

# Standalone Power Systems (SAPS)

Second Draft Report and Determination

**Published: August 2022**

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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

## Notice of Third Stage Consultation – Standalone Power Systems

### National Electricity Rules – Rule 8.9

#### **Date of Notice: 25 August 2022**

This notice informs all Registered Participants and interested parties (Consulted Persons) that AEMO is commencing its third stage consultation (Consultation) on Standalone Power Systems (SAPS).

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

#### **Invitation to make Submissions**

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

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

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

#### **Closing Date and Time**

Submissions in response to this Notice should be sent by email to [nem.retailprocedureconsultations@aemo.com.au](mailto:nem.retailprocedureconsultations@aemo.com.au), to reach AEMO by 5.00pm (Sydney time) on 22 September 2022.

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

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

#### **Publication**

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

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## Executive Summary

The publication of this Second Draft Report continues the Consultation by AEMO to determine the appropriate design options to support the SAPS Priority One Framework under the NER.

The Consultation provides the Consulted Persons with the opportunity to comment on AEMO's proposals to make the changes to the following procedures (Procedures) which are necessary to implement SAPS:

- Service Level Procedure (SLP): Metering Data Provider Services
- SLP: Metering Provider Services
- Metrology Procedure: Part B
- National Metering Identifier Procedure (NMI Procedure)

The feedback to AEMO on the first Draft Report and Determination (First Draft Report) raised a number of complex issues. On 2 August 2022 AEMO hosted a workshop with interested parties to work through those issues. AEMO proposed a different approach to the options proposed in the First Draft for the management of metering data and energy settlement within SAPS. AEMO also extended the date for publication of the Second Draft Report to provide the necessary time to consider the complex issues which had been raised.

### Identifying a SAPS NMI in MSATS

A National Metering Identifier (NMI) connected to a SAPS will have a different wholesale settlement price to other NMIs in a region. Accordingly, the NMI will need to be identifiable and discoverable by market participants and AEMO.

AEMO considered three options to enable a participant to identify a SAPS NMI in Market Settlement and Transfer Solutions (MSATS). These options are outlined in Table 1.

**Table 1 SAPS identification options**

Option	Description
<b>Option 1</b> SAPS Flag	Identifying SAPS NMIs using Transmission Node Identifier (TNI) Code with a SAPS Flag against it which appears in MSATS
<b>Option 2</b> TNI Convention	Identifying SAPS NMIs using TNI Codes with special convention or format for SAPS TNI Codes
<b>Option 3</b> New SAPS ID field	Identifying SAPS NMIs using a new SAPS ID field

The feedback on the First Draft Report was generally supportive of Option 2. Accordingly, AEMO determined that it should proceed with Option 2 as the preferred approach.

### Management of metering data and energy settlement within SAPS

NER 7.16.3(c)(6)(iv) requires the Metrology Procedure to include the method to be used to determine the calculated metering data for a market connection point for a market generating unit in a regulated SAPS, which will result in the allocation of energy losses and unaccounted for energy in the regulated SAPS to the market generating units in the regulated SAPS on a reasonable basis. The metering installation type and the nature of the metering data at connection points within SAPS is a key consideration in determining the complexity and practical application of any method required in the Metrology Procedures.

As any type of NEM metering installation might be moved within a SAPS, AEMO procedures would need to account for the conversion of non-5-minute metering data and the method of using the resulting data to determine settlement.

### Options A, B1 and B2

Initially, AEMO proposed three options to resolve the conversion of non-5-minute metering data, each of which required MDPs at SAPS generation NMIs to calculate SAPS generation metering data (being Options A, B1 and B2 in Table 2 below<sup>1</sup>).

The feedback from respondents raised issues in respect of the Options A, B1 and B2 which include the potential cost and complexity, time required for implementation, potential for significant delays to delivery of individual SAPS, potential for data mismatches, and low participation by MDPs resulting in competition issues.

### Option C

Accordingly, AEMO developed Option C, as presented at the workshop on 2 August 2022 (Table 2 below):

Option C would involve the following roles:

- MDPs which operate in SAPS would provide metering data to participants as required for NMIs not connected to SAPS (as MDPs do currently, so no new requirements for MDPs).
- AEMO would convert non-5-minute metering data from end user connection points in SAPS (including Type 6 metering data) into 5-minute data using flat calculation methods (for example, 30-minute interval value divided into 6 equal 5-minute intervals).
- AEMO would then calculate the settlement amount to be applied to the generation NMI(s) within each SAPS by aggregating end user energy values.

Option C would bring the following benefits:

- Not require any changes to MDP or Distribution Network Service Provider (DNSP) systems or MDP accreditation for the conversion or calculation of metering data within SAPS.
- Enable energy settlement for SAPS NMIs and calculation of energy for SAPS generation NMIs.
- Not impact FRMP transfers at all connection points in SAPS.

Participants at the workshop were supportive of AEMO proceeding to publish this Second Draft Report with the proposed Option C as the preferred option.

**Table 2 Metering data management options**

Option	Description
<b>Option A</b> Five-minute metering mandate	Mandating remotely read 5-minute metering for all connection points within SAPS

<sup>1</sup> in the previous consultation paper these options were referenced as Option 1, 2a and 2b. Note that these references have changed to "A", "B1" and "B2" in this paper to avoid confusion with options listed for SAPS NMI identification.

Option	Description
<b>Option B Conversion of metering data to a common standard within SAPS</b>	
<b>Option B1</b> Type 6 MDP to convert accumulation to interval data	Requiring the MDP for connection points with type 6 (accumulation) metering installations transferred into a regulated SAPS to provide interval data to the relevant parties
<b>Option B2</b> SAPS generator MDP to convert accumulation to interval data	Requiring the MDP at the market connection points for market generating units at a regulated SAPS to receive all types of metering data and convert to an interval data file, for provision to relevant parties
<b>Option C</b>	Enabling AEMO to calculate the settlement amount to be applied to the generation NMIs, after converting non-5-minute metering data from end user connection points (incl. Type 6 metering data) into 5-minute data, with MDPS in SAPS providing metering data as currently required for NMIs not connected to SAPS

### Second draft determination

AEMO's draft determination is to amend the Procedures in the form published with this Second Draft Report.

# 1. Stakeholder Consultation Process

AEMO is conducting this Consultation in accordance with the NER consultation process in NER 8.9.

AEMO's indicative timeline for the Consultation is outlined below.

Deliverable	Indicative date
Issues Paper published	1 March 2022
First stage submissions closed	6 April 2022
Notice of second stage consultation and First Draft Report published	18 May 2022
Second stage submissions closed	2 June 2022
Notice of third stage consultation and Second Draft Report published	25 August 2022
Third stage submissions closed	22 September 2022
Final Report published	3 November 2022

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

## 2. Background

### 2.1. NER requirements

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

The procedures authorised by AEMO under NER Chapter 7 must be established and maintained by AEMO in accordance with the NER, including NER 7.16.7.

### 2.2. Context for this consultation

The AEMC's Final Report and Proposed Rules for Updating the regulatory frameworks for the distributor led Stand-Alone Power Systems (SAPS) Priority One (AEMC Final Report) sets out a national framework to facilitate the provision of SAPS by DNSPs to their existing customers, where SAPS offer a more economically efficient solution relative to investing in, and maintaining, traditional network solutions.

### 2.3. First stage consultation

AEMO published the Issues Paper on 1 March 2022.

In the Issues Paper, AEMO identified the three options for identifying that a SAPS NMI, being Option 1, Option 2 and Option 3. AEMO received 15 written submissions in the First Stage Consultation.

AEMO also held the two industry forums on 11 March 2022 and 29 April 2022, respectively. AEMO has published copies of all written submissions, minutes of meetings and issues raised in forums (excluding any confidential information) on AEMO's website at: <https://aemo.com.au/en/consultations/current-and-closed-consultations>

### 2.4. Second Stage Consultation

AEMO published the First Draft Report on 18 May 2022.

In the First Draft Report, AEMO identified the three options for the calculation of metering data for generation resource connection points within SAPS, being Options A, B1 and B2. AEMO held the workshop on 2 August 2022, at which AEMO presented Option C.

### 3. Summary of Material Issues

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

No.	Issue	Raised by
1	Identifying a SAPS NMI in MSATS	AEMO
2	Metering data management	Multiple parties

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

## 4. Discussion of Material Issues

### 4.1. Identifying a SAPS NMI in MSATS

#### 4.1.1. Issue summary and submissions

In the Issues Paper, AEMO invited feedback on the preferred option for identifying a SAPS NMI in MSATS. In the First Draft, AEMO determined that it would adopt a convention for allocating codes for SAPS TNIs. To ensure that the creation of SAPS TNI codes is transparent and consistent, AEMO proposes that the SAPS TNI code structure convention is included in a procedure.

AEMO invited participants' feedback as to whether they agreed with this approach, and which procedure should contain the convention.

#### 4.1.2. AEMO's assessment

In the first draft, AEMO determined that Option 2, the TNI convention option, was the best option.

Generally, participants supported Option 2. However, Red Energy and Lumo Energy opposed Option 2, although they did not offer an alternative.

Generally, participants supported the inclusion of the TNI convention in the NMI Procedure. TasNetworks proposed the creation of a new guide.

A number of participants recommended that the NMI allocation list be amended to include TNIs.

#### 4.1.3. AEMO's conclusion

AEMO concludes that:

- Option 2 is the best option, as generally supported by participants.
- The TNI naming convention should be included in a procedure.
- The NMI Procedure is the most appropriate procedure.
- A new procedure is not necessary or appropriate, because the NMI Procedure can appropriately provide for TNI naming convention.

### 4.2. Management of metering data and energy settlement within SAPS

The AEMC Final Report Section 3.5.2 sets out the principles that:

- no loss factors are to be applied;
- settlement must always be balanced with energy withdrawals matching injections; and
- any actual losses will be the responsibility of generators within a SAPS.

