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CrowdFlex Availability Summer Trial 2025: Customer feedback

End of Trial Report

December 2025

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Executive Summary

This report presents the results of the second customer feedback survey for the CrowdFlex availability trial, summer 2025. This trial explored how electric vehicle (EV) demand flexibility can be incentivised using availability payments, which reward customers for being plugged in and available to respond when events are called. The survey was sent to over 19,000 Ohme and OVO participating customers. There were 6,923 respondents considered as part of this analysis – a 36% response rate.

Key findings

Overall, engagement with the CrowdFlex trial was broadly positive amongst survey respondents, with the majority (80%) reporting favourable experiences and a high level of perceived ability to participate. However, the data also reveal important nuances in motivation, engagement, and barriers that are critical to understanding the durability and inclusivity of such schemes.

Of those that stated that they changed their plug-in duration or frequency, all said that they were likely to continue with their new plug-in schedule. Almost three-quarters (73%) said that the trial had become part of their regular habits, which is a positive indication of the potential for changes in behaviour to become durable over time. The most common reason for survey respondents feeling positive was the perception of being rewarded for existing behaviour, which may suggest that the availability trial has helped to unlock latent flexibility. ‘Making a difference’ and ‘environmental reasons’ were also prevalent reasons for feeling positive about the trial.

However, nearly one fifth of respondents said that they were losing interest in the trial as it went on, which may be critical for the durability of this approach over the long-term. Repeat respondents generally had more negative views in the summer trial compared to the end of winter 2025 trial, and we saw a notable decline in the proportion of respondents reporting a ‘very positive’ experience compared to earlier phases of the trial.

Overall, we see a split emerging over time, with the majority of survey respondents forming habits which increase ease of participation, versus a large minority who encounter barriers and start to lose interest. People’s motivation for taking part is crucial – those who were mainly motivated by achieving a cleaner and greener grid were the least likely to lose interest in the trial, whereas those who were financially motivated

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were most likely to lose interest. In addition, those with low propensity to trust technology had substantially more negative experiences across a range of survey questions.

The most commonly reported barrier was ‘not using the car enough to deplete the battery’. This challenge was also highlighted in the winter trial. The trial is designed to increase plug in rather than actual charging, but this is a complex picture to communicate to customers. Trial participants are asked to plug in to make their vehicle available to the grid, but currently this won’t deliver flexibility if battery charging is not required. We are, however, likely to see greater benefit from extended plug-in periods in future as Vehicle-to-Grid charging becomes more common¹. This reported barrier also suggests that those who drive less may be less likely to engage in availability-type flexibility services like the CrowdFlex trial. Of those that said they were losing interest, 41% cited ‘not needing to plug in as much as the trial suggested’ as a reason.

Households that may already be vulnerable in the energy market do report some concerns in higher numbers than those without vulnerability risk factors. Those who are financially insecure and those with a health condition had more concerns about the costs of charging at peak times, and more concerns about their battery range. The challenge of not driving enough to deplete the battery was prevalent for survey respondents from older households and those with multiple vulnerabilities. However, those with a health condition and those with multiple vulnerability risk factors reported more positive experiences overall compared to others, and felt more strongly that they had learned something new and that participation became easier over time.

Contrary to expectations, those living in rural areas had more positive experiences and more effective participation on a number of measures, despite some challenges around internet signal and lack of other transport options. Amongst survey respondents, suburban dwellers were generally more negative about the trial than rural or urban households.

We found encouraging evidence that for the vast majority of survey respondents, participating in the CrowdFlex availability trial does not result in a direct rebound effect from driving more². However, although only 8% of respondents reported driving more because of the trial, this still warrants closer attention, as it could have significant environmental and congestion implications if scaled up to the population level.

¹ Vehicle-to-Grid (V2G) means that electric vehicles can send power stored in their batteries back to the grid. With V2G, being plugged-in for longer periods will mean that the EV will be more available as a flexibility asset to better support grid balancing.

² Based on self-reported perceptions of driving frequency, no mileage data was obtained in the trial.

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Recommendations

Messaging and communications

Motivation matters. People sign up for both environmental and financial reasons, but those with environmental motivations were more likely to maintain interest over time. This suggests that a multi-faceted engagement strategy that varies over time may be beneficial. Emphasising how the scheme contributes to a cleaner, greener grid may help to sustain interest. Regular feedback on users' contributions to broader goals – for instance, avoiding the use of fossil power stations for grid backup – could reinforce intrinsic motivations. Users could also be segmented by motivation type, for instance using an onboarding questionnaire, with tailored messaging; for those who are mainly financially motivated at the start, non-financial rewards could be gradually introduced over time.

Those who drive less may encounter more barriers to participation in availability-type schemes, and run the risk of becoming disillusioned, or even driving more in order to take part. Whilst this does reflect a misunderstanding of how the availability trial works, the prevalence of this misunderstanding across survey respondents does suggest that some changes to messaging and communication may be required. Tailored messaging could be developed to support those who are known to have lower mileage.

Though a very small proportion of survey respondents, those with low propensity to trust in technology had markedly more negative experiences of the trial, therefore future schemes need to ensure that this group receives additional support. For example, using reassurance from peer testimonials and trusted third parties, and providing learning support to ease apprehension. Confirmation cues (e.g. “your settings are safe, and charging is happening as expected”) may help to reduce anxiety amongst this group.

Future service design

In terms of future scheme design, respondents generally preferred positive charging messages – for instance, requests to plug in by a particular time, or to charge tonight – to any requests to delay or forego charging. Where prompts and notice periods are used, the most popular time period for respondents was a few hours before an action needs to be taken. A service that prompts people to plug in depending on the availability of energy on the grid, enabling them to participate with greater autonomy, may work well for some.

Longer term, plugging in more frequently or for longer appeared straightforward for many respondents and easily became a habit, but we did also see some respondents losing interest in the trial itself. This suggests that efforts could focus on introducing

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maximum plug-in as the standard way of using a smart charger, rather than a prompted action. This could be provided as a default option when purchasing a smart charger, and as a requirement of EV tariffs, with integrated availability payments.

Further research

More research is needed to understand direct rebound effects from availability-type schemes, and the implications this might have for congestion and non-exhaust particulate pollution. Vehicle data could be used to calculate total additional mileage from the small minority who report driving more as a result of the scheme.

As in the winter trial, we have seen underrepresentation of women and non-white customers. Further exploration of these gaps, and consideration of their needs within service design, may help ensure equitable access to flexibility services and avoid exacerbating existing inequalities in the energy transition.

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1. Introduction

This project is funded by energy network users and consumers through the Strategic Innovation Fund, a programme from the UK’s independent energy regulator Ofgem managed in partnership with Innovate UK.

This report presents the results of the second customer feedback survey for the CrowdFlex availability trial, summer 2025. This trial explored how electric vehicle (EV) demand flexibility can be incentivised using availability payments, which reward customers for being plugged in and available to respond when events are called.

Customers were asked to plug in their electric vehicles more frequently to earn rewards. Plugging in did not mean charging more, but providing availability for the smart charger to spread out charging across longer plugged in periods based on grid demand. Customers were not aware when events were called, and any pre-set charging schedules were not affected – this means that charge levels and ready-by times should not have been impacted.

The survey was sent to over 19,000 Ohme and OVO customers participating customers (this did not include those in the trial control group). There were 6,923 respondents considered as part of this analysis – a 36% response rate.

The customer feedback work within CrowdFlex is designed to provide a rich picture of:

- Charging behaviour and plug in across different consumer groups, including more vulnerable groups where possible.
- The range of factors that affect plug in and availability including perceptions of the car as a flexibility asset.
- Trust in automated load control or remote dispatch, including how this differs amongst different groups.

This report begins to answer these questions by analysing survey responses through the lens of particular consumer groups and vulnerability characteristics, as detailed below. It builds on the first survey at the end of the winter availability trial (April 2025) and analyses changes reported between the two.

The analysis in this report is for a subset of CrowdFlex Availability participants only – all those who completed a survey in the summer trial. The primary research of the trial published alongside this report (see CrowdFlex report: Availability Trial, Summer 2025) analysed a larger sample of CrowdFlex participants. Findings within this report should

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not be taken as representative of all CrowdFlex participants, or of the general population.

Consumer groups

We aim to understand how different types of electric vehicle (EV) owners participate in the trial, and whether certain personal or household characteristics impact upon one's experience of the trial. To do this, we have defined the following broad groups:

Households that may be vulnerable in the energy market because of their circumstances – this includes those reporting financial insecurity, households that include somebody with a long-term health condition, and people of pensionable age. We have aligned this grouping broadly with Ofgem vulnerability definitions³ and the Priority Services Register eligibility criteria⁴.

Households who may have particular barriers or enablers to taking part – this includes households across different rural urban classifications, those working from home, those not currently working and those with children in the home.

Full details of these groups and their rationale for inclusion are provided in Appendix 1.

Methodology

The feedback survey was shared with all trial participants via email. Those that responded in abnormally fast response times which may not have provided accurate responses were excluded from the analysis. Cleaning the data in this manner left us with 6,923 survey responses. More detail is provided in the extended methodology provided in appendix 2.

³ Ofgem defines vulnerability as when a consumer's personal circumstances and characteristics combine with aspects of the market to create situations where they are significantly less able to protect or represent their interests in the energy market, or may be significantly more likely to suffer detriment and that detriment is likely to be more substantial than for other consumers. Vulnerability in the energy market is not wholly about rising prices, though they can exacerbate problems for consumers. Vulnerability can also be struggling to access and choose the best tariffs, or living in a cold, damp home. Ofgem Consumer Vulnerability Strategy 2013, accessed at www.ofgem.gov.uk

⁴ To align with the NESO archetypes and due to limits on survey length, the PSR criteria for households with children under 5 could not be included.

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Statistical tests

Significance testing shows the difference between a group and the remainder of the sample, so a statement such as ‘Group X were more likely to say Y’ indicates they are more likely to say Y than those that don’t fall within group, rather than in comparison to another group. All significance testing has been conducted at the 95% confidence level. This means that, if there had been no true difference, the probability of observing a difference as large as that observed would have been less than 5%. Because the sample is a subset of trial participants, who themselves are a subset of EV owners, the results should not be interpreted as being generalisable across the whole population. Significance testing does not on its own determine whether findings are representative of the wider population and makes no claims as to the extent of a difference. Statistics have been provided through the report to contextualise these findings.

Further detail on the statistical methods used throughout the report can be found in Appendix 2 (extended methodology).

Qualitative analysis

Open-ended questions were analysed using thematic coding analysis whereby text responses are categorised with short, descriptive ‘codes’ enabling identification of broad themes. The code frame was developed iteratively, adding new codes as required. Initially, all new points received new codes but as the frame was developed some codes were combined, whilst others, which had been used a lot, were disaggregated to capture the nuance of what people were saying. Comments were also back-coded into the existing frame where appropriate. For one question, coding ended when saturation was reached and no new codes were emerging.

For several questions, this was guided by an initial word frequency analysis using a natural language processing model in R. The most prevalent words or phrases, or those that particularly stood out, were the target for thematic coding and explored in more depth.

Limitations

This analysis is limited in that it doesn’t include any electricity usage data, so we are unable at this stage to report on whether the trial impacted a household’s energy demand or whether their demand changed during the trial, or on whether a household’s previous consumption impacted their experience of the trial.

There have been changes in trial design since the first customer feedback survey at the end of the winter trial, and changes in respondent experience might be attributed to this, rather than changes over time. In particular, repeat respondents would have seen the

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reward criteria become more difficult to achieve from the second trial to the first, as what qualified as a plug-in session was extended from 3 hours in winter to 6 hours in summer. Seasonal changes may also have had an impact.

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2. Demographics and Household Characteristics

This chapter looks at the makeup of survey respondents and their households. Demographic characteristics are compared against the wider population of Great Britain (GB) and respondents in the end of winter 2024/25 CrowdFlex Trial.

Representativeness

The following section describes the make-up of survey respondents and their households.

Group	Count	Proportion of sample	Proportion of sample (end of winter trial 2025)	Comparison to GB population
Health condition	2,068	30%	34%	24%
Older household	1,507	22%	20%	19%
Financially insecure	656	10%	9%	-
Households with children	2,935	42%	44%	26%
Home workers	1,228	18%	18%	16%
Households with access to a non-electric car	2,546	37%	40%	-
Urban households	1,732	25%	31%	44%
Suburban households	2,889	42%	44%	40%
Rural households	2,302	33%	25%	17%
Not working	1,845	27%	29%	35%
Total	6,923	-	-	-

Table 1 Representativeness of the survey sample

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As set out in the introduction and detailed in the appendix, we aim to explore the experiences of particular consumer groups that may have distinct experiences. Table 1 shows how well represented these groups are in the research, and how this compares to the general population of Great Britain (GB), and respondents from the previous CrowdFlex trial. Several of the consumer groups considered in this research are overrepresented in the survey sample: respondents were more likely to have a health condition (30% to 24%), have children (42% to 26%), and live in rural areas (33% to 17%). Notably, rural representation increased between survey waves (from 25% to 33%) – a statistically significant difference. This is particularly relevant given wider CSE research has shown that rural households are significantly less likely to deliver flexibility⁵ and because we set out to look in more detail at the experience of rural households in the survey.

Compared to the GB population, current survey respondents were less likely to live in urban areas (25% compared to 44%) and less likely to be economically inactive (27% to 35%). Further, the median income band for respondents (£50,000 – £89,999) was significantly higher than the GB population median of £36,700. As such, while the sample includes households with indicators of vulnerability, it is skewed toward higher-income groups. This sampling bias should be considered when interpreting survey findings.

These demographic findings are broadly reflective of EV owners, who tend to have higher incomes than the general population. However, since the survey respondents reflect a subset of CrowdFlex participants, it is not possible to say whether the demographic representation in the survey is reflective of OVO/Ohme customers or CrowdFlex participants more generally.

Gender

Women were heavily underrepresented among survey respondents, with 70% of respondents being men. This reflects the wider gender gap in electric vehicle ownership – while women own around half of driving licenses, only around a third (36%) of EVs owners are women.⁶ This imbalance reflects the winter 2025 trial proportions.

Ethnicity

Almost nine in ten (90%) of respondents were white, compared to eight in ten (83%) across the GB population. There was a corresponding underrepresentation of ethnic minorities, including Black (1% compared to 4% of the GB population) and Asian (6%

⁵ CSE (2025), [Access to flexibility](#)

⁶ YouGov (2025), [What differentiates Britain's electric vehicle owners from other car owners?](#)

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compared to 9%) respondents. Owing to a lack of national data on EV ownership, it is unclear whether this makeup reflects the ethnicity of EV owners, the ethnic makeup of OVO / Ohme customers, or the specific respondents to the survey. With ethnic minorities at a greater risk of energy vulnerability, primarily because of overrepresentation in low-income groups, further exploration of this gap may help mitigate risks of non-white customers being left behind in the energy transition.⁷

Conclusion

Compared to the general population of Great Britain, respondents were more likely to live in rural areas, have children, and report a health condition; all characteristics that we might expect to have lower flexibility capacity. The increase in rural representation between survey waves (from 25% to 33%) is particularly relevant, aligning with the recommendation from the winter trial survey to better understand the experiences of rural households.

Survey respondents were also more likely to be higher-income households, with the median income band (£50,000–£89,999) notably above the national median of £36,700. Respondents were also less likely to be economically inactive and less likely to live in urban areas. While some indicators of vulnerability are present, such as health conditions and limited transport access, the overall profile suggests a sample that is more affluent than the general population.

Gender and ethnicity gaps were also evident. Women were significantly underrepresented – a pattern consistent with the previous CrowdFlex trial and reflective of broader disparities in electric vehicle ownership. Similarly, white respondents were overrepresented, with lower participation from Black and Asian groups. Given the known links between ethnicity, income, and energy vulnerability, these gaps warrant further exploration to ensure equitable access to flexibility services and avoid exacerbating existing inequalities in the energy transition.

⁷ Simcock et al. (2020), *Vulnerability to fuel and transport poverty*

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3. Motivation and trial perceptions

This chapter explores survey respondents’ motivations for taking part in the trial, whether their experiences were generally positive or negative, and why.

