



RISE

Retrofit information,
support & expertise

Distribution Network Operator (DNO) connections for housing

Supply chain advice pack

October 2025

Funded by:



Department for
Energy Security
& Net Zero

www.riseretrofit.org.uk



Introduction

If your project involves changes in required connection capacity or the ability to export surplus electricity, then the District Network Operator (DNO) needs to be informed. The DNO is responsible for managing electricity connections in your geographical region. This could include any of the following technologies:

- Solar photovoltaic (PV).
- Heat pumps.
- Electric vehicle (EV) charge points.
- Battery storage (BESS).

When you are installing these technologies, they are referred to in this guidance document as an 'installation'. An installation can be made up of more than one technology, i.e. installing Solar PV with a battery system.

Why the DNO needs to be notified of new connections:

- To ensure that local cables, transformers and substations are sized correctly for safety and compliance purposes.
- Understanding demand and export patterns in the local area to help plan future equipment and infrastructure upgrades.

Benefits to installers getting registration with DNOs right first time:

- Avoiding project delays.
- Helps projects run to budget.
- Helps ensure a smooth customer journey.
- Helping to protect the installer's reputation.

SAP reference	Measures that must be notified to DNO	SAP status
Z1 / Z2	Heat pumps with radiators or underfloor heating	Approved measure
Z3	Micro-CHP	Approved measure
U	Photovoltaics	Approved measure
U1	PV battery	Approved measure
	EV charging / Vehicle to grid	Not an approved measure

Identify your local DNO

You can find your DNO by entering the postcode onto the Electricity Network Association (ENA) website [here](#).



Source: Energy Networks Association

Determine which approval is required

The route that you take will depend on the scale of the project. The first section of this document deals with small projects in a tight geographical area. The last section deals with larger projects that may be spread widely across a single DNO area or even across two DNO areas.

Projects in a relatively confined geographical area

There are usually two routes for connection approvals of Heat pumps, Solar PV and battery storage systems in this situation. All accredited installers should be familiar with the thresholds and the required ENA guidance notes that should be followed for each.

The two routes are referred to as 'Connect and notify' or 'Apply to connect'.

Connect and notify

In some cases, the installer may only need to inform the DNO after the installation has taken place – this is referred to as a '**Connect and Notify**' process. 'Connect and Notify' is relevant for electricity generation and battery storage projects which fall under the **Engineering Recommendation G98** guidance.

However, if you have several installations taking place in the same geographic area (i.e. the same road, estate or part of a town), the DNO will need to be informed before the installations take place - even if the installations would normally be considered as 'Connect and Notify'. These become 'Apply to connect'.

Connect and notify needs to be submitted within 28 days of installation.

Exception

For a group of small installations under 3.68kW per phase, you should notify the DNO using G98 Appendix 3 Form A before installation, or alternatively, installers can use the "Direct Connect" Service portal: [ENA Connect Direct](#).

Apply to connect

This is where you need approval before connecting to the mains supply because the installation does not comply with the G98 guidance, usually because the installation is larger than the statutory 3.68kW **Declared Network Capacity (DNC)**. DNC refers to the size of the inverter equipment, not the total amount of PV power.

It is unlikely that you will be installing projects at this scale. However, if a larger installation is required then the relevant guidance is found in Engineering recommendation **G99**.

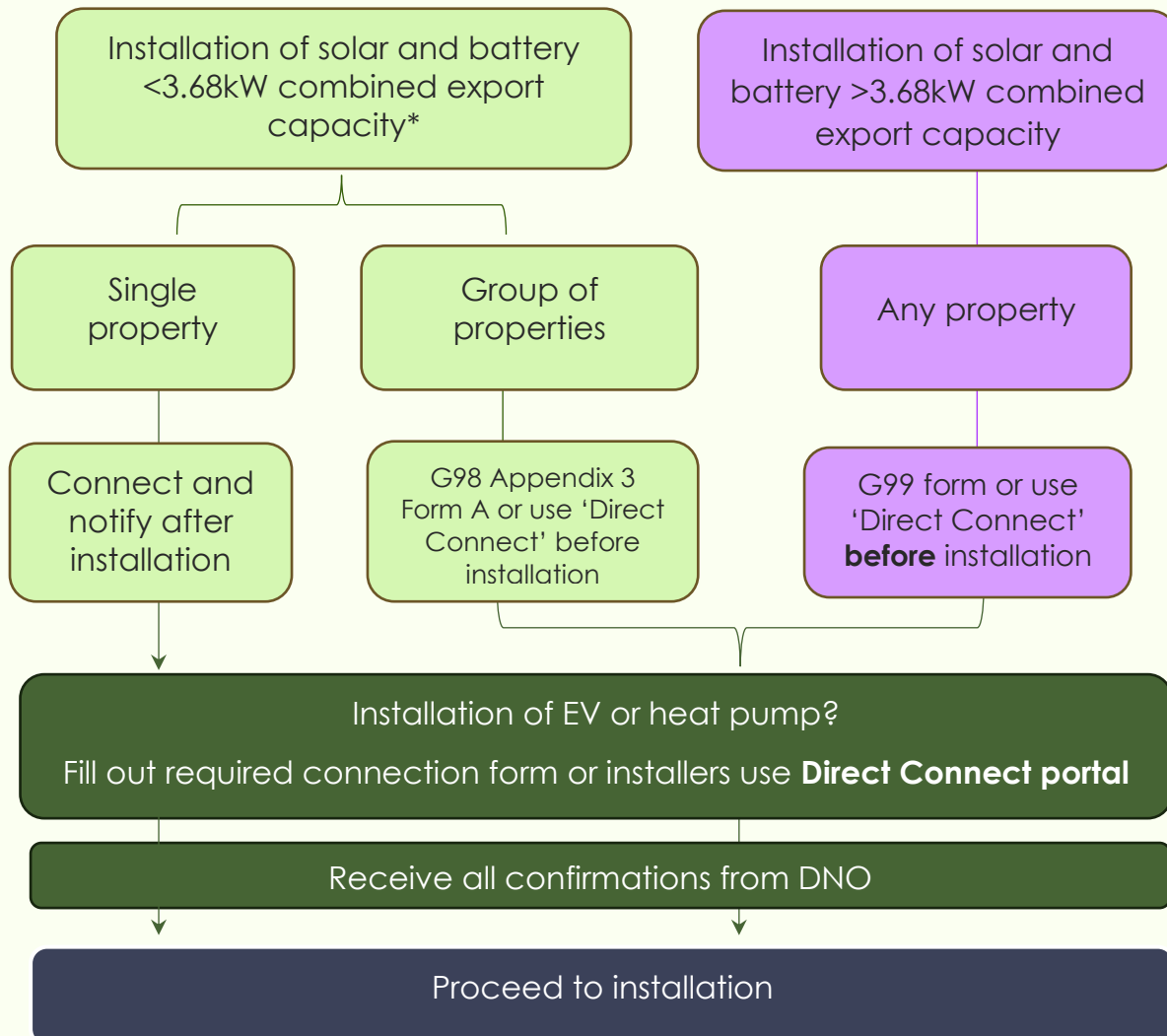
Your installer can apply through the Direct Connect portal