The AEMC Final Report:

- provided examples on how this could be achieved;

- made specific provisions in the NER to facilitate those examples; and
- required the Metrology Procedure to include the management methodology for metering data in accordance with NER 7.16.3(c)(6)(iv).

When considering new requirements for the management of metering data, AEMO needs to be cognisant of the various uses for that data, to ensure that they are either unaffected by the changes or are included in the change requirements. These data uses in a SAPS include:

- ensuring that SAPS generation is equal to the aggregate of end user NMI energy volumes in the SAPS for each trading interval;
- enabling transparent application of the administered price to all SAPS connection points;
- accommodating the FRMP transfer processes at all NMIs in SAPS;
- enabling market participants to generate bills and invoices and to determine charges; and
- providing metering data via standard processes to parties with rights to access that data.

Given the relatively limited volumes of NMIs that might be moved within a SAPS in the foreseeable future, AEMO considers that material changes to core market processes should be limited, where it is possible to do so. For example, a model to implement SAPS that required fundamental changes to core FRMP transfer processes is unlikely to be proportionate.

In addition to determining the method for the calculation of the energy value to be attributed to generation connection points within SAPS for settlement, AEMO must also establish a mechanism for the management of the various types of metering data that might be provided within SAPS. The NER does not place restrictions on metering installation types that might be moved within a SAPS, meaning that metering data could be provided in either interval or accumulation data formats, and collected by either remote communications or by manual collection. Metering installations at NMIs for SAPS generation will always be required to provide 5-minute interval data, but to enable settlement and other market processes to operate, all metering data within the SAPS must either be provided in, or be converted to, 5-minute interval data.

In the First Draft Report, AEMO presented the three options for the treatment of non-5-minute metering data<sup>2</sup>, with SAPS generation calculations being operated by the SAPS generator MDP as proposed in the AEMC Final Report, being Options A, B1 and B2.

**Table 3 Metering data management options**

Option	Description
<b>Option A</b> Five-minute metering mandate	Mandating remotely read 5-minute metering for all connection points within SAPS
<b>Option B Conversion of metering data to a common standard within SAPS</b>	

<sup>2</sup> AEMO (2022) SAPS Draft Report and Determination. Available at [https://aemo.com.au/-/media/files/stakeholder\\_consultation/consultations/nem-consultations/2022/standalone-power-stations-in-msats/identifying-a-saps-nmi-in-msats-draft-determination.pdf?la=en](https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2022/standalone-power-stations-in-msats/identifying-a-saps-nmi-in-msats-draft-determination.pdf?la=en)

Option	Description
<b>Option B1</b> Type 6 MDP to convert accumulation to interval data	Requiring the MDP for connection points with type 6 (accumulation) metering installations transferred into a regulated SAPS to provide interval data to the relevant parties
<b>Option B2</b> SAPS generator MDP to convert accumulation to interval data	Requiring the MDP at the market connection points for market generating units at a regulated SAPS to receive all types of metering data and convert to an interval data file, for provision to relevant parties
<b>Option C</b>	Enabling AEMO to calculate the settlement amount to be applied to the generation NMIs, after converting non-5-minute metering data from end user connection points (incl. Type 6 metering data) into 5-minute data, with MDPS in SAPS providing metering data as currently required for NMIs not connected to SAPS

Options A and B2 were discounted as being non-viable in AEMO's assessment:

- Option A – The AEMC did not impose a 5-minute metering mandate in the SAPS rule. Metering installation work has the potential to be delayed, as highlighted in the AEMC's Metering Framework Review. Accordingly, it would not be reasonable for a SAPS installation to be dependent on the replacement of a metering installation.
- Option B2 – Option B2 was considered highly complex and impractical due to the need to create and handle multiple data files from different parties for the same NMI. Option B2 did not fulfill all participants needs regarding use of metering data. For example, AEMO needs interval data for settlements and to support switching, in addition to the SAPS generator MDP requiring data to calculate the generation energy. These calculations would all need to align. This alignment would be highly complex to operate and reconcile, with multiple points of failure and double handling.

AEMO proposed that option B1 be progressed and sought feedback via submissions.

#### 4.2.1. Feedback and submissions

The submissions raised a range of issues and concerns regarding the potential adoption of Options A, B1 and B2:

- Option A – Broadly, the respondents agreed with AEMO as to its concerns regarding the practicality of mandating 5-minute metering installations in SAPS. Nonetheless, respondents noted that the opportunity to replace type 6 metering installations with modern advanced metering presents is an optimal solution, avoiding the need for any conversion of accumulation data in SAPS. Retailer submissions noted that the establishment of a SAPS would provide a good opportunity for coordination of resources and activity across market participants to install 5-minute metering installations as part of SAPS establishment.
- Option B1 – Option B1 received limited, qualified support. Issues raised were mostly in relation to the potential costs and complexity. DNSPs were concerned that the potential uplift in system and process costs might inhibit the uptake of SAPS in the NEM. Victorian DNSPs were particularly concerned about the need to make changes to systems and processes to cater for the less than 1% of NMIs in their regions that are active with a type 6 metering installation. Retailers were concerned

that the implications of Option B1 would need to be better understood before it could reasonably proceed.

- Option B2– Option B2 was also viewed as complex and costly. Where support was given for further exploration of Option B2, it was qualified, similar to Option B1.

In addition:

- A number of respondents suggested that AEMO should review whether it can undertake at least some of the tasks that were proposed to be placed on MDPs by the options presented. There were suggestions to leverage existing capabilities within AEMO systems and process, rather than creating new, complex arrangements which were external to AEMO.
- A further matter raised was whether physical metering installations were required at SAPS generation connection points under the various models. Further, considering the scale of change required to implement either of Options B1 or B2, whether there is sufficient time for the various responsible parties to comply with the second effective date of 30 May 2023.

#### 4.2.2. AEMO's assessment

In reviewing submissions, AEMO made the following assessments.

##### **Options A and B2**

AEMO did not identify a reason to change the view that Options A and B2 were non-viable.

##### **Option B1**

The concerns raised by respondents in relation to the practicality and costs to implement Option B1 has led to AEMO expanding on the end-to-end requirements of Option B1 to test its complexity and practicality.

##### ***Baseline requirements***

The baseline requirements to implement Option B1 that were directly considered or implicit in the model presented in the previous consultation paper included:

- Type 6 MDPs:
  - Processes and systems to be amended to enable conversion of type 6 metering data to 5-minute interval data.
  - Provision of metering data to an additional party – the MDP for the generation NMI(s) in the SAPS.
  - Accreditation application, assessment and audit in relation to those changes.
- SAPS generator MDPs:
  - Processes and systems to be developed or amended to enable receipt of interval data files from MDPs within the SAPS.
  - Conversion of 30 and 15-minute interval metering data to 5-minute interval data.
  - Processes and systems to be developed for the calculation of metering data for SAPS generation NMI(s).

- Accreditation application, assessment and audit in relation to these changes.
- AEMO
  - Mechanisms and processes to validate that the metering data provided for NMIs within each SAPS was equal to the volume of energy calculated by the SAPS generator MDPs to applied at the generation NMI(s).
  - Perform accreditation, assessment and approval and ongoing auditing for conformance monitoring.

### **Implementation requirements**

Further, AEMO identified required changes to facilitate the delivery of Option B1. AEMO has concluded that a new Meter Data File Format (MDFF) would be required to facilitate the operation of Option B1. The new MDFF would be designed to deliver interval metering data files to at least AEMO and the MDP for SAPS generator NMIs, from metering installations that are otherwise identified as type 6 (accumulation metering installations). For example, this would mean that in addition to the current NEM12 and NEM13 MDFF, there would be a further NEM14, or similar.

Option B1 would need to enable the standard delivery of metering data and its ongoing provision upon request to the SAPS generator MDP (for example via a B2B system Provide Metering Data (PMD) or Verify Metering Data (VMD) service request). Accordingly, all MDPs in the SAPS would need to easily identify the participant appointed to that role in the SAPS their NMI was operating within, as well as the changes to that role holder over time. AEMO held the view, supported by feedback from MDP representatives, that this requirement was likely to require a new role to be created in MSATS in order that the MDP at the generation connection point(s) within a SAPS can be identified at end user NMIs within that SAPS.

### **Other requirements**

Finally, AEMO identified issues that would need further consideration if Option B1 were to be progressed, including:

- A requirement to place explicit limitations regarding MDP appointment for SAPS generation NMIs, so that there is only ever one MDP for all SAPS generation connection points within any SAPS.
- Option B1 could not operate if more than one MDP was nominated to operate within a single SAPS at generation NMIs, as the model relies on a single SAPS generator MDP calculating the metering data for SAPS generation and allocating it across two or more NMIs.
- If this could practically be achieved within the scope of the Metrology Procedures, AEMO has yet to identify a method by which conformance assurance or enforceability would be applied.
- A specification of the data delivery requirements on MDPs to ensure that settlement processes were not materially impacted and that SAPS generation MDPs had sufficient time to calculate SAPS generation metering data and provide it for use in settlement.

- Metering data needs to be delivered to the published data delivery calendar. For the SAPS generator MDPs to calculate SAPS generation metering data, they would either need to receive metering data to perform those calculations earlier than specified more generally in the data delivery calendar, or deliver SAPS generation metering data later than required by the settlement process.
- A further consideration of the design of customer switching processes, to address the discrepancy in type of metering data delivered to AEMO for settlement and delivered to retailers for end user billing.
- Processes for switching customers at NMIs with type 6 metering installations are supported by AEMO's access to the NEM13 accumulation metering data file, which would not be available for NMIs with type 6 metering installations within a SAPS (rather it would be replaced by a new metering data file format, as previously noted, that would contain interval metering data).
- AEMO systems for supporting switching process and the design of any new metering data file format would need to accommodate the variations in SAPS to negate material changes to process for retailers.