Motivation

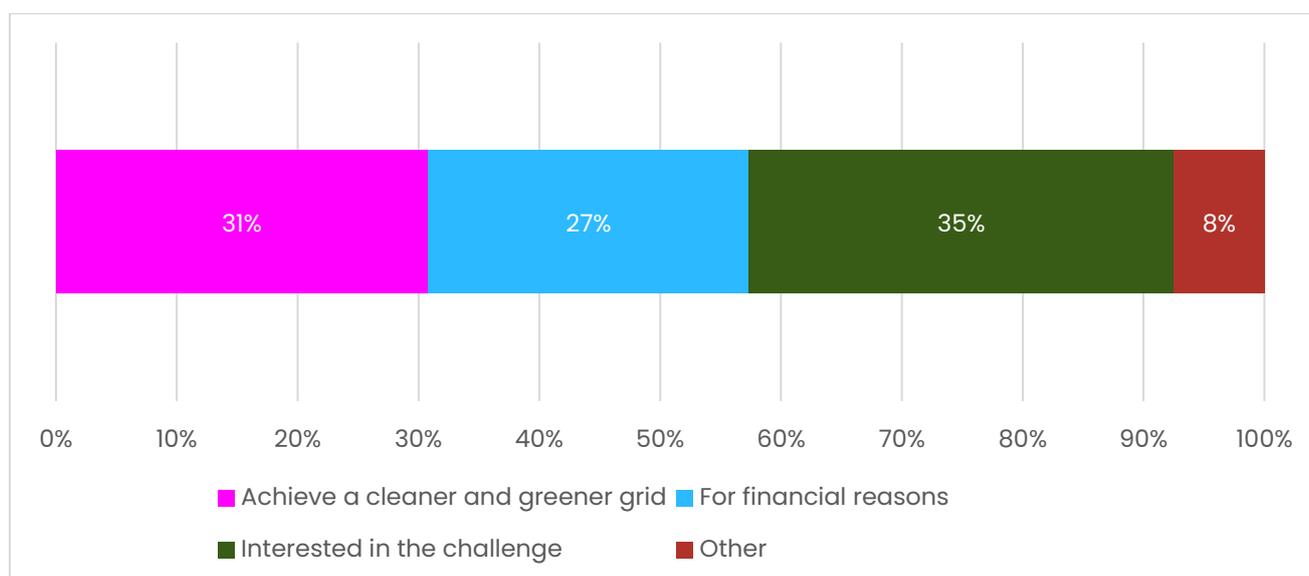


Figure 1 What was your main reason for wanting to take part in the trial? (n = 6,923)

Around a third (35%) of respondents were motivated by their personal interest in the challenge, while just over a quarter (27%) took part for financial reasons. 31% took part to achieve a ‘cleaner and greener grid’.

As respondents were asked to give just their main reason for participating, these motivations cannot be interpreted as mutually exclusive; that a respondent gives one motivation does not mean that the other motivations are not relevant to that respondent, simply that they are less relevant than the motivation given as primary.

As shown in Figure 2, different groups had different motivations.

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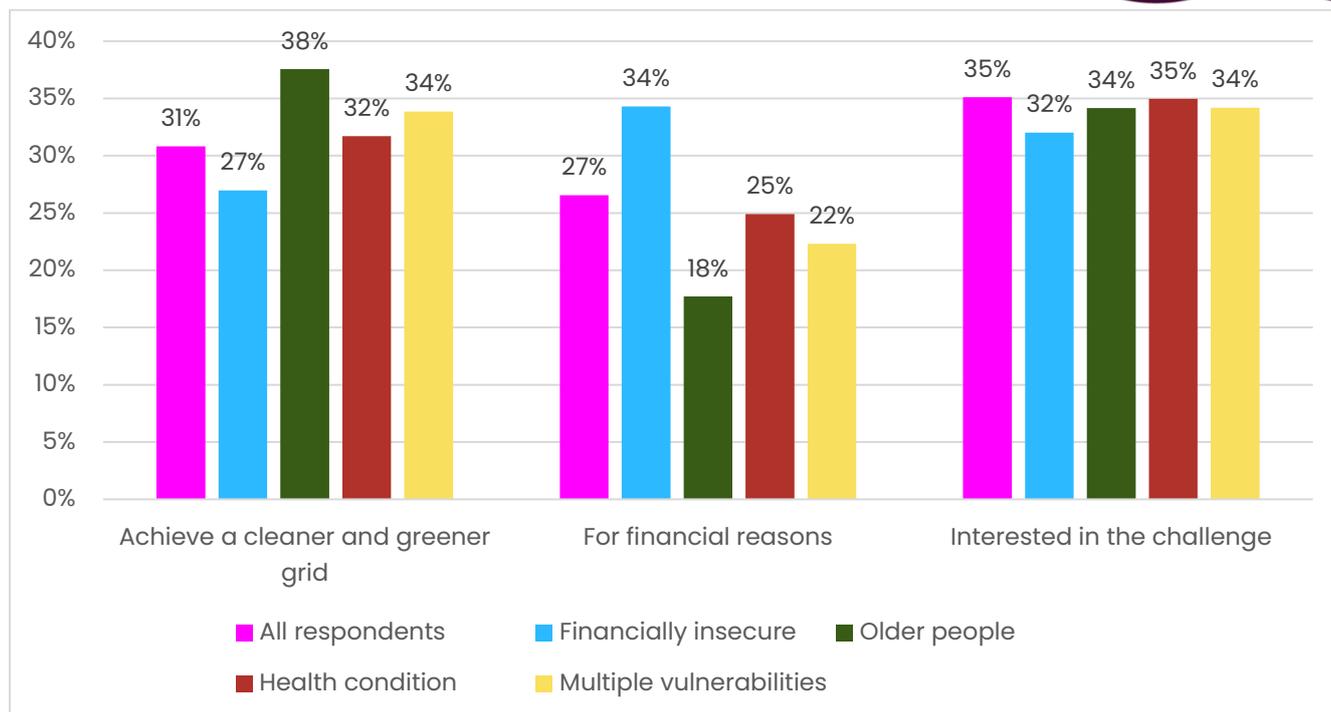


Figure 2 Main reason for wanting to take part in the trial: vulnerability risk factor groups

Motivation does appear to impact sustained interest – as shown below, those motivated to achieve a cleaner and greener grid were least likely to lose interest as the trial went on (12% reported this), whilst those participating for financial reasons were the most likely to lost interest (24% reported this). Maintaining interest is explored in more detail in the next chapter.

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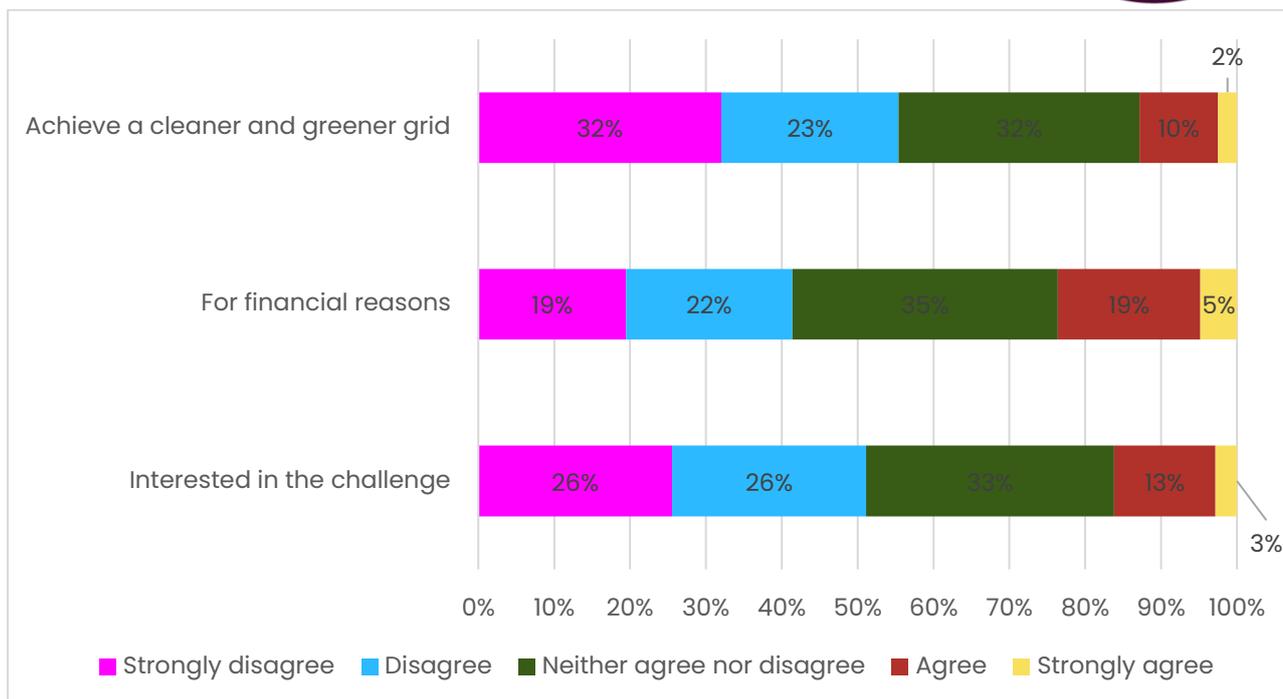


Figure 3 Percentage that agreed/disagreed they had lost interest as the trial went on (Q: I started losing interest as the trial went on), segmented by main motivation for taking part (Q: What was your main reason for wanting to take part in the trial?)

Trial perceptions

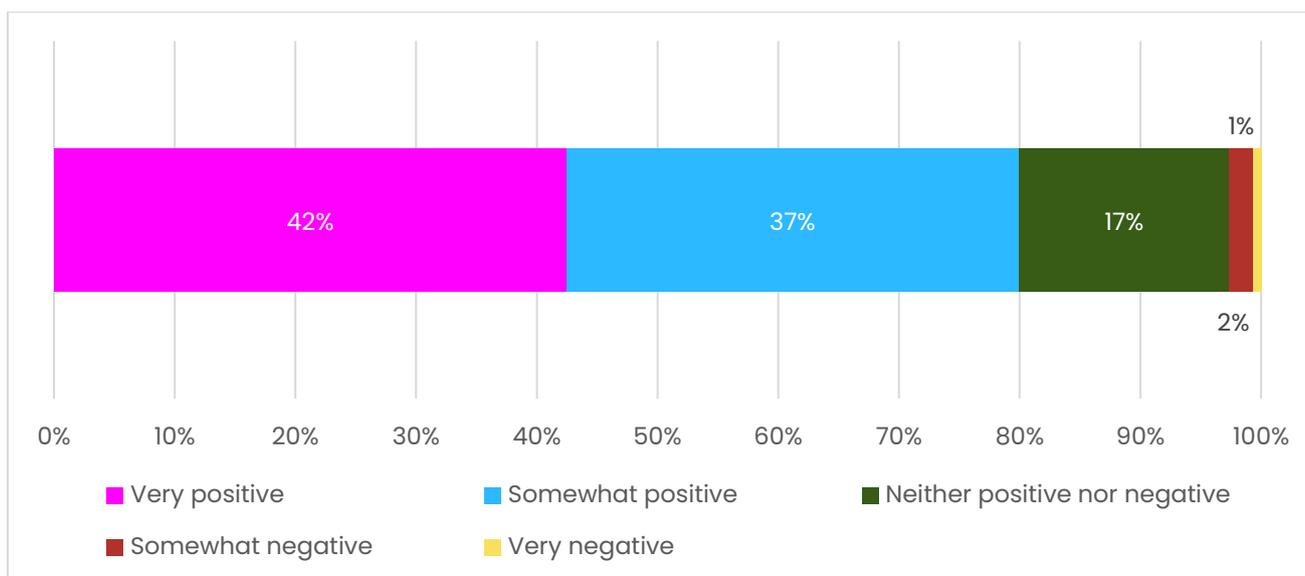


Figure 4 Overall Trial Experience (n = 6,923)

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Overall, around eight in ten (80%) of survey respondents were positive about their experience of the trial. Fewer than 3% of respondents had a somewhat negative or very negative experience of the trial.

There was a marked reduction in the percentage of respondents recording 'very positive' experiences compared to the end of winter trial: down 13 percentage points (pp) from 55% to 42%. This change was driven primarily by an increase in somewhat positive and neutral responses (up 6pp each). This decline may relate to trial fatigue or declining interest as those participating in the trial for the first time were more likely to report a positive experience than repeat respondents (83% compared to 73% - Figure 5).

Among the different consumer groups, older respondents were more likely to report a negative experience, but this was the only group to report differently to the wider respondent sample.

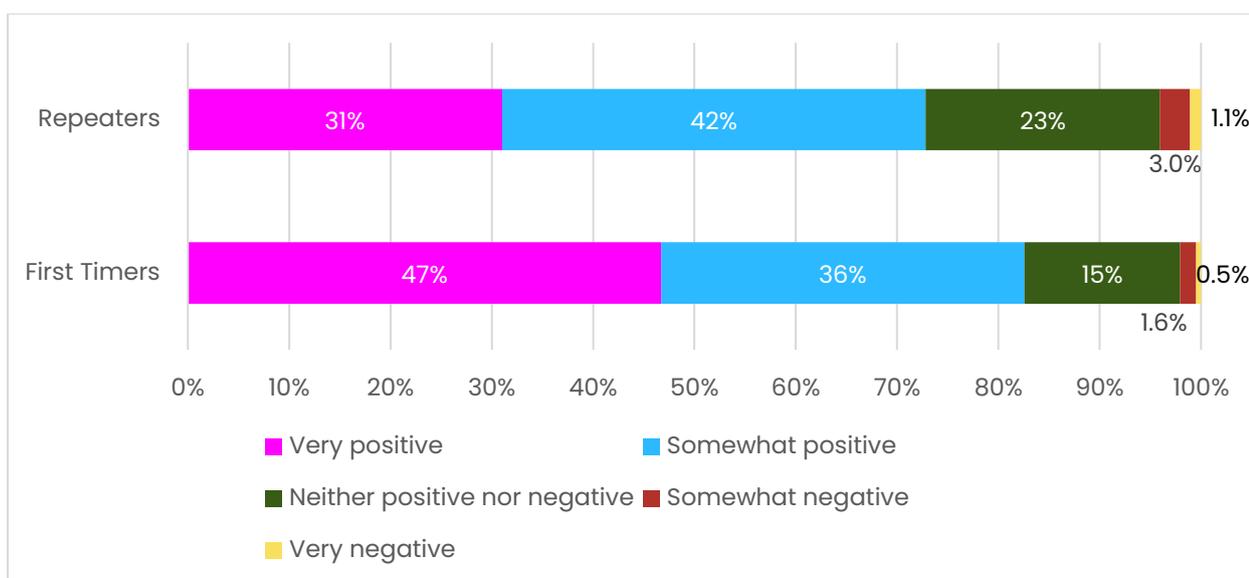


Figure 5 Trial experience: first-time vs repeat respondents

Respondents were asked why they felt positive or negative about the trial. Among those who responded positively, the most common reason for feeling at least somewhat positive was the perception of being rewarded for existing behaviour, with 52% selecting 'receiving payments for something I was doing anyway.' Slightly smaller proportions reported feeling positive due to 'making a difference' (46%) and owing to environmental benefits (44%), suggesting both personal gain and broader social impact were valued (Figure 6).

