

Distributed Generation Connection Guide: Information Sheets

The following pages contain a number of information sheets. These bring information that is contained throughout the Guide into a single page. The information sheets include:

- Decision Tree for the Distributed Generation Connection Guide—to help you to identify whether this is the right Guide for you.
- Capacity cut off points—a diagram illustrating the impacts that the generation capacity of your generating equipment has on the requirements and opportunities for your project.
- Provision of Information: DNO websites—a summary of the information you can expect to find on DNO websites.
- Legislative and Regulatory Document Hierarchy—an illustration of document hierarchy, and list of key documents.

You will find the Guide introduction and contents after these information sheets.

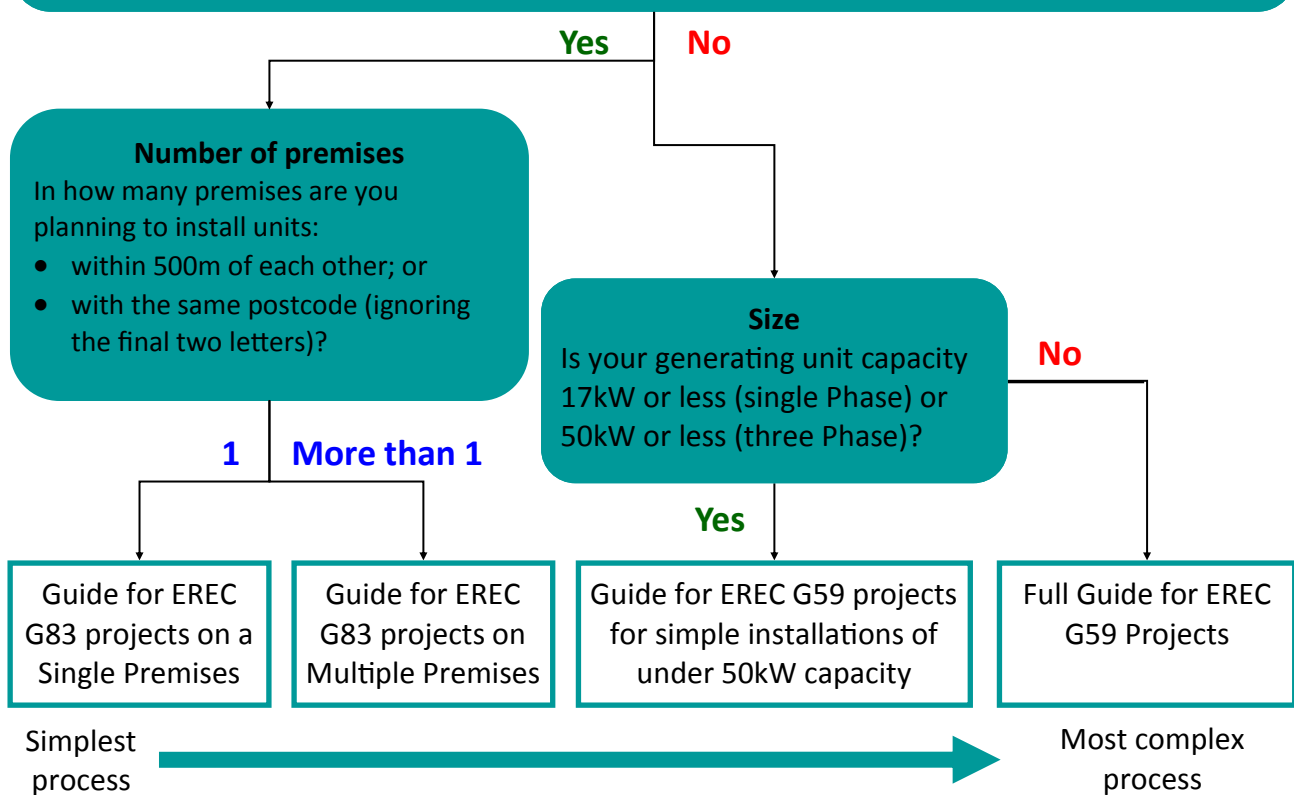
Decision Tree for the Distributed Generation Connection Guide

There are four separate Distributed Generation Connection Guides, each with a corresponding 'Summary' guide. The purpose of the summary guides is to act as a quick check, providing only the most useful information in a condensed format. This flowchart guides you to the most relevant Connection Guide for the Distributed Generation you are planning to install. The Guides can be found on the Distribution Generation section of the [ENR website](#).