AEMO concludes that should Option B1 be progressed, material changes would be required to AEMO and MDP systems and residual problems would need to be overcome. AEMO considers that the timeframes required to implement the necessary accreditations, system builds and process redesign across various participants would almost certainly prevent participants from being able to comply with the second effective date in the NER for SAPS, which is go-live on 30 May 2023.

### Option C

Respondents requested AEMO to develop other options for consideration, including testing whether it is possible for AEMO to perform some, or all the data conversions and calculations required to enable energy settlement in SAPS, noting that similar data conversions have been recently introduced to support the delivery and operation of the 5 minute settlement in the NEM. In response, AEMO has considered other options to deliver the outcomes required by the SAPS rule, whilst seeking to avoid larger-scale changes to participants process and systems, and limiting risks and issues that were presented by the other options.

Specifically, AEMO has considered possible approaches to AEMO converting non-5-minute metering data and calculation of SAPS generation data in MDP processes and systems, in the form of Option C.

At a high level, Option C would require MDPs operating in SAPS to provide metering data to participants, including AEMO, as usual. That is, there would be no new requirements placed on MDPs for collection, processing, validation or delivery of metering data. For example, MDPs at type 6 metering installations would provide accumulation data files, MDPs at type 4 metering installations would continue to provide interval metering data to the timing, format and other specifications required by the NER, as is the case today. Any conversion of metering data and other calculations to enable settlement of SAPS generation would be performed by AEMO.

AEMO would then undertake the following process steps for each SAPS:

1. AEMO would separate the NMIs within a SAPS from standard settlement processes, on receipt of metering data for NMIs within a SAPS.
2. AEMO would convert any non-5-minute interval metering data at end user NMIs to 5-minute data using 'flat' calculation methods (consistent with the conversion approach already established in the Metrology Procedures for conversion for operation of 5-minute settlement). For example:
  - 30-minute interval data values will be divided into 6 equal 5-minute intervals; and
  - 15-minute interval data values will be divided into 3 equal 5-minute intervals.
  - AEMO would convert any accumulation metering data at end user NMIs to 5-minute data. The process for managing this could be very simple – an extension of the simplified approach to converting 30 and 15-minute interval data as described above. For example, the accumulation metering data values to be divided by the number of calendar days for which it has been provided, then divided further by 288 (the number of 5-minute intervals in a 24-hour period).

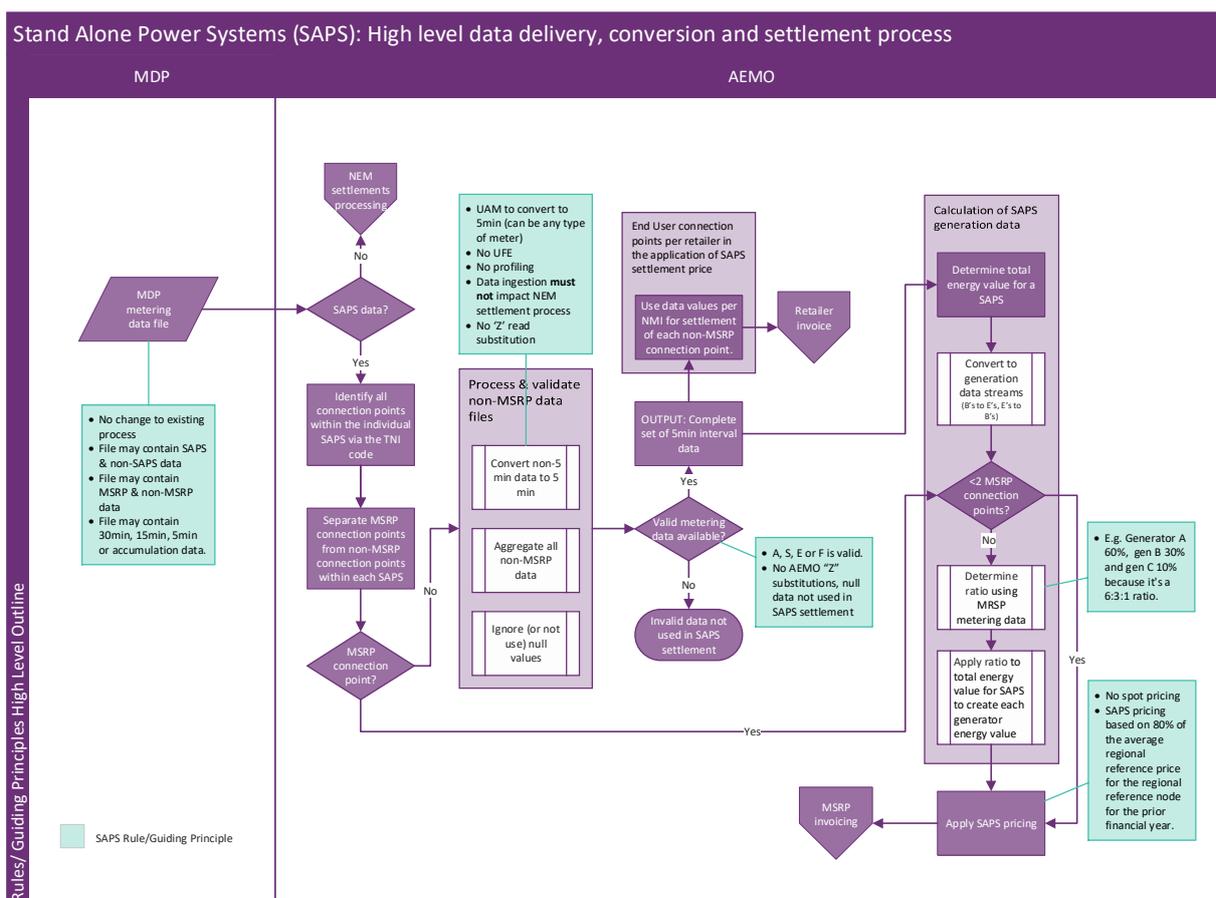
This simple conversion method would have the effect of dividing the accumulation metering data equally into the 5-minute periods within the days that it is provided for.

AEMO may be able to develop far more complex models to convert accumulated metering data into 5-minute intervals. For example, 5-minute interval metering data could be aggregated across all generation connection points in a SAPS, and the resulting 'profile shape' across each day in the settlement period be applied to the accumulation data. However, AEMO does not consider that introducing a materially more complex and costly mechanism would be warranted, for reasons which include the lack of price variation for each trading interval in any given day within a SAPS (as the fixed, administered price, will be applied to all intervals) and the broader market initiatives to replace type 6 metering installations with interval metering – a matter that was highlighted in submissions, which currently is being considered within the AEMC's Metering Framework Review – which will render any conversion method applied by AEMO redundant over time.

3. AEMO would aggregate the resulting energy values, consistent with the calculation methods proposed by the AEMC in the AEMC Final Report. AEMO would then 'reverse' the identities of the data streams in order that energy withdrawals ('E' data streams) were instead identified as injections ('B' data streams) and vice versa. This process would confirm the total energy values per 5-minute interval for generation in the SAPS.
4. AEMO would reference the metering data from the generation NMIs to determine the ratio of energy to be attributed to each generation NMI in that SAPS for the given settlement trading week, should there be more than one generation connection point within the SAPS. For example, if NMI #123ABC was responsible for 60% of the energy injections into a SAPS over a trading week, 60% of the total energy value across the trading week in that SAPS would be assigned to NMI #123ABC. Again, this is consistent with the approach proposed by the AEMC in the AEMC Final Report for allocation in settlement where there is more than one generation NMI in a SAPS.
5. AEMO would apply this ratio calculation to only take into account SAPS generation NMIs where metering data had been provided to AEMO. In the unlikely event that metering data was not provided to AEMO for some but not all generation NMIs within a SAPS, this ratio calculation would only consider those NMIs where data had been provided. For example, in a SAPS with two generation NMIs, if the MDP for one NMI

failed to provide metering data, 100% of the energy injections into the SAPS would be attributed to the generation NMI where metering data had been provided. If no metering data was provided from any of the generation NMIs within a SAPS (where the SAPS that has two or more generation NMIs), AEMO would allocate energy equally between the generation NMIs. For example, if a SAPS had two generation connection points, but AEMO did not receive metering data for either NMI, AEMO would allocate energy injections into the SAPS based on a 50:50 ratio across the two generation NMIs.

A high-level process flow describing the logic to be applied by AEMO in operating Option C is as follows.



### Benefits of Option C over Option B1

AEMO considers that Option C offers a number of benefits generally, as well as specifically in comparison to Option B1.

These benefits include:

- System changes to implement data conversion and calculation of SAPS generation are limited to AEMO systems and processes.
- No requirements are identified that would require multi-participant system testing activities.
- There are no material changes that MDPs or any other participant must adopt for conversion and calculation of SAPS generation, including system, process, accreditations.

- There is no need to introduce new data formats into the NEM.
- No new MSATS roles are required as data is not needed to be shared from one MDP to another.
- The design leverages off capability already established in AEMO processes (as previously established in the Metrology Procedure) for the conversion of 30- and 15-minute data to 5-minute intervals.
- No requirements, restrictions, monitoring or conformance enforcement needs to be applied to the appointment of MDPs at generation NMIs within the same SAPS – the processes will work regardless of the MDP appointed to NMIs within the SAPS.
- No changes are required to metering data delivery.
- Customer switching processes are unaffected – Option C will enable retailer role transfers at all connection points in SAPS using existing processes.

Accordingly, Option C mitigates the risks which Option B1 presents to the viability of the second effective date of 30th May 2023.

### Alternative options

An option has emerged in discussions with stakeholders that for the simplest of SAPS arrangements, where one SAPS generation connection point supplies a single end user connection point, the 5-minute interval metering data at the SAPS generation NMI could be used to settle the generation connection point and used to settle the end user NMI (converting injections to withdrawals, etc.).

