



Electricity

# Draft Electricity Distribution Code and Electricity Guideline No. 1

Consultation paper

April 2020

## Request for submissions

The Essential Services Commission (**Commission**) invites written submissions on this paper by **24 April 2020**.

It is the Commission's policy to make all submissions publicly available via its website ([www.escosa.sa.gov.au](http://www.escosa.sa.gov.au)), except where a submission either wholly or partly contains confidential or commercially sensitive information provided on a confidential basis and appropriate prior notice has been given.

The Commission may also exercise its discretion not to publish any submission based on length or content (for example containing material that is defamatory, offensive or in breach of any law).

Responses to this paper should be directed to: **Draft Electricity Distribution Code and Distribution Guideline No. 1**

It is preferred that submissions are sent electronically to: [escosa@escosa.sa.gov.au](mailto:escosa@escosa.sa.gov.au)

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## Glossary of terms

Term	Explanation
ABA	Adelaide Business Area
AMA	Adelaide Metropolitan Area
CBD	Central Business District
Commission	Essential Services Commission, established under the <i>Essential Services Commission Act 2002</i>
ESC Act	<i>Essential Services Commission Act 2002</i>
GSL	Guaranteed Service Level
IEEE method	The method for normalising reliability performance set out in the Institute of Electrical and Electronics Engineers (IEEE) standard 1366-2012
MECS	Monitoring, Evaluation and Compliance Strategy
MEDs	Major Event Days
MRC	Major Regional Centres
USAIDI	Unplanned System Average Interruption Duration Index
USAIFI	Unplanned System Average Frequency Duration Index

# 1 Introduction

This consultation paper outlines proposed changes to the:

- ▶ Electricity Distribution Code EDC/12.1 (the **current Code**) to create the draft Electricity Distribution Code EDC/13 (the **draft Code**), and
- ▶ Electricity Guideline No. 1 G1/12 (the **current Guideline**) to create the draft Electricity Guideline No. 1 G1/13 (**draft Guideline**).

The draft Code and draft Guideline have been published with this consultation paper, with changed clauses highlighted.

Changes reflect the SA Power Networks reliability standards review final decision, made in January 2019.<sup>1</sup> The final decision left some matters open:

- ▶ whether network reliability targets would be set based on the average of five or ten years' historical performance<sup>2</sup>, and
- ▶ the methodology for normalising regional performance data.<sup>3</sup>

This paper sets out the Commission's position on these matters.

Further, practical issues arose in implementing network restoration targets using the design described in the final decision.<sup>4</sup> This paper sets out a revised design that overcomes these issues.

The Commission is seeking input from stakeholders on the draft Code and draft Guideline by **24 April 2020**.

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1 Essential Services Commission of South Australia, *SA Power Networks reliability standards review final decision*, January 2019, available at <https://www.escosa.sa.gov.au/ArticleDocuments/1188/20190107-Electricity-SAPN-reliabilitystandardsreview-FinalDecision.pdf.aspx?Embed=Y>.

2 Essential Services Commission of South Australia, p. 10

3 Essential Services Commission of South Australia, p. 59

4 Essential Services Commission of South Australia, p. 33

## **2 Electricity Distribution Code - revisions**

This section outlines the changes made to the draft Code. After the main description of revisions, minor changes made to the Code and Guideline are summarised in Attachment 1.

### **2.1 Definitions**

Various definitions have been changed or added to reflect the final decision, and a number of definitions have been changed or added to make improvements identified in preparation of the draft Code. These are set out in Table 1 and Table 2 below.

Table 1: Definitions changed or added as per the final decision

Definition	EDC/12.1	Draft Code	Reference to final decision
CBD Feeder	means a <b>feeder</b> supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground <b>distribution network</b> containing significant interconnection and redundancy when compared to urban areas	means a <b>feeder</b> in the CBD area supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground <b>distribution network</b> containing significant interconnection and redundancy when compared to urban areas	Section 3.3
Long Rural Feeder	means a <b>feeder</b> which is not a <b>CBD</b> or <b>urban feeder</b> with a total <b>feeder</b> route length greater than 200 km or as otherwise agreed between <b>SA Power Networks</b> and the <b>Commission</b>	means a <b>feeder</b> which is not a <b>CBD feeder</b> , <b>urban feeder</b> or <b>short rural feeder</b>	Section 3.3
Low reliability feeder	Not defined in Code. In Guideline, defined as an individual feeder with USAIDI performance approximately twice as high as the USAIDI target for that feeder class for two consecutive financial years.	means a <b>feeder</b> with <b>USAIDI</b> twice as high as the target for that region for two consecutive <b>regulatory years</b>	Section 6.3
Momentary interruptions	Not listed in definition section, but in body of Code (clause 2.2.1(a) and 2.3.1(d)(ii))) is set out as interruptions of less than one minute.	means an <b>interruption</b> to a distribution <b>customer</b> 's electricity <b>supply</b> with a duration of three minutes or less, provided that the end of each momentary interruption is taken to be when electricity supply is restored for any duration	Section 3.6
Short Rural Feeder	means a <b>feeder</b> which is not a <b>CBD</b> or <b>urban feeder</b> with a total <b>feeder</b> route length less than 200 km or as otherwise agreed between <b>SA Power Networks</b> and the <b>Commission</b>	means a <b>feeder</b> which is not a <b>CBD</b> or <b>urban feeder</b> with a total <b>feeder</b> route length less than 200 km	Section 3.3
Urban Feeder	means a <b>feeder</b> , which is not a <b>CBD feeder</b> , with actual maximum demand over the reporting period per total <b>feeder</b> route length greater than 0.3 MVA/km or as otherwise agreed between <b>SA Power Networks</b> and the <b>Commission</b>	means a <b>feeder</b> , which is not a <b>CBD feeder</b> , which has a three-year average maximum demand over the three-year average <b>feeder</b> route length greater than 0.3 mega-volt amps/km	Section 3.3