- The application must be submitted **before** installation.
- The DNO will normally respond within 45 days (a statutory response time).
- You should not proceed with installation until the DNO has given permission.

EV and Heat pump connections and notifications

Both EVs and heat pumps will require notification before proceeding with installations. Installers can follow the correct process using the [ENA Connect Direct](#) portal.

Decision tree (smaller projects)



What does “combined export capacity” mean?

Solar PV and battery installations can be arranged in different ways using different storage and inverter types. This means that the DNO sometimes treats them as separate generating technologies unless the system has been specifically designed to limit export of electricity to below 3.68kW per phase. For further guidance, speak to your installation partner at the time of design and procurement to ensure compliance.

Projects in a larger geographical area

When you are considering large projects (for example >10 heat pumps or solar systems), or multiple projects across a larger area, (for example, spread across a whole town or more than one DNO area) it makes sense to engage with the DNOs as early as possible.

This process is dealt with differently in different areas, but DNOs all have established processes for opening up these dialogues at an early stage. Your first action, if you do not have an established relationship with the connections office, is to navigate to the “New connections” section of the DNO website. There will normally be a dedicated contact form to set up what is sometime referred to as a “connections surgery”, or a dedicated email address that means your enquiry can be elevated to the appropriate contact for strategic planning.

Key considerations

For smaller projects use the decision tree

- DNO applications and notifications for smaller projects are usually dealt with by the installer as they have all the required data to hand.

Keep up to date with DNO notification progress through dialogue with your installers

- They will use the Direct Connect portal to make the necessary notifications.
- They may use a separate compliance service to make the notifications on their behalf, but retain overall responsibility

MCS certified installers should register their work on the MCS installation database once completed

- Research what certifications and paperwork are needed for lodgements.

Funded works compliance

- PAS2035 compliant Solar, heat pump and battery installations all require lodging with Trustmark.

Looped property connections:

- “A ‘looped service’ is where two properties share a single electricity supply cable. These may require unlooping before any installation takes place. In some circumstances a temporary load limiting device can be connected until the service can be un-looped by the DNO – but this at their discretion.

- In extreme circumstances, failure to follow the correct processes can lead to the DNO requesting that equipment is disconnected until the correct infrastructure or upgrades are in place.

Example approaches

Single property

Installer manages through
Direct Connect

Several properties on a single road or otherwise close by

Installer manages through
Direct Connect

A group of installations across an estate or town

Engage with the DNO at early
planning stages

Multiple groups of installations across a county

Engage with DNO(s) at early
planning stages
There may be more than one DNO
involved

What information will I require for the DNO where 'Direct Connect' is not the chosen route?

In the early stages the DNO will often only require a list of properties and addresses so they can understand which substations may be impacted by the installations. As you progress, they will need:

- An MPAN number for each property.
- A list of all the technologies to be installed for each property.
- The size of each piece of equipment.
- Confirmation that all the equipment has relevant type approvals and MCS accreditation – your installation partner will be able to confirm this.

Resources



Podcast: All RISE podcasts are available [here](#).

Energy Networks Website: available [here](#).



Masterclass: All RISE masterclasses are available [here](#).

Masterclass: "TrustMark and MCS Requirements" available [here](#).



Advice pack: All RISE advice packs available [here](#).

Advice packs: "Heat Pump Installation Considerations" available [here](#).



This pack aims to share insights, good practices, and lessons learned from the sector. It is intended for informational purposes only and does not constitute as recommendations or endorsements of specific suppliers, products, or services or as legal advice. Please always check the latest regulations.



www.riseretrofit.org.uk



RISE – Retrofit information, support & expertise