octopus
ELECTROVERSE

CHARGING INFRASTRUCTURE INSIGHTS
UK & EUROPE

DECEMBER 2025

HIGHLIGHTS OF THE MONTH

How the UK & Europe Compare: Network Size and EV Adoption

With December marking the end of 2025, comparisons between UK and European driver behaviours are converging:

In the UK, the number of public charge points in the UK stands at around 106,000, spread across 36,000 locations, supporting 1.78 million EVs. Across Europe, the network is far larger, with 1.28 million charge points at 374,000 locations, serving 13.7 million EVs. While Europe's network is roughly twelve times the size of the UK's, charging patterns remain broadly consistent across both regions.

How Drivers Charge: Session Times and Energy Use

UK drivers spend an average of 28 minutes per charge, slightly longer than the European average of 27 minutes, and consume around 27 kWh per session, comparable to Europe's 26.6 kWh. These figures indicate similar usage behaviour despite the difference in network scale, with high-power rapid and ultra-rapid chargers delivering the majority of total energy consumed.

The Backbone of the Network: Connector Types and Charging Speeds

Month-on-month comparisons between November and December 2025 show modest changes. Slow chargers (<8 kW) remain dominant in the UK, representing 44% of connectors, while rapid and ultra-rapid chargers account for 26% of the network. Across Europe, fast charging (8–50 kW) is far more prevalent, representing around 68% of connectors.

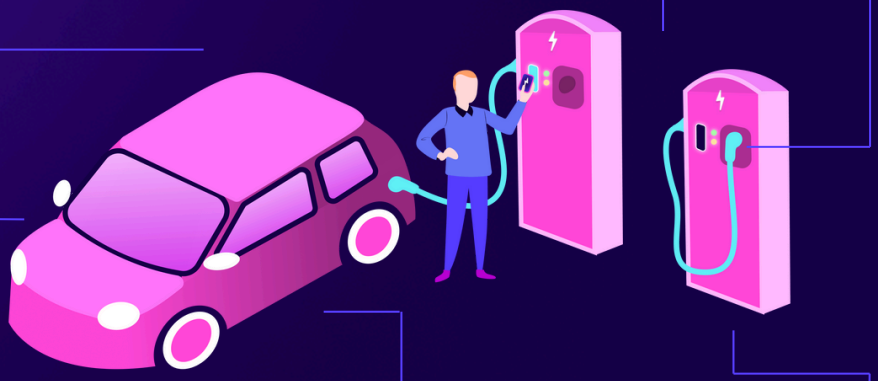
Overall, December 2025 marks a maturing EV charging ecosystem. Both the UK and Europe continue to expand their networks, improving coverage, and accommodating growing EV adoption and driver charging patterns.

UK HEADLINE STATISTICS

28 MINUTES
Average charge time*

36k
Locations

113k
Connectors



1.78 MILLION
Electric Vehicles

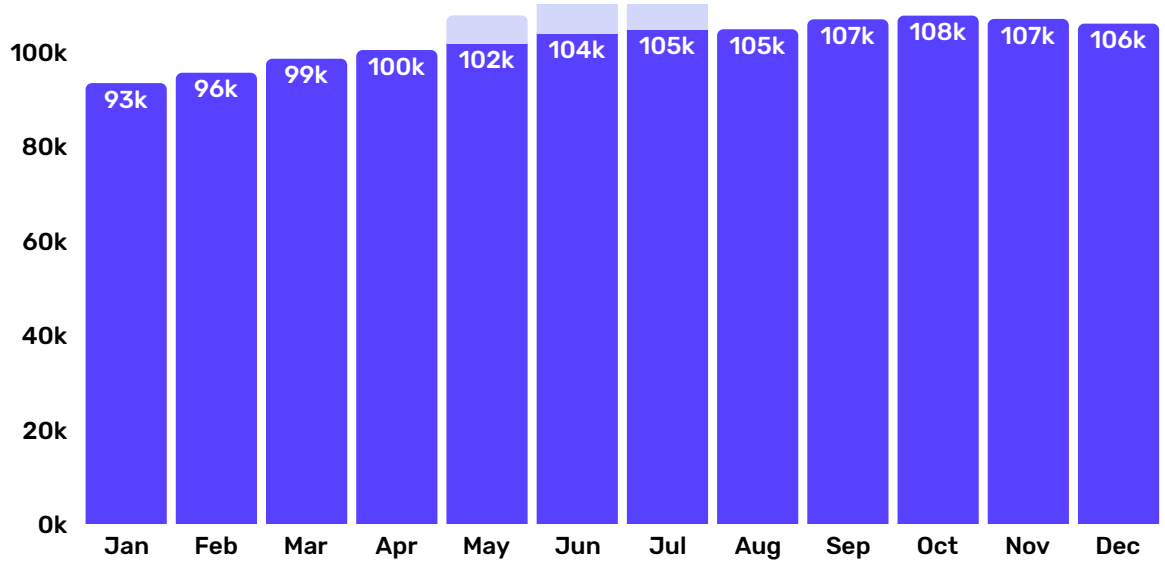
27 kWh
Average consumption per charge*

106k
Charge Points

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

In December 2025, the UK's charge point number totalled around 106k. Following the identification and resolution of an anomaly in third-party data sources last month, December saw another removal of duplicate locations in third-party data. This means that over the course of 2025, the UK has added ~13,000 new EVSEs.**

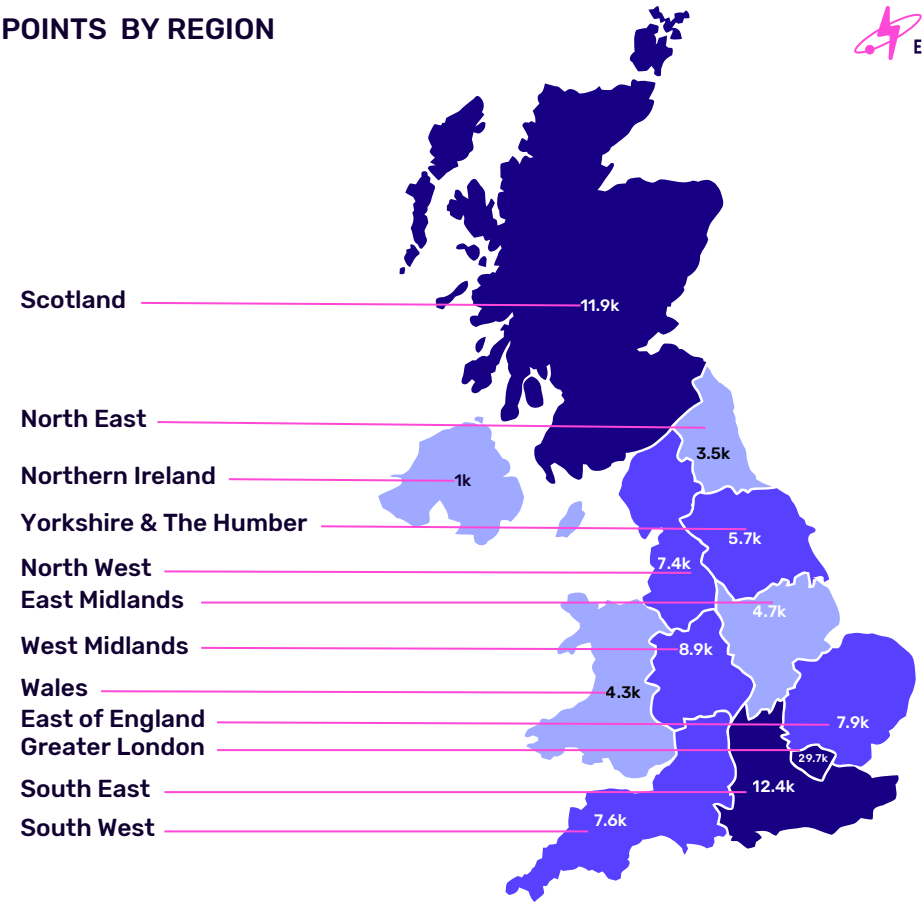
UK CHARGE POINTS GROWTH



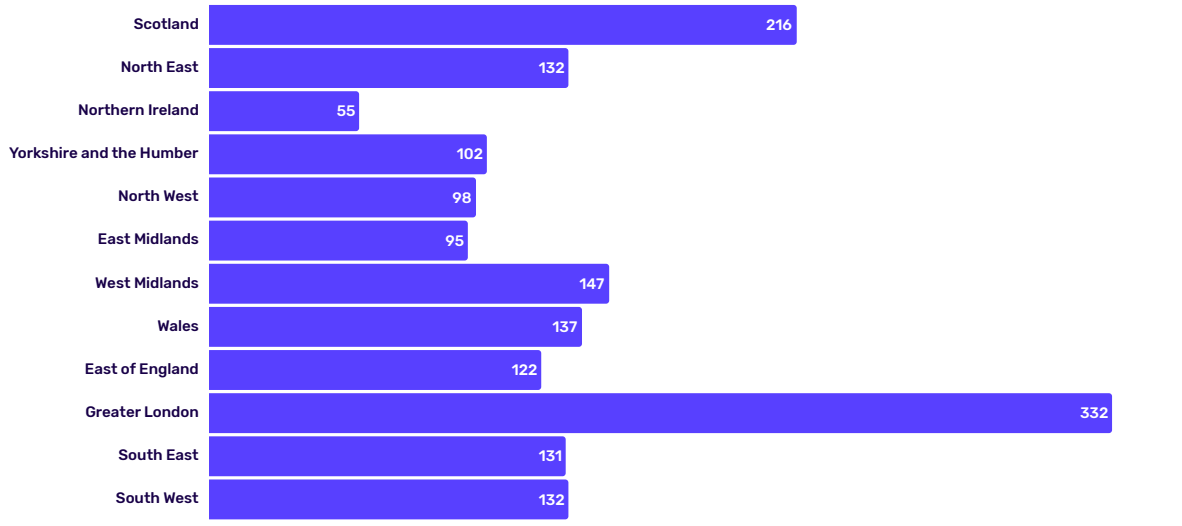
**For more details on the anomaly in reporting, please see our Sources and Data section at the end of the report