Table 2: Additional definitions changed or added in preparing draft Code

Definition	EDC/12.1	Draft Code	Explanation
Adelaide Business Area	means that part of Adelaide shown in Map 1 of Schedule 1 and in which <b>customers</b> are supplied by <b>feeders</b> as agreed between <b>SA Power Networks</b> and the <b>Commission</b>	means that part of Adelaide shown in Map 1 of Schedule 1 and in which <b>customers</b> are supplied by <b>feeders</b> as agreed between <b>SA Power Networks</b> and the <b>Commission</b> or where agreement cannot reasonably be reached, then as determined by the <b>Commission</b>	This variation allows for the scenario that SA Power Networks and the Commission cannot reach agreement on which feeders to include in the Adelaide Business Area.
Australian Standard or AS	means a standard published by the Standards Association of Australia	means a standard published by Standards Australia	This variation updates the name of the relevant body.
Business day	has the meaning given to that term in the <b>National Energy Retail Law</b>	means a day that is not a Saturday, a Sunday or a public holiday in the State of South Australia	The current definition excludes public holidays that are not national (or nationally celebrated) such as the Adelaide Cup day. This change allows that South Australian public holidays are not considered as business days.
Country area	-	means an area outside of <b>major metropolitan areas</b>	There is currently no definition of country area in the Code, despite clause 3.7 making obligations regarding country areas.
Electrical installation	has the meaning given to that term in the <b>Act</b>	-	This term is not used in the Code.
Good electricity industry practice	-	has the meaning given by the <b>National Electricity Rules</b> as amended from time to time	This term has been added to support the added amendment in Chapter 3.

Definition	EDC/12.1	Draft Code	Explanation
Major Metropolitan Areas	means the <b>Adelaide Business Area</b> , Greater Adelaide Metropolitan Area as indicated in Map 2 of Schedule 2 and Major Regional Areas including Mount Barker, Mount Gambier, Port Augusta, Port Lincoln and Whyalla in which <b>customers</b> are supplied by <b>feeders</b> as agreed between <b>SA Power Networks</b> and the <b>Commission</b>	means the <b>Adelaide Business Area</b> , Greater Adelaide Metropolitan Area as indicated in Map 2 of Schedule 2 and Major Regional Areas including Mount Barker, Mount Gambier, Port Augusta, Port Lincoln and Whyalla in which <b>customers</b> are <b>supplied</b> by feeders as agreed between <b>SA Power Networks</b> and the <b>Commission</b> or where agreement cannot reasonably be reached, then as determined by the <b>Commission</b>	This variation allows for the scenario that SA Power Networks and the Commission cannot reach agreement on which feeders to include as Major Metropolitan Areas.
Planned interruption	-	has the meaning given by the <b>National Energy Retail Rules</b> as amended from time to time	This term has been added to support references in the Code and Guideline.
Regulatory year	-	means the period commencing on 1 July and ending on 30 June the following calendar year (for example the <b>regulatory year</b> for 2020 will commence on 1 July 2020 and will end on 30 June 2021)	There is currently no definition of regulatory year in the Code, despite its extensive use.
Technical regulator	means the person holding the office of Technical Regulator under Part 2 of the <b>Act</b>	-	This term is not used in the Code.
Unplanned interruption	-	has the meaning given by the <b>National Energy Retail Rules</b> as amended from time to time	This term has been added to support references in the Code and Guideline.

## 2.2 Service Standards

### 2.2.1 Customer Service Measures

This section of the draft Code establishes standards for customer service.

#### 2.2.1.1 Telephone responsiveness standard

The draft Code contains a revised definition of responding to telephone calls that incorporates detail set out in the current Guideline. This is in accordance with section 5.1 of the final decision.

