

# Load Profiling Methodologies Consultation

Final Report – Standard consultation  
for the National Electricity Market

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New South Wales | Queensland | South Australia | Victoria | Australian Capital Territory | Tasmania | Western Australia  
Australian Energy Market Operator Ltd ABN 94 072 010 327



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## Executive summary

The publication of this final report (**Final Report**) concludes the standard consultation procedure conducted by AEMO to establish a viable longer-term Load Profiling Methodology (the **proposal**) under the National Electricity Rules (**NER**).

AEMO thanks all stakeholders for their feedback on the proposal in Draft Report, on which AEMO consulted as required by NER 8.9.2.

In response to the Draft Report, AEMO received four written submissions. All respondents agreed with the proposed implementation of Option 6, with an effective date of 1 October 2023. No respondents raised any material issues. Some minor grammatical errors were identified within the procedures, which have since been amended.

As a result, AEMO's final determination is to:

- Implement Option 6 as the longer-term methodology for five-minute load profiles (**5MLPs**).
- Implement Option 6 effective 1 October 2023.
- Perform additional analysis to determine the preferred longer-term solution for net system load profiles (**NSLPs**).
- Implement the three Electricity Retail Consultative Forum (**ERCF**) Issue Change Forms (**ICFs**) effective 30 May 2023:
  - ICF\_055 Clarifying when an embedded network code must be used
  - ICF\_064 Addition of the 'HouseNumberToSuffix' field to MSATS
  - ICF\_065 Removal of NMI Discovery Type 3 limitations.

Accordingly, the following procedures have been amended, with the following effective dates:

- The three ERCF ICFs - 30 May 2023:
  - MSATS Procedures - CATS v5.5
  - MSATS Procedures - WIGS v5.5
  - Standing Data for MSATS document v5.5
  - Retail Electricity Market Procedures - Glossary and Framework v3.9
- The 5MLP longer-term load profiling methodology - 1 October 2023:
  - Metrology Procedure: Part B v7.5
  - MSATS Procedure - MDM Procedures v4.4

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# 1. Stakeholder consultation process

As required by NER, AEMO has consulted on Load Profiling Methodologies and other matters in accordance with the standard rules consultation procedure in NER 8.9.2.

This Final Report uses terms defined in the NER, which are intended to have the same meanings. There is a glossary of additional terms and abbreviations in Appendix A.

AEMO's process and timeline for this consultation are outlined below.

**Table 1 Consultation process and timeline**

| Deliverable                     | Indicative date              |
|---------------------------------|------------------------------|
| Issues Paper published          | Wednesday, 28 September 2022 |
| Submissions due on Issues Paper | Thursday, 27 October 2022    |
| Draft Report published          | Thursday, 1 December 2022    |
| Submissions due on Draft Report | Friday, 20 January 2023      |
| Final Report published          | Friday, 24 February 2023     |

AEMO's consultation webpage for the proposal is at <https://aemo.com.au/consultations/current-and-closed-consultations/load-profiling-methodologies-consultation>, which contains all published papers and reports, written submissions, and other consultation documents and reference material.

In response to the Issues Paper, AEMO received seven written submissions, including two late submissions.

AEMO considered these submissions and other relevant information in developing the Draft Report, in which AEMO set out its draft determination, to:

- Implement Option 6 as the longer-term methodology for 5MLPs.
- Implement Option 6 effective 1 October 2023.
- Perform additional analysis to determine the preferred longer-term solution for NSLPs.
- Implement the three ERCF ICFs on 30 May 2023:
  - ICF\_055 Clarifying when an embedded network code must be used
  - ICF\_064 Addition of the 'HouseNumberToSuffix' field to MSATS
  - ICF\_065 Removal of NMI Discovery Type 3 limitations.

In response to its Draft Report, AEMO received four written submissions. All respondents agreed with the proposed implementation of Option 6, with an effective date of 1 October 2023. No respondents raised any material issues. Some minor grammatical errors were identified within the procedures, which have since been amended.

AEMO thanks all stakeholders for their feedback on the proposal throughout this consultation, which has been considered in preparing this Final Report.

