

Small Scale Generation

Thanks for considering a small scale grid interactive connection with Country Energy.

How Grid Connection Works

Country Energy customers who have solar generation units are able to sell excess electricity back to the National Electricity Grid. This means that energy that would have otherwise been wasted can be distributed to others – that's good news for you, the environment and our future.

Easy steps to Grid Connection

1. Read through this document.
2. Complete the application form and send it back to Country Energy.
3. Once you have received approval you can arrange the installation.
4. Contact the Regional Inspector assigned to arrange the grid interactive meter installation.
5. Start enjoying lower energy bills, and piece of mind knowing that you're reducing greenhouse gas emissions and playing a part in the climate change solution.

INTRODUCTION

This document provides the technical and commercial requirements that must be met for approval to be obtained from Country Energy for Energy Systems to be connected via Inverters to the Country Energy Grid.

This policy applies to the connection of Energy Systems less than 10kW.

PURPOSE

This document is intended to be a guide for Customers and Installers seeking to connect Energy Systems to the Country Energy Grid via Inverters. This document outlines the commercial agreement and the technical requirements that need to be met before connection will be approved.

SCOPE

This Policy applies to Inverter Energy Systems with a rating less than 10kW proposed to be connected to the Country Energy low voltage network. Proposals to connect Inverter Energy Systems of capacity 10kW or greater will be considered on their individual merits and will be subject to a specific Connection Agreement.

INDEX

Technical Requirements	Page 3
The Commercial Agreement	Page 4
The Grid Connect Process	Page 10
The Application	Page 11

Technical Requirements

COMPLIANCE

Unless otherwise stated in this Policy, Inverters to which this Policy applies shall comply with the Technical Specifications detailed in the ESAA document titled *Australian Guidelines for Grid connection of Energy Systems via Inverters*. Inverters that comply with this Guideline and the other requirements of this Policy shall be deemed to be Acceptable Inverters. The installer shall provide, to Country Energy, a Certificate of Compliance to this effect before connection will be approved. As Inverters are shown to comply and are deemed to be Acceptable, they shall be added to a List of Acceptable Inverters which will be kept by Country Energy. This List will be made available to Installers on request.

POWER FACTOR

Allowable range is from 0.8 leading to 0.95 lagging (looking from the grid with the inverter seen as a load on the grid) for outputs from 20% to 100% of rated VA.

Note: Lagging power factor is defined to be when VAR flows are from the grid to the inverter.

PHASE UNBALANCE

Care must be taken to ensure that Single Phase Inverters connected to the three phase low voltage Grid system do not result in an appreciable phase unbalance on the local distribution transformer. The kVA rating of any individual single phase Inverter shall not exceed fifty percent of the per phase rating of the local Distribution Transformer.

Commercial Agreement

Agreement for Grid Connected Energy Systems via Inverters (Less than 10kW)

CONTENTS

1	Intent of Agreement	Page 5
2	Connecting to the Country Energy Network	
3	Permission to Connect	
4	Purchase of Energy	Page 6
5	Construction Permits	Page 7
6	Access to your Premises	
7	Interrupting or reducing your supply to Country Energy	
8	Disconnection of your supply to Country Energy	
9	Insurance	Page 8
10	Indemnity and Liability	
11	Governing Law	
12	Amendments	
13	Safety Requirements	Page 9
14	References	

Commercial Agreement

You/Your: *Means the person or organisation that owns or operates the solar generating equipment that is being connected to our electricity network.*

We/Us/Our: *Means Country Energy*

1 INTENT OF AGREEMENT

This Agreement is to allow the interconnection of your renewable energy generating equipment with our electricity network.

The intention of this interconnection is primarily to offset part or all of your electricity costs by delivering excess energy you generate, into our electricity network.

2 CONNECTING TO THE COUNTRY ENERGY NETWORK

The cost of designing, installing, operating and maintaining your renewable energy generating equipment is your responsibility. This must be done according to all laws and regulations that apply, and comply with the conditions detailed in Country Energy's technical requirements.