CHARGING INFRASTRUCTURE ACROSS THE UK

CHARGE POINTS BY REGION



CHARGE POINTS PER 100K INHABITANTS

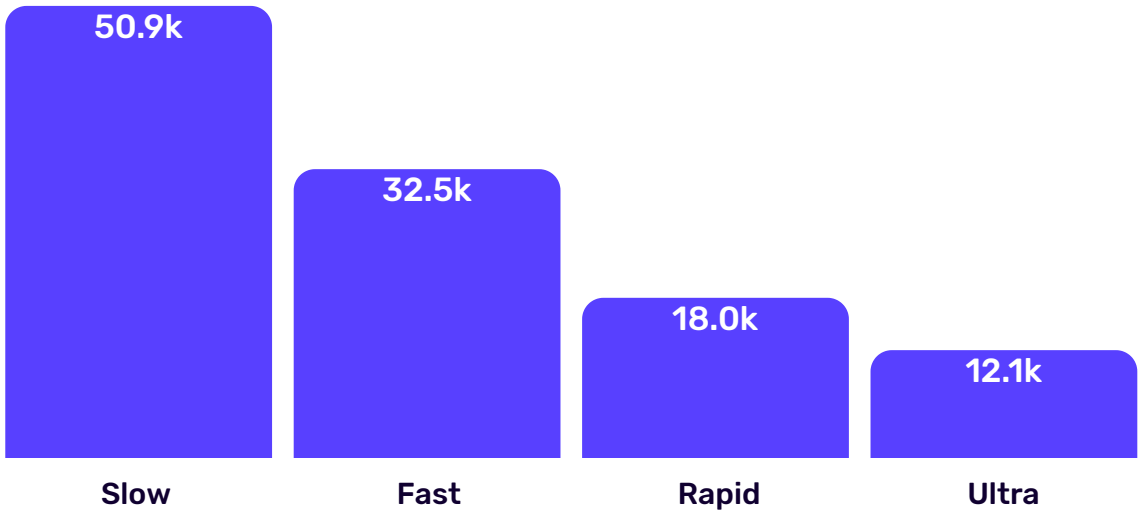


CHARGER CHARACTERISTICS

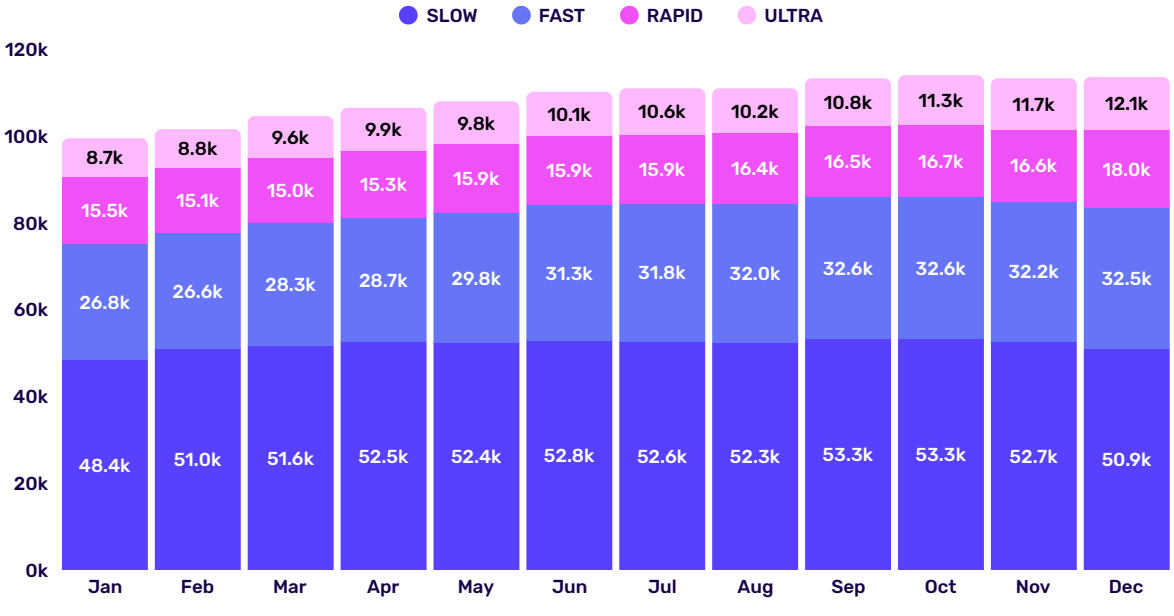
SPEED

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 **44%** of the total connectors, with rapid and ultra-rapid contributing around **26%**. 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