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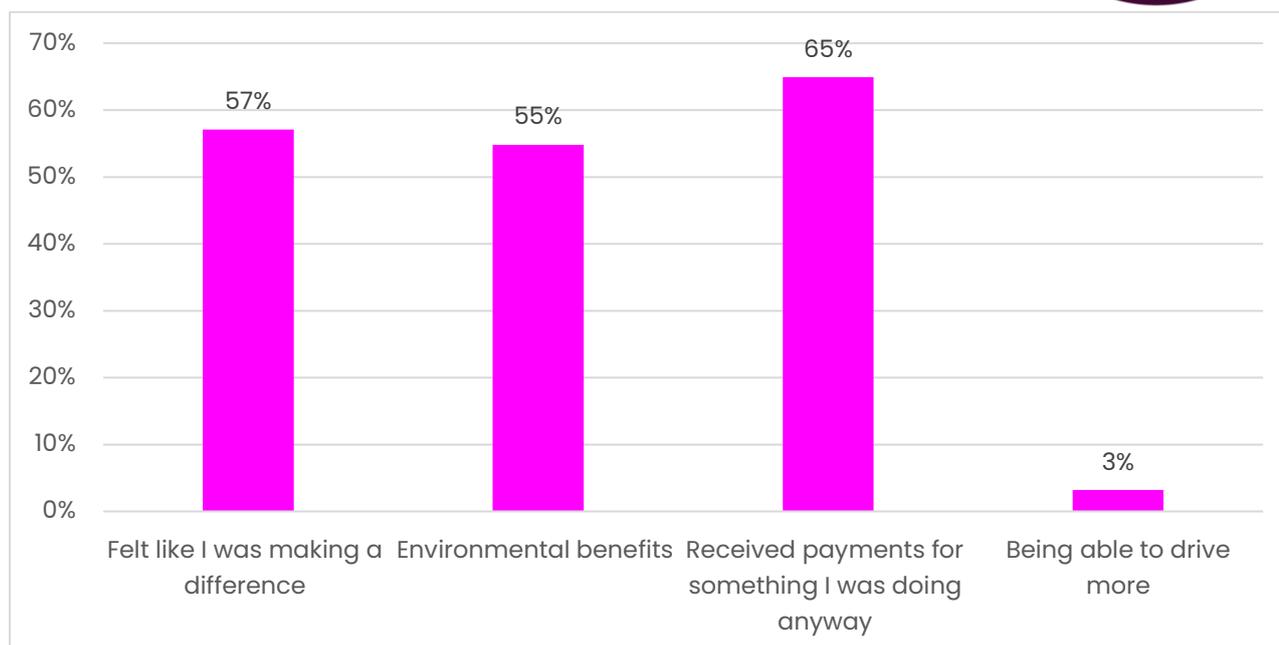


Figure 6 Why did you feel positive about the trial? (only respondents who reported an overall trial experience that was 'somewhat' or 'very' positive, n = 5,529)

Open-text responses provided further insight into respondents' experiences. 28% (28 out of 99) described the trial as intrinsically rewarding, noting that contributing to the research felt meaningful, particularly if the data may go on to help others in the future. Participation also supported habit-building and organisation (14%, 14 out of 99), helping them remember to charge their vehicle regularly. This contributed to peace of mind, with some respondents less concerned about being out of charge.

"Helped with organising and getting the car ready for the following day requirements."

Respondents also reported that the trial increased their understanding of flexibility schemes, the grid, and electric vehicles more broadly (13%, 13 out of 99). For some, this prompted further learning and engagement.

"Learned about charging and felt more able to understand how it works and how, when driving, to practice driving habits that conserve charge."

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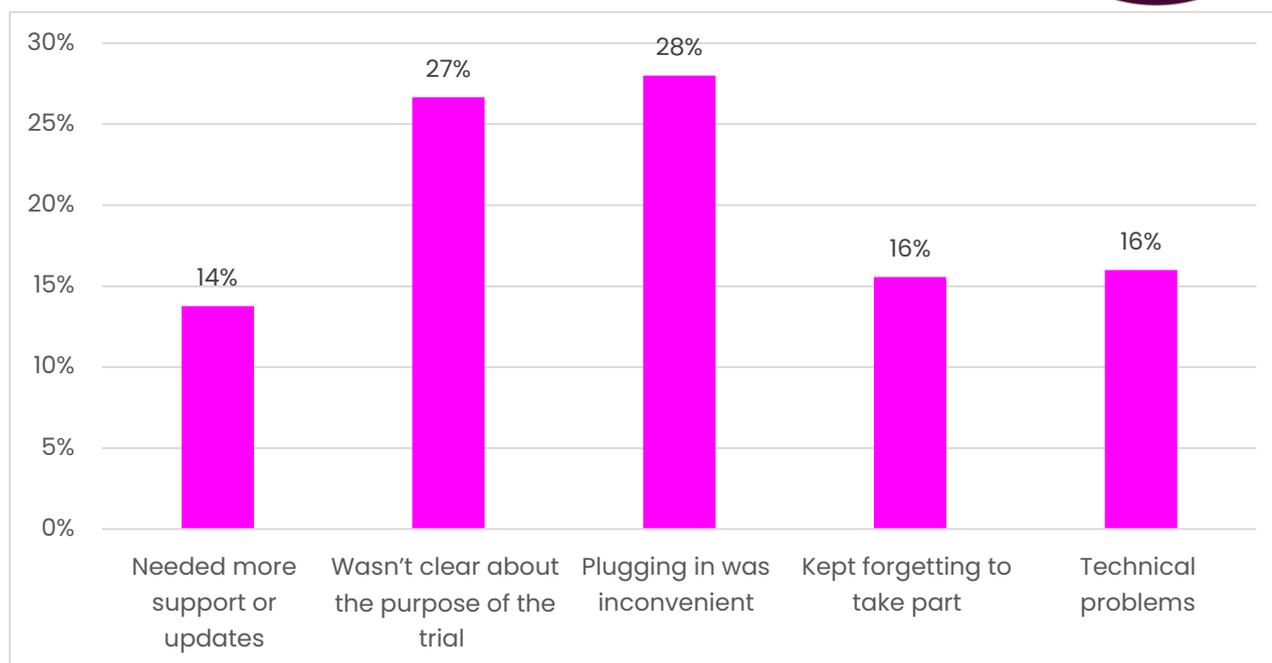


Figure 7 Why did you feel negative about the trial? (only respondents who reported an overall trial experience that was 'somewhat' or 'very' negative, n = 180)

Among the small subset of respondents (n=180) who felt at least somewhat negative about the trial, around a third suggested that 'plugging in was inconvenient' (28%) and that the purpose of the trial was not clear (27%).

Additional barriers from open-text responses are explored in more detail in the next chapter ('barriers to participation').

Conclusion

The most common motivation for taking part was personal interest in the challenge, with financial reasons and helping to achieve 'cleaner and greener grid' marginally less common. Motivation does appear to impact sustained interest in the trial. Those motivated to achieve a cleaner and greener grid were least likely to lose interest as the trial went on, whilst those participating for financial reasons were the most likely to lose interest.

Overall experiences were positive. The most common reason for feeling positive was the perception of being rewarded for existing behaviour. There was, however, a notable decline in the proportion of respondents reporting a 'very positive' experience compared to earlier phases of the trial.

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4. Barriers to participation

This section explores the barriers survey respondents faced to participating in the trial, looking at what made it difficult to take part and why. It also examines whether they lost interest as the trial went on, and what drove any decline in interest.

More than nine in ten respondents (92%) felt at least mostly able to participate in the trial. Fewer than one in ten (8%) felt they could not participate at all.

Those who are financially insecure or who report multiple vulnerabilities were slightly less likely to feel they could fully participate in the trial (11% of each group said they could not participate fully, compared to 8% of all respondents).

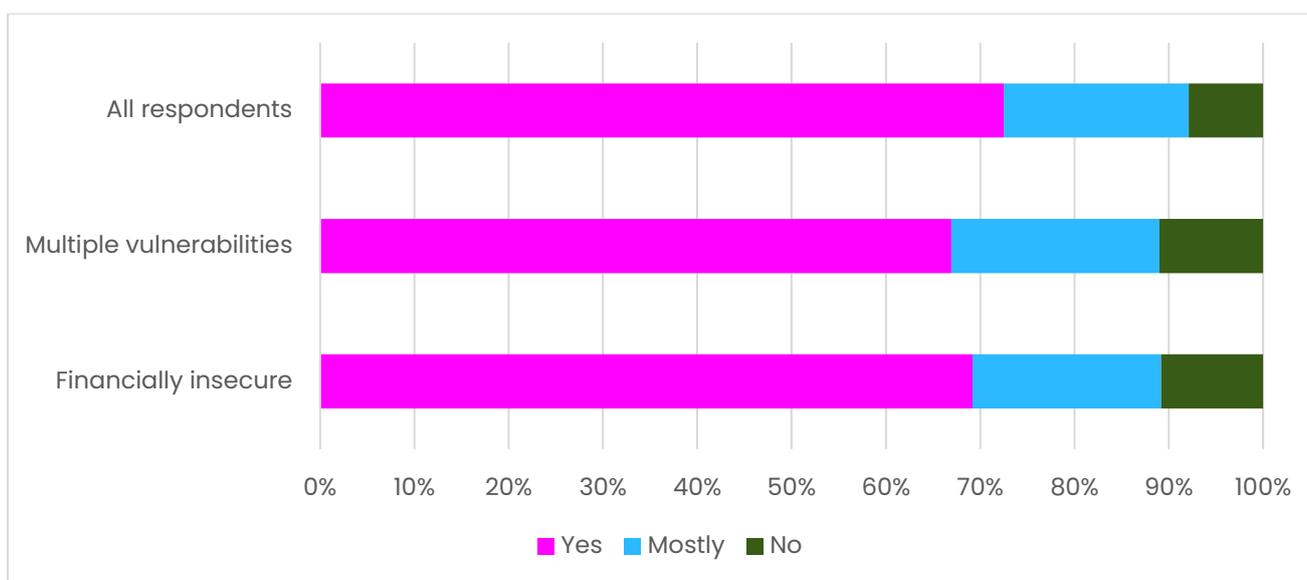


Figure 8 Did you feel able to fully participate in the trial (n, all respondents = 6,923)

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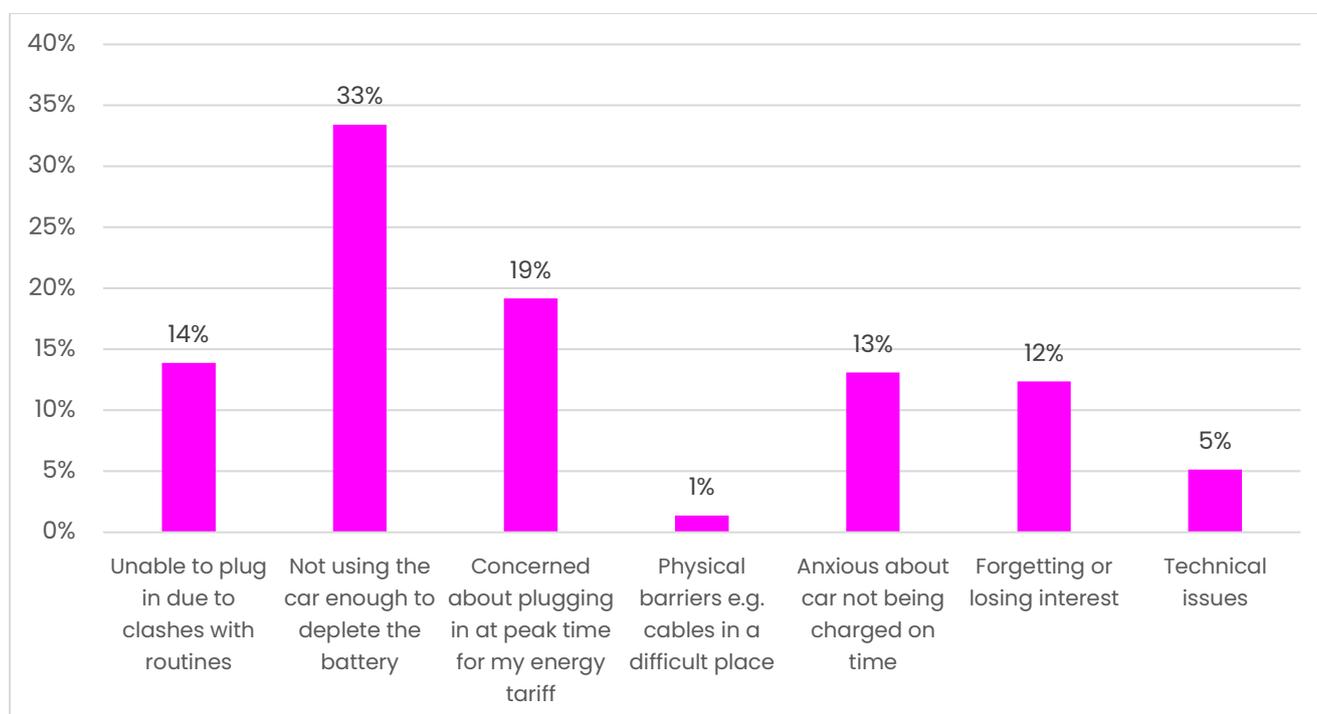


Figure 9 Did you experience any of the following barriers to taking part? (n = 6,923)

The most commonly reported barrier to participating in the trial was not using the car enough to deplete the battery. In line with this, a large proportion of the open text answers related to 'other barriers' were related to people not using their car for a period of time (44%, 166 out of 374). This was often because they were on summer holidays, business trips, or their car was being serviced.

"I have a lot of gaps plugging in due to being away for business"

In open-text responses, 15 respondents said that the trial led to concerns about battery degradation.

"I didn't want to ruin the battery by plugging in when it wasn't needed"

One in five (19%) were concerned about the costs of plugging in at a peak time for their energy tariff. Less frequently reported were 'unable to plug in due to clashes with routines' (14%), 'anxious about car not being charged on time' (13%) and 'forgetting or losing interest' (12%).

These barriers suggest the need for better communication around the core objective of the trial (i.e. to plug-in more). However, this is a complex picture to communicate to customers. Currently there is a limit on the flexibility that can be achieved through optimised charging if battery charging is not required. We are however likely to see

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greater benefit from extended plug-in periods in future as Vehicle-to-Grid charging becomes more common.

Certain barriers are more prevalent for certain groups:

- More than four in ten of ‘older people’ reported not using the car enough to deplete the battery (42%, compared to 33% of the full sample). This was also true for those not in work and home workers (41% and 38% respectively).
- Those struggling financially and those with a health condition were more likely to report concerns regarding perceived costs. ‘Concerned about plugging in at peak time for my energy tariff’ was reported by 28% of those reporting financial insecurity and the 24% of those with a health condition, compared to 19% overall. This reflects findings from the winter trial analysis.⁸
- Households with children were more likely to report ‘forgetting or losing interest’ (16%, compared to 12% of the full sample) or ‘unable to plug in due to clashes with routines’ (17%, compared to 14% overall).

Respondents also mentioned problems with their provider’s mobile app (6% of those reporting ‘other’ barriers, 23 out of 374). Problems here ranged from the app failing to register any charging adjustment to compatibility with apps from other energy and car companies, including Volkswagen and BMW, creating confusion around ‘which app is in control’.

“It was unclear to me whether it would be the only app or my eon app or my [Volkswagen] app that would override the others. The experiment was well intentioned but didn’t provide clarity to the end user around potentially conflicting schedules across multiple apps that control charging.”

Among the 8%, (545 respondents) who reported that they could not fully participate in the trial, the most frequently cited reasons closely mirrored the broader set of barriers identified across the full sample. However, one notable exception was the issue of routine clashes: 29% of these respondents reported being unable to plug in their vehicle due to conflicts with daily routines, more than double the proportion (14%) who cited this as a general barrier to participation. This suggests that routine is the biggest barrier that prevents people fully participating.

⁸ CSE (2025), CrowdFlex Winter 24-25 Customer Feedback Availability Trial, <https://smarter.energynetworks.org/projects/10070764/>

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Other barriers

Qualitative responses highlighted a number of physical barriers to full participation. The majority of respondents that provided open text responses described difficulties accessing their home charging infrastructure (62%, 50 out of 81), particularly those living in terraced housing with on-street parking. In such cases, charging often required running cables across pavements, which was described as impractical or unsafe. Many of these access challenges also covered the fact that their charging cable was too short. Others noted that having multiple vehicles on a shared driveway limited access to the charger (25%, 20 out of 81), while some reported technical issues such as faulty charging cables (6%, 5 out of 81).

"My charger constantly overheated and would consistently not hit my charger target."

Respondents also flagged personal health-related challenges that made plugging in physically difficult (6%, 5 out of 81). This included respondents with illnesses or disabilities, particularly those using a wheelchair.

Many of the 'other' responses also related to home location. 21% (78 out of 377) spoke of connectivity issues between their charger, car and mobile app. Issues with their charging cable tripping or going offline erratically meant that their vehicle wasn't always registered as plugged in and caused them to lose out on rewards. Whilst some blamed this on patchy Wi-Fi connection, other said this would happen despite having good Wi-Fi.

"Major problems between OVO and my charger provider (Indra) mean my car was registered as unplugged most of the time. The problem continues"

"Charger lost connection for 6 days and wouldn't work"

Conclusion

Barriers to participation were both practical and perceptual. The most frequently cited issues related to charging behaviour, such as not needing to plug in frequently or concerns about energy tariffs, while engagement-related barriers included forgetting to take part and the purpose of the trial being unclear.

These barriers were not evenly distributed across the sample: vulnerable groups, including older people, those not in work, and financially insecure respondents, were more likely to report specific challenges.

Home routine is the biggest barrier that prevents people fully participating - with those unable to fully participate twice as likely to report this barrier.

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5. Maintaining interest

This chapter explores how survey respondents felt as they trial went on – whether they lost interest or if it got easier over time.

