

Electric vehicle charging: the user experience

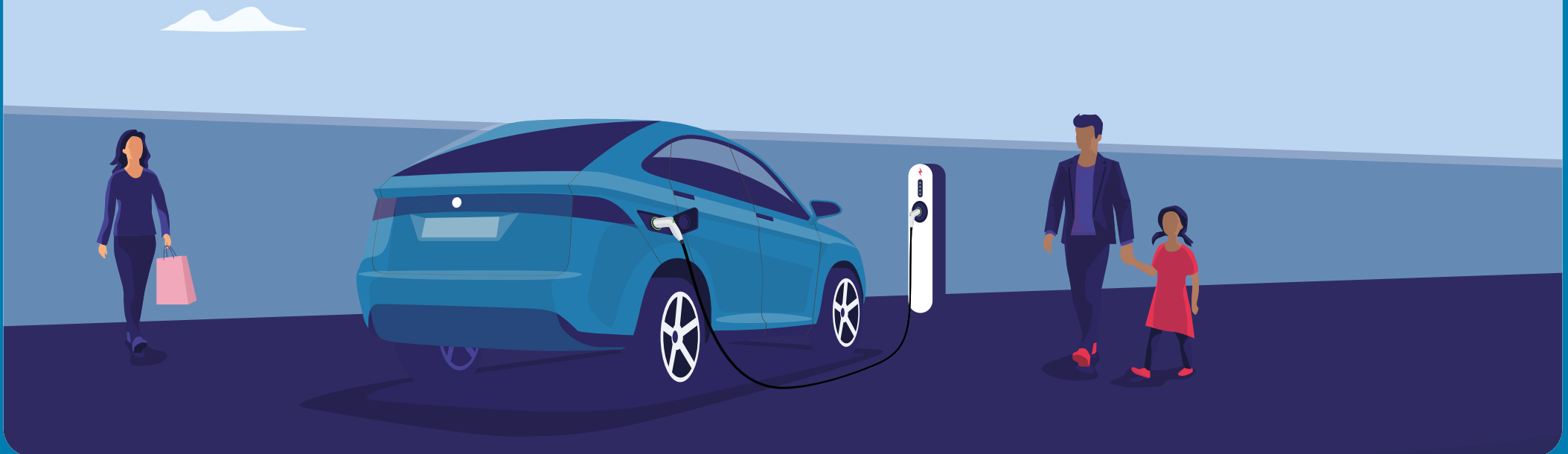
July 2022



With sales of new petrol and diesel cars and vans ending in 2030, the way we use England's motorways and major 'A' roads will change. We will charge up rather than fill up on some journeys. As part of our work representing the interests of users of National Highways' roads, Transport Focus intends to measure the consumer experience charging at services.

By benchmarking the experience from site to site, and between different chargepoint providers, Transport Focus will help drive up standards both in the short and longer term. We know from our work in other sectors that benchmarking experience is a powerful incentive to improve. And improvements will lessen concerns about charging mid-journey, real and perceived, being a barrier to the successful decarbonisation of road transport.

Why now? First, because it is important to benchmark consumer experience early in the transition to an electric vehicle, so change can be measured as more and more people switch. Secondly, to help inform the significant investment in new charging infrastructure that will take place between now and 2030.



What we did

Building on our earlier work *Plugging the gap: drivers' experiences with electric cars*, we have worked with National Highways to test different approaches to measuring the consumer experience charging an electric vehicle at services on England's motorways and major 'A' roads.



We carried out:

- **exploratory research** including observing and speaking to electric vehicle users at chargepoint locations
- **'intercept' interviews** with electric vehicle users across 12 sites to understand their experience charging and appetite for engagement in our survey.

We then tested two survey approaches:

- A **diary exercise** where we recruited electric vehicle users to a Transport Focus panel, and then asked them to complete the survey every time they charged.
- A **partnership with Zap-Map** which provides an app used by electric vehicle users to search for chargepoints, plan routes and share information. Zap-Map has over 200,000 users each month, a proportion of which was invited to complete our survey when they 'checked in' on the app at a chargepoint location.

Our testing suggests that for a large-scale survey of chargepoint experience a partnership with Zap-Map has potential, and that a diary approach is not likely to be cost-effective. We continue to explore options to implement the survey at scale later in the 2022/23 financial year. We are engaging with the Office for Zero Emission Vehicles, National Highways and the chargepoint providers to ensure the survey is as useful as possible in driving improvement for consumers.



More about our testing

Approach one - recruit to Transport Focus panel, invite to complete survey:

- we recruited more than 60 participants to our panel
- all were keen to provide feedback, but in reality many did not charge at services on National Highways network during the survey period - this reflects that many electric vehicle users charge at home
- this approach produced 32 charging evaluations from 15 different participants and is not likely to be cost-effective for a large-scale survey.

Approach two - event-driven survey, completed by Zap-Map members:

- We showed Zap-Map users a mobile advert with a link to a survey when they 'checked in' at a chargepoint. 383 charging evaluations were collected - 69 of these were at services on a National Highways road.
- Using this method we collected twice as many charging evaluations in three days than we did in three weeks using the diary approach.



Key findings

This work was small-scale and intended principally to test the effectiveness of different methodological approaches, rather than produce robust representative insight. Nevertheless, we gleaned useful information, including that electric vehicle users:

- remain an engaged group of consumers
- are willing to share and feed back information if it helps drive improvements which will ultimately benefit them
- have concerns about chargepoint supply keeping up with demand, especially considering the recent surge in electric vehicle sales
- are encountering problems with chargepoints, which they fear will worsen as more people switch.

Among the electric vehicle users we spoke to:

- around half were satisfied with their chargepoint experience
- most charged at home, with services and supermarkets being the next most popular location.

What are the problems?

Electric vehicle users reported a number of problems with chargepoints - including:

- reliability - it is not uncommon to find one or more chargepoints out of order at a particular location
- some chargepoints cannot accommodate two users charging at the same time
- queuing, sometimes leading to queue jumping – intentional or otherwise
- the charge can be delivered more slowly than expected/advertised
- connection issues leading to people paying multiple connection fees
- lack of clarity about prices and payment arrangements
- support is generally not available if something goes wrong (or appears to go wrong) or the user is confused about what to do.

"I'm rather angry! This is the second site I've visited, after having queued at a BP Pulse for 30 minutes only to find it wasn't working!"

Female, 65-74, one year driving an EV

This results in:

- the frustration of manoeuvring between bays
- worrying about whether there will be a queue – even if there isn't
- end to end journeys taking longer than they should.

"Although Gridserve have 2 connectors per charger, if you connect after someone else you actually stop them charging."

Male, 55-64, three years driving an EV



Contact Transport Focus

Any enquiries about this report should be addressed to:

Katherine McGowan-Downey

Senior policy advisor

Katherine.McGowan-Downey@transportfocus.org.uk

Transport Focus

Albany House

94-98 Petty France

London

SW1H 9EA

www.transportfocus.org.uk

Transport Focus is the operating
name of the Passengers' Council

Transport Focus is the independent consumer organisation representing the interests of:

- bus, coach and tram users across England outside London
- rail passengers in Great Britain
- all users of England's motorways and major 'A' roads (the Strategic Road Network).

We work to make a difference for all transport users.