

# Model Standing Offer for Micro Embedded Generator Basic Connection Services

## **MICRO EMBEDDED GENERATOR BASIC CONNECTION SERVICES**

- NEW CONNECTION WITH MICRO EMBEDDED GENERATOR
- EXISTING CONNECTION WITH NEW MICRO EMBEDDED GENERATOR
- CONNECTION ALTERATION WITH MICRO EMBEDDED GENERATOR

# INTRODUCTION

## Structure of this *model standing offer*

This *model standing offer* comprises the following:

- **This Introduction:** An explanation of:
  - The *micro embedded generator basic connection services* provided under these terms and conditions
  - The *connection charges*
  - The process for *you* applying for, and *us* providing, a *micro embedded generator basic connection service*, and
  - Other information – such as our contact information.
- **Part A:** An overview of the application and offer process.
- **Part B:** Terms and conditions for the provision of *micro embedded generator basic connection services*.

## This *model standing offer* applies to *micro embedded generator basic connection services* only

There are three categories of *micro embedded generator basic connection services* available under this *model standing offer*:

- a) **New connection including a *micro embedded generator***
- b) **Addition of a *micro embedded generator* to an existing connection**, and
- c) **Alteration of existing connection that includes a *micro embedded generator***.

A *micro embedded generator basic connection service* is only available where the requirements set out in clause 5.1 a) i) and the definition of a *micro embedded generator basic connection service* in clause 10 of this *model standing offer* are met. Where those requirements are met, *Jemena* will provide *you* with one of the *micro embedded generator basic connection services* listed in Schedule 1.

However, if:

- Your application involves a connection that does not meet the requirements of the definition of a *micro embedded generator basic connection service*, or
- If you wish to negotiate the terms and conditions on which we will provide the *micro embedded generator basic connection service*,

then your application is not for a *micro embedded generator basic connection service* and this *model standing offer* will not apply. Once we determine that the connection is not for a *micro embedded generator basic connection service*, we will contact you and advise of the process for, possible costs and expenses related to, and the applicable terms and conditions for, a *standard connection service* or a *negotiated connection service* (as applicable).

## Connection charges

The charges for *micro embedded generator basic connection services* are set out in our *Distribution Services Price Schedule*.

The applicable *connection charges* will vary depending upon the nature of the *micro embedded generator basic connection service* provided by us at the *supply address*.

Please note, however, that in some circumstances you may be required to pay charges to us (either directly or via your retailer) which are not *connection charges*. For example, the cost of providing you with a metering service, the costs of energisation, or other incidental costs such as wasted attendances to your *supply address* by our personnel.

## Process for undertaking a *micro embedded generator basic connection*

The process for applying for a *micro embedded generator basic connection service* and a summary of the associated obligations on *you* (or *your* retailer or solar installer) are set out on our website<sup>1</sup>.

## This *model standing offer* does not apply to the supply or sale of electricity to *you*

This *model standing offer* applies to the *connection* of *your supply address* to our *network* (via the provision to *you* of a *micro embedded generator basic connection service*). It does not apply to:

- The ongoing *connection* of the *supply address* to our *distribution system* – which is dealt with under the terms of our *Deemed Standard Distribution Contract*<sup>2</sup> (which is located on our website or can be obtained by contacting *us* via the contact details set out below), or
- The sale of electricity to the *supply address* – which is dealt with under a contract between *you* and *your* electricity retailer.

## Privacy Policy

Our *Privacy Policy*<sup>3</sup> is available on our website.

## Understanding this document

Italicised words in this document have the meaning given to them in the Definitions section in clause 10 of this *model standing offer*.

## Complaints and dispute resolution

If *you* have a complaint relating to this *model standing offer*, *you* may lodge a complaint to *Jemena* in accordance with our Standard Complaints and Dispute Resolution Procedures, which is available on our website<sup>4</sup>. *Jemena* will handle a complaint made by *you* in accordance with those procedures.

## Contacting us

Please ensure *you* read this document. If *you* have any queries in relation to the *connection*, the *Agreement* or emergency backstop please visit our website or contact our Solar Commissioning Team as follows:

Jemena Solar Commissioning Department  
PO Box 16182, Melbourne VIC 3000  
Phone: 1300 658 046  
Email: [solar.commissioning@jemena.com.au](mailto:solar.commissioning@jemena.com.au)

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<sup>1</sup> <https://www.jemena.com.au/electricity/solar-and-other-technologies/>

<sup>2</sup> [www.jemena.com.au/documents/electricity/deemed-standard-distribution-contract](http://www.jemena.com.au/documents/electricity/deemed-standard-distribution-contract)

<sup>3</sup> [www.jemena.com.au/about/privacy](http://www.jemena.com.au/about/privacy)

<sup>4</sup> [www.jemena.com.au/home-and-business/help-and-advice/feedback-and-complaints](http://www.jemena.com.au/home-and-business/help-and-advice/feedback-and-complaints)

## PART A: EXPLANATION OF THE APPLICATION AND OFFER PROCESS

### 1. Who can make an *application*?

*Applications for micro embedded generator basic connection services can be made by:*

- *You (or another person acting on your behalf who is duly authorised and appointed), or*
- *Your retailer.*

### 2. How do you submit an *application*?

*You can submit an application:*

- *Through our electronic business system, [connect and manage my electricity](#),<sup>5</sup> or*
- *By filling in the application form published on our website and returning it to our Network Connections Team.*

*A paper copy of the application form can also be obtained by contacting our Network Connections Team (see the contact details in the Introduction to this model standing offer).*

*If your application is incomplete in a material respect, we will advise you and may require you to complete your application and re-submit it. We may require you to provide us with any additional information we may reasonably require to assess your application.*

*If your retailer is making an application on your behalf, then your retailer will take care of the application process, and the terms and conditions of this model standing offer will apply to the provision of the micro embedded generator basic connection service.*

### 3. What is the offer and acceptance process?

*The offer and acceptance process will depend upon whether your application is for an expedited connection or a non-expedited connection. Specifically, where:*

- a) You have submitted a properly completed application, and*
- b) We are satisfied that the application is for a micro embedded generator basic connection service, and in your application **either**:*
  - i) You requested an **expedited connection** and indicated acceptance of the terms and conditions for that micro embedded generator basic connection service as set out in Part B of this model standing offer, and we did not advise you within 10 business days of receiving your application that we required further information or that a micro embedded generator basic connection service is not the appropriate connection service, or*
  - ii) You **did not request an expedited connection**, so we made a written offer to provide you with a micro embedded generator basic connection service in accordance with the terms and conditions in this model standing offer, and that offer has been properly accepted by you within the period specified (which is 45 business days from the date of the written offer unless a longer period is agreed),*

*then this model standing offer applies as part of the Agreement between you and us for the provision of a micro embedded generator basic connection service consisting of:*

- *your application and this model standing offer, and*
- *if you did not request an expedited connection, it also consists of the offer that we made to you and your acceptance of that offer.*

*Note: Your application will be treated as a request for an expedited connection if you make an application via your retailer.*

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<sup>5</sup> <https://myservices.iemena.com.au/edp/login/auth> or [www.iemena.com.au](http://www.iemena.com.au)

## PART B: TERMS AND CONDITIONS FOR PROVIDING THE *MICRO EMBEDDED GENERATOR BASIC CONNECTION SERVICE*

### 4. Term of this model standing offer

#### 4.1 Commencement

Upon the *deemed acceptance date* (for an *expedited connection*) or the date of acceptance of the *offer* by you under clause 3 (for a *non-expedited connection*), you are taken to have entered into an *Agreement* with us to carry out the *micro embedded generator basic connection service*.

