Updating instruments for regulated stand-alone power systems

Decision

August 2022

AUSTRALIAN ENERGY REGULATOR

Shortened forms

Shortened Form	Extended Form
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CAIDI	Customer Average Interruption Duration Index
CESS	Capital Expenditure Sharing Scheme
DNSP	Distribution Network Service Provider
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
Regulated SAPS	A SAPS that is part of the national electricity system
RIT-D	Regulatory Investment Test for Distribution
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SAPS	Stand-Alone Power System
STPIS	Service Target Performance Incentive Scheme

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Summary

From 1 August 2022, distribution network service providers (DNSPs) can connect customers to a stand-alone power system (SAPS) where it may be cheaper, safer and more reliable than connection to the grid. These will become regulated SAPS. Customers connected to regulated SAPS will not be disadvantaged. They will receive an equivalent level of consumer protections and will pay for their electricity in the same way as grid customers. Both SAPS and grid customers can benefit from lower charges and improved system resilience.

The National Electricity Rules (NER) require us to review and where necessary to amend and publish eleven documents.[1] These documents are guidelines that assist DNSPs deliver outcomes that are in the long-term interest of electricity customers. Our amendments will help all network customers receive the benefits of SAPS becoming part of the national electricity system.

We have amended six documents to take into account the *National Electricity Amendment (Regulated stand-alone power systems) Rule 2022* (Amending Rule).[2] The Amending Rule allows distributor-led SAPS to become part of the national electricity system.

We published an explanatory statement with draft amendments to six documents on 18 May 2022 and invited feedback from stakeholders. We received three submissions on the draft amendments, which we have published on our website. Feedback included amending or clarifying definitions, and reconsideration of the regulatory investment test, market benefits test and reliability measures to better account for SAPS. We have taken this feedback into consideration in finalising the amendments to the six documents.

Our amendments to these six documents will ensure that:

- existing customers are connected to regulated SAPS where it is efficient to do so
- new customers connecting to a regulated SAPS will pay only fair and reasonable connection charges, and receive the same consumer protections as grid-connected customers
- reliability of regulated SAPS can be benchmarked across DNSPs.

1 NER, cl. 11.142.4.

2 The Amending Rule can be found at: https://www.aemc.gov.au/sites/default/files/2022-02/SAPS%20NER%20amending%20rule%20final%202022.pdf.

1. Background

1.1. Stand-alone power systems

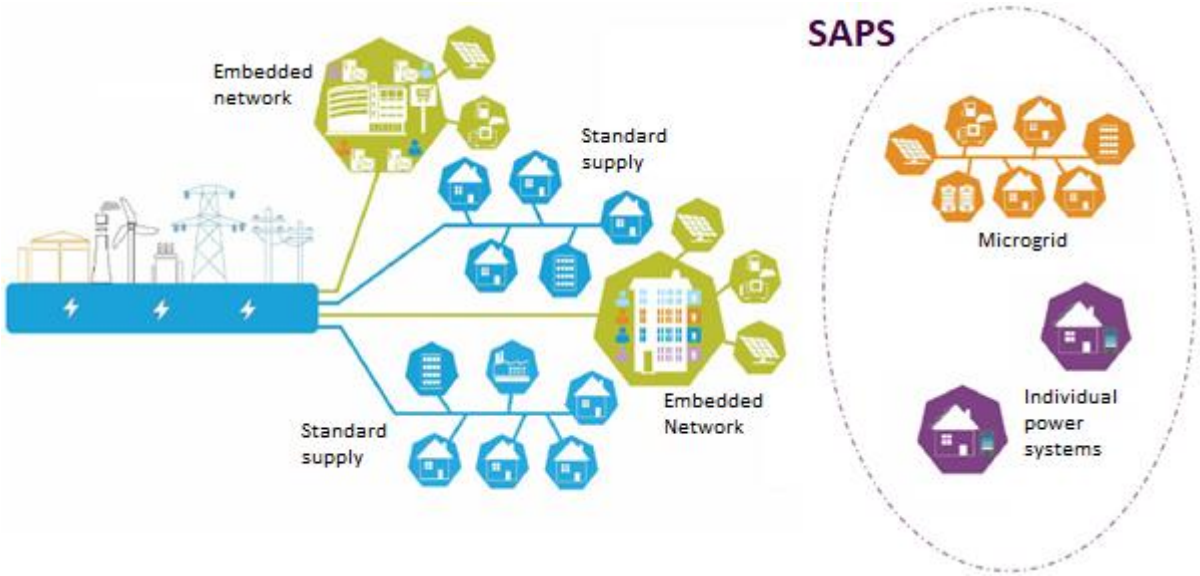
What is a SAPS?

