



# Electricity Distribution Code (EDC/13) and Electricity Guideline No. 1 (G1/13)

Implementation of final decision

June 2020

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# Table of contents

- Glossary of terms ..... ii
- 1 Introduction ..... 1
- 2 Electricity Distribution Code - revisions ..... 2
- 3 Electricity Guideline No. 1 - revisions..... 17

## Glossary of terms

Term	Explanation
ABA	Adelaide Business Area
AER	Australian Energy Regulator
GAMA	Greater 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 standard 1366-2012
IEEE standard	The Institute of Electrical and Electronics Engineers standard 1366-2012
MECS	Monitoring, Evaluation and Compliance Strategy
MEDs	Major Event Days
MRC	Major Regional Centres
STPIS	Service Target Performance Incentive Scheme
USAIDI	Unplanned System Average Interruption Duration Index
USAIDIn	Unplanned System Average Interruption Duration Index, normalised
USAIFI	Unplanned System Average Frequency Duration Index
USAIFIn	Unplanned System Average Frequency Duration Index, normalised

# 1 Introduction

This paper outlines changes to the:

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

The final Code and Guideline are published together with this paper.

The final Code and Guideline reflect the SA Power Networks reliability standards review final decision, made in January 2019.<sup>1</sup>

The final decision left certain implementation 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>

Further, practical issues arose in implementing network restoration targets using the design described in the final decision.<sup>4</sup>

The Commission published a consultation paper<sup>5</sup> on how to address those matters, along with a draft Code<sup>6</sup> and Guideline<sup>7</sup>, in April 2020. The consultation paper also set out a number of more minor changes made in preparation of the draft instruments. Four submissions were received in response to the consultation paper, and the Commission has considered those submissions in completing the final Code and Guideline.

The final Code and Guideline will apply from 1 July 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.

5 Essential Services Commission of South Australia, *SA Power Networks reliability standards review draft Electricity Distribution Code (EDC/13) and Electricity Guideline No. 1 (EG/13) consultation paper*, April 2020, available at <https://www.escosa.sa.gov.au/ArticleDocuments/21472/20200407-Electricity-SAPN-SSF20-DraftEDC13-EG1-ConsultationPaper.pdf.aspx?Embed=Y>.

6 Essential Services Commission of South Australia, *Electricity Distribution Code (EDC/13) – Draft*, April 2020, available at [https://www.escosa.sa.gov.au/ArticleDocuments/21472/20200407-Electricity-SAPN-SSF20-DistributionCode\\_13-Draft.pdf.aspx?Embed=Y](https://www.escosa.sa.gov.au/ArticleDocuments/21472/20200407-Electricity-SAPN-SSF20-DistributionCode_13-Draft.pdf.aspx?Embed=Y).

7 Essential Services Commission of South Australia, *Electricity Guideline No. 1 (EG/13) - Draft*, April 2020, available at [https://www.escosa.sa.gov.au/ArticleDocuments/21472/20200407-Electricity-SAPN-SSF20-Guideline\\_1-Draft.pdf.aspx?Embed=Y](https://www.escosa.sa.gov.au/ArticleDocuments/21472/20200407-Electricity-SAPN-SSF20-Guideline_1-Draft.pdf.aspx?Embed=Y).

## 2 Electricity Distribution Code - revisions

This section outlines the changes made to the current Code, to create the final Code.

### 2.1 Preliminary

Clause 1.2.1(c) has been added, to specify a Code commencement date, and allow, as an alternative, for a date to be advised in the South Australian Gazette, and give 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 (see section 28(7) of the *Essential Services Commission Act 2002*).

Clause 1.3.1(h) has been added, to reflect that the distributor's obligations and some aspects of the relationship between a customer and a distributor are also contained in customer contracts. In its submission to the draft Code, SA Power Networks said "*it should be noted that the National Electricity Law, National Energy Retail Law, the associated Regulations, the National Electricity Rules and the National Energy Retail Rules override the local Codes where there are any inconsistencies.*"<sup>8</sup> The relationship between the National Electricity Rules, the *National Energy Retail Law* and the Code is addressed at clause 1.1.2. No further changes have been made.