#### 4.2 Expiry of the *Agreement*

The *Agreement* ends upon the earlier of:

- a) When we complete the *micro embedded generator basic connection service*, or
- b) We terminate the *Agreement* in accordance with clause 7 of this *model standing offer*.

### 5. Our rights and obligations

#### 5.1 Provision of *micro embedded generator basic connection service*

- a) We will provide you with the *micro embedded generator basic connection service* provided that:
  - i) We are satisfied that your *micro embedded generator* is either:
    - A. *Emergency backstop enabled*; or
    - B. *an Exempt Unit*; and
  - ii) you comply with:
    - A. Your obligations set out in clause 6, and
    - B. Any other relevant obligations under the *Agreement*;  
(the “*Pre-Conditions*”).
- b) We will not be required to start the *micro embedded generator basic connection service* until you satisfy the *Pre-Conditions*.

#### 5.2 Timing of *connection work*

- a) Subject to clause 5.1, we will arrange a suitable date with you to complete the *connection works* by the *connection date*.
- b) Where no *connection date* is arranged, we will use our best endeavours to ensure the *connection date* is within:
  - i) 10 *business days*, where you make an *application* through your retailer, or
  - ii) 20 *business days*, where you have made an *application* to us directly,  
from when we are satisfied that you comply with the relevant *Pre-Conditions*.

#### 5.3 Premises connection assets

- a) Any *premises connection assets* comprising the *connection works* will be installed by us and remained owned by us at all times (including after completion of the *connection*).
- b) We have the absolute right to determine the design, specifications and any other requirements, in providing you with the *micro embedded generator basic connection service*, which, without limitation, may include determining where the *premises connection assets* are located or the point of origin, route and facilities requires for any such *connection*.

#### 5.4 Force majeure

Jemena will be relieved from complying with any obligation under the *Agreement* to the extent that we are preventing from performing the obligation by any *force majeure event*.

## 5.5 Interruption and curtailment

You authorise *us* to interrupt or *curtail*, remotely or otherwise, electricity supply services provided to you or generation or export by your *micro embedded generator*, including:

- a) for a planned or unplanned interruption; or
- b) in accordance with the conditions of any applicable tariff; or
- c) under a contract with your retailer; or
- d) to comply with a direction of a relevant authority; or
- e) to comply with a direction of AEMO, or another person lawfully authorised by AEMO; or
- f) pursuant to Laws; or
- g) to conduct testing in accordance with clause 5.7; or
- h) where otherwise agreed in writing between *us*.

## 5.6 We may adjust your inverter settings remotely

Where your *micro embedded generator* can be remotely accessed by the manufacturer to adjust the inverter settings, you authorise *us* to act on your behalf in directing the manufacturer to remotely adjust your inverter settings to comply with our safety and technical requirements.

## 5.7 Testing

You give *us* your explicit informed consent to *remotely interrupt or curtail* electricity supply services provided to you or generation and/or export by your *micro embedded generator* without notice in order to conduct testing, system or asset upgrades or maintenance which we consider reasonably necessary, including to:

- a) test the capability of interruption or *curtailment* of electricity generation or export; or
- b) test that your *micro embedded generator* is compliant with Laws; or
- c) conduct *distribution* system wide testing of systems and platforms which remotely interrupt or curtail electricity generation.

## 5.8 Notice

- (a) If we are directed to interrupt or *curtail* under clause 5.5(e), 5.7(a) or 5.7(c), we will publish a notice on our website with relevant information as soon as practicable.
- (b) If clause 5.7 or clause 5.8(a) are not applicable, and we would otherwise be required to give you individual notice, you give your explicit informed consent to us notifying you by electronic communication, or if not available, in writing.

## 5.9 Emergency backstop enquiries

If you have any queries about emergency backstop, please visit our website<sup>6</sup> or email *us* at [solar.commissioning@jemenasolar.com.au](mailto:solar.commissioning@jemenasolar.com.au).

# 6. Your obligations

## 6.1 Payment of connection charges

- a) Where you have applied for a *micro embedded generator basic connection service* via your retailer, you must pay the *connection charges* and any other charges payable in accordance with the Agreement, via your retailer.
- b) Where you have applied directly to *us* for a *micro embedded generator basic connection service*, you must pay the *connection charges* in accordance with the invoice provided by *us* to you by the due date. You may make payment to *us* by providing *us* with your credit card details. If you wish to make payment via a different method please contact *us* (via the contact details set out in the

<sup>6</sup> <https://www.jemenasolar.com.au/electricity/solar-and-other-technologies/emergency-backstop-mechanism/>



Introduction of this *model standing offer*) to discuss payment options. If any other amounts are payable in accordance with the *Agreement* (e.g. *meter service charges*, energisation fees), *you* will be required to make payment of such amounts to *us* via *your retailer*.

- c) For the avoidance of doubt, we are entitled to charge amounts other than *connection charges*, which may apply to *you*, such as:
  - i) For wasted attendance or after-hours appointment, or
  - ii) Energisation of *your* premises, or
  - iii) Costs of providing any metering service required.

## 6.2 Appointment of retailer and energisation

- a) If *you* have made an *application* directly to *us* (not through a *retailer*), the energisation of the *connection point* and supply of electricity to the *supply address* will not commence until:
  - i) *You* have entered into a contract with a *retailer* of *your* choice for the *supply address*, and
  - ii) The *retailer* has requested the energisation of *your supply address*.
- b) *You* will need to pay an additional fee for energisation at the rates set out in *our Distribution Services Price Schedule*. The additional fee is not included in the *connection charges*. *We* will bill *you* for these amounts via *your retailer*.

For completeness, where *you* made an *application* to *us* via *your retailer* and energisation is requested, *we* will *energise* the *connection* at the time of undertaking the *micro embedded generator basic connection service*.

## 6.3 Your maximum allocated capacity

- a) *You* must ensure that the demand for electricity at *your supply address* does not exceed the *maximum allocated capacity*.
- b) If *you* wish to increase *your maximum allocated capacity*, *we* may charge *you* for the cost of any necessary works to *our* distribution network in accordance with *our customer connection policy* and under a separate agreement (that is, because such works will not fall within the scope of this *model standing offer*).

