



ACN 082 464 622

# **Micro/Small Generator Application Process**

User Guide

**Version 2.0 9/12/10**

**Table of Contents:**

1 Micro and Small Generator Application Process.....3  
Introduction.....3  
Scope .....3  
Process.....3  
    1. Applicant wishes to install a micro or small generating unit.....3  
    2. Applicant returns completed Connection Application Form .....4  
    3. Check Application Details .....4  
    4. Offer to Connect, Connection Agreement and Schedule.....4  
    5. Applicant Returns signed Connection Agreement .....5  
    6. Installer installs generating unit and sends EWR to Aurora.....5  
    7. Check Applicant Signed Connection Agreement.....5  
    8. Aurora arrange meter replacement.....5  
    9. Meter fitted.....5  
    10. Electrical Inspection Notice prepared prior to switching system on .....5  
2 Appendix:.....6  
    1 New Installer/Applicant Process Flow.....6  
    2 Application Form .....7  
    3 Connection Agreement Template .....8  
    4 Offer to Connect – Sample Micro Embedded Generation Connection .....10

# 1 Micro and Small Generator Application Process

## Introduction

Dear Customer, welcome to the application process for Micro and Small Embedded Generation units. As a guide these units include but are not limited to solar panels and small wind generators up to 1 MW.

You have now indicated an interest in embedded generation and exploring the potential for installing an embedded generating unit at your premises. You have joined thousands before you who have taken up the option of installing electricity generation systems and taking advantage of the opportunity to generate your own electricity.

The installation of Embedded Generation units at your premises provides the opportunity for you to reduce your power bills through reduced consumption of electricity from the grid and the ability to generate your own clean electricity.

The following detailed process together with the customer guidelines and technical guidelines will hopefully assist applicants in making an informed decision regarding the purchase, connection and operation of a generating system at their premises.

## Scope

- 0.1 This document outlines the application process to be followed when an applicant wishes to connect a micro or small *generating unit* (examples include wind, solar, mini hydro).

A **micro** generating unit is a generating unit up to 10 kVA (single phase) or 30kVA (three phase) connected to the low voltage (230/400V) distribution network

A **small** generating unit is a generating unit greater than 10 kVA (single phase) or 30kVA (three phase) up to 1MW connected to the Low Voltage 230/400V distribution network.

This process commences at the point an applicant enquires about arranging such a connection, through to the final “switch-on” of the generating unit.

- 0.2 This process does not deal with any approach the applicant should make to their retailer regarding their tariffs or payments, which their retailer may make for any electricity utilised within the distribution network.
- 0.3 A flow chart at the end of the document provides a high level overview of the following process.

## Process

### 1. Applicant wishes to install a micro or small generating unit

- 1.1 The **first step** if you are interested in connecting an embedded generating unit to the distribution network is to either contact Aurora (telephone, letter, e-mail, via retailer, via Customer Services etc – visit [www.auroraenergy.com.au](http://www.auroraenergy.com.au) ) or contact a power installer or an electrical contractor who deals with embedded generating units (Please note Aurora can provide you with a list of Aurora Preferred Renewable Energy Suppliers, who can discuss your requirements). If you the applicant have contacted a power installer or an electrical contractor initially, the installer or contractor will deal with your initial enquiry, which also may include the completion of the Generating Unit Connection Application form (Connection Application form) [See Step 2.0] . In the majority of cases the installer's have managed and submitted the relevant paperwork on the applicant's behalf.

- 1.2 Where Aurora have been contacted by the applicant they will send the applicant a copy of the Micro/Small Generator Application Process and a Connection Application form (including any technical requirements the inverter must meet or if there is no inverter what the generating unit must meet if not already AS 4777 compliant). The letter will advise the applicant that further information can be provided on request or alternatively can be found on the Aurora website listed under "Embedded Generation". Where the applicant has specific enquiries that raise issues regarding their connection, Aurora will respond within **5 business days** of any issues to be resolved or negotiated.

## 2. *Applicant returns completed Connection Application Form*

- 2.1 The applicant returns a completed and signed Connection Application. The applicant may return the form through the Installer or Contractor, provided the applicant's signature is on the form.