All renewable energy generating facilities are required to have installed Net Import/Export metering facilities. Only where the generating capacity is less than the minimum standing load of the installation shall this requirement be negated, If the Retailer involved is NOT Country Energy, all necessary metering arrangements shall be to their requirements.

3 PERMISSION TO CONNECT

You cannot connect your cogeneration equipment until we give you written approval. We will not unreasonably withhold this approval.

We may decide to have our staff or representatives present at the initial testing of your protective equipment. You will need to inform us one week in advance of this testing.

Commercial Agreement

PURCHASE OF ENERGY

4.1 RENEWABLE ENERGY GENERATING FACILITIES WITH AN OUTPUT LESS THAN 5 KW

If the energy generated by your equipment exceeds the energy you use during any billing period, we will pay for the excess energy you deliver to us at your applicable retail tariff rate¹, plus GST if applicable. This means that you will receive a straight reverse for the excess energy produced, at the same rate (in most cases) that you pay for energy you consume.¹

If you are currently on an obsolete tariff your buyback rate may be at the current regulated rate. If you are unsure, or wish to confirm your buyback rate please contact us on 1300 363 955.

If you use more electricity than you generate we will charge you for this electricity at your usual tariff.

The transactions for both of these events will be reflected through your electricity account.

4.2 RENEWABLE ENERGY GENERATING FACILITIES WITH AN OUTPUT 5KW OR GREATER BUT LESS THAN 10 KW

Any electricity generated by your equipment and delivered to Country Energy's electricity distribution network will be paid for at 10c/kWh.²

You will be charged for any electricity that you use in the normal manner at your usual tariff. The electricity used will be supplied in accordance with the terms and conditions contained in Country Energy's Customer Contract for Connection and Supply.

These transactions will be reflected through your electricity account as separate items and will result in a net amount to pay or to be paid.

4.3 RENEWABLE ENERGY GENERATING FACILITIES WITH AN OUTPUT OF 10KW OR GREATER

A separate agreement with us or your electricity retailer will be required for the purchase of energy.

¹ Country Energy reserves the right to vary this price without prior notice.

² Country Energy reserves the right to vary this price without prior notice

Commercial Agreement

5 CONSTRUCTION PERMITS

You must obtain any authorisation or permits required for the connection and operating of your renewable energy generating equipment and interconnection facilities. This may, without limitation include local government rezoning or building permits.

You will be required to indemnify us against any or all actions that may arise relating to authorisation or permits, whether you obtain them or not and will be required to reimburse us for all losses, or liability we incur as a result of any action taken in relation to these permits.

6 ACCESS TO YOUR PREMISES

Our staff or authorised representatives may enter your premises to:

- Inspect protective devices on your equipment;
- Read or test meters;
- Disconnect the interconnection facilities, without notice, in an emergency situation.

7 INTERRUPTING OR REDUCING YOUR SUPPLY TO COUNTRY ENERGY

We may require you to interrupt or reduce delivery of energy to us in some circumstances, which include but are not necessarily limited to:

- To construct, install, maintain, repair, remove, investigate or inspect any of our equipment or part of our system; or
- If we believe it is necessary because of emergencies, forced outages, compliance with prudent electrical practices or because of other dangerous and unexpected events.

Whenever possible, we will give you reasonable notice if an interruption or reduction of deliveries is required. We will endeavour to keep any interruptions as short as is reasonably possible.

8 DISCONNECTION OF YOUR SUPPLY TO COUNTRY ENERGY

We can disconnect your generating equipment from our network if we determine that:

- Your equipment is dangerous to our staff, representative or other parties; or
- The continued operation of your equipment is dangerous to the integrity of our electricity distribution network.

We will not reconnect your equipment to our network until we are satisfied that you have corrected any problems and fulfilled our requirements. You may terminate this agreement and disconnect your supply to us by giving us 7 days notice in writing.

Commercial Agreement

9 INSURANCE

Copies of all policies, renewal certificates, endorsement slips and certificates of currency are to be produced to Country Energy ten business days prior to the commencement of the agreement and upon each subsequent policy renewal date.