A SAPS is a system that generates and distributes electricity but is not physically connected to the main electricity grid. A SAPS can come in various forms, but for a residential customer it typically comprises of one or more renewable power generation units, a battery, and back-up generation. For some customers, this set-up will deliver safe power at lower cost and/or greater reliability than connecting to the national grid.

The Australian Energy Market Commission (AEMC) identifies four potential models of electricity supply for customers, as shown in Figure 1.[3] The four models are:

- **standard supply** via the main electricity grid – the interconnected national electricity system
- **embedded networks**, which are private systems (e.g. shopping centre or apartment building) connected to the main electricity grid
- **individual power systems**, which are SAPS supplying a single customer and are not connected to the main electricity grid
- **microgrids**, which are SAPS supplying multiple customers and are not connected to the main electricity grid.

Figure 1: Four potential models of electricity supply in the National Electricity Market



Source: AEMC.

[3] AEMC, *Review of the regulatory frameworks for stand-alone power systems - priority 1, Final report*, 30 May 2019, p. 2.

1.2. Advantages of SAPS

A SAPS can have several benefits over a grid-connected system, including:

- improving reliability to customers who are currently connected to the grid by relatively poor performing overhead lines
- improving resilience by reducing the impact of environmental hazards such as bushfires
- lower network costs for all customers compared with replacing and maintaining long spans of overhead lines
- being more environmentally friendly when SAPS use renewable generation.

Until now, DNSPs regulated under the national framework have been unable to offer a SAPS to existing customers to realise these benefits. From 1 August 2022, DNSPs will be allowed to connect customers to a 'regulated SAPS'.

1.3. What is a regulated SAPS?

A SAPS is a **regulated SAPS** when it forms part of the national electricity system. It is a part of a DNSP's network and must be regulated in the same way as it otherwise would if it were part of the connected network.

Currently, around 2 per cent of households around Australia are "off-grid". These are households who own and operate their own energy supply. They do not have a retailer or access to the usual National Energy Market (NEM) energy processes and protections. A regulated SAPS (sometimes called a distributor-led SAPS) uses similar technology to an off-grid installation. However, it is operated in a different manner whereby the DNSP is responsible for the assets.

Regulated SAPS will be formed when a DNSP decides to convert a part of its existing interconnected national electricity system to a SAPS where it is economical to do so. For example:

> A long span of power lines that connects a small number of farms may be approaching the end of its life. The power lines may be in a high-risk bushfire area. In this example, the DNSP will consider options to continue to provide electricity to these farms. The best option may be to decommission the power line and establish one or more regulated SAPS. This solution may provide the farms with a more reliable and resilient power supply, and in the long run be the lowest cost to consumers because of the lower bushfire risk and ongoing maintenance costs.

This means that existing grid-connected customers, rather than off-grid customers, will be impacted if their DNSP decides to convert their part of the network to a regulated SAPS. The SAPS quality of supply principle, which forms part of the Amending Rule, ensures that consumers being converted to a regulated SAPS will not be disadvantaged.

The NER outline the principles that DNSPs must follow before and after converting part of the network to a regulated SAPS:

- Develop and publish SAPS performance and supply standards, having regard to the SAPS quality of supply principle. DNSPs must comply with these published standards.[4]
    - The SAPS quality of supply principle means that a SAPS customer's quality and reliability of electricity supply should be no worse than the quality and reliability they would experience if they were connected to the interconnected national electricity system.[5]

[4] NER, cl. 5.13B.1.

[5] NER, cl. 5.10.

- Develop a customer engagement strategy and engage with affected customers in accordance with that strategy.[6]
- Give notice to affected customers when developing a proposal to convert part of the network to a regulated SAPS and having regard to comments received in response to the notice.[7]

Further to the above, the AER may publish guidelines about how DNSPs engage with affected customers.[8] We have determined that the guidelines are not required at this time, but we will monitor DNSPs' engagement with customers and will publish guidelines if we find that the engagement is not meeting customers' needs.