## 2. Background

### 2.1. Context for this consultation

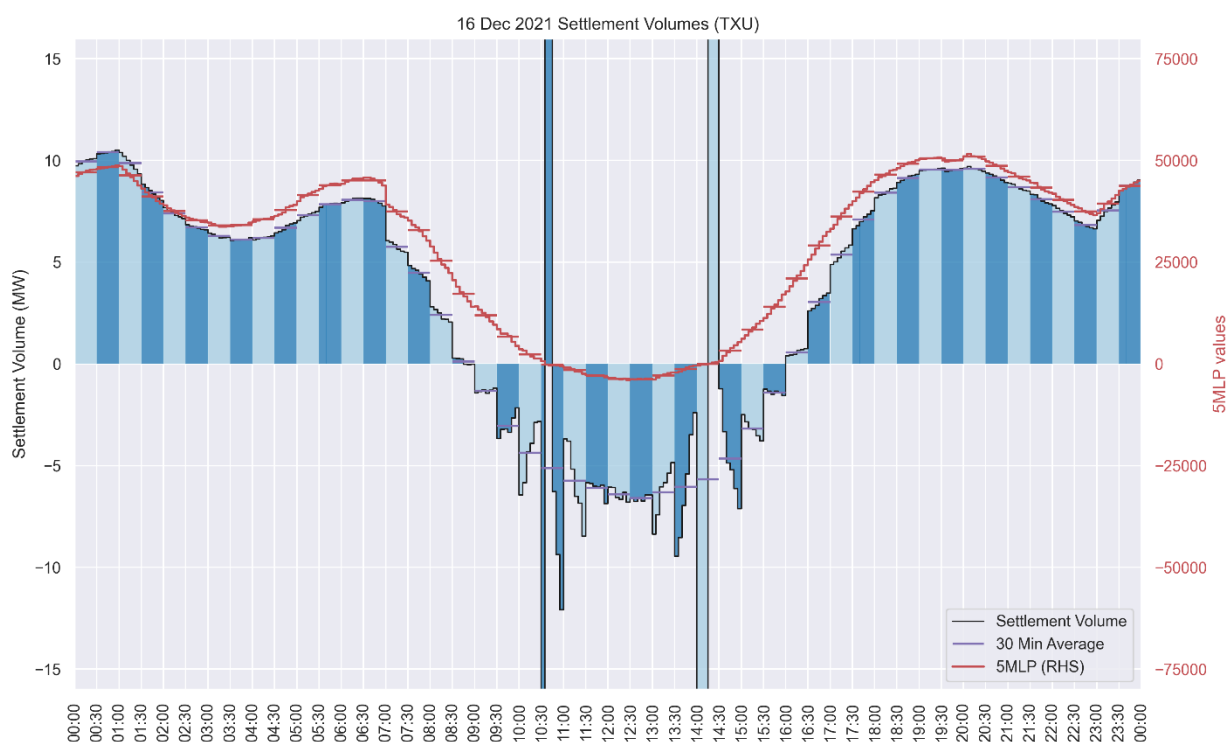
#### 2.1.1. Load Profiling Methodologies

AEMO’s Meter Data Management (**MDM**) system generates the following load profiles, to support market settlement processes:

- 5MLPs, to convert 30-minute and 15-minute interval metering data into 5-minute intervals.
- NSLPs, to convert accumulation (basic meter) reads, that typically account for consumption over a 90-day period, into 5-minute intervals.

Subsequent to the implementation of the Five-Minute Settlement Rule, on 1 October 2021, the issue was identified where negative load profiling values were present as shown in figure 1.

**Figure 1 Negative Load Profiling Values**



A combination of positive and negative values can produce very high or very low profiled values after applying the 5MLP to 30-minute and 15-minute metering data or the NSLP to accumulation metering data. This outcome is a consequence of having a small denominator value in the profiling algorithm.

The metering data would sum to the correct energy value over the period. However, the key risk is the potential for coincidental high spot/pool pricing, which may result in trading limit breaches for Financial Responsible Market Participants (**FRMPs**).

The interim solution was sought to manage these volume spikes as quickly as possible, until the longer-term solution could be identified and implemented. The interim solution, to be implemented quickly, needed to leverage existing AEMO MDM functionality. The ‘weights’ methodology was selected for this purpose. This methodology increases the system load component of the profiles, which artificially shifts the profiles up, as shown in figures 2 and 3.

Figure 2 5MLP – No Weights

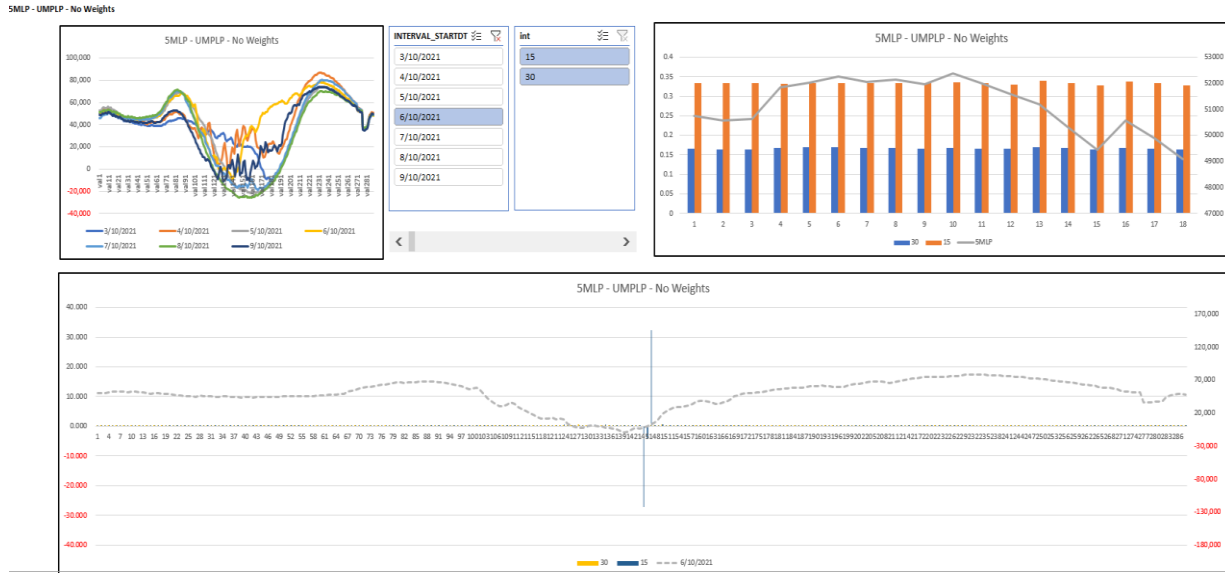
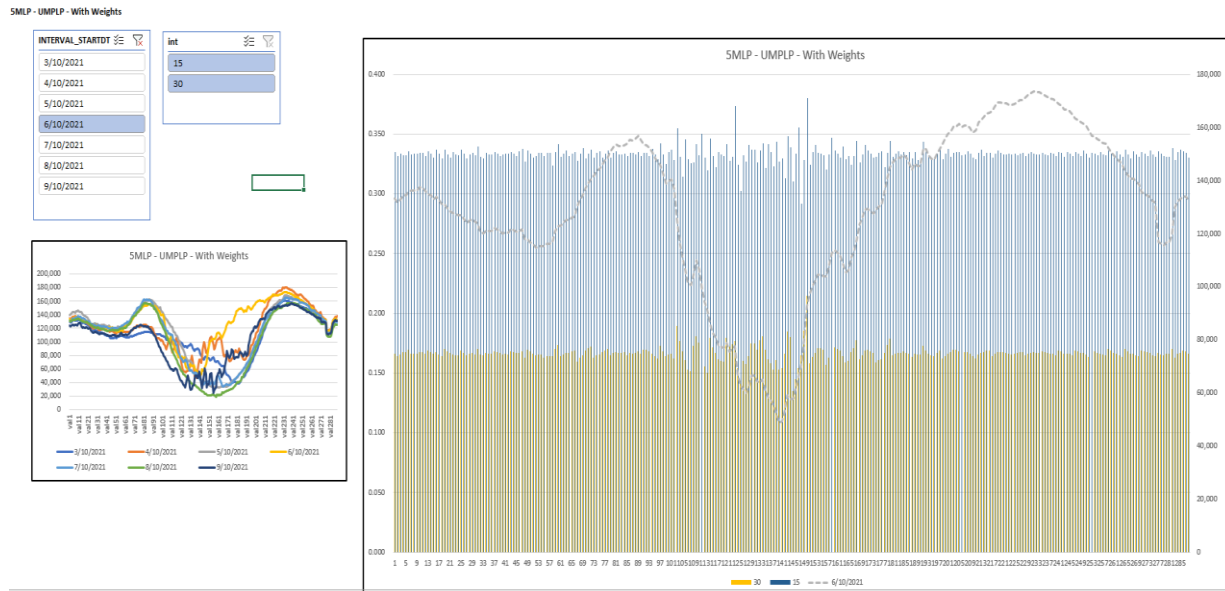