#### 2.1.1 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 Code. These are set out in Table 1 and Table 2.

Following consultation on the draft Code, amendments were made to the definitions of: country areas, high voltage, low reliability feeder, major metropolitan areas, other areas, street light fault, Unplanned System Average Interruption Duration Index (**USAIDI**), Unplanned System Average Interruption Frequency Index (**USAIFI**), normalised USAIDI (**USAIDI<sub>n</sub>**) and normalised USAIFI (**USAIFI<sub>n</sub>**). A definition of customer base has been added, which is necessary to give effect to the revised definitions of USAIDI and USAIFI. These amendments are more fully described in Table 1 and Table 2.

In its submission to the consultation draft, SA Power Networks suggested two other changes to definitions, but these suggestions have not been adopted.

First, SA Power Networks suggested that the definitions of USAIDI<sub>n</sub> and USAIFI<sub>n</sub> be updated to note that they exclude "*unplanned interruptions commencing on a Major Event Day*".<sup>9</sup>

This amendment is not necessary, as the Commission's definitions for USAIDI<sub>n</sub> and USAIFI<sub>n</sub> refer to the definition of Major Event Day (**MED**) contained in the Institute of Electrical and Electronics Engineers Standard 1366 (**IEEE standard**), which specifies that an interruption that spans multiple days should be accrued to the day the interruption begins. Therefore, this clarification does not also need to be included in the Commission's definitions.

Second, SA Power Networks suggested that the definition of MED should be linked to the Australian Energy Regulator's (**AER**) determination of the method that SA Power Networks may use to identify MEDs.

The Commission agrees that using the same method as that approved by the AER is practical and facilitates better coordination between the two regulatory frameworks.

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8 SA Power Networks, April 2020, *Submission to consultation paper*, p. 17.

9 SA Power Networks, *Submission to consultation paper*, p. 17.

Currently, both the Code and the AER Service Target Performance Incentive Scheme (**STPIS**) define MEDs as having the meaning given in the IEEE standard. However, the AER STPIS further allows that a distributor may nominate an alternative method, for consideration and approval by the AER. SA Power Networks has no plans to use an alternative method, and the AER has approved use of the Institute of Electrical and Electronics Engineers method (**IEEE method**) for the 2020 – 2025 period.

The Commission would expect to be involved in any reconsideration of this issue so that it could understand the reasons for that proposal, and check its suitability for the South Australian context. Therefore, the Code MED definition has not been changed to automatically link with the method approved by the AER.

Table 1: Definitions changed or added in accordance with the final decision

Definition	Electricity Distribution Code version 12.1	Electricity Distribution Code version 13	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 <b>supplying</b> predominantly commercial, high-rise buildings, <b>supplied</b> by a predominantly underground <b>distribution network</b> containing significant interconnection and redundancy when compared to urban areas	Section 3.3
Low reliability feeder	Not defined in Code. In the current 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 a <b>USAIDI</b> twice as high as the ten-year historical average to 30 June 2019 for that region, rounded to the nearest five minutes, for two consecutive regulatory years  (Note that the reference time period is the same as that used to establish feeder-category USAIDI performance targets).	Section 6.3
Momentary interruptions	Not listed in definition section, but is in the body of the Code (clause 2.2.1(a) and 2.3.1(d)(ii)) and is set out as interruptions of less than one minute.	means an <b>interruption</b> to a distribution <b>customer's</b> 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 <b>supply</b> is restored for any duration	Section 3.6
Rural Long 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
Rural Short 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 Code

Definition	Electricity Distribution Code version 12.1	Electricity Distribution Code version 13	Explanation
Adelaide Business Area	means that part of Adelaide shown in Map 1 of Schedule 1 and in which <b>customers</b> are <b>supplied</b> 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 <b>supplied</b> 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 <i>National Energy Retail Law</i>	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 areas	-	means all areas in which <b>customers</b> are supplied outside of <b>Major Metropolitan Areas</b> and which have been agreed as being country areas 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>	There is currently no definition of country area in the Code, despite clause 2.8 making obligations regarding country areas.
Customer base	-	means, in respect of a relevant period: the number of distribution <b>customers</b> as at the start of the relevant period; plus the number of distribution <b>customers</b> as at the end of the relevant period, divided by two.	This definition is required in order to revise the definitions of USAIDI and USAIFI, to bring them into line with the definitions in the AER STPIS (see discussion about USAIDI and USAIFI discussions below).  In its submission, SA Power Networks asked that the definitions of USAIDI and USAIFI