### 2.2.2 Reliability Measures

This section of the draft Code establishes standards for network reliability and network restoration.

#### 2.2.2.1 Network reliability standards

Clause 2.2.1 contains the revised network reliability standards and targets, and introduces network reliability reporting thresholds for the first time.

The revised network reliability targets have been established in accordance with the final decision (section 3.1). They have been established to maintain reliability, as the average of recent historical performance, prior to the start of the regulatory period.

The final decision (section 3.1) left open the matter of whether to use a five or ten year period to establish average recent historical performance prior to the start of the regulatory period.

The Commission is proposing to use a ten-year period. There are two reasons for that proposal.

First, averaging performance over ten years, rather than five, smooths the impact on performance of one-off events, such as extreme weather, that SA Power Networks cannot control. Some, but not all, of the impact of such events is removed by normalising performance data.

Second, average performance over the last five years has been somewhat better than performance over the last ten years (see Table 3 and Table 4).<sup>5</sup>

Table 3: Five and ten year mean USAIDIn performance to 30 June 2019

	CBD	Urban	Rural Short	Rural Long
Five years' average performance to 30 June 2019	17	100	177	279
Ten years' average performance to 30 June 2019	16	108	199	289

Table 4: Five and ten year mean USAIFIIn performance to 30 June 2019

	CBD	Urban	Rural Short	Rural Long
Five years' average performance to 30 June 2019	0.15	1.04	1.41	1.55
Ten years' average performance to 30 June 2019	0.15	1.17	1.63	1.75

<sup>5</sup> Note that for the 2020 - 2025 regulatory period, and for the purpose of calculating targets for that period, performance of CBD feeders is based on application of the CBD feeder definition as described in Attachment 2, which differs slightly from that currently used by SA Power Networks.

Since 1 July 2015, SA Power Networks has operated within its current revenue determination, which allows for meeting targets in the current Code, while also providing an incentive to improve performance (under the terms of the Australian Energy Regulator's (AER) Service Target Performance Incentive Scheme).

SA Power Networks has indicated that no additional expenditure is required in the 2020 – 2025 period to meet the Commission's reliability targets set based on recent historical performance (over either five or ten years).<sup>6</sup>

However, if targets were to be set based on the last five years rather than the last ten, there is a risk that, over time, additional operating and replacement expenditure may be necessary to deliver the higher reliability outcomes. This outcome would be inconsistent with the consistently expressed customer preferences to maintain reliability levels without cost increases.

Therefore, the Commission's position is to set network reliability targets as the averages (means) of the last ten years' performance (rounded to the nearest five minutes or 0.05 interruptions).

**Question for stakeholders:**

Do you support the Commission's position to set network reliability targets as the average of ten years' historical performance? Why or why not?

Clause 2.2.1 contains network reliability reporting thresholds. The reporting thresholds are established in accordance with section 3.5 of the final decision, with the exception of those for CBD feeders.

When calculated as per the final decision, the reporting thresholds for CBD feeders are 30 minutes (USAIDIn) and 0.25 interruptions (USAIFIn). The reporting thresholds have been set at 20 minutes (USAIDIn) and 0.20 interruptions (USAIFIn) to adjust for outlying poor performance in 2017-18 while allowing for scrutiny of SA Power Networks' management of ongoing issues with the CBD underground network.

If the proposed reporting thresholds had applied in the last five years, each of the eight reporting thresholds would have been breached once (and therefore required detailed reporting from SA Power Networks). This is consistent with the intent of the final decision.

**Question for stakeholders:**

Do you support the Commission's position to set lower reporting thresholds for CBD feeders? Why or why not?

### **2.2.3 Network restoration standards**

Clause 2.2.2 contains the network restoration standards, targets and reporting thresholds.

The proposed network restoration targets are consistent with the intent of section 3.7 of the final decision; that is, to introduce greater transparency around SA Power Networks' performance during very long duration interruptions. However, the targets are not in the same form presented in the final decision.

The final decision was to introduce network restoration targets as the maximum proportion of customers in each feeder category allowed to experience a single unplanned interruption longer than two hours, and longer than three hours, each year (with the proportion of customers based on recent

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<sup>6</sup> See discussion on page 12 of the final decision.

historical performance). Network restoration targets produced as per the final decision (based on the average performance over ten years to 30 June 2019) are shown in Table 5.

Table 5: Annual network restoration time targets as per final decision (based on average performance over ten years, rounded to nearest five percent)

	CBD	Urban	Rural Short	Rural Long
Interruption longer than 2 hours	5 percent	25 percent	60 percent	85 percent
Interruption longer than 3 hours	2 percent	10 percent	25 percent	50 percent

To illustrate what these targets mean, in a year, the target for CBD feeders would be a maximum of five percent of customers experiencing an interruption longer than two hours, and a maximum of two percent of customers experiencing an interruption longer than three hours. Likewise, in a year, the target for Rural Long feeders would be a maximum of 85 percent of customers experiencing an interruption longer than two hours, and a maximum of 50 percent of customers experiencing an interruption longer than three hours.

