exemptions	Noted.	AEMO notes respondent’s comment.
2.	Energy Queensland	2.7.7		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
3.	Evoenergy	2.7.7		Noted	AEMO notes respondent’s comment.
4.	Flow Power	2.7.7		Noted	AEMO notes respondent’s comment.
5.	Intellihub	2.7.7		No Comment	AEMO notes respondent’s comment.
6.	Origin Energy	2.7.7		Noted	AEMO notes respondent’s comment.
7.	Red and Lumo	2.7.7		Red and Lumo support this change.	AEMO notes respondent’s support for the proposed change.
8.	Tango Energy	2.7.7		Agree	AEMO notes respondent’s support for the proposed change.
9.	TasNetworks	2.7.7		Noted.	AEMO notes respondent’s comment.
10.	Vector AMS	2.7.7		Noted	AEMO notes respondent’s comment.
11.	AGL	5	GLOSSARY	Note inclusion of Agreed Load for NONCUMUL.	AEMO notes respondent’s comment.
12.	CitiPower Powercor	5		<p>CitiPower Powercor recommends, for clarity, the term/s ‘MRIM / MRIM RWD meter’ be added with an explanation of ‘A meter installed in Victoria as part of the Advanced Metering Infrastructure mandate in Victoria’. In MSATS, such MRIM RWD meters are recorded as Type 5 meters.</p> <p>At least 3 of the 5 Victorian distributors use this instead of ‘VICAMI Meter’ as VICAMI Meter has implications in terms of the Validation/Substitution rules to be applied under Metrology Procedure Part B.</p> <p>The Victorian Order in Council GG21017S346 dated 12 October 2017 specifically defines Victorian AMI Meters (relevant metering installations) as Type 5 metering installations not type VICAMI metering installations.</p> <p><b>7.1.2 Application to Victoria</b></p> <p>(b) In this Chapter 7, a relevant metering installation that, but for it being capable of remote acquisition, would be a type 5 or type 6 metering installation <u>is taken to be a type 5 or type 6 metering installation respectively.</u></p> <p>(e) In this Chapter 7, for the purposes of clause 7.8.9(b) and (c), a relevant metering installation with a complying remotely read interval meter <u>is a type 5 metering installation that has been altered to make it capable of remote acquisition.</u></p>	Wording revised.
13.	Energy Queensland	5		Energy Queensland offers no comment on this change.	AEMO notes respondent’s comment.
14.	Evoenergy	5		Noted	AEMO notes respondent’s comment.
15.	Flow Power	5		Noted	AEMO notes respondent’s comment.
16.	Intellihub	5		No Comment	AEMO notes respondent’s comment.
17.	Origin Energy	5		<p>Origin Energy notes that the Definition against the NMI Classification Code has an incorrect reference in the CATS procedure; latest version has details against cl 4.10, not 4.9.</p> <p>Origin Energy questions whether the Glossary be updated to include terms and definitions for:-</p>	Reference corrected.

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
				BULK DWHOLESALE NGER SAMPLE WHOLESALE XBOUNDARY	
18.	Red and Lumo	5		Red and Lumo have no comment on this change.	AEMO notes respondent's comment.
19.	Tango Energy	5		It's suggested if the two terms of LR and ENLR continue to be used then the Glossary include the following: LR = GLOPOOL or POOLXXX ENLR = FRMP of the Parent NMI	LR Participant IDs for Global Settlements added. ENLR already defined as Parent FRMP.
20.	TasNetworks	5		Noted.	AEMO notes respondent's comment.
21.	United Energy	5		United Energy recommends, for clarity, the term/s 'MRIM / MRIM RWD meter' be added with an explanation of 'A meter installed in Victoria as part of the Advanced Metering Infrastructure mandate in Victoria'. In MSATS, such MRIM RWD meters are recorded as Type 5 meters.  At least 3 of the 5 Victorian distributors use this instead of 'VICAMI Meter' as VICAMI Meter has implications in terms of the Validation/Substitution rules to be applied under Metrology Procedure Part B.  The Victorian Order in Council GG21017S346 dated 12 October 2017 specifically defines Victorian AMI Meters (relevant metering installations) as Type 5 metering installations not type VICAMI metering installations.  <b>7.1.2 Application to Victoria</b>  (b) In this Chapter 7, a relevant metering installation that, but for it being capable of remote acquisition, would be a type 5 or type 6 metering installation <u>is taken to be a type 5 or type 6 metering installation respectively.</u>  (e) In this Chapter 7, for the purposes of clause 7.8.9(b) and (c), a relevant metering installation with a complying remotely read interval meter <u>is a type 5 metering installation</u> that has been altered to make it capable of remote acquisition'.	Refer to response to CitiPower Powercor Item 12.
22.	Vector AMS	5		Noted	AEMO notes respondent's comment.
23.	TasNetworks	5	Inventory Table Definition	Reference to clauses in Metrology Procedure: Part B need to be renumbered as 13.2.2, 13.2.3, and 13.5.2.	Clause references corrected.