AEMO considers this option is not practical because:

- This option could not be applied beyond the simple SAPS connections (i.e. one SAPS generation NMI to one SAPS end user NMI), meaning that:
  - another option (such as Option C) would be required for all other SAPS arrangements; and
  - “simple SAPS” arrangements would need to be identified independently from all other SAPS arrangements and be updated, if they were expanded in the future, as the final rule allows.
- This option does not meet the requirements of the final rule regarding allocation of losses, because by default, any losses beyond the SAPS generation connection point would be allocated to the FRMP at the end user NMI, rather than at the SAPS generation NMI.

AEMO has not identified any additional options which both are consistent with the requirements of the final rule and can be practically applied.

### AEMO's conclusion

AEMO agrees with submissions noting that Option B1 is likely to be costly and time-consuming to implement. AEMO's consideration of submissions and further examination of Option B1 has identified a number of material changes required to data formats and tables within MSATS, in addition to changes to the majority of NEM MDP systems and processes. AEMO has identified other issues in relation to this Option B1 that, as yet, have no workable solution or mitigation (such as impacts to customer switching process).

Option C meets the settlement outcomes required by the final rule using some existing functionality in AEMO systems and removes the need for NEM MDPs to otherwise make material system and process changes. AEMO also considers that Option C is likely to be deliverable to enable implementation of the final rule by the second effective date.

Through feedback from the workshop on 2 August 2022 and other discussions with stakeholders, AEMO has received widespread support for progressing with Option C, in particular from those parties who would be seeking to implement SAPS (DNSPs), and those who otherwise be required to adopt changes to systems and process to enable SAPS under other explored options (mostly MDPs). The feedback suggested that costs and complexity (external to AEMO) to implement Option C would be materially lower than to implement Option B1.

AEMO concludes that some, if not all, of the changes to AEMO systems required to implement Option C would be needed to implement Option B1 in any case, to ensure that losses had been treated in accordance with the requirements of the NER and that energy injections and withdrawals in each SAPS were always equal (i.e. net to zero).

Accordingly, AEMO will proceed to further develop and implement Option C.

Critically, Option C must continue to be designed and implemented in a way which avoids AEMO inadvertently performing a role or duty of an MDP in the NEM.

Whilst beyond the scope of this Consultation, AEMO will explore the creation of retail market reporting, in order that FRMPs at SAPS generation NMIs can discover the calculations undertaken by AEMO to determine the energy values assigned to them in settlement.

## 5. Other Matters

### Generation Metering

Stakeholders have sought clarification regarding the requirement to install a metering installation at SAPS generation connection points. The final rule does not include exclusions or changes which would enable a SAPS generation connection point to not have its own metering installation. Accordingly, each SAPS generation connection must have its own metering installation. AEMO notes that as the first SAPS will not be created in market systems before 1 December 2022, all SAPS generation connection points must be provided with 5-minute interval metering installations.

### Embedded Networks

The solutions presented for the management of metering data and settlement in regulated SAPS do not consider the existence of an embedded network within a SAPS. Should a DNSP seek to move an embedded network within a regulated SAPS, further enabling changes to process and systems, with associated costs, would be required. AEMO considers that although the NER does not explicitly prohibit the movement of embedded networks to a SAPS, the prospect is extremely unlikely, therefore currently does not warrant the additional development and complexity to accommodate the possibility.

### SLP Administrative Changes

The transitional SAPS rule 11.142.2(a) requires AEMO to review and where necessary amend SLPs. As part of this Consultation AEMO has proposed minor changes in respect of the SLP Meter Data Provider. These changes are common to the SLP Meter Provider. Accordingly, AEMO has replicated the changes in the SLP Meter Data Provider in the SLP Meter Provider. Change marked copies of the two SLPs accompany this Second Draft Report.

## 6. Draft Determination

AEMO's draft determination is to amend the Procedures in the form of Attachment 1, in accordance with NER 7.16.7.

## Appendix A. Glossary

Term or acronym	Meaning
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
DNSP	Distribution Network Service Provider
MDFF	Meter Data File Format
MDP	Meter Data Provider
NEL	National Electricity Law
NER	National Electricity Rules
NMI	National Metering Identifier
PMD	Provide Meter Data
SAPS	Standalone Power System
TNI	Transmission Node Identifier
VMD	Verify Meter Data

## Appendix B. Summary of Submissions and AEMO Responses

**Table 4** Questions on proposed changes

Question	Consulted person	Participant comment	AEMO response
<p><b>Do participants agree with AEMO’s assessment that MDPs for accumulation meters should provide interval data to the generator MDP and AEMO in a NEM12 file as outlined in option 2(a)?</b></p>	<p>Ausgrid</p>	<p>Ausgrid believes that neither option provides the best solution. The case for profiling the small amount of generation within a SAPS is not clear – as a likely MSRP Ausgrid does not see the need for profiled consumption data for the small amounts of revenue resulting from this process. There are significant cost implications for deployment of physical meters on SAPS to provide such data and potentially for system changes for other parties to undertake the profiling, which will ultimately be passed onto customers.</p> <p>Profiling is currently conducted by AEMO, who have systems in place to prepare these profiles. Ausgrid understands that the NERs indicate that a new accreditation to allow the MDP to do the profiling where required has been adopted, but this seems like an excessive expense for a small number of sites and particularly where AEMO already have this profiling capability.</p> <p>2(a) will require all Type 6 MDPs to build to create NEM12 for these customer NMIs regardless of whether or not that are involved in SAPS processes and some Type 6 MDPs may not have the current capability to create NEM12 data.</p> <p>Whilst option 2(b) would be preferred from the proposed options, it requires that an MDP has elected to participate in the SAPS process and can build to create NEM12 for Basic data. For the small amount of sites an SAPS MDP would have it seems like a significant expense for changes which they may not adequately recover. However this option also alleviates the issue that the MDP for the Type 6 NMI will not have to create forward estimates and substitutions for Type 6 meters in a SAPS connection arrangements.</p> <p>As MDPs cannot be forced to conduct this work, it is unclear to Ausgrid if MDPs will be willing to obtain this accreditation, and what fallback mechanisms AEMO proposes in the instance that there are insufficient providers of these services due to excessive costs.</p>	<p>AEMO notes the respondent’s comment. AEMO has taken the feedback into consideration and interacted with internal and external stakeholders in developing a new proposal which involves conversion of non 5-minute interval metering data (including Type 6 metering data) into 5-minute data using flat calculation methods to enable FRMP transfers at all connection points in SAPS, energy settlement for SAPS NMIs, and calculation of energy for SAPS generation NMIs.</p>
	<p>AusNet</p>	<p>AusNet is concerned that Option 2(a) would drive significant system implementation costs to the 11 incumbent MDPs that manage basic meters in the National Electricity Market. We consider that most DNSP led SAPS will involve substantial customer engagement and that would lend itself to the establishment of VICAMI or Type 4 interval metering at each participating sites. More than 99% of our small customers have VICAMI meters. Noting that Type 7 and NONCONUML are profiled to 5-minute interval data by the DNSP.</p> <p>For this reason, we recommend options 1 and 2(b) as the most beneficial and most cost-effective solutions. We do not recommend Option 2(a) as it is the costliest option. Option 2(b) involve one party changing its system to provide the data profiling capability, while Option 2(a) involves 11 parties making system changes to provide the same capability. Presumably, it would be more costly</p>	<p>AEMO notes the respondent’s comment and refers to its response in item 1 above.</p>

Question	Consulted person	Participant comment	AEMO response
	AGL	<p>for 11 incumbent MDPs develop the same capability than it would be for AEMO to develop the same capability.</p> <p>AGL queries the options that AEMO has presented. These options were:</p> <ul style="list-style-type: none"> <li>• Use 5 min meters – no data conversion required;</li> <li>• 2a. Type 6 meter MDP to convert Data to interval data. The consumer load meter may also be a Type 5 meter (30 min intervals) which would also be required to be profiled to 5ms for settlements.</li> <li>• 2b. Generator MDP to undertake conversion of Data;</li> </ul> <p>There was significant discussion about the costs / delays that might be borne by Participants in updating customer meters to 5ms. However, there has been no cost comparison / consideration in the system and process changes which would be required for the networks to implement the profiling systems to manage the legacy Type 5/6 customer meters which would be supplied by a SAPS system.</p> <p>The implementation of a SAPS system is not at this stage a process which can happen overnight. AGL would expect some planning and load assessment be undertaken by the network in order to properly size the type of SAPS needed for a site.</p> <p>In order to undertake this assessment, AGL would argue that the installation of 5 min meters would provide a far better suite of information for the network than any assessments based on an accumulation meter.</p> <p>If the number of SAPS to be rolled out is very small, then the cost of the changes to enable MDPs to profile type 5 / 6 meters is an unnecessary expense on the regulated networks for such a small number of sites. It would be far cheaper (certainly in the initial years) to pay for the meters to be replaced, as AGL suggested in its initial submission.</p> <p>Assuming the number is SAPS is to grow over time, then the likely rollout of smart meters will keep up with this growth in SAPS. Again, this would severely limit the benefit of making changes to MDP roles for the profiling of SAPS loads.</p> <p>Given the potential for accelerated rollout of smart meters compared to the system costs for establishing a profiling system for a small number of legacy meters, options 2a and 2b may not be cost effective and therefore not meet the requirements of the NEO.</p> <p>Therefore AGL strongly opposes Options 2a and 2b.</p> <p>AGL strongly believes that a proper cost / benefit be undertaken prior to this decision being made. See Attachment 1 Diagram</p> <p>Further, AGL notes that there has been no industry discussion to resolve and clarify the process for how one of the MDPs may receive all the data (from the other MDPs) generate an appropriate profile and then provide the meter data to the appropriate FRMP.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>