## 6.4 Provision of information

*You* must:

- a) Provide *us* with the information as set out in the Micro Embedded Generator Emergency Backstop Procedures or otherwise requested by *us*, required for the purposes of clause 5.1 a).
- b) Provide *us* with all information about any risks, hazards or other actual or potential concerns that could impact in any way on the nature, cost or timing of any aspect of the *micro embedded generator basic connection service* to be provided under the *Agreement*, as early as possible before *we* commence providing the *micro embedded generator basic connection service*.
- c) Provide *us* with all other information that *we* may reasonably require at any time for the purposes of the *Agreement*
- d) Ensure that all information *you* provide *us* is correct and *you* must not mislead or deceive *us* in relation to any information provided, and
- e) Notify *us* immediately if any information that *you* have previously provided to *us* is no longer accurate in any respect.

## 6.5 Preliminary works

*You* must, at *your* expense, provide all necessary preliminary work (if any) at or near the *supply address* that *we* require to be carried out before *we* will provide the *micro embedded generator basic connection service*.

## 6.6 Metering

The *connection* must be metered. The meter must be a bi-directional meter which measures both the import and export of electricity. If *your retailer* is responsible for providing the meter, the meter must be installed at the *supply address* before *we* are obliged to provide the *micro embedded generator basic connection service*.

## 6.7 Compliance with *safety and technical requirements* and *Service Installation Rules*

- a) Where any electrical work is required to be undertaken (including any installation of, or alteration to, a *micro embedded generator* at the *supply address* by *you* or on *your behalf* *you* must ensure that such works are carried out:
  - i) Only by a person with the necessary *qualifications*, and
  - ii) In accordance with all *safety and technical requirements*.
- b) In respect of any such electrical work, *you* or *your retailer* must provide *us*, upon written request with relevant certificates including a *Micro Embedded Generator Connection Application Form*, *Prescribed Certificate of Electrical Safety* and/or an *Electrical Works Request Form* supplied by *your registered electrical contractor*.

## 6.8 Safe and unhindered access and protection of our equipment

- a) *You* must provide *our* representatives at all times (provided official identification is produced by *our* representatives if requested) with convenient, safe and unhindered access to:
  - i) The *supply address* and any other sites necessary to complete the *micro embedded generator basic connection service*
  - ii) *Our* equipment for any purpose associated with the *connection*, metering or billing of electricity, and
  - iii) *Your* electrical installation for the purpose of inspection or testing, or connecting, disconnecting or reconnecting supply.
- b) *You* must provide sufficient space at the *supply address* to accommodate *our* assets, *you* must protect *our* assets from harm and *you* agree not to tamper with, adjust, disconnect, by-pass, interfere with or otherwise damage or render inoperable or inaccurate the metering equipment and *you* must use *your* best endeavours to ensure that no other person does so or attempts to do so.

## 6.9 Additional obligations for *micro embedded generators*

### 6.9.1 Technical and safety requirements

*You* must:

- a) Ensure that the installation of the *micro embedded generator* and its *connection* to *our distribution system* complies, and continues to comply with, all *Laws and safety and technical requirements* (in particular *DER Technical Standards* and the *Micro Embedded Generator Emergency Backstop Procedures*, and that all related equipment necessary to the function of the *micro embedded generator* is connected in accordance with AS 3000 – Wiring Rules)
- b) Ensure that inverters are installed by an installer accredited under the *Solar Accreditation Australia* accreditation scheme<sup>7</sup> (or any replacement scheme)
- c) Ensure that inverters comply with the *DER Technical Standards* and are approved for installation under the Renewable Energy Certificate scheme, have volt-watt and volt-var response capability and protection functions enabled and are approved for installation by the CEC (or any replacement approval body)
- d) Ensure that the standard inverter protection settings in Schedule 1 are applied
- e) Ensure that the *micro embedded generator* is connected to a dedicated circuit complete with lockable isolating switch at the switchboard

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<sup>7</sup> <https://saaustralia.com.au/about-accreditation/>



- f) Ensure that the main switchboard, isolating fuse / switch circuit breaker are labelled correctly and alternative supply signage has been installed
- g) Ensure that commission tests as specified in the *Service Installation Rules* are satisfactorily completed
- h) Ensure that the *micro embedded generator* remains switched off until any metering upgrades or reconfiguration is complete
- i) Ensure that the *micro embedded generator* is maintained in a safe condition
- j) Ensure that *you* retain comprehensive maintenance records for work performed on the *micro embedded generator*
- k) Ensure that the *micro embedded generator* is installed and maintained in accordance with the manufacturer's instructions and specification by a *registered electrical contractor* to ensure that the *micro embedded generator* remains safe and functional at all time
- l) Ensure that *you* immediately disconnect, or arrange for disconnection of, the *micro embedded generator* from our *distribution system* if the safety features of the *micro embedded generator* are not functioning properly. *You* must not reconnect *your micro embedded generator* until the lack of functionality of the safety features of the *micro embedded generator* have been rectified
- m) Understand how to operate and maintain the *micro embedded generator* and must not operate or maintain the *micro embedded generator* in a way which:
  - i) causes, or may cause, any damage or loss to *our distribution system*
  - ii) compromises the safe and reliable operation of *our distribution system*, or
  - iii) interferes with the continuity or quality of the electricity supply provided by *us*.
- n) Promptly comply with an instruction given by *us* or *our* authorised representatives in relation to the disconnection of any *micro embedded generator* from *our distribution system*. *We* may disconnect the *micro embedded generator* from *our distribution system* or instruct *you* to do so in any circumstance which *we* are entitled, or obligated, to interrupt the supply of electricity.
- o) Ensure that your *micro embedded generator* continues to be:
  - i) *Emergency backstop enabled*; or
  - ii) *An Exempt Unit*,
 and upon becoming aware of any breach of this obligation, take immediate action to rectify the breach.
- p) Promptly comply with any request by *us* to enable *us* to monitor continued compliance of *your micro embedded generator* with applicable *Laws* and *our* ongoing capability to remotely interrupt or curtail *your* supply into *our distribution system*.
- q) Ensure that you comply with the *Micro Embedded Generator Emergency Backstop Procedures*.

#### 6.9.2 Maximum generating capacity

*You* must ensure that *you* do not:

- a) Install and connect a *micro embedded generator* with total generating capacity exceeding the *maximum generating capacity* to *our distribution system*, or
- b) export to *our distribution system* any amount exceeding your *export limit*.

#### 6.9.3 Low static export limit

If your *micro embedded generator* is an *Exempt Unit*, the *low static export limit* applies.

