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| Stage 2 G83 microgeneration |
| Application and Commissioning pack for multiple installations in close proximity  Version 1.0 September 2015 |

Includes:

Assessment form for connection of multiple microgeneration installs (Section 1)

Small Scale Embedded Generator (SSEG) installation commissioning confirmation (Section 2)

**Introduction to Microgeneration**

Small scale renewable technologies such as solar panels, hydro or wind turbines can be used to generate your own electricity and export some of that electricity to the grid, commonly referred to as Small Scale Embedded Generators (SSEG). These microgenerators typically connect to the NIE Networks’ electricity grid under the principles of Engineering Recommendation G83/1.

Typical schemes are:

* Single phase solar, hydro or wind technologies which generate up to a maximum of 3.68[[1]](#footnote-1) kilowatts of electricity. These will typically be connected to domestic premises. An existing single phase connection must already be available.
* Three phase solar, hydro or wind technologies which generate up to a maximum of 11.04[[2]](#footnote-2) kilowatts of electricity. These will typically be connected to a farm or small commercial premises. An existing three phase connection must already be available.

**Connecting Multiple SSEG units within close proximity- Stage 2 connections**

**There is a key difference between connecting a single unit at one customer site and multiple SSEG units within different customer sites and in a close geographical area. For multiple units you need to get prior written agreement from the DNO (NIE Networks) before you can connect.**

The G83/1 Stage 2 process covers the connection of multiple SSEGs (other than within a single Customer’s Installation) in a ‘Close Geographic Region’, under a planned programme of work.

In the case of projects where the proposal is to install multiple SSEGs in a number of Customers Installations in a ‘Close Geographic Region’, the Installer shall discuss the installation project with NIE Networks at the earliest opportunity. NIE Networks will need to assess the impact that these connections may have on the network and specify conditions for connection.

**Close geographic region** is the area within which the premises where more than one SSEG installation planned by the same organisation (i.e. installer) are within 500m of each other.

**Connection Process**

At NIE Networks, we are responsible for assessing your application to determine the extent of work required to facilitate your connection, registering your installation and fitting an import/export meter.

Remember: you will not be able to connect your generation or benefit from exporting electricity back to the grid until the following process is complete:

1. You must submit an assessment form for connection of multiple microgeneration installs (with the appropriate fee if applicable) to NIE Networks to assess any network impact of your connection
2. NIE Networks will either agree in principle that you can proceed with your connection, or will issue a Connection Offer with terms and conditions for your connection if requested. You must accept these terms and conditions and any network reinforcement detailed in the Connection Offer must be completed before you can connect your generation.
3. You must then inform NIE Networks when each individual generator is connected to the system- see Note 1
4. You must submit commissioning forms for each individual generator to allow each generator to be registered by NIE Networks
5. Your electricity meter(s) has been changed by NIE Networks to a meter capable of recording export
6. Your purchase contract(s) is in place with your chosen electricity supplier

**Note 1:** In compliance with G83/1 you are required to notify NIE Networks that a connection has been made to the network. Please ensure you submit the online form at the address below, at or before making your connection. You then have 30 days to complete and return the required information.

[www.nienetworks.co.uk/Connections/Generation-connections/Microgeneration](http://www.nienetworks.co.uk/Connections/Generation-connections/Microgeneration)

**Note 2:** All G83 connections are subject to:

* the installation not causing any operational difficulties for NIE Networks
* the installation not adversely affecting the quality of supply to either the connected party or any other customers

Your installer can advise further in relation to the issues above which are covered under Annex A of G83/1.

**How to commission your microgeneration**

1. **Network Connection study**

A Network Connection Study must be carried out by NIE Networks for all G83 Stage 2 installations.

Provided all the information received in the application is in order, we will register your application and will send a letter advising you of your unique job reference number.

This study is a full technical appraisal and requires you to submit a formal assessment form for connection of multiple microgeneration installs (Section 1 of this document) including the full technical specification of the generator(s) being connected, details of planning permission where required and any associated fees (if applicable)\*

***\*Where a change from single phase to three phase is required, or where there is no existing supply available at the site, then an application fee of £651.60 will be applicable for each proposed connection.***

***Following the receipt of all information (and payment if applicable) for the Network Connection***

Assessment, NIE Networks will advise if there are costs to connect. If the installer advises they wish to proceed with the project, a Connection Offer will be issued. This can take up to three months to complete.