Using interruptions longer than two and three hours as the basis for restoration time targets does not adequately reflect the intent of the final decision, which was to establish targets inside of which the majority of customers would be restored following an interruption.

Therefore, the Commission has formed the preliminary view that the intent of the final decision is better achieved by establishing targets for interruptions of different lengths for each feeder category. This approach is expected to provide greater transparency around SA Power Networks' management of very long interruptions.

Network restoration targets produced on this basis are shown in Table 6, and are included in the draft Code at clause 2.2.2.

Table 6: Network restoration time targets, established for interruptions of different lengths  
(based on average performance over ten years, rounded to nearest five percent)

	CBD Feeders	Urban Feeders	Rural Short Feeders	Rural Long Feeders
Interruption equal to or greater than 1 hour	10 percent			
Interruption longer than 2 hours	5 percent	25 percent		
Interruption longer than 3 hours		10 percent	25 percent	
Interruption longer than 4 hours				30 percent
Interruption longer than 5 hours			10 percent	
Interruption longer than 7 hours				10 percent

#### Questions for stakeholders:

Do you support establishing restoration targets of different lengths for each feeder category in the network? Why or why not?

Clause 2.2.2 also contains network restoration reporting thresholds.

The final decision detailed a method for calculating reporting thresholds in relation to network reliability performance targets (using the 75<sup>th</sup> percentile, as discussed above).

This methodology has not been used for network restoration reporting thresholds. Instead, and for simplicity, a standard 2.5 percentage point threshold has been used across all feeder categories.

When calculated using the 75<sup>th</sup> percentile method, the reporting thresholds for Urban, Rural Short and Rural Long targets are each close to 2.5 percentage points above each target.<sup>7</sup> The reporting thresholds for CBD feeders are wider: 19 percent (for interruptions longer than one hour, the target is 10 percent) and 10 percent (for interruptions longer than two hours, the target is five percent). These have been curtailed to 2.5 percentage points to be consistent with the other feeder categories.

If they had applied in the last five years, each of the two CBD feeder reporting thresholds would have been breached once (and therefore required detailed reporting from SA Power Networks), and one of each of the two Urban, Rural Short and Rural Long feeder reporting thresholds would have been breached once. This is consistent with the intent set out in the final decision.

#### Question for stakeholders

Do you support use of a standard restoration target reporting threshold of 2.5 percentage points across all feeder categories? Why or why not?

## 2.2.4 Guaranteed Service Level Scheme

The draft Code contains changes to the Guaranteed Service Level scheme outlined in sections 4.1 to 4.4 of the final decision.

Clause 2.3.1(a) relates to required timeframes for the connection of new supply addresses. The wording ‘the distributor must use its best endeavours to *connect* customer’s new supply address’ has been replaced with ‘the distributor must use its best endeavours to *provide infrastructure to enable a connection* for a customer’s new supply address’, as per section 4.3 of the final decision.

Clause 2.3.1(c)(iv) has been added to clarify that partial interruptions to a supply address are excluded from the GSL scheme. This reflects current practice, and the practicalities of administering the scheme.

### 2.2.4.1 GSL payment for timely repair of street light faults

Minor changes have been made to the GSL payment for timely repair of street light faults.

First, a definition of street light fault has been added to the Code, as per section 4.4 of the final decision.

Second, clause 2.3.1(b) has been amended to clarify that SA Power Networks is not required to make a GSL payment for repair of a street light fault where the person reporting the fault deliberately caused damage to that street light. This removes the possibility of a person causing deliberate damage to obtain a payment.

More broadly, the final decision noted that from 1 July 2020, the AER will change its classification of public lighting services, and that may require public lighting service levels to be further defined, and made transparent. It also noted that SA Power Networks was consulting with public lighting customers, and planned to detail the public lighting service levels it will offer from 1 July 2020 as part of its revenue

<sup>7</sup> For Urban feeders, 28.0 and 12.5 percentage points (on targets of 25 percent and 10 percent); for Rural Short feeders, 27.1 and 9.3 percentage points (on targets of 25 percent and 10 percent); for Rural Long feeders, 34.2 and 12.9 percentage points (on targets of 30 percent and 10 percent).

proposal to the AER.<sup>8</sup> The final decision noted that progress in this area could change the need for the street light fault GSL payment. The Commission noted that '*more information may become available between now and the start of the next regulatory period*', and committed to '*seek out and consider such information, and review this decision point if it sees fit*'.<sup>9</sup>

In December 2019, SA Power Networks published its Public Lighting Service Framework (the **framework**).<sup>10</sup> The framework is a set of standards that are the product of consultation between SA Power Networks and the Public Lighting Working Group (convened by SA Power Networks, chaired by the Local Government Association of South Australia, and with members representing public lighting customers).