Losing interest

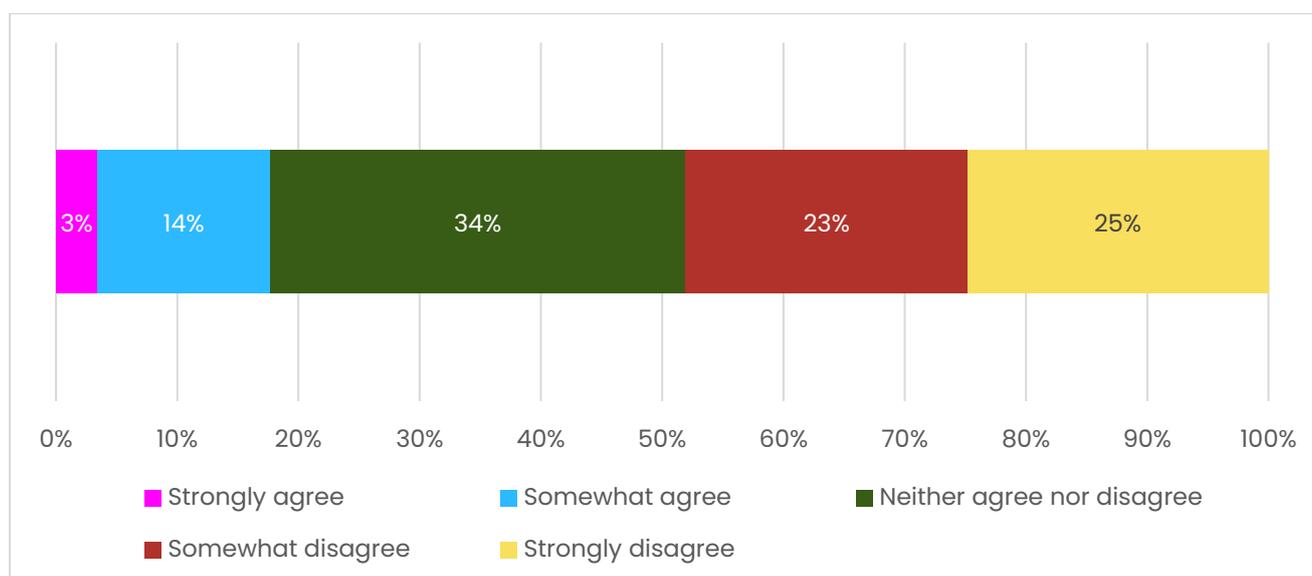


Figure 10 I started losing interest as the trial went on (n = 6,923)

Respondents were asked whether they started losing interest in the trial as it went on. Just under one in five (18%) of respondents either strongly or somewhat agreed with this statement; which may partly explain the findings in Chapter 9 showing that positive sentiment has generally decreased in this second trial, both overall and amongst repeat respondents. The Availability trial has only been running since summer 2024, therefore the fact that nearly a fifth of respondents say they are losing interest may be a critical finding for the durability of this approach over the long-term.

Home workers and households with children were both more likely to say they lost interest than the average respondent (22% and 20% respectively agreed, compared to 18% overall). In contrast, those not working and those living in rural areas were both less likely to lost interest (14% and 15% respectively agreed, compared to 18% overall). Chapter 8 explores these group differences in more detail.

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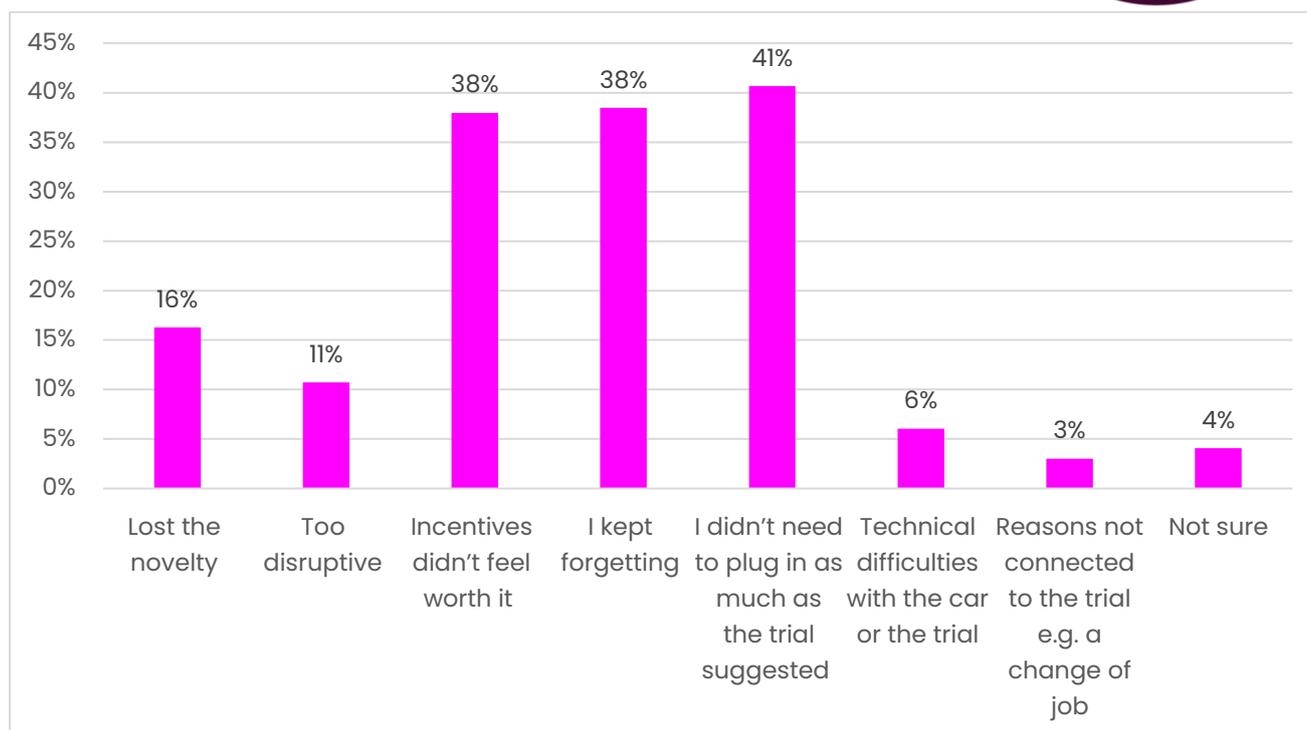


Figure 11 Why would you say you started losing interest in the trial? (only respondents who agreed that they started losing interest as the trial went on, n = 1,222)

Among respondents who lost interest in the trial over time, key reasons reflected the barriers to participation explored in the previous chapter – suggesting that barriers concretely reduced engagement. These include ‘not needing to plug in as much as the trial suggested’ (41%), ‘I kept forgetting’ (38%) and ‘incentives didn't feel worth it’ (38%). Less common responses included the trial losing novelty (16%) and it being disruptive (11%).

Qualitative responses (n=105) highlighted additional reasons for a loss of interest. A common theme was the information that respondents were receiving about the trial (24 respondents), with some expressing confusion about the purpose of the trial, what actions they were expected to take, and the benefits of participating. Sufficient information on these topics might support customers to maintain interest.

*“Lack of feedback on a daily or weekly basis - have I plugged in 2 or 3 times already?
How am I doing on the leaderboard? Am I damaging my battery?”*

A very small number of qualitative responses said that the trial conflicted with other LCTs and tariffs, particularly solar PV:

“it also required manual changes [to] my solar system to force using the grid for charging which meant I wasn't benefitting from the solar energy I was generating. The financial reward didn't cover my losses”

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Ease of participation

For those who felt it was initially difficult to some degree (those reporting it was ‘quite easy’, ‘neutral’, or ‘difficult’ to participate at the start of the trial – 56% overall) we asked if participation was becoming easier. For the majority (51%) of these respondents, the trial has remained the same difficulty over time. For a substantial minority (46%), it has gotten either ‘somewhat’ or ‘much’ easier, while for a small minority (4%) it has become either ‘somewhat’ or ‘a lot more’ difficult.

Among those reporting that the trial became easier over time, the most commonly selected reason was that it had become part of their regular habits (67%). This was more than twice as common as the next most cited reason: improved understanding of the trial (28%). Smaller proportions attributed the change to increased confidence with the technology (17%) or finding ways to overcome barriers (13%).

Conclusion

Around a fifth said that they are losing interest in the trial over time. Since the trial has only been running since summer 2024 this high proportion may be a crucial finding for the durability of this approach over the long-term.

Importantly, the reasons given for this disengagement closely mirrored the barriers to participation, indicating a relationship between practical challenges and declining interest. Home workers and households with children were both more likely to say they lost interest than the average respondent.

Qualitative responses highlighted the role of information, with respondents expressing confusion about the trial’s purpose and concerns about battery degradation. These findings underscore the importance of clear, timely communication and tailored support to improve participant understand and maintain engagement.

Despite this, many respondents said that taking part got easier over time, whereas very few said that it had become more difficult. The most common reason for this was that the trial had become part of their regular habits. Therefore we see a split emerging over time, with some forming habits which increase ease, versus others who encounter barriers and lose interest.

Those who were mainly motivated by achieving a cleaner and greener grid were the least likely to lose interest in the trial.

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6. Impacts on charging behaviour

This chapter looks at findings related to respondents' participation: whether they plugged in their EV more because of the trial, how likely they are to continue doing so, and habit formation (how easy or difficult was it to fit into their daily schedules). It also examines experiences of ready-by prompts, and what drove these experiences.

Around two-thirds (64%) of respondents plugged their EV in more during the trial than they did before (figure 12). Around seven in ten (69%) said they were at least fairly likely to continue doing so.

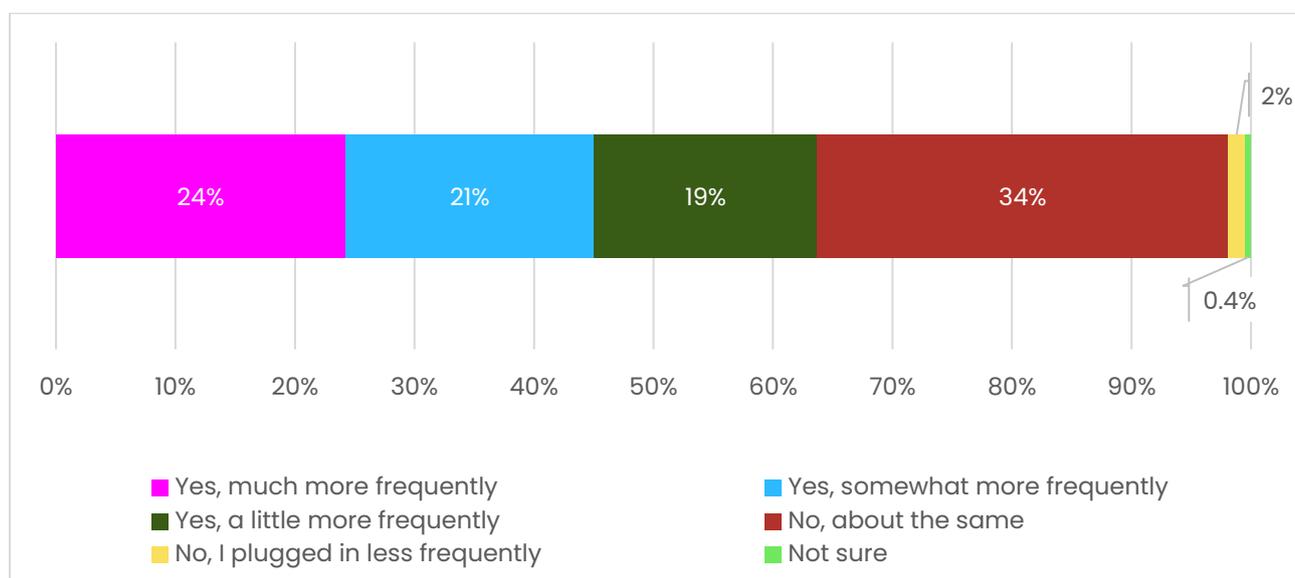


Figure 12 For the trial, did you plug in your EV more frequently than you did before the trial? (n = 6,923)

Half of respondents (50%) said that they kept their EV plugged in for longer periods of time than before the trial (Figure 13). 34% said they were at least fairly likely to continue doing so. Most other respondents (47%) said their charging durations remained about the same

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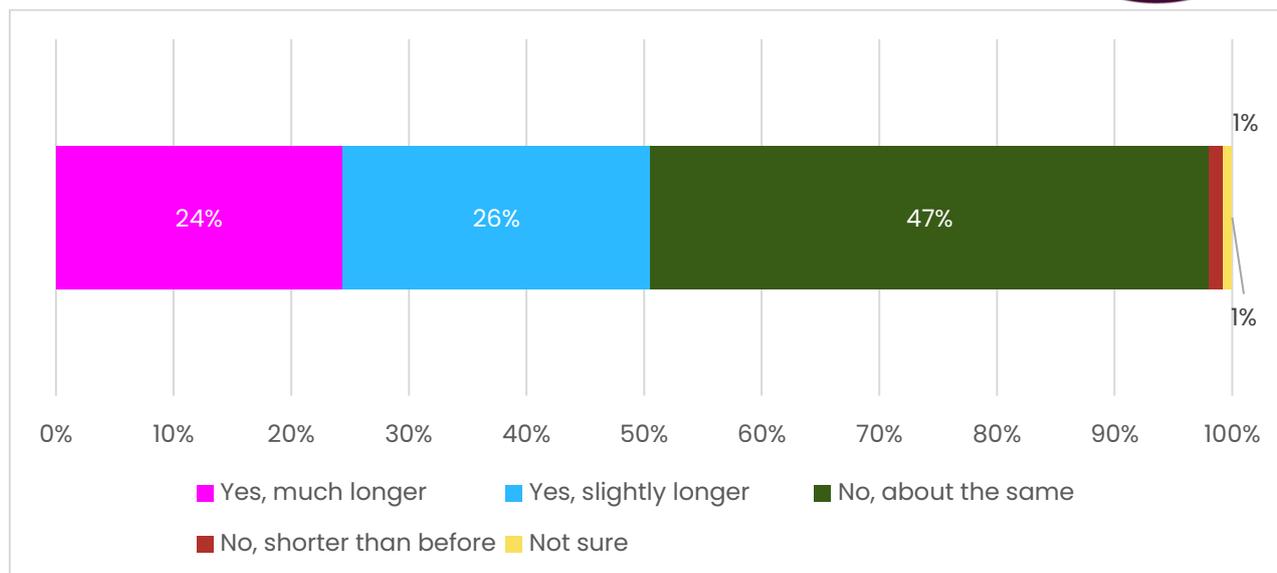


Figure 13 For the trial, did you keep your EV plugged in for longer periods of time than you did before the trial? (n = 6,923)

For 58% of respondents, this represented a change to way they were plugging in before the trial (Figure 14). Of those that stated that they changed at least one of their plug-in duration or frequency, all stated that were likely to continue with their new plug-in schedule.

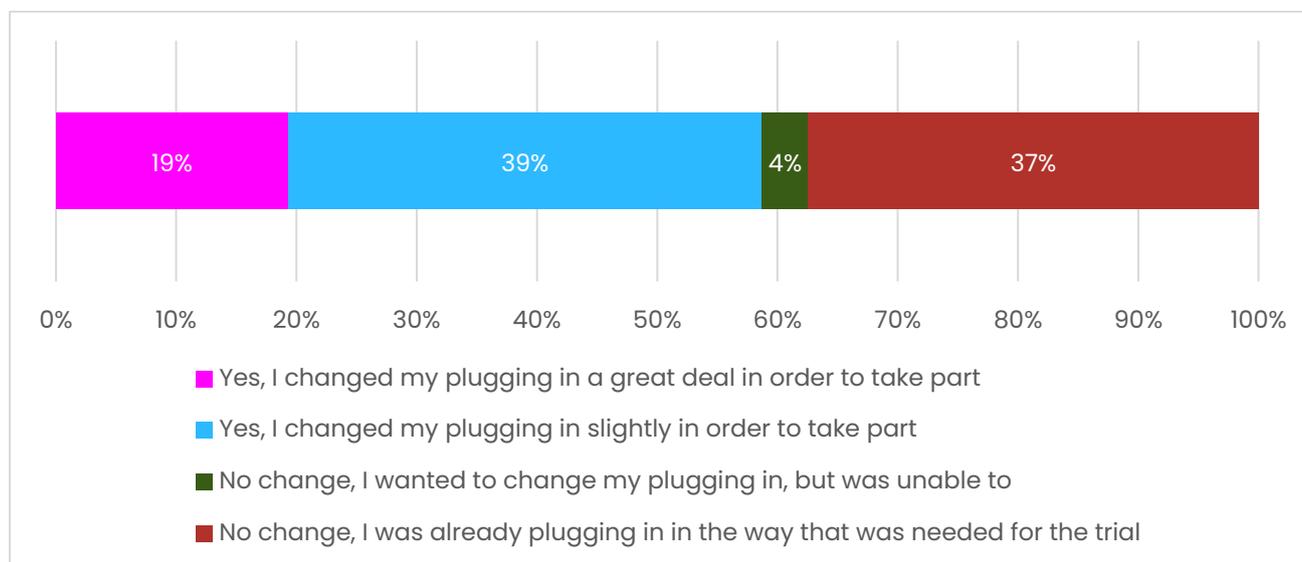


Figure 14 Did you need to change your plug-in habits in order to take part in the trial? (n = 6,923)

Around eight in ten (79%) of respondents either somewhat or strongly agree that the trial felt easy to fit into their lives (Figure 15). Fewer than one in twenty (4%) disagreed with this statement.

