



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**; and
  - (b) **embedded generators** which are not registered under the **National Electricity Rules**.

## 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 affected by:
- (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; and
  - (g) the Electricity Distribution Licence.

## 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;
  - (d) an expression importing a natural person includes any company, partnership, trust, joint venture, association, corporation or other body corporate and any governmental agency;
  - (e) a reference to a person includes that person's executors, 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 bylaw 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;
  - (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:

<b>Act</b>	means the Electricity Act 1996 (SA)
<b>Adelaide Business Area</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>
<b>augmentation</b>	means works to enlarge the capability of the <b>distributor's distribution network</b> to distribute electricity
<b>Australian Standard or AS</b>	means a standard published by the Standards Association of Australia
<b>best endeavours</b>	means to act in good faith and use all reasonable efforts, skill and resources
<b>business day</b>	has the meaning given to that term in the <b>National Energy Retail Law</b>

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
Commission	means the Essential Services Commission established under the Essential Services Commission Act 2002
connection	means to form a physical link to a <b>distribution network</b>
customer	has the meaning given to that term in the <b>Act</b> , namely a person who has a supply of electricity available from a <b>transmission network</b> or <b>distribution network</b> for consumption by that person and includes: <ul style="list-style-type: none"> <li>(a) the occupier for the time being of a place to which electricity is <b>supplied</b>; and</li> <li>(b) where the context requires, a person seeking an electricity <b>supply</b>; and</li> <li>(c) a person of a class declared by regulations under the <b>Act</b> to be <b>customers</b>.</li> </ul>
distributor	means a holder of a licence to operate a <b>distribution network</b> under Part 3 of the <b>Act</b>
distribution network	has the meaning given to that term in the <b>Act</b>
electrical installation	has the meaning given to that term in the <b>Act</b>
Electricity Distribution Determination	means any applicable determination made by the Australian Energy Regulator in accordance with the <b>National Electricity Law</b> and the <b>National Electricity Rules</b> 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 <b>embedded generating unit</b>
embedded generating unit	means a generating unit which is connected to a <b>distribution network</b> and does not have direct access to a <b>transmission network</b>

<b>feeder</b>	means an electric powerline and associated equipment which the <b>distributor</b> uses to distribute electricity
<b>high voltage</b>	means a voltage greater than 1,000 volts
<b>interruption</b>	means a planned or unplanned interruption of, or restriction to, distribution services of at least one minute in duration, other than an interruption or restriction due to an emergency, a generation failure or a transmission failure
<b>large embedded generator</b>	means an <b>embedded generator</b> other than a <b>small embedded generator</b>
<b>Long Rural Feeder</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 greater than 200 km or as otherwise agreed between <b>SA Power Networks</b> and the <b>Commission</b>
<b>Major Metropolitan Areas</b>	means the <b>Adelaide Business Area</b> , Greater Adelaide Metropolitan Area as indicated in Map 2 of Schedule 2 and Major Regional Areas including Mount Barker, Mount Gambier, Port Augusta, Port Lincoln and Whyalla in which <b>customers</b> are <b>supplied by feeders</b> as agreed between <b>SA Power Networks</b> and the <b>Commission</b>
<b>Major Event Day</b>	has the meaning given to that term in the Institute of Electrical and Electronics Engineers IEEE Standard 1366-2012
<b>National Electricity Law</b>	means the National Electricity Law, as contained within the National Electricity (South Australia) Act 1996
<b>National Electricity Rules</b>	has the meaning given to that term in the <b>National Electricity Law</b>
<b>National Energy Retail Law</b>	has the meaning given to that term in the National Energy Retail Law (South Australia) Act 2011 as in force from time to time
<b>National Energy Retail Regulations</b>	means the Regulations made under Part 11 of the <b>National Energy Retail Law</b>
<b>National Energy Retail Rules</b>	means the Rules made under Part 10 of the <b>National Energy Retail Law</b>
<b>Other Areas</b>	means all areas in which <b>customers</b> are <b>supplied</b> other than the <b>Adelaide Business Area</b> and <b>Major Metropolitan Areas</b>
<b>SA Power Networks</b>	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 PAL 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

<b>Short Rural Feeder</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 or as otherwise agreed between <b>SA Power Networks</b> and the <b>Commission</b>
<b>small embedded generator</b>	means an <b>embedded generator</b> which owns, operates or controls an <b>embedded generating unit</b> that complies with the requirements of <b>AS 4777</b>
<b>supply</b>	means the delivery of electricity
<b>supply address</b>	means the address for which a <b>customer</b> purchases electricity
<b>Technical Regulator</b>	means the person holding the office of Technical Regulator under Part 2 of the <b>Act</b>
<b>transmission network</b>	has the meaning given to that term in the <b>Act</b>
<b>Urban Feeder</b>	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>
<b>USAID<sub>n</sub></b>	means Unplanned System Average Interruption Duration Index (normalised to exclude <b>MED</b> )
<b>USAIFI<sub>n</sub></b>	means Unplanned System Average Interruption Frequency Index (normalised to exclude <b>MED</b> )

1.5.2 References to **Australian Standards** are references to standards existing from time to time, 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 year ending on 30 June.