The framework sets out a suite of service areas and levels for public lighting. These include repair of street light faults, as well as continuation of the street light outage reporting tool, quarterly reporting on timely street light repairs, bulk change overs of conventional street lights (performed to avoid outages), street light cleaning, and replacement of conventional street lights with LED street lights.

With regard to street light faults, the framework includes a target of SA Power Networks repairing 98 percent of lights for which it is responsible within five and ten days for metropolitan and regional areas. These timeframes are the same as those currently required in clause 2.3.1 (b)(i) of the Commission's Code, and the 98 percent service level is an improvement on current service levels as reported to the Commission.

The framework does not include a scheme to provide payments to customers if service levels are not met, nor an alternative financial penalty scheme.

The framework sets the basis for improved transparency around public lighting service levels. The Commission's view is that it has the potential to address the gap around jurisdictional service standards for public lighting identified in the final decision (section 4.4), and reduce the importance of the Commission's street light fault GSL payment to ensure timely repairs.

However, as it is recently developed, its effectiveness in providing the appropriate incentives for SA Power Networks to effectively and efficiently manage its street light obligations is yet to be demonstrated. Further, as the framework is not a formal regulatory instrument, there is no role for either the Commission or the AER in monitoring performance or taking compliance action where SA Power Networks does not meet its obligations.

Therefore, the Commission proposes to retain the street light fault repair GSL payment for the 2020–2025 regulatory period. The effectiveness of this scheme will be considered as part of the regulatory framework review for the 2025 – 2030 regulatory period.

The Commission invites stakeholder views on this position.

#### Questions for stakeholders

What is your view on whether SA Power Networks' Public Lighting Service Framework changes the importance of the street light fault repair GSL payment? Do you support the Commission's position to retain the street light fault repair GSL payment?

<sup>8</sup> See discussion on pages 45 - 47 of the final decision.

<sup>9</sup> See page 47 of the final decision.

<sup>10</sup> SA Power Networks, *Public Lighting Service Framework - Supporting document 14.10 to the 2020 – 2025 revised regulatory proposal*, December 2019, available at <https://www.aer.gov.au/system/files/SAPN%20-%20Revised%20Proposal%20-%202014.10%20-%20Public%20Lighting%20Service%20Framework%20-%20December%202019.pdf>.

## 2.2.5 Monitoring, Evaluation and Compliance Strategy

Clause 2.6.1 has been added to require SA Power Networks to provide a Monitoring, Evaluation and Compliance Strategy to the Commission ahead of each regulatory year. This is consistent with the final decision (section 3.5).

Clause 2.6.2 has been added to require the strategy to be prepared in compliance with Electricity Guideline No. 1.

## 2.2.6 Performance reporting

This section of the Code establishes high-level reporting obligations, and is supported by more detailed reporting requirements contained in Electricity Guideline No. 1.

Specifically:

- ▶ clause 2.7.1 requires annual and quarterly reporting by SA Power Networks
- ▶ clause 2.7.2 specifies that contents of reporting must be as defined by the Guideline
- ▶ clause 2.7.3 allows that the Commission may require additional reporting of the distributor on its performance on MEDs, including details of preparedness and restoration practices (as per final decision section 3.4), and
- ▶ clause 2.7.4 requires public reporting of SA Power Networks, including annual public reporting on regional performance, and publication of time-series data (as per final decision sections 6.1, 6.4 and 6.6).

### 2.2.6.1 Normalising regional performance data

In the final decision, the Commission committed to work with SA Power Networks to develop and consult publicly on an acceptable methodology for normalising regional performance data ahead of 1 July 2020 (see final decision section 6.2).

Currently, the Commission does not specify how regional performance data should be normalised, although it requires, for the purpose of assessment against network reliability service standards, that system-wide performance be normalised by excluding Major Event Days (**MEDs**) identified using the method developed by the Institute of Electrical and Electronics Engineers (**IEEE method**).

Currently, to analyse regional performance, SA Power Networks uses a methodology it has designed to identify and exclude a number of days where localised severe weather has impacted regional performance. It excludes the same number of days identified by the IEEE method (a variable number, three each year on average), with the actual days being with severe weather noted by the Bureau of Meteorology.

The final decision explained that specifying a methodology is important so it is transparent and replicable, and to ensure effective normalisation of regional performance. That is, to effectively exclude relevant days from each region (for example, localised severe weather), regardless of whether those days affected system-wide performance.<sup>11</sup>

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<sup>11</sup> Essential Services Commission of South Australia, p. 59

The Commission has worked with SA Power Networks to analyse the effectiveness and practicality of several alternative methodologies. These included:

- ▶ the IEEE method
- ▶ two variations of the IEEE method applied to each region rather than the whole distribution system, and
- ▶ SA Power Networks' current regional normalisation methodology (described above).

