

RISE

Retrofit information,
support & expertise

Distribution Network Operators

Quick guide

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Contents

Contents	2
Distribution Network Operators (DNOs).....	3
DNO and solar power.....	4
DNO permission	5
DNO support.....	6

Distribution Network Operators (DNOs)

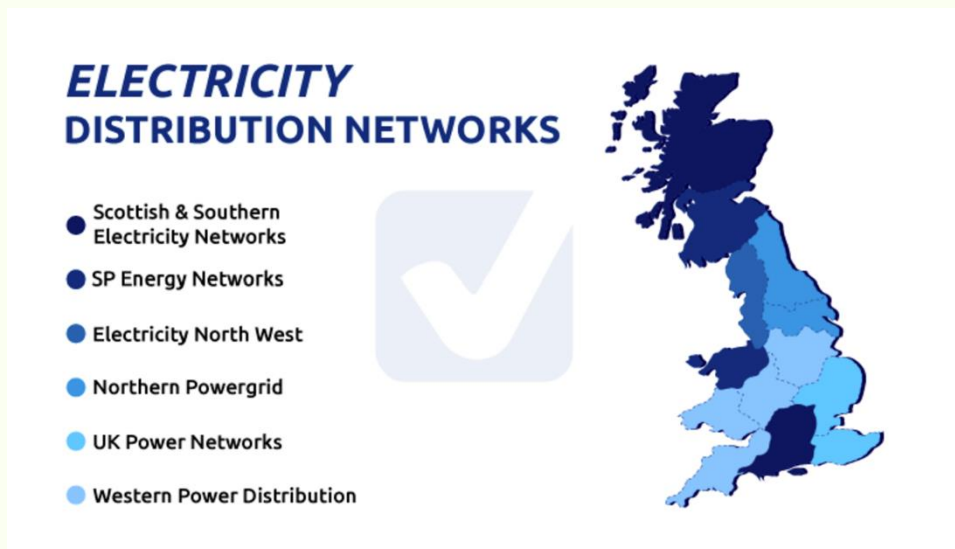
DNOs are the organisations that are responsible for the infrastructure that carries electricity to your home. They manage the network of towers, pylons, cables and sub stations that make the distribution of electricity to your home possible. The DNO is not an electricity supplier. These are the companies that you buy your electricity from.

There are 14 different DNOs, and these are managed by 6 different DNO groups:

DNO group	DNO region
Electricity North West	The Norweb area (parts of Cheshire, Cumbria, Derbyshire, Lancashire, Merseyside, North Yorkshire and Shropshire).
Northern Powergrid	The Northern Electric area (parts of County Durham, Cumbria, Northumberland and Yorkshire).
	The Yorkshire Electricity area (parts of Derbyshire, Lancashire, Lincolnshire, Nottinghamshire, Staffordshire and Yorkshire).
Scottish and southern Electricity Networks	The Scottish Hydro area (most of Northern Scotland)
	The Southern Electric area (parts of Berkshire, Buckinghamshire, Dorset, Gloucestershire, Hampshire, Isle of Wight, London, Monmouthshire, Oxfordshire, Somerset, Surrey, Sussex and Wiltshire).
Scottish SP Energy Networks	The Scottish Power area (from the Scottish Borders to the Scottish Hydro area).
	Manweb area (parts of Cheshire, Lancashire, Merseyside, North Wales, Shropshire and Staffordshire).
UK Power Networks	Eastern area (parts of Bedfordshire, Buckinghamshire, Cambridgeshire, Essex, Hertfordshire, Norfolk, North London, Oxfordshire and Suffolk).
	The Seeboard area (parts of Kent, London, Surrey and Sussex).
	The London Electricity area (parts of Essex, Kent, London and Surrey).

Western Power Distribution	East Midlands area (parts of Bedfordshire, Buckinghamshire, Derbyshire, Leicestershire, Lincolnshire, Norfolk, Northamptonshire, Nottinghamshire, Oxfordshire, Rutland, South Yorkshire, Staffordshire, Warwickshire and the West Midlands).
	The Midlands Electricity area (parts of Cheshire, Gloucestershire, Herefordshire, Mid Wales, Oxfordshire, Shropshire, Staffordshire, Warwickshire, West Midlands and Worcestershire).
	The SWEB – the South Western Electricity area (parts of Cornwall, Devon, Dorset, Gloucestershire, Isles of Scilly, Somerset, Wiltshire and Worcestershire).
	The SWALEC area (parts of Herefordshire and most of South Wales)

Source: <https://www.energybrokers.co.uk/electricity/dno-distribution-network-operators>



Source: www.selectra.co.uk/energy/guides/distribution

DNO and solar power

The DNO needs to know about any solar power systems being added to homes. The government guidance says that homeowners must inform their local DNO if

they intend to install an energy device on their property that connects to the grid. They need to understand this to be able to manage:

- **Safety:** DNO staff need to be able to work safely on the infrastructure. Sometimes this means stopping all power in the areas they are working, including any unused solar energy being exported back to the grid via the electricity supplier. The DNO needs to be aware of this in order to manage it and safeguard its staff.
- **Smart Export Guarantee (SEG):** Anyone exporting energy into the grid via SEG needs permission.
- **Capacity:** As solar systems can export energy back into the grid, the DNO needs to monitor and manage fluctuations locally to reduce the risk of overloading the network. This could lead to tripping out the network and should ideally be prevented.

If you plan for your solar system to be completely off grid, and not to connect to the grid. Then permission isn't needed from the DNO.

DNO permission

The size of your solar system will affect the way you interact with the DNO over permissions. The owners of smaller systems need only **notify** the DNO, whereas you will need to **apply to connect** larger capacity systems.

Connect and notify:

- This option is available to those installing solar systems that are rated under 3.68 Kilo Watt Peak (KwP). It means that the installation can take place before you notify the DNO
- The notification provides the DNO with the information they need about solar being added into the local network. It will help the DNO manage upgrades the network in that area e.g., the capacity of a substation may need to increase
- To undertake the notification, owners should complete a G98 application within 28 days of the solar panels being commissioned

Apply to connect:

- This is for solar systems that exceed 3.68KwP in size. Through this application, the DNO are checking that the network can cope with the production created by this kind of larger array.
- To apply you should complete a G99 before commissioning the panels, and allow 11 weeks for an outcome. If the permission is not granted, there may be recommendations around work needed to the grid or a request to reduce the size of the array

- Systems of this size should not be commissioned until DNO permission has been granted

DNO support

DNOs usually have teams that can help applicants understand the process and prepare their application. For example, Electricity North West has the Pre-Application Customer Engagement (PACE) team that are there to help with pre-application information.

The earlier you contact the DNO, the more opportunity they have to support your applications. If you are a landlord looking to fit solar panels to several homes in an area, it's therefore important to contact the DNO as soon as possible. This will help them plan any work needed to facilitate this.