

INFORMATION AND GUIDANCE

GE-TGI-IG-0690

TITLE: Customer guidance for an electricity service connection	DOCUMENT NO: GE-TGI-IG-0690
Document Business Owner:	Development and Standards Manager

Author/Reviewer:	Development and Standards Manager	Nicola Smith	August 2023
Approver:	Asset Design Manager	Danni Patrick	August 2023
Authoriser:	Asset Design Manager	Danni Patrick	August 2023

Document Review – Latest Update

Document Version	Amendment Details
1	Document Issued

Full Document History is available at the end of this document

Next Review Due	Aug 2026
------------------------	----------



Customer guidance for an electricity service connection

This document should provide customers with some guidance on their electricity service connection and whether they may require an upgrade.

Do I need an Electric service upgrade?

In most cases the domestic capacity to your property shall be designed to be sufficient to provide for maximum foreseeable Electric Vehicle Charging Point (EVCP) and local (domestic) demand. This being a single-phase electricity supply which will give you up to 23kVA of power.

Most of our services are 35mm² and 100A cut out which will give you up to 23kVA of power. However, we do have some services which are 25mm and a 60A or 80A cut out which will be less.

If you have a 60A or 80A cut out it may be just a fuse change or could be a service replacement to 35mm if they did want to increase to 100A. Your electrician can advise on sizing, see below for reference:

100A - 23 kVA

80A - 18.4 kVA

60A - 13.8 kVA

In most cases, a 23kVA single-phase service will be sufficient for a 7.2 kW EVCP at a domestic dwelling but larger EVCPs or multiple EVCPs may require a three-phase supply, particularly if electrical heating load is expected.

Domestic demands

For standard domestic properties with non-electric heating, including an EVCP rated up to 7.2kW/32A, single-phase power will generally be sufficient.

For standard domestic properties with an air source heat pump (ASHP), including an EVCP rated up to 7.2kW/32A, single-phase power will generally be sufficient.

Standard car chargers, rated up to 7.2kW, can be run from a standard single-phase connection.

W www.gtc-uk.co.uk



Any car charges greater than 7.2kW may require a three-phase supply.

A 7.2kW EVCP does not need to be considered separately to your existing property demand, therefore we would not charge for connecting EVCPs at this rating or lower.

For EVCPs with a demand over 7.2kW, we will re-assess your property demand which may incur additional charges in construction materials and running costs post-installation. We may also require authorisation from the upstream network operator to allow for the additional demand, this will increase the quote turnaround time and may also incur additional charges.

Upgrade an electricity supply in your home (up to 69kVA)

Typically, customers need an upgrade when:

- Extending a property which requires more power to run more electrical appliances.
- Installing high power equipment such as faster car chargers, ground, or air source heat pumps, photovoltaics (PV), microgeneration, large motors, and welders.
- Installing any three-phase electrical equipment, such as water pumps.

If you need more power, we may be able to offer an upgrade from a single-phase electricity supply to a three-phase electricity supply. This will give you up to 69kVA of power.

Your electrician will need to review and advise on the implications and wiring needed from your consumer unit. One thing to consider would be the spacing requirements as the equipment needed for a three-phase supply is larger than a single-phase supply. i.e., Meter box, Hockey stick and cut out.

If in doubt, contact a qualified electrician or GTC's "My Connections" Team to discuss your requirements

W www.gtc-uk.co.uk



Glossary

EVCP – Electric Vehicle Charging Point

ASHP – Air Source Heat Pump

GSHP – Ground Source Heat Pump

PV – Photovoltaics / Solar Panel

Amps (A) – The amount of electricity or energy an appliance needs to operate.

Kilowatt hour (kWh) – a measure of energy

Kilowatt (kW) – rating of power

Kilovolt ampere (kVA) – a measure of power



DOCUMENT HISTORY

V1	August 2023	Document Issued