Definition	Electricity Distribution Code version 12.1	Electricity Distribution Code version 13	Explanation
			<p>refer to the “average number of customers supplied over the regulatory year, rather than simply to number of customers”.<sup>10</sup> Using the concept of ‘customer base’ responds to that comment.</p> <p>This definition of customer base is the same as that in the AER STPIS, except that ‘customer’ is defined as in the Code, and in the STPIS ‘distribution customer’ is defined as in the National Electricity Rules.</p>
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.
High voltage	means a voltage greater than 1,000 volts	has the meaning given to it by the <i>Electricity (General) Regulations 2012</i> (as amended from time to time)	The <i>Electricity (General) Regulations 2012</i> , has the following definition, which includes voltage that is <u>equal to</u> or greater than 1,000 volts: “high voltage or HV, in relation to electricity, means electricity at a voltage exceeding 1 000 volts alternating current (ac) or 1 500 volts direct current (dc).” It is important for the Code to be consistent with state legislation.

<sup>10</sup> SA Power Networks, *Submission to consultation paper*, p. 17.

Definition	Electricity Distribution Code version 12.1	Electricity Distribution Code version 13	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, Greater Adelaide Metropolitan Area</b> , Mount Barker, Mount Gambier, Port Augusta, Port Lincoln and Whyalla, where <b>customers</b> are <b>supplied</b> 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>	<p>The purpose of this definition is to define where various timeframes for reconnection apply, where SA Power Networks must reconnect supply under the NERR, as set out in clause 2.4.1 of the Code.</p> <p>The revised definition leaves out the reference to Map 2 of Schedule 1 because this is included in the definition of the Greater Adelaide Metropolitan Area.</p> <p>It also leaves out the words 'Major Regional Areas', in favour of listing specific agreed places. This is more accurate.</p>
Other areas	means all areas in which customers are supplied other than the <b>Adelaide Business Area</b> and <b>Major Metropolitan Areas</b>	means all areas in which <b>customers</b> are supplied outside of <b>Major Metropolitan Areas</b>	<b>Adelaide Business Area</b> has been removed because it is included in the definition of <b>Major Metropolitan Areas</b>
Planned interruption	-	has the meaning given to the term distributor planned interruption 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.
Street light fault	Not defined in Code. In the current Guideline, means an occasion on which a street light has gone out as a result of a fault in the luminaire, which includes the globe, photoelectric cell, and the wiring to the luminaire terminal block.	means an occasion on which a street light has gone out as a result of a fault in the luminaire, which includes the globe, photoelectric cell, and the wiring to the luminaire block; and/or, as a result of a fault in the cable that supplies the street light. Instances of damage to street lights where	The final decision (section 4.4) was to add the definition of street light fault currently in Electricity Guideline No. 1 (G1/12) to the Code, and to amend the definition to clarify that instances of damage to street lights

Definition	Electricity Distribution Code version 12.1	Electricity Distribution Code version 13	Explanation
		the light has not gone out (including but not limited to damaged or missing lighting covers, flickering or dimmed street lights, or damaged poles) are not street light faults	<p>where the light has not gone out are not street light faults.</p> <p>In consultation, SA Power Networks identified the definition does not explicitly capture outages caused by cable faults.</p> <p>Street light GSL payments currently apply to outages caused by cable faults; and the Commission's final decision is to retain the street light GSL payment in its current form.</p> <p>Therefore, the words 'and/or, as a result of a fault in the cable that supplies the street light' have been added to the definition.</p>
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.
Unplanned System Average Interruption Duration Index (USAIDI)	Not defined in Code. In the Guideline, USAIDI means the total duration of unplanned customer supply interruptions divided by total number of customers.	means the sum of the duration of each unplanned sustained customer interruption (in minutes), divided by the <b>customer base</b> . Unplanned SAIDI excludes <b>momentary interruptions</b> .	This change introduces a definition of USAIDI, which is the same as the definition used in the AER STPIS, and more precise than the definition currently included in the Guideline.
USAIDIn	means Unplanned System Average Interruption Duration Index (normalised to exclude MED)	means <b>Unplanned System Average Interruption Duration Index</b> (normalised to exclude <b>MEDs</b> )	Unplanned System Average Interruption Duration Index has been bolded so it clearly relates to the defined term, and MED has been corrected to MEDs.
Unplanned System Average Interruption	Not defined in Code. In the Guideline, USAIFI means the total number of unplanned	means the total number of unplanned sustained customer interruptions, divided by the <b>customer base</b> . Unplanned SAIFI	This change introduces a definition of USAIFI, which is the same as the definition used in