Figure 3 5MLP with Weights



Prior to any weights being applied, analysis of the system load is performed and confirmed with the respective Transmission Network Service Providers (TNSPs) and the Distribution Network Service Providers (DNSPs).

In the Issues Paper, AEMO sought stakeholder feedback regarding a preferred longer-term methodology, to better manage scenarios which may result in volume spikes occurring in either 5MLPs or NSLPs.

### Objectives and Principles

Through engagement with members of the ERCF, the following objectives and principles were established, to assist in the assessment of any potential longer-term methodologies:

- The shape of the curves for each metering type should be correctly representative
  - The profiles align with the expected energy volumes and consumption patterns for interval and consumption metering data.
- The magnitude of the curves for each metering type should be correctly representative
  - The energy quantities for each of the component curves are consistent with the expected energy volumes for interval and consumption metering data.
- The gradients of 5-minute values should match the gradients of the profile curves
  - The rate of change or slope of the profiled reads within a 30-minute or 15-minute interval matches the behaviour of the 5MLP.
- The application of the methodology should be consistent and standardised
  - The methodology is consistent and standardised across all system load TNIs and profile areas in all jurisdictions.

These objectives and principles in the Issues Paper were supported by all respondents.

### Proposed Methodologies

Since the implementation of the interim solution, AEMO identified and assessed the potential viability of various methodologies, based on the agreed objectives and principles which are set out above.

To date, AEMO's analysis has been limited with respect to the potential consequential impacts to NSLPs and to Unaccounted for Energy (**UFE**) allocations, due to the following factors (**AEMO Analysis Limitation Factors**):

- Issues in data quality in the early stages of Five-minute Settlements (**5MS**).
- Unavailability of the latest data in lower testing environments.
- The need for 365 days of data to scrutinise NSLP outcomes.
- The impact of the timing of methodology implementation on the profiling or allocation of the reads among the methodologies.
- The different trends and behaviours in respect of the several profile areas – the impact to UFE and the impact to NSLP may differ in different profile areas, depending on the volume of five-minute meters.
- The different impacts on different NSLPs of the methodology which is applied to the 5MLPs.

The following methodologies were presented in the Issues paper as potential longer-term options, based on the objectives and principles:



**Table 2 Proposed Load Profiling Methodologies**

| Option      | Description   |
|-------------|---|
| Option 1    | The Uniform Allocation Method ( <b>UAM</b> ) is applied to <b>all</b> intervals associated to the effected day.   |
| Option 5    | The UAM is applied to <b>specific</b> intervals that <b>have crossed the x-axis</b> i.e., there is a combination of positive and negative values in the specific 30-minute or 15-minute interval.   |
| Option 5(a) | The UAM is applied to <b>the specific</b> intervals that have crossed the x-axis. Additionally, the <b>UAM is applied to the immediately preceding and following 30-minute and 15-minute intervals</b> (number of intervals configurable). This is a variation of Option 5 with an additional buffer. |
| Option 6    | The UAM is applied to intervals <b>where the load profile is negative</b> i.e., all intervals below the x axis. This results in a flat profile while the profile is negative.   |

### 2.1.2. ERCF ICFs

The three ICFs which were presented in the Issues Paper were supported by respondents throughout the consultation.

#### ICF\_055 Clarifying the process for obtaining and applying embedded network codes

MSATS requires each embedded network to be given a code, called the embedded network code, which is used to identify the parent NMI(s) and child NMIs.