**Table 11 – Other Issues Related to Consultation Subject Matter**

#	RESPONDENT	CLAUSE	HEADING/ DEFINITION	PARTICIPANT COMMENT	AEMO RESPONSE
1.	AGL			<p><b>Meter Interval reversion</b></p> <p>While we understand certain meters are mandated to become 5-ms meters, however the Rules and procedures are silent if a non-mandated meter (e.g. pre 1 Dec 2018 meter type 4 / 5) can be converted to 5-minute intervals and later reconfigured back to 15/30-minute intervals. AGL feels that would be an inappropriate outcome, and suggests that for clarity amongst all participants that there be a prohibition on reverting a meter once converted to 5-ms.</p>	<p>Metrology Procedure: Part A, section 7 amended to prevent metering installations producing 5-minute metering data reverting to produce 15 or 30-minute metering data.</p> <p>5MS Final Determination (pages v, 10 and 140) states that: “Existing meters that generate five minute data are prevented from being replaced with a meter of a lower functionality.”</p>
2.	Origin Energy			<p>Origin acknowledges contributions by AEMO and all other market participants in the development of procedures to support an efficient and effective market to achieve the National energy objective (NEO). AEMO’s proposed model of including non-contestable unmetered supply loads (NCONUML) sites in MSATS to enable Global settlement is a good step in the right direction. However, it does not go far enough to deliver market operational efficiency and customer outcomes. Origin considers that market procedures require further enhancements for an efficient operation in the supply of electricity for non-contestable unmetered sites.</p> <p>Origin have provided a detailed Participant Response to the proposed changes and requests the following items in relation to the management of non-contestable unmetered supply loads (NCONUML) be addressed by AEMO in the final Metering Package 2 Procedures:</p> <ol style="list-style-type: none"> <li><b>Same asset type and load profile per meter</b> - AEMO should mandate in the procedures that every NCONUML created in MSATS at the meter (device) level must have the same device type, load profile and network tariff rate. This provides a more efficient data model that enables transparency to the customer on the load and accurate settlement of associated charges.</li> <li><b>One market participant to have ownership of data in MSATS</b> - Networks should have an obligation to maintain NCONUML assets in MSATS accurately, as they do currently for Type 7 Contestable loads. A well-defined data model implemented for NCONUML would ensure MSATS is the source of truth for all standing and consumption data. This will standardise the process for all NMIs in MSATS and remove bilateral processes between market participants that are subject to potential errors.</li> <li><b>Alignment of B2B and B2M processes</b> - AEMO should specify market participant obligations in the procedures in relation to NCONUML sites for set up, maintenance and abolishment using the existing defined B2B and B2M market processes. This provides participants with certainty on the processes required to be undertaken to maintain NCONUML assets and not follow off-market processes.</li> <li><b>Centralised unmetered asset list with load</b> – AEMO to include non-contestable unmetered assets in the existing centralised unmetered asset list with load to enable a consistent approach across the National Electricity market.</li> </ol>	<ol style="list-style-type: none"> <li>Inventory Tables for NCONUML NMIs held in the MDP’s metering data services database will contain this information. Procedures provide for this information to be available to relevant Registered Participants.</li> <li>NCONUML NMI Standing Data will also be held in MSATS.</li> <li>Enhancements to the B2B framework are managed by the IEC. Please raise this in IEC forums through you IEC representative.</li> </ol> <p>The current NEM Load Table contains NATA tested devices for type 7 unmetered loads only.</p>

**Table 12 – Origin Energy Proposal**

Changes to B2B documentation and processes will need to be managed by the IEC.

Table of B2B Transactions and Typical Participant combinations with applicability to new SMS/GS Installation Types