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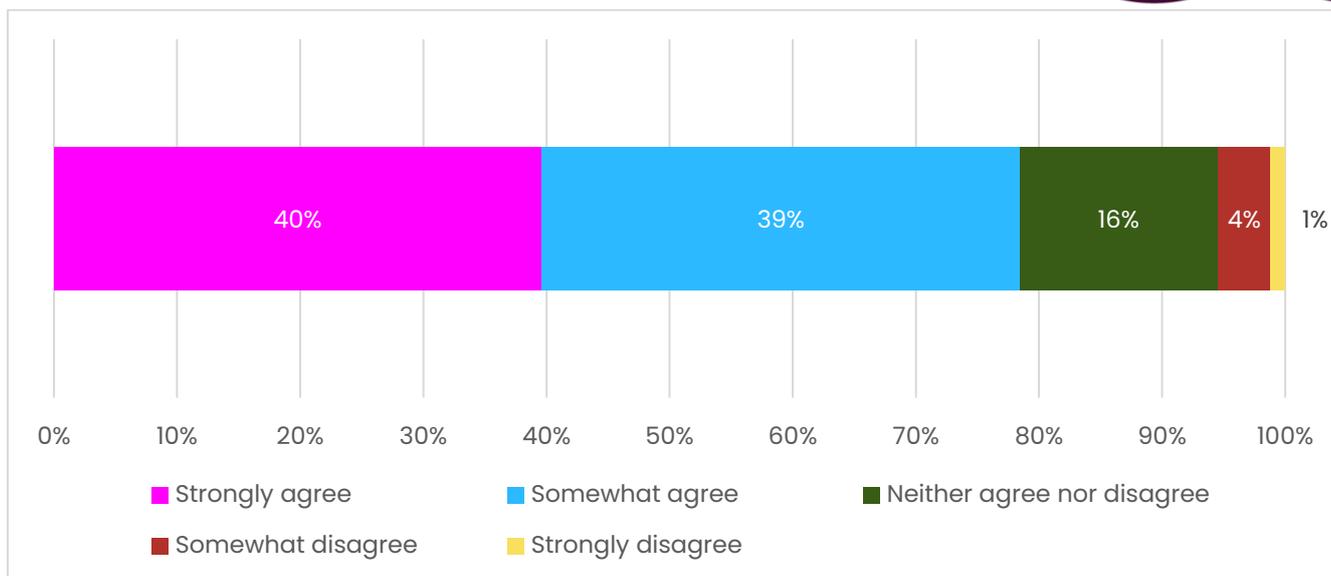


Figure 15 The trial felt easy to fit into my life (n = 6,923)

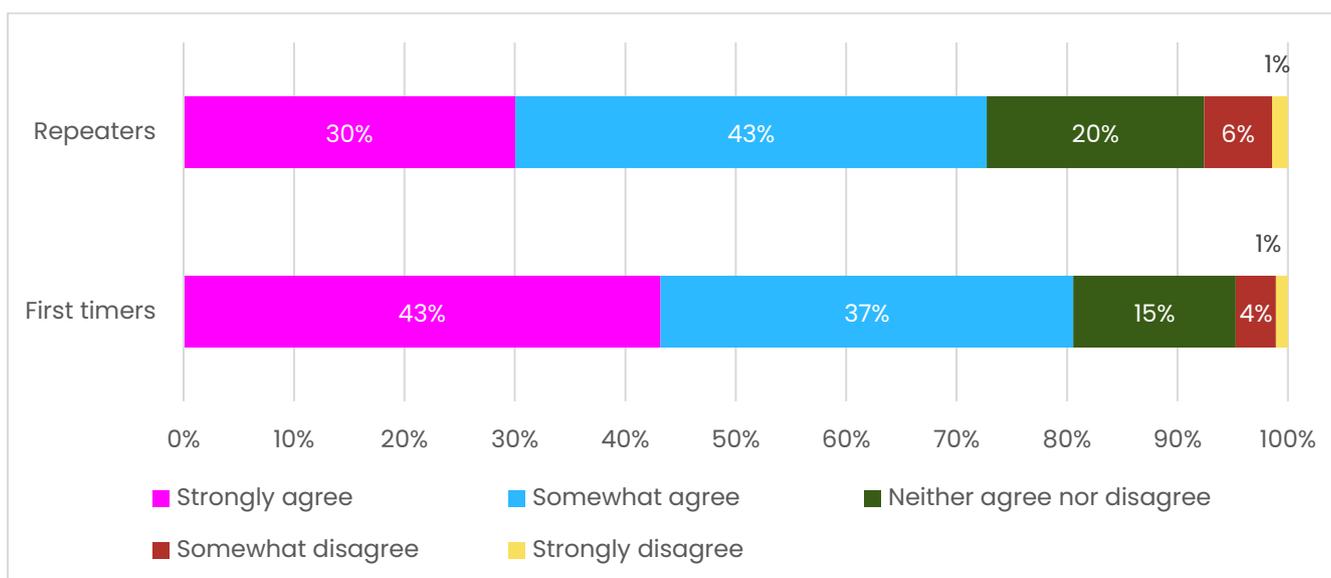


Figure 166: The trial felt easy to fit into my life. First time vs repeat respondents

Respondents were also asked whether they agreed that the trial became part of their regular habits. Almost three-quarters (73%) agreed. Around one in five (22%) responded neutrally, and only a small proportion (6%) disagreed.

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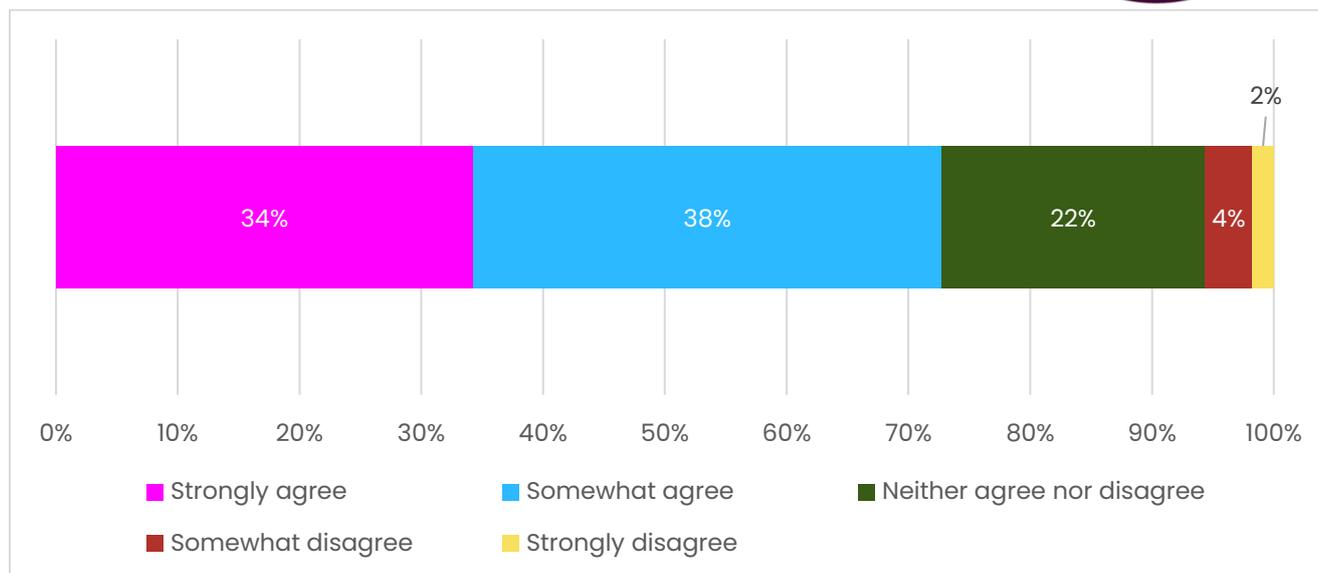


Figure 17: The trial became part of my regular habits (n = 6,923)

Across these questions we see interesting differences for those responding for the first time, compared to those who also took part in the winter trial. First time respondents were more likely to report plugging their EV in more frequently (67%, compared to 45% overall) and they were more likely to at least somewhat agree that the trial had become part of their habits (81% compared to 73%).

Home workers were more likely to report plugging their EV in more frequently (69% compared to 64% overall). There were no other significant differences seen for any other consumer groups.

Impacts on awareness and perceptions

We asked respondents about their understanding of how electric vehicles can contribute to grid balancing (Figure 18). It's encouraging that 46% said they were aware of this and that they understood it, of these respondents 40% said they were not aware of this before the trial – demonstrating that participation in the CrowdFlex availability trial may have helped to build this understanding. In line with this, 50% agreed that they had learned something new about their energy use or their electric vehicle, whilst only 13% disagreed.

34% said they were not fully aware and 20% had not heard of this. As shown in the chapter on motivations (Figure 3), those who were mainly motivated by achieving a cleaner and greener grid were the least likely to lose interest in the trial. This suggests that building awareness and understanding of how electric vehicles can support the electricity transition may help to build sustained participation in smart charging.

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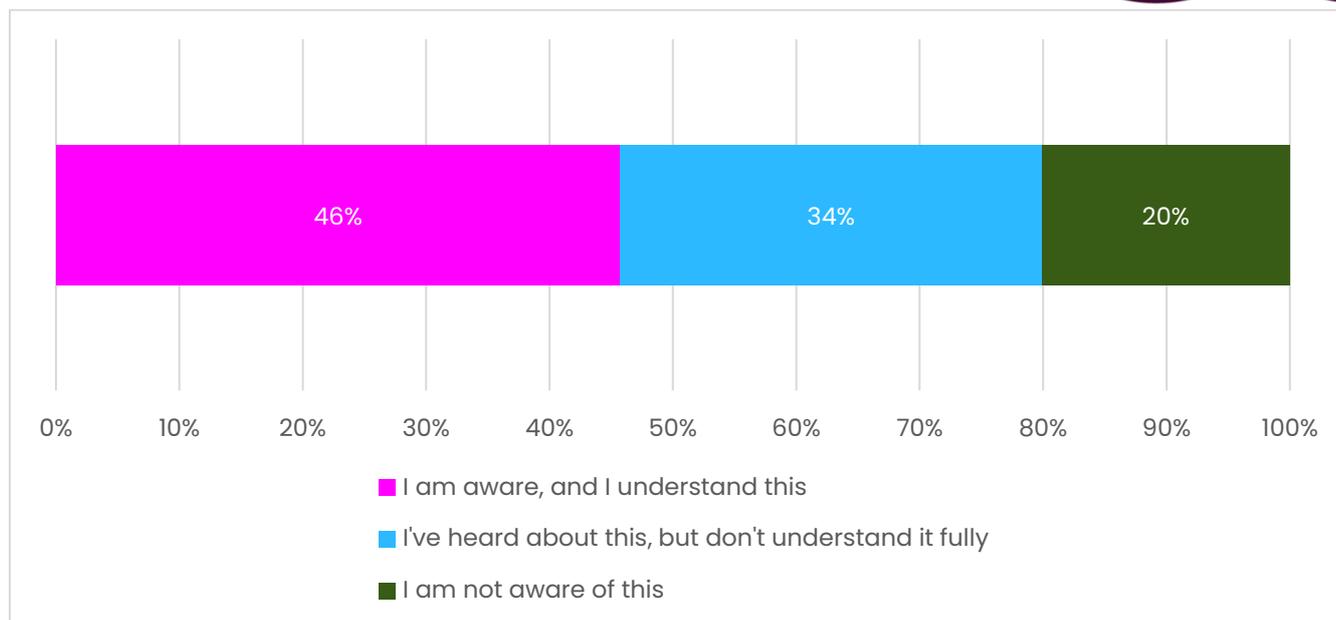


Figure 18 Are you aware that your EV can be used to help balance the electricity grid in your area? (n = 6,923)

Experience of Ready By Prompts

As part of the trial, 32% of the survey respondents received a specific prompt asking them to change their 'ready-by' time of their vehicle – a setting which defines the time by which the vehicle must reach its desired charge level, as set by the user. Of those who received a ready-by prompt, about half reported a 'somewhat' or 'very' positive experience of the 'ready-by' prompts, while 36% reported a neutral experience and only 13% reported a negative experience.

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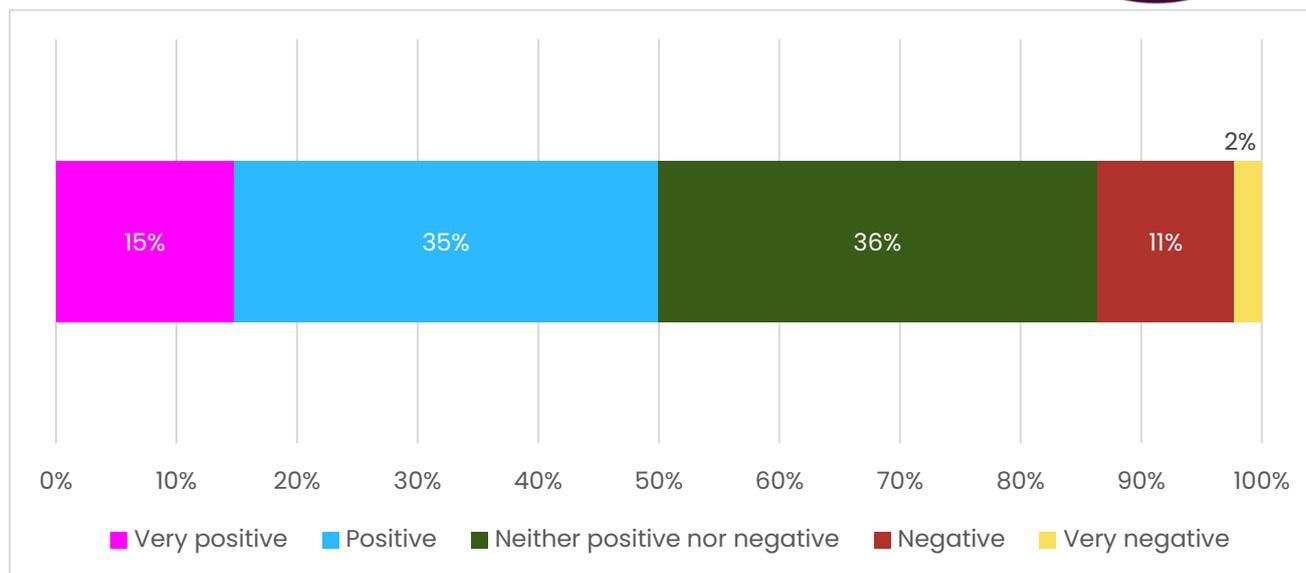


Figure 19 Was your experience of the 'ready by' prompts positive or negative (only respondents who received the prompts n=2,227)

This varied significantly across user groups (Figure 20). Those with a health condition or multiple vulnerabilities reported more positive experiences. Those living in urban area were also more positive. First time respondents reported a much more positive experience than repeat respondents. Home workers reported a more negative experience of these prompts.

