



Increasing the charging infrastructure across the UK



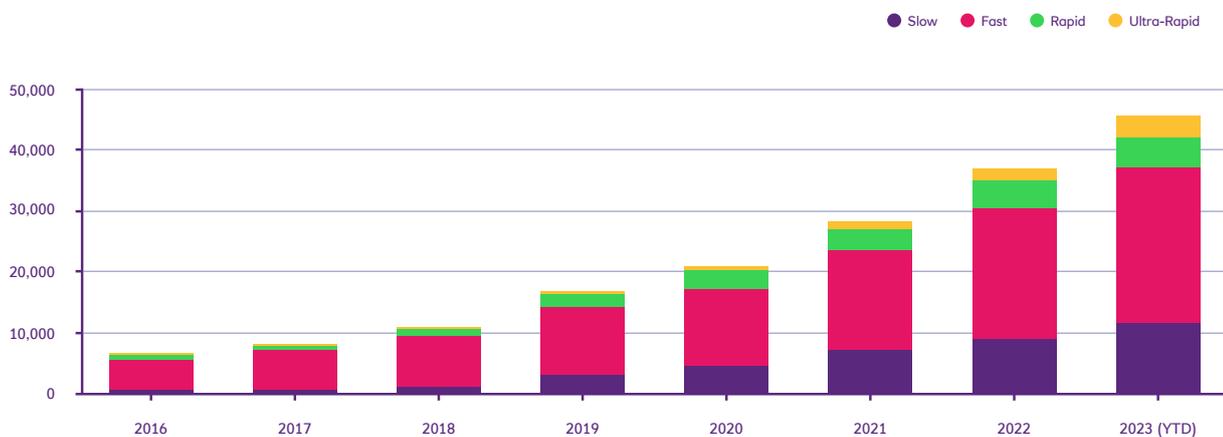
Electric cars need charging, which means we'll need more charge points over the next decade.

We're already on the way, with more charge points being installed by the month. Plus, this growth is set to accelerate in the years ahead, with the charge points themselves also becoming faster.

At the end of July 2023, the UK's public charging network consisted of nearly 46,000 devices, with a total of around 73,000 connectors.

What's more, nearly 9,000 of today's public charge points are either rapid or ultra-rapid chargers. That means they can charge a vehicle to 80% in 25 to 40 minutes, or even quicker.

Number of public charge points in the UK



Source: Zap-Map database. Updated: 31st July 2023.

That's just the public charging network.



Supermarkets are installing an increasing number of charge points, as are motorway service stations.

Many of these charge points can be easily accessed through contactless cards or apps, and paid for either by subscription or pay-as-you-go. There is also an ever-growing private charging network, where workplaces are installing charge points for employees, or individuals are installing them at home.

This private charging network has had a lot of Government support. There are now a number of grants and other measures available to help reduce the costs, including:

- **The Workplace Charging Scheme (WCS).** Offers vouchers worth £350 for each of the first 40 charge points installed by an employer. Applications to the WCS are open until 31 March 2024.
- **100% First-Year Allowance (FYA).** This applies for businesses installing charge points, and was made permanent in the 2023 Autumn Statement.

Of course, the suitability of these incentives will differ according to your drivers' or your organisation's situation, particularly when it comes to home charging. The Government's Electric Vehicle Homecharge Scheme (EVHS) came to an end on 31 March 2022 for homeowners but has been replaced by the EV Chargepoint Grant.

This grant provides funding of up to 75% towards the cost of installing electric vehicle smart chargepoints at domestic properties across the UK, and is available to landlords, flat owner-occupiers or people living in rented accommodation.

When thinking of chargers, you will need to consider if you prefer them to be ‘tethered’ (i.e. with a cable permanently attached) or ‘untethered’ (i.e. with the cable kept separately, most likely in the boot of the driver’s vehicle). A tethered charger is convenient and fast, while an untethered cable means you can swap the cable to suit different connectors, although the vast majority of electric cars use Type 2 connectors.

You should also think about the power output of any chargers. Alongside the rapid and ultra-rapid chargers already mentioned, there are effectively four categories of power output, affecting the speed of charging:



Standard/slow

Up to 3 kilowatts (kW) of AC charge. These take around 6 to 12 hours to fully charge a Battery Electric Vehicle (BEV), or about 2 to 4 hours for a Plug-in Hybrid Electric Vehicle (PHEV).