Category	Customer Service measure	Standard
Customer service	Time to respond to telephone calls	85% within 30 seconds
Customer service	Time to respond to written enquiries	95% within 5 <b>business days</b>

2.1.2 The term “responding to telephone calls” includes:

- (a) answering a **customer’s** telephone call in person; and
- (b) 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 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 information provided, including that which is provided by means of a computer/telephony based interactive service, is current and accurate.

2.1.4 A written enquiry is an enquiry by email, fax or letter from a customer to a **distributor**, via nominated enquiry channels, requesting information from the **distributor** or making a complaint about an action of the **distributor**.

2.1.5 A response to such an enquiry includes direct or telephone contact or 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 Supply Restoration and Reliability Standards

- (a) The **distributor** must use its **best endeavours** to achieve the following reliability standards during each year ending on 30 June:

## USAIDI<sub>n</sub> and USAIFI<sub>n</sub> Standards

	USAIDI <sub>n</sub> (average minutes off supply per customer per annum)	USAIFI <sub>n</sub> (average no. of supply interruptions per customer per annum)
CBD Feeders	15	0.15
Urban Feeders	120	1.30
Short Rural Feeders	220	1.85
Long Rural Feeders	300	1.95

Note: These standards reflect unplanned supply interruptions on the low voltage and high voltage distribution networks but exclude:

- (a) any planned supply interruptions and supply interruptions of a duration less than one minute; and
- (b) any unplanned supply interruptions that qualify as **MEDs**.

### 2.2.2 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 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 practicable.

## 2.3 Guaranteed Service Standards

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

- (a) Timeliness of appointments

The **distributor** will use its **best endeavours** to be on time for any appointment with a **customer**. Unless due to circumstances beyond its reasonable control, if later than 15 minutes, the **distributor** will pay the **customer** \$25 (including GST).
- (b) Timeliness of connection of a new supply address

The **distributor** will use its **best endeavours** to connect a **customer's** new **supply address**:

- (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 the necessary pre-conditions.

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

- (c) Repair of faulty street lights

The **distributor** will use its **best endeavours** to repair street lights which have gone out and for which it is responsible within **5 business days** in the Adelaide metropolitan and CBD area, Whyalla, Mount Gambier, Mount Barker, Gawler, Stirling, Murray Bridge, Port Augusta, Willunga, Port Pirie and Port Lincoln, and **10 business days** elsewhere, from the date on which the fault is reported to the **distributor**.

The **distributor** will pay the first person to report the faulty street light \$25 (including GST) for each period (5 or 10 **business days** as outlined above) in which the light is not repaired.

While multiple faulty street light reports may be made by a person on any day in respect of street lights for which the **distributor** is responsible:

- (i) a report made on a Saturday, a Sunday or a public holiday will be deemed to occur on the next **business day**; and
- (ii) the **distributor's** liability to pay the person \$25 (including GST) for each period (5 or 10 business days as outlined above) in which a faulty street light is not repaired relates only to the first 40 faulty street light reports made by that person on that day (including deemed reports).

- (d) Minimise frequency and duration of supply interruptions

The **distributor** will use its **best endeavours** to minimise the frequency and duration of supply interruptions to a **customer's supply address**. If the frequency of interruptions or the duration of any single interruption exceed the thresholds in the following tables the **distributor** will make payments to **customers** experiencing supply interruptions set out in those tables.

#### Thresholds and payment amounts – frequency of interruptions

	Threshold 1	Threshold 2	Threshold 3
Number of interruptions in a regulatory year ending 30 June	>9 and ≤12	>12 and ≤15	>15
Payment	\$100	\$150	\$200

#### Thresholds and payment amounts – duration

	Threshold 1	Threshold 2	Threshold 3	Threshold 4	Threshold 5
Duration (hrs)	>12 and ≤15	>15 and ≤18	>18 and ≤24	>24 and ≤48	>48
Payment	\$100	\$150	\$200	\$405	\$605

Payments in relation to the frequency of interruptions will be made in the quarter directly following the regulatory year (ending 30 June). Payments in relation to the duration of interruptions will be made within three months of the event occurring. 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) interruptions of a duration less than one minute; and
- (iii) planned interruptions.

### 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** (e.g. bushfire, lightning, storm, flood) 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) if 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(d).