We strongly advise prospective customers that they inform their own insurance companies of the presence of the installation on their property, to ensure that adequate cover is made for the installation under the relevant insurance policy (eg building or contents).

10 INDEMNITY AND LIABILITY

In this clause, the word liability includes loss, damage, consequential damage, claim, cost, charge, demand, expense and legal fees.

You will be required to indemnify Country Energy against claims in respect of personal injury or death or loss for damage to any property (including Country Energy's property) arising out of or as a direct consequence of:

- The design, construction, maintenance or operation of the renewable energy generating equipment or interconnection equipment or the addition or modification or deletion of any equipment to your system at a later date.

Your liability to indemnify Country Energy shall be reduced proportionately to the extent that the act or omission of Country Energy or its employees, agents, consultants or contractors may have contributed to the injury, death, loss or damage. Your liability will not extend to indirect or consequential loss other than property loss or economic loss and in respect of any one occurrence will be limited to \$10m.

Country Energy will indemnify you in respect of claims made by any person for injury, death, loss or damage resulting from the performance of its services where its employees, agents, consultants or contractors have contributed to the injury, death, loss or damage.

11 GOVERNING LAW

The law governing the agreement, its interpretation and of agreement to arbitrate is the law of New South Wales.

12 AMENDMENTS

Any amendments or modifications to this Agreement (including any waiver of the agreement) must be in writing and agreed to by both parties.

The failure of any party to require performance of any provision within this agreement does not affect their right to enforce this provision at a later time.

Commercial Agreement

13 SAFETY REQUIREMENTS

Any privately owned installation connected to an electricity distributor's network must comply with all statutory and regulatory requirements including without limitation, the ESAA Wiring Rules, the distributor's General Terms and Conditions or Customer Connection Contract and the service and installation rules. Before granting permission to connect renewable energy generating equipment the following conditions must also be complied with.

"Islanding" occurs when your renewable energy generating equipment remains connected to a portion of our network while that portion is isolated from the main interconnected generation system (i.e., the grid). This situation can occur after emergency or routine operation of equipment on our system to disconnect supply to a section of our network. Islanding creates serious safety issues, quality of supply problems for other customers and the possibility of severe equipment damage. Due to the obvious legal and moral implications, all reasonable precautions must be taken to prevent the intentional or unintentional islanding of private generation installations.

13.1 SIGNAGE

Warning signs must be placed on the main switchboard and on all distribution boards in a prominent position.

These signs must consist of **white** lettering, minimum 8 mm high, permanently engraved on a **red** background. The total sign size must be at least 120 mm x 60 mm and the signs must be permanently affixed to the board via screws.

The sign is to consist of the following wording: "Warning - Interconnected Solar Generator"

Example:



14 REFERENCES

ESAA document Australian Guidelines for the Grid Connection of Energy Systems via Inverters.

The Grid Connect Process

GRID CONNECTION APPROVAL & METER INSTALLATION

1. Once you have decided to go ahead with installing a grid interactive solar unit it is required that you return the signed Country Energy “Technical Requirements and Commercial Agreement for the Connection of Energy Systems to the Country Energy Grid via Inverters” application form (page 11 & 12) with the following material:
 - A single line diagram provided by the approved installer/electrician detailing the connection of the unit to the grid.
 - A “Certificate of Suitability” which verifies that the inverter meets the requirements of the Department of Fair Trading. The Certificate should be provided with the unit at purchase.

This information should be returned to:

Sheila Singleton
Renewable Energy Coordinator
Country Energy
PO Box 718
QUEANBEYAN NSW 2620

Email: sheila.singleton@countryenergy.com.au
Phone: 02 6214 9678
Fax: 02 6214 9705

2. On receipt of this material, the proposal will be put to Country Energy’s Group Manager of Technical Services for approval.
3. On approval, the Marketing Operations Manager will notify the customer/installer and the Regional Electrical Inspector for the appropriate area of the approval. The model number of inverter and copy of single line diagram will be sent to Regional Inspector along with the customer and installer’s details. A copy of the signed, approved agreement will then be returned to the customer.
4. The Regional Electrical Inspector will then make arrangements with the customer/installer to install the relevant metering and make the final safety inspection.
5. On completion of the inspection, the Regional Electrical Inspector will inform billing of the changes to the premise and make the necessary arrangements to have the customers account updated to take into account the credit/debit system at the applicable rate.

