

Stage 2 G98/NI micro-generation

Application and Commissioning pack for multiple installations in close proximity

Version 1.1 April 2019

Includes:

Application form for connection of multiple micro-generation installs (Section 1)

Micro-Generator installation commissioning confirmation (Section 2)

Introduction to Micro-generation

Micro-generation technologies such as solar panels, hydro, wind turbines or electricity storage devices can be used to generate your own electricity and export some of that electricity to the grid, commonly referred to as Micro-Generators. These micro-generators typically connect to the NIE Networks' electricity grid under the principles of Engineering Recommendation G98/NI.

Typical schemes are:

- Single phase solar, hydro, wind or electricity storage technologies which are connected to an inverter with a maximum registered capacity of 3.68 kilowatts of electricity. These will typically be connected to domestic premises. An existing single phase connection must already be available.
- Three phase solar, hydro, wind or electricity storage technologies which are connected to an inverter with a maximum registered capacity of 11.04 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 micro-generator units in close proximity within 28 days of each other - Stage 2 connections

There is a key difference between connecting a single unit at one customer site and multiple micro-generator units at different customer sites in a close geographical area within 28 days of each other. For multiple units being installed within 28 days of each other you need to get prior written agreement from the DNO (NIE Networks) before you can connect.

The G98/NI Stage 2 process covers the connection of multiple micro-generators (other than within a single Customer's Installation) in a 'Close Geographic Region', under a planned programme of work within a 28 day period.

In the case of projects where the proposal is to install multiple micro-generators in a number of customers' properties in a 'Close Geographic Region' within 28 days of each other, 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 micro-generator 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 application form for connection of multiple micro-generation 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 reinforcement works are required. 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 G98/NI 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 'Register Generation Connection' button

Note 2: All G98/NI 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 G98/NI.

How to commission your micro-generation

1. Network Connection study

A Network Connection Study must be carried out by NIE Networks for all G98/NI Stage 2 installations. Provided all the information received in the application is in order, we will register your application and assign a unique job reference number to it.

This study is a full technical appraisal and requires you to submit a formal application form for connection of multiple micro-generation 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 will be applicable for each proposed connection. Please see the latest Statement of Charges for the applicable fee.***

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

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 and payment of deposit (if applicable), 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.

In cases where the fault level has reached the limit in an area, we may be unable to agree to the proposed connection.

2. Commissioning of your micro-generation:

The installer must commission the system and fully complete and return a copy of Section 2 **for each installation**, along with all necessary information, to NIE Networks. This information verifies that each micro-generator installation complies with Engineering Recommendation G98/NI and is suitable to be connected to the electricity grid:

- Micro-generator installation commissioning confirmation
- A schematic diagram of the micro-generation scheme installed
- Technical information on the type of micro-generation installed
- Site layout plan showing location of each micro-generator if required
- G98/NI Certification for the inverters. (to be provided for each installation)

All of this information should be returned via the online application at www.nienetworks.co.uk/connections/micro-scale, or in hard copy to:

Market Operations - SRU
NIE Networks
Pennybridge Industrial Estate,
Larne Road,
Ballymena, BT42 3HN

3. 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.

4. 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).

G98/NI Stage 2 Application Form

ENGINEERING RECOMMENDATION G98/NI

Section 1: Application for connection of multiple Micro-Generating Plant installations to NIE Networks grid

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

Application form for the connection of multiple micro-generator units in parallel with the public distribution Network within 28 days of each other – in accordance with Engineering Recommendation G98/NI. It is only necessary to submit one copy of Section 1 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 micro-generator unit(s) in order that NIE Networks can assess the potential impact that the connection will have on the Network.

Customer Details:	
Developer / Customer (name)	
Address	
Post Code	
Contact person (if different from Customer)	
Telephone number	
E-mail address	
Installer Details:	
Installer	
Accreditation / Qualification	
Address	
Post Code	
Contact person	

Telephone Number							
E-mail address							
Proposed Micro-generator Details:							
Address	Post Code	MPRN	Micro-generator Registered Capacity in kW at 230 V AC				Inverter Manufacturer's Ref No (this number should be registered on the ENA Type Test Verification Report Register as Product ID)
			Single Phase Units	3-Phase Units			
				PH1	PH2	PH3	
<p>Use continuation sheet where more than 10 Micro-generators are to be installed.</p> <p>Please include an electronic map with the location of each property highlighted in red.</p> <p>Record Micro-generator Registered Capacity in kW at 230 V AC, to one decimal place, under 'Single Phase Units' for single phase supplies and under the relevant phase for two and three phase supplies. For example 2.8 kW.</p> <p>Detail on a separate sheet if there are any proposals to limit export to a lower figure than that of the Micro-generator.</p>							

Other Information to be Enclosed
<p>Micro-generation type verification test certificate, to include the following information:</p> <ul style="list-style-type: none"> • Manufacturer and model type • Micro-generator 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.
<p>Copy of system circuit diagram within the installation.</p>
<p>Earthing arrangements.</p>
<p>Site layout plan showing location of micro-generators - if applicable.</p>

Installer Signature		
Name:		Date:
Signature:		

G98/NI Stage 2 Commissioning Form

Section 2: Micro-Generator installation commissioning confirmation

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

Confirmation of commissioning of a Micro-Generator connected in parallel with NIE Networks' Distribution Network in accordance with Engineering Recommendation G98/NI.

Please complete and provide a copy of this Section 2 document **for each premises**, once Micro-generator installation is complete.

Developer / Customer Details:	
Customer (name)	
Address	
Post Code	
Contact person (if different from Customer)	
Telephone number	
E-mail address	
Installer Details:	
Installer	
Accreditation / Qualification	
Address	
Post Code	
Contact person	
Telephone Number	
E-mail address	
Installer signature	
Installation details	
Address	

Post Code	
MPRN(s)	
Location within Customer's Installation	
Location of Lockable Isolation Switch	

Details of Micro-generators – complete as applicable if multiple **Micro-generators** will exist within one premises. Use a separate line for new and existing installations and for different technology type.

Manufacturer	Date of Installation	Primary Energy source Please enter code from table below	Inverter Manufacturer's Ref No (this number should be registered on the ENA Type Test Verification Report Register as Product ID)	Micro-generator Registered Capacity in kW				
				Single Phase Units	3-Phase Units			Power Factor
					PH1	PH2	PH3	

Information to be Enclosed	
Final copy of circuit diagram	
Micro-generator Type Test Certificate (if not already provided e.g. under a Stage 2 Application)	

Computer print out (where possible) or other schedule of protection settings	
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Declaration – to be completed by Installer for Micro-generators Tested to EREC G98/NI	
I declare that the relevant Micro-generators and the installation which together form a Micro-generating Plant within the scope of EREC G98/NI at the above address, conform to the requirements of EREC G98/NI. This declaration of compliance is confined to Micro-generating Plant tested to EREC G98/NI or EREC G83 as applicable at the time of commissioning.	
Signature:	Date:

NIE Networks Ref.ⁱ	
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ⁱ 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:

Market Operations - SRU
 NIE Networks
 Pennybridge Industrial Estate,
 Larne Road,
 Ballymena, BT42 3HN