Question	Consulted person	Participant comment	AEMO response
		<p>While the requirement for energy allocation to trading intervals is somewhat moot due to the single annual administered price, there is a problem for all load Retailers whose customers may have accumulation meters.</p> <p>If there is an environment with multiple accumulation meters (see previous comment) then whichever MDP is providing the profile, not only needs to know what all the generating units are producing, what wholesale purchases (if any) there were, but would likely need specific information about the customers movements in order to generate an appropriate profile for each customer, particularly at the July 1 crossover or for any customer churns, as these may have substantial impacts on the customer retailers and likely on the other retailers.</p> <p>While a SAPS environment may be quite simple to resolve in a one or two customer environment, AGL believes that the problems will quickly escalate in a SAPS environment with more than a few customers (ie microgrids).</p> <p>While AGL can see the benefit of placing the obligation on the DNSP MDP (which is more likely to lead to meters being replaced) AGL does not believe that simply making one party responsible is an easy outcome, nor really possible. Whoever undertakes the profiling needs all the meter data to undertake this work.</p> <p>AGL also believes that there may be subtleties which have not been identified and urges AEMO to undertake some industry workshops on this matter prior to finalising any decision.</p>	
	CitiPower Powercor	<p>CitiPower Powercor disagrees with AEMO's assessment that MDPs for accumulation meters should supply interval data to the generator MDP and AEMO in the NEM12 format.</p> <p>CitiPower Powercor recommends option 1 be adopted to deal with this matter, particularly in Victoria. Of the two other options we would only support option 2b as it is consistent with the intent of the AEMC rule change in relation to NER chapter 7, particularly 7.10.2 (b1).</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Endeavour Energy	<p>Endeavour Energy believes that there is merit in considering Option 1 as it simplifies the metering data management processes.</p> <p>With respect to the specific question we don't see Endeavour having a strong view on this.</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Energy Australia	<p>Yes we do agree with this data interval be 5min and sent via the NEM 12file format.</p> <p>A lot more needs to be discussed and an understanding the process for MDP receive all their data ( and from each other ) to be able to provide this to the appropriate FRMP / Retailer</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Essential Energy	<p>No. Under option 2a Essential Energy would be required to implement a load profile system into our MDP processes in order to convert type 6 data (NEM13) to 5 minute interval data (NEM12). This is likely to be a manual and time consuming process.</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Intellihub	<p>Intellihub noted AEMO's assessment and outlined in option 2(a) and is supportive of the proposal.</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.

Question	Consulted person	Participant comment	AEMO response
	Origin Energy	<p>Origin is keen to understand whether there has been consideration of the scalability of the below options to include the third-party SAPS Unit in the future.</p> <p>These options were:</p> <ul style="list-style-type: none"> <li>• Use 5 min meters – no data conversion required.</li> <li>• 2a. Type 6-meter MDP to convert Data to interval data. The consumer load meter may also be a Type 5 meter (30 min intervals) which would also be required to be profiled.</li> <li>• 2b. Generator MDP to undertake conversion of Data;</li> </ul> <p>Further Origin Suggests AEMO should continue to profile the data consistent with the standard connection points. Given the suggested options, all of these will require reaccreditation of MDPs which adds to the risk in our contractual arrangements, should an MDP fail to obtain accreditation.</p> <p>Has AEMO considered the capability of MDP for any type 6 metering to send data in NEM12, generating SAPS MDP not having visibility to customer profiles/movements in customers etc. Has AEMO considered how the MDP’s will profile the data and the system and process changes which would be required for the networks to implement the profiling systems</p> <p>All the above options are adding additional complexities to the process and Origin believes there will be a lot of intricacies and details that are yet to be considered along with the scalability and cost efficiency for each of the options.</p>	<p>AEMO notes the respondent’s comment and refers to its response in item 1 above.</p>
	PLUS ES	<p>PLUS ES do not agree with AEMO’s assessment as:</p> <p>There is a better and more efficient alternative – Metering the SAPS – see below response</p> <p>We believe that AEMO have made a few assumptions with respect to the DNSP having a choice with customer metering installation types. Perfect in theory but not practical. This is what we assumed AEMO also meant when Option 1 was discounted as impractical and unreasonable.</p> <p>The costs to be borne by the MDP for a reducing meter population is not justified</p> <p>PLUS ES does not support either option and strongly recommend for AEMO to consider alternatives. If the choice had to be between 2a or 2b PLUS ES would preference 2a as the better of the two options.</p>	<p>AEMO notes the respondent’s comment and refers to its response in item 1 above.</p>
	Red Energy and Lumo Energy	<p>Red and Lumo oppose the decision to proceed with option 2 - see response to the following question.</p> <p>However, should AEMO disregard our objections to the proposal and proceed with option 2, AEMO’s assessment and proposal as outlined in option 2(a) is largely acceptable.</p>	<p>AEMO notes the respondent’s comment and refers to its response in item 1 above.</p>
	SA Power Networks	<p>SA Power Networks does not support Option 2(a) as recommended by AEMO.</p> <p>Our assessment of Option 2(a) is –</p> <p>It is the most complex of the options and does not provide the expected level of accuracy required by the market.</p>	<p>AEMO notes the respondent’s comment and refers to its response in item 1 above.</p>

Question	Consulted person	Participant comment	AEMO response
		<p>Significant investment would be required to develop the internal system and process capability to produce interval data and provide this data to the MDP of the generator – this is likely to make the SAPS proposition cost prohibitive (noting that manual work arounds would not be sustainable if SAPS customers grow beyond a very small volume).</p> <p>Establishing new requirements for the Distributors to make investment in metering capabilities does not make sense when the market rules are removing distributors from the metering roles (wasted investment and cost for customers).</p> <p>True interval data should be used to remove any scope for disputing the validity of the settlements process (basic meter data collection cycles are not likely to match settlement timing requirements. Where this is the case, it would add to the estimation requirements and potential accuracy gap).</p> <p>In addition, SA Power Networks would require MDP accreditation to produce Type 1-4 interval data as we are currently only accredited as an MDP for Types 5, 6 and 7 therefore adding further cost and complexity. This would be the only process we would require such accreditation for as we are not required to produce Type 1-4 interval metering data for any other purpose at present.</p> <p>SA Power Networks recommends that Option 1 is the only sensible solution option that should be progressed because -</p> <p>Option 1 would be the lowest overall costs to implement for industry and customers (when compared to our assessment of the system and process costs to build the capability for both Options 2a and 2b).</p> <p>The distributor can factor the cost of metering (installation and ongoing costs) into the overall business case to determine if the planned SAPS is the lowest cost solution for customers.</p> <p>The most simple and accurate option, particularly as the volume of customers within a SAPS increases.</p> <p>This option does not require distributors to build capability in legacy metering systems that they are working towards retiring (particularly important if the volume of SAPS in a distribution area is low).</p> <p>Should Option 1 not proceed, then SA Power Networks believes that Option 2(b) is the only other viable option to be considered.</p>	
	TasNetworks	<p>In Principle.</p> <p>TasNetworks concur with AEMO’s assessment that mandating all connection points within a SAPS to have a five-minute capable meter installed would be the most preferable solution.</p> <p>TasNetworks acknowledges the points raised by other parties in regards to facilitating the installation of five-minute capable metering at all connection points within a SAPS may not be able to be achievable.</p> <p>However, given the increasing numbers of interval meters within the Tasmanian jurisdiction, it is untenable for TasNetworks (as MDP for Type 6 meters) to develop capability for profiling and provisioning of accumulation metering data to the Generator MDP.</p>	<p>AEMO notes the respondent’s comment and refers to its response in item 1 above.</p>

Question	Consulted person	Participant comment	AEMO response
		<p>Accordingly, TasNetworks envisages that all SAPS connections in Tasmania will require an interval meter. TasNetworks considers this to be a more viable solution than facing the substantial costs to develop the capability to manage a small number of accumulation meters within SAPS.</p> <p>This may be unique to each jurisdiction depending on the interval meter penetration rate, and acknowledge that procedures for option 2a may need to be developed where there is a higher likelihood of accumulation meters being contained within a SAPS.</p> <p>However, the development of procedures and processes to manage accumulation data in SAPS may not be widely utilised so the effort in developing a process needs to be weighed up against the benefit.</p>	
	United Energy	<p>United Energy disagrees with AEMO's assessment that MDPs for accumulation meters should supply interval data to the generator MDP and AEMO in the NEM12 format.</p> <p>United Energy recommends option 1 be adopted to deal with this matter, particularly in Victoria. Of the two other options we would only support option 2b as it is consistent with the intent of the AEMC rule change in relation to NER chapter 7, particularly 7.10.2 (b1).</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Vector Metering	<p>At this point we do not agree that MDP's should be required to profile accumulation meter reads. Not enough information on the design of the SAPS solution is available to make an informed choice between the options.</p> <p>We agree with AEMO's conclusion that requiring all meters within a regulated SAPS to be a remotely read interval meter may not be practical due to the complexities related to exchanging meters in a timely manner, and these may delay the commissioning of a SAPS.</p> <p>Our understanding of the SAPS solution design is that profiled interval data from accumulation meters will still be required for market settlement to correctly allocate a customer's consumption to the FRMPs who are responsible over the settlement period.</p> <p>To provide interval data from an accumulation read a process of profiling against an agreed system load profile is required.</p> <p>Currently it is AEMO's role to provide the NSLP for settlement processes. Preparation of the NSLP requires access to all interval data within the SAPS so that this can be removed from the generation load. As individual MDPs within the SAPS will not have access to all interval meter data (only from meters they are responsible for) and given that AEMO does receives all interval data and already has processes that produce a NSLP, and can use this to profile basic meter reads for settlement purposes, we believe they are the best party to continue to perform these functions for a SAPS.</p> <p>Should there be a need for other parties to receive this profiled data e.g. SAPS operator (MSRP), then AEMO could make this available via the existing methods (RM reports).</p> <p>We are of the view that having AEMO continues to produce the SAPS NSLP and perform the profile of accumulation meter data for settlement processes and make this available to parties that need it for other purposes, is preferred over requiring new parties (MDP's) to perform this function.</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.

