

EV Charging Feasibility Guide

This guide outlines key considerations for small-scale EV charging systems rather than large installations. To note, this was taken from a meeting with EV Company – MER. Other costs and options may vary. This is also my interpretation of what they say and should serve as an outline guide only.

Regulatory Overview

As of November 2024, any charger rated above 8 kW must include a contactless payment option.

Adding contactless capability increases equipment cost by approximately £800 per charger, excluding installation and commissioning time.

Charging Types

AC Charging

- AC charging is slower than DC charging, with charge times varying by vehicle battery capacity.
- Around 90–95% of EVs can accept up to 11 kW AC charge.
- When two vehicles share a dual terminal, each receives half the stated output (e.g. a 22 kW dual unit provides 2 × 11 kW).

AC Options:

Charger Type	Typical Charge Time	Power Supply	Approx. Cost
Dual 7.4 kW	~12 hours	63 A single-phase	—
Dual 22 kW	~8 hours	32 A three-phase	~£2,000 per terminal

DC Charging

Charger Type	Typical Charge Time	Power Supply	Approx. Cost
Dual 50 kW	~1 hour	80 A three-phase	~£10,000 per terminal

Load Management

A load management device can be installed to prevent site supply overload. Approximate cost: £300, excluding minor installation costs.

User Interface and Management

MER CONNECT provides back-office control and accessibility management.

- Annual cost: £100
- Required for all systems

Accessibility Options:

Mode	Description	Typical Management Fee	Notes
Public	Visible on Google Maps, Waze, etc.	11% (App) / 12.5% (Contactless)	Tariff set by client. Payments processed by MER and remitted monthly. 7.4 kW units excluded.
Preferential	Registered app users (e.g. staff, community).	8%	Tariff set by client.
Private	Fob access for fleet or internal users.	—	Can be free or client-defined rate.

All three accessibility options can be included without additional fees via the MER CONNECT system.

Funding and Viability

For small systems, CAPEX must be client-funded or externally financed. MER does not provide capital support.

Project feasibility is highly dependent on footfall, which MER does not model.

Engagement Process

1. Initial meeting
2. Completion of MER questionnaire (supply capacity, earthing arrangements, etc.)
3. Submission of maximum and/or proposed maximum site demand
4. Site survey
5. Model and financial discussion