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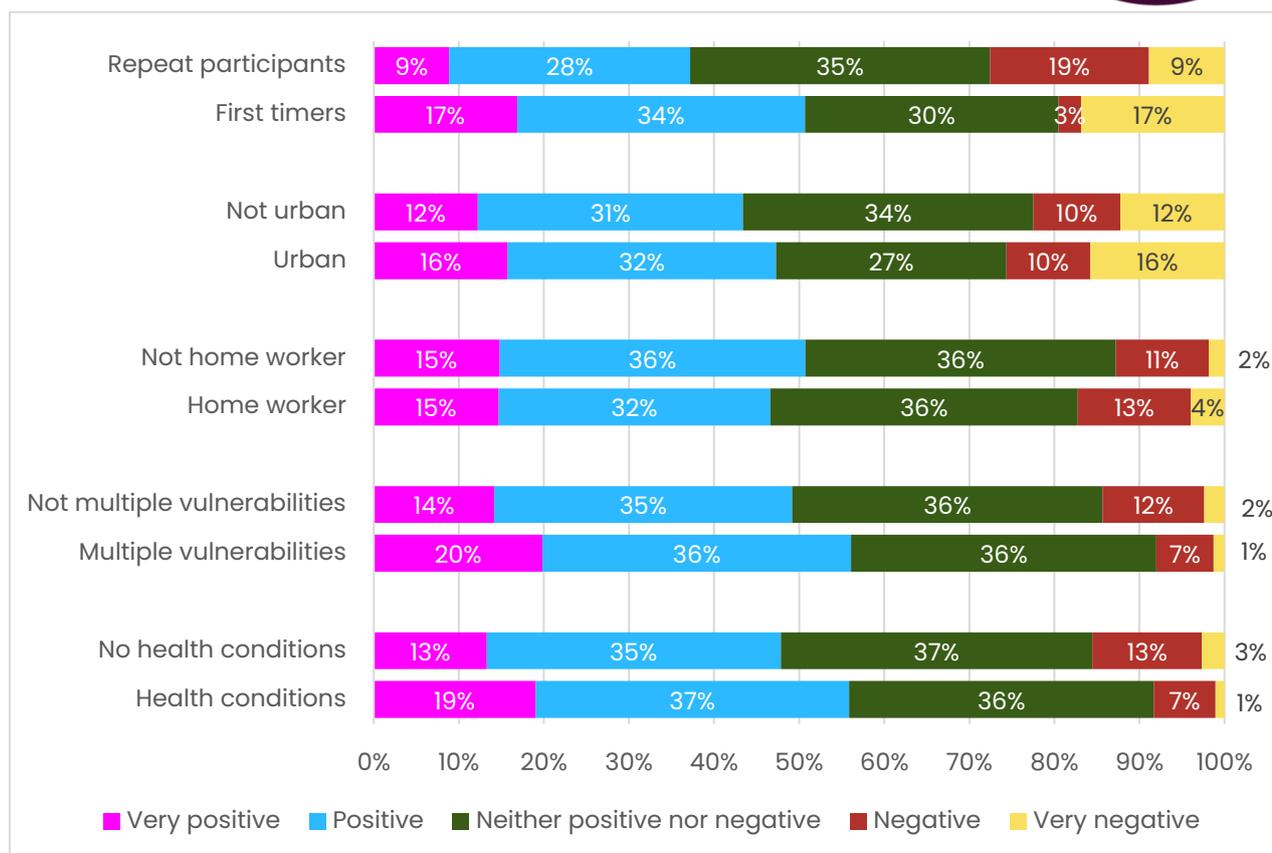


Figure 20 Experience of ready-by prompts, by user groups

Among those who reported a positive experience, some respondents felt that the prompts served as a useful reminder to plug in and charge, reducing the risk they would forget. They also felt reassured that their car would be done charging by the indicated time, and therefore be ready to use.

“gives you confidence that the car will be fully charged at the set time in the morning”

Similarly to qualitative feedback related to overall positive experiences of the trial, for some respondents this was because it enabled them to plan ahead and be more organised. Also reflecting broader positive experiences, prompts were seen as informative, helping EV users understand what they should be doing whilst also increasing understanding of the grid and the need for balance.

“I was a new EV owner at the beginning of the trial and found the guidance very helpful in organising how to set up my charging regime”

For respondents with negative experiences of the prompts (n=290), three key areas of difficulty emerged. Firstly, 84 respondents stressed that the prompts would often conflict with personal schedules routines, and unexpected outings. This meant that they needed the car ready to go by a certain time and couldn't delay charging time as requested.

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“Asking me to move time to say 10am on a specific day is impractical if I have to do a school run with no other option.”

51 respondents commented on the frequency of these notifications, namely that there was simply too many prompts to the point they became ‘annoying’, ‘pushy’ and even ‘distressing’. A small proportion (27) reported repeatedly receiving these despite already having responded to the prompt.

“I would get emails asking to extend my ready time but the time it stated as my average ready time was out of date and didn't reflect changes I had already made. On many occasions I would change the ready time anyway to the amount asked for in the email, or more, and it wasn't reflected when being given credit for the changes.”

This issue is a result of the innovative nature of the trial design. Due to the complexity to implement, OVO customers' ‘average RBT’ could not be dynamically updated in real time during the trial, and had to rely on a single mid-trial readjustment to reflect changes participants had made. RBT push backs were sent to all participants in this treatment group by default.

Conclusion

58% changed plugging in compared to before the trial. Of those that stated that they changed at least one of their plug-in duration or frequency, all said that were likely to continue with their new plug-in schedule. Around eight in ten said it felt easy to fit into their lives and 73% agreed that the trial became part of their regular habits.

A substantial minority are aware of how their vehicle can help support grid balancing, and 40% said that they had not been aware of this before the trial, showing that CrowdFlex has helped build this understanding and awareness. Half the respondents also said that they learnt something new about their energy use or their electric vehicle. Building awareness and understanding of how electric vehicles can support grid balancing – and thereby contribute to a cleaner, greener grid – may encourage sustained participation in smart charging.

Experiences of ‘ready-by’ prompts were generally positive, with qualitative feedback reflecting overall positive experiences of the trial (helping with organisation and learning). There were subgroup variations, with first-time respondents and those with a health condition or multiple reporting more favourable views, while home workers were more likely to report negative experiences. Here the qualitative feedback revealed challenges around inflexible schedules and technical errors that need addressing.

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7. Households that may be vulnerable

As outlined in the introduction, the study aimed to understand how different types of energy consumers participated in the trial, and whether certain characteristics of the person or their home correlate to different experiences.

This chapter explores key survey questions wherein potentially vulnerable groups responded in a significantly different way to other respondents. This covers the breadth of the survey, including demographics, engagement, barriers and participation. Our definition of households that may be vulnerable in the energy market because of their circumstances is informed by Ofgem’s definition of vulnerability, though it is important to point out that the presence of vulnerability risk factors does not mean that customers are necessarily vulnerable or at greater risk.

Financially insecure

As we might expect, survey respondents that self-reported as financially insecure were more likely to be financially motivated to participate. They were also more likely to be worried about the trial costing them money by asking them to plug in during peak times (10 percentage points (pp) more likely to say yes than those not in this group).

Financially insecure respondents were also more likely to report concerns around battery range as preventing them from participating fully (13pp more likely to say yes). They were also less likely to have any other transport options available to them – compounding their barriers to engagement. These challenges are not wholly related to home location as this group were also less likely to live in rural areas (30% of those financially insecure, 34% of those not financially insecure).

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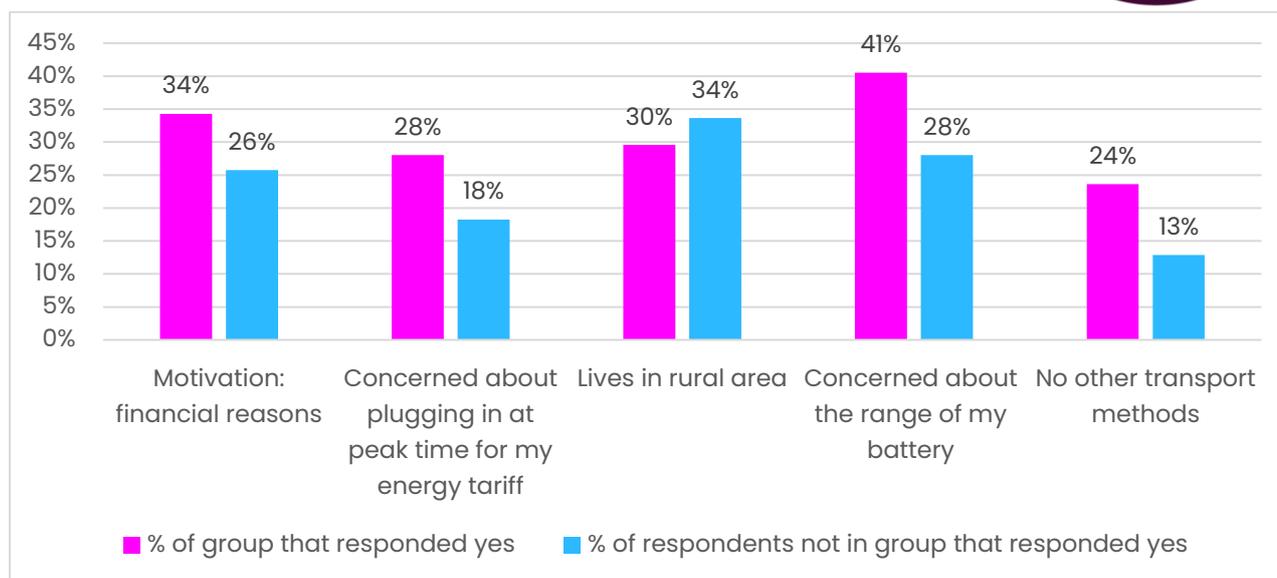


Figure 21 Responses to key questions by financially insecure respondents

Older Households

Respondents from older households were more likely to be motivated to participate for environmental reasons (38% compared to 29% of those not in this group). Lifestyle factors made a difference for respondents from this group – though their routines did not present challenges to plugging in more, their low car usage did (they were 11 percentage points more likely to say that they weren't using the car enough to deplete its battery).

Though they reported less positive experiences of the trial overall (75% 'somewhat' or 'very' positive, vs 81% of respondents not in the older people group), they were also less likely to lose interest (18% 'somewhat' or 'strongly' agree they had lost interest as the trial went on, compared to 15% of those not in the older people group).

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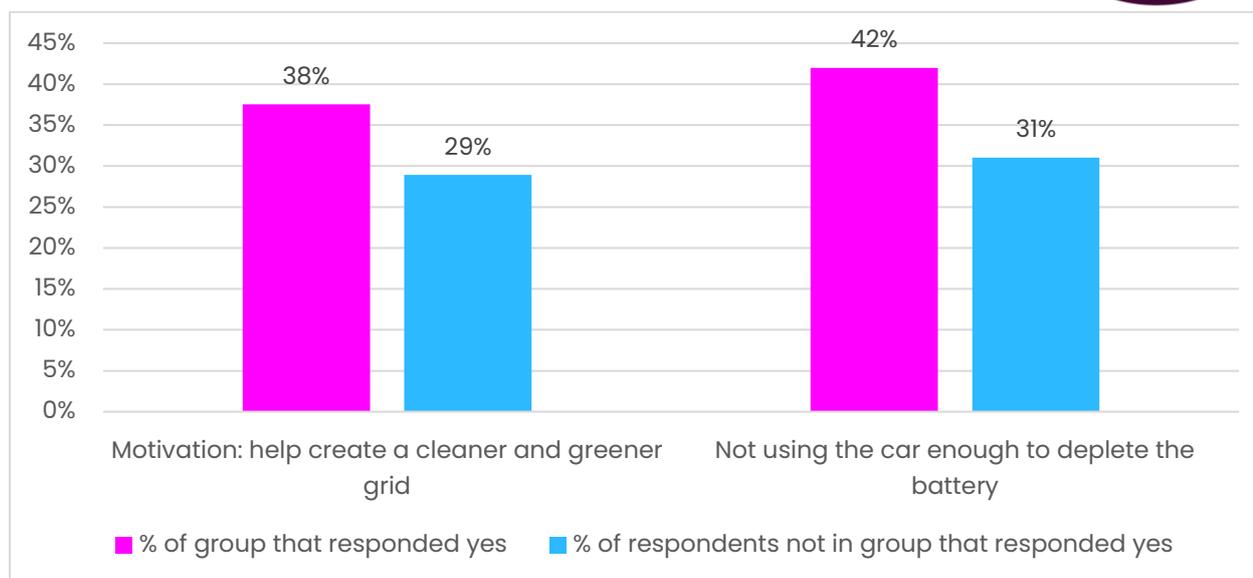


Figure 22 Responses to key questions by older households

Health Conditions

Respondents with a health condition were likely to have a worse financial condition than those without a health condition. As such, they were more likely to report cost concerns about plugging in at peak times as a challenge to participating fully (24% compared to 17% for those not in this group). They also reported battery range concerns due to where they live (34% compared to 27%) and were more than twice as likely to have no other transport options available to them.

Despite this, respondents from this group had overall positive experiences and a slightly better than average overall perception of the trial. They felt more strongly that they had learned something new and that participation became easier. This correlated with more effective participation, with a bigger increase in their plug in frequency than those outside the group.

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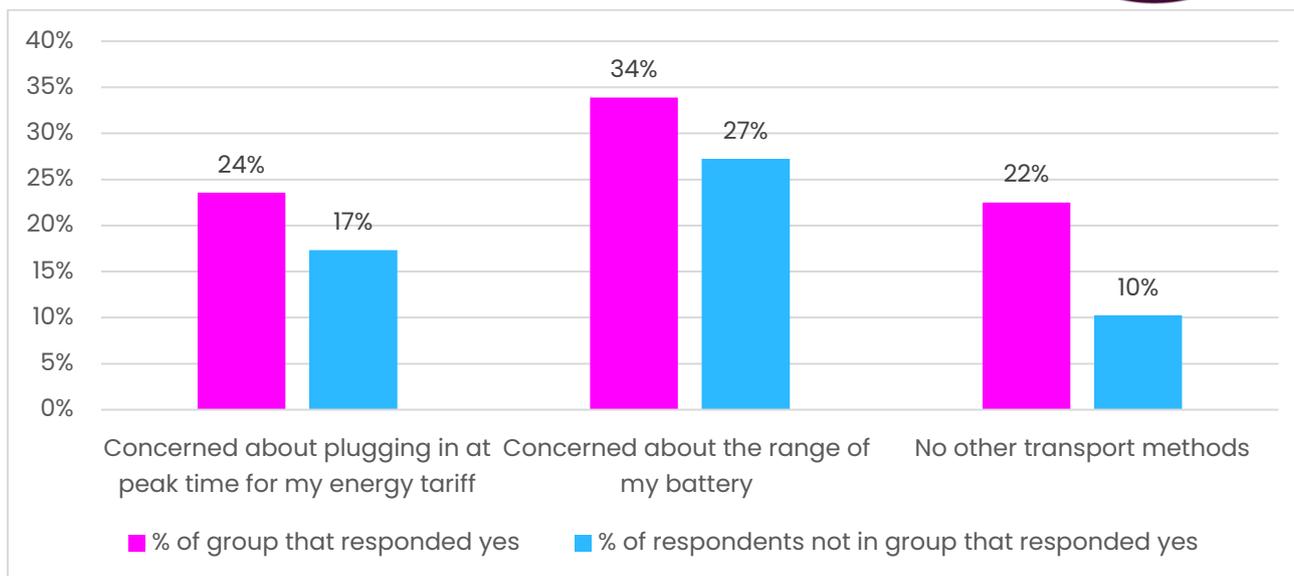


Figure 23 Responses to key questions by those with a health condition

Multiple Vulnerability risk factors

Respondents with more than one vulnerability risk factors were more likely to report barriers to taking part, including concerns about battery range (35% to 28%), not using their car enough to warrant plugging in (39% to 33%). But, as with respondents with a health condition, they were more likely to report positive outcomes: they felt more strongly that they had learned something new, they felt participation become easier more strongly than others, they had a more positive experience of 'ready-by' prompts.