Fast

Between 7kW and 22kW (AC). They can fully charge a BEV in around 3 to 4 hours.

Rapid

Between 25kW and 99kW (DC). These can charge a BEV up to 80% in about 1 to 1.5 hours*.

Ultra-rapid

100kW and over (DC). Generally, these can fully charge compatible BEVs in less than an hour.*

While different homes can accommodate different power outputs, most domestic chargers now tend to sit around the 7kW or 11kW range – i.e. a fast charger. The more powerful fast charge points are more prevalent in workplaces and car parks, while rapid and ultra-rapid models are most common in motorway service stations.

*Charging figures will vary for different vehicles based on the amount of charge they can accept.

All these options mean two things for fleets and their drivers: choice and coverage.



Even without off-road parking at home, you should be able to choose an alternative way to charge your vehicle – whether that’s through the public charging network or at your workplace. This is becoming increasingly true across the country.

The coverage isn’t perfect. Looking through [Zap Map](#) at public charge points around the UK, there are noticeable gaps, particularly in the Scottish Highlands. If you are travelling in these areas, you should make sure you know the route and where potential charging stops are along the way.

You could also shift focus to vehicles with higher driving ranges, or even PHEVs that have a back-up petrol or diesel engine.

Many BEVs now have a driving range that is more than sufficient for most journeys. A real-world range of 200 to 250 miles for a BEV is now pretty standard, while some new models of electric vehicle, such as the Tesla Model 3 Long-Range, can go up to or even beyond 300 miles.

This means that the Scottish Highlands are still manageable, especially if you charge your vehicle overnight.



However, Scotland are rolling out charging points so that they are second to London across the whole of the UK with 72¹ devices for every 100,000.



In comparison, London has 145¹ per 100,000 people, and the UK average is 60¹ per 100,000 people. This has been made possible by projects such as PACE, which has had £5.3 million of Scottish Government funding. Transport Scotland is also working to fund zero emission car clubs with housing associations and other community groups too, investing over £918,000 and providing access to modern zero emission vehicles while reducing the need for personal car ownership.

Plus, Lake District National Park has installed a network of 33 electric vehicle charging points across its locations for public use, as well as to charge their own BMW i3s.

The Government is planning for more public charge points. The ‘Green Industrial Revolution’ plan announced by Boris Johnson at the end 2020 earmarked £1.3 billion to “accelerate the roll out of charging infrastructure”. There is a particular emphasis on both rapid charge points alongside major roads and on-street charge points near homes and workplaces. This comes on top of previous pledges in the 2019 Conservative manifesto “to ensure that everyone is within 30 miles of a rapid electric vehicle charging station”.

All the while, charging technology is likely to improve, bringing down the time it takes to charge a vehicle. The Government’s ‘Green Industrial Revolution’ plan also sets a “target milestone” of 2030, when “we expect the network of charge points... to be more extensive with 2,500 high powered charge points that can charge your car so it can drive over 100 miles, all in the time it takes to have a cup of coffee”.

In March 2022, the Government confirmed in its EV Infrastructure Strategy that they would invest £1.6 billion to build a network of 300,000 electric vehicle (EV) chargers by 2030. That’s almost ten times the number of fuel pumps available today.

In February 2023, the Government expanded their Local EV Infrastructure (LEVI) Fund with £57m in public funding and private investment to further support local authorities in England to plan and deliver chargepoint infrastructure.

¹<https://www.gov.uk/government/statistics/electric-vehicle-charging-device-statistics-april-2023/electric-vehicle-charging-device-statistics-april-2023>

About the contributor



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Specialisms:

- Financial modelling
- Total Cost of Ownership
- Fleet optimisation
- Mobility

Tash has over 14 years' industry experience, including previous roles in Strategic Account Management at KINTO UK and Venson Automotive, working with a variety of private, public and not for profit businesses with both car and van fleets varying from 50 – 5,000 vehicles.

Tash has a wealth of experience and a proven ability in working in partnership with customers to identify cost-saving opportunities, share best practice and advise on future strategic fleet decisions.

She has considerable experience working with businesses to identify the most suitable funding methodologies as well as enabling and supporting the creation of robust, adaptable and suitable fleet policies, including integration of alternative fuels and Total Cost of Ownership (TCO).

If you'd like to discuss this further, please contact your Account Manager or our Business Intelligence and Consultancy Team.

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