B2B Procedure	Transaction Type	Sub Type	Purpose	Initiator/s	Recipient	Notified Parties	Applies to all new NMI Classification codes
Service Orders	Supply Service Works	Allocate NMI	The first step in a new connection process	RB	DB/ENM	X	Yes
Service Orders	Supply Service Works	Establish Permanent Supply	Establish supply - Part of overall new connections process. This service order is not required in NSW whilst the Accredited Service Provider Scheme is in operation for service works.	RB	DB	MDP / MP / MC	Yes
Service Orders	Supply Service Works	Establish Temporary Supply	Establish supply - Part of overall new connections process. This service order is not required in NSW whilst the Accredited Service Provider Scheme is in operation for service works.	RB	DB	MDP / MP / MC	Yes
Service Orders	Supply Service Works	Establish Temporary in Permanent	Establish supply - Part of overall new connections process. This service order is not required in NSW whilst the Accredited Service Provider Scheme is in operation for service works.	RB	DB	MDP / MP / MC	Yes
Service Orders	Supply Service Works	Supply Abolishment	Abolish supply	RB	DB	MDP / MP / MC	Yes
Service Orders	Supply Service Works	Supply Alteration	Alter the supply (e.g. upgrade service to multi- phase / move ). This service order is not required in NSW whilst the Accredited Service Provider Scheme is in operation for service works.	RB	DB	MDP / MP / MC	Yes
Service Orders	Supply Service Works	Tariff Change	A request from a retailer to change a customer's network tariff	RB	DB	X	Yes
Service Orders	Supply Service Works	Temporary Isolation	Temporary supply Isolation to facilitate 3rd party metering works or other. This service order is not required in NSW whilst the Accredited Service Provider Scheme is in operation for service works.	RB	DB	MDP / MP / MC	Yes
Service Orders	Supply Service Works	Temporary Isolation – Group Metering	Tempory supply isolation where multiple NMI's are connected to one supply point.	RB	DB	MDP / MP / [MC]	Yes
Service Orders	Metering Service Works	Change Timeswitch Settings	Change the timeswitch settings.	RB	DB	MP / MC	Yes
Service Orders	Metering Service Works	Exchange Meter	Swap an existing meter or meter installation to a new one	RB or MC	MP	DB / MDP	Yes
Service Orders	Metering Service Works	Install Controlled Load	Install or set up Controlled Load devices, including hot water	RB or MC	MP or DB	DB / MDP / MC	Yes
Service Orders	Metering Service Works	Install Meter	Install one or more meters or metering installations	RB or MC	MP	DB / MDP / MC	Yes
Service Orders	Metering Service Works	Move Meter	Move the location of a meter	RB or MC	MP (or DB for Type 5/6)	MDP / DB / MC	Yes
Service Orders	Metering Service Works	Remove Meter	The removal of one or more <i>meters</i> is required. The removal of redundant <i>meters</i> . A Remove Meter used to remove the last meter on site should be accompanied with a Supply Abolishment sent to the DNSP.	RB or MC	MP (or DB for Type 5/6)	DB / MDP / MC	Yes
Service Orders	Metering Service Works	Meter Investigation – Inspect	Inspect meter and report	RB or MC	MP (or DB for Type 5/6)	MDP / MC	Yes
Service Orders	Metering Service Works	Meter Investigation - Meter Test	Perform meter test	RB or MC	MP (or DB for Type 5/6)	MDP / MC	Yes
Service Orders	Metering Service Works	Reseal Device	Device seal is missing and requires replacement	RB or MC	MP (or DB for Type 5/6)	MDP / MC	Yes
Service Orders	Metering Service Works	Meter Reconfiguration	Reconfigure meter (e.g. Remotely re-program)	RB or MC	MP (or DB for Type 5/6)	MDP / MC	Yes