The CATS Procedure defines the process for obtaining and applying this embedded network code into MSATS, along with who is responsible for each step and the time frame for each step. In summary, the current clauses are as follows:

- Clause 4.12(b): within 5 business days of a request, LNSP must provide AEMO with the embedded network code.
- Clause 2.10(e): within 2 business days of notification from the LNSP, AEMO must populate the embedded network code in MSATS.
- Clause 4.12(d): within 2 business days of MSATS being updated with the embedded network code, LNSP must populate the parent NMI(s) with the embedded network code.
- Clause 2.11(f): ENM must populate the child NMI with the embedded network code (there is no timeframe for this obligation).

However, the issue has arisen that participants are observing two different interpretations of the current clauses:

1. The clauses are only applicable when the Distributor approves:
  - the parent connection point for a greenfield embedded network application; or ;
  - an existing market connection point to be a parent connection point for a brownfield embedded network application.
2. The clauses are applicable regardless of the Distributor's embedded network application process.

AEMO considers that the first interpretation is correct.

Accordingly, AEMO proposes to delete the current CATS Procedure Section 4.12(b)(iv) and insert the following new Section 4.12(b)(iv):

(iv) once all obligations have been met under the NER Chapter 5 and 5A and jurisdictional documentation, the LNSP must provide the Embedded Network Code to AEMO within five business days from the time it receives the request from the embedded network owner or the ENM acting on behalf of the embedded network owner, where the site is:

(A) a Greenfield Site;

(B) a Brownfield Site that for all intents and purposes has been set up as an embedded network but all consumers were purchasing energy from the embedded network owner; and

(C) a Brownfield Site that may require network infrastructure changes.

### ICF\_064 Addition of the 'HouseNumberToSuffix' field

The 'House Number To Suffix':

- Is a part of the Australian structured address standards.
- Was reviewed during the MSATS Standing Data Review (**MSDR**) consultations in 2020.
- Was added to the r42 schema in November 2021 by the aseXML Standards Working Group (**ASWG**), which is the body that ensures the technical accuracy of the aseXML schemas. At the time, ASWG industry representatives suggested that, from an aseXML perspective, it would be prudent to add the 'HouseNumberToSuffix' element as a logical extension of 'HouseNumberTo'.

This ICF proposes that the 'HouseNumberToSuffix' element be included in the market procedures for use in MSATS, due to its availability in the schema, to enable better quality site addresses to be recorded for energy participants.

The absence of this field in the procedures restricts the site address to be recorded without this information e.g. if a site address is 14A-14B, MSATS is unable to record the address accurately, and instead, the address may appear inaccurately as 14A-14.

### ICF\_065 Removal of NMI Discovery Type 3 validation

The NMI Discovery Type 3 is utilised by retailers to ascertain the previous FRMP in the case of a 'won in error' scenario. The 'Won in Error' process is being impacted by MSATS NMI Discovery Type 3 showing an error message, where a transfer is completed more than 130 business days ago.

This MSATS constraint forces market participants to rely on manual processes and results in retailers having to obtain the 'previous FRMP' details from the relevant network via email.

NER 7.15.5 (c) and (e) provide for retailers to access to energy data, including NMI Standing Data, in order to comply with their obligations. Since there are no restrictions in the NER, ICF\_065 proposes the removal of the current validation from MSATS.

### 2.1.3. Retail Electricity Market Procedures – Glossary and Framework

The definition of the Last Consumer Change Date (**LCCD**) was included in the Retail Electricity Market Procedures – Glossary and Framework v3.9, with an effective date of 30 May 2023.

### 2.1.4. MSATS Procedure – MDM Procedures

An additional change to the MSATS Procedure - MDM Procedure v4.4 was included to update the description of the RM46 Report in section 9.16.

## 2.2. NER Requirements

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

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

## 2.3. The National Electricity Objective

Within the specific requirements of the NER applicable to this proposal, AEMO has sought:

- to make a determination that is consistent with the national electricity objective (**NEO**); and
- where considering options, to select the option which is best aligned with the NEO.

The NEO is expressed in section 7 of the National Electricity Law as:

to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

### 3. List of material issues

The respondents did not raise any key material issues in their submissions to the Draft Report.

A detailed table of written submissions by stakeholders to the Draft Report, together with AEMO's responses, is contained in Appendix B.

## 4. Final determination on proposal

Having considered the matters raised in submissions to the Draft Report, AEMO's final determination is to:

- Implement Option 6 as the longer-term methodology for 5MLPs.
- Implement Option 6 effective 1 October 2023.
- Perform additional analysis in determined the preferred longer-term solution for NSLPs.
- Implement the three ERCF ICFs on 30 May 2023:
  - ICF\_055 Clarifying when an embedded network code must be used
  - ICF\_064 Addition of the 'HouseNumberToSuffix' field to MSATS
  - ICF\_065 Removal of NMI Discovery Type 3 limitations.
- Add the LCCD definition to the Retail Electricity Market Procedures - Glossary and Framework document.
- Update the description of the RM46 Report in section 9.16 of the MSATS Procedure - MDM Procedure.

