

CrowdFlex Consumer Segment

Electric Vehicle Users with a Disability

Centre for Sustainable Energy

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About CrowdFlex

CrowdFlex is a two-year NESO-led innovation project investigating the potential of domestic flexibility to help operate the grid. Two types of domestic electricity flexibility service were trialled:

- Utilisation service: customers were paid to turn up or turn down their electricity usage during notified events.
- Availability service: customers were paid to make their electric vehicles available to the grid by plugging in whenever they were at home.

33,000 customers from across two project partners, Ohme EV and OVO, took part in the availability service. CSE surveyed over 8,000 people in the availability trial to explore the experiences of different consumer groups who took part.

Based on these real experiences within the trial, this series of case studies aims to showcase how different types of households – including those that may face barriers to participating in the energy transition – can benefit from demand shifting services.



Introduction

Many disabled people in the UK experience significant financial challenges. Disabled people are nearly twice as likely to be unemployed as non-disabled people and are more likely to be in poverty.

They are also more likely to face higher living costs, with the average disabled household incurring £975 a month more than their non-disabled counterparts. Research shows that many disabled people are at risk of fuel poverty and experience a range of barriers which risk excluding them from the energy transition.

Transport is one area where disabled people may face higher costs – for example, through needing to have vehicles specially adapted. The Motability scheme provides a way for disabled people to lease a vehicle by using their government-funded mobility allowance. There are currently over 100,000 customers leasing an electric vehicle (EV) through the Motability scheme. Ohme is the Motability Scheme's primary partner for home EV chargers, enabling thousands of Motability customers to take part in CrowdFlex.

Sources: [Disability Rights UK](#); [scope.org.uk](#); [Better retrofit services for Disabled people - Centre for Sustainable Energy](#); Evidence submitted to Parliament by the Motability Foundation; [Motability Report 2025](#)

33%

of availability survey respondents reported having a long-term health condition.

81%

of those with a long-term health condition felt positive overall about taking part.

Participation

In the CrowdFlex survey of households with electric vehicles taking part in the availability trial, participants reporting a long-term health condition were*:

- 14 percentage points (pp) more likely to be financially insecure than those without a long-term health condition (19% compared to 5%).
- 7pp more likely to be concerned about the cost of plugging in their EV at peak times (25% compared to 18%).

However, these respondents were 2pp more likely to have had positive experiences of the trial as a whole (81% compared to 79% of those without a long-term health condition).

They were also more likely to develop a habit of plugging in more frequently.

*All data from the Summer 2025 availability trial.



Customer experiences

To find out more about disabled customers' participation in CrowdFlex, we conducted follow-up interviews with five Motability Scheme customers.

Ease of participation and financial benefits

Motability Scheme users who were interviewed all said that they found taking part in CrowdFlex very easy. Plugging in their EV more frequently was found to be manageable, even for those with long-term health conditions like Lorraine:

"If I'm not feeling well, it's easy enough just to plug it in."

EV users were rewarded with vouchers for plugging in more frequently. Receiving these vouchers resulted in a range of benefits. For some households, such as Harriet's, the vouchers made a real difference financially:

"We're a single-earning household. I'm a full-time parent/carer for our daughter, who's disabled... And it was just very, very helpful to be honest."

Wellbeing benefits

Others were in less need of financial support, but they still valued the vouchers for the wellbeing benefits they provided. Lorraine, for example, used the vouchers to buy craft materials that supported her mental health during times when she was feeling unwell due to her long-term health condition:

"When you're not 100%, it's really good having the opportunity to do things like knitting... I used the voucher to buy stuff to support how I was feeling."



New charging habits

Several participants said that they had formed new charging habits through their participation in CrowdFlex. Instead of waiting until their EV needs to be charged, customers like Emma are now plugging in daily, creating benefits to the grid by making their EVs available for electricity flex by their service providers:

"It just got me into a good routine, which was nice because the next day I always had enough miles to go wherever I needed to."

Emma explained that, before CrowdFlex, there had been a couple of times when she unexpectedly had to drive a long distance and found that she didn't have sufficient charge. This meant that she needed to break her journey to use a public charging station, which added to her journey time and cost her more money. Plugging in more frequently as part of CrowdFlex solved this issue for Emma.

Lorraine also reported the psychological benefits of charging her EV more frequently – specifically, she was less conscious of her EV's range because she was always starting the day on a full charge. She suggested that this effect may be particularly helpful for people who worry about whether their EV has sufficient battery charge to reach their destination:

"I think it does sort of negate the possibility of range anxiety."

Conclusions and recommendations

Our evaluation has shown that disabled EV users were able to participate easily and effectively in the CrowdFlex availability trial.

Taking part led to financial rewards and enhanced the convenience of EV use by ensuring that vehicles were charged more regularly. While these outcomes would benefit any EV user, for customers on the Motability Scheme experiencing disability and long-term health conditions, they often made even more of a difference. Stopping to charge at a public charging station on an unexpectedly long journey, for example, can be challenging for someone with a health condition.

Recommendation:

CrowdFlex participants with a health condition reported some concerns about battery range and the cost implications of charging at peak times in higher numbers. Tailored messaging could help overcome specific challenges like this that may be more prevalent for different consumer groups.

Recommendation:

Strategic partnerships between flexibility service providers and organisations supporting people with particular health conditions may enable barriers for certain groups to be identified and addressed, allowing for the provision of more bespoke services or support.

More information on CrowdFlex can be found at www.neso.energy/about/our-projects/crowdflex

Customer feedback and trial analysis reports can be found on the ENA portal at <https://smarter.energynetworks.org/projects/10070764/>