B2B Procedure	Transaction Type	Sub Type	Purpose	Initiator/s	Recipient	Notified Parties	Applies to all new NMI Classification codes
Service Orders	Re-energisation	After Disconnection for Non payment	Re-Energise the customer after a disconnection for Non-payment	RB	DB or MP or MC	MDP / DB / MP / MC	Yes
Service Orders	Re-energisation	Remote	Re-Energise the customer via Remote communication with the meter	RB	DB (VIC) or MP or MC	MDP / DB / MP / MC	Yes
Service Orders	Re-energisation	Retrospective Move-in	When a move-in reading is required for an already Energised Site.	RB	DB or MP	MDP / DB /MP / MC	Yes
Service Orders	Re-energisation	New Reading Required	Re-Energise the customer via a site visit. If the site is already energised then collect a Reading	RB	DB or MP	MDP / DB / MP / MC	Yes
Service Orders	Re-energisation	Physical visit	Re-Energise the customer via a site visit	RB	DB or MP	MDP / DB / MP / MC	Yes
Service Orders	Re-energisation	Recipient Discretion	Re-Energise the customer using recipients standard business process	RB	DB or MP or MC	MDP / DB / MP / MC	Yes
Service Orders	De-energisation	Pillar Box Pit Or Pole-Top	De-Energise the customer at a point upstream of the point of attachment	RB	DB	MDP / MP / MC	Yes
Service Orders	De-energisation	Remove Fuse	De-Energise the customer via removal of the service fuse	RB	DB	MDP / MP / MC	Yes
Service Orders	De-energisation	Remote	De-Energise the customer using remote means	RB or MC	DB (VIC),MP or MC	MDP / DB / MC	No
Service Orders	De-energisation	Local Meter Disconnection	De-Energise the customer through local operation of in-built meter contactor	RB	DB/(VIC) / MP	MDP / DB / MP / MC	Yes
Service Orders	De-energisation	Recipient Discretion	De-Energise the customer via a method chosen by the service provider	RB or MC	DB or MP or MC	MDP / DB / MP / MC	Yes
Service Orders	Special Read	Check Read	Obtain a meter reading	RB	MDP (or DB for Type 5/6)	X	Yes
Service Orders	Special Read	Final Read	Obtain a meter reading	RB	MDP (or DB for Type 5/6)	X	Yes
Service Orders	Special Read	No Sub Type	Can be used when a Retailer requires a transfer on a special read.	RB	MDP (or DB for Type 5/6)	X	Yes
Service Orders	Miscellaneous Services	No Sub Type - Ignore if populated	An ad-hoc service request	Any	Any	Any	Yes
Customer and Site Details Notification	Customer Details Request	No Sub type	Request from a DNSP or an MP to a Retailer to supply the Customer and Life-support details	DB or MP or MC	RB	X	Yes
Customer and Site Details Notification	Customer Details Notification	No Sub type	Customer and Life support details issued to DNSP or MP after update or on request	RB	DB or MP or MC	X	Yes
Customer and Site Details Notification	Site Access Request	No Sub type	Request from a Retailer to obtain a copy of the Site access and hazard information.	RB or MP or DB or MC	RB or MP or DB or MC	X	Yes
Customer and Site Details Notification	Site Access Notification	No Sub type	Publication of Site access and hazard information. Typically this is from a Retailer to a DNSP or MP whenever the data changes, but can also be from a DB or MP to a Retailer based on receiving a site access request	RB or DB or MP or MC	DB & MP or RB or MC	X	Yes
One Way Notifications	Notice of Metering Works	No Sub type	Informs the DNSP about the details of a recently completed metering works	MP or MC	DB	X	No
One Way Notifications	Meter Fault and Issue Notification	No Sub type	Informs a retailer about a meter fault. Can be from an MP, MC or a DNSP in the case of Type 5 and 6 meters.	MP or DB or MC	RB	X	No
One Way Notifications	Planned Interruption Notification	No Sub type	Informs a DNSP about planned interruptions on the network	RB or MC	DB	X	No
One Way Notifications	Network Tariff Notification	No Sub type	Informs a Retailer about an intent to change network tariffs	DB	RB	X	No
One Way Notifications	Meter Exchange Notification	No Sub type	A transaction to support forward planning of bulk meter rollouts.	RB or MP or MC	Any	X	No
One Way Notifications	Notified Party	No Sub Type	A special purpose transaction used to inform Notified parties of the state of a service order process	RB or MC	Any	X	Yes
Meter Data Process	Provide Meter Data	No Sub type	Request to provide meter data	RB or DB or MDP	MDP	X	Yes

B2B Procedure	Transaction Type	Sub Type	Purpose	Initiator/s	Recipient	Notified Parties	Applies to all new NMI Classification codes
Meter Data Process	Verify Meter Data	No Sub type	Request to verify meter data	RB or DB or New MDP	MDP / old MDP	X	Yes
Meter Data Process	Meter Data Notification	No Sub type	Provision / delivery of meter data to market participants	MDP	RB or DB or MDP or MC	X	Yes
Meter Data Process	Remote Service Request	No Sub type	Request to invoke a remote services function. Directed to a remote meter via Service provider	DB or RB or MC	MP or MC	X	No
Meter Data Process	Remote Service Response	No Sub type	Provision of meter status and electrical measurements and events from a remote meter	MP or MC	DB or RB or MC	X	No
Network Billing Process	Network Invoice Notification	No Sub type	Network Invoices to Retailer	DB	RB	X	Yes
Network Billing Process	Dispute Notification	No Sub type	Network Charge dispute notification sent to LNSP.	RB	DB	X	Yes
Network Billing Process	Dispute Response	No Sub type	Dispute Status Change Advice	DB	RB	X	Yes
Network Billing Process	Remittance Notification	No Sub type	Remittance to DB	RB	DB	X	Yes
Network Billing Process	Credit Notification	No Sub type	Credit Balance Invoice Advice	RB	DB	X	Yes
Network Billing Process	Remind Notification	No Sub type	Outstanding Invoice Advice	DB	RB	X	Yes