Each methodology has limitations.

The first variation of the IEEE method applied to each region (the natural logarithm method) identified fewer MEDs than expected<sup>12</sup>, although those MEDs were regionally-relevant (that is, those with high USAIDI because of localised severe weather).

The second variation (the Box-Cox method) identified an expected number of MEDs, but these included some days with no localised severe weather, which would be more accurately included as part of performance in normal circumstances.

SA Power Networks' current regional normalisation methodology identified the same number of days as the system-wide IEEE method, with unique days selected for each region based on severe weather being noted by the Bureau of Meteorology. This removed relevant days, but is time-consuming to apply and verify.

On balance, the IEEE method, applied system-wide and without variation, is preferred by the Commission and SA Power Networks. The reasons are that the IEEE method is:

- ▶ transparent, and exists as a documented industry standard<sup>13</sup>, and
- ▶ required to be used by distributors in preparing performance data for the AER, and by SA Power Networks in preparing feeder category performance data for the assessment against the Commission's network reliability performance targets.

The main limitation of the IEEE method is that it does not remove all days from regional performance that have high USAIDI because of regionally-significant weather. The Commission's preliminary view is that this weakness can be managed by describing the nature and impact of regionally-significant events in regional reporting.

The Commission is seeking views from stakeholders on its position to require use of the IEEE method, applied system-wide and without variation, in the preparation of regional performance data.

#### Question for stakeholders

Do you support use of the IEEE method, applied system-wide and without variation, in the preparation of regional performance data? Do you support use of an alternative method? If so, why?

<sup>12</sup> The IEEE standard (Table B.2, page 28) explains that the method is expected to identify, on average, 2.3 MEDs each year. The first variation of the IEEE method trialled by the Commission identified an average of 0.8 MEDs each year.

<sup>13</sup> Institute of Electrical and Electronics Engineers standard 1366-2012

## 3 Connection of Embedded Generation Units

The draft Code does not contain material changes to Chapter 3. The Code's provisions for embedded generators were last reviewed in 2010. The Commission recognises the potential to update these provisions, and has identified several areas for potential improvements.

For example, there is the potential to improve alignment with the National Electricity Rules (**NER**), which have changed since Chapter 3 was last reviewed and now require streamlined connection processes for some embedded generators.<sup>14</sup> The Commission is proposing to review Chapter 3 in late 2020.

One change has been made, to clause 3.2.1 to specify that the distributor must only connect embedded generators in accordance with good electricity industry practice, as defined in the NER. This provides the Commission broader scope to assess SA Power Networks' connection practices (which are described in detail in SA Power Networks' own service and installation rules).

### 3.1 Schedule 1 – Maps

The boundary of the Adelaide Business Area, shown in Map 1, has been updated as per section 6.1 of the final decision.

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<sup>14</sup> Chapter 5A was introduced in Version 50 of the NER (July 2012), and has applied in South Australia since the National Energy Customer Framework was adopted in 2013. Chapter 5 also contains a negotiated connection framework for non-registered embedded generation proponents (those with capacity less than 5MW). This was introduced in 2014.

## 4 Electricity Guideline No. 1 - revisions

This section outlines the changes made to create the draft Guideline. It uses headings and numbering that mirror the headings and numbering in the draft Guideline, to allow for cross referencing.

A number of relatively minor additional changes were made to the draft Guideline during its preparation. These are summarised in Attachment 1.

### 4.1 Introduction

Clause 1.2.2 has been updated to describe the required contents of periodic reporting to the Commission, which includes regional reporting (as per final decision section 6.1), reporting on low reliability feeders (as per final decision section 6.3), and reporting on communication quality (as per final decision section 5.4).

### 4.2 Definitions

Definitions of ten categories for regional reporting have been added which reflect those in the final decision. These are:

- ▶ nine distinct geographic regions, which exclude the relevant major regional centres, and
- ▶ a tenth category for major regional centres (**MRCs**).

The ten categories are defined with reference to Schedule 1 of the draft Guideline.

### 4.3 Best endeavours reporting requirements

This section has been added to the Guideline to provide a description of requirements regarding when SA Power Networks must report on how it has applied its best endeavours. It covers publication of an annual Monitoring, Evaluation and Compliance Strategy (**MECS**), instances when reporting will be required and the structure and content of that reporting.