- (b) 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) Request to **distributor** by 5.00 pm

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) Request to **distributor** between 5.00 pm and 10.00 pm

Where the **customer** makes a request for reconnection to its **retailer** after 4.00 pm and before 9.00 pm on a **business day**, or to its **distributor** after 5.00 pm and 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) Request to distributor after 10.00 pm

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**.

## 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 this clause 2. The **distributor** must keep sufficient records to monitor its performance level and to provide the information required by this clause 2.

## 2.6 Report to Commission

2.6.1 The **distributor** must report to the **Commission** by 31 August each year concerning matters relating to the service standards during the previous year ending on 30 June. In particular, the **distributor** will report on:

(a) its compliance with the service standards set out in this clause 2 of this industry code;

- (b) the amount of rebates paid or credited to **customers** as a result of a **distributor's** failure to meet guaranteed service standards set out in this industry code;
- (c) an explanation of the reason for any non-compliance; and
- (d) a report on how the **distributor** will improve its performance so as to meet the service standards set out in clause 2 of this industry code.

## 2.7 Country Lines

- 2.7.1 A **distributor** must not, without the **Commission's** 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.

## 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.

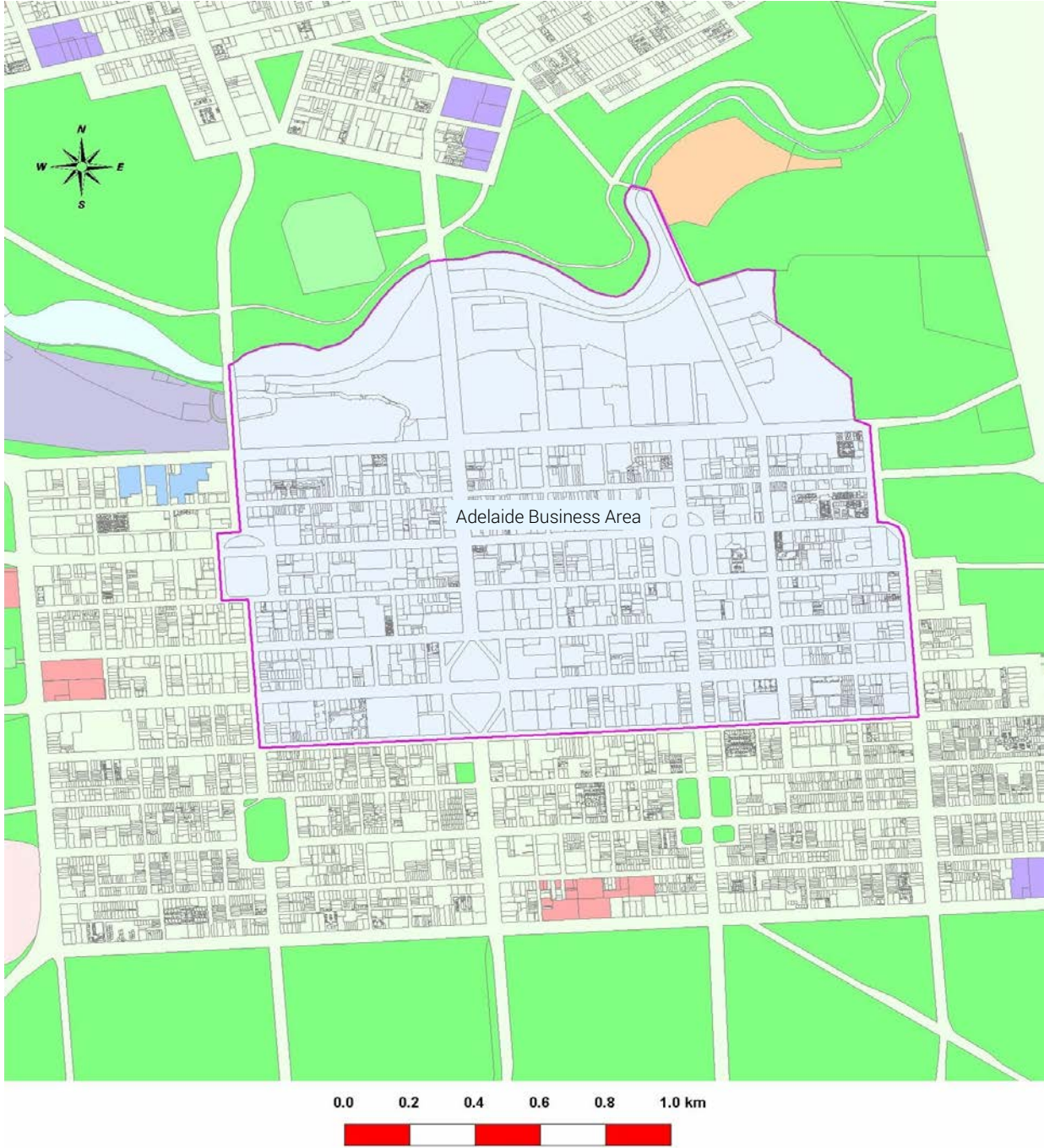
### 3.17 Interference

- 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.