## 3. *Check Application Details*

- 3.1 Aurora will confirm that the Connection Application includes approved certification that the inverter or, where there is no inverter, that the generating unit is certified to comply with Aurora's requirements for connection to the distribution network.
- 3.2 Where the generating unit is non-compliant with AS 4777 the applicant must provide documentation confirming that the generating unit is unable to comply with AS 4777, and also certifies that the generating unit will not interrupt the distribution network or other customers; create an occupational health and safety hazard; and meet Aurora's technical requirements.
- 3.3 Aurora may determine that further testing and inspection of the generating unit must be carried out for the purposes of confirming that the generating unit meets AS 4777 and/or Aurora's technical requirements. You will be advised within **5 business days** if Aurora consider further information is required, whether a network study is required and whether any other parties need to be involved in the planning or indeed need to be paid.

## 4. *Offer to Connect, Connection Agreement and Schedule*

- 4.1 If the details provided in the Connection Application Form are correct and adequate certification has been provided (as determined by Aurora) that guarantees the safety of the generating unit connecting to the distribution network and meets Aurora's technical requirements; Aurora can offer a Connection Agreement to the applicant. The details contained in the Connection Application are used to complete the Offer to Connect, the Connection Agreement and Schedule 1 of the Agreement.
- 4.2 The Offer to Connect is sent to the applicant with the Connection Agreement enclosed.
- 4.3 On Page 1 of the Connection Agreement, the applicant's name and a Date Box are placed under the 'Agreed' statement for the applicant to sign and date to indicate they accept the terms of the Agreement.
- 4.4 The Schedule contains the important technical details of the equipment being connected to Aurora's distribution network. The details are taken from the applicant's Connection Application.
- 4.5 The applicant will receive an Offer to Connect and two copies of the Connection Agreement and Schedule within **10 business days** of

receipt of the applicant's completed application. The applicant is requested to **sign both copies** of the Connection Agreement if they accept the terms of the Agreement. The applicant is asked to return both signed copies of the Connection Agreement to Aurora.

5. *Applicant Returns signed Connection Agreement*

5.1 Applicant completes, signs and returns both copies of the Connection Agreement.

6. *Installer installs generating unit and sends EWR to Aurora*

6.1 The installer may then install the *generating unit*.

6.2 The installer is required to send an Electrical Works Request (EWR) to Aurora to allow Aurora to fit an import/ export meter. This must occur prior to the installer switching the generating unit on.

7. *Check Applicant Signed Connection Agreement*

7.1 On receipt of the signed Connection Agreements Aurora checks that the Agreed Statement has been signed and dated on each copy.

7.2 Aurora will match received Connection Agreement against received EWR.

7.3 Where there is a match Aurora will sign each Connection Agreement and return one copy to the applicant for their records.

7.4 If alterations have been made to the technical specification of the generating unit then a new technical assessment and Connection Agreement will have to be prepared and re-sent for the applicant's signature [return to step 4.1].

7.5 If Aurora receive an EWR but have not received a Connection Application form or signed Connection Agreement, Aurora will investigate who the applicant is and ask that they, or their installer submit a Connection Application form and/ or Connection Agreement

[return to step 2.1 regarding the submission of a Connection Application form or step 4.1 regarding an outstanding Connection Agreement]

8. *Aurora arrange meter replacement*

8.1 Provided Aurora has matched the received Connection Agreement and schedule against a received EWR, Aurora will progress the arrangements to have an import/export meter fitted. Please allow for roughly **20 Working days** to have a meter fitted.