The following procedures are to be amended in the form published with this Final Report, in accordance with the NER:

- MSATS Procedures - CATS v5.5 - Effective date 30 May 2023
- MSATS Procedures - WIGS v5.5 - Effective date 30 May 2023
- Standing Data for MSATS v5.5 - Effective date 30 May 2023
- Retail Electricity Market Procedures – Glossary and Framework v3.9 - Effective date 30 May 2023
- Metrology Procedure Part B v7.5 - Effective date 1 October 2023
- MSATS Procedures - MDM Procedure v4.4 - Effective date 1 October 2023

## Appendix A. Glossary

| Term or acronym | Meaning  |
|-----------------|--|
| 5MLP            | Five Minute Load Profile   |
| CATS            | Consumer Administration and Transfer Solution, a part of MSATS.                  |
| ERCF            | Electricity Retail Consultative Forum  |
| FRMP            | Financially Responsible Market Participant                                       |
| ICF             | Issue / Change Form  |
| LNSP            | Local Network Service Provider   |
| MSATS           | Market Settlements and Transfer Solution   |
| NEM             | National Electricity Market  |
| NER             | The National Electricity Rules made under Part 7 of the National Electricity Law |
| NMI             | National Metering Identifier   |
| NSLP            | Net System Load Profile  |
| POC             | Proof of Concept   |
| UAM             | Uniform Allocation Method  |

## Appendix B. List of Submissions and AEMO Responses

**Table 3 Question on Load Profiling Methodology Implementation Date**

| No. | Question  | Stakeholder                | Participant comments   | AEMO response   |
|-----|---|----------------------------|--|---|
| 1   | Do you agree with AEMO's proposed implementation date of 1 October 2023? If not, why? | AGL                        | AGL notes AEMO's proposed reasoning for moving the implementation to 1 October so as to reduce price volatility. However, in light of the reasoning provided by AEMO, AGL suggests that final implementation of the profiling methodology should be by Notice, rather than establishing affixed date. As such, AEMO should monitor the market for volatility, and if the market conditions are not sufficiently stable, then AGL proposes that AEMO should defer the implementation to the start of the next settlements period and so forth. Given the mechanism for the changes last year, AGL also suggests that AEMO should provide pre and post advice of implementation – including settlements distribution lists.  | AEMO notes the respondent's comment. As the changes will require testing and release management to occur by both AEMO and effected Industry Participants, AEMO's position is to maintain a fixed effective date of 1 Oct 2023.                                    |
| 1   | Do you agree with AEMO's proposed implementation date of 1 October 2023? If not, why? | Alinta Energy              | Alinta Energy supports a 1 October 2023 start date and agrees that this is historically a less volatile period in the spot market.   | AEMO notes the respondent's support for the change.   |
| 1   | Do you agree with AEMO's proposed implementation date of 1 October 2023? If not, why? | Origin                     | Origin agrees with the proposed implementation date of 1st Oct 2023 for the load profile changes, keeping in mind the ICFs covered in this consultation pack are proposed to go-live in May 2023.  | AEMO notes the respondent's support for the change.   |
| 1   | Do you agree with AEMO's proposed implementation date of 1 October 2023? If not, why? | Red Energy and Lumo Energy | Red Energy and Lumo Energy (Red and Lumo) support the date of October 2023, and would not support an earlier date. There are some substantial regulatory changes and other initiatives already planned for 2023 - including Better Bills and Consumer Data Right. This new load profiling methodology will require changes and testing to be conducted, requiring resources and time to be allocated accordingly. Furthermore, to ensure October 2023 can be accommodated and in order to reduce the impact on change management, Red and Lumo request for AEMO to provide the per-interval profile proportion. Red and Lumo currently receive the profiles in terms of volumes, and undertake a calculation to work out the proportion of the daily volume which should be distributed to each interval. Any change in profiling methodology requires each participant to spend development effort revising the | AEMO notes the respondent's comment. The provision of this report would require a greater scope for AEMO system (MDM) development including changes required to MSATS to allow participants access to the report. This is outside the scope of this consultation. |

| No. | Question | Stakeholder | Participant comments  | AEMO response |
|-----|----------|-------------|---|---------------|
|     |          |             | <p>calculation (or purchase system upgrades from a vendor). Given AEMO are likely to change profiling in future, we request AEMO provide the per-interval profile proportion in addition to the existing profile volume information - saving time and effort for all participants who undertake their own calculations. This reduces the need for participants to change their systems to calculate the proportion themselves, and gives AEMO more flexibility to make changes in the future while ensuring all participants can profile with correct distributions. This request is analogous to the UFEA factors which AEMO provides and can be applied by participants directly, in addition to the supporting UFE quantities that allow participants to verify the given UFEA factor if they wish to (but can still reach settlement without having to do the full calculation themselves).</p> |               |

**Table 4 Metrology Procedure Part B**

| No. | Section   | Description  | Stakeholder | Participant comments  | AEMO response  |
|-----|---|--|-------------|---|--|
|     | 12.4 Applying the five-minute profile positive values to 15-minute and 30-minute metering data for a Profile Area | AGL queried AEMO as to how the determination required in 12.4 (ie whether to use the positive algorithm or negative algorithm) can be selected when applying the profile to the 15/30 min data. AEMO advised the decision is selected via the outcome of clause 12.3(d) which is not clearly specified, and therefore suggested that two new sub-clauses referencing 12.4 (a) and (b) be included. | AGL         | <p>Proposed new 12.3(e)<br/>Where the five-minute profile values determined in (d) are positive, the method to produce a five-minute representation of 15 and 30-minute metering data is described in 12.4.</p> <p>Proposed new 12.3(f)<br/>Where the five-minute profile values determined in (d) are negative, the method to produce a five-minute representation of 15 and 30-minute metering data is described in 12.5.</p> | AEMO notes the respondent's comment. This has been marked change in the final procedure. |
| 1   | 12.4 Applying the five-minute profile positive values to 15-minute and 30-minute metering data for a Profile Area | Edited to include the new Option 6 Load Profiling Methodology  | AGL         | Noted – bracketed reference requires 2 ')' – '(calculated in 12.3(d))'  | AEMO notes the respondent's comment. This has been marked change in the final procedure. |
| 1   | 12.4 Applying the five-minute profile positive values to 15-minute and 30-minute metering data for a Profile Area | Edited to include the new Option 6 Load Profiling Methodology  | Alinta      | No comment  |  |
| 1   | 12.4 Applying the five-minute profile positive values to 15-minute and  | Edited to include the new Option 6 Load Profiling Methodology  | Origin      | No further comments, the proposed change aligns with Origin's position provided during first round of consultation.   | AEMO notes the respondent's comment.   |