Question	Consulted person	Participant comment	AEMO response
<p><b>Are there other advantages and disadvantages of the various options that AEMO should consider?</b></p>	Ausgrid	<p>Creating a data stream for the SAPS NMI using multiple customer NMIs with different meter types would be a complex arrangement (ie. BASIC, MRIM and COMMS4D).</p> <p>Ausgrid believes that in these circumstances with multiple customers and/or generators within the same SAPS, an actual meter on the SAPS NMI would be the easiest option and AEMO could adopt a simplified MDP accreditation as the metering data from the physical meter on the SAPS NMI would be used rather than a complex calculation from various customer metering NMIs.</p>	<p>AEMO notes the respondent's comment. Metering, and the provision of metering data at the connection point for SAPS generation resources, is required by the NER in all cases regardless of the mechanisms applied to manage metering data in SAPS. However, the NER is explicit in requiring the calculation of SAPS generation to ensure no losses. AEMO considers that the new Option 3 presented in the draft determination provides a possible resolution to this issue.</p>
	AusNet	<p>Option 1 is the cheapest solution and Option 2(a) is the costliest solution for the industry. Option 1 may limit industry benefits for the establishment of small remote communities powered by a SAPS where dozens of customers are powered by a SAPS system.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	AGL	<p>See above comment.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	Citipower Powercor	<p>CitiPower Powercor is of the view that option 2a introduces unnecessary and significant costs for our IT systems which would be required to have capability to load profile and provide NEM12 data for type 6 meters. Type 6 meters make up less than 1% of our meter population and we have an active strategy to reduce this number further making the business case for this option very cost prohibitive.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	Energy Australia	<p>Discussion around the cost of updating customers to 5ms and any delays that may occur in changing customer meters over. Estimate reads</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	Essential Energy	<p>Broadly speaking Essential Energy's preference would be for all SAPS connection points to require the installation of a remotely read smart meter. In our view there is strong efficiency reasons for installing a smart meter on a customers premise at the same time as the SAPS unit is being installed on the customer property. Nonetheless, we note AEMO's concerns that establishing such a mandate could potentially delay the establishment of a SAPS for an extended period.</p>	<p>AEMO notes the respondent's comment.</p>

Question	Consulted person	Participant comment	AEMO response
		<p>In our view option 2b is also preferable (relation to option 2 a) for the following reasons: it is consistent with the intent of the AEMC Rule Change to NER Chapter 7. AEMO already profiles the type 6 meters in the NEM and hence should under the requirements of the new Rule continue to profile Type 6 data into MSATS, therefore this is the least cost option.</p>	
	Intellihub	Intellihub believes that advantages and disadvantages have been reasonable identified of the various options.	AEMO notes the respondent's comment.
	Origin Energy	As per above	AEMO notes the respondent's comment and refers to its response in item 1 above.
	PLUS ES	<p>Option 2a Places the onus of profiling on the Type 6 MDP. This would require every MDP performing Type 6 metering services to develop this capability where there is a commitment or likelihood that the network will support a SAPS solution. This would involve considerable implementation costs to Type 6 MDPs but cheaper and less complex than 2b. Type 6 MDP would already have access to the metering data OPTION 2b Places the onus of profiling on the SAPS Generator MDP. More costly and complex process compared to Option 2a - The SAPS MDP will have to also build to receive NEM 13 files in addition to the requirements of Option 2a. Development and operational costs might be a deterrent for a service provider (due to the low volumes).</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Red Energy and Lumo Energy	<p>Red and Lumo do not agree that option 1, the installation of five minute remotely read interval metering at all connection points which are moved to a regulated SAPS, is unreasonable or impractical. In fact, it is the opposite. The set-up of SAPS will require planning from generators, networks and retailers. They will not be established overnight or are likely to happen very quickly. For brownfield SAPS, updating metering installation of meters which are to be part of a SAPS should form part of the proactive planning and identification to creation of a SAPS. Appropriate planning ahead and taking appropriate action should not result in any unnecessary delay of SAPS roll out. For greenfield SAPS, installation of meters that does not meet the NER requirements is likely to delay rather than expedite it considering that NER-compliant meters are likely to be more readily accessible than non-compliant meters. We recommend that AEMO look for a solution which provides for consistency across the NEM, and not one which deviates from how the NEM operates. Competitive neutrality in the approach is imperative to support consistent arrangements for consumers. Inconsistency has the potential of</p>	AEMO notes the respondent's comment and refers to its response in item 1 above.

Question	Consulted person	Participant comment	AEMO response
		<p>creating further issues down the track - in such instances as, for example, some NMIs needing to roll off being part of SAPS and needing to be integrated back into the standard operating procedures. Furthermore, as has been identified by AEMO, the solution implemented should align and support where possible other industry initiatives such as the general themes emerging from the ESB initiatives and the metering framework review which considers mechanisms to progress the rollout of advanced metering.</p> <p>Option 1 delivers on the above, and provides consistency across the NEM, including cost reflectivity for 5 minute settlement - which option 2a and 2b accurately do not.</p>	
	SA Power Networks	Please refer to SA Power Networks feedback and response to question above.	AEMO notes the respondent's comment and refers to its response in item 1 above.
	TasNetworks	TasNetworks considers that mandating five-minute metering would provide the best outcome.	AEMO notes the respondent's comment and refers to its response in item 1 above.
	United Energy	United Energy is of the view that option 2a introduces unnecessary and significant costs for our IT systems which would be required to have capability to load profile and provide NEM12 data for type 6 meters. Type 6 meters make up less than 1% of our meter population and we have an active strategy to reduce this number further making the business case for this option very cost prohibitive.	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Vector Metering	<p>Requiring all meters within the SAPS to be interval will avoid the complexity introduced by allowing accumulation meters to exist but appears impractical. However, we suggest that the solution design explore this further before discounting it. It is possible that the beneficiaries of the SAPS have the necessary incentives to take on the financial responsibility of resolving customer side defects to allow smart meter exchanges so that a SAPS can be commissioned in a timely manner.</p> <p>Also, in determining the requirements for a specific meters type we recommend that AEMO carefully consider the implications of requiring that all meters within a SAPS must be a smart meter as it is highly likely that remote communications to these meters will be problematic due to geographical issues. Retailers face materially higher reading costs for a manually read smart meter compared to reading a legacy basic meter. Forcing all meters to be exchanged for a smart meter that is to be manually read will realise these higher costs with little benefit to both the market and the customer.</p>	AEMO notes the respondent's comment. AEMO considers that the new Option 3 presented in the draft determination provides a possible resolution to this issue, without requiring changes to any of the existing metering arrangements for customer NMIs transitioned to a SAPS connection.
<b>Are there other options that AEMO should consider to</b>	Ausgrid	Ausgrid strongly encourages AEMO to re-consider the requirements for profiling what is a small amount of energy, not linked to market price fluctuations (i.e. a flat rate all year), and not proportional to the actual cost of energy in a SAPS as significant components will be supplied by renewable energy not from diesel operations. Our estimates suggest that the energy value per annum per SAPS based on current price and proposed formula is on average less than \$1,000.	AEMO notes the respondent's comment and refers to its response in item 1 above.

Question	Consulted person	Participant comment	AEMO response
<p><b>resolve this matter?</b></p>		<p>If a change is required to AEMO systems to facilitate a different payment approach for these customers, that should be strongly considered in light of the significant market costs (either systems or physical meter installations) that the profiling requirement will otherwise necessitate.</p> <p>AEMO could consider a mix of options that allow for a physical COMMS4 meter on the SAPS NMI in complex cases (subject to technical limitations on installation of meter). Installation of a COMMS4 meter on the SAPS NMI would solve a number of issues raised in this consultation paper for those cases.</p> <p>For simple (ie 1 customer) SAPS eliminating the profiling requirement altogether would be most efficient and proportional given the energy values involved and complications identified in this paper.</p>	
	AusNet	None	
	AGL	<p>Given the size of and number of these customers (at least initially) there has been no consideration of allowing the Type 5/6 Meter MDP to subcontract the profiling process to another MDP for that small number of meters.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	Citipower Powercor	<p>CitiPower Powercor recommends that AEMO continues to load profile type 6 metering data for all settlements purposes, including SAPS, as part of its compliance with rule 3.21.</p> <p>Additionally, if option 2a remains the preferred option for AEMO and/or the industry it should not be introduced in Victoria and only be applicable in other jurisdictions.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	Energy Australia	<p>More discussion around the impacts to retailers in how they are going to know what the generating units are producing, so that we can then meet our obligations around greenhouse reporting.</p>	<p>AEMO notes the greenhouse gas reporting is beyond the scope of the matters being considered in this consultation.</p>
	Intellihub	<p>Intellihub has not identified alternative options to resolve this matter.</p>	<p>AEMO notes the respondent's comment.</p>
	Origin Energy	<p>As per above Origin suggests AEMO should consider profiling the data in 5 min interval which will be consistent across different SAPS.</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>
	PLUS ES	<p>PLUS ES recommends that the most efficient option with the least impact in the current industry environment of change would be for the SAPS unit to be metered.</p> <p>Since converting customer data to 5min at the generator is ONLY required if you do not meter the generator, then all the other more complex options are not required. AEMO will then reconcile the SAPS against the customer NMIs with SAPS TNI (BAU Market Settlement) – as AEMO already have the ability to collect and profile BASIC Meter Data.</p> <p>Ideally all customer metering installations would be upgraded to smart metering - 5 min enabled - but experience has shown this is not a given. Hence a MDP will be forced to go down the path of building to support Basic meter data for the odd reticent customer.</p> <p>Additional benefits:</p>	<p>AEMO notes the respondent's comment and refers to its response in item 1 above.</p>

