



octopus
ELECTROVERSE

**CHARGING INFRASTRUCTURE INSIGHTS
UK & EUROPE**

OCTOBER 2025

HIGHLIGHTS OF THE MONTH

Seasonal Shifts in Charging: Shorter Stops, Longer Journeys

Drivers across the UK and Europe are changing how they charge their electric vehicles. Data from the summer months shows a roughly 10% decrease in both average session duration and energy consumption (kWh). This shift likely reflects seasonal behaviours, particularly the rise in road trips during summer months. Many drivers appear to be “topping up” en route, charging just enough to reach their destination rather than waiting for a full charge. This trend highlights a maturing EV ecosystem, where charging fits naturally into everyday travel routines rather than being seen as a barrier or interruption.

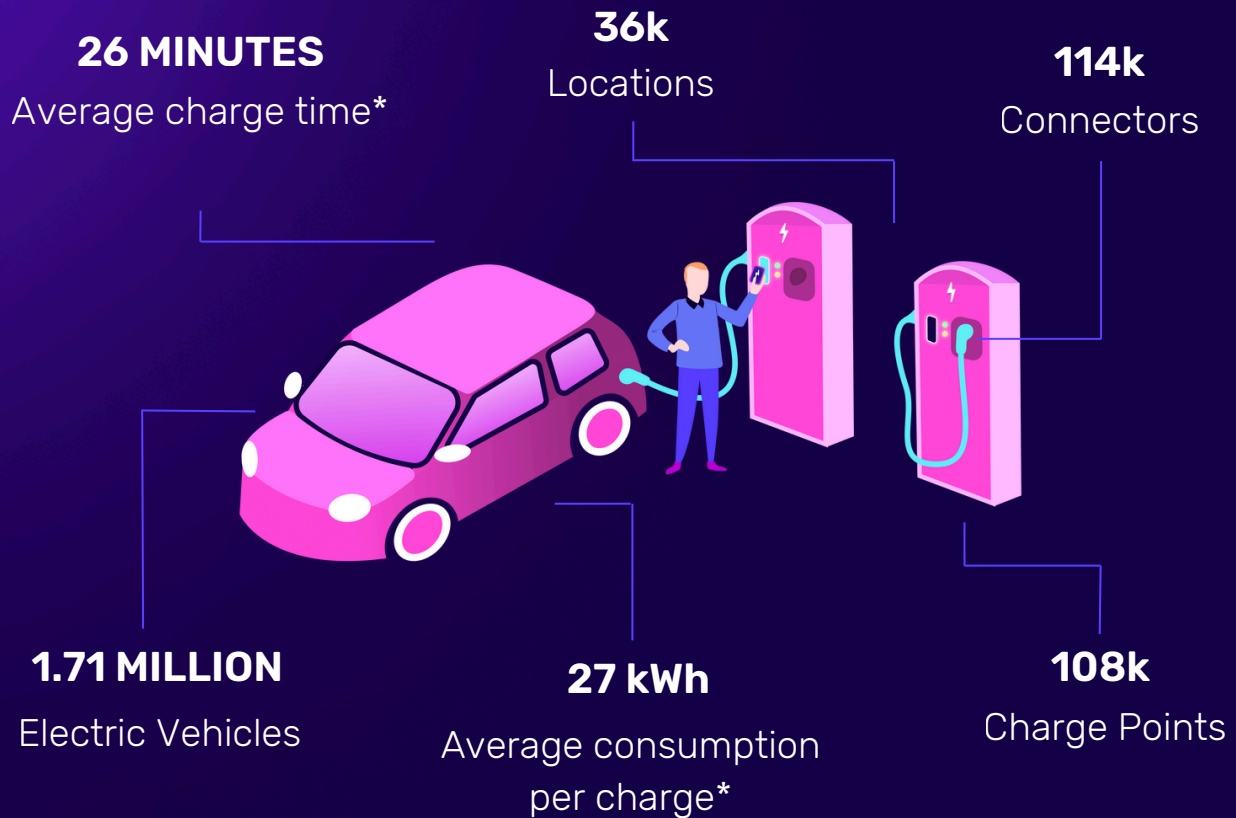
How Drivers Are Charging

UK charge points are split into four main categories by speed: slow (<8 kW), fast (8–50 kW), rapid (50–150 kW), and ultra-rapid (>150 kW). As of October, slow chargers make up roughly 47% of all UK connectors, often serving as home-charging alternatives. Rapid and ultra-rapid chargers account for around 25% and are crucial for keeping drivers moving on longer trips.

Europe's Expanding Infrastructure

Europe's total charge point count now stands at around 1.25 million. Growth rates and charging speed mixes vary significantly by country, but fast chargers (8–50 kW) remain dominant, making up about 68% of Europe's total. In comparison, the UK leans more heavily toward slower charging, reflecting different market needs and rollout strategies.

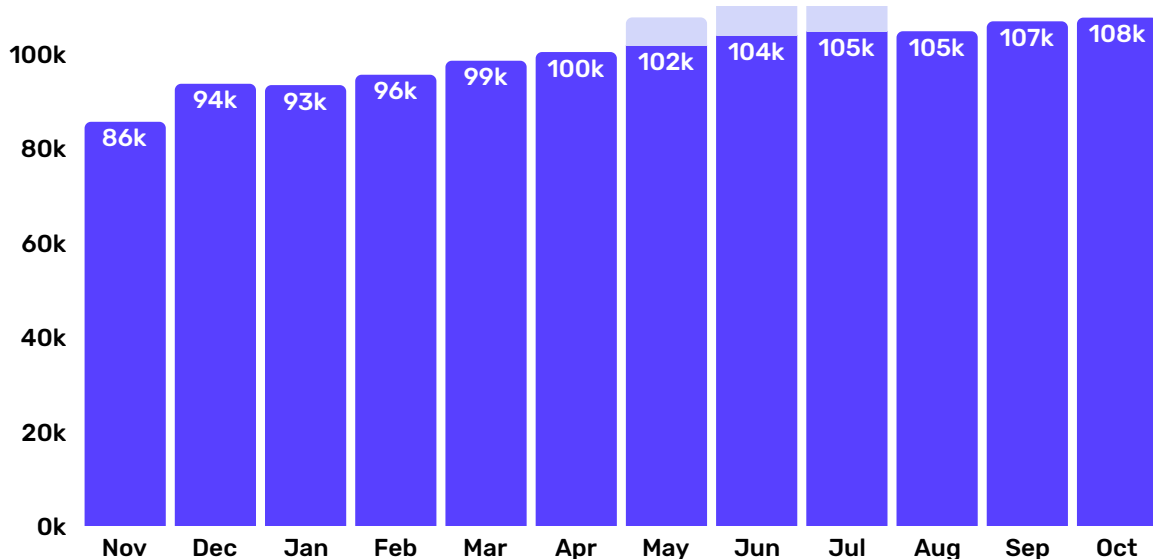
UK HEADLINE STATISTICS



*Based on last month of Electroverse consumers charging data on Ultra Rapid Chargers

In October 2025, the UK's charge point number totalled 108k. Following the identification and resolution of an anomaly in third-party data sources, a steady increase of ~8,000 EVSEs can be observed since May 2025.**