| No. | Section  | Description   | Stakeholder                | Participant comments   | AEMO response  |
|-----|--|---|----------------------------|--|--|
|     | 30-minute metering data for a Profile Area   |   |                            |  |  |
| 1   | 12.4 Applying the five-minute profile positive values to 15-minute and 30-minute metering data for a Profile Area                                  | Edited to include the new Option 6 Load Profiling Methodology | Red Energy and Lumo Energy | Noted.   | AEMO notes the respondent's comment.   |
| 2   | 12.5. Converting 15-minute and 30-minute metering data for a Profile Area when five-minute profile values are negative – uniform allocation method | Addition of the new Option 6 Load Profiling Methodology       | AGL                        | Consistency of description – eg 5-minute or five-minute<br>For consistency across the document suggest that '5-minute'/'15-minute'/'30-minute' is used. In particular, 5-minute allows for easier identification of the 5-minute market reference in blocks of text.<br>AGL is aware that numbers on their own below 10 are normally spelt out. However, it can be reasonably argued that the term '5-minute' is more appropriate given the market that is represented and the linkage between 5, 15 and 30. | AEMO notes the respondent's comment. This has been marked change in the final procedure. |
| 2   | 12.5. Converting 15-minute and 30-minute metering data for a Profile Area when five-minute profile values are negative – uniform allocation method | Addition of the new Option 6 Load Profiling Methodology       | Alinta                     | No comment   |  |
| 2   | 12.5. Converting 15-minute and 30-minute metering data for a Profile Area when five-minute profile values are negative – uniform allocation method | Addition of the new Option 6 Load Profiling Methodology       | Origin                     | No further comments, the proposed change aligns with Origin's position provided during first round of consultation.  | AEMO notes the respondent's comment.   |
| 2   | 12.5. Converting 15-minute and 30-minute metering data for a Profile Area when five-minute profile values are negative – uniform allocation method | Addition of the new Option 6 Load Profiling Methodology       | Red Energy and Lumo Energy | Noted.   | AEMO notes the respondent's comment.   |

Table 5 MSATS – MDM Procedure

| No. | Section                           | Description   | Stakeholder                | Participant comments    | AEMO response   |
|-----|-----------------------------------|---|----------------------------|-------------------------|---|
| 1   | 3.2.3 Characteristics of the 5MLP | Addition of reference to section 12.5 Metrology Procedure: Part B | AGL                        | AGL supports the change | AEMO notes the respondent's <a href="#">support for the change</a> comment. |
| 1   | 3.2.3 Characteristics of the 5MLP | Addition of reference to section 12.5 Metrology Procedure: Part B | Alinta                     | No comment              |   |
| 1   | 3.2.3 Characteristics of the 5MLP | Addition of reference to section 12.5 Metrology Procedure: Part B | Origin                     | No comment              |   |
| 1   | 3.2.3 Characteristics of the 5MLP | Addition of reference to section 12.5 Metrology Procedure: Part B | Red Energy and Lumo Energy | Noted.                  | AEMO notes the respondent's comment.  |
| 2   | 9.16 MDM-RM46                     | Update of description of the RM46 Report                          | AGL                        | AGL supports the change | AEMO notes the respondent's <a href="#">support for the change</a> comment. |
| 2   | 9.16 MDM-RM46                     | Update of description of the RM46 Report                          | Alinta                     | No comment              |   |
| 2   | 9.16 MDM-RM46                     | Update of description of the RM46 Report                          | Origin                     | No comment              |   |
| 2   | 9.16 MDM-RM46                     | Update of description of the RM46 Report                          | Red Energy and Lumo Energy | Noted.                  | AEMO notes the respondent's comment   |

Table 6 MSATS Procedures: CATS Procedure Principles and Obligations

| No. | Section                               | Description  | Stakeholder | Participant comments    | AEMO response                                       |
|-----|---------------------------------------|--|-------------|-------------------------|---|
| 1   | 4.12 Embedded Network Codes and Rules | Addition of:<br><br>(iv) once all obligations have been met under the NER Chapter 5 and 5A and jurisdictional documentation, the LNSP must provide the Embedded Network Code to AEMO within five business days from the time it receives the request from the embedded network owner or the ENM acting on behalf of the embedded network | AGL         | AGL supports the change | AEMO notes the respondent's support for the change. |

| No. | Section                               | Description  | Stakeholder   | Participant comments | AEMO response |
|-----|---------------------------------------|--|---------------|----------------------|---------------|
|     |                                       | owner, where the site is:<br>(a) a Greenfield Site;<br>(b) a Brownfield Site that for all intents and purposes has been set up as an embedded network but all consumers were purchasing energy from the embedded network owner; and<br>(c) a Brownfield Site that may require network infrastructure changes.  |               |                      |               |
| 1   | 4.12 Embedded Network Codes and Rules | Addition of:<br>(iv) once all obligations have been met under the NER Chapter 5 and 5A and jurisdictional documentation, the LNSP must provide the Embedded Network Code to AEMO within five business days from the time it receives the request from the embedded network owner or the ENM acting on behalf of the embedded network owner, where the site is:<br>(a) a Greenfield Site;<br>(b) a Brownfield Site that for all intents and purposes has been set up as an embedded | Alinta Energy | No comment           |               |