Regulated SAPS customers will have:

- ✓ a meter
- ✓ NEM regulation
- ✓ consumer protections equivalent to customers connected to the grid
- ✓ choice of retailer
- ✓ a DNSP that is responsible for the system.

In the NEM the general principle is that generation should be competitive wherever possible and not provided by a monopoly business such as a DNSP. Therefore, the required generation is best provided by third party providers, called "SAPS resource providers".

Section 6B of the National Electricity Law (NEL) provides for a participating jurisdiction to make regulations under which certain stand-alone power systems form part of the national electricity system. Such a stand-alone power system is a regulated SAPS under the NEL.[9] This means that jurisdictions will need to opt in, or provide their own SAPS frameworks, before DNSPs are allowed to start deploying regulated SAPS.

6 NER, cl. 5.13B.2.
7 NER, cl. 5.13B.4.
8 NER, cl. 5.13B.3.
9 NER, ch. 10.

2. Reasons for the Amending Rule

The Amending Rule:

- allows DNSPs to connect customers to SAPS when this offers better value for money than connection to the interconnected national electricity system
- ensures that regulated SAPS customers will receive an equivalent level of service to grid customers with respect to price, reliability and consumer protections.

The Amending Rule, effective from 1 August 2022, removes existing barriers to DNSPs providing SAPS to customers. It allows for DNSPs to provide SAPS to existing customers, and to offer to connect new customers to existing regulated SAPS where it is more economically efficient than connection to the interconnected national electricity system.[10]

Prior to the Amending Rule, the NEL and NER did not adequately capture power systems that were not connected to the interconnected national electricity system. The relevant definitions in the NEL and NER are now updated to include regulated SAPS so that the price, reliability and consumer protections (such as safety) that grid-connected customers benefit from, will also apply to regulated SAPS customers. SAPS customers will also retain access to the competitive retail market, including their existing retailers and retail offers. This means that customers will not be disadvantaged where a DNSP determines that it is more cost-effective to supply them via a SAPS.

Ahead of the implementation of the Amending Rule on 1 August 2022, the AEMC identified that the introduction of regulated SAPS may have implications for the AER's existing guidelines. The AEMC therefore provided for a transitional period for us to consult on and update relevant guidelines. This ensured that our guidelines were consistent with the national arrangements for regulated SAPS, before the Amending Rule took effect.

[10] The Amending Rule also provides for new customers to connect to a new regulated SAPS, in particular if the cost to connect to the grid outweighs the cost of an off-grid solution such as a SAPS.

3. Review of documents

In accordance with the NER, we have reviewed, and where necessary, amended and published eleven documents to take into account the Amending Rule.[11] Table 1 lists the documents that we reviewed as part of this process and identifies our decision to amend or not amend to take into account the Amending Rule.

Our amendments are effective from 1 August 2022.

Our review found that amendments were required for four out of the eleven documents:

- Regulatory Investment Test for Distribution Application Guidelines
- Connection Charge Guidelines[12]
- Distribution Service Classification Guidelines
- Distribution Reliability Measures Guidelines.

Further to the above documents, we have also amended two additional documents:

- Regulatory Investment Test for Distribution (RIT-D)
- Expenditure Forecast Assessment Guideline.

Our amendments will help all network customers receive the benefits of allowing SAPS to become part of the national electricity system by ensuring that:

- existing customers are connected to regulated SAPS where it is efficient to do so
- new customers connecting to a regulated SAPS will pay only fair and reasonable connection charges, and receive the same consumer protections as grid-connected customers
- reliability of regulated SAPS can be benchmarked across all DNSPs.

Our amendments include:

- updating definitions to reflect changes to the NER
- including regulated SAPS into relevant regulatory requirements
- providing new guidance for regulated SAPS where the regulatory requirements differ from the interconnected national electricity system
- taking into account stakeholder submissions.

We have not amended the Distribution Ring-fencing Guidelines as part of this process, as they have already been amended in the latest version published on 3 November 2021.[13]

We have not amended six of the eleven documents, because:

- amendments are not required to give effect to the Amending Rule
- the Amending Rule does not change the definitions in these documents
- the guidance set out in the documents adequately cover circumstances where regulated SAPS are deployed.