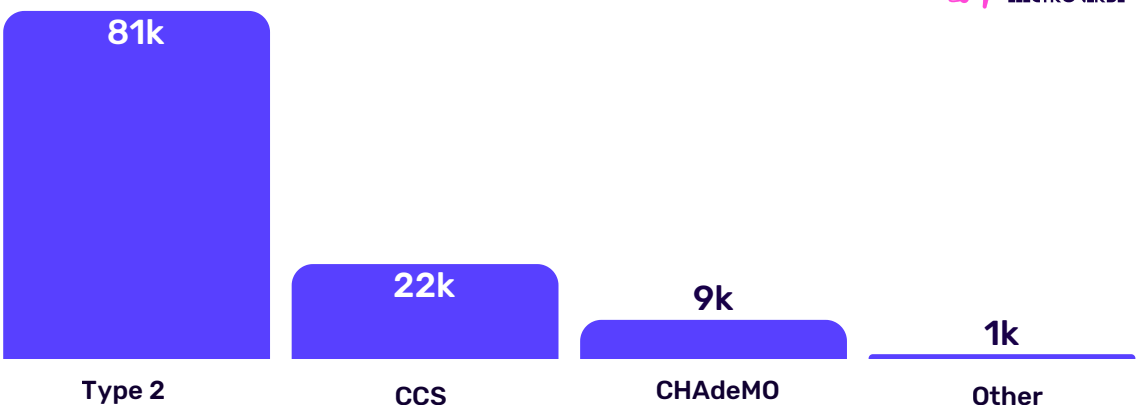
UK CONNECTOR GROWTH BY SPEED



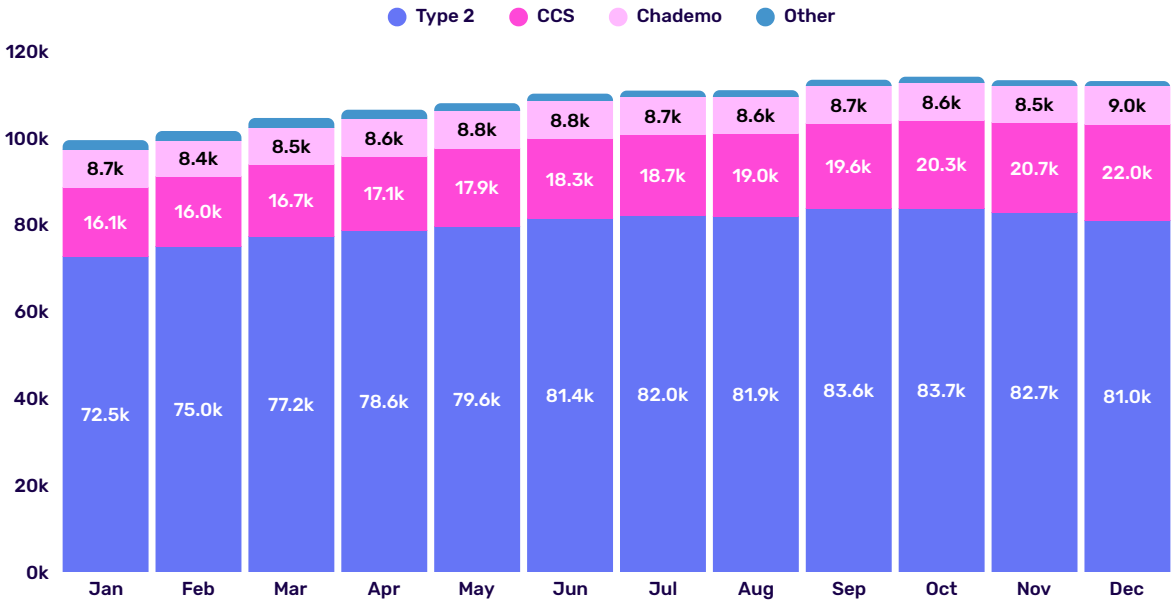
STANDARD TYPE

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

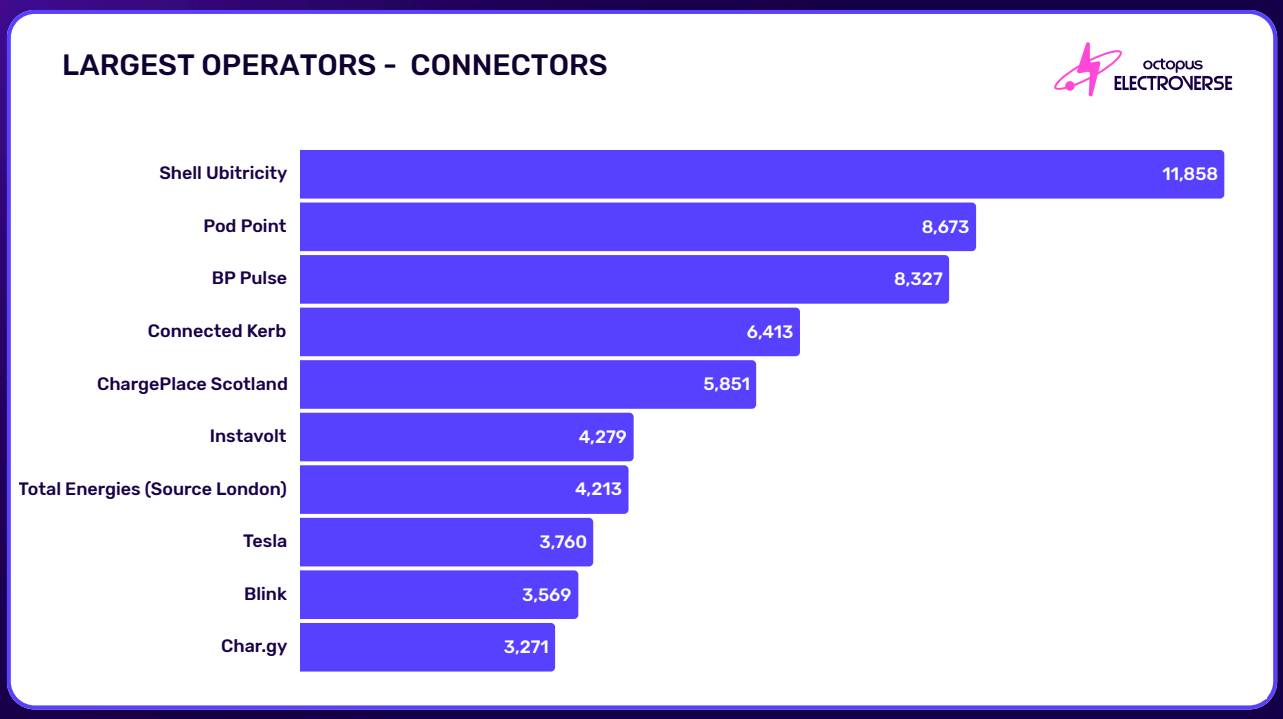


UK CONNECTOR TYPE GROWTH

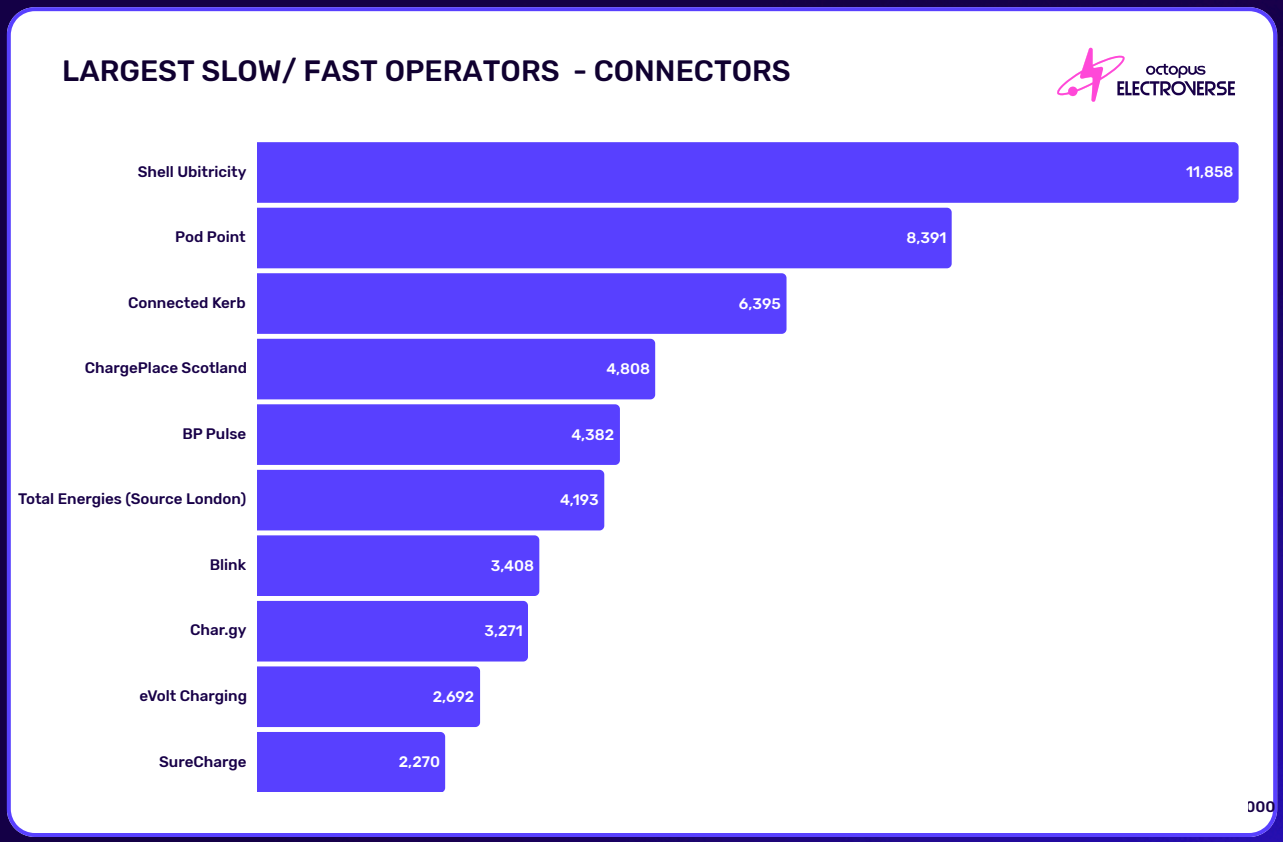


CHARGE POINT OPERATORS

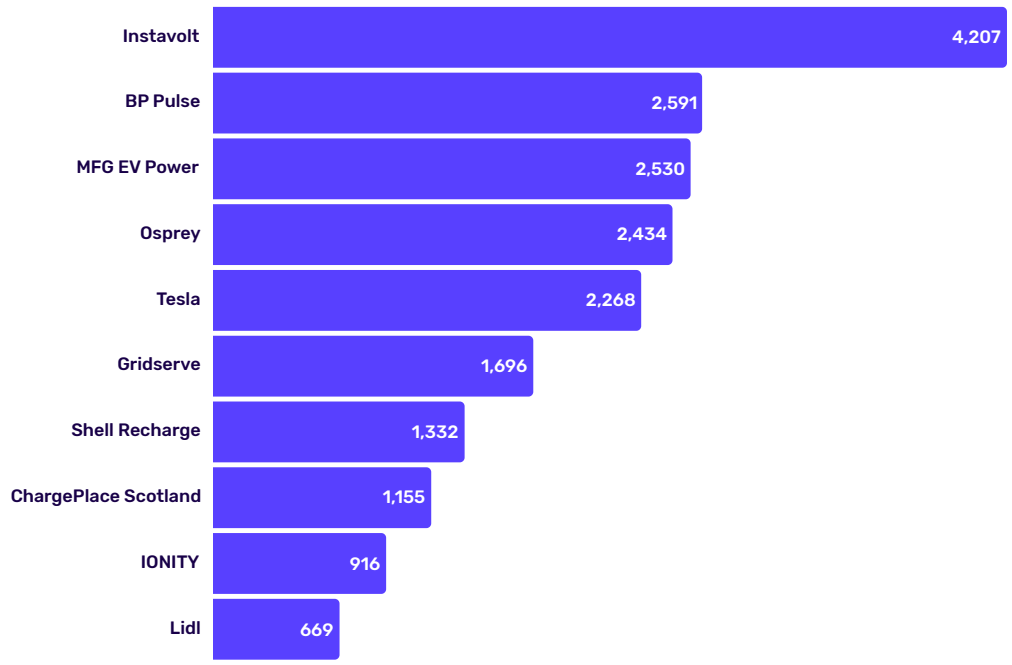
This graph details the largest operators by number of connectors across the UK. Operators, colloquially known as charging networks or ‘CPOs’, run and maintain the charge points on their network.