Definition	Electricity Distribution Code version 12.1	Electricity Distribution Code version 13	Explanation
Frequency Index (USAIFI)	customer supply interruptions divided by total number of customers.	excludes <b>momentary interruptions</b> . SAIFI is expressed per 0.01 interruptions.	the AER STPIS, and more precise that the definition currently included in the Guideline.
USAIFIn	means Unplanned System Average Interruption Frequency Index (normalised to exclude MED)	means <b>Unplanned System Average Interruption Frequency Index</b> (normalised to exclude MEDs)	Unplanned System Average Interruption Duration Index has been bolded so it clearly relates to the defined term, and MED has been corrected to MEDs.

## 2.2 Service Standards

SA Power Networks is required to use its best endeavours to achieve service standards during each and every regulatory year. This is reflected in clause 2.1.1 (in relation to customer service), 2.2.1(a) (in relation to network reliability) and 2.2.2(a) (in relation to network restoration).

In its submission to the draft Code, SA Power Networks queried this wording, noting that *“the targets are for the end of each and every regulatory year not during the regulatory year.”*<sup>11</sup>

The Commission has considered SA Power Networks’ comment, and notes that although targets relate to annual performance, the word ‘during’ is appropriate because SA Power Networks has an ongoing obligation to use its best endeavours to manage its performance. The wording has not been changed.

### 2.2.1 Customer Service Measures

This section of the Code establishes standards for customer service.

#### 2.2.1.1 Telephone responsiveness standard

The final Code contains a revised definition of ‘responding to telephone calls’ that incorporates detail set out in the current Guideline (at clause 2.1.2). This is in accordance with section 5.1 of the final decision.

Obligations in responding to telephone calls (at clause 2.1.3) currently require that SA Power Networks must use its best endeavours to ensure that all information provided is current and accurate. As was the case in the draft Code, this 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 to 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.

#### 2.2.1.2 Written enquiries responsiveness standard

The standard for time to respond to written enquiries has been amended so that the target relates to response times after receipt of a written enquiry (at clause 2.1.1). 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.

As was the case in the draft Code, the meaning of written enquiry has been amended to include an enquiry made using SA Power Networks’ website or direct messaging through the social media channels it uses (at clause 2.1.4). This change reflects the contemporary ways customers may make written enquiries.

The meaning of a response to a written enquiry has been amended to mean direct or telephone contact or written response, rather than these being examples of a response (at clause 2.1.5). This change makes the clause more prescriptive about what responding to a written enquiry means, introducing more certainty for customers.

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<sup>11</sup> SA Power Networks, *Submission to consultation paper*, p. 15.

## 2.2.2 Reliability Measures

This section of the Code establishes service 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 network reliability reporting thresholds.

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

A ten-year period has been used to establish average recent historical performance. The final decision (section 3.1) left open the matter of whether to use a five-year or ten-year period. The Commission indicated its intention to use a ten-year period, and reasons for doing so, in the consultation paper.<sup>12</sup> SA Power Networks noted its support for that approach in its submission.<sup>13</sup> No other submission addressed the matter.

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, which have been curtailed.

The Commission indicated its intention to curtail reporting thresholds for CBD feeders at 20 minutes (USAIDIn) and 0.20 interruptions (USAIFIn), and reasons for doing so, in the consultation paper.<sup>14</sup> SA Power Networks noted its support for that approach in its submission.<sup>15</sup> No other submission addressed the matter.