| No. | Section                               | Description   | Stakeholder | Participant comments | AEMO response |
|-----|---------------------------------------|---|-------------|----------------------|---------------|
|     |                                       | <p>network but all consumers were purchasing energy from the embedded network owner; and</p> <p>(c) a Brownfield Site that may require network infrastructure changes.</p>  |             |                      |               |
| 1   | 4.12 Embedded Network Codes and Rules | <p>Addition of:</p> <p>(iv) once all obligations have been met under the NER Chapter 5 and 5A and jurisdictional documentation, the LNSP must provide the Embedded Network Code to AEMO within five business days from the time it receives the request from the embedded network owner or the ENM acting on behalf of the embedded network owner, where the site is:</p> <p>(a) a Greenfield Site;</p> <p>(b) a Brownfield Site that for all intents and purposes has been set up as an embedded network but all consumers were purchasing energy from the embedded network owner; and</p> | Origin      | No comment           |               |

| No. | Section                              | Description  | Stakeholder   | Participant comments  | AEMO response                                       |
|-----|--------------------------------------|--|---------------|---|---|
|     |                                      | (c) a Brownfield Site that may require network infrastructure changes. |               |   |   |
| 2   | 9.1.4 LNSP Requirements              | Addition of House Number To Suffix in ( e )                            | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 2   | 9.1.4 LNSP Requirements              | Addition of House Number To Suffix in ( e )                            | Alinta Energy | No comment  |   |
| 2   | 9.1.4 LNSP Requirements              | Addition of House Number To Suffix in ( e )                            | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 3   | 9.2.4 ENM Requirements               | Addition of House Number To Suffix in ( e )                            | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 3   | 9.2.4 ENM Requirements               | Addition of House Number To Suffix in ( e )                            | Alinta Energy | No comment  |   |
| 3   | 9.2.4 ENM Requirements               | Addition of House Number To Suffix in ( e )                            | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 4   | 9.3.4 LNSP Requirements              | Addition of House Number To Suffix in ( f )                            | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 4   | 9.3.4 LNSP Requirements              | Addition of House Number To Suffix in ( f )                            | Alinta Energy | No comment  |   |
| 4   | 9.3.4 LNSP Requirements              | Addition of House Number To Suffix in ( f )                            | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 5   | 9.4.4 ENM Requirements               | Addition of House Number To Suffix in ( g )                            | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 5   | 9.4.4 ENM Requirements               | Addition of House Number To Suffix in ( g )                            | Alinta Energy | No comment  |   |
| 5   | 9.4.4 ENM Requirements               | Addition of House Number To Suffix in ( g )                            | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 6   | 12.2.4 LNSP Requirements (5001 only) | Addition of House Number To Suffix in ( d )                            | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 6   | 12.2.4 LNSP Requirements (5001 only) | Addition of House Number To Suffix in ( d )                            | Alinta Energy | No comment  |   |
| 6   | 12.2.4 LNSP Requirements (5001 only) | Addition of House Number To Suffix in ( d )                            | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 7   | 12.2.4 ENM Requirements (5021 only)  | Addition of House Number To Suffix in ( c )                            | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 7   | 12.2.4 ENM Requirements (5021 only)  | Addition of House Number To Suffix in ( c )                            | Alinta Energy | No comment  |   |

| No. | Section   | Description                               | Stakeholder   | Participant comments  | AEMO response                                       |
|-----|---|---|---------------|---|---|
| 7   | 12.2.4 ENM Requirements (5021 only)   | Addition of House Number To Suffix in (c) | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 8   | 12.3.4 LNSP Requirements  | Addition of House Number To Suffix in (d) | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 8   | 12.3.4 LNSP Requirements  | Addition of House Number To Suffix in (d) | Alinta Energy | No comment  |   |
| 8   | 12.3.4 LNSP Requirements  | Addition of House Number To Suffix in (d) | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 9   | 12.6.4 ENM Requirements   | Addition of House Number To Suffix in (d) | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 9   | 12.6.4 ENM Requirements   | Addition of House Number To Suffix in (d) | Alinta Energy | No comment  |   |
| 9   | 12.6.4 ENM Requirements   | Addition of House Number To Suffix in (d) | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 10  | 15.1.4 AEMO Requirements  | Addition of House Number To Suffix in (d) | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 10  | 15.1.4 AEMO Requirements  | Addition of House Number To Suffix in (d) | Alinta Energy | No comment  |   |
| 10  | 15.1.4 AEMO Requirements  | Addition of House Number To Suffix in (d) | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 11  | Table 16-C – NMI Standing Data Items and CATS Standing Data NMI Discovery Data Access Rules | Addition of HouseNumToSuffix              | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 11  | Table 16-C – NMI Standing Data Items and CATS Standing Data NMI Discovery Data Access Rules | Addition of HouseNumToSuffix              | Alinta Energy | No comment  |   |
| 11  | Table 16-C – NMI Standing Data Items and CATS Standing Data NMI Discovery Data Access Rules | Addition of HouseNumToSuffix              | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |