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



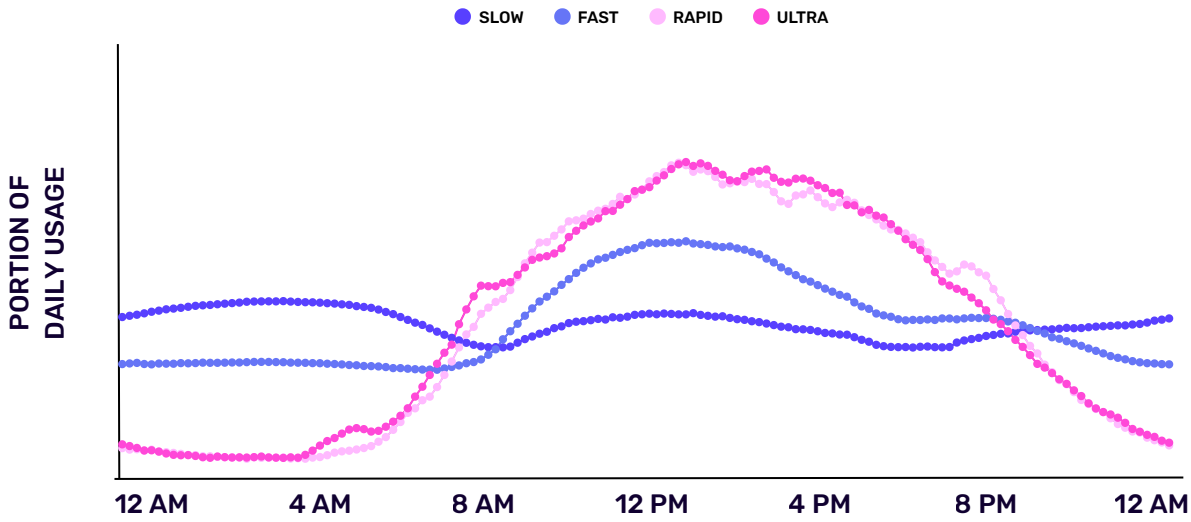
LARGEST RAPID/ ULTRA OPERATORS - CONNECTORS



USAGE PROFILES

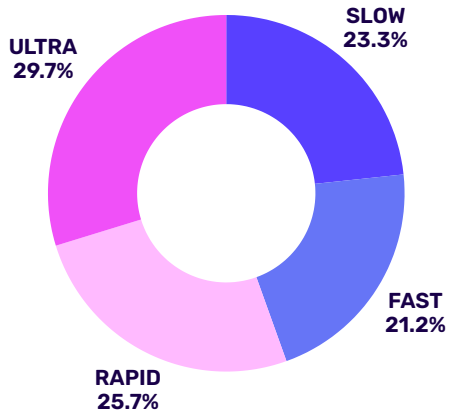
Daily usage curves illustrate how EV drivers interact with EV charging infrastructure. Rapid and Ultra usage peaks during the daytime when drivers are charging on the go. In contrast, slow charger utilisation remains relatively steady, with an uptick overnight as drivers use cheaper, slower speeds as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

CUSTOMER CHARGING PROFILES BY TIME OF DAY



Based on Octopus Electroverse consumption data from the last 12 months

CONSUMPTION BY SPEED



AVERAGE TIME CHARGING BY SPEED

SPEED	TIME
SLOW	05 hr 41 minutes
FAST	03 hr 28 minutes
RAPID	00 hr 37 minutes
ULTRA	00 hr 31 minutes

Based on Octopus Electroverse consumption data from the last month

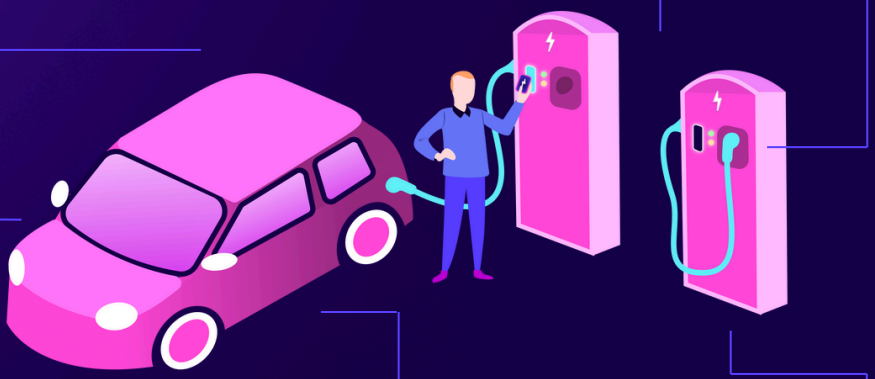
When we look at the distribution of Consumption by Speed, more than **55%** of the total kWh volume consumed by Electroverse drivers is via ultra-rapid & rapid chargers, despite these only accounting for around **10%** and **16%** of total connectors, respectively. This is partly because these connectors can deliver more energy more quickly.

EUROPEAN HEADLINE STATISTICS

27 MINUTES
Average charge time*

374k
Locations

1.35 M
Connectors

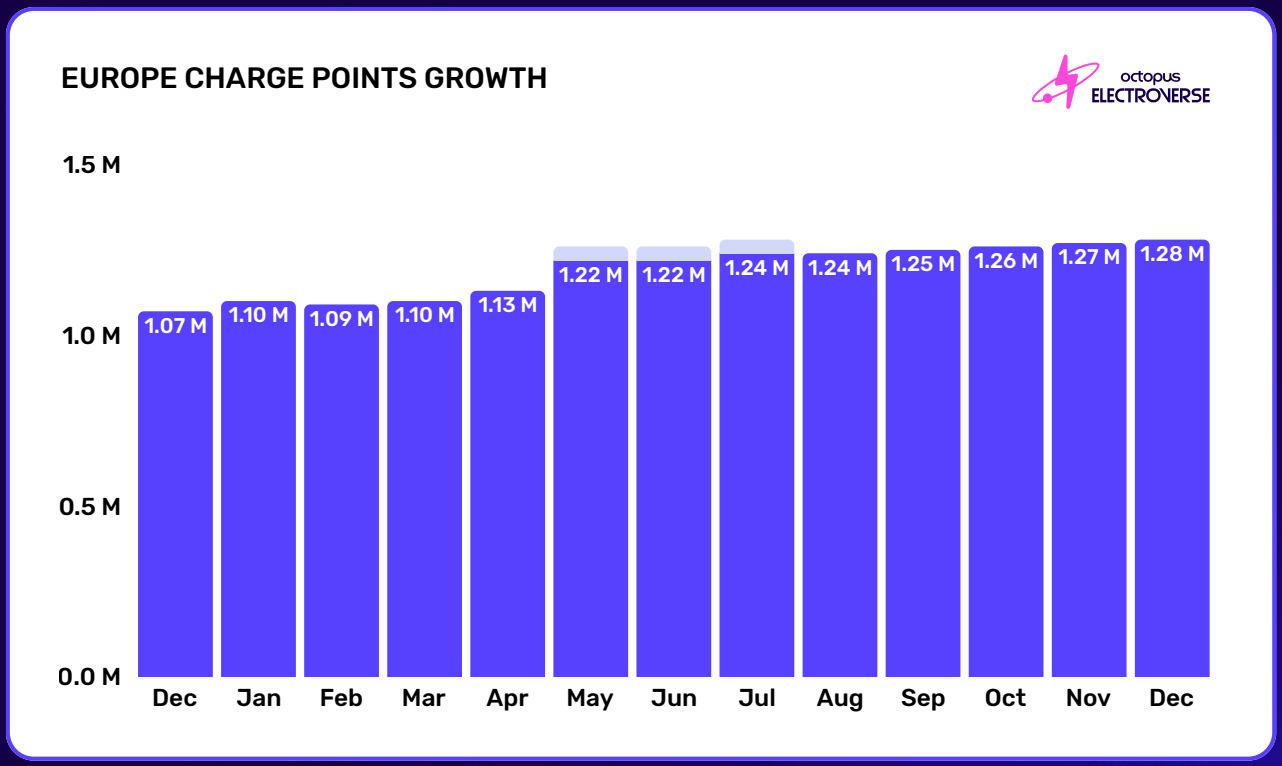


13.7 MILLION
Electric Vehicles

26.6 kWh
Average consumption per charge*

1.28 M
Charge Points

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



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

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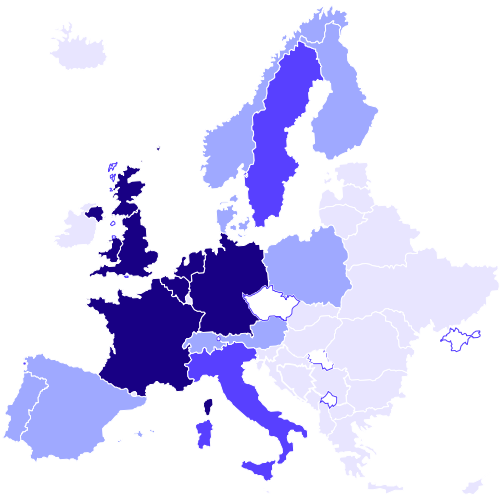
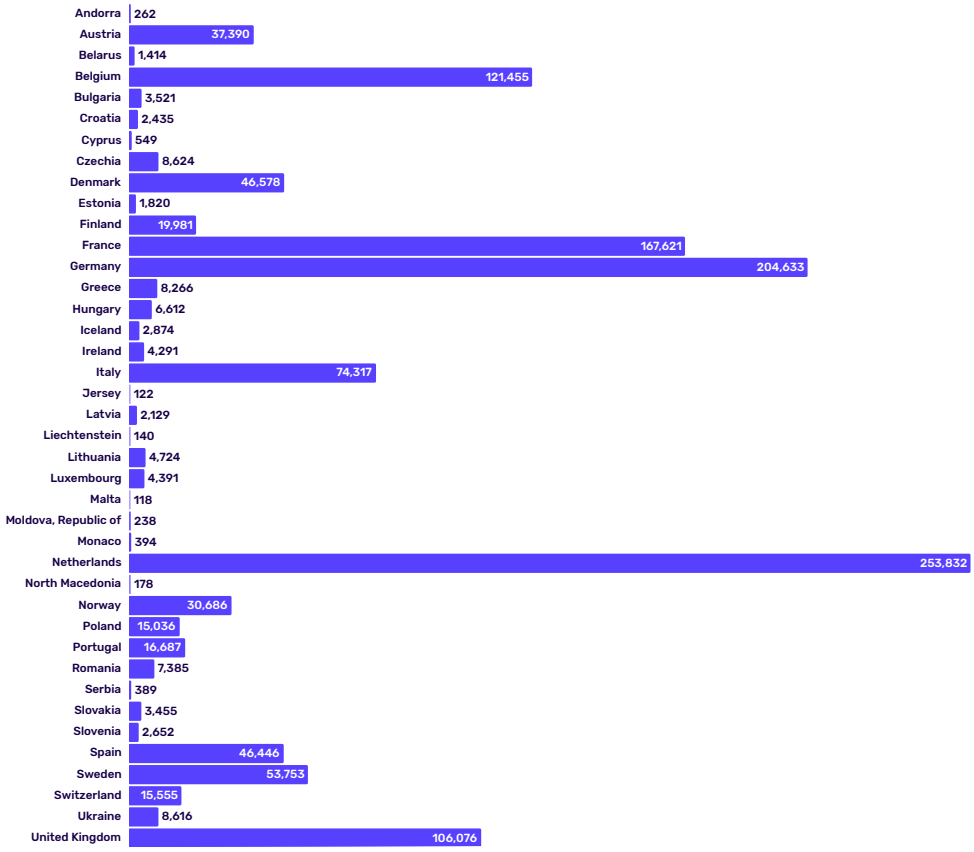
- < 10,000
- 10,000 - 49,000
- 50,000 - 99,000
- 100,000+