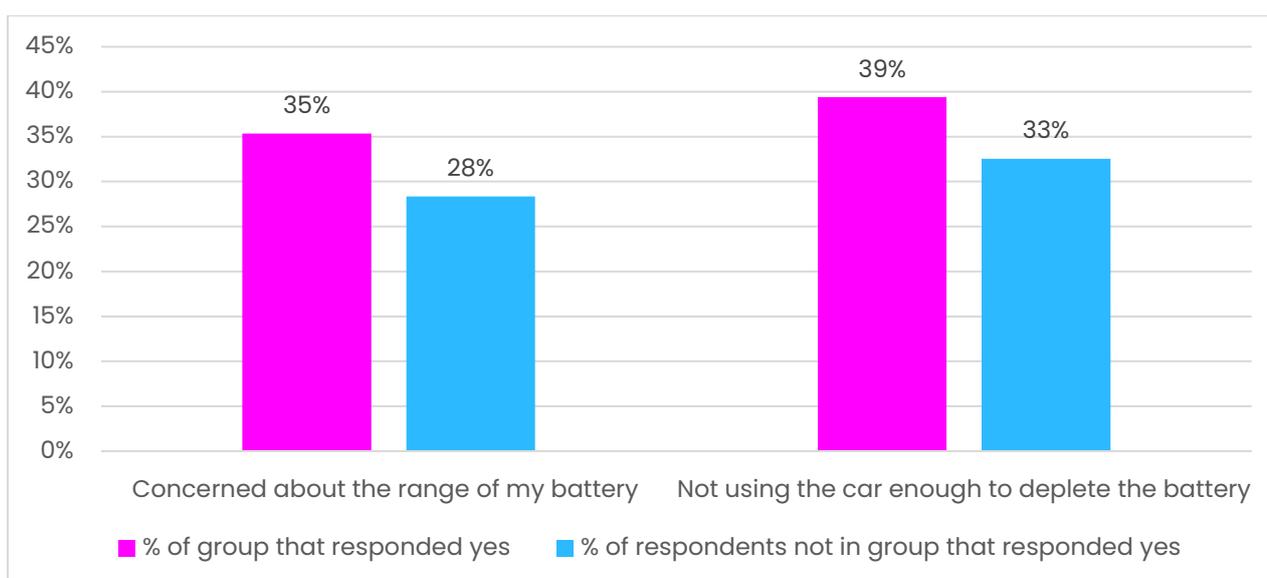


Figure 24 Responses to key questions by those with multiple vulnerability risk factors

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Conclusions

Households that may already be vulnerable in the energy market reported generally more positive experiences compared to those outside these groups. Those with health conditions, and those with multiple vulnerability risk factors, felt more strongly than others that they had learned something new and that participation became easier over time, as well as having a more positive experience of the ready-by prompts. Therefore the CrowdFlex Availability trial appears to be gaining positive engagement from these groups.

However, these groups also report some concerns in higher numbers. Those who are financially insecure and those with a health condition had more concerns about the costs of peak charging and more concern about their battery range, and were also less likely to have other transport options available to them. The challenge of not driving enough to deplete the battery was prevalent for those with multiple vulnerabilities. Older people had slightly less positive experiences of the trial, but were also less likely to be losing interest.

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8. Households who may engage with the trial in distinct ways

As noted in the introduction to the previous chapter, key to this research is to understand the experiences of different types of energy consumer. This chapter explores the experiences of respondents who may engage with the trial in different ways – primarily through different work or travel arrangements. This includes those not working, home workers, and conditions related to rural or urban living. It also explores whether trust in technology impacts experiences.

Those not working and home workers

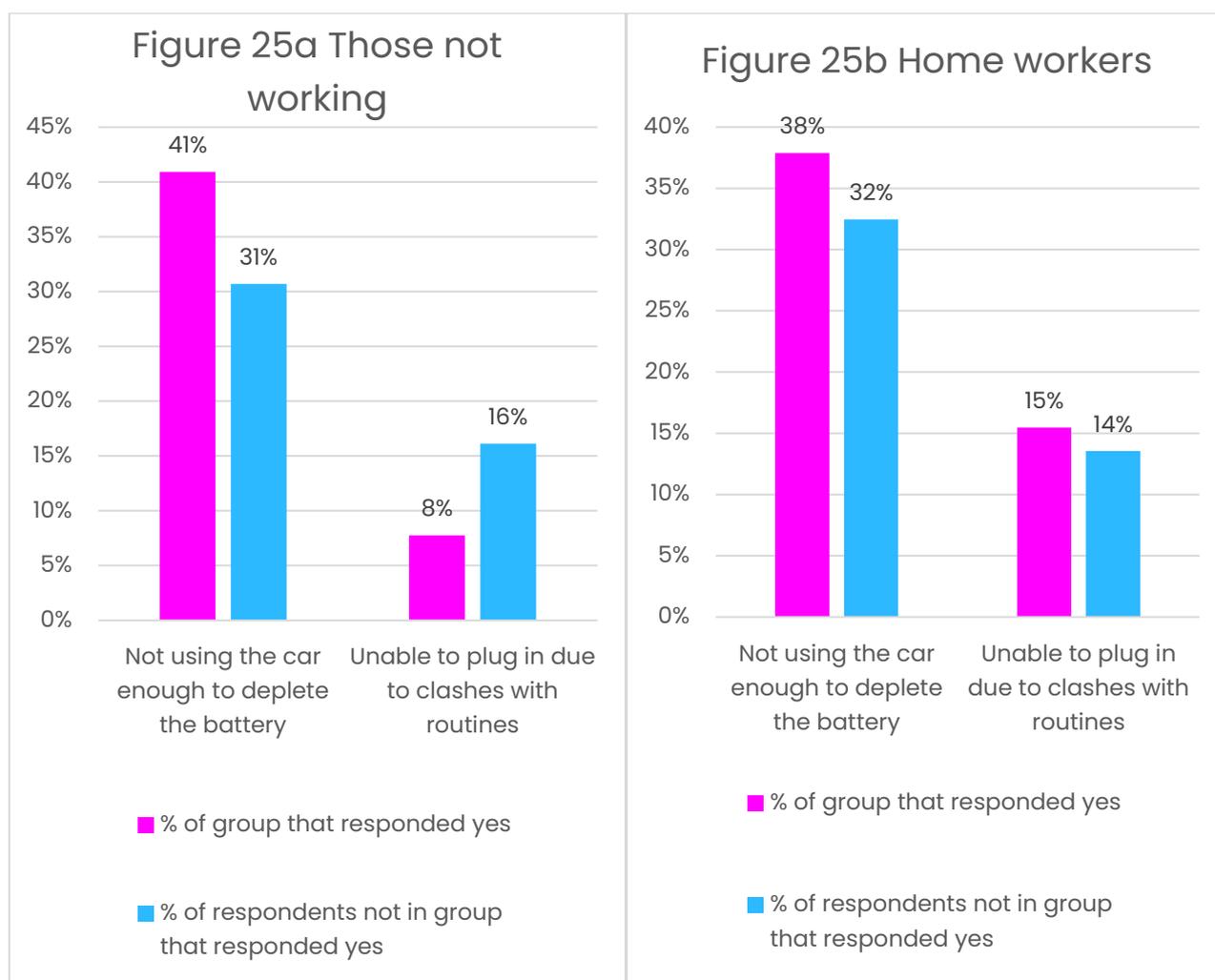


Figure 25 Responses to key questions by not working group and home workers

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Households not working may spend more time in their home and so be able to manage their charging more effectively (this group includes anyone reporting as ‘Retired’, ‘Unable to work’ or ‘Unemployed’). Similarly, home workers may be distinct from other households both in that they are likely to drive less, and they are at home more often, though we might expect them to be more financially secure than those who are not working.

Being at home does correlate with the ability to plug-in in some ways; those not working were less likely to say that their home routine was a barrier to taking part (8% compared to 16% of those not in this group) and home workers were more likely to have changed the duration of their plug-ins (59% vs 49% of non-home workers) and the frequency of their plug-ins (50% vs 43% of non-home workers). However, this does present other barriers as both non-working households and home workers were more likely to report lower car usage as a barrier to participation (non-workers 10 percentage points (pp) more likely to say this; home workers 5pp more likely).

Households with Children

We expected that having children may impact a household’s driving and charging routine due to the need to manage multiple schedules and needs, reducing a household’s flexibility capital, which may make them a vulnerable group in the energy transition.

As reported in Chapter 4, respondents from households with children were more likely to report ‘forgetting or losing interest’ (16%, compared to 12% of the full sample) or ‘unable to plug in due to clashes with routines’ (17%, compared to 14% overall). However, these barriers did not appear to impact trial experience, as these respondents reported more positive experience of the trial overall.

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Home location

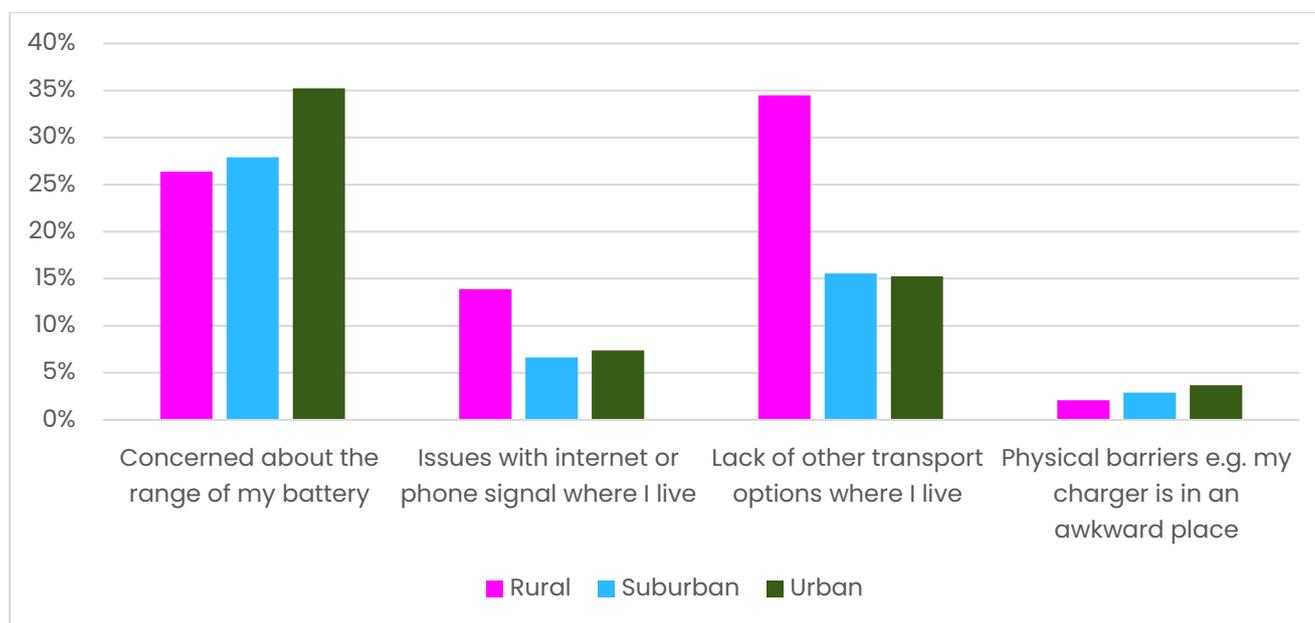


Figure 26 Did you experience any challenges with the trial related to where you live? By area type.

Location and accessibility is likely to have an effect on journey length, so exploring this factor is important for understanding how the trial can impact households with different travel demands.

Respondents in rural areas were twice as likely to report issues with internet or phone signal due to where they live than those in urban or suburban areas (14% compared to 7% respectively). They were also more than twice as likely to be concerned about a lack of other transport options (34% compared to 16% and 15% respectively). However, their participation was generally positive and effective - they were more likely to maintain their new plug in duration habit, more likely to maintain their new plug in frequency habit, and less likely to report losing interest.

We also looked specifically at those living in rural areas with no other transport options. They were more likely to report issues with phone or internet as a challenge to participation (13% reported this, compared to 9% overall). But on a number of measures they reported more positive than the overall sample of survey respondents. They were more likely to persist with changes to their plug in duration, and more likely to say that they had learned something new.

Contrary to what we might expect, respondents living in urban areas were more likely to be concerned about the range of their battery (35% compared to 28% and 26% for suburban and rural areas respectively).

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Suburban residents generally held more negative views than rural and urban residents. These respondents were less likely to report that the trial was enjoyable, less likely to report that ease of participation improved over time and more likely to report losing interest.

Trust in technology

Two distinct technology trust groups were identified: those with low trust (did not respond agree, on average across all questions on technology trust, n = 556), and those with high trust (n = 6,367). It is positive to see such high trust in technology, though perhaps unsurprising in a sample of trial participants for which electric vehicle and smart charger ownership is a prerequisite.

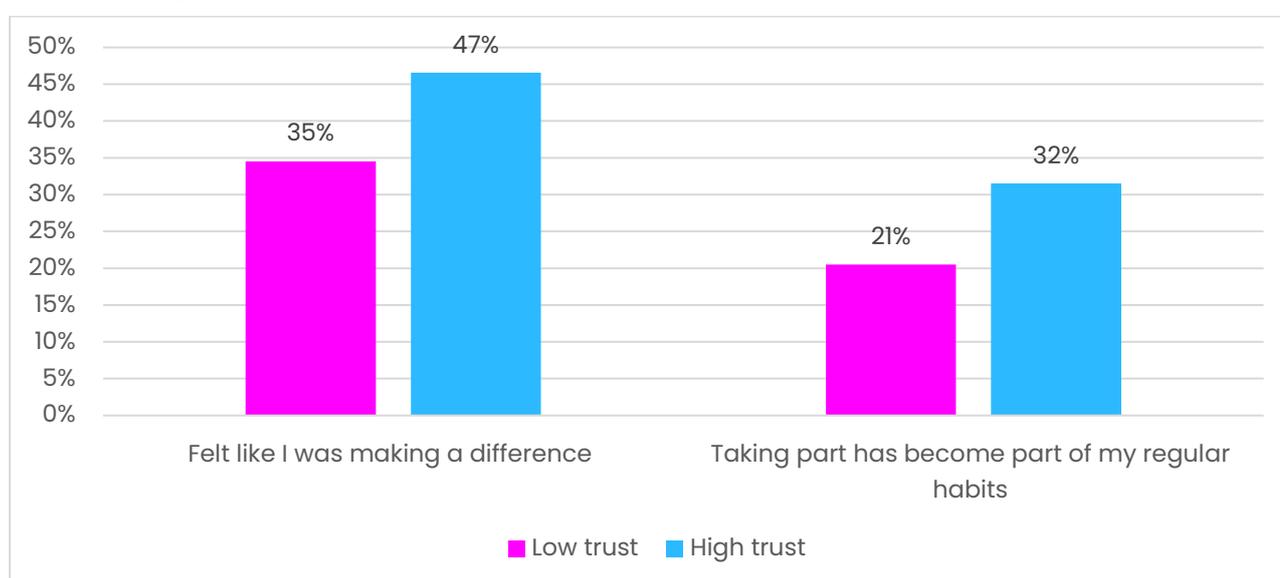


Figure 27 Responses by trust in technology group

These groups had different experiences of the trial. The low trust group were less likely to make participation into a habit compared to those not in this group, were less likely to have a positive experience overall, less likely to have learned something new, less likely to have found participation enjoyable, and less likely to maintain their new plug in habits. These are substantial differences, much higher than many other between-group differences.

Conclusion

We expected that those working at home or not working may be able to manage their participation more effectively. This does appear to be true to some extent as those not working were less likely to say that their home routine was a barrier to taking part and home workers were more likely to have successfully changed the duration and

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frequency of their plug-ins. This does present other challenges, however, as both non-working households and home workers were more likely to report lower car usage as a barrier to participation.

Having children does increase barriers around routines, but this does not impact overall participation or enjoyment, as they generally reported more positive experiences of the trial.

In another challenge to our hypotheses, those living in rural areas had more positive and effective participation on a number of measures, despite some challenges around internet signal and lack of other transport options. Urban dwellers rather than rural dwellers were more concerned about their battery range. It is suburban dwellers that have reported the most negativity overall.

We found very substantial differences between those with different levels of trust in technology. The low trust group were less likely to have formed a habit, less likely to have learned something new, and less likely to have found participation enjoyable or have a positive experience overall.

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9. Change over time

This chapter examines the experiences of repeat responders (those who took part in the winter and summer trials) and first time responders (those who just took part in the summer trial). It compares responses temporally (between survey waves for repeat responders) and inter-group (between repeat responders and first timers). It is important to note, however, there have been changes in trial design since the first customer feedback survey at the end of the winter trial and changes in respondent experience might be attributed to this, rather than changes over time. In particular, repeat respondents may have felt that the reward criteria became more challenging to achieve from the second trial to the first, as what qualified as a plug-in session was extended from 3 hours in winter to 6 hours in summer. Seasonal changes may also have had an impact.

Repeat respondent comparison

This analysis filtered survey responses down to only respondents who had participated in both trials, and considered their responses to questions that appear in both surveys.