Size of your generating unit within any single premises

Does your generating unit **and / or storage device** (or the aggregation of units if there are more than one) have a capacity of 16A per phase or less, and is it connected at low voltage? In other words:

- Three phase—generation capacity of 11.04kW or smaller and connected at 400V
- Single Phase—generation capacity of 3.68kW or smaller and connected at 230V



Examples of Distributed Generation that is 16A per phase or less

PV system: If you are installing solar panels on the roof of your home (or another similar building), it is likely that your project will be less than 16A per phase, particularly if your array is about 30m² or less; or about 18 panels or fewer.



Wind: Many small scale wind turbines are also less than 16A per phase. For example:

- **QR5 turbine:** Rated 6.5 kW with a rotating section of 5 m height
- **Bergey wind turbine:** Rated 10.0 kW with a diameter of 7 m



Combined Heat and Power (CHP): A micro-CHP plant rated 6 kW (3-phase) (the size of a big dishwasher 0.8 x 1 x 1m) could have a thermal output of 18 kW.

Connection Process: Capacity Cut Off Points

The tasks that you have to undertake to get connected vary with the capacity of the generating plant. In general, the bigger the generator, the more complex the connection requirements.

The table below illustrates some of the impacts that the capacity of your generating units have on the connection process and requirements on you.

Connection Process		Size Definitions			Generation Licencing	Metering	Incentives Schemes
Single Phase	Three Phase	North Scotland	South Scotland	England and Wales			
Smaller Power Stations	Covered by G83 if connected at low voltage (230V or 400V) and type tested. If these conditions are not met, then covered by G59.	Small Power Station May chose to have an agreement with NGET, in order to make use of the transmission system or to participate in the balancing market.			Do not need a generation licence.	Usually will have Non-Half Hourly metering.	FITs (Feed-In Tariffs) if technology is eligible. If technology is not eligible for FITs, then it may be covered by RO.
	Covered by G59 Can use simplified G59 process if type tested.						
	Covered by full G59 process.						
		Large Power Station Must hold an agreement with NGET—BEGA or BELLA.	Medium Power Station		Must hold a generation licence, unless exempt.	Must have Half Hourly metering.	CFD (Contracts for Difference) Projects in the order of several MW
		Large Power station Must hold a Bilateral Embedded Generation Agreement (BEGA) with NGET.		Must hold a generation licence.			
Section C		Sections C and D			Section D	Section E	Section F

Provision of Information: DNO Websites

There is a great deal of published information available from your DNO that can be helpful for your project planning. Some of the most useful sources are summarised here, and links to the DNO websites are in the table below.

Long Term Development Statement (LTDS)

Covers the development plans for the network, and other information useful for prospective developers. An introductory chapter is generally available on the DNO's website and DNOs will give access to the full document on request. These documents are updated every six months, and published annually.

Connection Charging Documents

Statements and methodologies will be given for both connection charges and Use of System (UoS) charges. This information may be included in a single document, or in several, and are updated regularly. These are available on DNO websites.

Standards of Performance

Ofgem has set minimum performance standards for connections, both during and after their construction. If your DNO fails to meet these standards, you may be entitled to receive payment. Ofgem has guidance documents about these Standards on their website:

www.ofgem.gov.uk/licences-codes-and-standards/standards/quality-service-guaranteed-standards

Distributed Generation "Work Plan"

The Incentive for Customer Engagement (ICE) exists to encourage DNOs to engage with and respond to the needs of major connections customers (which includes generation customers), and includes a requirement on DNOs to set out plans on what improvements they plan to make in the next regulatory year, consisting of two parts. Part 1 covers plans for improvements for the forthcoming year; and Part 2 reviews the progress in the previous year. Check your DNOs Distributed Generation web pages.