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11 NER, cl. 11.142.4.

12 In a separate process, we are amending the *Connection Charge Guideline* to take into account the Access, Pricing and Incentive Arrangements for Distributed Energy Resources Rule 2021.

13 See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/ring-fencing-guideline-electricity-distribution-review.

Table 1 Outcomes of our review of relevant documents

Guideline	Outcome of our review
Documents we are required to review under NER cl. 11.142.4	
RIT-D Application Guidelines	Amended
Connection Charge Guidelines	Amended
Distribution Service Classification Guidelines	Amended
Asset Exemption Guidelines	Not amended
Cost Allocation Guidelines	Not amended
Distribution Ring-fencing Guidelines	Amended in the latest version, published 3 November 2021
Distribution Reliability Measures Guidelines	Amended
Forecasting Best Practice Guidelines	Not amended
Contracts and Firmness Guidelines	Not amended
Reliability Compliance Procedures and Guidelines	Not amended
Market Liquidity Obligation Guidelines	Not amended
Additional documents that we will amend under this process	
Regulatory Investment Test for Distribution	Amended
Expenditure Forecast Assessment Guideline	Amended

In Appendix A we discuss the six documents that we have amended. For each document, we outline the issues raised by stakeholders through our consultation process and how we have responded.

Each of the documents are the same as the draft amended documents that we published on our website on 18 May 2022, except to address stakeholder comments as indicated. Additionally, we have also had regard to minor drafting issues that Energex/Ergon Energy raised in its joint submission.

Appendix A. Amendments to relevant documents

A.1. RIT-D and RIT-D Application Guidelines

The regulatory investment test for distribution (RIT-D) aims to promote efficient investment through greater consistency, transparency and predictability in distribution investment decision-making. This is achieved in part by requiring DNSPs to consider credible options that are non-network options.

The RIT-D Application Guidelines provides instruction to DNSPs (and Transmission Network Service Providers for joint planning projects) about the process and application of the RIT-D.

The Amending Rule means that DNSPs must consider SAPS options along with non-network options as part of the RIT-D process. The amendments to these documents are mechanical in nature to update definitions, and the procedural and consultation requirements on DNSPs are substantively unchanged.

Table 2 shows where these changes are reflected in our draft amendments to the RIT-D and RIT-D Application Guidelines.

Stakeholder feedback

Energex and Ergon Energy (joint submission) provided the following feedback:

- Insert a definition of "SAPS performance and supply standards" as it is used in the definition of "Reliability corrective action".

  AER response: We will include the following two definitions in the glossary:

  > ***SAPS performance and supply standards**—Service standards that a network business publishes following consultation. They must ensure that the regulated SAPS meets the SAPS quality of supply principle.*
  >
  > ***SAPS quality of supply principle**—The quality and reliability of supply experienced by a distribution customer connected to a regulated SAPS should be no worse than the quality and reliability of supply that the distribution customer would experience if it were connected to the interconnected national electricity system.*

The Public Interest Advocacy Centre (PIAC) provided the following feedback on the RIT-D and RIT-D Application Guidelines:

- Recommend changing the RIT-D threshold, reflecting the potential cost savings of SAPS, to "$200,000 (or other appropriate value reflecting the cost of SAPS) per customer supplied by that network investment."

  AER response: The purpose of the RIT-D cost threshold is to balance the importance of ensuring a robust economic assessment of network investment against the importance of avoiding disproportionate regulatory burden.

  We have no reason to believe that the trade-off between a robust economic assessment and regulatory burden differs for projects with the potential for a SAPS compared with projects with no SAPS potential. That is, there is no reason to think that a $4 million investment (for example) with SAPS potential is in greater need of RIT-D oversight than a $4 million investment with no SAPS potential.

  Under the regulatory framework, DNSPs will be incentivised to invest in a SAPS solution where it is economic to do so. The capital expenditure sharing scheme (CESS) rewards a DNSP that improves its efficiency, including by investing in lower-cost options such as SAPS.

In addition, under clause 5.13B.3 of the Amending Rule we may issue guidance about engaging with affected network users in relation to DNSP-led SAPS projects. What we observe in the deployment of SAPS will be a critical factor in whether we see a need to issue this guidance.