## 7. Termination

- a) We may terminate the *Agreement* upon written notice in any of the following circumstances:
  - i) The *site information* provided is inaccurate and as a result the terms of the *Agreement* are no longer considered by us to be appropriate in light of the correct *site information*
  - ii) You have failed to comply with one or more of the *Pre-Conditions*
  - iii) You have indicated that you require an *expedited connection* but we notified you that a *micro embedded generator basic connection service* is not appropriate for your application or the supply address, or
  - iv) The *connection works* have not commenced within 90 days of receipt of the *application* by us because of circumstances within your reasonable control.
- b) If the *Agreement* ends before the *micro embedded generator basic connection service* has been provided to you we may disconnect, dismantle, decommission and remove any of the *premises connection assets* that are only relevant to the *micro embedded generator basic connection service*.

## 8. Limitation of liability

### 8.1 General

- a) To the extent permitted by *Law* (and subject to clause 8.2 below) our liability to you is as follows:
  - i) No warranties, guarantees, undertakings or conditions are implied into the *Agreement* and, except where expressly stated in the *Agreement*, we give no warranties, guarantees, undertakings or conditions and make no representation to you about the condition, suitability, quality, fitness or safety of any electricity supplied or of our *micro embedded generator basic connection services* or the *connection works*.
  - ii) Our liability (if any) arising from, or in connection with, any failure to comply with any *Law* or any consumer guarantee is limited, as far as the *Law* permits and at our option, to resupplying the goods or services (including the *micro embedded generator basic connection services*), or paying for their resupply.
  - iii) Neither party shall be liable to the other for any *Consequential Loss*.
  - iv) We are not otherwise liable to you unless we have been negligent or acted in bad faith.
  - v) If any *Law* (including sections 119 and 120 of the *National Electricity Law*) provides us with any additional limitations of liability or immunities to those set out in the *Agreement* then nothing in the *Agreement* is intended to, or shall, affect the operation or application of those *Laws*.
  - vi) Any limitations or exclusions of liability in this clause or the *Agreement* apply whether a claim is based on, or arises out of, or in connection with, the *Agreement* or otherwise in contract, tort (including negligence), under any warranty or indemnity, under statute, in equity or otherwise.
- b) Nothing in this clause 8 shall limit any obligation we have to make a *GSL payment* to you due to a failure by us to comply with any applicable guaranteed service level.
- c) To the extent permitted by *Law*, you shall not be liable to us for any *Consequential Loss* caused to us by your acts or omissions in relation to the *micro embedded generator basic connection service*.
- d) Any obligations under the *Agreement* upon a party (i.e. you or us) to pay loss or damage to the other party, shall be reduced to the extent the loss or damage is caused, or contributed to, by the other party.

## 8.2 No representation or warranty as to performance of a *micro embedded generator*

The *connection* of the *micro embedded generator* to our *distribution system* at your *supply address* is subject to fluctuations and interruptions from time to time which may affect your ability to export electricity into our *distribution system* from a variety of reasons and, therefore you acknowledge and agree that:

- a) We are unable to, and do not represent, warrant or guarantee that you, or any person who subsequently acquires the *micro embedded generator*, will be able to export electricity into our *distribution system* at any time; and
- b) Such fluctuations or interruptions may damage the *micro embedded generator* or cause it to malfunction.

## 8.3 Release and indemnity

- a) You release and discharge us from and against any Loss that you may incur which arises out of, or in relation to any:
  - i) Inability, whether partial or total, to export electricity into our *distribution system* at any time, including but not limited to any partial or total failure by us to take supply of electricity from the *micro embedded generator*, except where that failure is caused by our negligence or bad faith, and
  - ii) Malfunction of, or any damage to, the *micro embedded generator* that arises out of, or in relation to, any fluctuations or interruptions from time to time in the connection of the *micro embedded generator* to our *distribution system*, except where that malfunction or damage is caused by our negligence or bad faith.
- b) You agree to indemnify us on demand and hold us harmless from and against any Loss that you incur and which, despite clause 8.2 or 8.3(a), you seek to, or do, recover from us.
- c) Where applicable, the indemnity in this clause 8.3 is to be reduced by an amount which reasonably reflects the extent to which we contribute to such Loss through our negligence, fraud, willful misconduct or breach of laws.

## 9. General

- a) The *Agreement* comprises the entire understanding between you and us. To the extent permitted by Laws, any previous representations are superseded by the *Agreement* and will have no legal effect.
- b) If for any reason any of the terms of the *Agreement* are held to be invalid, illegal or unenforceable by any court or administrative body, all other terms of the *Agreement* will remain in force and effect.
- c) Any reference in the *Agreement* to *Laws* is a reference to the relevant *Laws* as amended or replaced from time to time. References to a “clause” are to clauses in this *model standing offer*.
- d) The *Agreement* will be governed by the Law applicable in Victoria.
- e) Clauses 8 and 9 survive expiration or termination of this *model standing offer*.

## 10. Definitions

The terms set out below have the following meanings wherever used in this *model standing offer*:

**AER**—means the Australian Energy Regulator.

**Application**—means any application made by you (including via your agent or your retailer) for a *micro embedded generator basic connection service*.

**Agreement**—means the contract between you and us for provision of a *micro embedded generator basic connection service* comprising the documents referred to in clause 3 of this *model standing offer*, and includes this *model standing offer*.

**Basic connection services**—means a *connection service* which involves a new *connection* or a *connection* alteration for which a *model standing offer* has been approved by the AER and that does not involve any *micro embedded generator*.

**Business day(s)**—means a day (not being a Saturday or Sunday) or a public holiday appointed under the Public Holidays Act 1993 (Vic).

**CEC**—means the Clean Energy Council Limited

**Connection**—means a physical link between *our distribution system* and the *supply address of your micro embedded generator* to allow the flow of electricity via the *premises connection assets*.

**Connection charges**—means the amount that *you* must pay for the provision of the *micro embedded generator basic connection service*.

**Connection date**—means the date on which *we* agree to complete the *connection works*.

**Connection point**—means the point where the *customer's* electrical installation is *connected* to *our distribution system*.

**Connection work(s)**—means all works undertaken by *us* in providing the *micro embedded generator basic connection service*.

**Consequential Loss**—means any Loss which does not arise naturally according to the usual course of things, including (but not limited to):

- a) indirect, special or consequential loss or damage;
- b) loss of opportunity, revenue, profit or anticipated profit, contracts, or goodwill,
- c) loss arising from business interruption; or
- d) liability arising out of or in connection with pollution or contamination,

but does not include any Direct Loss.

**CSIP-AUS**—means the Common Smart Inverter Profile Australia Technical Standard, SA TS 5573:2025, published by Standards Australia June 2025 and as amended from time to time or if superseded, the document(s) listed by Standards Australia as superseding the Standards Australia Technical Standard 5573:2025. SA TS 5573:2025 supersedes SA HB 218:2023, however SA HB218:2023 will remain current for 12 months from 27 June 2025.