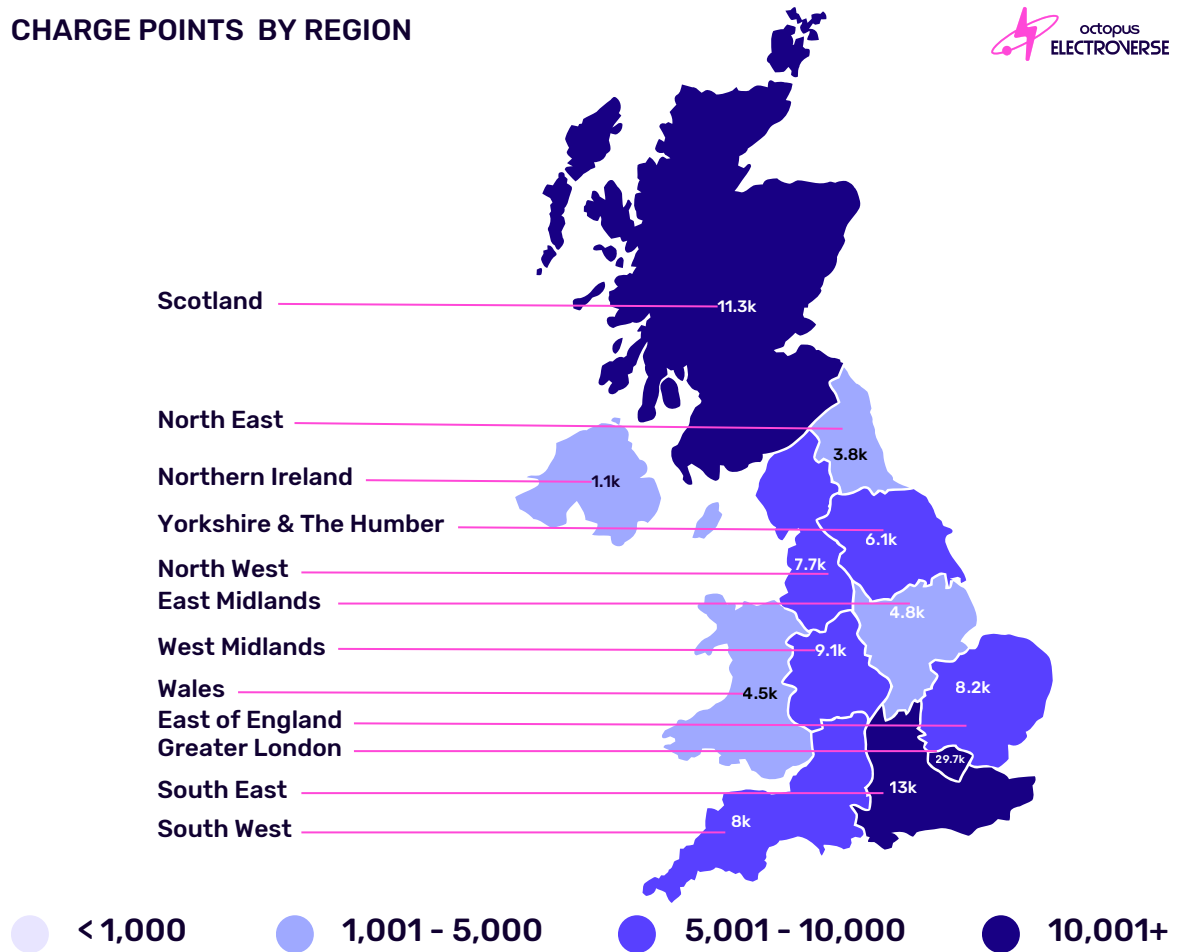
UK CHARGE POINTS GROWTH



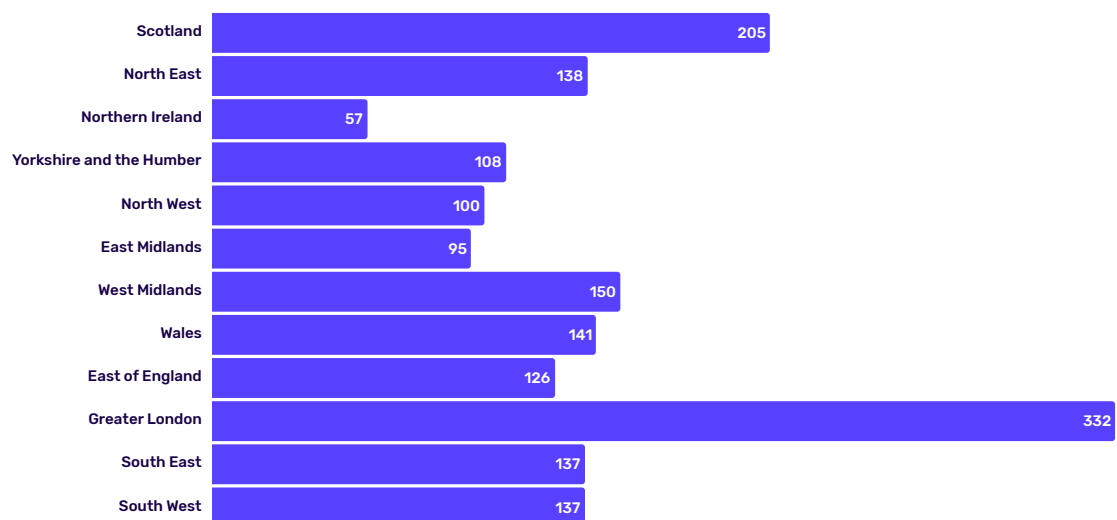
**For more details on the anomaly in reporting, please see our Sources and Data section at the end of the report

CHARGING INFRASTRUCTURE ACROSS THE UK

CHARGE POINTS BY REGION



CHARGE POINTS PER 100K INHABITANTS

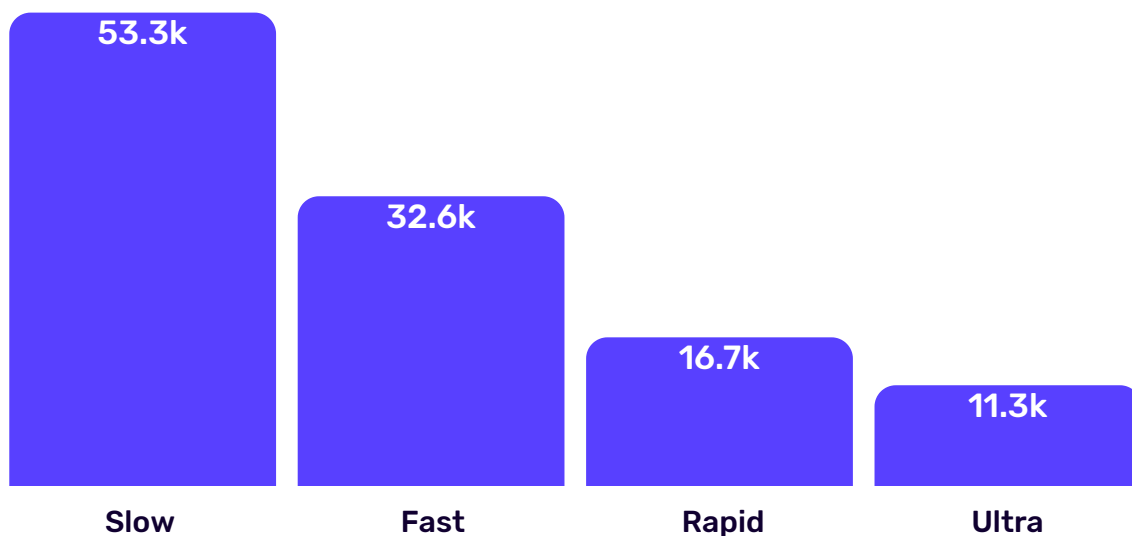


CHARGER CHARACTERISTICS

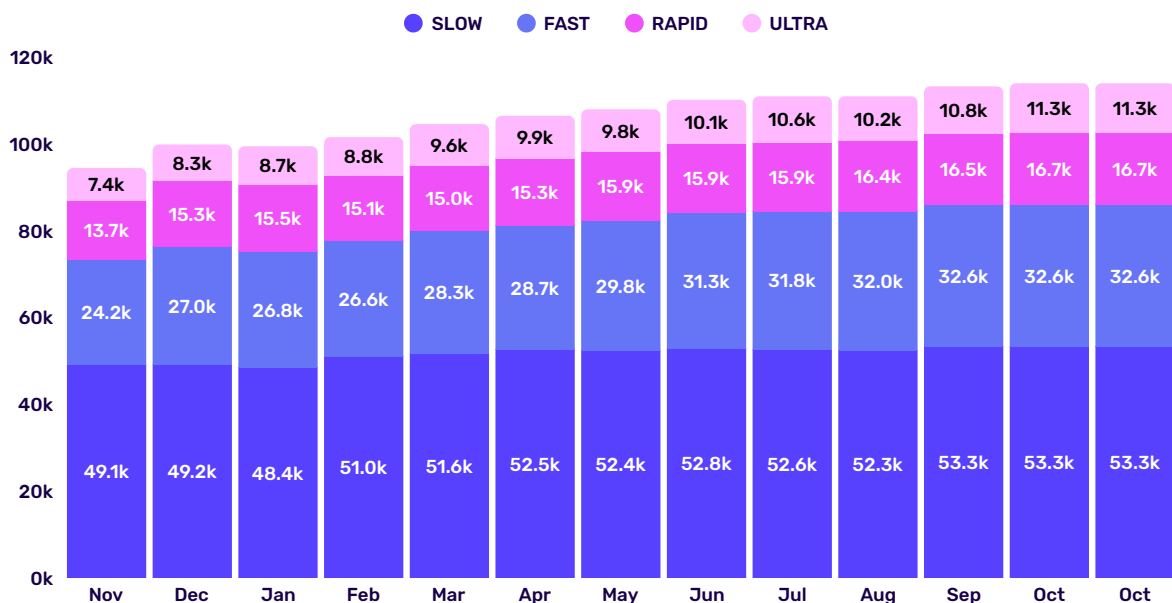
SPEED

Charging connectors offer varying speeds (kW), and are classified as **slow** (< 8 kW), **fast** (8 - 49 kW), **rapid** (50 - 149 kW), or **ultra-rapid** (>= 150 kW). In the UK, slow charging speeds make up around **47%** of the total connectors, with rapid and ultra-rapid contributing around **25%**. Charging speed utilisation often relates to varying driver needs: some slower chargers can act as home charging alternatives, so a greater number is required to meet demand.