Question	Consulted person	Participant comment	AEMO response
		Existing MDPs will not need new data forwarding mechanisms to send data to the SAPS MDP The Market will not need a MDP2 Role to allow the data forwarding	
	Red Energy and Lumo Energy	As indicated above, Red and Lumo believe that option 1 delivers the best potential outcome. Not only does it resolve the issues identified in our response above, but it does so without needing to split away from how the current processes and procedures operate. It minimises the risk for any unforeseen issues which may arise by trying to implement new procedures which differ from how other meters, the customer expectations and experience are managed.	AEMO notes the respondent's comment and refers to its response in item 1 above.
	SA Power Networks	No other option identified.	AEMO notes the respondent's comment.
	TasNetworks	Another option would be for AEMO to profile Type 6 meter data for SAPS connections.	AEMO notes the respondent's comment and refers to its response in item 1 above.
	United Energy	United Energy recommends that AEMO continues to load profile type 6 metering data for all settlements purposes, including SAPS, as part of its compliance with rule 3.21. Additionally, if option 2a remains the preferred option for AEMO and/or the industry it should not be introduced in Victoria and only be applicable in other jurisdictions.	AEMO notes the respondent's comment and refers to its response in item 1 above.
	Vector Metering	As above, a viable option 2(c) could be that AEMO calculates and profiles profiled basic meter data for settlement and reconciliation purposes.	AEMO notes the respondent's comment and refers to its response in item 1 above.
<b>Do participants agree that this convention is to be captured in a procedure?</b>	Ausgrid	Ausgrid does not have any issues with AEMO's TNI proposal. Ausgrid would like to clarify this arrangement with AEMO. Is the purpose of having a specific TNI code for each SAPS so that the customer NMIs that are going to be used to calculate the metering data for the virtual meter on the SAPS NMI are linked together? However, if it was mandated that the SAPS NMI must have a physical metering installation then one TNI per network area could be used as the metering data from the physical meter on the SAPS NMI could be used for delivery to AEMO for settlement.	AEMO notes the respondent's comment
	AusNet	Yes	AEMO notes the respondent's comment.
	AGL	AGL supports the option of ensuring that all SAPS are uniquely identifiable and should be clearly documented. AGL suggests an update to the NMI Allocation List to ensure the specific allocation information is easily locatable.	AEMO notes the respondent's comment.
	Energy Australia	With the move to use a TNI over a unique identifier in MSATS, AEMO will need to create a list and how to identify these NMIs that have a SAPS TNI associated with it. As not all participants have access to the TNI.	AEMO notes the respondent's comment.
	Intellihub	Intellihub acknowledges the need of documenting the SAPS NMI convention in the procedures.	AEMO notes the respondent's comment.

Question	Consulted person	Participant comment	AEMO response
	Origin Energy	Origin agrees the Application of the TNI Convention should be captured in the procedures.	AEMO notes the respondent's comment.
	PLUS ES	PLUS ES supports having the TNI convention captured in a procedure.	AEMO notes the respondent's comment.
	Red Energy and Lumo Energy	Red and Lumo oppose the decision to proceed with option 2 - however, should AEMO proceed with either of option 2(a) or 2(b), Red and Lumo request that the convention used is to be captured in a procedure. AEMO must also outline what due diligence will be in place to ensure data quality and integrity is maintained.	AEMO notes the respondent's comment.
	SA Power Networks	SA Power Networks agrees that the TNI convention for SAPS should be captured within a market Procedure.	AEMO notes the respondent's comment.
	TasNetworks	Yes, TasNetworks believes it would be beneficial.	AEMO notes the respondent's comment.
	Vector Metering	Yes	AEMO notes the respondent's comment.
<b>In which procedure or supporting document should it be included?</b>	Ausgrid	A new section on TNIs in the AEMO NMI procedure.	AEMO notes the respondent's comment.
	AusNet	The TNI requirements should be included in the NMI procedures that apply to NMI establishment and alterations.	AEMO notes the respondent's comment.
	AGL	AGL suggests that the generic requirements be placed in the relevant processes / procedures which assign TNIs and NMIs and that the AEMO NMI Allocation list be updated to include the SAPS TNI ranges for each Network, so that this range is visible to all participants.	AEMO notes the respondent's comment. AEMO will add a new section to the NMI Procedure to describe the process to transition existing NMIs out of the NEM and into a SAPS. The SAPS TNI structure will be included in this new section.
	Energy Australia	In the short term whilst we may not have many moving onto SAPS – the use of the TNI is a very complex due to this we request that a allocation list be updated to include the TNIs and NIMs and SAPS and be visible to all of us.	AEMO notes the respondent's comment.
	Intellihub	Intellihub believes that SAPS NMI convention should be described in the NMI Procedure and the NMI Allocation List.	AEMO notes the respondent's comment.
	Origin Energy	Origin suggests adding the TNI Convention is the processes / procedures which assign TNIs and NMIs.	AEMO notes the respondent's comment.
	PLUS ES	PLUS ES recommends the TNI convention is included in the NMI Procedure with a new section for the TNI convention. Similar to the section that has included the TNI requirements for Type 7.	AEMO notes the respondent's comment.

Question	Consulted person	Participant comment	AEMO response
	SA Power Networks	SA Power Networks recommends that the NMI Allocation Procedures be considered.	AEMO notes the respondent's comment.
	TasNetworks	TasNetworks suggests that it may be appropriate for a guide to be produced for SAPS where, amongst other things, it could include details related to the Transmission Node Identifier (TNI) Convention. Alternatively the National Metering Identifier Procedure could be updated to include a section on SAPS.	AEMO notes the respondent's comment.
	Vector Metering	'MSATS PROCEDURES: NATIONAL METERING IDENTIFIER'?	AEMO notes the respondent's comment.
<b>Has AEMO captured all the changes?</b>	Ausgrid	In August 2022, the new role of SAPS Resource Provider (SRP) will become a role under the NERs. In May 2023 the new role of Market SAPS resource Providers (MSRP) will become a new participant under the NERs. In the AEMC final determination both the SRP and MSRP have to register with AEMO. Ausgrid notes in this draft determination that AEMO have will publish an application and guideline based on the current MSGA documents. Ausgrid would like AEMO to confirm if this application will cover both the SRP and MSRP registered participant roles.	AEMO notes the respondent's comment. AEMO confirms that application form and guideline will cover both the SRP and MSRP registered participant roles.
	AusNet	Yes	AEMO notes the respondent's comment.
	AGL	There has been no consideration of whether any B2B Service Order or meter data processes need adjustment to allow for a SAPS generator or SAPS load supply, or consumer profiling.	AEMO notes the respondent's comment and confirms that the IEC members will be updated on progress of matters that are subject to consultation by AEMO.
	Energy Australia	Is there any concerns with SAPS that may affect our current B2B service orders.	AEMO notes the respondent's comment and refers to its comment in item 71.
	Intellihub	Intellihub has not identified any changes that AEMO has not already captured.	AEMO notes the respondent's comment.
	Origin Energy	No comments	
	Red Energy and Lumo Energy	AEMO has not captured all the potential changes from adopting option 2. AEMO needs to capture any downstream impacts of deviating from current NEM processes. Including: <ul style="list-style-type: none"> <li>• how will option 2 impact network settlement invoices?</li> <li>• how will option 2 be displayed in network settlement invoices?</li> <li>• how will option 2 impact the display in RM reports?</li> <li>• will there be new RM reports?</li> <li>• how will option 2 impact consumer profiling?</li> <li>• how will the impact to consumer profiling be managed and communicated to participants?</li> </ul> Adequate responses are critical before AEMO proceeds with its preference for option 2(a), however, would not be required should option 1 be adopted.	AEMO notes the respondent's comment. AEMO notes that Network billing is out of scope. AEMO considers that the new Option 3 presented in the draft determination provides a possible resolution to this issue.

Question	Consulted person	Participant comment	AEMO response
		<p>Finally, and importantly, there has also been no cost analysis in terms of the system and process changes which would be required for the networks to implement in profiling to manage the legacy Type 5/6 customer meters which would be supplied by a SAPS system - required for option 2. In order to give due consideration to all options, AEMO must undertake this analysis and undertake a comparison with option 1. Without this, AEMO is not acting in accordance with its legislative requirements to consider the implications of the NEO and NERO.</p> <p>As indicated in question 2, given the potential for accelerated rollout of smart meters, in comparison to the costs for implementing option 2, this may show that option 2 may in fact not be cost effective and therefore not meet the requirements of the NEO.</p>	
	SA Power Networks	At this point, SA Power Networks has not identified any further items.	AEMO notes the respondent's comment.
	TasNetworks	No comment	
	Vector Metering	We recommend that a more comprehensive solution design be published. Until that is available it is difficult to determine the scope of the necessary changes.	AEMO notes the respondent's comment. Draft procedures are published with this draft determination.
<b>In making the changes to the SLP and Metrology procedures, what are the issues that AEMO should keep in mind/consider?</b>	AusNet	AusNet recommends mirroring the accreditation and qualification requirements from existing MDPs to SAPS MDP classifications. We question the need for any additional requirements on SAPS MDPs, that are different from Type 1-4 MDPs.	AEMO notes the respondent's comment. Track changed procedures are published with this draft determination. No material changes to the MDP SLP have been recommended.
	AGL	AGL has concerns about AEMOs proposed changes to the Metrology SLPs as this may impose a substantial un-necessary cost on the networks to implement these profiling systems.	AEMO notes the respondent's comment. Draft procedures are published with this draft determination. No material changes to the MDP SLP have been recommended.
	Energy Australia	As mentioned previously we are concern around any additional cost that may be incurred, as this has not been discussed. Also, around the timings of when we will be notified of the new prices as we have an obligation to notify our customers 30 days before a rise	AEMO notes the respondent's comment. The timing of the publication of SAPS wholesale price is set by the NER. AEMO will consider whether information can be provided in relation to the calculation of the new price in advance of it being applied, noting that this is not a matter in the scope of this consultation.
	Intellihub	No comments.	