- Any market benefits assessment involving one or more SAPS should include comparison of SAPS opex with any wholesale energy costs, including system losses, avoided by that SAPS.

  AER response: The existing RIT-D allows for consideration of these benefits. The RIT-D provides for:

  - *"changes in costs for parties other than the RIT-D proponent due to differences in…operating and maintenance costs" as a class of market benefit. (clause 7c)*
  - *"changes in electrical energy losses" as a class of market benefit. (clause 7g)*
  - *the RIT-D proponent to request that we determine an additional class of market benefits if the two clauses noted above are not sufficient to cover all expected benefits. (clause 7h)*

- Reliability value of one or more SAPS should include any improvements to reliability:
  - for individual SAPS customers, including avoided GSL payments
  - at a feeder level, particularly for worst-served feeders
  - across the DNSP's system, with consideration of STPIS outcomes.

  AER response: The existing RIT-D allows for changes in reliability to be considered as costs and/or benefits.

  The NER state that the RIT-D "must not require a level of analysis that is disproportionate to the scale and likely impact of each of the credible options being considered."[14] Consequently, the degree of detail in the RIT-D, such as whether benefits are estimated at the individual customer or feeder level, is a matter of judgment for the RIT-D proponent.

  Consultation and dispute resolution processes allow stakeholders to provide input on the degree of detail that should reasonably be considered in each RIT-D on a case-by-case basis.

Table 2 Draft amendments to the RIT-D and RIT-D Application Guidelines to take into account the Amending Rule

Change	Section
Regulatory investment test for distribution	
References to 'non-network options report' updated to 'options screening report'	1.1(2)(d) 1.1(7)(h) 1.1(12)
RIT-D Application Guidelines	
'Demand side engagement register' (or 'DSER') removed from shortened forms	Shortened forms
'Non-network options report' (or 'NNOR') removed from shortened forms	Shortened forms
References to 'non-network options report' (or 'NNOR') updated to 'options screening report'	1.2 1.6 3.5.4 3.6.2

[14] NER, cl. 5.17.1(c)(2).

	4 (incl. fig. 1) 4.2 4.3 4.5.1 5.3 5.4 6 B
References to ‘applicable regulatory instruments’ updated to ‘applicable regulatory instruments or SAPS performance and supply standards’	3.1 3.3 B
Definitions included for ‘SAPS performance and supply standards’ and ‘SAPS quality of supply principle’	3.1
References to ‘notice of non-network options’ updated to ‘options screening notice’	1.6
References to ‘non-network options report’ updated to ‘options screening report’ in quote to reflect amendments to RIT-D	3.6
References to ‘non-network options’ updated to ‘non-network options and/or SAPS options’ or references to ‘non-network option’ updated to ‘non-network option and/or a SAPS option’, as the case may be	3.1 3.2.4 3.5.4 3.6.2 3.8.3 4 4.2 4.3 4.4 6 6.1 6.3
References to ‘demand side engagement register’ (or ‘DSER’) updated to ‘industry engagement register’	4 4.2 4.3 4.4 B
Definition and guidance provided for ‘industry engagement register’	4
References to ‘non-network option’ updated to ‘non-network option or (in relation to an adoptive SAPS network) a SAPS option’ or references to ‘non-network options’ updated to ‘non-network options, and (in relation to an adoptive SAPS network) SAPS options’	4.2
After ‘A summary of potential credible options to address the identified need,’ added ‘as identified by the RIT-D proponent’, to better align with NER cl. 5.17.4(e)(5)	4.2
Amendments to address stakeholder comments	
Added definitions for *SAPS performance and supply standards* and *SAPS quality of supply principle*.	Glossary

A.2. Connection Charge Guidelines for Electricity Retail Customers

This guideline sets out how DNSPs must develop a connection policy covering the circumstances in which connection charges are payable and the basis for determining the amount of such charges.

Consistent with the AEMC's policy intent to treat regulated SAPS customers similar to customers within the interconnected national electricity system, we have not prescribed a different connection charge framework for connections to regulated SAPS. The changes to the guideline are mostly mechanical in nature.

The AEMC's final report proposes that only Chapter 5A of the National Electricity Rules will apply where a person is seeking connection to a regulated SAPS. Chapter 5A has also been amended so that it applies to *Registered Participants* or *Intending Participants*[15,16] when they are:

- acting as the agent of a retail customer, or
- seeking connection or connection services in relation to a regulated SAPS.