9. *Meter fitted*

9.1 Aurora fit the meter and once fitted instruct the Installer to switch the generating unit on.

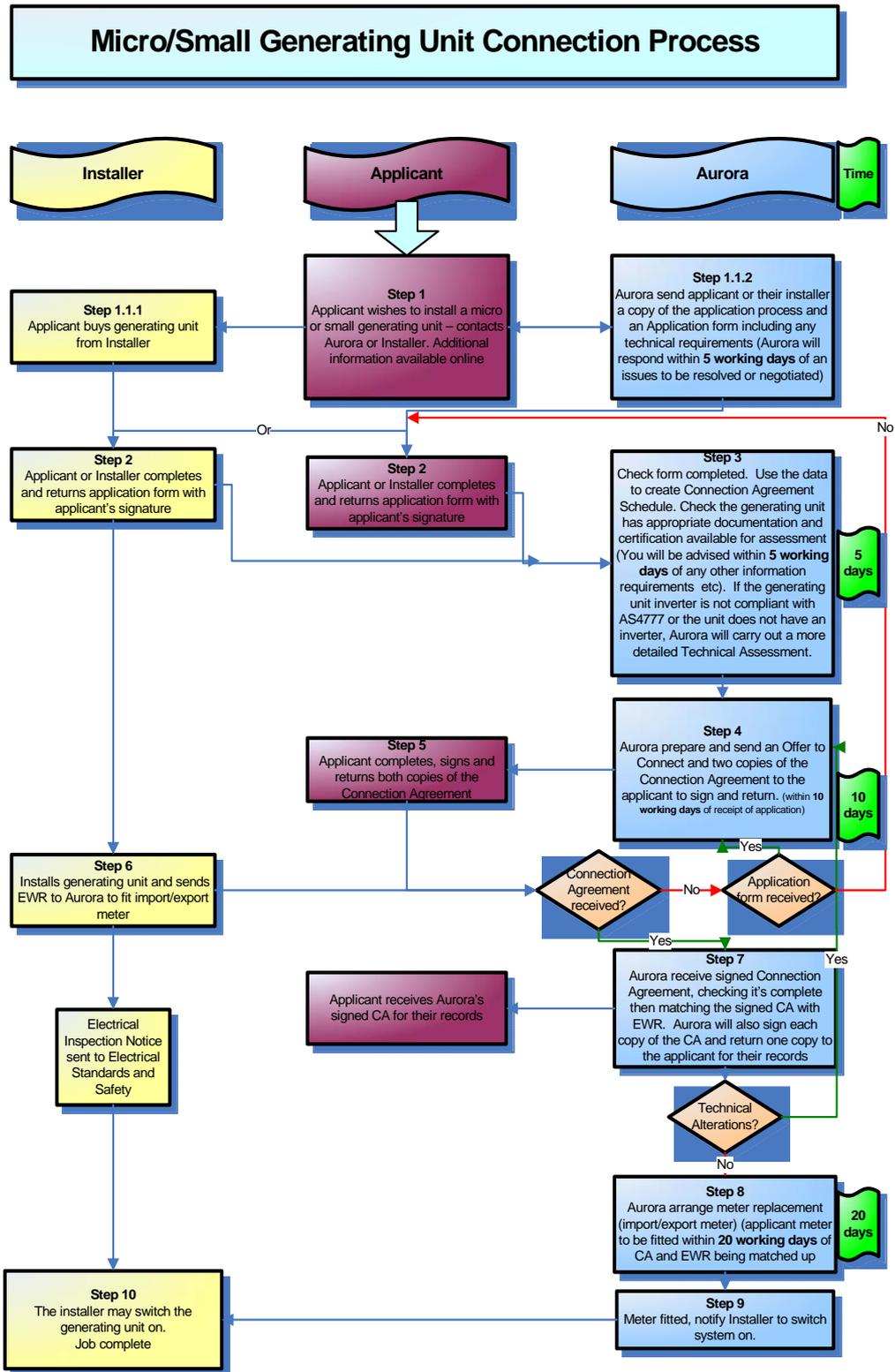
10. *Electrical Inspection Notice prepared prior to switching system on*

10.1 The Installer is responsible for providing an Electrical Inspection Notice (EIN) to Electrical Standards and Safety prior to switching the generating unit on.

**(End of Process )**

## 2 Appendix:

### 1 New Installer/Applicant Process Flow



## Micro/Small Generating Unit Connection Application



***The following information is required to enable Aurora Energy to assess the suitability of the connection of a micro or small generating unit to its electricity distribution network in Tasmania***

### Connection Point

The Connection Point is the agreed point of supply between Aurora's distribution network and the applicant's private electrical installation, which is located at the following address: -

### The micro or small generating unit equipment

Generator manufacturer	<input type="text"/>
Number of modules	<input type="text"/>
Rated output (Watt per Module)	<input type="text"/> Watts
Inverter manufacturer	<input type="text"/>
Model number of inverter	<input type="text"/>
Inverter rating	<input type="text"/> Watts
Approval / certification with AS 4777 Grid Connection of Energy Systems via Inverters evidence Cert No.	<input type="text"/>

### Connection and Protective Equipment

Incorporated in the Inverter      Yes          No   

### Micro or small generating unit owner contact details

Name	<input type="text"/>
Address	<input type="text"/>
Phone:	<input type="text"/>
Email:	<input type="text"/>

### Equipment Installer

Name	<input type="text"/>
Company	<input type="text"/>
Phone:	<input type="text"/>

### Electrical Contractor

Name	<input type="text"/>
Company	<input type="text"/>
Phone:	<input type="text"/>

2 Application Form

This Agreement is between Aurora Energy Pty Ltd, in its capacity as a Distribution Network Service Provider (“**Aurora**”), and the “**Embedded Generator**” (as defined in the Tasmanian Electricity Code).