UK CONNECTORS BY SPEED



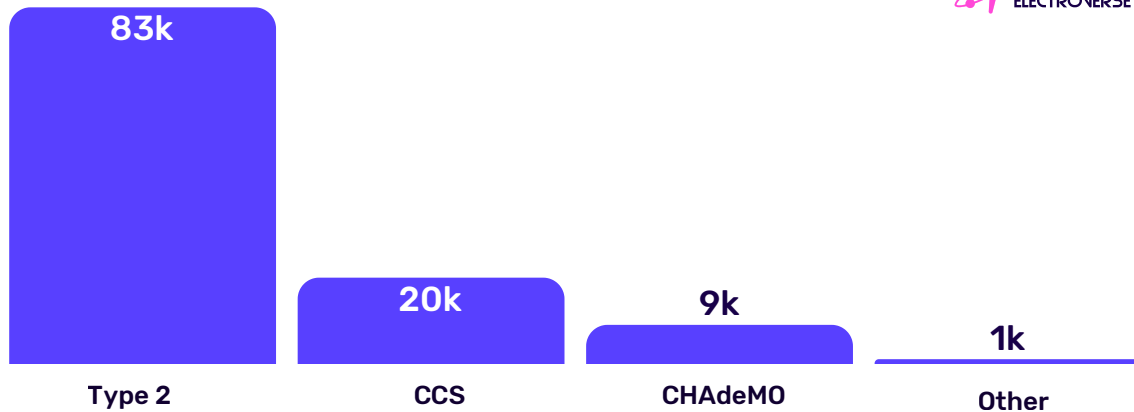
UK CONNECTOR GROWTH BY SPEED



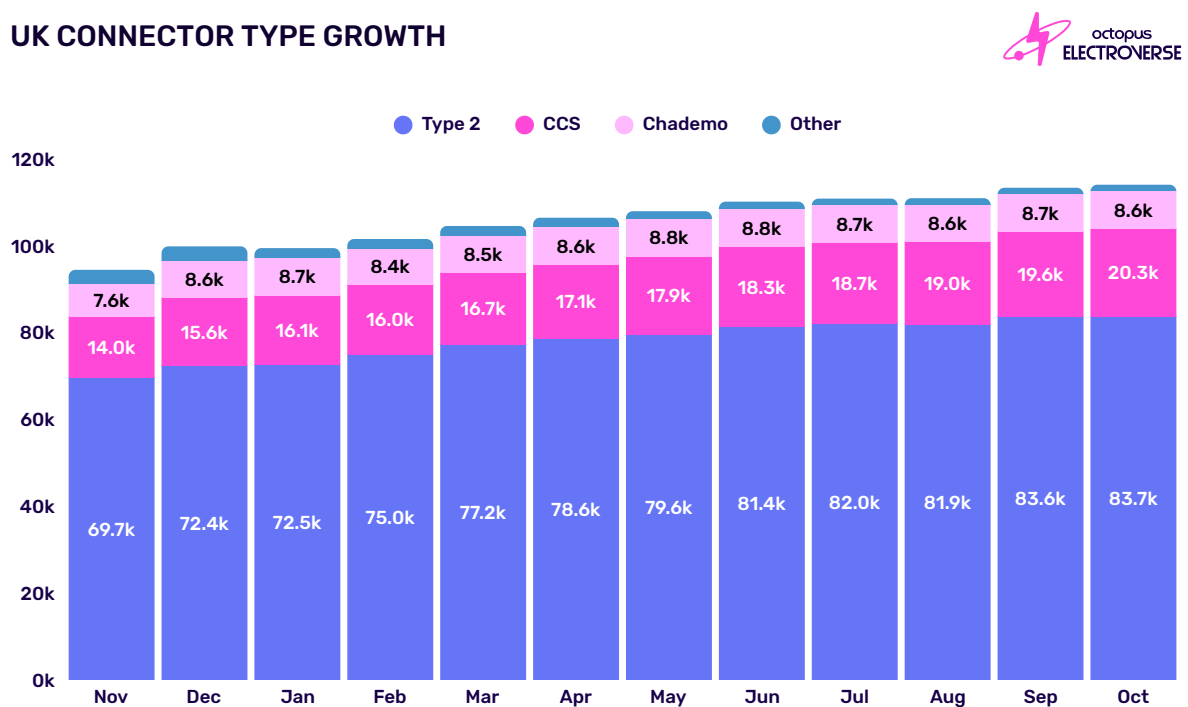
STANDARD TYPE

Type 2 and CCS connectors are being rapidly expanded across the UK, highlighting strong growth in both Slow and Fast charging for Type 2, and Rapid and Ultra-Rapid charging for CCS. Meanwhile, the number of CHAdeMO connectors has remained largely unchanged over the past 12 months, as CCS is gradually replacing this older standard in new vehicles across the UK market.

UK CONNECTORS BY TYPE



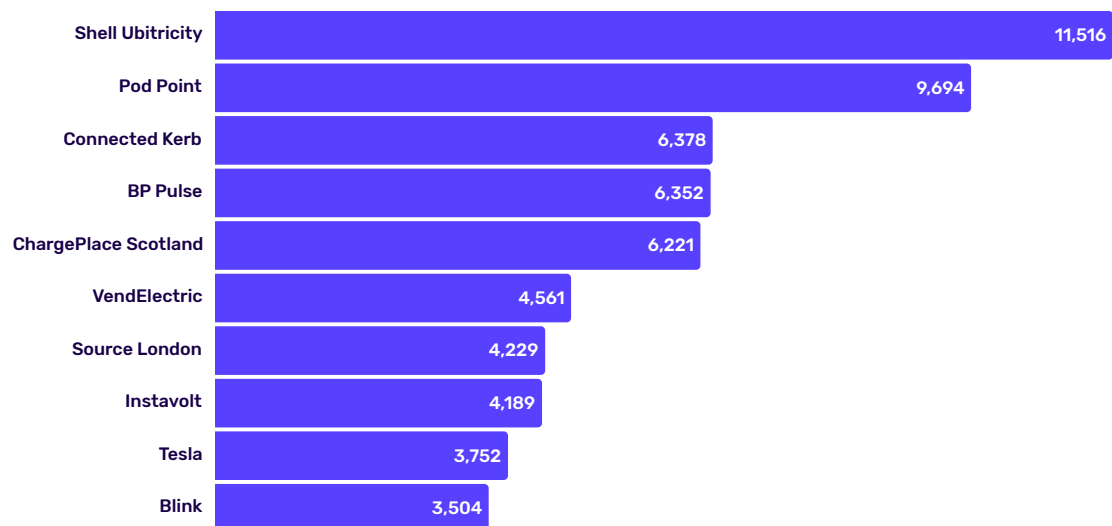
UK CONNECTOR TYPE GROWTH



CHARGE POINT OPERATORS

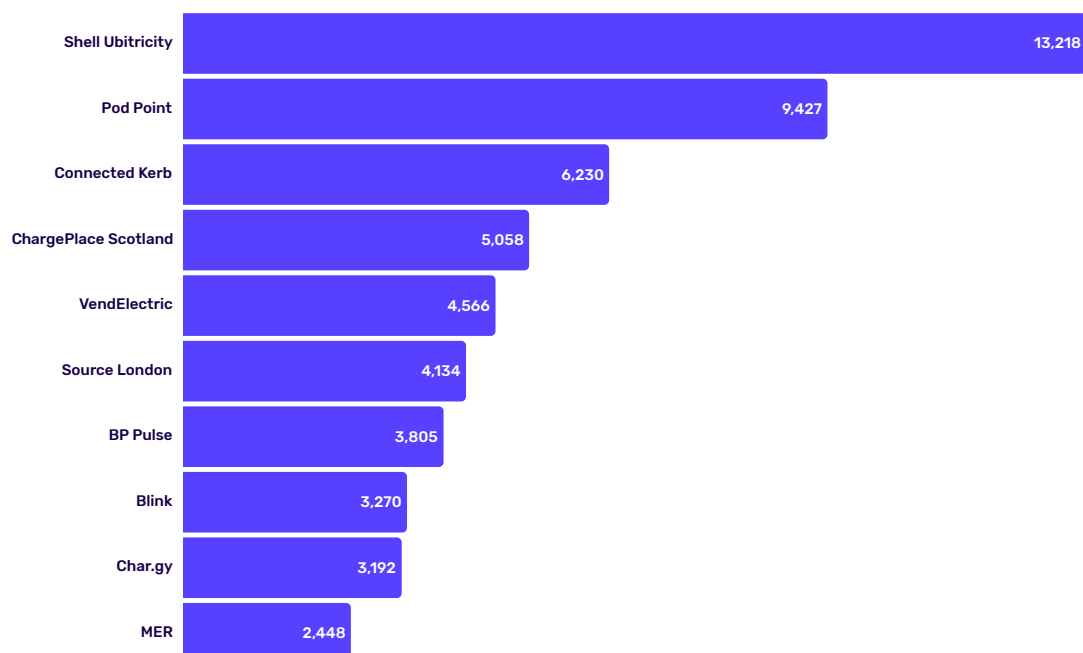
This graph details the largest operators by number of connectors across the UK. Operators, colloquially known as charging networks or 'CPOs', run and maintain the charge points on their network.

LARGEST OPERATORS - CONNECTORS

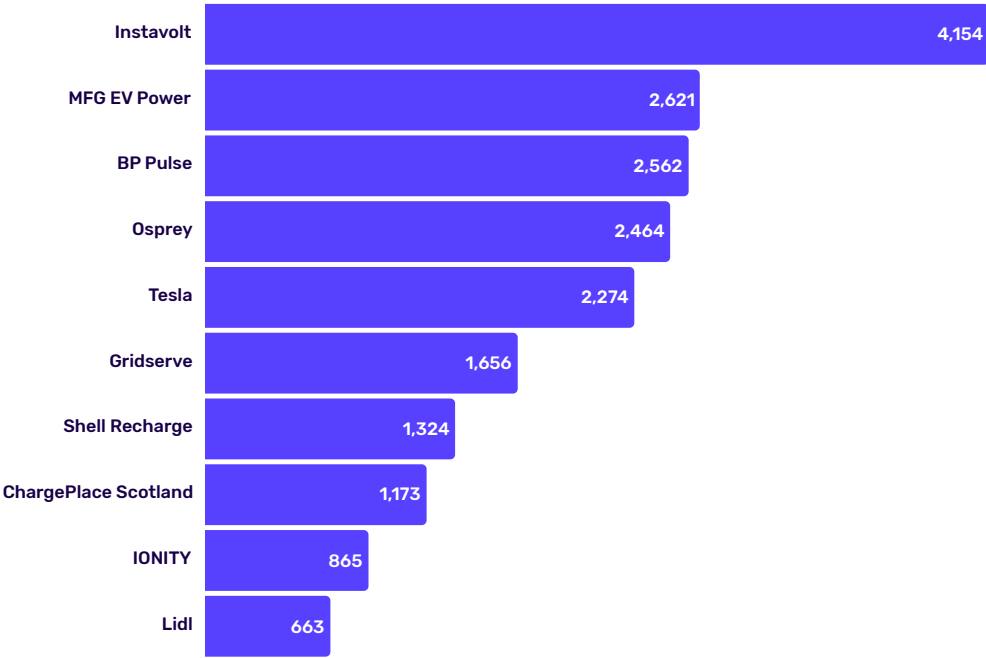


Operators specialising in slower AC charging, like Shell Ubitricity and Pod (previously, Pod Point), have established a significant lead in the total number of connectors across the UK. In contrast, InstaVolt & MFG Power dominate the rapid DC charging landscape, closely followed by BP Pulse & Osprey. While many CPOs focus on either AC or DC infrastructure, some, such as BP Pulse, offer both.