Units of measurement (USAIDIn and USAIFIn) have been added to the table in clause 2.2.1 that specifies network reliability minimum performance targets and reporting thresholds. These were omitted in the draft Code.

### 2.2.2.2 Network restoration standards

Clause 2.2.2 contains network restoration standards and targets.

The 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, to better achieve that intent, the network restoration targets are for interruptions of different lengths for each feeder category (rather than for two and three hours for all feeder categories, which was the final decision). The Commission set out its intention to use this approach, and its reasons for doing so, in the consultation paper.<sup>16</sup>

SA Power Networks noted its support for this approach, and setting restoration targets using average performance over the ten years to 30 June 2019, in its submission.<sup>17</sup> No other submission addressed the matter.

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<sup>12</sup> Essential Services Commission of South Australia, *Consultation paper*, pp. 6-7.

<sup>13</sup> SA Power Networks, *Submission to consultation paper*, p. 3.

<sup>14</sup> Essential Services Commission of South Australia, *Consultation paper*, p. 7.

<sup>15</sup> SA Power Networks, *Submission to consultation paper*, p. 3.

<sup>16</sup> Essential Services Commission of South Australia, *Consultation paper*, pp. 7-8.

<sup>17</sup> SA Power Networks, *Submission to consultation paper*, p. 3.

However, SA Power Networks did not support rounding average performance to the nearest five percent in setting targets, because that would make some of the targets harder to achieve.<sup>18</sup> It was particularly concerned with the effect of rounding on:

- ▶ urban feeder performance for interruptions longer than two hours (performance of 27 percent, rounded to 25 percent), and
- ▶ rural short feeder performance for interruptions longer than three hours (performance of 27 percent, rounded to 25 percent).

The Commission has decided to round average performance to the nearest one percent in setting restoration targets. This means that restoration times will accurately reflect average performance over the ten years to 30 June 2019, which achieves the Commission’s intent that SA Power Networks maintain historical performance.

Network restoration targets produced on this basis are shown in Table 3, and are included in the final Code at clause 2.2.2.

Table 3: Network restoration time targets, established for interruptions of different lengths (based on average performance over ten years, rounded to the nearest one percent)

		CBD Feeders	Urban Feeders	Rural Short Feeders	Rural Long Feeders
Percentage of total customers in each feeder category per annum	Interruption equal to or greater than 1 hour	11			
	Interruption longer than 2 hours	4	27		
	Interruption longer than 3 hours		11	27	
	Interruption longer than 4 hours				30
	Interruption longer than 5 hours			8	
	Interruption longer than 7 hours				10

Clause 2.2.2 also contains network restoration reporting thresholds. The reporting thresholds are established by adding a standard 2.5 percentage points to all restoration targets. The reasons for this approach were explained in the consultation paper.<sup>19</sup>

In its submission to the consultation paper, SA Power Networks proposed that the Commission set reporting thresholds using a standard three percentage points, but did not specify reasons.<sup>20</sup> No other submission addressed the matter. The Commission has not changed its approach.

The unit of measurement (percentage of total customers in each feeder category per annum) has been added to the tables in clause 2.2.2 that specifies network restoration minimum performance targets and reporting thresholds. These were omitted in the draft Code.

<sup>18</sup> SA Power Networks, *Submission to consultation paper*, p. 10.

<sup>19</sup> Essential Services Commission of South Australia, *Consultation paper*, p. 9.

<sup>20</sup> SA Power Networks, *Submission to consultation paper*, p. 10.

## 2.2.3 Guaranteed Service Level Scheme

At clause 2.3, the final Code contains changes to the Guaranteed Service Level (GSL) scheme as outlined in sections 4.1 to 4.4 of the final decision.

### 2.2.3.1 GSL payment for timely connection of new supply addresses

Clause 2.3.1(a) relates to required timeframes for the connection of new supply addresses. Consistent with the draft Code, 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'.

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

Clause 2.3.1(b) relates to required timeframes for the timely repair of street light faults.