This Network Connection Study is a full technical appraisal and requires you to provide all the technical data associated with the generator(s) being installed. Once this technical data is received and the appropriate payment made, NIE Networks will progress the Network Connection Study.

Following the Network Connection Study, NIE Networks will either agree in principle that you can proceed with your connection, or if requested, provide a Connection Offer outlining the connection voltage, connection costs, terms and conditions for connection and details of any network reinforcement work required to provide the connection for the requested capacity and technology.

This quotation is valid for three months from the date of issue and the developer must forward their acceptance of terms and the required deposit to NIE Networks within this 90 day period.

On acceptance of the Connection Offer, NIE Networks will proceed with the activities required to connect the generator to the Distribution System. This may include seeking statutory permission for the connection (overhead line or underground cable), landowner permissions for the equipment, procurement of equipment, and completion of any network reinforcement work required.

1. **Commissioning of your microgeneration:**

The installer must commission the system and fully complete and return the following forms and information to NIE Networks. This information verifies that each microgenerator installation complies with Engineering Recommendation G83/1 and is suitable to be connected to the electricity grid:

* Small scale embedded generator installation commissioning confirmation
* A schematic diagram of the microgeneration scheme installed
* Technical information on the type of microgeneration installed
* Site layout plan showing location of the microgenerator if required
* G83/1 Certification for the inverters. (to be provided for each installation)

All of this information should be returned in **hard copy** to:

Central Processing and Registration

Northern Ireland Electricity Networks

Dargan Depot

57 Dargan Road

Belfast

BT3 9JU

1. **Changing your electricity meter**

Once we have received and checked all of the information above, we will arrange the installation of an import/export electricity meter (if required). An import/export meter records the electricity units being exported to the grid. This process can take up to four weeks.

1. **Agreeing your purchase contract:**

You need to agree a purchase contract with an electricity supplier to sell your exported electricity units. [NB. You may have two electricity suppliers – you may buy electricity from one supplier and sell or export electricity to another supplier].

NIE Networks has no involvement in the purchase contract agreement – your chosen export electricity supplier will provide this information. It is your responsibility to provide export meter readings to your export supplier.

For more information on electricity suppliers operating in Northern Ireland, you may wish to consult the Utility Regulator (www.uregni.gov.uk) or the Consumer Council for Northern Ireland ([www.consumercouncil.org.uk](http://www.consumercouncil.org.uk)).

# G83 Stage 2 Application Form

**ENGINEERING RECOMMENDATION G83/1**

**Section 1: Assessment form for connection of multiple microgeneration installs**

Assessment form for the connection of multiple SSEG units in parallel with the public distribution Network – in accordance with Stage 2 of Engineering Recommendation G83/1. It is only necessary to submit one Pro-forma per multiple installation project, but this must include details of all proposed installs.

This information is to be provided to NIE Networks prior to the installation of a SSEG unit(s) in order that NIE Networks can assess the potential impact that the connection will have on the Network.

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| **Project details**  Please provide details on the microgeneration project | |
| Property address  (including postcode) |  |
| Telephone number |  |
| MPRN number  This is a unique 11 digit number which identifies the electricity connection. You will find it on the card left by your meter reader or on your electricity bill. |  |
| Distribution Network Operator (DNO) | **NIE Networks** |
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| **Installer details**  Please provide details on your company | |
| Installer |  |
| Accreditation/qualification: |  |
| Address  (including post code) |  |
| Contact person |  |
| Telephone number |  |
| Fax number |  |
| E-mail Address |  |

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| **SSEG details**  Please provide details of the Small Scale Embedded Generator (SSEG) | |
| SSEG owner |  |
| SSEG location within the installation |  |
| Total number of SSEG units to be installed under this project  (include SSEG Unit capacity in kVA and location) |  |