LARGEST SLOW/ FAST OPERATORS - CONNECTORS

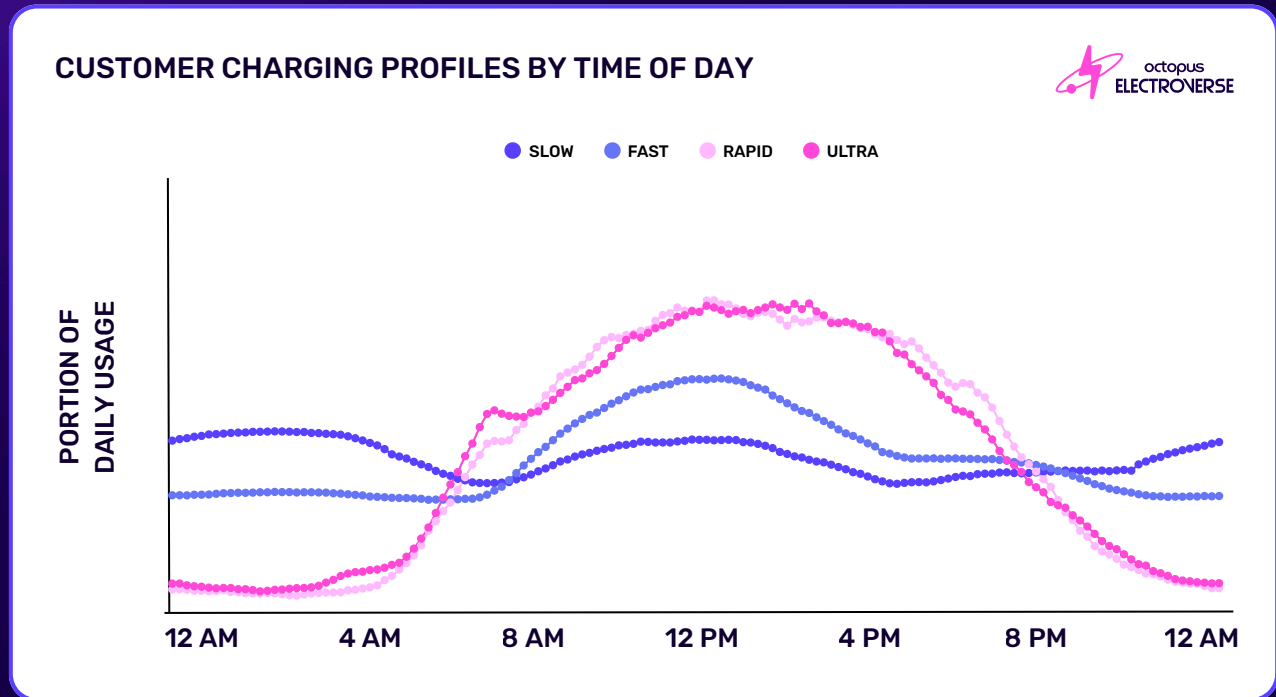


LARGEST RAPID/ ULTRA OPERATORS - CONNECTORS

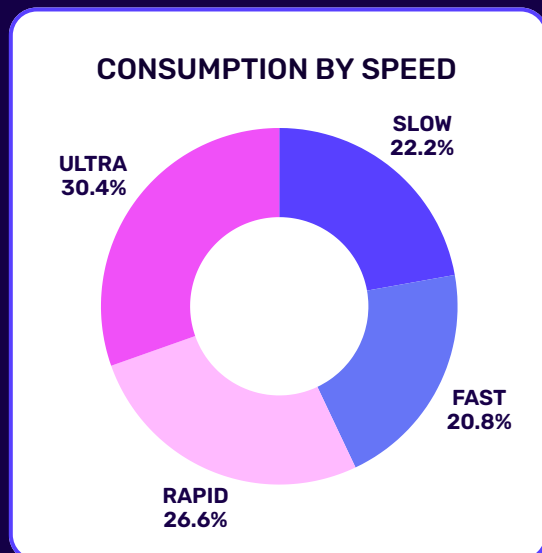


USAGE PROFILES

Daily usage curves illustrate how EV drivers interact with EV charging infrastructure. Rapid and Ultra usage peaks during the daytime when drivers are charging on the go. In contrast, slow charger utilisation remains relatively steady, with an uptick overnight as drivers use cheaper, slower speeds as an alternative to home charging.



Based on Octopus Electroverse consumption data from the last 12 months



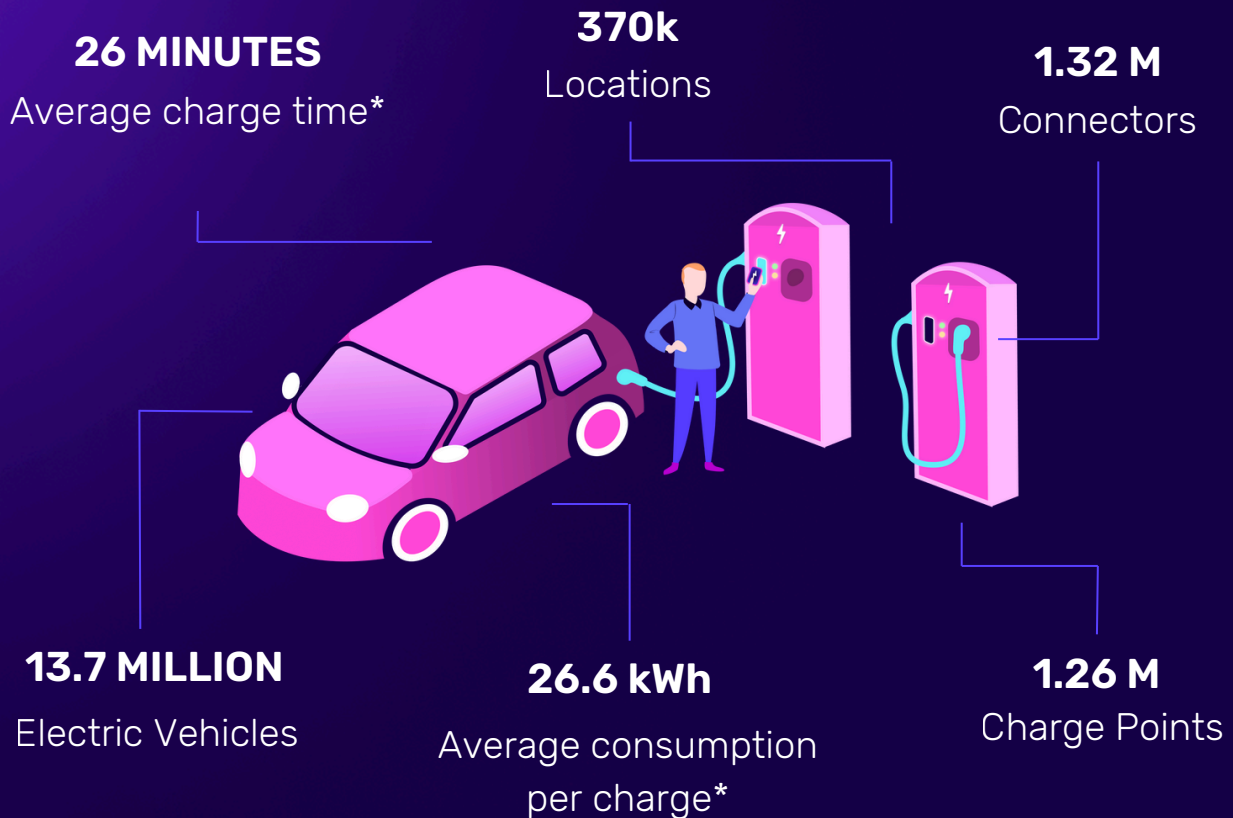
AVERAGE TIME CHARGING BY SPEED

SPEED	TIME
SLOW	05 hr 14 minutes
FAST	03 hr 27 minutes
RAPID	00 hr 35 minutes
ULTRA	00 hr 29 minutes