**Curtail**—means limiting the export of electricity from an embedded generating unit into the distribution system.

**Customer**—means the customer identified in the *application*.

**Customer connection policy**—means *our* customer connection policy required to be published under Chapter 5A of the *National Electricity Rules*, as published on *our* website.<sup>8</sup>

**Deemed Acceptance Date**—means the day an *expedited connection* is taken to have been accepted in accordance with clause 3 of this *model standing offer*.

**Deemed Standard Distribution Contract**—means *our* deemed standard contract for supply of electricity published on *our* website, as amended from time to time.<sup>9</sup>

**DER**—means Distributed Energy Resources.

**DER Technical Standards**—means the requirements for a *micro embedded generator* under Australian Standards AS4777.1:2016, AS4777.2:2020 and the *CSIP-AUS* as in force from time to time.

**Direct Loss**—means the actual, direct and foreseeable Losses incurred by a party which arise naturally according to the usual course of things and includes Loss of *us* or *our* customers due to damage to or interference with *our* assets or electricity distribution network.

**Distribution Services Price Schedule**—means *our* schedule of charges which have been approved by the AER. A copy of our Distribution Services Price Schedule<sup>10</sup> can be accessed on *our* website or a printed copy can be obtained by contacting *us* via the contact details set out in this *model standing offer*.

**Distribution system**—means *our distribution system*, including any connection assets, where relevant.

**Electrical Works Request Form**—means the Electrical Works Request Form for new and existing installations which provides certification that the electrical work complies certain requirements.

**Electronic business system**—means *our* electricity distribution portal located at connect and manage my

<sup>8</sup> <https://www.jemena.com.au/electricity/new-connections/negotiated-connections/>

<sup>9</sup> [www.jemena.com.au/about/document-centre/electricity/deemed-standard-distribution-contract](https://www.jemena.com.au/about/document-centre/electricity/deemed-standard-distribution-contract)

<sup>10</sup> [www.jemena.com.au/documents/electricity/distribution-services-price-schedule](https://www.jemena.com.au/documents/electricity/distribution-services-price-schedule)

electricity<sup>11</sup>.

**Force majeure event**—means an event outside the control of *us* or *you* (such as, without limitation, natural disasters and acts of God).

**Emergency backstop enabled** means, in relation to a *micro embedded generator*, means:

- (a) able to communicate with *our* utility server via a communication channel that is compliant to *IEEE 2030.5* and *CSIP-AUS* and is hosted:
  - i. on the relevant *micro embedded generator*; or
  - ii. on a gateway device; or
  - iii. via a cloud connection; and
- (b) connected to *our* utility server via the internet – to enable the remote interruption or *curtailment* by *us* of electricity generated by the relevant *micro embedded generator*.

**Exempt Unit**—means a *micro embedded generator* where *we* are satisfied:

- (a) it is in an embedded network and *we* are capable of remotely interrupting or curtailing electricity generation; or
- (b) it is able to communicate via a communication channel that is compliant to *IEEE 2030.5* and *CSIP-AUS* either hosted locally on the inverter, or a gateway device, or via a certified cloud connection, and either:
  - i. there is no onsite internet connectivity; or
  - ii. all of the following apply:
    - A. it is not greater than 30 kVA capacity; and
    - B. it cannot practicably be connected to *our* server via the internet.

**Expedited connection**—means *you* have submitted a complete *application* for a *micro embedded generator basic connection service* which has been accepted by *us* and *you* have indicated in the *application* that *you* agree to accept the terms of this *model standing offer* and do not wish to go through the *offer* and acceptance process.

**Export limit**—means the export capacity limit of the *micro embedded generator* approved by *us* unless varied from time to time by any notice given by *us* to the *retail customer* at the supply address. For avoidance of doubt, *the export limit* must not exceed 5kVA per phase (or 15kVA per three-phase) at the *connection point*. Where the *low static export limit* is applicable, references to the *export limit* are replaced with the *low static export limit* as appropriate.

**GSL Payment**—means the guaranteed service level payments required to be made by *us* in the circumstances, and at the rates and maximum amounts, set out in the Electricity Distribution Code of Practice as may be amended from time to time.

**Host Retailer**—means the retailer as advised by *us* from time to time. Please contact *us* for details of the applicable host retailer.

**IEEE 2030.5 CSIP-AUS**—means the Standard IEEE 2030.5-2018 CSIP-AUS, Institute of Electrical and Electronics Engineers Standard for Smart Energy Profile Application Protocol, as amended from time to time.

**Law or Laws**—means all acts, ordinances, regulations and sub-ordinate legislation applicable to the *Agreement* (including the Competition and Consumer Act 2010 (Cth)), any codes, applicable Australian or international standards, any applicable certificates, licences, consents, permits, notices, orders, directions or approvals of organisations having jurisdiction in relation to the subject matter of the *Agreement* and includes any amendment to such instruments made from time to time.

**Loss**—means any liability, cost, expense, loss or damage (including any cost or expense incurred in connection with a claim).

**Low static export limit**—means a maximum specified capacity to supply into the *distribution system* at all times of day and in all network operating conditions that is lower than, and which replaces, the *Export Limit*, being 0.5kw as of 1 October 2024 (as amended from time to time).

**Maximum allocated capacity**—means *your* maximum allocated capacity for a *basic connection service* will

<sup>11</sup> <https://myservices.jemena.com.au/edp/login/auth>



(unless otherwise agreed in writing) be the lesser of:

- a) 40 amps per phase, or
- b) The rating of the smallest component of *our distribution system* used solely to supply electricity to *your supply address*.

**Maximum generating capacity**—means the total inverter capacity of the *micro embedded generator*, which is less than or equal to 10kVA per phase (or 30kVA per three-phase).

**Meter service charges**—means that we are supplying a meter the meter service charge that recovers *our* capital and operating metering costs (as determined by the rates fixed by the AER).

**Micro Embedded Generator Emergency Backstop Procedures**<sup>12</sup>—means the procedures published by *us* from time to time on *our* website setting out the processes relevant to emergency backstop requirements (such as procedures or requirements for testing, installation settings and commissioning of new units) and any further specifications we may require (such as a list of improved approved inverters which must be complied with), including to confirm to *our* satisfaction that the *micro embedded generator* is and remains compliant with relevant *Law*.

**Micro embedded generator**—means an embedded generator unit or units (including an inverter or inverters and any related equipment essential to its functioning as a single entity or any requirements of the kind contemplated by the *DER Technical Standards*) for which *basic micro embedded generator connection services* are required (e.g. solar panels, wind generators, battery storage).

**Micro embedded generator basic connection service**—means a *connection* or a *connection alteration* involving *micro embedded generator* and which is set out in Schedule 1 to this *model standing offer* and which also meets the following qualifying conditions:

- a) No augmentation, replacement or extension of *our distribution system* is required
- b) There is an adequate network capacity available at the required voltage at or near the boundary of the *supply address* to accommodate the new *connection* or *connection alteration* that includes a *micro embedded generator*
- c) The *maximum generating capacity* and the *maximum allocated capacity* will not be exceeded
- d) Where applicable, the required overhead clearances (as detailed in section 7—Connecting to the Low Voltage (LV) Network of the *Service Installation Rules*) must be able to be achieved and maintained for an overhead connection and there must be no excessive property crossing, and
- e) The *connection* must be metered.