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| **Other Information to be Enclosed** | | | | |
| SSEG type verification test certificate, to include the following information:   * Manufacturer and model type * SSEG rating (A) and power factor * Single or Multi phase * Maximum peak short circuit current (A) * Type of prime mover and fuel source * Contact details – telephone numbers, web address etc. | | | | |
| Copy of system circuit diagram within the installation. | | | | |
| Earthing arrangements. | | | | |
| Site layout plan showing location of SSEGs - if applicable. | | | | |
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| **Declaration**  To be completed by the installer | | | | |
| Comments (use separate sheet if necessary) | | | | |
| I declare that this installation has been designed to comply with the requirements of ER G83/1  I confirm that I request NIE Networks to install a meter capable of recording export at this premises YES / NO | | | | |
| Name: | | | Date: | |
| Signature: | | |
| Accreditation/Qualification: | | |
| **For official use only**  To be completed by DNO representative following application | | | | |
| A NIE Networks representative will witness the commissioning | | | | yes/no |
| As a NIE Networks representative, I give, in principle, permission for the connection of these SSEG units. If “no”, see comments below | | | | yes/no |
| Comments: | | | | |
| DNO: | Contact: | Date: | | |

**Section 2: Small Scale Embedded Generator (SSEG) installation commissioning confirmation**

(Up to 3.68 kW single phase and up to 11.04kW three phase)

Confirmation of commissioning of a Small Scale Embedded Generator (SSEG) connected in parallel with NIE Networks’ Distribution Network in accordance with Engineering Recommendation G83/1.

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| **Site details** | | | |
| Property address  (including post code) |  | | |
| Telephone number |  | | |
| MPRN number  This is a unique 11 digit number which identifies the electricity connection. You will find it on the card left by your meter reader or on your electricity bill. |  | | |
| Meter Serial Number  Unique Meter Serial Number can be located on the front of the meter that requires changed to an import/export meter |  | | |
| Distribution Network Operator (DNO) | **NIE Networks** | | |
| **Contact details** | | | |
| SSEG owner |  | | |
| Contact person |  | | |
| Contact telephone number |  | | |
| **SSEG details** | | | |
| Manufacturer and model type |  | | |
| Serial number of SSEG |  | | |
| Serial number/version numbers of software (where appropriate) |  | | |
| SSEG rating (A) and power factor (under normal running conditions) |  | Capacity KWp |  |
| Maximum peak short circuit current (A) |  | | |
| Type of prime mover and fuel source |  | | |
| Location of SSEG within the  Installation |  | | |
| Location of multi pole isolator |  | | |

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| **Information to be Enclosed** | |
| Final copy of circuit diagram |  |
| SSEG Type Test Certificate (if not already provided e.g. under a Stage 2 Connection) |  |
| Computer print out (where possible) or other schedule of protection settings |  |
| Electricity meter(s) make and model: | |

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| **Installer details**  To be completed by installer | |
| Installer |  |
| Accreditation/Qualification: |  |
| Address  (including post code) |  |
| Contact person |  |
| Telephone number |  |
| Fax number |  |
| Email address |  |

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| **Installer declaration**  Must be completed by the installer | | |
| The SSEG installation complies with the relevant sections of Engineering Recommendation G83/1. | |  |
| Protection settings have been set to comply with Engineering Recommendation G83/1. | |  |
| The protection settings are protected from alteration except by prior written agreement between NIE Networks and the Customer or his agent. | |  |
| Safety labels have been fitted in accordance with section 6.2 of Engineering Recommendation G83/1. | |  |
| The SSEG installation complies with the relevant sections of BS7671 and an installation test certificate is attached. | |  |
| Comments (continue on separate sheet if necessary) | |  |
| **Name:** | **Signature:** | **Date:** |

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| **NIE Networks Ref.[[3]](#endnote-1)** |  |

1. Please note NIE Networks will accept a maximum installed capacity of 4kW provided the inverter is rated at no more than 3.68kW [↑](#footnote-ref-1)
2. Please note NIE Networks will accept a maximum installed capacity of 12kW provided the inverter is rated at no more than 11.04kW [↑](#footnote-ref-2)
3. For Stage 2 applications only. NIE Networks’ reference will be provided in the Connection Offer as part of the Stage 2 Application process and should be provided here.

   Please send completed forms to:

   Central Processing and Registration

   Northern Ireland Electricity Networks

   Dargan Depot

   57 Dargan Road

   Belfast

   BT3 9JU [↑](#endnote-ref-1)