Based on Octopus Electroverse consumption data from the last month

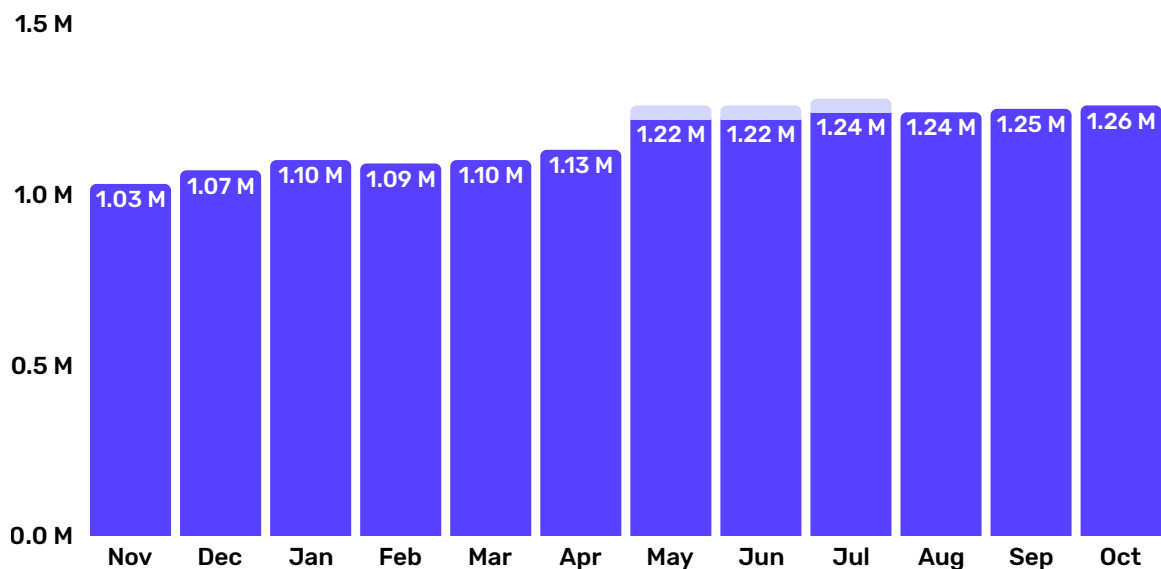
When we look at the distribution of Consumption by Speed, more than **57%** of the total volume of kWh consumed by Electroverse drivers is via ultra-rapid & rapid chargers, despite these only accounting for **9%** and **14%** of total connectors, respectively. This is partly because these connectors can deliver more energy more quickly.

EUROPEAN HEADLINE STATISTICS



*Based on last month of Electroverse consumers charging data on Ultra-Rapid Chargers

EUROPE CHARGE POINTS GROWTH



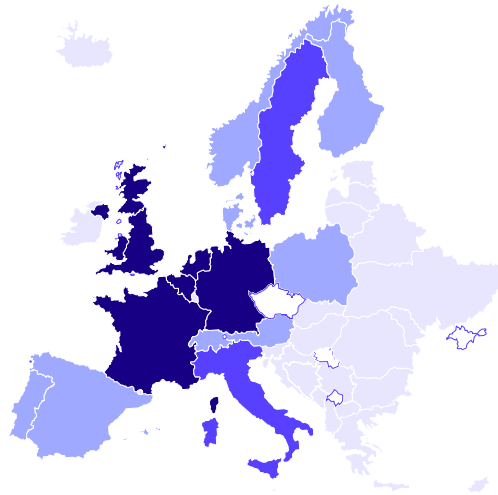
This graph highlights the steady growth of charge points across Europe. **

The graphs on the following pages show the mechanisms for achieving this growth vary widely across European markets, both in terms of charging speeds and speed of rollout.

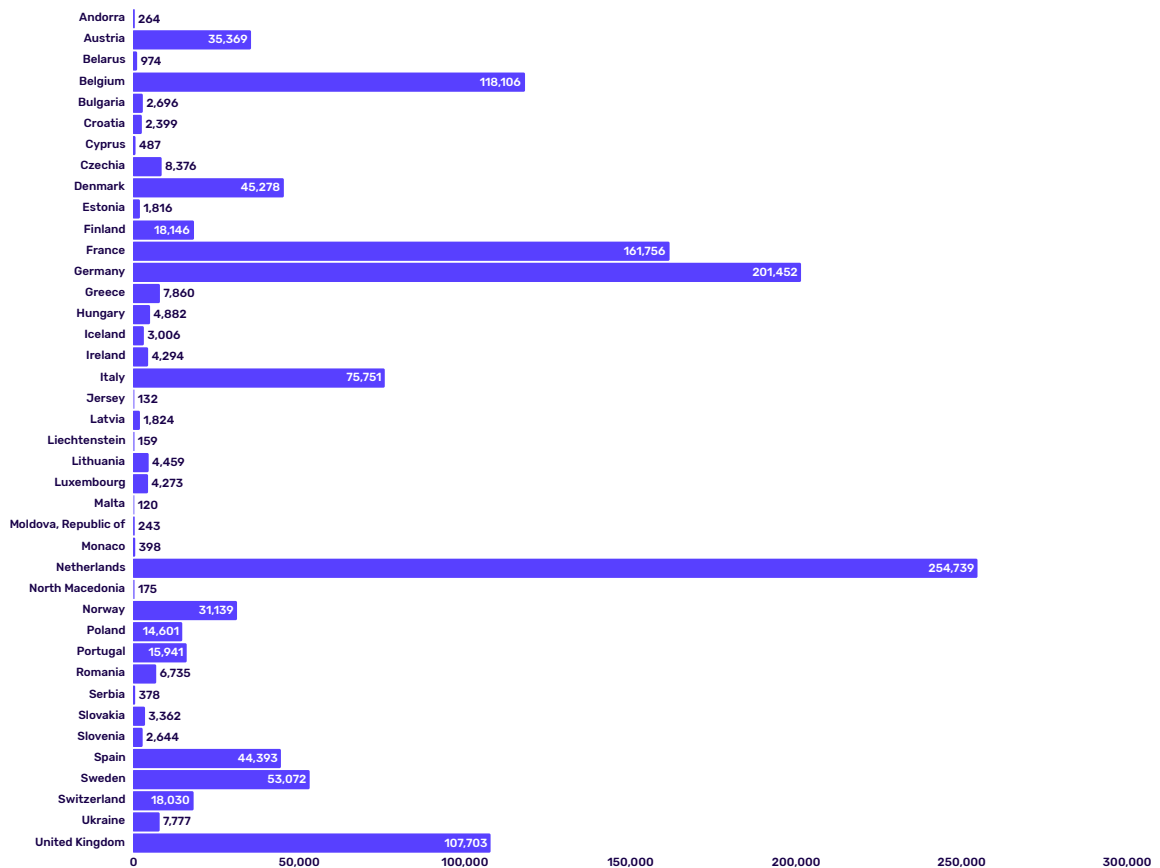
**For more details on the anomaly in reporting, please see our Sources and Data section at the end of the report

