



Electricity

Code



Electricity Distribution Code

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1 Preliminary

1.1 Authority

- 1.1.1 This industry code is made by the **Commission** under section 28 of the *Essential Services Commission Act 2002*.
- 1.1.2 A provision of, or requirement or obligation imposed under, this industry code will only apply to a person where:
- (a) that provision, requirement or obligation is not inconsistent (directly or indirectly) with a substantially equivalent provision, requirement or obligation arising under Part 5 of the **National Electricity Rules** or the **National Energy Retail Law** (as in force from time to time); or
 - (b) there is no substantially equivalent provision, requirement or obligation arising under Part 5 of the **National Electricity Rules** or the **National Energy Retail Law** (as in force from time to time).

1.2 Application of this Industry Code

- 1.2.1 This industry code applies to:
- (a) the **distributor**
 - (b) **embedded generators** which are not registered under the **National Electricity Rules**, and
 - (c) commences on 1 July 2020, or as otherwise advised in the South Australian Gazette, and will remain in effect until revoked by the **Commission**.

1.3 Other Acts, Codes and guidelines

- 1.3.1 Not all aspects of the **distributor's** obligations are regulated by this industry code. The **distributor's** obligations and some aspects of the relationship between a **customer** and a **distributor** are also contained in (without limitation):
- (a) Acts of Parliament and regulations made under those Acts of Parliament (in particular, the *Electricity Act 1996* (and associated regulations) and the *Essential Services Commission Act 2002*)
 - (b) any guidelines or rules made by the **Commission** from time to time
 - (c) the **National Electricity Rules** and associated National Procedures
 - (d) the **National Energy Retail Law**, **National Energy Retail Regulations** and **National Energy Retail Rules**
 - (e) the Electricity Metering Code
 - (f) the Electricity Transmission Code
 - (g) the Electricity Distribution Licence, and
 - (h) the obligations owed to **customers** under contracts (provided that these contractual obligations are not inconsistent with the other obligations outlined in clause 1.3.1).

1.4 Interpretation

- 1.4.1 In this Code, unless the context otherwise requires:
- (a) headings are for convenience only and do not affect the interpretation of this Code
 - (b) words importing the singular include the plural and vice versa
 - (c) words importing a gender include any gender identity
 - (d) an expression importing a natural person includes any company, partnership, trust, joint venture, association, corporation, statutory corporation or other body corporate and any governmental agency
 - (e) a reference to a person includes that person's executors, guardian(s), administrators, successors, substitutes (including, without limitation, persons taking by novation) and permitted assigns
 - (f) a reference to any statute, regulation, proclamation, order in council, ordinance or by-law includes all statutes, regulations, proclamations, orders in council, ordinances or by-laws varying, consolidating, re-enacting, extending or replacing them and a reference to a statute includes all regulations, proclamations, orders in council, ordinances, by-laws and determinations issued under that statute
 - (g) a reference to a document or a provision of a document includes an amendment or supplement to, or replacement or novation of, that document or that provision of that document and any annexures to that document, and
 - (h) an event which is required under this code to occur on or by a stipulated day which is not a **business day** may occur on or by the next **business day**.

1.5 Definitions

- 1.5.1 In this Code words appearing in bold like **this** have the following meanings:

Act	means the <i>Electricity Act 1996</i> (SA)
Adelaide Business Area	means that part of Adelaide shown in Map 1 of Schedule 1 and in which customers are supplied by feeders as agreed between SA Power Networks and the Commission or where agreement cannot reasonably be reached, then as determined by the Commission
augmentation	means works to enlarge or enhance the capability of the distributor's distribution network to distribute electricity
Australian Standard or AS	means a standard published by Standards Australia
best endeavours	means to act in good faith and use all reasonable efforts, skill and resources
business day	means a day that is not a Saturday, a Sunday or a public holiday in the State of South Australia

CBD feeder	means 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
Commission	means the Essential Services Commission established under the <i>Essential Services Commission Act 2002</i>
connection	means to form a physical link to a distribution network
country areas	means areas in which customers are supplied outside of Major Metropolitan Areas and which have been agreed as being country areas between SA Power Networks and the Commission , or where agreement cannot reasonably be reached, then as determined by the Commission
customer	has the meaning given to that term in the Act , namely a person who has a supply of electricity available from a transmission network or distribution network for consumption by that person and includes: <ul style="list-style-type: none"> (a) the occupier for the time being of a place to which electricity is supplied; and (b) where the context requires, a person seeking an electricity supply; and (c) a person of a class declared by regulations under the Act to be customers.
customer base	means, in respect of a relevant period: the number of distribution customers as at the start of the relevant period; plus the number of distribution customers as at the end of the relevant period, divided by two
distributor	means a holder of a licence to operate a distribution network under Part 3 of the Act
distribution network	has the meaning given to that term in the Act
Electricity Distribution Determination	means any applicable determination made by the Australian Energy Regulator in accordance with the National Electricity Law and the National Electricity Rules in force from time to time and includes any instruments made under or in connection with that determination
emergency	means an emergency due to the actual or imminent occurrence of an event which in any way endangers or threatens to endanger the safety or