The consultation paper discussed SA Power Networks' Public Lighting Service Framework (the **framework**),<sup>21</sup> published in December 2019, and asked stakeholders for views on whether the framework changes the importance of the street light GSL payment.

Two submissions addressed street lighting service levels, from the Local Government Association of South Australia<sup>22</sup> (LGA SA) and SA Power Networks.<sup>23</sup> Each stakeholder explained its involvement in developing the framework, set out concerns about potential costs associated with the street light GSL payment, and called for changes to manage the cost of the scheme.

Given that the final decision was made in January 2019, and that commencement of the 2020 – 2025 regulatory period is imminent, it is not appropriate for the Commission to make further and material changes to the design of the street light GSL payment at this time - particularly as the timing does not allow for broad consultation on these important matters. Accordingly, consistent with the position set out in the final decision (section 4.4) and consultation paper, the street light GSL payment will be retained for the 2020 – 2025 period.

While the newly introduced framework has the potential to address the gap around jurisdictional service standards for public lighting identified in the final decision (section 4.4), and so reduce the importance of the Commission's street light fault GSL payment to ensure timely repairs in the future, its effectiveness is yet to be demonstrated.

The Commission will consider evidence of the effectiveness of the framework when it next reviews the street light GSL payment, ahead of the 2025 – 2030 regulatory period.

The Commission invites stakeholders to start the process of collecting the necessary data, and other evidence, to allow for the development of evidence-based proposals for changes to the street light GSL payment ahead of that review. For example, those proposals should explore issues such as:

- ▶ the direct and indirect costs of the street light GSL scheme
- ▶ the role of the GSL payment in supporting the achievement of agreed public lighting service levels, and
- ▶ the value of providing street lighting services to customers and the wider community.

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21 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-%2014.10%20-%20Public%20Lighting%20Service%20Framework%20-%20December%202019.pdf>.

22 LGA SA, *Submission to consultation paper*.

23 SA Power Networks, *Submission to consultation paper*, pp. 12 – 14.

The following amendments have been made to clause 2.3.1(b), to support implementation of the street light GSL payment during the 2020 – 2025 period:

- ▶ A definition of street light fault has been added to the Code - refer section 4.4 of the final decision. That definition has been updated following consultation on the draft Code, to clarify that outages caused by cable faults are included in the scheme (see comment in Table 2).
- ▶ Following consultation on the draft Code, the description of where the five and ten day periods apply at clause 2.3.1(b)(i) has been updated to correctly use defined terms, and list places alphabetically. This does not change where each timeframe currently applies.
- ▶ Clause 2.3.1(b)(ii) 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. In the final Code, clause 2.3.1(b)(v) has been added to require SA Power Networks to have and keep evidence that damage was deliberately caused.
- ▶ Clause 2.3.1(b)(iii) has been amended so as to adopt a single cut-off time (4.00 pm) for calculation of the five or ten business day period after which a GSL payment applies, if a street light has not been repaired. This change was made following consultation on the draft Code. It replaces separate cut-off times for reports made by telephone and reports made by other means, and removes the associated potential for confusion.
- ▶ A new clause 2.3.1(b)(vi) has been added to allow that SA Power Networks may stop taking reports from any person who has made reports that are not 'in good faith' for a period of up to 12 months. This change was made following consultation on the draft Code, and will allow SA Power Networks to respond to cases such as those where a person makes a disproportionate number of inaccurate reports on an ongoing basis.
- ▶ A new clause 2.3.1(b)(vii) has been added to require that before SA Power Networks may stop taking reports under clause 2.3.1(b)(vi), it must inform the person it is considering declining to accept reports from them, advise them of the reasons why, and allow that person an opportunity to respond. Further, under clause 2.3.1(b)(viii), SA Power Networks must explain, in writing, the reasons why it will stop taking reports, and provide a copy of those reasons to the customer.

### **2.2.3.3 GSL payment for frequency and duration of supply interruptions**

Clause 2.3.1(c) has been amended to include changes to frequency and duration of supply interruption GSL payments, as set out in section 4.1 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.