CHARGING INFRASTRUCTURE ACROSS EUROPE

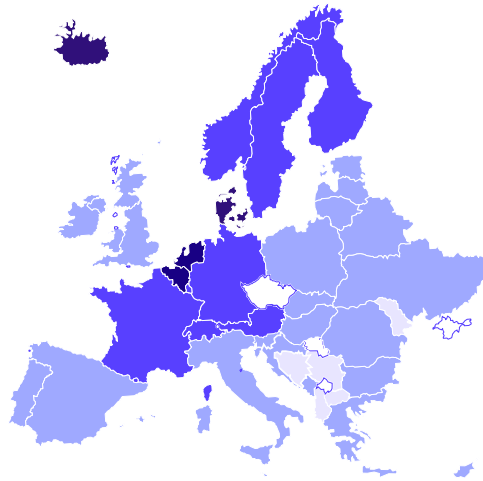
CHARGE POINTS BY COUNTRY



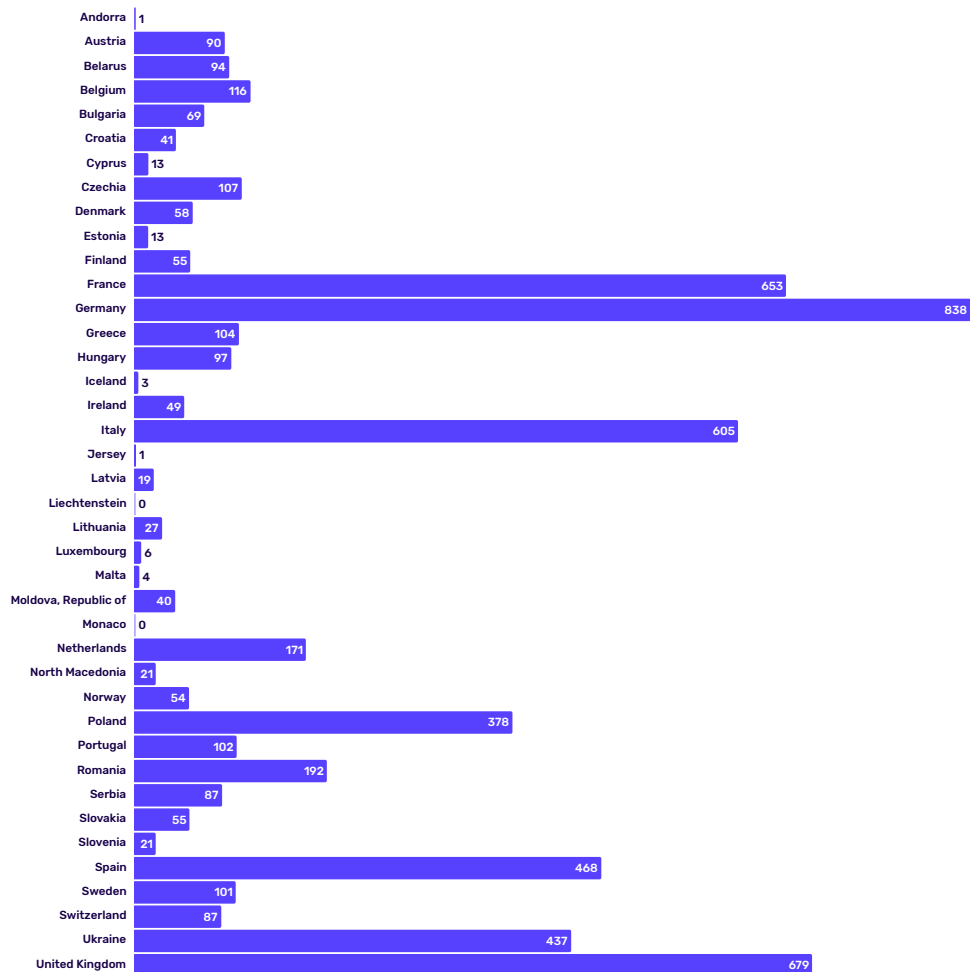
CHARGE POINTS BY COUNTRY



CHARGE POINTS PER 100K INHABITANTS

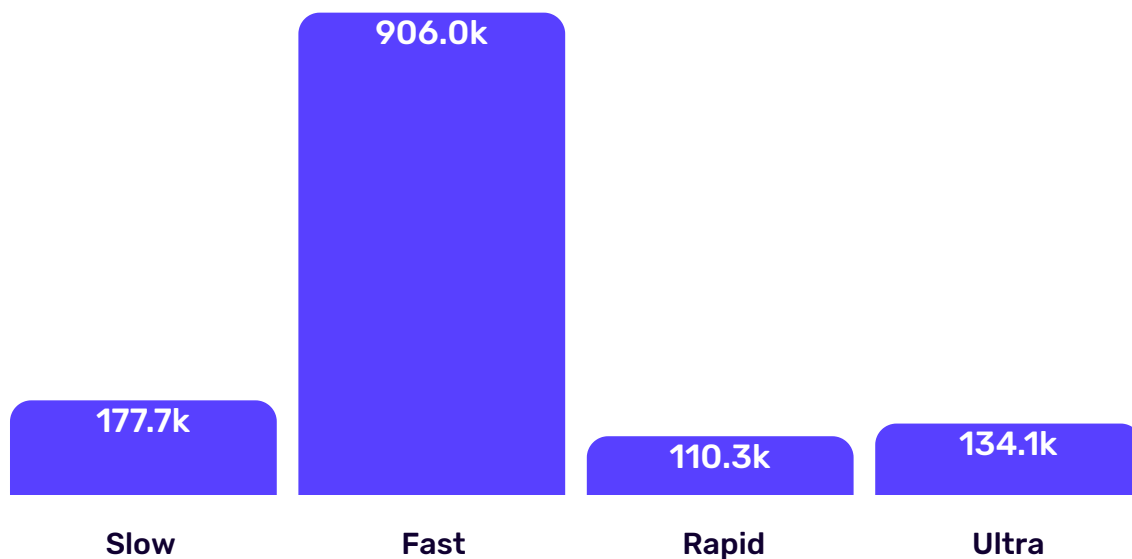


CHARGE POINTS PER 100K INHABITANTS



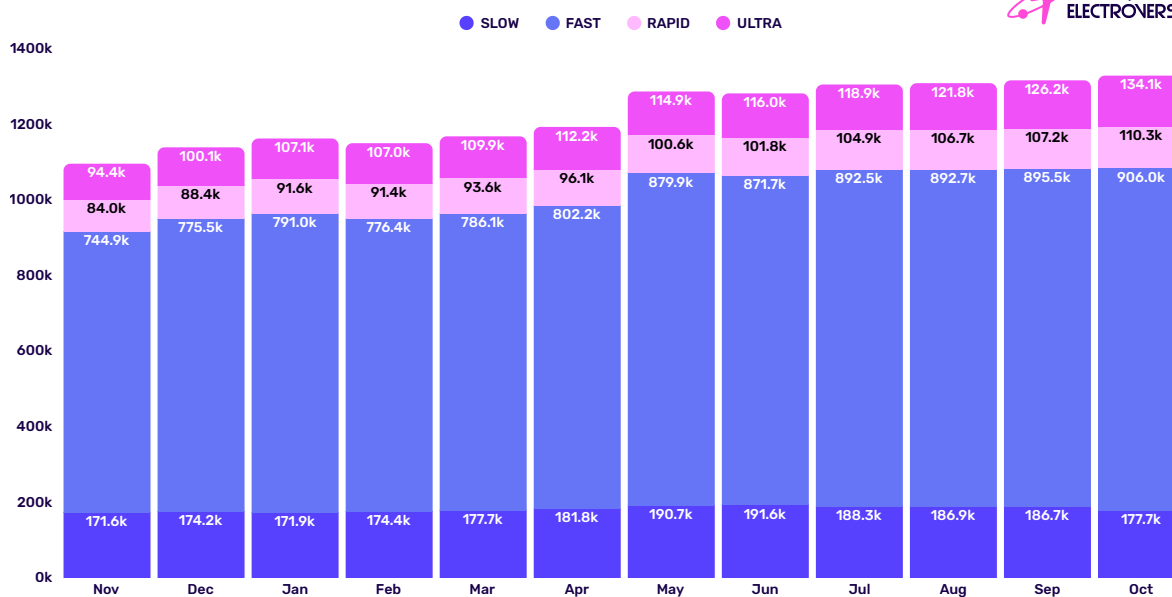
SPEED

EUROPE CONNECTORS BY SPEED

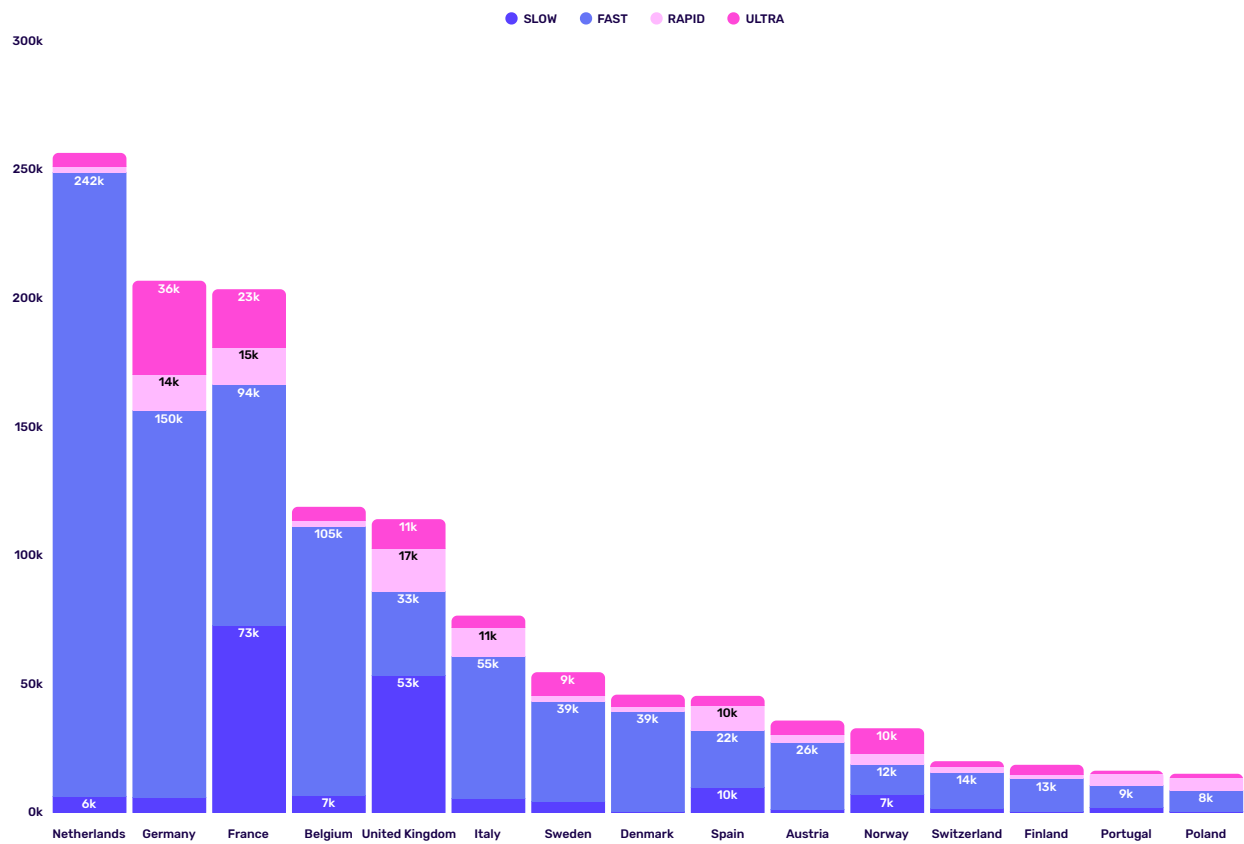


These graphs demonstrate the current state of charging speeds across Europe and offer insight into potential future trends. 8 - 50 kW fast charging speeds dominate Europe, contributing around **68%** of total connectors - comparatively, the UK has a greater number of slow charging connectors (**47%** relative to the total number).