	health of any person, or the maintenance of power system security, in the state of South Australia or which destroys or damages, or threatens to destroy or damage, any property in the state of South Australia
embedded generator	means a generator who owns, operates or controls an embedded generating unit
embedded generating unit	means a generating unit which is connected to a distribution network and does not have direct access to a transmission network
feeder	means an electric powerline and associated equipment which the distributor uses to distribute electricity
Greater Adelaide Metropolitan Area	means the area indicated in Map 2 of Schedule 1 and in which customers are supplied by feeders as agreed between SA Power Networks and the Commission or where agreement cannot reasonably be reached, then as determined by the Commission
good electricity industry practice	has the meaning given to it by the National Electricity Rules (as amended from time to time)
high voltage	has the meaning given to it by the <i>Electricity (General) Regulations 2012</i> (as amended from time to time)
interruption	means a planned or unplanned interruption of, or restriction to, distribution services of at least three minutes in duration, other than an interruption or restriction due to an emergency , a generation failure or a transmission failure
large embedded generator	means an embedded generator other than a small embedded generator
Low reliability feeder	means a feeder with a USAIDIn twice as high as the 10-year historical average from 30 June 2009 to 30 June 2019 for that region, rounded to the nearest 5 minutes, for two consecutive regulatory years
Major Metropolitan Areas	means the Adelaide Business Area , Greater Adelaide Metropolitan Area and Mount Barker, Mount Gambier, Port Augusta, Port Lincoln and Whyalla, where customers are supplied by feeders as agreed between SA Power Networks and the Commission or where agreement cannot reasonably be reached, then as determined by the Commission

Major Event Day (MED)	has the meaning given to that term in the current version of the Institute of Electrical and Electronics Engineers IEEE Standard 1366-2012
momentary interruption	means an interruption to a distribution customer's electricity supply 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
National Electricity Law	means the National Electricity Law, as contained within the <i>National Electricity (South Australia) Act 1996</i>
National Electricity Rules	has the meaning given to that term in the National Electricity Law
National Energy Retail Law	has the meaning given to that term in the National Energy Retail Law (South Australia) Act 2011 as in force from time to time
National Energy Retail Regulations	means the Regulations made under Part 11 of the National Energy Retail Law
National Energy Retail Rules	means the Rules made under Part 10 of the National Energy Retail Law
other areas	means all areas in which customers are supplied other than in Major Metropolitan Areas
planned interruption	has the meaning given to the term distributor planned interruption by the National Energy Retail Rules (as amended from time to time)
regulatory year	means the period commencing on 1 July and ending on 30 June the following calendar year (for example the regulatory year for 2020 will commence on 1 July 2020 and will end on 30 June 2021)
Rural long	means a feeder which is not a CBD feeder , urban feeder or a rural short feeder
Rural short	means a feeder which is not a CBD feeder or urban feeder with a total feeder route length less than 200 km
SA Power Networks	means SA Power Networks (ABN 13 332 330 749) a partnership comprising Spark Infrastructure (No.1) Pty Ltd (ABN 54 091 142380), Spark Infrastructure (No.2) Pty Ltd (ABN 19 091 143 038), Spark Infrastructure (No. 3) Pty Ltd (ABN 50 091 142 362), CKI Utilities Development Ltd (ABN 65 090 718 880), and PAI Utilities Development Ltd (ABN 82 090 718 951) and includes any wholly owned subsidiary of any of the partners that

	provides distribution services for or on behalf of the partners
small embedded generator	means an embedded generator which owns, operates or controls an embedded generating unit that complies with the requirements of AS 4777
street light fault	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 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
supply	means the delivery of electricity
supply address	means the address for which a customer purchases electricity
transmission network	has the meaning given to that term in the Act
Urban Feeder	means a feeder , which is not a CBD feeder , which has a three-year average maximum demand over the three-year average feeder route length greater than 0.3 mega-volt amps/km
unplanned interruption	has the meaning given by the National Energy Retail Rules (as amended from time to time)
Unplanned System Average Interruption Duration Index (USAIDI)	means the sum of the duration of each unplanned sustained customer interruption (in minutes) (excluding any momentary interruptions) divided, by the customer base .
Unplanned System Average Interruption Frequency Index (USAIFI)	means the total number of unplanned sustained customer interruptions (excluding any momentary interruptions) divided, by the customer base . SAIFI is expressed per 0.01 interruptions
USAIDIn	means Unplanned System Average Interruption Duration Index (normalised to exclude MEDs)
USAIFIn	means Unplanned System Average Interruption Frequency Index (normalised to exclude MEDs)

- 1.5.2 References to **Australian Standards** are references to standards existing from time to time as amended, or where they are superseded, their replacements.