CHARGE POINTS BY COUNTRY

octopus ELECTROVERSE



CHARGE POINTS PER 100K INHABITANTS

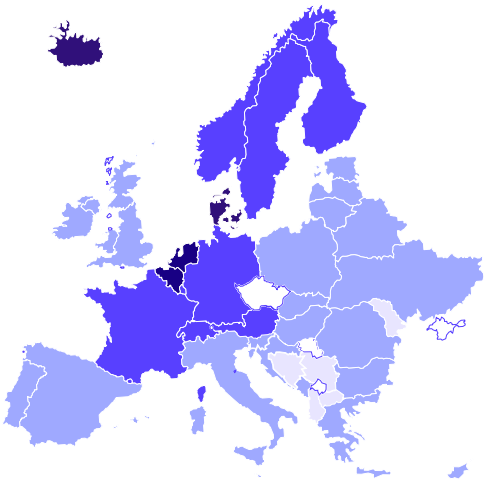
octopus ELECTROVERSE

< 10

10 - 199

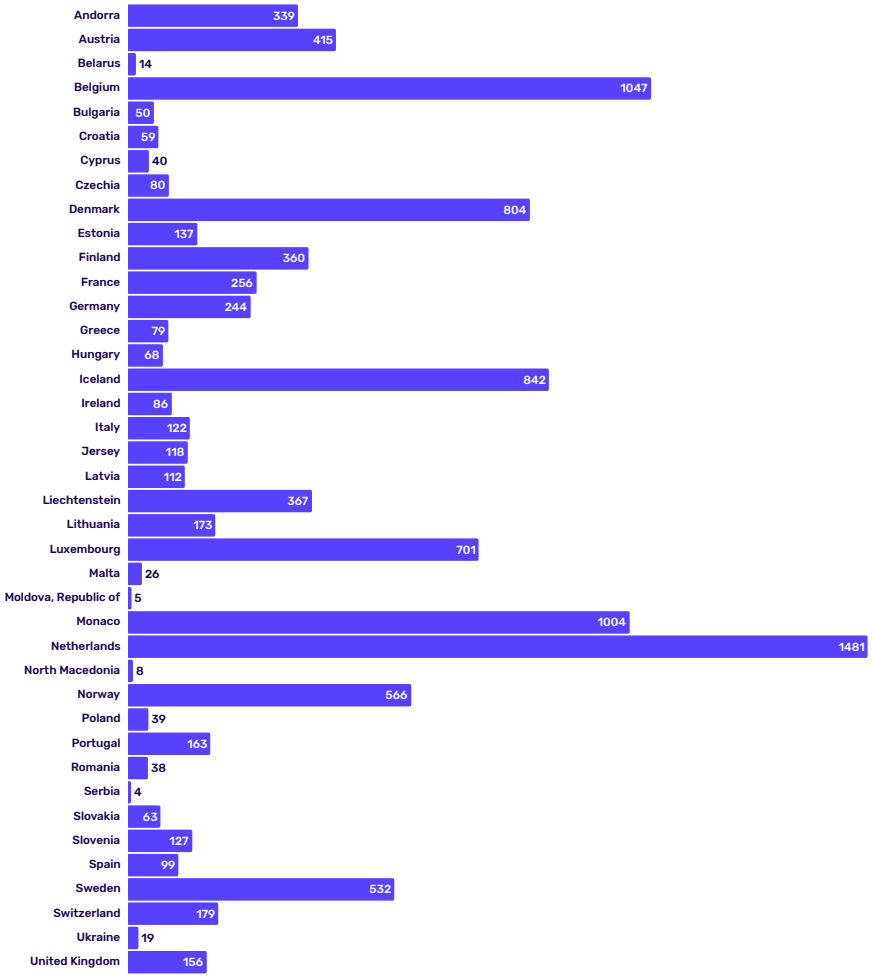
200 - 749

750 - 1000+

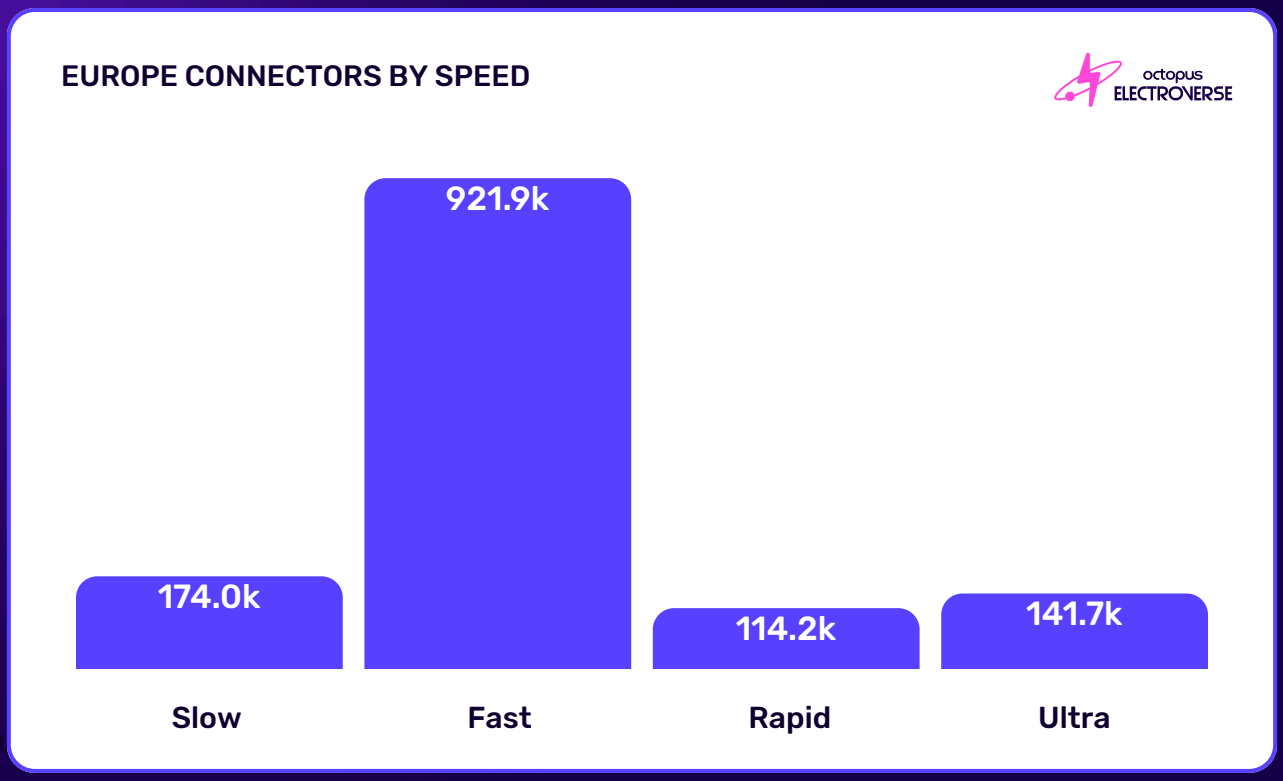


CHARGE POINTS PER 100K INHABITANTS

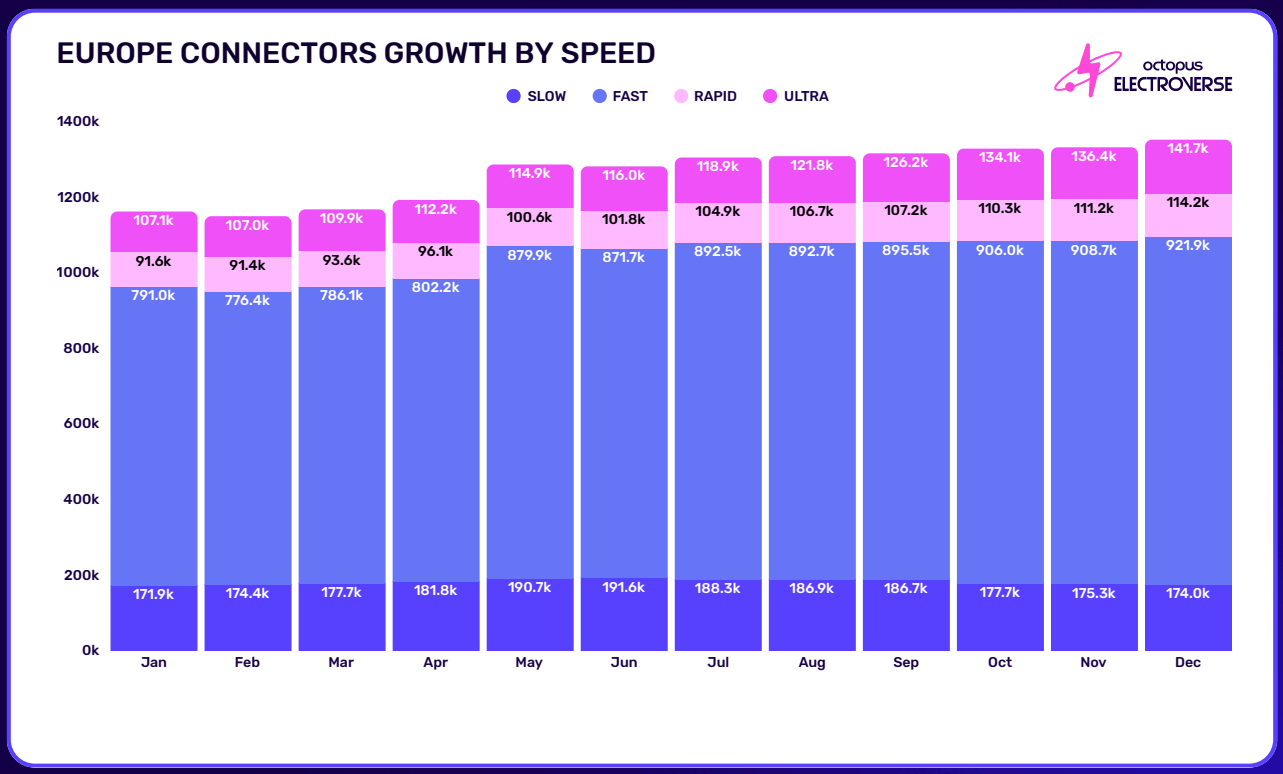
octopus ELECTROVERSE



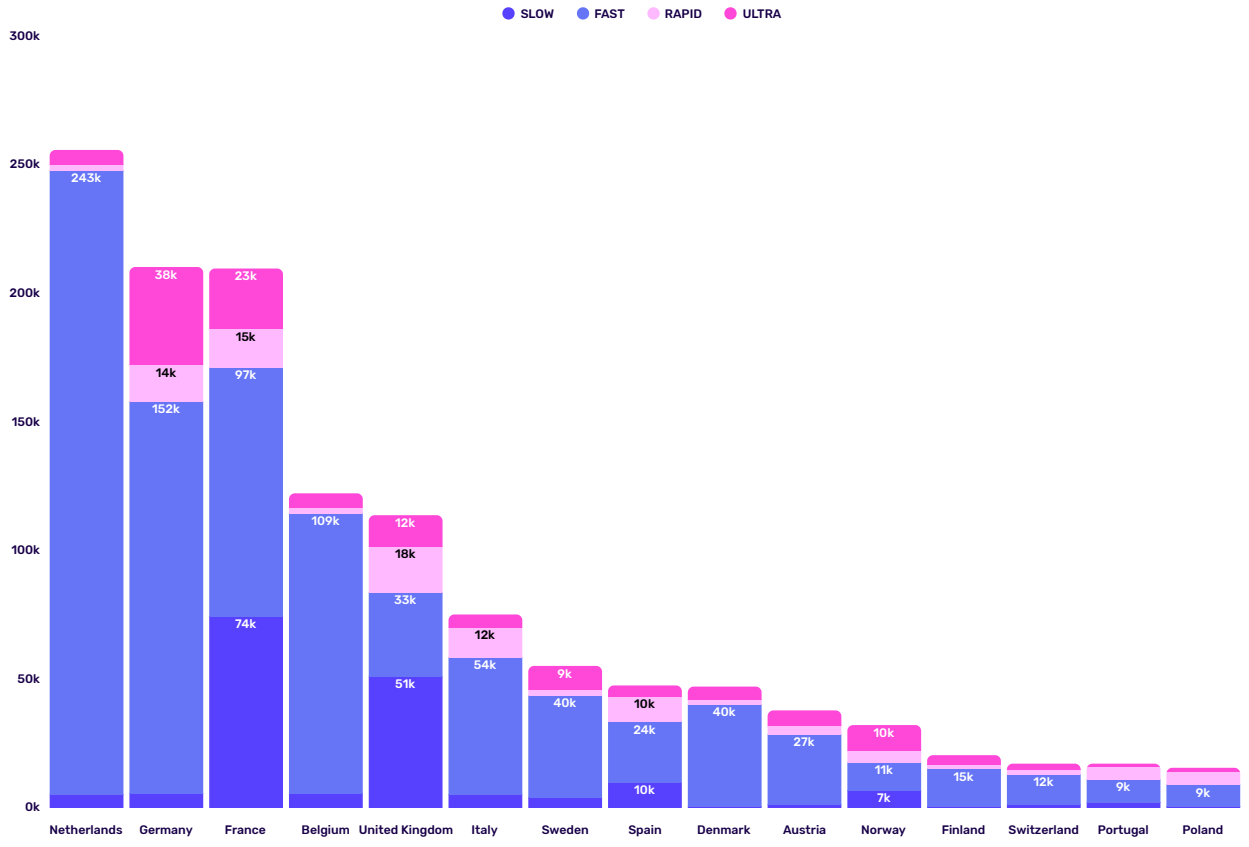
SPEED



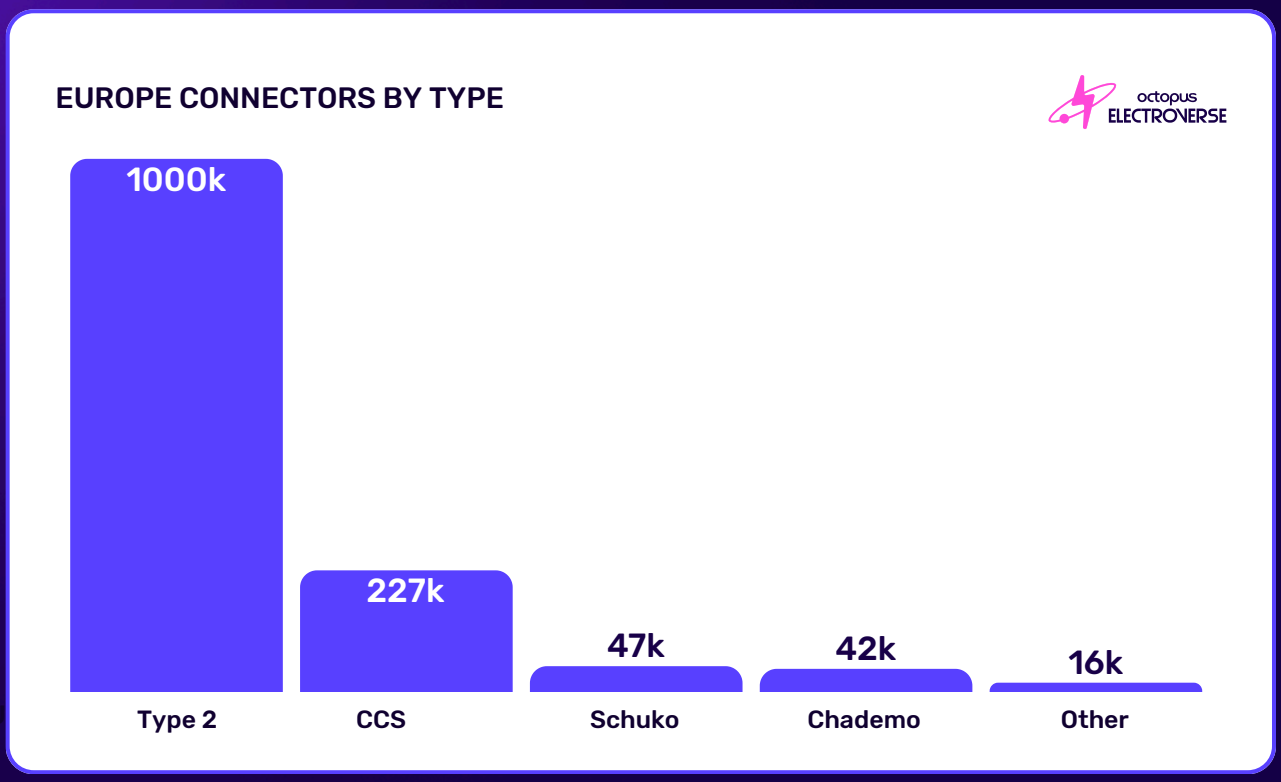
These graphs demonstrate the current state of charging speeds across Europe and offer insight into potential future trends. 8 - 50 kW fast charging speeds dominate Europe, contributing around **68%** of total connectors - comparatively, the UK has a greater number of slow charging connectors (**44%** relative to the total number). However, ultra-rapid is the fastest growing segment of charging across both the UK and Europe.