**Micro Embedded Generator Connection Application Form**—means the Application for Micro Embedded Connection Services which is available on *our* website.

**Model standing offer**—for *micro embedded generator basic connection services* means the terms and conditions set out in this document and any attachments to this document.

**National Electricity Law**—means the Schedule to the National Electricity (South Australia) Act 1996 (SA), which applies as a law of Victoria, in accordance with section 6 of the National Electricity (Victoria) Act 2005 (Vic).

**National Electricity Rules**—has the same meaning as it has in the National Electricity Law.

**Negotiated connection service**—means services provided under a negotiated connection contract agreed in accordance with Part C, Chapter 5A of the *National Electricity Rules*.

**Offer**—means the offer made by *us* to *you* (in accordance with clause 3 of this *model standing offer*) to provide a *micro embedded generator basic connection service* and which comprises a written *offer* and this *model standing offer*.

**Our, we, us or Jemena**—means Jemena Electricity Network (Vic) Limited (ABN 82 064 651 083) and, as applicable, *our* contractors, subcontractors or agents.

**Pre-Conditions**—means the pre-conditions set out in clause 5.1(a) which *you* must satisfy before *we* are required to provide *you* with a *micro embedded generator basic connection service*.

**Premises connection assets**—means the components of *our* distribution network used to provide a *micro embedded generator basic connection service* to *you* which includes, without limitation:

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<sup>12</sup> <https://www.jemena.com.au/electricity/solar-and-other-technologies/emergency-backstop-mechanism-documents/>



- a) For an overhead *connection* – the service line from *our* power pole to the *supply address* and the fused overhead line *connection box*, or
- b) For an underground *connection* – the underground service pit.

**Prescribed Certificate of Electrical Safety**—means the Prescribed Certificate of Electrical Safety which is available on Energy Safe Victoria's website.<sup>13</sup>

**Qualifications**—means a *registered electrical contractor* or any alternative qualification accepted or agreed to by Energy Safe Victoria.

**Registered electrical contractor**—means any person in the business of electrical contracting or offering to contract who is registered by Energy Safe Victoria as an electrical contractor.

**Retail customer**—has the same meaning as in the National Electricity Law (that is, a person to whom electricity is sold by a *retailer*).

**Retailer**—means a person who holds, or is exempt from holding, a retail licence to sell electricity (other than through the wholesale electricity market) under the Electricity Industry Act 2000 (Vic).

**SAA**—means the Solar Accreditation Australia Limited.

**Safety and Technical Requirements**—includes the Electricity Industry Act 2000 (Vic), the Electricity Safety Act 1998 (Vic), the Essential Services Commission Act 2001 (Vic), the National Electricity (Victoria) Act 2005 (Vic), the National Electricity (Victoria) Further Amendment Act 2016, the *National Electricity Rules*, the Occupational Health and Safety Act 2004 and any regulations or determinations under those Acts (including the Electricity Safety (Installation) Regulations 2009, Electricity Safety (Electric Line Clearance) Regulations 2010 (Vic) and the Occupational Health and Safety Regulations 2007), the National Electricity Law, any codes (including the Electricity Distribution Code of Practice), the Victorian *Service Installation Rules*, the Victorian Electricity Supply Industry (VESI) The Green Book 2013, VESI Fieldworkers Handbook 2008, VESI Skills and Training Guideline 2016, VESI Installation Supply Connection Test & Procedures 2016, VESI Tasks for the Application of Safe Approach Distance – Special, any order (including Orders in Council G17, G33 and G36 and Special Gazette No. S 31 published in the Victoria Government Gazette on Wednesday 31 January 2024), or other instrument applying from time to time in Victorian to the electricity market, any order or certification of the ESC, WorkSafe or other government or regulatory body have jurisdiction over the electricity industry or the subject matter of the Agreement, AS2467 – Maintenance of Electrical Switchgear, AS/NZS3000:2007 – Australian/New Zealand Wiring Rules, AS/NZS61000 – Electromagnetic Compatibility, AS4777 – Grid Connection of Energy Systems via Inverters, AS/ANZS 5033:2012 – Installation of Photovoltaic (PV) Arrays, AS/NZS3760 – In-Service Safety Inspection and Testing of Electrical Equipment, Standard IEEE 2030.5 IEEE 2030.5 -, Common Smart Inverter Profile Australia, SA TS 5573:2025 (or SA HB 218:2023 Handbook until 27 June 2026), any guidelines (including the Solar Accreditation Australia (SAA) webpage - Accreditation and Compliance sections) and any other *Law*, statute, regulation, proclamation, order in council, direction, tariff, guideline or standard which can be enforced by *Law* or by a regulatory authority applicable to the electricity industry or to the subject matter of the Agreement, Jemena internal guidelines (including AMI Electricity Meter Installation, Configuration & Commissioning (ELE PR 1501), Customer Installation Defect Management Procedure (ELE PR 1408), Work Instruction / Meter Installation –fixing screws (ELE WI 1522), Jemena Electricity Network Asbestos Management Plan (JEN PL 3001), Jemena Electricity Network Environmental Management Plan (JEN PL 0061), Testing of Connections and Energisation of Customer Supplies (ELE PR 0023), Jemena Sub-Contractor Engagement Guide for Works on Jemena Electricity Network (ELE GU 0015), any other requirements we may advise *you* of from time to time and includes any amendment to, or replacement of, such instruments from time to time.

**Service Installation Rules**<sup>14</sup>—means the Victorian Services and Installation Rules with which all *connections* or proposed *connections* to *Jemena's distribution system* must comply with as a condition of acquiring and maintaining an electricity supply.

**Site information**—means the site details provided in *your application* about the *supply address*.

**Supply address**—means a single premise located at an address and identified in the *application*.

**Standard connection service**—means a connection service (other than a *basic connection service*, *micro embedded generator basic connection service* or *negotiated connection service*) for a particular class (or sub-class) of *connection applicant* for which a *model standing offer* has been approved by the *AER*.