2 Service Standards

2.1 Customer Service Measures

2.1.1 The **distributor** must use its **best endeavours** to achieve the following **customer** service standards during each and every **regulatory year**.

Category	Customer Service measure	Target
Customer service	Time to respond to telephone calls	85% within 30 seconds
Customer service	Time to respond to written enquiries	95% within 5 business days after receipt of the written enquiry

2.1.2 Responding to telephone calls means:

- (a) answering a **customer's** telephone call in person, or
- (b) answering a **customer's** telephone call after they have used an Interactive Voice Response system to elect to talk to an operator (with monitoring of the call waiting time commencing when the caller selects the relevant operator option and covers the time from this point until an operator picks up the call to deal with the caller's issue), or
- (c) answering a **customer's** telephone call by providing access to a computer/telephony based interactive service which is able to process calls by providing information or direct calls to a service officer, but

does not include the answering of a call by being placed in an automated queue to wait for any one of the options above.

2.1.3 When responding to telephone calls the **distributor** must at all times use its **best endeavours** to ensure that all of the information provided, including that which is provided by means of a computer/telephony based interactive service, is current and accurate and that vital information for **customers** is not omitted.

2.1.4 A written enquiry is an enquiry by the use of email, fax, a **distributor's** website, direct messaging on social media channels used by a **distributor**, or by letter sent by a **customer** to a **distributor**, via nominated enquiry channels, requesting information from the **distributor** and/or making a complaint about an action of the **distributor**.

2.1.5 A response to such an enquiry means direct or telephone contact or a written response in which the **distributor** either answers the enquiry or acknowledges receipt of the enquiry and indicates the process and timetable to be followed in dealing with the enquiry.

2.2 Reliability Measures

2.2.1 Network Reliability Standards

- (a) The **distributor** must use its **best endeavours** to achieve the following minimum network reliability standards during each and every **regulatory year**.
- (b) The **distributor** is only required to report on how it has applied its **best endeavours** if it fails to meet the reporting thresholds set out in the following table.

Network reliability minimum performance targets and reporting thresholds

		CBD Feeders	Urban Feeders	Rural Short Feeders	Rural Long Feeders
USAIDIn (average minutes off supply per customer per annum)	Target	15	110	200	290
	Reporting threshold	20	125	220	330
USAIFIn (average number of supply interruptions per customer per annum)	Target	0.15	1.15	1.65	1.75
	Reporting threshold	0.20	1.35	1.85	2.10

Note: These targets reflect **unplanned interruptions** on the low voltage and **high voltage distribution networks**. They exclude **planned interruptions**, **momentary interruptions**; and any **unplanned interruptions** that occur on **MEDs**.

2.2.2 Network restoration standards

- (a) The **distributor** must use its **best endeavours** to achieve the minimum network restoration time targets for the proportion of the **customers** in each feeder category that experience **unplanned interruptions** that exceed the defined time periods set out in the following table during each and every **regulatory year**.

Network restoration time targets

		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

Note: These targets reflect **unplanned interruptions** on the low voltage and **high voltage distribution networks**. They exclude **planned interruptions**, **momentary interruptions**, and any **unplanned interruptions** that occur on **MEDs**.

- (b) The **distributor** is only required to report on how it has applied its **best endeavours** if its performance fails to meet the reporting thresholds set out in the following table.

Network restoration time reporting thresholds

		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	13.5			
	Interruption longer than 2 hours	6.5	29.5		
	Interruption longer than 3 hours		13.5	29.5	
	Interruption longer than 4 hours				32.5
	Interruption longer than 5 hours			10.5	
	Interruption longer than 7 hours				12.5

Note: These thresholds reflect **unplanned interruptions** on the low voltage and **high voltage distribution networks**. They exclude planned **supply interruptions**, **momentary interruptions**, and any **unplanned interruptions** that occur on **MEDs**.

2.2.3 Minimise interruptions

- (a) A **distributor** must use its **best endeavours** to:
- (i) minimise **interruptions** or limitations to **supply** caused by:
 - (A) carrying out maintenance or repair work to the **distribution network**
 - (B) connecting a new **supply address** to the **distribution network**
 - (C) carrying out **augmentations** or extensions to the **distribution network**, and
 - (ii) restore **supply** as soon as reasonably practicable.