Question	Consulted person	Participant comment	AEMO response
	Origin Energy	At this stage Origin has no further comments however Origin believes once a solution is narrowed down/decided upon Origin will do a more through impact assessment and may have further issues to consider/add and to make an informed decision.	AEMO notes the respondent's comment.
	PLUS ES	Changes to the SLP and Metrology procedures will impose changes for the MDP with significant costs. Costs which PLUS ES maintain are unnecessary or can be avoided.	AEMO notes the respondent's comment. Draft procedures are published with this draft determination. No material changes to the MDP SLP have been recommended.
	Red Energy and Lumo Energy	See above.	AEMO notes the respondent's comment.
	SA Power Networks	SA Power Networks has no issues to highlight.	AEMO notes the respondent's comment.
	TasNetworks	No comment	
	Vector Metering	Before changes to SLP and Metrology procedures are made a more comprehensive solution design is required.	AEMO notes the respondent's comment. Draft procedures are published with this draft determination. No material changes to the MDP SLP have been recommended.
<b>Other comments</b>	Ausgrid	<p>If the network registers as an MSRP, the network can appoint them selves as the FRMP for the SAPS NMI. If the network chooses not to regiater as a MSRP and decide to appoint another party as the FRMP, being the SAPS NMI will have a NMI Classification of GENERATR, would the participant have to be registered with AEMO as a Generator or can the network appoint a retailer registered as a Market Customer? Ausgrid believes it should be a registered generator, but is requesting clarification.</p> <p>Ausgrid would like to confirm that the SAPS NMI allocation follows the following process:</p> <ul style="list-style-type: none"> <li>• Network creates NMI;</li> <li>• Network appoints FRMP;</li> <li>• Depending on MIT customer (network) or FRMP will appoint the MC (see below comments)</li> <li>• MC appoints MP and MDP.</li> </ul> <p>For a Type 5 metering installation connected to the SAPS, does the MDP (either in option 2(a) or 2(b)) have to convert the 30 minute interval data to 5 minute data? Ausgrid assumes that this would be the total consumption from the 30 minute interval evenly split over each 5 minute interval. Will this requirement be documented in AEMO's procedures?</p> <p>What Metering Installation Type will the SAPS NMI have if it is a virtual meter? This impacts how the MC is appointed. As there is no meter its should not be a Type 5 or 6 as AEMO is requesting 5</p>	<p>AEMO notes the respondent's comment. For confirmation, the SAPS generation connection point must have its own metering installation as required by NER provisions:</p> <p>A connection point must have a metering installation and the metering installation is registered with AEMO (7.2.1(a)).</p> <p>The Metering Coordinator at a connection point must ensure that there is a metering installation at that connection point (7.8.1(a)).</p> <p>The LNSP must issue for each metering installation a unique NMI (7.8.2(d)).</p> <p>For each market connection point there is one FRMP (3.15.3(a)).</p>

Question	Consulted person	Participant comment	AEMO response
		<p>minute data and Type 5 and 6 cannot be installed anymore. NCONUML doesn't seem suitable as although there is no meter and these are based on a constant load not a variable load, which is what the customer NMIs would be. COMMS4D, whilst there is no meter, the MDP has systems to estimate and substitute 5 Min data. Again, if a meter is mandated for the SAPS NMI this alleviates this issue as it would have to be a Type 4 metering installation.</p> <p>Ausgrid strongly encourages AEMO to condiser that a physical COMMS4 meter on the SAPS NMI should be the preferred option. Installation of a COMMS4 meter on the SAPS NMI would solve a number of issues raised in this consulation paper.</p>	<p>That is, a connection point has one metering installation, one NMI and one FRMP.</p> <p>Metering Point - Metering Coordinator must ensure that the metering point is located as close as practicable to the connection point (7.8.7(a)(1)).</p> <p>AEMO notes that the first SAPS won't be created before 1 Dec 2022, therefore the SAPS generator connection point will have 5-min metering.</p> <p>Registration requirements are covered in new section 2.3B of the SAPS Rule.</p>
	AGL	<p>Feed In Tariff Issue</p> <p>There seems to be no consideration of any feed-in Tariff payments. As the wholesale price (both purchase and Sales) is Administered, it would be appropriate that any required feed-in tariff payable to a SAPS connected customer should be set relative to the Administered SAPS wholesale price, to ensure that a load retailer is not paying an end user more than they would be paying for supply.</p> <p>This argument also applies to the AER/ESC Approach to the establishment of the VDO/DMO. AGL understands that AEMO is not responsible for these issues but wishes to raise them for public debate and consideration.</p>	<p>AEMO notes the respondent's comment. Feed in tariffs is a jurisdictional requirement and is therefore out of scope of this review.</p>
	AGL	<p>NMI Classification</p> <p>AGL re-iterates that it believes that a NMI Classification for a SAPS should be created and implemented to easily separate out a grid connected market generating unit versus a Stand Alone Power Supply market generating unit.</p> <p>The issues about ease of visibility and useability raised by AGL and Endeavour are of substantial importance to a Retailer managing a SAPS customer. As such, if the decision to use the TNI is to be adopted, then a review of NMI discovery screens and transactions needs to be undertaken to ensure that the TNI field is visible in all returns.</p> <p>AGL has previously raised issues with the current suite of NMI classifications which it does not believe are adequate in a two-sided market and strongly recommends that further work be done to develop a set of Guidelines for establishing NMI Classifications.</p>	<p>AEMO notes the respondent's comment. Refer to the C1 and C4 reports that provide TNI and TNI is returned during NMI discovery.</p>
	AGL	<p>SAPS Settlement Calculation</p> <p>AGL notes that the Administered Wholesale Price would be a \$/MWH price (consistent with other wholesale prices) for a trading interval, but that customer energy would be measured in kW or W for each trading interval. AGL is concerned that significant differential between the wholesale price</p>	<p>AEMO notes the respondent's comment. Settlement system deals to eight decimal places in MWH. All of the interval calculations carry up to eight decimal</p>

Question	Consulted person	Participant comment	AEMO response
		units and the retail price units at 5 min Trading Intervals will lead to substantial discrepancies as a result of the inevitable rounding which will occur through that process. This will become quite critical if there are any Type 7 UMS loads (street lights or NCOMUML devices) which can operate at a small number of Watts.	dollars (six decimal cents) and it gets rounded up at for a billing week for invoicing.
	AGL	<p>Market Price Caps</p> <p>AGL notes that while the SAPS settlement price is a calculated price, it is unclear if any of the other NEM pricing processes (eg Price Cap, Market Suspension etc) can override this calculated price for a SAPS price. There seem to be no changes to those sections of the Rules which might lead to either retaining or removing those processes from the SAPS pricing. Clarity in this area would be helpful.</p>	AEMO notes the respondent's comment. Settlement price in SAPS is determined by the administered price mechanism.
	AGL	<p>Compensation Fund charges</p> <p>AGL notes that there has been no change to CL 3.16 Participant Compensation Fund. This means that a SAPS FRMP will be paying into the Compensation Fund, which has been established to compensate them for a scheduling error, where no such error can occur by definition. Therefore, this is an unnecessary cost imposition on the SAPS supply FRMPs.</p>	AEMO notes the respondent's comment. Any changes to the Participant Compensation Fund would require a rule change.
	AGL	<p>AEMO Fees</p> <p>As these SAPS devices are not transmission connected, AGL considers that AEMO should review its fee structure with respect to any SAPS connections. AGL fully appreciates that fees such as FRC fees, 5ms Compliance etc are appropriate to be levied on SAPS supply and Load retailers. However, AGL considers that AEMO should provide clarity on why fees such as the National Transmission Planner or Victorian Transmission Network Service Provider fees should be levied on these Retail Participants.</p>	AEMO consults with industry before setting its fees in advance of the coming year.
	AGL	<p>Network Fees</p> <p>Noting that a portion of DNSP fees pay Transmission Service charges. As such, AGL believes that DNSPs should provide clarity on how the Transmission portion of their Network Service fees is applicable to a SAPS customer.</p> <p>AGL notes that this is not an issue that AEMO can resolve but wishes to raise them for public debate and consideration.</p>	AEMO notes the respondent's comment.
	AGL	<p>Requirement for SAPS Market Generating Units to use Calculated Meter Data</p> <p>Cl 3.21.3(b) of the Rules indicates that all trading amounts (ie ME) within a regulated SAPS for a market generating unit, must use calculated metering data. AGL understands that this is a requirement for the SAPS Market Generating Units as there is a need to balance the sold and purchased energy to the energy consumed by the connected load. However, in the case of a non-SAPS market generating unit connected to a SAPS, the energy provided by such a unit should be the metered energy.</p>	<p>AEMO notes the respondent's comment.</p> <p>The only price that will be applied in settlement is the SAPS administered price.</p> <p>The establishment of any SAPS is subject to AER approval. A DNSP seeking to establish SAPS which included a market generator connection</p>

Question	Consulted person	Participant comment	AEMO response
	Energy Australia	With the very tight time frame we are not sure to get through all the required changes and correlated distributor side changes by May 2023. Is there any scope to move this out to early next year as a Tranche 4?	point would have to consider the complexities of the arrangements in their application. AEMO notes the respondent's comment. Market participants and AEMO are bound by the NER to be ready for May 2023.
	Origin Energy	Origin reiterates that AEMO should consider scalability of the solution options, as the industry will be required to implement Phase 2 (third party SAPS) after this phase (DB SAPS). Hence investing in a longer-term solution would be Origin's preference. Origin suggests that whichever solution is implemented it should be fit for purpose for priority 2. Origin also believes that a SAPS customer should not be disadvantaged for being on SAPS and feed in tariff payments need to be considered.	AEMO notes the respondent's comment and refers to its response in item 90.
	PLUS ES	Type 6 accumulation metering has been mentioned throughout but PLUS ES recognises additional processes will be required for Type 5 MRIM metering installations though not as complex as Type 6.	AEMO notes the respondent's comment.

## SAPS Participant Layout – Multiple Loads