<sup>13</sup> <https://www.energysafe.vic.gov.au/coes>

<sup>14</sup> [www.victoriansir.org.au/Forms.aspx](http://www.victoriansir.org.au/Forms.aspx)

**You and your**—means a *retail customer* identified in the *application*.

**Your Obligations** —means the requirements set out in clause 6 of this *model standing offer*.

## SCHEDULE 1 – DESCRIPTION OF JEMENA’S MICRO EMBEDDED GENERATOR BASIC CONNECTION SERVICES

### **Micro embedded generator basic connection services – new connections**

| Category                                            | Service description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New connection involving a micro embedded generator | <p>Establish a new <i>connection</i> involving the establishment of a permanent or temporary <i>connection</i> (either single or three-phase) with a total capacity of less than 100 Amps per phase that is either:</p> <ul style="list-style-type: none"> <li>a) A physical <i>connection</i> between an agreed <i>connection</i> point at the <i>supply address</i> and <i>our distribution system</i> that comprises an overhead single span service cable from an existing pole where the length of the service cable does not exceed 45 metres in total and does not exceed 20 metres over <i>your</i> property at the <i>supply address</i>, or</li> <li>b) A physical <i>connection</i> between the <i>supply address</i> and <i>our distribution system</i> via an underground electricity cable where the <i>connection</i> point is in an existing service pit located at <i>your</i> property boundary at the <i>supply address</i>,</li> </ul> <p>where such <i>connection</i> involves the installation of a <i>micro embedded generator</i> at the <i>supply address</i>.</p> |

### **Micro embedded generator basic connection services – existing connections**

| Category                                                         | Service description                                                                                                                                      |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Addition of a micro embedded generator to an existing connection | Alter an existing meter installation as a result of installation of a new <i>micro embedded generator</i> being installed at the <i>supply address</i> . |

### **Micro embedded generator basic connection services – connection alterations**

| Category                                                                                   | Service description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alteration to existing connection (where a micro embedded generator is already installed). | <p>Alter an existing <i>connection</i> which may involve any of the following:</p> <ul style="list-style-type: none"> <li>a) A <i>connection</i> upgrade from single phase to three-phase supply of less than 100 Amps</li> <li>b) A <i>connection</i> upgrade of the service fuse of less than 100 Amps</li> <li>c) Relocation of existing premises <i>connection</i> assets, or</li> <li>d) Alteration of a <i>micro embedded generator</i> where the <i>maximum generating capacity</i> is less than or equal to 10 kVA per phase (or 30 kVA per three-phase) and an <i>export limit</i> must not exceed 5 kVA (or 15 kVA per three-phase) unless otherwise agreed in writing,</li> </ul> <p>where such <i>connection</i> involves an existing <i>micro embedded generator</i> at the <i>supply address</i>.</p> |

### **Micro embedded generator basic connection services – Key Technical and Settings Requirements**

| Category                | Requirement                                                                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total inverter capacity | The maximum total inverter capacity of the <i>micro embedded generator</i> installed at the <i>supply address</i> must not exceed 10 kVA per phase (or 30 kVA per three-phase). |

| Maximum export with <i>Emergency Backstop Enabled</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | The maximum export of the <i>micro embedded generator</i> installed at the <i>supply address</i> must not exceed 5 kVA per phase (or 15 kVA per three-phase), measured at the <i>connection point</i> .                                                                                                                                                                                                                  |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------|--------------------|-----------------|-----------------|-----------------|-------------|---------------------------------------------|------------------------------------------------------------------------|-------|-------|-------|
| Maximum export for <i>Exempt Unit</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | The maximum export of the <i>micro embedded generator</i> installed at the <i>supply address</i> must not exceed 0.5 kVA total ( <i>low static export limit</i> ), measured at the <i>connection point</i> .                                                                                                                                                                                                             |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Maximum export under loss of internet connectivity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | The maximum export of the <i>micro embedded generator</i> installed at the <i>supply address</i> must not exceed 0.5 kVA total ( <i>low static export limit</i> ), measured at the <i>connection point</i> .                                                                                                                                                                                                             |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| DER Technical Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>The inverter must comply with or meet the technical and functional requirements of AS/NZS 4777.2, as in force at the date of installation.</p> <p>For the avoidance of doubt, the <i>micro embedded generator</i> must be compliant with the <i>DER Technical Standards</i>.</p> <p>The inverter shall be set to Australia A settings for operational modes and multiple mode inverter, and protective functions.</p> |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Voltage response modes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The inverter shall be set to Australia A settings as per clauses 3.3.2 and 3.4.3 of AS/NZS 4777.2.                                                                                                                                                                                                                                                                                                                       |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Volt-Watt Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | The volt-watt response default set-point values for all inverters must be set at:                                                                                                                                                                                                                                                                                                                                        |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <table><tr><th>Region</th><th>Default value</th><th>V<sub>W1</sub></th><th>V<sub>W2</sub></th></tr><tr><td rowspan="2">Australia A</td><td>Voltage</td><td>253 V</td><td>260 V</td></tr><tr><td>Inverter maximum active power output level (P) % of S<sub>rated</sub></td><td>100 %</td><td>20 %</td></tr></table>                                                                                                       | Region                                                                 | Default value      | V <sub>W1</sub>    | V <sub>W2</sub> | Australia A     | Voltage         | 253 V       | 260 V                                       | Inverter maximum active power output level (P) % of S <sub>rated</sub> | 100 % | 20 %  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Region                                                                                                                                                                                                                                                                                                                                                                                                                   | Default value                                                          | V <sub>W1</sub>    | V <sub>W2</sub>    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Australia A                                                                                                                                                                                                                                                                                                                                                                                                              | Voltage                                                                | 253 V              | 260 V              |                 |                 |                 |             |                                             |                                                                        |       |       |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                          | Inverter maximum active power output level (P) % of S <sub>rated</sub> | 100 %              | 20 %               |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Source: AS4777.2:2020, Table 3.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| The inverter’s volt-watt response set-point values for all multiple mode inverters with energy storage when charging must be set at:                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| <table><tr><th>Region</th><th>Default value</th><th>V<sub>W1-ch</sub></th><th>V<sub>W2-ch</sub></th></tr><tr><td rowspan="2">Australia A</td><td>Voltage</td><td>207 V</td><td>215 V</td></tr><tr><td>P<sub>charge</sub> / P<sub>rated-ch</sub></td><td>20 %</td><td>100 %</td></tr></table> <p>Note 1: P<sub>charge</sub> refers to power input level through the grid-interactive port.</p> <p>Note 2: P<sub>rated-ch</sub> refers to the rated active power input through the grid-interactive port used for charging the energy storage</p> | Region                                                                                                                                                                                                                                                                                                                                                                                                                   | Default value                                                          | V <sub>W1-ch</sub> | V <sub>W2-ch</sub> | Australia A     | Voltage         | 207 V           | 215 V       | P <sub>charge</sub> / P <sub>rated-ch</sub> | 20 %                                                                   | 100 % |       |       |
| Region                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Default value                                                                                                                                                                                                                                                                                                                                                                                                            | V <sub>W1-ch</sub>                                                     | V <sub>W2-ch</sub> |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Australia A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Voltage                                                                                                                                                                                                                                                                                                                                                                                                                  | 207 V                                                                  | 215 V              |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | P <sub>charge</sub> / P <sub>rated-ch</sub>                                                                                                                                                                                                                                                                                                                                                                              | 20 %                                                                   | 100 %              |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Source: AS4777.2:2020, Table 3.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                        |                    |                    |                 |                 |                 |             |                                             |                                                                        |       |       |       |
| Volt-VAr Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>The inverter’s volt-var response set-point values for all inverters must be set at:</p> <table><tr><th>Region</th><th>Default value</th><th>V<sub>V1</sub></th><th>V<sub>V2</sub></th><th>V<sub>V3</sub></th><th>V<sub>V4</sub></th></tr><tr><td>Australia A</td><td>Voltage</td><td>207 V</td><td>220 V</td><td>240 V</td><td>258 V</td></tr></table>                                                                | Region                                                                 | Default value      | V <sub>V1</sub>    | V <sub>V2</sub> | V <sub>V3</sub> | V <sub>V4</sub> | Australia A | Voltage                                     | 207 V                                                                  | 220 V | 240 V | 258 V |
| Region                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Default value                                                                                                                                                                                                                                                                                                                                                                                                            | V <sub>V1</sub>                                                        | V <sub>V2</sub>    | V <sub>V3</sub>    | V <sub>V4</sub> |                 |                 |             |                                             |                                                                        |       |       |       |
| Australia A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Voltage                                                                                                                                                                                                                                                                                                                                                                                                                  | 207 V                                                                  | 220 V              | 240 V              | 258 V           |                 |                 |             |                                             |                                                                        |       |       |       |