2.3 Guaranteed Service Level scheme

2.3.1 The **distributor** must meet the following service standards:

- (a) Required timeframes for the **connection** of new **supply addresses**

The **distributor** must use its **best endeavours** to provide infrastructure to enable a **connection** for a **customer's new supply address** either:

- (i) on a date agreed with the **customer**, or
- (ii) where no date has been agreed with the **customer**, within 6 **business days** after the **customer** has met all of the necessary pre-conditions for **connection**.

The **distributor** must pay the **customer** \$65 (including GST) for each day it is late in connecting the **customer**, up to a maximum of \$325 (including GST).

- (b) Repair of **street light faults**
- (i) The **distributor** must use its **best endeavours** to repair **street light faults** affecting lights for which it is responsible within five **business days** in the **Adelaide Business Area** and **Greater Adelaide Metropolitan Area**, Gawler, Mount Barker, Mount Gambier, Murray Bridge, Port Augusta, Port Lincoln, Port Pirie, Stirling, Willunga and Whyalla, and within 10 **business days** in all other places/areas, from the date on which the **street light fault** is reported to the **distributor**.
 - (ii) The **distributor** must pay the first person (provided that this person did not deliberately cause the damage to the street light) to report the **street light fault** \$25 (including GST) for each period (five or 10 business days as outlined above) in which the **street light fault** is not repaired.
 - (iii) For the purpose of calculating when the five or 10 business day period commences the following conditions apply:
 - (A) the **business day** on which a report is made is day zero
 - (B) a report made on a Saturday, a Sunday or a public holiday will be deemed to occur on the next **business day**
 - (C) a report made before 4.00 pm is deemed to occur on that **business day**, and
 - (D) a report made after 4.00 pm is deemed to occur on the next **business day**.
 - (iv) While multiple **street light fault** reports may be made by a person on any day in respect of street lights for which the **distributor** is responsible, the **distributor's** liability to pay the person \$25 (including GST) for each period (five or 10 **business days** as outlined above) in which a **street light fault** is not repaired relates only to the first 40 **street light fault** reports (inclusive) made by that person on that day (including deemed reports).
 - (v) Where the **distributor** declines to make a **street light fault** payment to a person on the basis that the person reporting the fault deliberately caused the damage to the street light, then it must keep the records that justified this decision for a period of 12 months after receiving the report.
 - (vi) The **distributor** may decline to accept **street light fault** reports from a person, for a specified period of up to and including 12 months, if it is satisfied on reasonable evidence that the person has:
 - (A) in a six month period made an excessive number of incorrect reports of **street light faults** (taking into account both the total number of reports that the person has made and the number of inaccurate reports)
 - (B) been found by the **distributor** to have made a **street light fault** report in circumstances where they deliberately caused the damage to the street light, or

- (C) for any other reason where the **distributor** is reasonably satisfied that the person has not been making **street light fault** reports in good faith or it is for any reason inappropriate to accept **street light fault** reports from this person.
- (vii) Before making any decision to decline to accept **street light fault** reports from a person, the **distributor** must:
 - (A) inform the person that it is considering declining to accept **street light fault** reports from them and advise them of the reasons for this (along with the supporting evidence)
 - (B) allow the person a reasonable opportunity to respond to these concerns and to make any further submissions (for example any reasons explaining why they made inaccurate reports or why they should be allowed to continue to submit **street light fault** reports), and
 - (C) consider any submissions made by the person.
- (viii) The **distributor** must prepare written reasons explaining any decision to decline to accept street light fault reports from a person. A copy of these reasons must be provided to the person within 10 **business days** of making the decision and a copy of the reasons must be kept by the **distributor** for a period of 12 months after the decision is made.
- (c) Minimise frequency and duration of supply interruptions

The **distributor** must use its **best endeavours** to minimise the frequency and duration of **supply interruptions** to a **customer's supply address**. If the total number of **interruptions** and/or the total duration of all **interruptions** across a **regulatory year** exceeds the thresholds in the following tables the **distributor** must make payments to **customers** experiencing **interruptions** as set out in those tables.

Thresholds and payment amount – frequency of interruptions

	Threshold
Number of interruptions in a regulatory year	> 9
Payment (including GST)	\$100

Thresholds and payment amounts – total annual duration of interruptions

	Threshold 1	Threshold 2	Threshold 3
Total annual duration (hrs)	> 20 and ≤ 30	>30 and ≤60	>60
Payment (including GST)	\$100	\$150	\$300

Payments will be made in the quarter directly following the end of the **regulatory year**. Payments will be made in respect of the **supply address**, not the **customer**.