Grid Connect Application

CUSTOMER DETAILS – PLEASE PRINT CLEARLY:

Account Holders Full Name:

Customer Number:

Company / Business Name (If Applicable):

Street Address:

Town/City:

State:

Postcode:

Postal Address (If Different):

Town/City:

State:

Postcode:

Contact Phone Numbers:

Fax Number:

Email Address:

DETAILS OF PROPOSED SOLAR GENERATION EQUIPMENT UNDER 10KW:

PV Array Rating (If Applicable):

Total Panel Output (kW):

Inverter kW Rating:

Inverter Make & Model:

Address for Installation:

Town/City:

State:

Postcode:

Date installation will be ready for inspection:

Any other details / notes:

*Country Energy Must be advised if making any changes to the generation capacity of the Solar system prior to or after installation.

OTHER PARTIES:

Supplier:

Contact Numbers:

Installer:

Contact Numbers:

Electrician:

Contact Numbers:

LINE DIAGRAM IS ATTACHED

Line Diagram Attached (Please Tick) – This is required for approval.

Technical Requirements & Commercial Agreement for the Connection of
Energy Systems to the Country Energy Grid via Inverters

November 2007

Prepared by: Johl Norwood – Grid Connect Services Coordinator

countryenergy

Grid Connect Application

TERMS OF AGREEMENT

This Agreement will become effective on the date the last party signs. Either party may terminate this agreement by giving the other 7 days notice in writing.

SIGNATURES

By signing below you are agreeing to the terms and conditions outlined within this document. The signatures of each party appear below.

CUSTOMER DETAILS – PLEASE PRINT CLEARLY:

Name(s): _____

Signature(s): _____

Witness Name: _____

Signature: _____

Date: _____

COUNTRY ENERGY:

Representative Name: _____

Signature: _____

Date: _____

DISCLAIMER

Country Energy including any of its officers ("**the Releasor**") may issue this document ("**the Document**") to any third party ("**the Recipient**") and in consideration of such issue, the Recipient agrees to the following conditions and acknowledges that:

1. the information and instructions contained in the Document ("**the Information**") may be updated from time to time by the Releasor;
2. the Recipient must, before using the Information, ensure that the Document has not been updated since the day it was printed, as indicated by the date specified on the Document ("**the Print Date**"), or alternatively, obtain a hard copy of all amendments made since the Print Date;
3. the Document contains confidential information and that the Recipient must not under any circumstances release or otherwise make available the Document or all or any part of the Information to any third party except with the prior written consent of the Releasor;
4. while the Releasor believes that the Information may assist the Recipient, the Releasor does not warrant that the Information is accurate in every respect, nor that the Information can be used for any particular purpose; and
5. all intellectual and industrial property rights which exist in or may be derived from the Information, if any, remain the property of the Releasor. In particular, a Recipient will neither obtain nor retain copyright or other intellectual or industrial property rights in the Document or the Information as a consequence of its issue to or use by the Recipient or any other person or entity.

The Releasor disclaims all liability to the Recipient for errors or omissions of any kind whatsoever (whether negligent or otherwise) for any loss, damage or other consequence which may arise as a result of the Recipient's reliance on or use of the Information. The Recipient agrees to indemnify the Releasor from and against all claims, demands, actions and proceedings brought against the Releasor arising out of or in any way related to the failure of the Recipient to comply with clauses 2 or 3 of this Disclaimer.

Technical Requirements & Commercial Agreement for the Connection of
Energy Systems to the Country Energy Grid via Inverters

November 2007

Prepared by: Johl Norwood – Grid Connect Services Coordinator



countryenergy