EUROPE CONNECTORS GROWTH BY SPEED

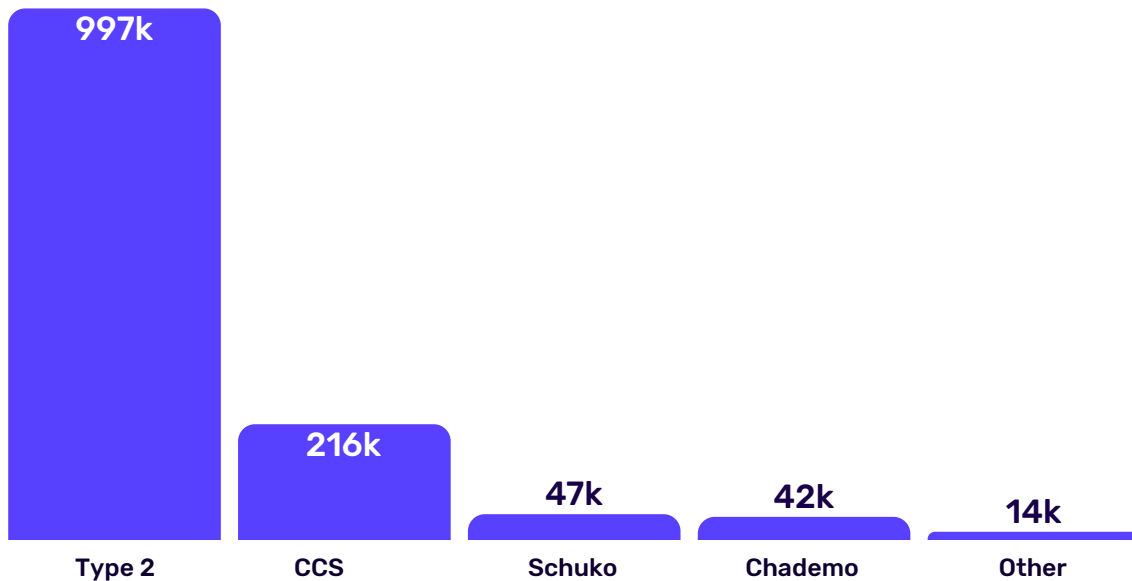


NUMBER OF CONNECTORS BY SPEED AND COUNTRY IN EUROPE (>10,000 CONNECTORS)



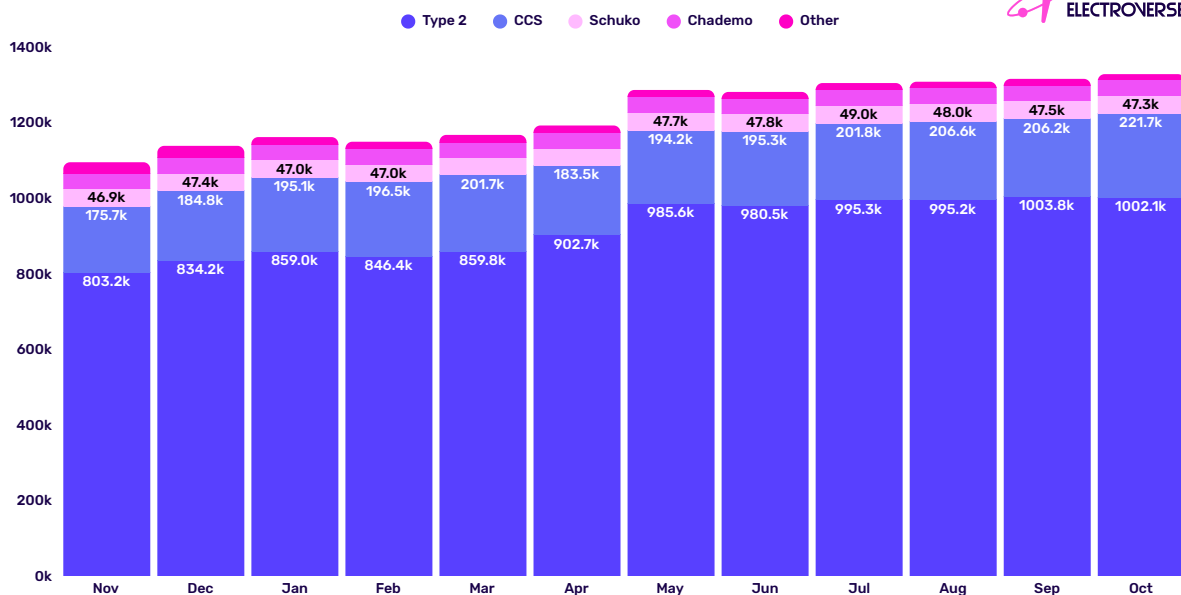
STANDARD TYPE

EUROPE CONNECTORS BY TYPE



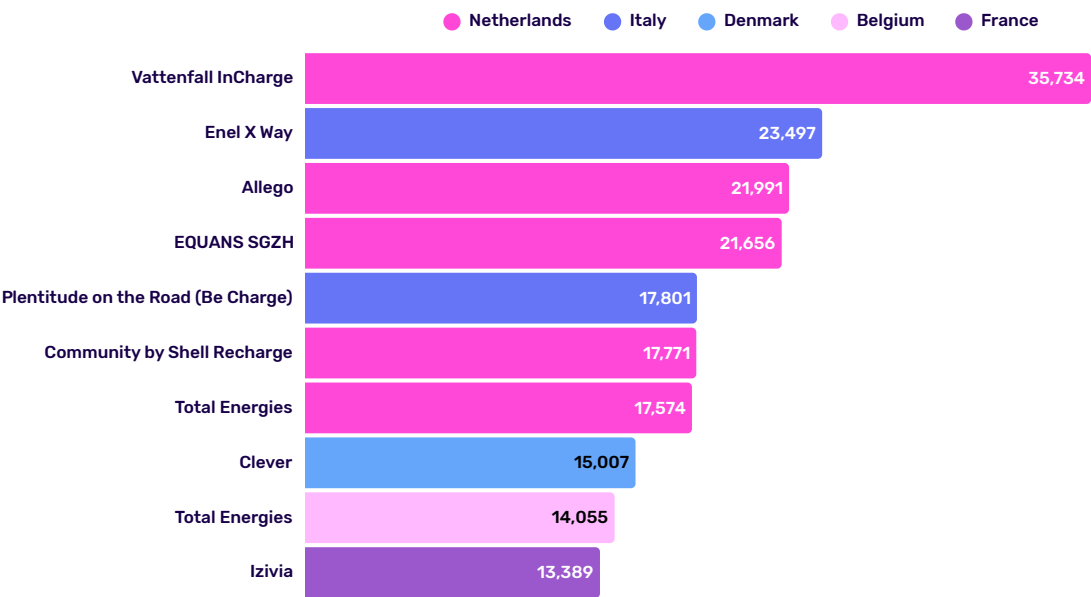
Connector trends across Europe closely mirror those seen in the UK. Market growth is being fuelled by the widespread rollout of Type 2 and CCS connectors, now standard on all new vehicle models. In contrast, CHAdEMO connector numbers have remained steady, continuing to support older vehicles still in use. Europe also has many Schuko connectors (similar to a standard household socket), though this category has shown little change and, as expected, is not an area of growth.