The above scheme excludes:

- (i) **interruptions** caused by the following:
 - (A) transmission and generation failures
 - (B) disconnection required in an emergency situation (e.g. bushfire)
 - (C) single **customer** faults caused by that **customer**
- (ii) momentary interruptions
- (iii) planned interruptions, and
- (iv) partial interruptions to a supply address such as:
 - (A) **interruptions** that affect only one or two phases of **supply** at a **supply address** with three phase **supply**, and/or
 - (B) **interruptions** to one connection point where the **supply address** has multiple connection points.

2.3.2 Interruptions outside control of **distributor**

- (a) If an **interruption** arises from one or more events or circumstances that are not caused by and are outside the control of the **distributor** and:
 - (i) the **distributor** is prevented from restoring **supply** by an event or circumstance that is not caused by and is outside the control of the **distributor**, or
 - (ii) in circumstances where the **distributor** took steps to restore, or to seek to restore, **supply** during or following the event or circumstance, those steps would, or would be likely to, result in a serious risk to the health or safety of any person (including a serious risk to the health or safety of any employee or contractor of the **distributor** other than a risk that arises in the ordinary course of the person's employment or the performance of their contractual obligations),

the period of time during which (as applicable):

- (iii) the **distributor** is so prevented, or
- (iv) the serious risk to the health or safety of that person continues to exist,

will not be counted in determining whether the **distributor** has exceeded a timeframe set out in clause 2.3.1(c).

- (b) When the event(s) or circumstances that prevent the **distributor** from restoring **supply** or that give rise to a serious risk to the health or safety of a person, have ended or ceased, the **distributor** must use its best endeavours to restore **supply**.
- (c) The **distributor** must use its **best endeavours** to give prompt notice to affected **customers** including details of the event, an estimate of likely duration, the extent to which obligations are affected and the steps taken to remove, overcome or minimise those effects.

2.4 Reconnection after disconnection

2.4.1 Where a **distributor** is obliged under the **National Energy Retail Rules** to reconnect a **customer's supply address** the **distributor** must connect the **customer's supply address** in accordance with this clause

(a) Requests made to the **distributor** by 5.00 pm on a **business day**

Where the **customer** makes a request for reconnection to its **retailer** before 4.00 pm or to the **distributor** before 5.00 pm on a **business day**, the **distributor** must:

- (i) reconnect the supply address on the day of the request in the **Adelaide Business Area** and **Major Metropolitan Areas**, and
- (ii) use its **best endeavours** to reconnect on the day of the request in **other areas** and, in any event, by the next **business day**.

(b) Requests made to the **distributor** between 5.00 pm and 10.00 pm on a **business day**

Where the **customer** makes a request for reconnection to its **retailer** after 4.00 pm but before 9.00 pm on a **business day**, or to its **distributor** after 5.00 pm but before 10.00 pm on a **business day**, and pays the **distributor's** reasonable after hours reconnection charge, the **distributor** must:

- (i) reconnect on the day requested by the **customer** in the **Adelaide Business Area** and **Major Metropolitan Areas**, and
- (ii) use its **best endeavours** to reconnect on the day requested by the **customer** in **other areas** and, in any event, by the next **business day**.

(c) Requests made to the **distributor** after 10.00 pm on a **business day**

Where under clause 2.4.1 a **distributor** is obliged to reconnect a **customer** and the **customer** makes a request for reconnection to its **retailer** after 9.00 pm on a **business day** or to the **distributor** after 10.00 pm on a **business day**, the **distributor** must reconnect the **supply address** as soon as possible and in any event by the end of the next **business day**.

(d) Requests made to the **distributor** made at any time on days that are not a **business day**

Where under clause 2.4.1 a **distributor** is obliged to reconnect a **customer** and the **customer** makes a request for reconnection to its **retailer** or to the **distributor** on a day that is not a **business day** the **distributor** must reconnect the **supply address** as soon as possible on the next **business day** and in any event by the end of the next **business day**.

2.5 Compliance and record keeping

2.5.1 The **distributor** must comply with any directions issued by the **Commission** from time to time concerning the definition and interpretation of service standards contained within clause 2 of this industry code. The **distributor** must keep sufficient records to monitor its performance level and to provide the information required.

2.6 Monitoring, Evaluation and Compliance Strategy

2.6.1 The **distributor** must publish and provide to the **Commission** a written Monitoring, Evaluation and Compliance Strategy that outlines how it will apply its **best**

endeavours in pursuing the requirements set out in clauses 2.1 to 2.4 of this industry code, before the commencement of each **regulatory year**.

- 2.6.2 The Monitoring, Evaluation and Compliance Strategy document must be prepared in compliance with the **Commission's** Electricity Industry Guideline No. 1 (as amended from time to time).