For connection charging purposes, *Registered Participants* and *Intending Participants* will be treated in the same category as real estate developers. That is, *Registered Participants* and *Intending Participants* connecting to a SAPS are (like real estate developers) not eligible for the exemption from being charged for upstream augmentation.[17]

We have also added a paragraph to the guideline to clarify that the guideline also covers connections to SAPS.

Table 3 shows where these changes are reflected in our draft amendments to the guideline.

Stakeholder feedback

PIAC provided the following feedback on the Connection Charge Guidelines for Electricity Retail Customers:

- Regulated SAPS should only be supplied to customers with a pre-existing network connection. The draft guideline could be interpreted to suggest DNSPs are able to supply SAPS for new customers, which is not the intention of the SAPS rule change. Providing regulated SAPS to new customers does not avoid costs of network asset replacement, so would result in inappropriate cross-subsidies from DNSP's other customers. Recommend using language that clarifies regulated SAPS will only be an option to supply existing customers of the DNSP.

  AER response: Clause 5A.A.2 of the NER specifies that the connection process under Chapter 5A of the NER also apply to regulated SAPS. This means that DNSPs may offer to connect new customers to existing regulated SAPS, where it is more efficient to do so than to connect to the interconnected network.

  Furthermore, DNSPs are incentivised to connect new customers to existing regulated SAPS only where it is efficient to do so. The CESS rewards a DNSP that improves its efficiency, including by investing in lower-cost options such as SAPS. Therefore, we do not consider that the risk of inappropriate cross-subsidies from DNSPs' other customers is higher for new connections to regulated SAPS than for new connections to the interconnected network.

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15 *Registered Participant* has the same meaning as that in the NER; namely, a person (for example, a generator or retailer) who is registered by AEMO in any one or more of the categories listed in NER rr. 2.2 to 2.7 (see exceptions in NER glossary). *Intending Participant* has the same meaning as that in the NER; namely, a person who intends to participate in the market and is registered by AEMO as an *Intending Participant* under NER ch. 2.

16 The purpose of allowing Registered Participants and Intending Participants to seek connection to regulated SAPS includes, for example, to enable customers to buy from the NEM at the SAPS settlement price. In this context, *Registered Participants* and *Intending Participants* mainly refer to electricity retailers.

17 Charge for augmenting a DNSP's network upstream from the point of connection.

Table 3 Draft amendments to the Connection Charge Guidelines for Electricity Retail Customers to take into account the Amending Rule

Change	Section
Insert paragraph to clarify that the guideline applies to connections of retail customers to both the interconnected networks of DNSPs as well as for connections to Regulated Stand Alone Power Systems Added text to reflect changes to specific clauses in the Rules	Nature and authority – Application of this guideline
Added the words *Registered Participant or an Intending Participant* to text which describes what the connection charge guideline must do	Nature and authority – Requirements of the National Electricity Rules
Added the words "*Registered Participant or an Intending Participant"*	1.1.1
Added: - new section 8.1.1, explaining the limits of application of the guideline for *Registered Participant and Intending Participant* - references to *Registered Participant* and *Intending Participant* to 8.1.2 to 8.1.5	8
Added definitions for *Intending Participant*, *Interconnected national electricity system*, *New connection*, *Registered Participant* and *Regulated Stand-alone Power System*	12 - Definitions

A.3. Electricity Distribution Service Classification Guideline

This guideline provides a practical explanation of how the AER determines the type of economic regulation, if any, to be applied to distribution services.

The Amending Rule means that regulated SAPS are to be treated the same as the interconnected components of the distribution network for the purposes of service classification. It will also direct the AER to include regulated SAPS as a distribution service. The amendments to this guideline are mechanical in nature to update definitions.

Table 4 shows where these changes are reflected in our draft amendments to the guideline.

Stakeholder feedback

Ausgrid provided the following feedback on the Electricity Distribution Service Classification Guideline:

- Clarify the phrase 'electricity through regulated SAPS' in footnote 9 to more clearly reflect the requirements of rule 6.2.1A of the NER.