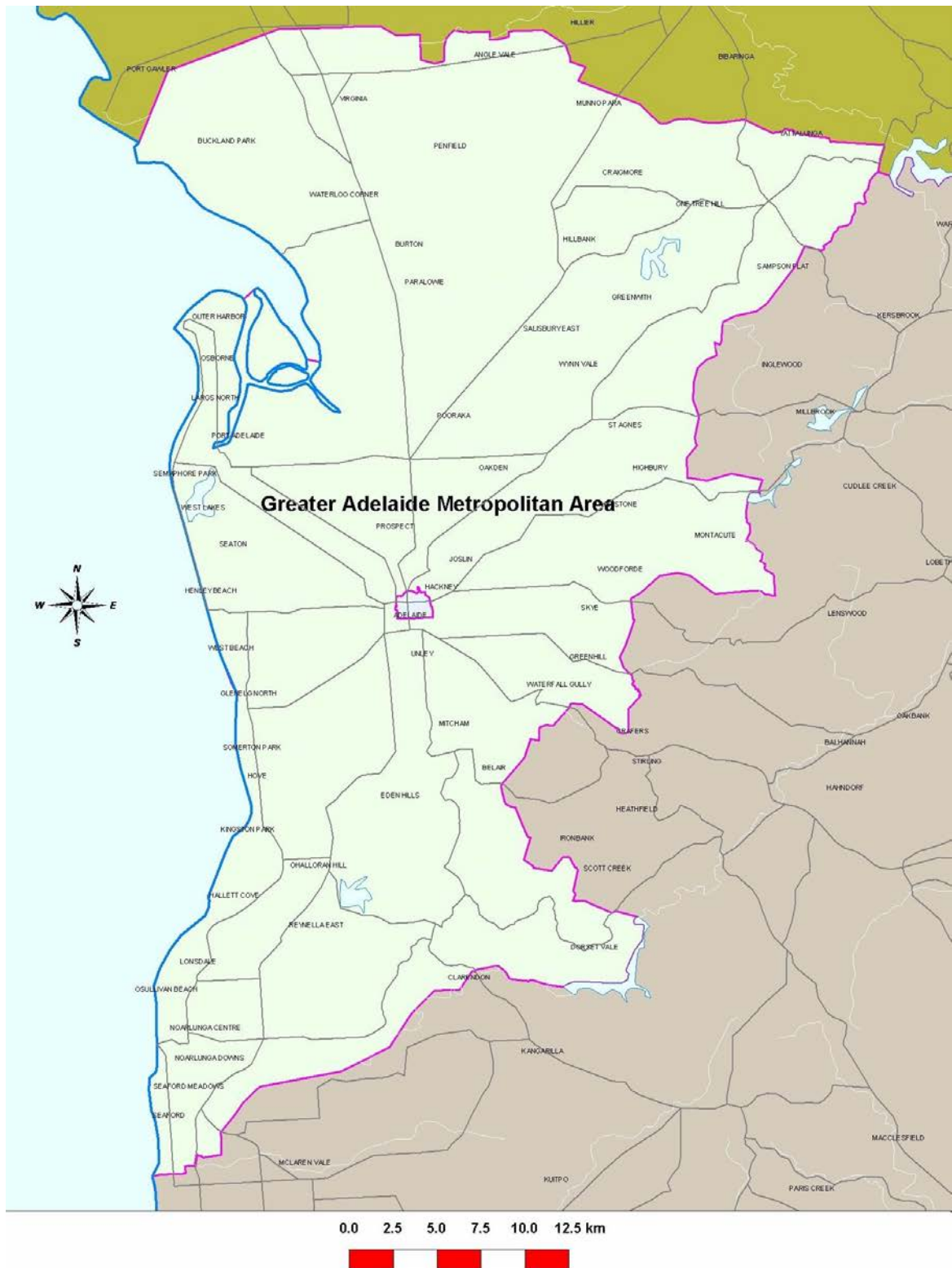
# Schedule 1 – Region maps

## Service Standard Region Maps

Map 1



Map 2



This Industry Code was made by the Commission on 8 January 2018 pursuant to Part 4 of the Essential Services Commission Act 2002, to take effect on and from the date on which it is notified in the Gazette.

The COMMON SEAL of )  
the ESSENTIAL SERVICES )  
COMMISSION of South )  
Australia was hereunto affixed )  
by authority of the ESSENTIAL )  
SERVICES COMMISSION and )  
in the presence of: )



*Paul Thorne*

Commissioner

*11 January 2018*

Date



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