

Electric vehicle charging

The three main types of charging are:

- Standard (13amp, 3kW) charging, which generally uses a standard domestic 3-pin plug. Alternatively, an industrial ('Blue Commando') plug may be more suitable, and permits a higher charging current of 16 amps (3.7kW). This type of charging can be used by all EVs on the market. It typically takes 6-8 hours to charge an EV battery fully from empty using a standard charger. A wall mounted standard charger costs around £2000 to buy, and £1,500 to install. A standing post would cost around £3000 to buy and £3500 to install.
- Fast (32amp, 7kW) charging, which is similar to the power supplied by domestic cooker circuits. At present, only a minority of EVs are equipped to take a fast charge, which can charge a battery from empty in just a few hours. Fast chargers cost around £3,500 to buy, and around £3,500 to install. They also often require new cabling (or a spur) and a dedicated socket, which could cost up to £1,000.
- Rapid (3-phase 32-63amp, 22-43kW AC or 20-50kW DC) charging, which requires substantial infrastructure. At present, only a minority of EVs are equipped to take a rapid charge, which can charge a battery fully from empty in just 30 minutes.

Charge point types	Time to top up battery	Time to fully charge battery from empty	Used by
Residential Standard (3kW) Equivalent to a normal domestic plug. Can be used by all EVs on the market	Several hours	6-8 hours	Cars, 2-wheelers
Workplace Fast (7kW) Equivalent to a cooker socket Only a minority of EVs currently can take a fast charge.	30 minutes	A few hours	Cars, vans, 2-wheelers
Public charging Rapid (22kw).	15 minutes	1-2 hours	Cars Vans HGVs Coaches Buses
Restricted access Rapid (43kW AC or 50kW DC) Very	A few minutes	30 minutes	Cars Vans

<p>high voltage: normally restricted access.</p> <p>Limited locations as need high capacity local grid supply</p> <p>Only a minority of EVs can use and some manufacturers recommend limiting use to preserve EV battery life.</p>	<p>Good emergency use</p>		<p>HGVs</p> <p>Coaches</p> <p>Buses</p>
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