**Table 7 MSATS Procedures: Procedure for the Management of Wholesale, Interconnector, Generator and Sample (WIGS) NMIs**

| No. | Section                 | Description                                | Stakeholder | Participant comments    | AEMO response                                       |
|-----|-------------------------|--|-------------|-------------------------|---|
| 1   | 4.1.4 LNSP Requirements | Addition of House Number To Suffix in ( e) | AGL         | AGL supports the change | AEMO notes the respondent's support for the change. |

| No. | Section                            | Description                                | Stakeholder   | Participant comments  | AEMO response                                       |
|-----|------------------------------------|--|---------------|---|---|
| 1   | 4.1.4 LNSP Requirements            | Addition of House Number To Suffix in ( e) | Alinta Energy | No comment  |   |
| 1   | 4.1.4 LNSP Requirements            | Addition of House Number To Suffix in ( e) | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 2   | 4.2.4 ENM Requirements             | Addition of House Number To Suffix in ( e) | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 2   | 4.2.4 ENM Requirements             | Addition of House Number To Suffix in ( e) | Alinta Energy | No comment  |   |
| 2   | 4.2.4 ENM Requirements             | Addition of House Number To Suffix in ( e) | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 3   | 4.3.4 LNSP Requirements            | Addition of House Number To Suffix in (f)  | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 3   | 4.3.4 LNSP Requirements            | Addition of House Number To Suffix in (f)  | Alinta Energy | No comment  |   |
| 3   | 4.3.4 LNSP Requirements            | Addition of House Number To Suffix in (f)  | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 4   | 7.1.4 LNSP Requirements            | Addition of House Number To Suffix in (d)  | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 4   | 7.1.4 LNSP Requirements            | Addition of House Number To Suffix in (d)  | Alinta Energy | No comment  |   |
| 4   | 7.1.4 LNSP Requirements            | Addition of House Number To Suffix in (d)  | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 5   | 7.1.5 ENM Requirements (5021 only) | Addition of House Number To Suffix in (d)  | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 5   | 7.1.5 ENM Requirements (5021 only) | Addition of House Number To Suffix in (d)  | Alinta Energy | No comment  |   |
| 5   | 7.1.5 ENM Requirements (5021 only) | Addition of House Number To Suffix in (d)  | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 6   | 7.2.3 LNSP Requirements            | Addition of House Number To Suffix in (d)  | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 6   | 7.2.3 LNSP Requirements            | Addition of House Number To Suffix in (d)  | Alinta Energy | No comment  |   |
| 6   | 7.2.3 LNSP Requirements            | Addition of House Number To Suffix in (d)  | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 7   | 7.4.4 ENM Requirements             | Addition of House Number To Suffix in (d)  | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 7   | 7.4.4 ENM Requirements             | Addition of House Number To Suffix in (d)  | Alinta Energy | No comment  |   |
| 7   | 7.4.4 ENM Requirements             | Addition of House Number To Suffix in (d)  | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 8   | 9.1.4 AEMO Requirements            | Addition of House Number To Suffix in (b)  | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 8   | 9.1.4 AEMO Requirements            | Addition of House Number To Suffix in (b)  | Alinta Energy | No comment  |   |

| No. | Section                 | Description                               | Stakeholder | Participant comments  | AEMO response                                       |
|-----|-------------------------|---|-------------|---|---|
| 8   | 9.1.4 AEMO Requirements | Addition of House Number To Suffix in (b) | Origin      | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |

**Table 8 Standing Data for MSATS**

| No. | Section   | Description   | Stakeholder   | Participant comments  | AEMO response                                       |
|-----|---|---|---------------|---|---|
| 1   | Table 12<br>CATS_NMI_DATA –<br>Field Definitions  | Addition of Data<br>Element Name<br>HouseNumberToSuffix | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 1   | Table 12<br>CATS_NMI_DATA –<br>Field Definitions  | Addition of Data<br>Element Name<br>HouseNumberToSuffix | Alinta Energy | No comment  |   |
| 1   | Table 12<br>CATS_NMI_DATA –<br>Field Definitions  | Addition of Data<br>Element Name<br>HouseNumberToSuffix | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 2   | Table 13<br>CATS_NMI_Data                         | Addition of House<br>Number To Suffix                   | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 2   | Table 13<br>CATS_NMI_Data                         | Addition of House<br>Number To Suffix                   | Alinta Energy | No comment  |   |
| 2   | Table 13<br>CATS_NMI_Data                         | Addition of House<br>Number To Suffix                   | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |
| 3   | Table 14<br>CATS_NMI_Data Field<br>value examples | Addition of<br>HouseNumberToSuffix                      | AGL           | AGL supports the change                                       | AEMO notes the respondent's support for the change. |
| 3   | Table 14<br>CATS_NMI_Data Field<br>value examples | Addition of<br>HouseNumberToSuffix                      | Alinta Energy | No comment  |   |
| 3   | Table 14<br>CATS_NMI_Data Field<br>value examples | Addition of<br>HouseNumberToSuffix                      | Origin        | Being the proponent, Origin agrees with the proposed changes. | AEMO notes the respondent's support for the change. |

**Table 9 Retail Electricity Market Procedures – Glossary and Framework**

| No. | Section     | Description                        | Stakeholder   | Participant comments           | AEMO response                                       |
|-----|-------------|------------------------------------|---------------|--------------------------------|---|
| 1   | 5. Glossary | Addition of the definition of LCCD | AGL           | AGL supports the change        | AEMO notes the respondent's support for the change. |
| 1   | 5. Glossary | Addition of the definition of LCCD | Alinta Energy | No comment                     |   |
| 1   | 5. Glossary | Addition of the definition of LCCD | Origin        | Origin agrees with the change. | AEMO notes the respondent's support for the change. |