EUROPE CONNECTORS BY TYPE

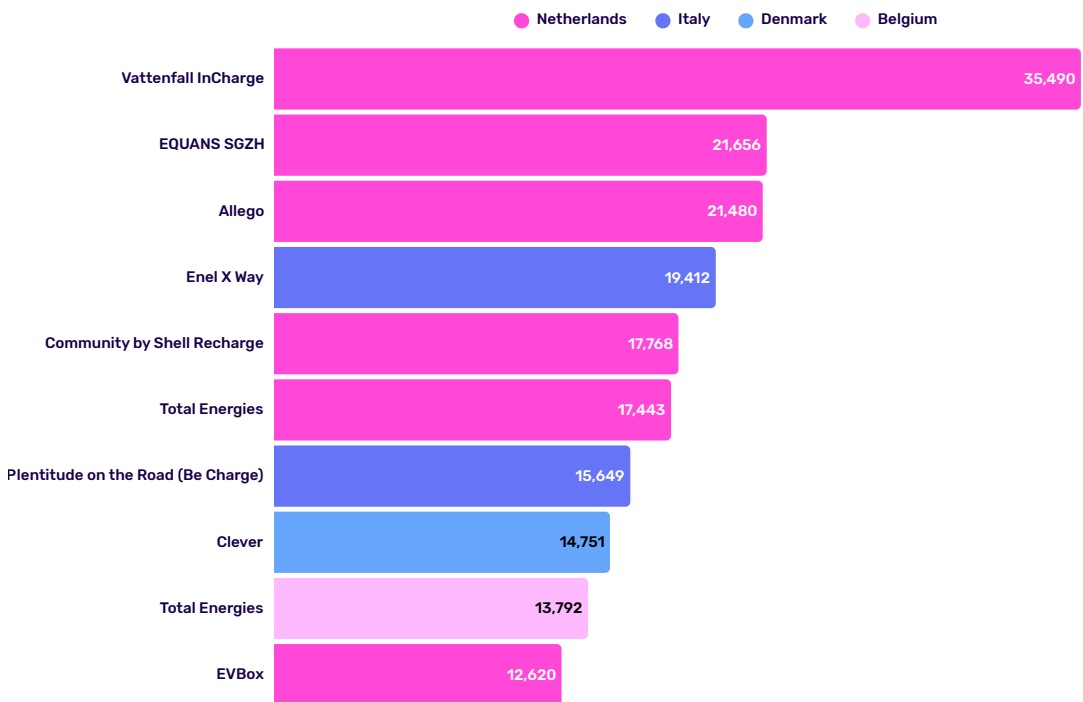


CHARGE POINT OPERATORS

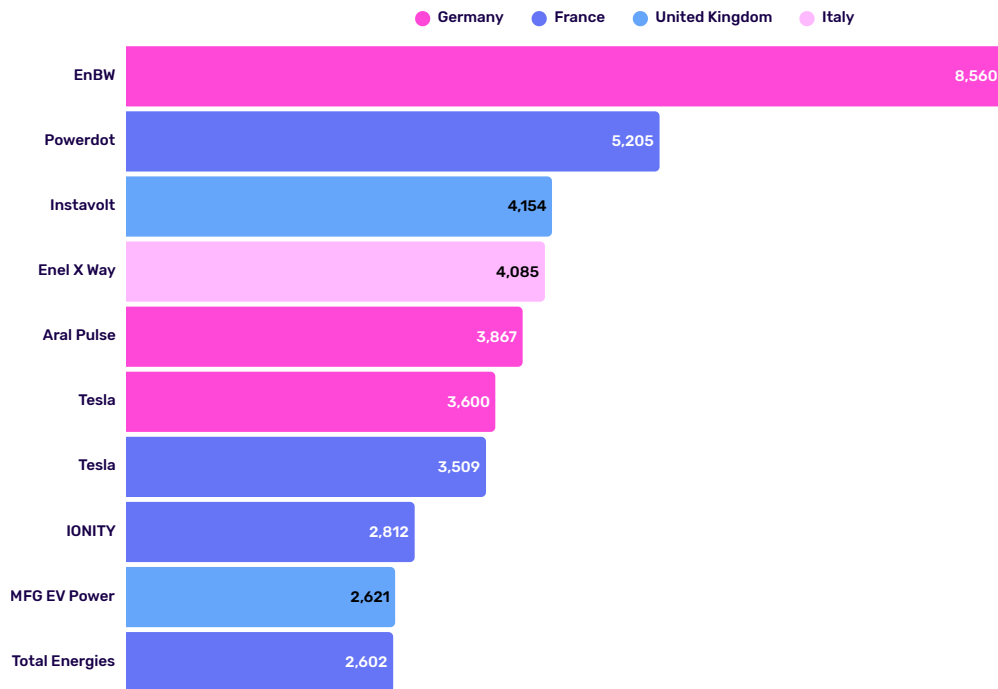
LARGEST OPERATORS IN EUROPE - CONNECTORS



LARGEST SLOW/FAST OPERATORS - CONNECTORS



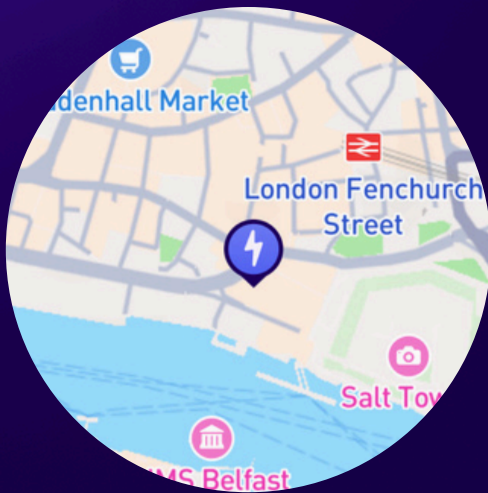
LARGEST RAPID/ULTRA OPERATORS - CONNECTORS



DEFINITIONS

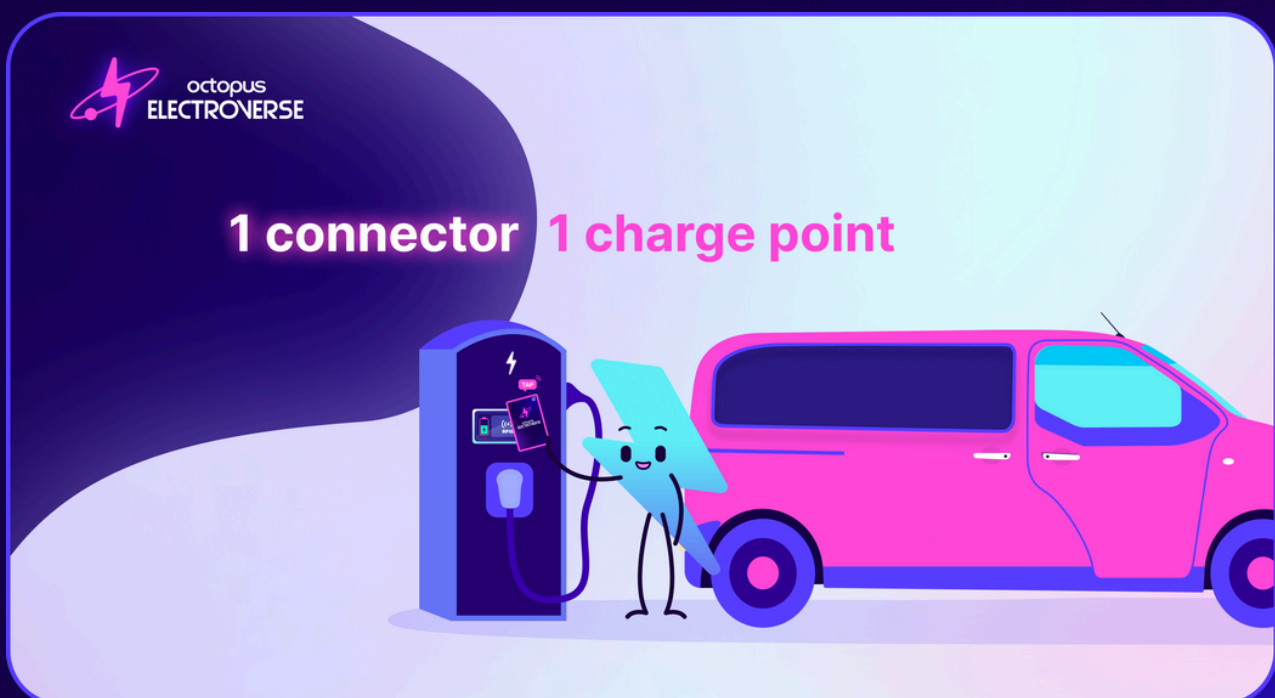
DEFINING A CHARGE POINT

We use the term 'charge point' to simplify the language - in the industry this is known as an 'EVSE', which stands for **Electric Vehicle Supply Equipment**. An EVSE is an independently operated and managed part of a charge point, that is **able to deliver energy to one EV at a time**. This is the industry-approved definition and forms part of the data structure we receive from Charge Point Operators (CPOs).



A **location** is a physical site where there are one or more charge points. Think of a location as a single pin on the Octopus Electroverse map!

The EVSE hardware inside each charging unit determines how many vehicles can simultaneously charge at the same unit. A basic charge point has **one connector** and therefore **one charge point** that can be used to **charge one vehicle** independently.



While a charging unit may have a **choice of connectors**, sometimes, it may only have the capability to **charge one vehicle** at a time, defining it as a **single charge point**. Here are some more examples:



2 connectors 1 charge point



2 connectors 2 charge points

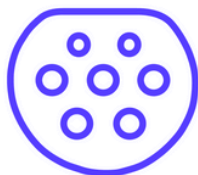


3 connectors 2 charge points



VISUALS OF CHARGING SOCKET TYPES

Currently, there are three main charging socket types: Type 2, CHAdeMO and CCS.



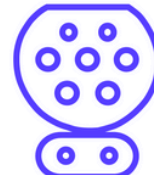
TYPE 2

Type 2 sockets will typically be reserved for slow charging speeds, delivering AC power.



CHAdeMO

CHAdeMO was the first type of DC socket, but is largely being replaced by CCS.



CCS

CCS sockets are capable of delivering large amounts of power, so are typically found on rapid and ultra-rapid charge points.

GLOSSARY

CPO

Charge Point Operator. The mobility provider managing the charging infrastructure (e.g. IONITY, Osprey, Shell Recharge, Connected Kerb etc).

EVSE

Electric Vehicle Supply Equipment. An EVSE is an independently operated and managed part of a charge point, that is able to deliver energy to one EV at a time.

kW

A kilowatt represents the rate of power (e.g. a charger's output). The higher the kW rating of a charger, the faster it can charge an EV.

kWh

A kilowatt-hour is the unit used to measure the number of kW used (e.g. charging prices are stated in kWh, and charging sessions are measured in kWh).

kW vs. kWh

Simply put, a kWh reflects the total amount of electricity used, whereas a kW reflects the rate of electricity usage.

SOURCES & REFERENCES

The Society of Motor Manufacturers and Traders (SMMT) : <https://www.smmt.co.uk/>

The European Automobile Manufacturers' Association(ACEA) : <https://www.acea.auto/>

Open Charge Point Interface (OCPI) : <https://evroaming.org/>

Population of European Countries) : <https://www.statista.com/statistics/685846/population-of-selected-european-countries/>

UK Population by Region : <https://www.statista.com/statistics/294729/uk-population-by-region/>

All other data : [The Octopus Electroverse database](#)

***Third-Party Data updates increase accuracy of tracking the UK's charging progress**

In August 2025, the UK's public EV charging network totalled 106,000 charge points. At first glance, this looks like a drop from July's figures, but the actual story is more positive. The change results from an update to one of many third-party data sources, which we compile and standardise to provide a holistic view of the UK's charging infrastructure. As part of this update, we identified an error which had contributed significantly to the large jump in the number of UK chargepoints in May. This error resulted in duplicate locations from third-party reporting, which have now been identified and removed from the count. By carefully identifying and addressing anomalies like this, we gain a clearer and more accurate picture of the network's actual state.

When you strip out that anomaly, the underlying trend shows steady and consistent growth. Between May and July 2025, the UK has added around 6,000 new EVSEs, keeping the country firmly on its upward trajectory. Six months of continuous expansion is a strong signal that the UK's charging infrastructure is maturing, becoming more reliable, and keeping pace with rising EV adoption.