2.7 Performance reporting

- 2.7.1 The **distributor** must provide regular written reports to the **Commission** in a manner and form defined by the **Commission's** Electricity Industry Guideline No. 1:
- (a) annually (by 31 August each year or, alternatively, on such date(s) as agreed with the **Commission** in writing from time to time), concerning its performance during the previous **regulatory year** and
 - (b) quarterly (within one month of the quarter ending, or as agreed with the **Commission** in writing from time to time), regarding its performance during the current **regulatory year**.
- 2.7.2 Without limiting the content of regular written reports, the **distributor** must report to the **Commission**, in a manner and form defined by the **Commission's** Electricity Industry Guideline No. 1.
- 2.7.3 The **Commission** may require additional irregular reporting of the **distributor** on its performance on **MEDs**, including details of preparedness and restoration practices.
- 2.7.4 The **distributor** must report directly to the public on:
- (a) its performance against service standards set out in clauses 2.1 to 2.4 of this industry code during the previous **regulatory year**
 - (b) its performance in the regions defined **Commission's** Electricity Industry Guideline No. 1 (as amended from time to time), and
 - (c) instances of non-compliance with service standards, the reason(s) for the non-compliance and an explanation of how the **distributor** intends to improve its performance so as to meet the service standards set out in clauses 2.1 to 2.4.
- 2.7.5 The **distributor** must report directly to the public:
- (a) in a manner that **customers** and other members of the public can reasonably access
 - (b) annually by 31 August each year or, alternatively, at such date(s) as agreed with the **Commission** in writing from time to time, with additional reporting following events that have a significant impact on performance, and
 - (c) by updating a time-series dataset to allow public comparison and analysis of performance.

2.8 Country Lines

- 2.8.1 A **distributor** must not, without the **Commission's** prior written approval, discontinue or cease to operate, maintain or service those parts of its **distribution network** which are in **country areas**.

3 Connection of Embedded Generation Units

3.1 Application of Chapter 3

3.1.1 This Chapter 3:

- (a) regulates an **embedded generator's** access to a **distribution network** in South Australia where the **National Electricity Rules** do not apply in respect of that **embedded generator**, and
- (b) applies to:
 - (i) distributors
 - (ii) each small embedded generator
 - (iii) any **large embedded generator** that is not required to be registered under the **National Electricity Rules**, and
 - (iv) **embedded generators** which are exempt under the *Electricity (General) Regulations 2012* from the requirement to be licensed as a generator under the **Act**.

3.2 Obligation for Connection Agreements

3.2.1 The **distributor** must only connect an **embedded generator's embedded generating unit** to its **distribution network** in accordance with the requirements of this Chapter 3, and in accordance with **good electricity industry practice**.

3.3 Connection where a Small Embedded Generator is also a Customer

3.3.1 Where a **small embedded generator**:

- (a) applies to the **distributor** for the **connection** of its **embedded generating unit** to the **distribution network**, and
- (b) is also a **customer** at the **connection point** at which the **embedded generating unit** is to be connected,

the **distributor** must provide that **connection** as soon as practicable once the **small embedded generator** has complied with any standard application requirements established by the **distributor**.

3.3.2 For the purposes of clause 3.3.1(a), the standard application requirements established by the **distributor**:

- (a) must be of a standard form and published on the **distributor's** website
- (b) may require the provision of information about the **small embedded generator** including, without limitation, the identity of the **small embedded generator** and the nature and location of the **embedded generating unit**
- (c) must not require the **small embedded generator** to enter into any agreement, arrangement, contract or undertaking in respect of the **connection** of the **embedded generating unit**
- (d) must not impose any rights or obligations on either party, other than the right for the **small embedded generator** to be connected in accordance with this clause 3.3 where the standard application requirements are met and the right for the **distributor** to disconnect the **embedded generating unit** where it is

satisfied, on reasonable grounds, that the standard application requirements are no longer met or that the **embedded generating unit** is affecting the quality of **supply** to other **customers**, and

- (e) may require the **small embedded generator** to pay the **distributor** a **connection** fee provided that any such fee is established in accordance with the **Electricity Distribution Determination**.

3.4 Connection where a Small Embedded Generator is not a Customer

3.4.1 Where a **small embedded generator**:

- (a) applies to the **distributor** for the **connection** of its **embedded generating unit** to the **distribution network**, and
- (b) is not a **customer** at the **connection point** at which the **embedded generating unit** is to be connected,
the **distributor** must provide that **connection** in accordance with the terms and conditions of a standard **connection** agreement for **small embedded generators** developed by the **distributor**.

3.4.2 The **distributor** must seek the **Commission's** prior written approval to use a standard **connection** agreement for **small embedded generators** developed by the **distributor** under clause 3.4.1.