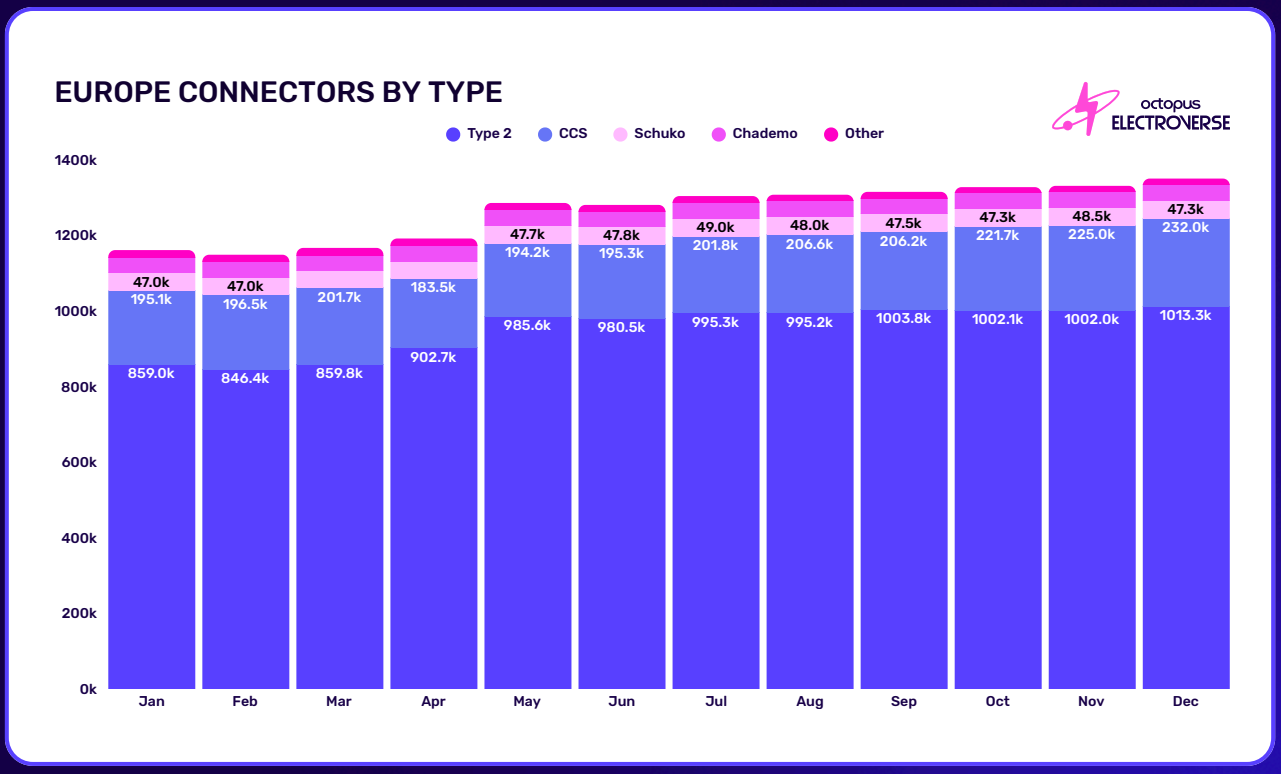
NUMBER OF CONNECTORS BY SPEED AND COUNTRY IN EUROPE (>10,000 CONNECTORS)



STANDARD TYPE

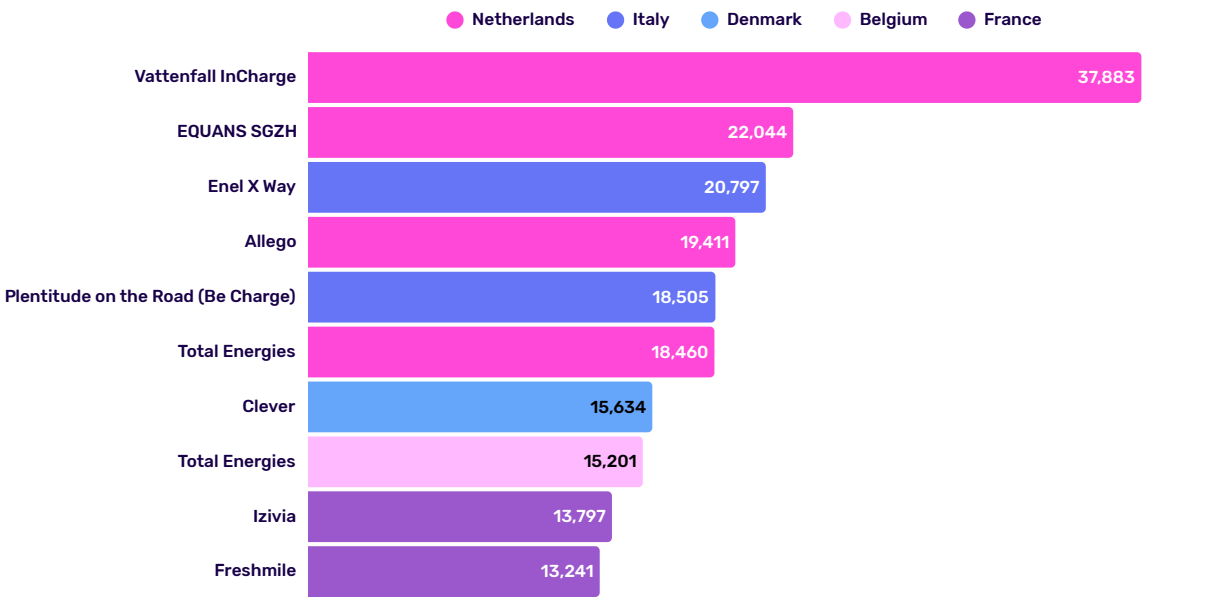


Connector trends across Europe closely mirror those seen in the UK. Market growth is being fuelled by the widespread rollout of Type 2 and CCS connectors, now standard on all new vehicle models. In contrast, CHAdeMO connector numbers have remained steady, continuing to support older vehicles still in 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.

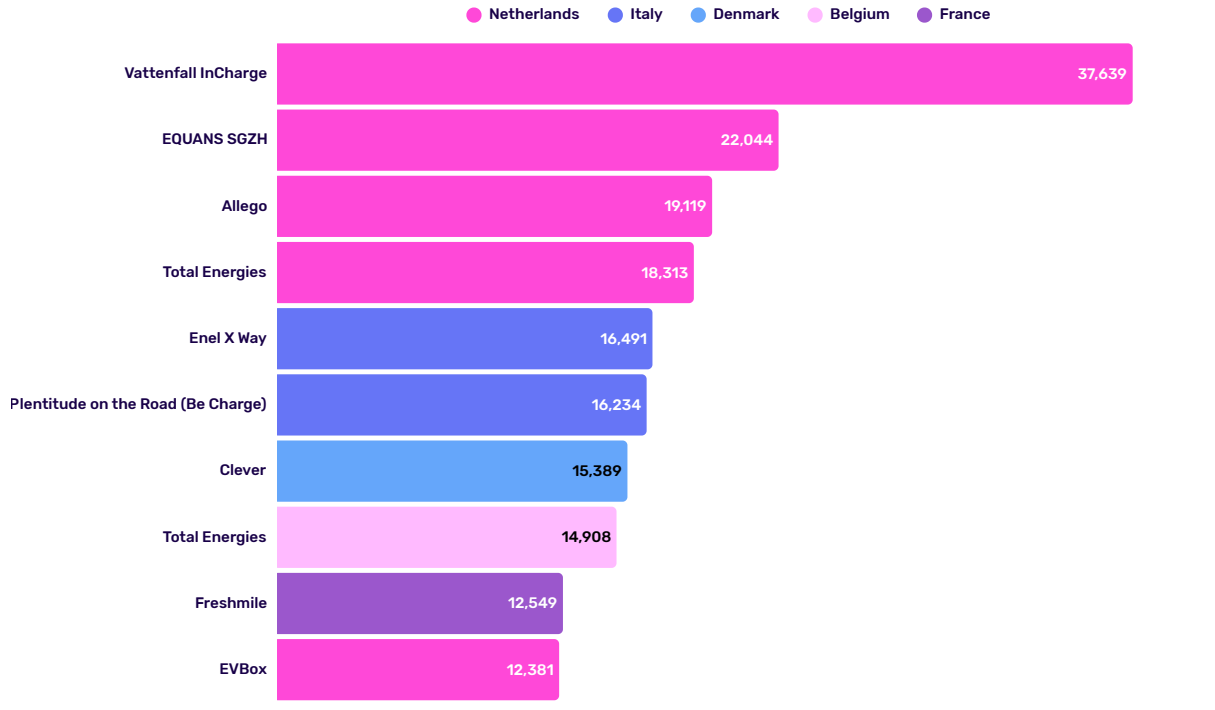


CHARGE POINT OPERATORS

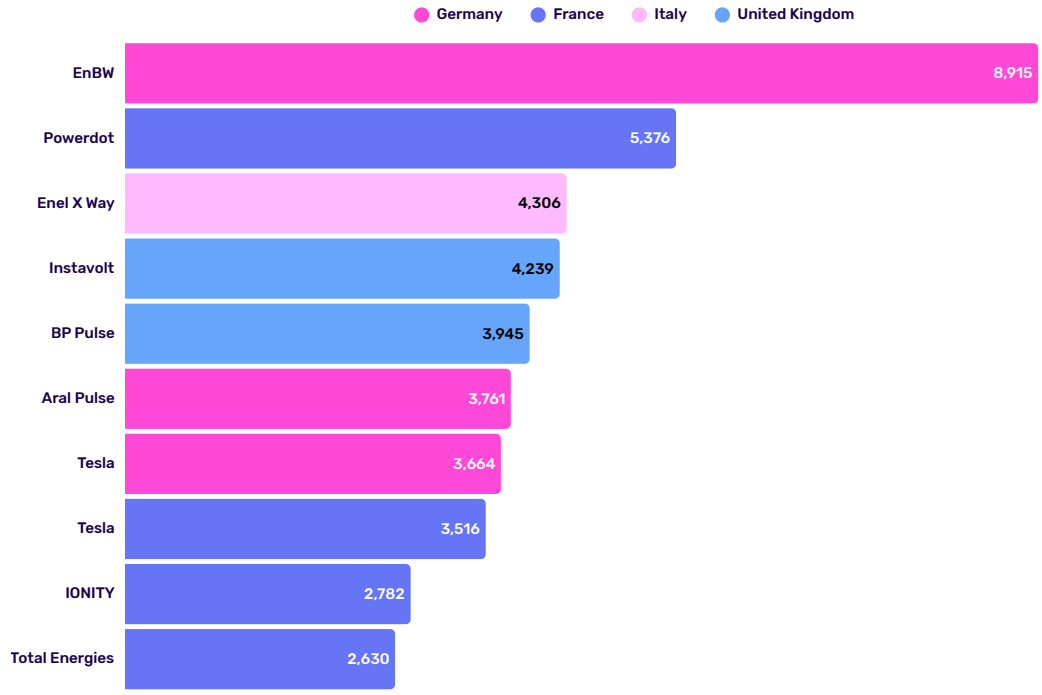
LARGEST OPERATORS IN EUROPE - CONNECTORS