### 4.4 Operational reporting requirements

Several SA Power Networks operational performance requirements have been added or revised to reflect the final decision. These are:

- ▶ communication quality (OP 1.3)
- ▶ regional reliability performance (OP 2.8). This revision includes the requirement that, for reporting to the Commission, feeder-level data is provided that identifies which regional category or major regional centre each feeder is assigned to.
- ▶ network restoration of unplanned outages (OP 2.9), and
- ▶ requirements for Guaranteed Service Levels reporting (OP 3.1 – OP 3.5).

## Attachment 1: Other draft amendments to the Code and Guideline

Table 7: Summary of other draft amendments to the Code

Clause and description of change	Discussion
1.2.1 (c) has been added. It specifies a Code commencement date, and allows, as an alternative, for a date to be advised in the South Australian Gazette, and gives the Code effect until revoked by the Commission.	Variations of Codes only take effect the date they are notified in the Gazette or a later date specified by the Commission, as per section 28(7) of the <i>Essential Services Commission Act 2002</i> .
1.3.1 (h) has been added. It reflects that the distributor's obligations and some aspects of the relationship between a customer and a distributor are also contained in customer contracts.	The purpose of this clause is to clarify that this Code is not the limit of distributor's obligations to consumers. The obligations owed by distributors to customers also include the obligations under customer contracts. However, distributors cannot use contracts with customers to override or vary other protections provided by law, including but not limited to, the Code.
2.1.1 the standard for time to respond to written enquiries has been amended so that the target relates to response times after receipt of written enquiry.	This change allows improved measurement of response times, as it is challenging to prove when letters are sent, and straightforward to document when they are received.
2.1.3 currently requires that, in responding to telephone calls, the distributor must use its best endeavours to ensure that all information provided is current and accurate. The clause has been amended to also require that vital information is not omitted.	Information that is 'vital' to customers will vary depending on the nature of the call. For example, in relation a query about an unplanned interruption, 'vital information' could reasonably include whether the distributor has estimated how long the interruption will last and, if so, the expected restoration time. This amendment introduces an obligation for the distributor to provide information that is complete, in combination with the current and ongoing obligation to provide current and accurate information.
2.1.4 has been amended to specify that a written enquiry may include an enquiry using SA Power Networks' website or direct messaging through the social media channels it uses.	This change reflects that written enquiries may be submitted through SA Power Networks' website and the social media channels it uses, and is consistent with section 5.2 of the final decision.
2.1.5 has been amended to set out that a response to a written enquiry means direct or telephone contact or written response, rather than these being examples of a response.	This change makes the clause more prescriptive about what responding to a written enquiry means, introducing more certainty for customers.

Clause and description of change	Discussion
<p>2.4.1 (d) has been added to provide for requests for reconnection after disconnection made to a distributor at any time on days that are not a business day. The provision is that customers must be reconnected as soon as possible on the next business day, and in any event by the end of the next business day.</p>	<p>This makes provision for requests made on a non-business day, which are not provided for in the current Code.</p>

Table 8: Summary of other draft amendments to the Guideline

Clause and description of change	Discussion
The definitions of 'material and materiality' and 'time to provide written explanation for interruptions' have been removed.	These terms are not referred to in the Guideline.
Clause 1.1 has been changed to add the purpose of the Guideline. The reference to Part A and Part B has been removed.	Section 1.1 has been added into the Guideline to include a description of its purpose. Further, as the Guideline is no longer divided into Part A and Part B, references to these separate parts of the Guideline have been removed.
Clause 1.2.2 has been removed, which required SA Power Networks to keep separate electricity distribution business records.	The Commission does not require SA Power Networks to regularly report on its accounts, either for its electricity business or other businesses. (Noting that clause 12.1 of SA Power Networks' distribution licence requires the provision of details of SA Power Networks' financial capacity to continue the operations authorised by the licence, in a manner and form determined by the Commission).
Clause 1.2.3 has been updated to 1.2.2 (draft Guideline) to be consistent with the draft Code. In addition 1.2.3 (c) and (d) have been combined.	Although there are two separate matters in the case of non-compliance and what is intended to be done to prevent this from occurring again, these two matters can be better addressed in one clause.
The interpretations (1.3) and definitions (2.1) sections have been separated.	The change improves readability and aligns with the other current guidelines of the Commission.
Clause 1.4.1 has been removed, which read 'the confidentiality provisions set out in Part 5 of the ESC Act ( <i>Collection and Use of Information</i> ) will apply to any information collected by the Commission in accordance with this Guideline'.	This clause stated that information collected under this guideline was subject to the confidentiality obligations that only apply to information obtained using the Commission's express power to issue written notices requiring information under section 29 of the ESC Act. Therefore, the clause has been removed.
Clause 1.5.3 has been changed to remove "the Commission will generally give SA Power Networks not less than 45 days prior notice of the commencement of any significant amendments to this Guideline.'	This change reflects that, in practice, changes to the Guideline are made on a case-by-case basis, as required by circumstances, having due regard to matters of procedural fairness.