  AER response: In the Service classification guideline we outline that 'Common distribution services' is a single service that "relates to the conveyance or flow of electricity through the network for consumers". Footnote 9 clarifies the meaning of 'network':

  > Deemed to include the flow of electricity through regulated SAPS under NER cl. 6.2.1A.

  We consider that the footnote makes clear that, for the purposes of baseline service groupings, the classification treatment of common distribution services provided by SAPS is the same as for services provided by the interconnected network. This is in accordance with NER clause 6.2.1A(b).

  Further, we have recently applied this for the classification of regulated SAPS in the NSW, TAS, ACT and NT framework and approach process and have detailed our reasoning for the classification approach taken through that process.

Table 4 Draft amendments to the Electricity Distribution Service Classification Guideline to take into account the Amending Rule

Change	Section
Footnote added that standard control services include regulated SAPS	1.1
Footnote added that 'flow of electricity through the network' includes regulated SAPS	2.2.1
Regulated SAPS works included in Common distribution service–standard control classification	3.1 A
SAPS added to glossary	Glossary

A.4. Distribution Reliability Measures Guideline

This guideline outlines a set of common definitions of reliability measures that can be used to assess and compare the reliability performance of DNSPs. This includes interruption frequency (SAIFI) and duration (SAIDI), which are reported by feeder type and the total network level.

The guideline will be updated so that the network reliability, security and quality standards that apply to grid-connected customers also apply to regulated SAPS customers. In this guideline, we propose to add a new "SAPS feeder" classification to SAIDI and SAIFI to reflect the unique characteristics of SAPS. We propose to treat each regulated SAPS as a single SAPS feeder. The reason for the changes are as follows:

- SAPS will mainly be formed in rural areas by converting rural feeders into SAPS feeders. We expect SAPS feeders will have much better reliability than rural feeders because of their shorter length and local power source. Hence, they do not fit into a rural feeder category. They also do not fit into an urban feeder category because of their location and power density.
- It is unlikely that the total number of customers within a SAPS will be large compared with typical network feeders on the interconnected grid. Therefore, we consider that the reliability measure for each SAPS can be adequately monitored to treat the entire SAPS as one entity (effectively as one feeder).
- A SAPS could be the product of a combination of multiple existing feeders to form a local supply precinct with centralised generating units. There can be several pre-existing feeders within the precinct to supply the customers within a SAPS if a new network type classification is not in place.

Table 5 shows where these changes are reflected in our draft amendments to the guideline.

Stakeholder feedback

Ausgrid provided the following feedback on the Distribution Reliability Measures Guideline:

- Clarify whether, in circumstances where a regulated SAPS forms part of the national electricity system, the proposed amended definition of 'Feeder' in the Distribution Reliability Measures Guideline is intended to include outages of the regulated SAPS (as defined in the NER), as well as the stand-alone distribution system (as defined in the NER) between a regulated SAPS itself and the customer.

  AER response: SAPS feeder performance measurements are based on the power supply reliability to the connected customers in regulated SAPS. This aligns with our definition of "SAPS feeder". We will therefore update our definition of "Feeder" to:

  > *"**Feeder** means a power line, including underground cables, that is part of a distribution network or a ~~regulated Stand-alone Power System (SAPS)~~ SAPS feeder."*

Energex and Ergon Energy (joint submission) provided the following feedback:

- Supports customer average interruption duration index (CAIDI) measurements being included as a SAPS reporting reliability performance index but note that it is not currently included in the Regulatory Information Notice reporting process.

  AER response: Currently, DNSPs are only required to report SAIDI and SAIFI data in the RIN for all feeder types. CAIDI can be determined by SAIDI/SAIFI.

- Amend definition of Distribution Customer to "Distribution Customer means a connection point between a *distribution network* and *Customer* that has been assigned a *National Metering Identifier*, including energised only *connection points* and active accounts but excluding

unmetered connection points without a National Metering Identifier." This will ensure that de-energised customers are not included and aligns with distribution reliability reporting obligations.

AER response: Energex/Ergon Energy suggests that we remove 'de-energised connection points' from the definition of "Distribution customer" and include 'active accounts'. We agree that this change will better align the definition with the distribution reliability reporting obligations. We will amend the guideline accordingly.

- Amend definition of a SAPS feeder to "SAPS feeder means a feeder that services a regulated stand-alone power system (SAPS)".