|                                                                  |                                                                                                                                                                                                         |                                                    |                         |     |                            |                         |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------|-----|----------------------------|-------------------------|
|                                                                  |                                                                                                                                                                                                         | Inverter reactive power level (Q) % of $S_{rated}$ | 44 % supplying (export) | 0 % | 0 %                        | 60 % absorbing (import) |
| Source: AS4777.2:2020, Table 3.7                                 |                                                                                                                                                                                                         |                                                    |                         |     |                            |                         |
| Phase unbalance                                                  | A multi-phase inverter energy system shall have a balanced output with respect to its rating with a tolerance of no greater than 5 kVA unbalance between any phases as per clause 2.3 of AS/NZS 4777.1. |                                                    |                         |     |                            |                         |
| Active anti-islanding protection                                 | The active anti-islanding protection system shall operate the automatic disconnection device within 2 seconds of disruption to the power system from the grid                                           |                                                    |                         |     |                            |                         |
| Voltage and frequency limits (passive anti-islanding protection) | The inverter shall be set to Australia A settings as per clause 4.4 of AS/NZS 4777.2.                                                                                                                   |                                                    |                         |     |                            |                         |
| Passive anti-islanding voltage limits                            | The inverter shall be enabled with passive anti-islanding voltage limit values (Australia A settings) as set out below.                                                                                 |                                                    |                         |     |                            |                         |
|                                                                  | Protective function                                                                                                                                                                                     | Protective function limit                          | Trip delay time         |     | Maximum disconnection time |                         |
|                                                                  | Under-voltage 2 ( $V_{<<}$ )                                                                                                                                                                            | 70 V                                               | 1 s                     |     | 2 s                        |                         |
|                                                                  | Under-voltage 1 ( $V_{<}$ )                                                                                                                                                                             | 180 V                                              | 10 s                    |     | 11 s                       |                         |
|                                                                  | Over-voltage 1 ( $V_{>}$ )                                                                                                                                                                              | 265 V                                              | 1 s                     |     | 2 s                        |                         |
|                                                                  | Over-voltage 2 ( $V_{>>}$ )                                                                                                                                                                             | 275 V                                              | -                       |     | 0.2 s                      |                         |
| Source: AS4777.2:2020, Table 4.1                                 |                                                                                                                                                                                                         |                                                    |                         |     |                            |                         |
| Passive anti-islanding frequency limits                          | The inverter shall be enabled with passive anti-islanding frequency limit values (Australia A settings) as set out below.                                                                               |                                                    |                         |     |                            |                         |
|                                                                  | Protective function                                                                                                                                                                                     | Protective function limit                          | Trip delay time         |     | Maximum disconnection time |                         |
|                                                                  | Under-frequency 1 ( $F_{<}$ )                                                                                                                                                                           | 47 Hz                                              | 1 s                     |     | 2 s                        |                         |
|                                                                  | Over-frequency 1 ( $F_{>}$ )                                                                                                                                                                            | 52 Hz                                              | -                       |     | 0.2 s                      |                         |
| Source: AS4777.2:2020, Table 4.2                                 |                                                                                                                                                                                                         |                                                    |                         |     |                            |                         |
| Sustained operation for voltage variations                       | The inverter shall operate the automatic disconnection device within 3 seconds when the average voltage for a 10-minute period exceeds 258 V ( $V_{nom-max}$ ).                                         |                                                    |                         |     |                            |                         |
| Sustained operation for frequency variations                     | The inverter shall be capable of supplying rated power between 45 Hz and 52 Hz.                                                                                                                         |                                                    |                         |     |                            |                         |
|                                                                  | Where the inverter is a multiple mode inverter connecting an energy storage system, it shall be capable of charging the energy storage from the grid-interactive port between 49.5 Hz and 55 Hz.        |                                                    |                         |     |                            |                         |
|                                                                  | The inverter shall maintain continuous operation for frequency variations within the limits specified in Table 4.4 and respond as defined in Table 4.5 of AS/NZS 4777.2:2020, and                       |                                                    |                         |     |                            |                         |

|                                     | shall be configured with Australia A settings nominated in Tables 4.4 and 4.5 of AS/NZS 4777.2:2020.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                          |                         |                       |     |   |                      |     |     |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------|-------------------------|-----------------------|-----|---|----------------------|-----|-----|
| Voltage phase angle shift withstand | <p>The inverter shall remain in continuous operation for a single-phase voltage angle shift within a voltage cycle of at least 60 electrical degrees. In addition, three-phase inverter shall remain in continuous operation for a voltage phase angle shift within a voltage cycle, in the positive-sequence, of at least 20 electrical degrees, as shown in the table below.</p> <table><tr><th></th><th>Single-phase disturbance</th><th>Three-phase disturbance</th></tr><tr><td>Single-phase inverter</td><td>60°</td><td>-</td></tr><tr><td>Three-phase inverter</td><td>60°</td><td>20°</td></tr></table> <p>Source: AS4777.2:2020, Table 4.9</p> |                         | Single-phase disturbance | Three-phase disturbance | Single-phase inverter | 60° | - | Three-phase inverter | 60° | 20° |
|                                     | Single-phase disturbance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Three-phase disturbance |                          |                         |                       |     |   |                      |     |     |
| Single-phase inverter               | 60°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -                       |                          |                         |                       |     |   |                      |     |     |
| Three-phase inverter                | 60°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20°                     |                          |                         |                       |     |   |                      |     |     |
| Rate of change of frequency         | The inverter shall maintain continuous operation for frequency excursions with a rate of change of frequency (ROCOF) that do not exceed ± 4.0 Hz/s for a duration of 0.25 s.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                          |                         |                       |     |   |                      |     |     |