Following consultation on the draft Code, the table in this clause has been updated to specify that GSL payment amounts for frequency and duration of supply interruptions include GST. The current Code does not specify whether duration and frequency payments include GST, though it does specify that amounts for street light and connection GSL payments include GST. This change clarifies that all GSL payments are GST inclusive.

### 2.2.3.4 Interruptions outside the control of the distributor

Clause 2.3.2 deals with interruptions outside the control of the distributor, and limits the obligations on SA Power Networks to make GSL payments in those circumstances.

In its submission to the consultation paper, the Technical Regulator noted that:

*"This clause of the draft Code provides exemptions from the Guaranteed Service Level (GSL) Scheme for "interruptions not caused by and outside the control of the distributor" and includes a bushfire event as an example. It would be prudent to consider the scenario in which electrical infrastructure may cause the bushfire, and it may not be easily assessable whether such bushfire was then outside the control of the distributor. To avoid ambiguity, it might be appropriate to refer to Force Majeure events in more generic terms for such GSL exemptions."<sup>24</sup>*

Following consultation on the draft Code, clause 2.3.2(a) has been changed to remove the existing, non-exhaustive list of examples of interruptions outside the control of the distributor (bushfires, lightning, storm and flood), and to reflect the way that the Commission has applied this clause in the past, which is by considering events and circumstances on a case-by-case basis.

## 2.3 Reconnection after disconnection

Clause 2.4 sets out timeframes for reconnections where SA Power Networks is obliged to do so by the National Energy Retail Rules.

Consistent with the draft Code, a new clause 2.4.1(d) has been added to make provision for requests made on a non-business day, which are not provided for in the current Code. It provides 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.

## 2.4 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); and, clause 2.6.2 has been added to require the strategy to be prepared in compliance with Electricity Guideline No. 1.

## 2.5 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 by the distributor on its performance on MEDs, including details of preparedness and restoration practices (refer final decision section 3.4), and
- ▶ clauses 2.7.4 and 2.7.5 require public reporting by SA Power Networks, including annual public reporting on regional performance, and publication of time-series data (refer final decision sections 6.1, 6.4 and 6.6).

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<sup>24</sup> Technical Regulator, *Submission to consultation paper*, p. 1.

## 2.6 Connection of Embedded Generation Units

There are no material changes to Chapter 3 of the Code. 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. The Commission is proposing to review Chapter 3 in late 2020. This approach was discussed in the consultation paper,<sup>25</sup> and was supported by the Technical Regulator in its submission.<sup>26</sup>

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).

## 2.7 Schedule 1 – Maps

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

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<sup>25</sup> Essential Services Commission of South Australia, *Consultation paper*, p. 13.

<sup>26</sup> Technical Regulator, pp. 1-2.

## 3 Electricity Guideline No. 1 - revisions

This section presents an overview of changes made to create the final Guideline, with more minor changes and comments received during consultation summarised in Table 4.

### 3.1 Introduction

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

### 3.2 Definitions

Definitions of 10 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 10 categories are defined with reference to Schedule 1 of the Guideline.

### 3.3 Best endeavours reporting requirements

Section four has been added 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.

### 3.4 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) – including the requirement that, where feeder-level data is provided to the Commission, the regional category and, if applicable, the major regional centre each feeder is assigned to is clearly identified
- ▶ network restoration of normalised unplanned outages (OP 2.9)
- ▶ requirements for GSL reporting (OP 3.1 – OP 3.5), and
- ▶ requirements for spreadsheets containing detailed supporting data to accompany information provided at the end of each regulatory year (OP2.1, OP2.2, OP2.3, OP2.5, OP2.8, OP2.9 and OP3.3).

#### 3.4.1 Annual provision of detailed supporting data

Currently, SA Power Networks reports quarterly on feeder-category and regional network reliability performance. It does not provide feeder-level data on a regular basis. The Commission occasionally requests full sets of feeder-level performance data (for example, to support its reliability standard reviews), as well as information about the performance of specific feeders to support compliance investigations.

Quarterly reporting on feeder-category and regional network reliability performance (using the new regional categories) will continue to be required by the final Guideline. The draft Guideline made a requirement for feeder-level performance data to also be provided quarterly.