Other Supporting Information Provided by DNOs

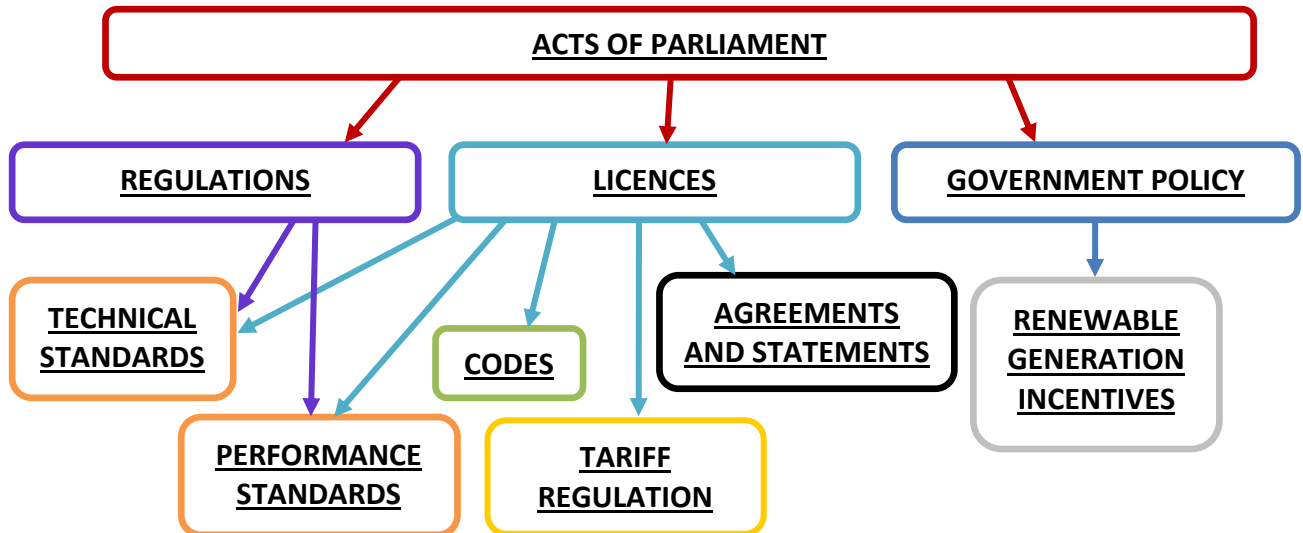
In recent years, there have been improvements to the information that DNOs provide, including:

- more detailed breakdown of connection costs, if applicable;
- web portals and decision support tools/application hotline;
- capacity "heat maps", indicating areas that can more readily facilitate connections; and
- holding events such as "open surgeries" for Distributed Generation customers.

Region	DNO	Website
North Scotland, Southern England	SSE Power Distribution	www.ssepd.co.uk
South Scotland, Cheshire, Merseyside and North Wales	SP Energy Networks	www.spenergynetworks.com
North East England and Yorkshire	Northern Powergrid	www.northernpowergrid.com
North West	Electricity North West	www.enwl.co.uk
East Midlands, West Midlands, Southern Wales, South West England	Western Power Distribution	www.westernpower.co.uk
Eastern England, South East England, London	UK Power Networks	www.ukpowernetworks.co.uk

Legislative and Regulatory Documents Hierarchy

The following diagram shows the legislative and regulatory documents in the power sector. These are grouped by category, and where possible the relationship between documents is illustrated. The documents have been colour coded by document category. The most relevant examples of each documents are included in the boxes below.



KEY:

→ Indicates where a document feeds into or influences another.

Document
Category:

Acts

Regulations

Licences

Policy

Agreements / Statements

Code

Standards

Tariff regulation

Renewable Energy Programmes

ACTS OF PARLIAMENT:

- Electricity Act 1989
- Utilities Act 2000
- Energy Act 2004 (BETTA go-live direction)
- Energy Act 2008 (FITs etc.)
- Energy Act 2010 (CCS incentive)

TECHNICAL STANDARDS

- Engineering Recommendations
- Security and Quality of Supply Standard (SQSS)

PERFORMANCE STANDARDS:

- Guaranteed standards and DG standards

TARIFF REGULATION:

- Ofgem Price Controls

REGULATIONS:

- Electricity Safety, Quality and Continuity Regulations 2002
- The Electricity (Applications for Licences, Modifications of an Area and Extensions and Restrictions of Licences) (No. 2) Regulations 2004
- The Electricity (Standards of Performance) Regulations 2015

CODES

- Balancing and Settlement Code
- Connection and Use of System Code
- Distribution Code
- Grid Code
- System operator – Transmission owner Code (STC)
- Distribution Code

AGREEMENTS AND STATEMENTS

- Connection Agreements
- Charging Statements
- The Distribution Connection and Use of System Agreement
- Master Registration Agreement
- The Electricity Ten Year Statement

LICENCES:

- Generation
- Transmission
- Distribution
- Supply

GOVERNMENT POLICY:

- Energy White Paper 2007
- The UK Low Carbon Transition Plan 2009
- The UK Renewable Energy Strategy 2009

RENEWABLE GENERATION:

- FIT and **CFD** programmes