LARGEST SLOW/FAST OPERATORS - CONNECTORS



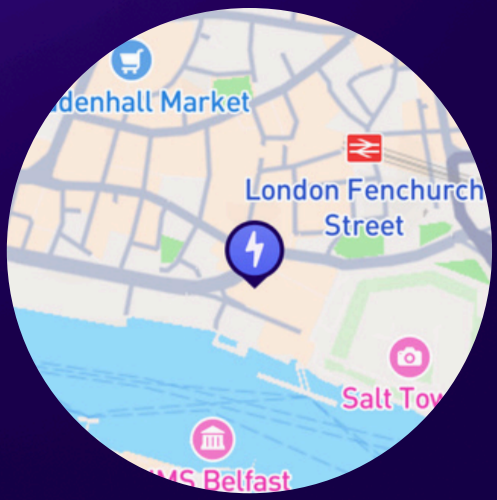
LARGEST RAPID/ULTRA OPERATORS - CONNECTORS



DEFINITIONS

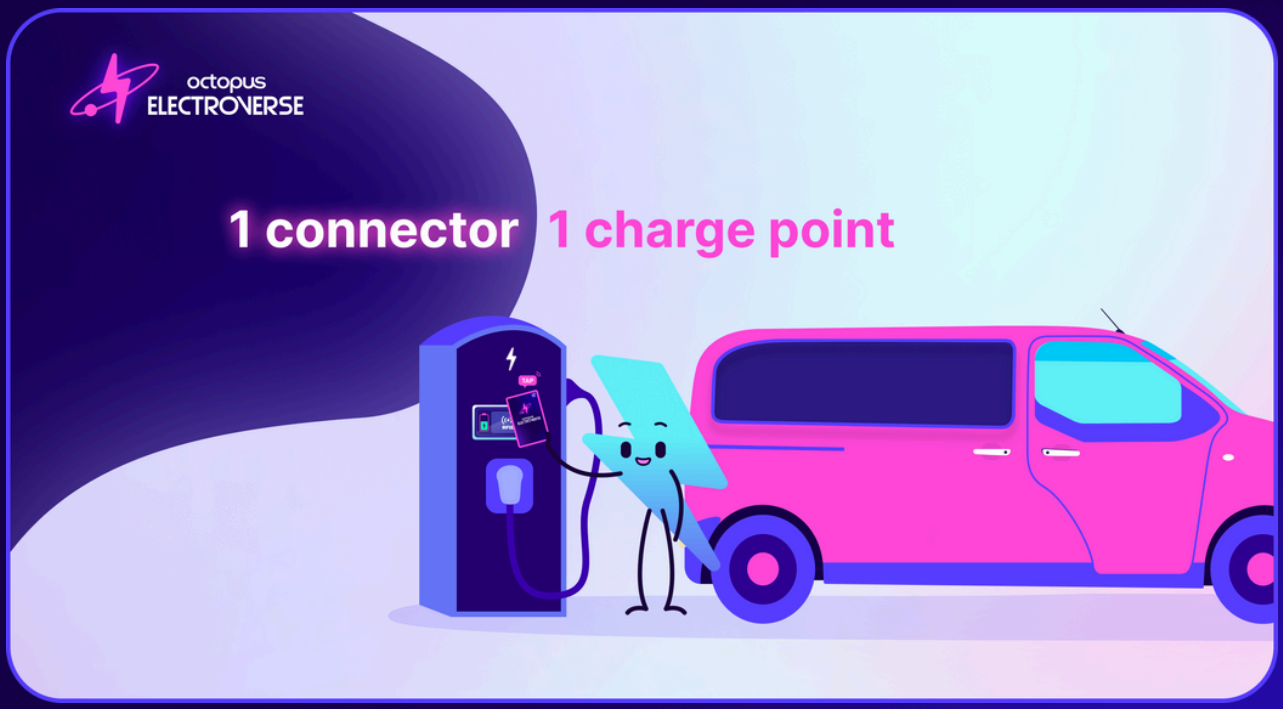
DEFINING A CHARGE POINT

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).

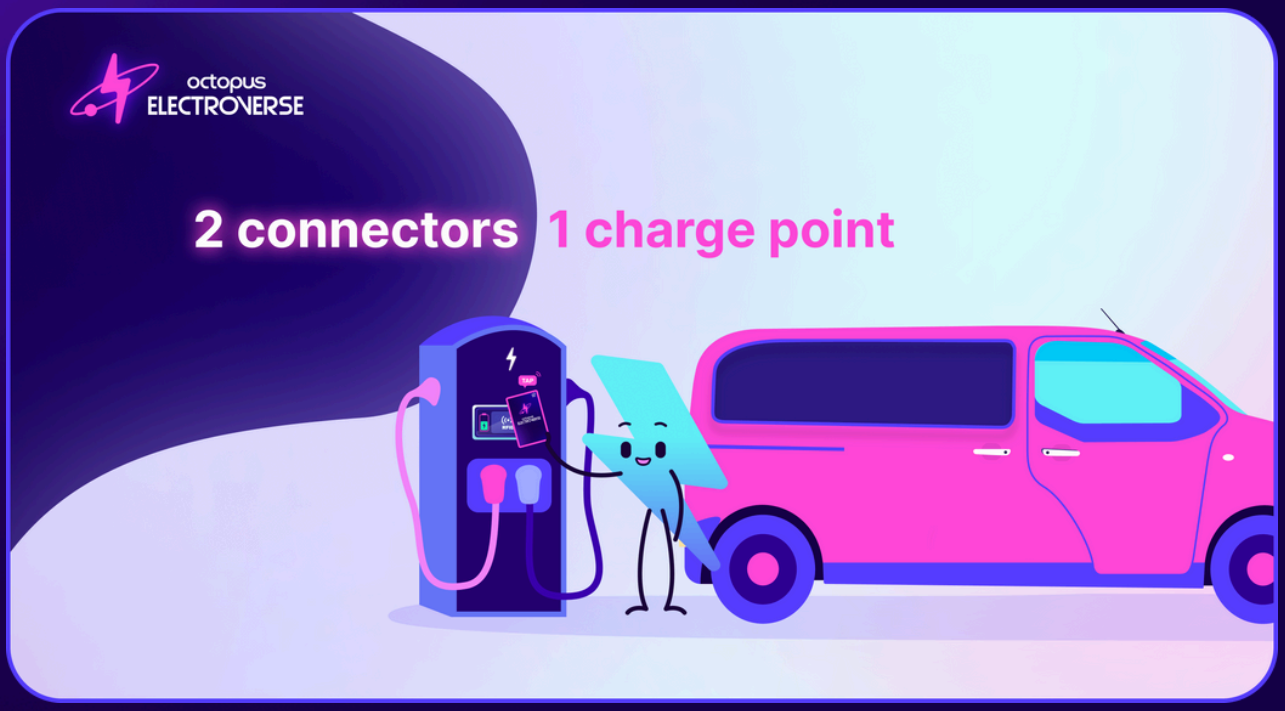


A **location** is a physical site where there are one or more charge points. Think of a location as a single pin on the Octopus Electroverse map!

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.

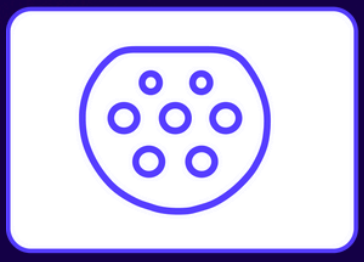


While a charging unit may have **a choice of connectors**, sometimes, it may only have the capability to **charge one vehicle** at a time, defining it as a **single charge point**. Here are some more examples:



VISUALS OF CHARGING SOCKET TYPES

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

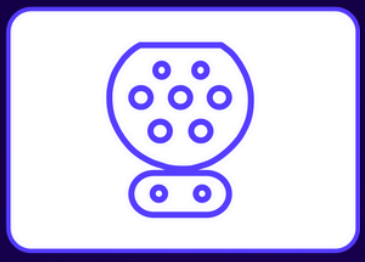


TYPE 2

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 November 2025, the UK’s public EV charging network totalled 107,000 charge points. At first glance, this looks like a drop from October’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 April and November 2025, the UK has added around 7,000 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.