Clause and description of change	Discussion
Clause 1.6.1 has been removed, which invited comments and questions on the Guideline.	This change reflects that, in practice, queries and comments of an operational or interpretive manner are addressed through normal business processes and more substantive comments or questions are generally addressed through formal reviews of the document, consistent with the Commission's consultation practices.
Clause 2.1.1 has been removed, which specified that reports must be presented clearly.	This requirement has been removed to be consistent with the other Commission guidelines. Further, there was a risk that this clause may have been incorrectly interpreted to suggest that the format of the reports was more important than the accuracy of data.
Clause 2.2.1 has been removed, which described the Commission's standard of materiality.	This requirement has been removed as it placed obligations on the Commission, rather than on the distributor, which is inappropriate given that the purpose of the Guideline is to outline the reporting obligations on distributors
Proforma OP2.1 has been updated to include overall USAIDI and interruptions excluding transmission/generation failure	The changes are consistent with clause 2.7.2(b) of the Code
Proforma OP2.3 has been updated to include overall USAIFI and interruptions excluding transmission/generation failure	The changes are consistent with clause 2.7.2(b) of the Code
Proforma OP2.6 has been updated to ensure that the heading more accurately reflects that the information collected is not limited to interruptions, but also include other instances when the network is unavailable	The change ensures that the definition of 'interruption' is used consistently throughout the document.

## Attachment 2: CBD feeders

This attachment describes the application of the CBD feeder definition used for the purpose of calculating targets for the 2020 - 2025 regulatory period, that will apply to data collection, monitoring and reporting throughout the period.

This is a slightly different application to that used to date, and impacts on CBD feeder performance data.

The final decision was to revise the definition of CBD feeder to be consistent with that in the revised AER Service Target Improvement Performance Incentive Scheme.<sup>15</sup>

The revised definition is:

*A feeder in the CBD area supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy when compared to urban areas.*

Currently, SA Power Networks identifies CBD feeders using the geographic boundary of the Adelaide Business Area (**ABA**) that is set out in the Code. It considers that only feeders, or parts of feeders, that serve customers within the ABA are 'CBD feeders'.

SA Power Networks had been reporting on CBD feeder performance on this basis consistently since 2015, and reporting on CBD feeder performance to the AER on the same basis. The approach was agreed with the Commission.

### Revised application of the CBD feeder definition

Commission staff requested that, in preparing data for use in setting performance targets for the 2020 - 2025 period, SA Power Networks not be constrained by the ABA boundary in identifying CBD feeders.

SA Power Networks proposed a revised method for applying the CBD feeder definition to identify CBD feeders. Commission staff reviewed and support that method, and SA Power Networks' application of that method, which was:

- ▶ First, to create a list of all feeders that serve customers in the ABA (as per the revised boundary set out in the final decision<sup>16</sup>). Some of these feeders also serve areas that surround the ABA. In total, these 88 feeders serve 14,296 customers.
- ▶ Second, to consider each feeder on a case-by-case basis, with respect to each element of the CBD feeder definition: whether the feeder supplies predominantly commercial, high-rise buildings, is predominantly underground, and has significant interconnection and redundancy. SA Power Networks considered both load and customer numbers in assessing if a feeder is 'predominantly commercial'.

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<sup>15</sup> Essential Services Commission of South Australia, p. 18

<sup>16</sup> Essential Services Commission of South Australia, pp. 56 – 57. The ABA boundary was revised to reflect development that has occurred in the CBD since the ABA boundary was first drawn in 1999.

## How does the revised application affect performance data?

There are approximately 5,000 customers in the current 'CBD feeder' category, served by 50 whole feeders and segments of a further 23 feeders. Based on the revised definition, there are 7,905 customers in the CBD feeder category, served by 76 whole feeders.

This affects CBD feeder performance data. Current and recast CBD feeder performance data is summarised in Table 9.

Table 9: Current and recast CBD feeder performance data

Financial year ending	USAIDIn			USAIFIn		
	Current	Recast	Difference (percentage)	Current	Recast	Difference (percentage)
2010	8.9	13.7	35	0.08	0.11	27
2011	17.7	19.8	11	0.13	0.16	19
2012	11.7	15.8	26	0.14	0.19	27
2013	12.6	12.6	0	0.16	0.13	-18
2014	9.0	15.5	42	0.12	0.13	11
2015	10.9	8.8	-23	0.15	0.14	-4
2016	2.3	4.4	48	0.02	0.04	31
2017	16.2	14.1	-15	0.11	0.08	-46
2018	42.6	44.0	3	0.41	0.39	-4
2019	13.3	13.1	1	0.10	0.09	-7

Under the revised application, USAIDIn performance is 'better' (that is, fewer minutes off supply) in two of the last ten years, and USAIFIn performance is 'better' (that is, fewer interruptions), in five of the last ten years.



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