In the final Guideline, this has been changed to an annual requirement. The provision of feeder level data on an annual basis will be sufficient for the Commission's analysis of reliability performance under its ongoing monitoring and reporting regime. The cost of collecting quarterly feeder-level data is likely to outweigh the additional benefit. SA Power Networks will continue to be obliged to provide information about the performance of specific feeders on request.

Detailed data to supplement current reporting on low reliability feeders (OP2.5), network restoration performance (OP2.9) and GSL payments (OP3.3) will also be required annually.

### 3.4.2 Normalising regional performance data

In the reliability standard framework, performance is normalised to remove the effects of extreme events, and so reflect SA Power Networks' underlying performance. Network reliability performance targets relate to feeder-category performance normalised to exclude MEDs, using the method developed by the Institute of Electrical and Electronics Engineers (**IEEE method**).

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

The consultation paper explained that the IEEE method, applied system-wide and without variation, is preferred by the Commission and SA Power Networks, as well as reasons for that position.<sup>27</sup> The Commission sought views from stakeholders on use of that method; none were received.

Therefore the final Guideline specifies use of the IEEE method, applied system-wide and without variation, in the preparation of regional performance data for the 2020 – 2025 period.

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<sup>27</sup> Essential Services Commission of South Australia, *Consultation paper*, pp. 11 – 12.

Table 4: Other amendments to the Guideline

Clause and description of change	Discussion
Several definitions have been removed, added or revised.	Terms that are not referred to in the Guideline have been removed, where terms are defined in the Code definitions contain a cross reference.
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 (Guideline) to be consistent with the 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 (Collection and Use of Information) 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.
In consultation on the draft Guideline, feedback was received on the term 'Regulatory Reporting Statements', used in clause 1.5, and the word 'information', which is used elsewhere in the Guideline. No change has been made.	The term 'Regulatory Reporting Statements' is only used in clause 1.5 and in the definitions. The word 'information' is used for the remainder of the Guideline. Based on stakeholder feedback, consideration was given to using one consistent term. However, 'Regulatory Reporting Statements' could include best endeavours reporting in addition to the information requirements specified in Chapter 5. Therefore, the final Guideline continues to use both terms.

Clause and description of change	Discussion
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 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
Following consultation on the draft Guideline, clause 3.8.2 has been changed to add ‘(or at a different frequency as agreed to by the Technical Regulator)’	This change will remove any ambiguity about reporting frequency.
Following consultation on the draft Guideline, proformas OP2.1 and OP2.3 have been amended so as not to require USAIDIn and USAIFIn attributable to transmission and generation outages to be reported for each feeder category.	The consultation draft included new rows in proformas OP2.1 (USAIDIn) and OP2.3 (USAIFIn), for SA Power Networks to report on USAIDIn and USAIFIn attributable to transmission system outages and generation system outages for each feeder category. Currently, SA Power Networks only reports on these state-wide. This additional information is not essential to the Commission’s requirements and has been removed.
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.
Following consultation on the draft Guideline, proforma OP2.9 has been amended to specify that reporting of	In the consultation draft, proforma OP 2.9 did not specify that network restoration of unplanned outages related to normalised unplanned outages. This has been corrected. The proforma has also been updated to replace monthly

Clause and description of change	Discussion
network restoration performance relates to normalised unplanned interruptions.	data (proposed in the consultation draft) with quarterly data, after discussion with SA Power Networks about the Commission's requirements, and its data collection processes.
Following consultation on the draft Guideline, proformas OP3.4 and OP3.5 have been updated to remove the need for regional reporting on the timely connections GSL payment.	The requirement for SA Power Networks to report on the number of timely connection GSL payments by region has been removed from OP 3.4 and OP 3.5. SA Power Networks does not have capacity to provide this data by region and this information is not essential to the Commission's requirements. It will continue to report quarterly on the number of payments made state-wide (at OP3.3).
Following consultation on the draft Guideline, proforma OP4.1 has been updated to remove the requirement for reporting on the number of network access permits requested and number of network access permits issued.	This proforma specifies the information for the annual return to the Technical Regulator. The Technical Regulator requested the removal in its submission to the draft Guideline. <sup>28</sup>

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28 Technical Regulator, p. 2.



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