  AER response: Since a SAPS feeder can be a combination of a number of circuits radiating from the generation source(s) of a SAPS, we consider the proposed change may not be sufficient to describe the actual arrangement. We will modify the definition to:

  > *"**SAPS feeder** means a* feeder*, or a group of circuits* ~~feeders~~*, that serves a regulated Stand-alone Power System (SAPS). To avoid doubt, there will be only one SAPS feeder for each regulated SAPS."*

- As DNSP-led SAPS are meant to provide customers with adequate reliability and protection as if they were deemed to be grid connected, SAPS feeders should not be exceptions under the load shedding exclusions numbered (1)-(3).

  AER response: The Distribution Reliability Measures Guideline outlines circumstances that may be excluded from the calculation of SAIDI, SAIFI, MAIFI and MAIFIe. Exclusions (1)-(3) relate to load shedding events.

  Regulated SAPS are not subject to load shedding events. Therefore, it is not necessary to make them subject to exclusions (1)-(3) for the purposes of calculating SAIDI, SAIFI, MAIFI and MAIFIe. However, since SAPS have a local generation source, additional clarification is needed to avoid doubt about whether local generation shortfall is counted in regulated SAPS performance measures.

PIAC provided the following feedback:

- Amend definition of a feeder to clarify a SAPS in entirety is equivalent to a feeder, and a SAPS sub-component is not. Clarification is needed so a failure of only part of a SAPS is not considered an outage for reliability purposes where it does not result in a loss of supply to the customer.

  AER response: As per our response to Ausgrid, we will amend the definition of "Feeder" to include a "SAPS feeder" rather than a "regulated SAPS". For reliability purposes, we confirm that reliability of regulated SAPS will be identical to the current practice for the interconnected parts of the networks—that is, reliability is measured on whether power is on at each customer's point of supply.

- It is unclear why SAPS are not subject to exclusions 1, 2 and 3 but not 4 and 5. None of these outages would have any bearing on a SAPS, as SAPS are not connected to the transmission system or the market. Make these consistent or clarify the reasoning for the differential treatment of these exclusions.

  AER response: The Distribution Reliability Measures Guideline outlines circumstances that may be excluded from the calculation of SAIDI, SAIFI, MAIFI and MAIFIe. Exclusions (1)-(3) relate to load shedding events. Exclusions (4)-(5) relate to load interruptions caused by a failure of the shared transmission network or transmission connection assets.

  As explained in our response to similar comment from Energex and Ergon Energy, regulated SAPS are not subject to load shedding events. Therefore, it is not necessary to make them subject to exclusions (1)-(3) for the purposes of calculating SAIDI, SAIFI, MAIFI and MAIFIe. However, since SAPS have a local generation source, additional clarification is needed to avoid doubt about whether local generation shortfalls are counted in regulated SAPS performance measures.

Exclusions (4)-(5) relate to transmission network outages. Since SAPS are not connected to the shared transmission network, there is no need for additional clarification to avoid doubt that transmission network outages are counted in regulated SAPS performance measures.

Table 5 Draft amendments to the Distribution Reliability Measures Guideline to take into account the Amending Rule

Change	Section
'Regulated SAPS' and 'SAPS feeder' added to definitions	3.2
Added that SAPS feeders are excluded from certain exclusions for the calculation of SAIDI, SAIFI, MAIFI and MAIFIe	3.3
SAPS added to shortened forms	4
Amendments to address stakeholder comments	
Amended definition of 'Distribution Customer'	3.2
Amended definition of 'Feeder'	3.2
Amended definition of 'SAPS feeder'	3.2

A.5. Expenditure Forecast Assessment Guideline for Electricity Distribution

This guideline describes the process, techniques and associated data requirements for our approach to setting efficient expenditure allowances for network businesses.

The Amending Rule means that we must have regard to how SAPS options, along with non-network options, have been considered and provided for in DNSPs' regulatory proposals. The amendments to this guideline are mechanical in nature to update definitions.

Table 6 shows where these changes are reflected in our draft amendments to the guideline.

Table 6 Draft amendments to the Expenditure Forecast Assessment Guideline for Electricity Distribution to take into account the Amending Rule

Change	Section
References to 'non-network options' updated to 'non-network options or SAPS options'	3.2.2 5.1