This Agreement sets out the terms and conditions under which Aurora allows connection of an “**embedded generating unit**” (as defined in the Tasmanian Electricity Code) to Aurora’s distribution network.

#### 1. Duration of Agreement

This agreement is permanent from the date of signature of this agreement and will only terminate where the condition under part 9 has not been met or as otherwise agreed. Aurora maintains the right to review this agreement in the case of changes directed from the Office of the Tasmanian Economic Regulator.

#### 2. Connection Services

Aurora shall provide the following services (“**the Connection Services**”) to the Embedded Generator:

- (i) Permit the **embedded generating unit** (as described in part 3 of the Schedule) to be connected to Aurora’s distribution network at the **Connection Point** specified in part 1 of the Schedule hereto provided an electricity meter measuring both the import and export of electricity at your generation address has been installed;
- (ii) Operate the Network so as to permit the transmission of electricity from the **embedded generating unit** to the **Connection Point** up to the agreed capability specified in part 2 of the Schedule hereto; and
- (iii) Aurora’s obligations extend up to the connection point for energy to be supplied to your premises and not beyond.

**The Embedded Generator** must do all things reasonably necessary to enable Aurora to provide the **Connection Services**.

#### 3. Connection Equipment

- (i) **The Embedded Generator** shall install all equipment in accordance with all relevant Australian standards and as outlined in the generating unit details (see units installation manual). All equipment shall be operated in a safe and reliable manner.
- (ii) The connection and protective equipment to be installed by each party, and the required characteristics of the equipment, are described in part 4 of the Schedule.
- (iii) **The Embedded Generator** shall inform Aurora about any changes in the unit details provided in part 3 of the schedule.
- (iv) Each party shall be responsible for the operation and maintenance of the equipment owned by it and must maintain such equipment in accordance with good electricity industry practice (as defined in the Tasmanian Electricity Code and Australian Standards).
- (v) The parties shall comply with all instructions, directions or powers of the **System Controller** (as defined in the Tasmanian Electricity Code) in relation to all connection equipment.

#### 4. Obligations

- (i) Aurora’s obligation.  
National Electricity Rules (including, in respect of Aurora, Schedule 5.1 of Chapter 5 and the Tasmanian Electricity Code and in respect of the **Embedded Generator**, Schedule 5.2 of Chapter 5);

- (ii) **Embedded Generator’s** Obligation.

Provide access to Aurora’s property where such access is necessary to enable Aurora to fulfil its obligations under this agreement.

#### 5. Supply Voltage & Voltage Fluctuation

The Australian Standards supply voltage is 230V, and Aurora recognises this standard voltage with a permitted fluctuation of the voltage at the **Connection Point** of + 10% and - 2%; or, the maximum permitted voltage level at the **Connection Point** is 255.5V and minimum permitted voltage level at the **Connection Point** 225.4V.

Aurora will require the **Embedded Generator** to disconnect the **embedded generating unit** if above limits are violated.

#### 6. Force majeure

If either party is prevented from performing its obligations under this agreement (other than monetary obligations) by an event beyond that party’s reasonable control, those obligations shall be suspended by notice to the other party for so long as the force majeure event continues.

#### 7. Reliability Standards

The reliability standard applicable for the area will be in accordance with performance standards as set out and varied from time to time by the Office of the Tasmanian Economic Regulator.

#### 8. Liability

The liability of each party shall be limited to:

- (i) Direct loss or damage to the other party’s plant and equipment;
- (ii) Death or personal injury to the other party, or (in the case of Aurora only) their officers, agents or employees; and
- (iii) Recovery of third party claims against the other party, except to the extent such loss, damage, injury, death or claim was caused or contributed by the other party.