3.4.3 If the **Commission** does not approve a standard **connection** agreement for **small embedded generators** submitted under clause 3.4.2, the **Commission** may:

- (a) require the **distributor** to amend the standard **connection** agreement in accordance with any direction of the **Commission** and resubmit that amended standard **connection** agreement for the **Commission's** approval for the purposes of clause 3.4.2, or
- (b) amend the standard **connection** agreement and approve that amended standard **connection** agreement for use by the **distributor** for the purposes of clause 3.4.1.

3.4.4 The **distributor** must seek the **Commission's** prior written approval to vary the terms and conditions of the standard **connection** agreement which has previously been approved by the **Commission** under clause 3.4.2.

3.4.5 The terms and conditions of a standard **connection** agreement approved by the **Commission** for the purposes of clause 3.4.1, as varied from time to time in accordance with clause 3.4.4, must be published by the **distributor** on its website.

3.4.6 The **distributor** may enter into a negotiated **connection** agreement with a **small embedded generator** on fair and reasonable terms and conditions agreed by that **small embedded generator** and approved by the **Commission**.

3.5 Connection Agreements for Large Embedded Generators

3.5.1 The **distributor** must only agree to provide **connection** services to a **large embedded generator** in accordance with the terms and conditions of a **connection** agreement which is fair and reasonable and agreed by that **large embedded generator**.

3.6 Connection charges

- 3.6.1 The **distributor** may only charge an **embedded generator** a **connection charge** in respect of the **connection** of the **embedded generator's embedded generating unit** to the **distribution network** which has been calculated in accordance with the **Electricity Distribution Determination**.

3.7 Extension charges

- 3.7.1 The **distributor** may only charge an **embedded generator** an **extension charge** in respect of the **connection** of the **embedded generator's embedded generating unit** to the **distribution network** which has been calculated in accordance with the **Electricity Distribution Determination**.

3.8 Augmentation charges

- 3.8.1 The **distributor**:
- (a) must not charge a **small embedded generator** for any **augmentation** required as a result of the **connection** of the **small embedded generator's embedded generating units** to the **distribution network**, and
 - (b) may only charge a **large embedded generator** an **augmentation charge** for any **augmentation** required as a result of the **connection** of the **large embedded generator's embedded generating units** which has been calculated in accordance with the **Electricity Distribution Determination**.

3.9 Coordination of Large Embedded Generating Units

- 3.9.1 **Large embedded generators** must comply with the following requirements:
- (a) the **embedded generating unit** must be synchronised to the **distribution network**
 - (b) the **embedded generating unit's** real and reactive power output or voltage output must be automatically controlled within limits agreed with the **distributor**. A nominal full load power factor of 0.8 lagging must be provided
 - (c) the **embedded generator's** voltage and frequency response times must be within the limits specified by the **distributor**. If the **embedded generator's** frequency rises above or falls below the system frequency for more than the time specified by the **distributor**, it must be disconnected from the **distribution network**
 - (d) the **embedded generating unit** must be fitted with necessary protection relays, as agreed with the **distributor**, in order to coordinate its ability to isolate itself from the **distribution network** in the event of a fault on either the **distributor's distribution network** or the **embedded generator's** electricity infrastructure
 - (e) the **embedded generating unit** must be equipped with lockable means of isolation from the **distribution network**
 - (f) unless otherwise agreed with the **distributor**, an **embedded generator** must allow for the **connection** of a communication link between the **embedded generation unit** and the **distributor's** substation to monitor and as necessary trip the generator in an **emergency**

- (g) asynchronous **embedded generating units** must be equipped with controlled power factor correction capacitors to support necessary VAR loading requirements, and
- (h) any other reasonable requirement of the **distributor**.

3.10 Capacity

- 3.10.1 The capacity of **embedded generator's** plant shall not exceed the capacity of the **distribution network** in terms of:
 - (a) its capacity to accept export energy
 - (b) its capacity to provide **emergency** energy in the event of a generator trip, and
 - (c) its fault level.

3.11 Scheduling

- 3.11.1 Unless otherwise agreed with the **distributor**, a **large embedded generator** with an **embedded generating unit** over 1 MW must advise the **distributor** prior to **connection** or disconnection of the **embedded generating unit**.
- 3.11.2 The rate of change of an **embedded generating unit** over 1 MW must be agreed with the **distributor**.

3.12 Minimum requirements for Embedded Generating Units over 1 MW

- 3.12.1 Unless otherwise agreed with the **distributor**, any **embedded generating unit** over 1 MW must:
 - (a) have an automatic excitation control system for volts and power factor
 - (b) have a governor control for speed (frequency) and load (MW) control, and
 - (c) be equipped with protection and auto synchronising equipment as defined by the **distributor**.