#### 9. Conditions of offer

This agreement is subject to the following conditions:

- (i) **The Embedded Generator** must continue to own and operate the **embedded generating unit**.

#### 10. Termination

This agreement shall terminate where the condition under part 9 has not been met or as otherwise agreed.

#### 11. Connection Service Charges

Application and connection fees associated with this connection have been waived.

#### 12. Disconnection

Aurora may disconnect a Connection Point:

- (i) To carry out maintenance work in accordance with this agreement;
- (ii) In an emergency to avoid death, personal injury or property damage;
- (iii) Following termination of this agreement;
- (iv) As otherwise provided under the Tasmanian Electricity Code; or
- (v) As otherwise provided by law.

#### 13 Procedures for Resolving Disputes

Any disputes arising from this agreement shall be addressed via established dispute resolution arrangements contained under the Distribution Charter.

**Please confirm your agreement to these terms and conditions by signing where indicated below.**

Agreed

Agreed Aurora

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## SCHEDULE

### 1. Connection Point

The **Connection Point** is the agreed point of supply between Aurora's distribution network and the Embedded Generator's private electrical installation, which is located at the following address

.

### 2. Capability

The agreed capability of the **Connection Point** is limited to (.....).

### 3. Equipment

#### 3a Equipment type: \_\_\_\_\_

- Equipment manufacturer –
- Number of Modules -
- Rated Output (Watt per Module) -
- Inverter Manufacturer -
- Inverter rating - Watts
- Approval/certification with AS 4777 Grid connection of energy systems via inverters evidence. Cert No.
- Other Certification provided:

**Protection** – If generating A/C protection built into inverter.

If generating D/C protection must be built into the generating unit

### 4. Connection & Protective Equipment

Incorporated in the Inverter/s.

### 5. Contact details for operational purposes

#### The Embedded Generator

NMI –  
Transformer ID -  
Telephone:

#### Aurora Contact

Nick Beltz  
Network Connections Officer  
Phone: (03) 6271 6357

#### ***Return Address for Connection Agreements***

Network Connections Team  
Aurora Energy Pty Ltd  
GPO Box 191  
Hobart  
Tas 7001

#### 4 Offer to Connect – Sample Micro Embedded Generation Connection

Contact: Nick Beltz

Phone (03) 6271 6357

Our Ref: NWM-03/1534/001

Dear

#### **OFFER TO CONNECT MICRO GENERATING UNIT/S TO AURORA'S DISTRIBUTION NETWORK**

Thank you for your application to connect your micro generating unit to the Aurora Energy Pty Ltd ("Aurora") electricity distribution network.

Based on the information provided in the application submitted by your supplier, I am pleased to advise you that Aurora, in its capacity as electricity network service provider, will allow the connection of your generating unit to its low voltage network.

Aurora requires you to enter into a Connection Agreement with Aurora, which sets out the obligations of both yourself and Aurora to maintain the connection. The agreement aligns with the requirements of the Tasmanian Electricity Code, which is available from the Office of the Tasmanian Economic Regulator, or from their website ([www.economicregulator.tas.gov.au](http://www.economicregulator.tas.gov.au)).

I have enclosed two copies of your Connection Agreement. Please check the details in the schedule of the agreement carefully and if correct, sign both copies of the agreement and return both copies to Aurora in the self-addressed envelope provided. Aurora will sign both copies and return one copy of the final agreement for your records. If any details in the schedule are incorrect (especially in respect of your generating unit), please contact your generating unit supplier and ask them to check the details and confirm the details with Aurora.

If you make any changes to the unit (eg: installing additional solar panels) you must advise Aurora so that Aurora can update its records and amend your Connection Agreement.

Following the installation of your generating unit, your supplier will submit an Electrical Work Request (EWR) to Aurora to fit a new digital import/export meter. Once Aurora receive the EWR, it is matched up with your signed Connection Agreement, and Aurora will then arrange to replace your meter within 20 working days. If you have any queries in relation to your meter exchange, please contact Aurora's Customer Service Centre on 1300 132 003.

If you have any queries in relation to the installation or activation of your embedded generation unit please contact your supplier from whom you purchased your unit. If you have any questions in respect of the Connection Agreement please contact me on (03) 6271 6357.

Yours sincerely

Nick Beltz

Network Connections Officer

Aurora Energy - Network Division