3.13 Delivery performance requirements of Embedded Generation Units

- 3.13.1 An **embedded generator's** plant shall be able to:
 - (a) respond safely to network disturbances
 - (b) shut down safely without external electricity **supply**
 - (c) restart following loss and restoration of **supply**, and
 - (d) operate in a stable manner on the **distribution network** during system disturbances.

3.14 Voltage Quality

- 3.14.1 An **embedded generator** must ensure that its **embedded generating** plant does not contribute to the permitted levels of voltage unbalance, voltage fluctuation and harmonic content specified by the **distributor** being exceeded.

3.15 Fault Levels

- 3.15.1 An **embedded generating unit** must be designed to work within and not contribute (other than an agreed contribution) to the system maximum fault level and the **feeder** capacity to which it is connected.

3.16 Earthing

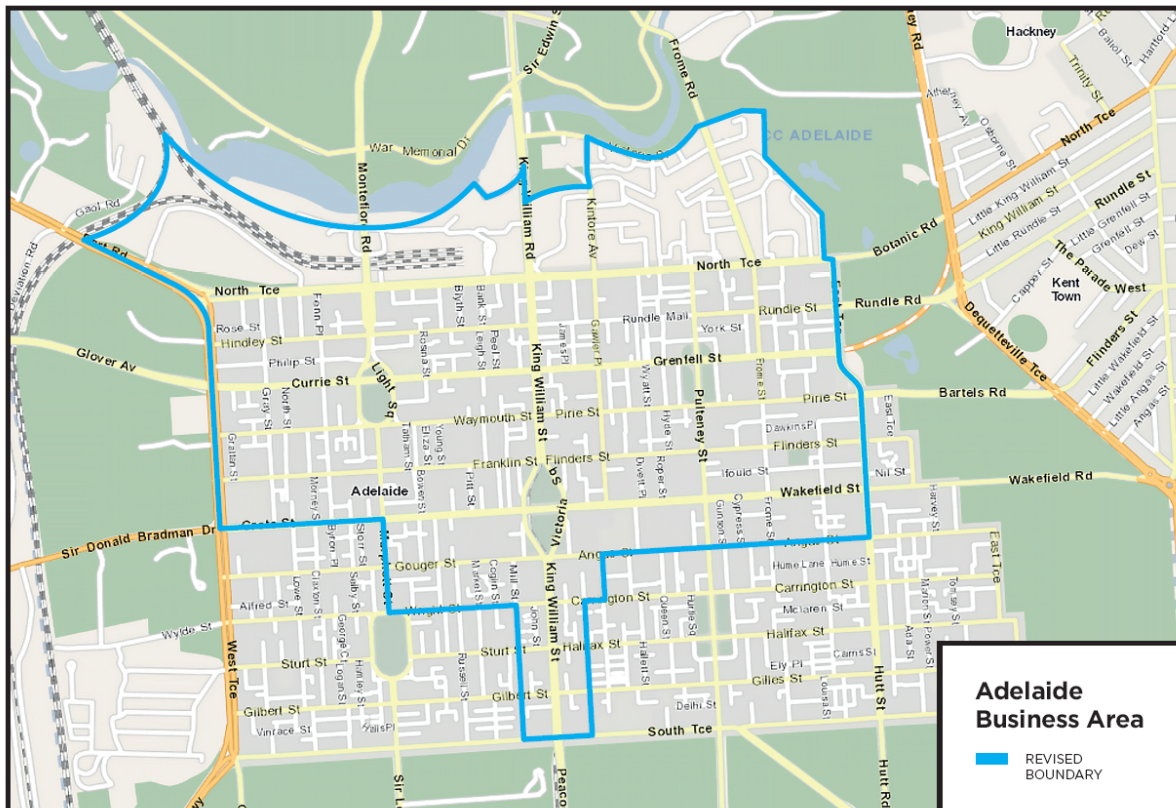
- 3.16.1 A **large embedded generator** must ensure that its **embedded generating units** are earthed in accordance with the **distributor's** earthing requirements. The **embedded generator** must provide earth fault protection to isolate each **embedded generating unit** from the **distribution network** under earth fault conditions.

3.17 Interference

- 3.17.1 If the **distributor** notifies the **embedded generator** that its **embedded generating unit** is causing interference above the limits set out in **AS/NZS 2344**, **AS2279**, **AS/NZS 61000 3.2**, **3.3** or **3.5**, the **embedded generator** must reduce the level of interference to below these limits within 90 days.

Schedule 1 – Maps

Map 1 – Adelaide Business Area



Map 2 – Greater Adelaide Metropolitan Area



This Industry Code was made by the **Commission** on 22 June 2020 pursuant to Part 4 of the Essential Services Commission Act 2002, to take effect on and from the date notified in the Gazette.

Adam Wilson

Chief Executive Officer and Commission authorised signatory



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Date

22 June 2020

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