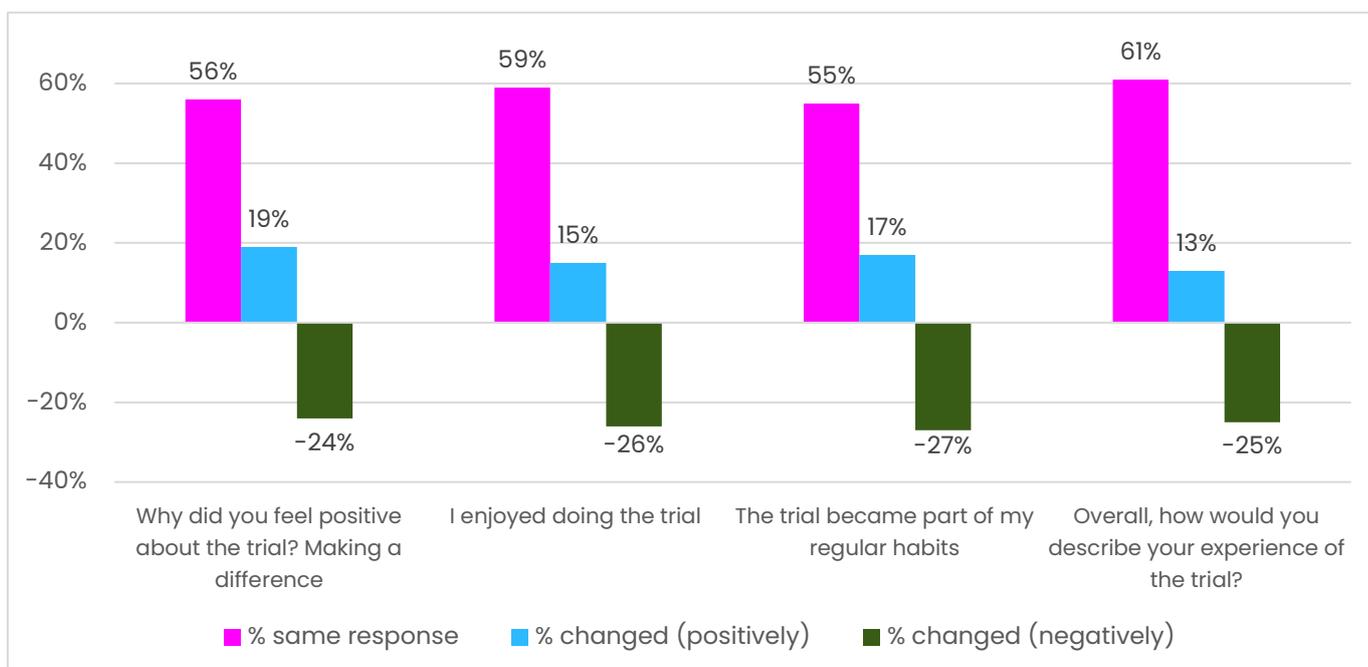


Figure 28 Proportion of repeat respondents who changed their responses between surveys 1 and 2 (n = 1,733)

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As shown in Figure 28, the majority of repeat respondents did not change their views between the winter and summer surveys. A quarter (25%) reported a worse (or less good) overall experience, and 13% felt more positive.

Similar patterns appeared across other key questions: more respondents said the trial was less integrated into their routine (27% vs. 17% who felt the trial became part of their regular habits), fewer enjoyed taking part (26% reported lower enjoyment vs. 15% higher), and slightly fewer cited 'making a difference' as a motivating factor (24% vs. 19% who felt more positive). Overall, the perceptions of repeat respondents shifted modestly but consistently in a negative direction.

Further analysis was conducted, breaking down these differences by the user groups identified in previous chapters. This found no significant differences between them: for the questions discussed above, all user groups changed their average response in the same direction as other respondents. This means that whatever is driving these changes is either generally universal (i.e., season, or changes in the trial structure), or is driven by something not captured by this survey.

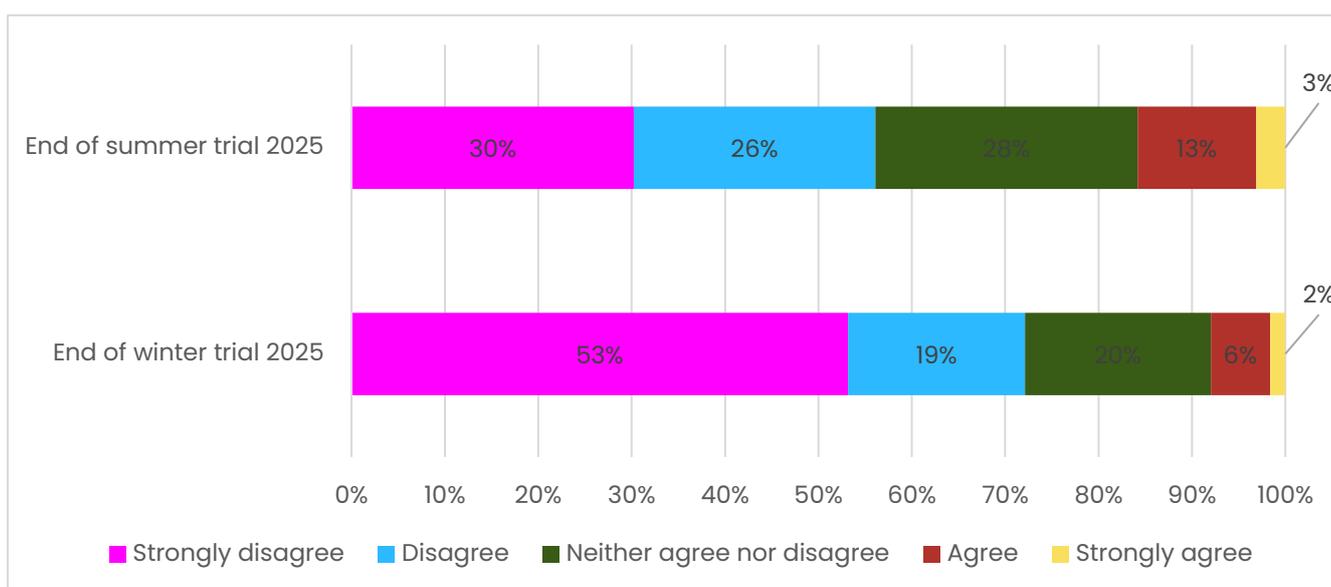


Figure 29 How much do you agree with the following statement: "I started losing interest as the trial went on" (n = 1,710)

A distinct difference was observed in responses to the question on losing interest as the trial went on: of respondents who participated in both trials, when responding to the winter survey 72% either disagreed or strongly disagreed that they'd lost interest as the trial went on, yet this decreased to 56% in the summer. Whereas only 8% agreed they had lost interest in the winter 2025 trial survey, this doubled to 16% in the most recent trial. Meanwhile 43% reported an increased magnitude losing interest in the second survey – for instance, changing from 'agree' to 'strongly agree' they were losing interest.

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First time respondents

We also explored the differences between those completing their first survey, and those who had been participating since the winter trial. First timers' overall experience of the trial was more positive.

First timers agreed more strongly that participation fits into their day-to-day life, and that participation was enjoyable. They were more likely to agree that they learned something new and more likely to agree that the trial became part of their habits.

First timers were able to plug in more, though plug in duration was less likely to be longer.

Conclusion

For the majority of repeat respondents views have not changed between the winter and summer surveys. However, across several measures, we do see slightly more negative views in this trial compared to the end of winter 2025 trial. Notably:

- Repeat respondents were less likely to report a positive overall experience, and less likely to agree that they enjoyed the trial compared to the previous trial.
- Repeat respondents were less likely to say that the trial had become part of their habits, and more likely to say that they had lost interest as the trial went on compared to the previous trial. This may be indicative of fatigue with the trial, or may reflect respondents feelings about trial design changes.
- However, these respondents were more likely to report that the trial was easier, compared to the previous trial. This suggests that adaptation and learning may be occurring.
- Of those who completed both trials, we see a doubling of those saying they were losing interest in the second survey compared to the first.

It is also important to highlight that these changes were broadly consistent across the highlighted user groups: whatever is driving these changes is either applicable to all respondents, or is impacted by factors outside the scope of this research.

It is not currently possible to rule out a time-of-year effect: people's EV use may vary seasonally, which may drive the difference between in responses given the different times of year the two trials were held. Since the Availability trial has only run for two surveys, a full longitudinal analysis was not possible. Therefore, at this stage, it is currently unclear whether these differences can be ascribed to effects related to repeat

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participation (learning, adaptation, fatigue), seasonal effects, or trial related effects (sampling processes, trial structure).

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10. Impacts on driving habits – rebound effects

This chapter explores the impact of the trial on respondents’ driving habits: how frequently they drove, why they drove more (among those who did), and, for those with more than one vehicle, whether they changed the type of vehicle used. It also looks at the impact of the trial on perceptions of their EV’s battery.

Driving frequency

The vast majority (90%) of respondents did not alter their driving habits as a result of taking part in the CrowdFlex availability trial. This suggests that rewarding electric vehicle (EV) drivers for charging flexibility does not, in most cases, lead to a rebound effect in terms of increased vehicle usage, at least in terms of the CrowdFlex Availability survey respondents.

Nonetheless, approximately 8% of respondents reported driving more during the trial. While this represents a minority, the potential implications are significant. With over 1 million EVs in the UK currently, scaling the scheme to business-as-usual (BAU) levels could result in a substantial number of additional vehicle journeys if similar behavioural patterns were replicated across the wider EV-driving population.

This finding is particularly important given the broader environmental and urban impacts associated with increased vehicle use. Although EVs produce fewer tailpipe emissions than internal combustion vehicles, they still contribute to greenhouse gas emissions through electricity generation and vehicle manufacturing. Moreover, EVs are a source of air pollution via road surface particulates, and they exacerbate congestion and land-use pressures in urban areas.

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Reasons for driving more

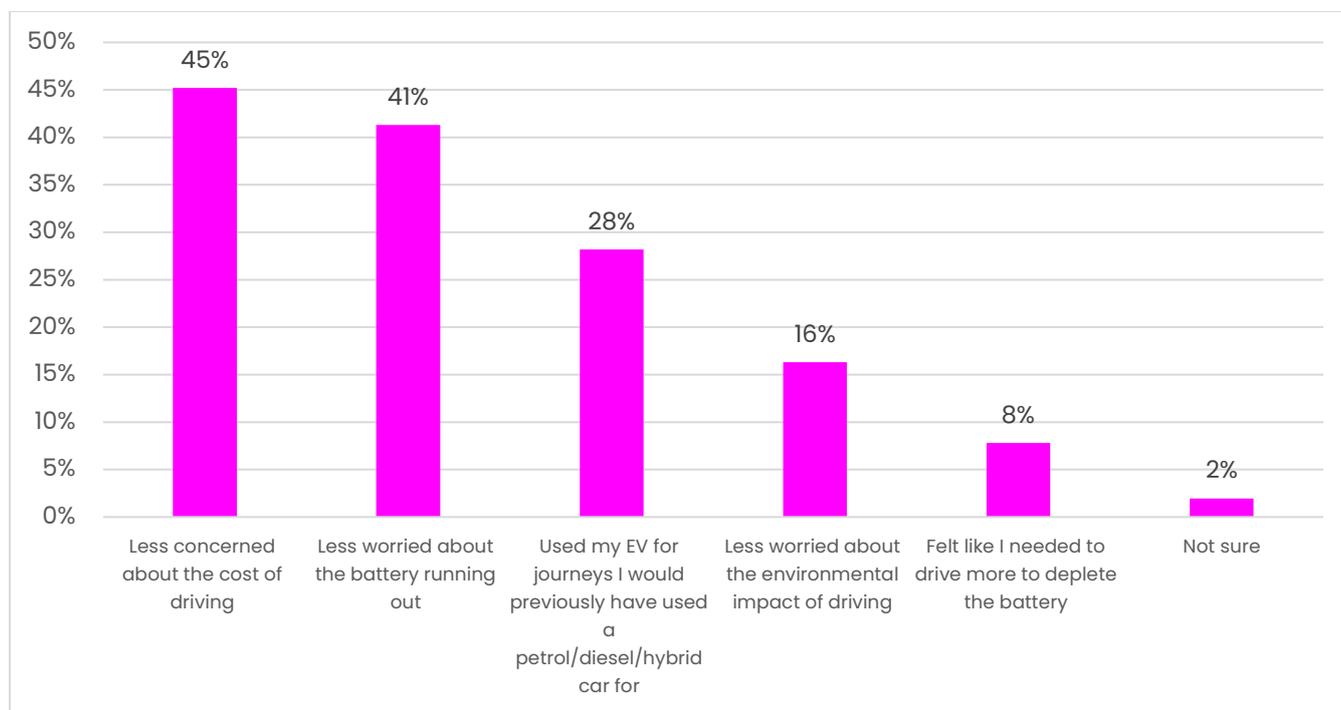


Figure 30 What were the reasons for driving more? (only respondents who answered that they found themselves driving more, n = 564)

45% of respondents who found themselves driving more reported that they were doing so because they were less concerned about the cost of driving, while 41% were less worried about their battery running out. There was no particular variation in responses between consumer groups in response to this question.

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Changed type of vehicle

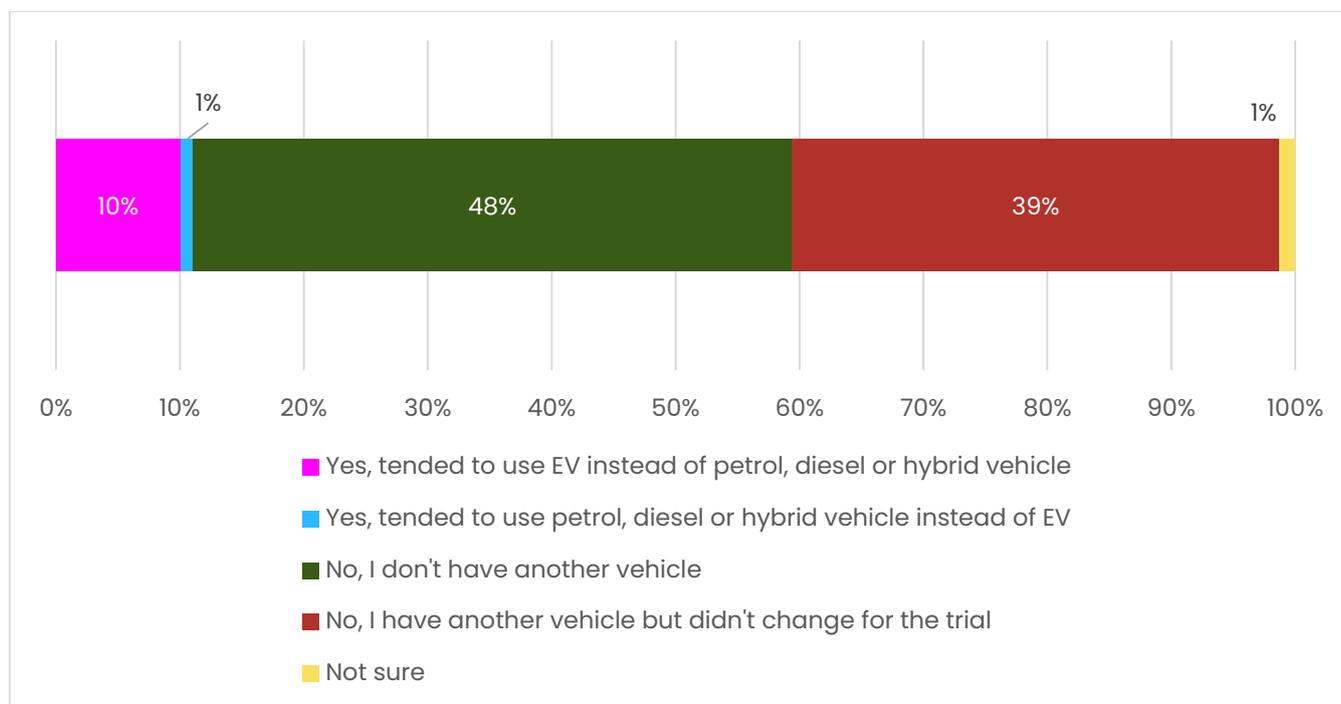


Figure 31 As a result of the trial, did you change the vehicle you used? (n = 6,923)

A small proportion of respondents (11%) reported that they changed the vehicle they used following participation in the trial. Among these, the majority switched from a non-electric vehicle (non-EV) to an electric vehicle (EV), while a very small number (fewer than 1% of all respondents) reported switching from an EV to a non-EV.

In contrast, four in ten (40%) respondents indicated that they had access to another vehicle but chose not to change it for the purposes of the trial. A further 48% reported that they did not have access to an alternative vehicle. These findings suggest that while vehicle switching occurred in a minority of cases, most respondents either lacked the option to switch or opted not to do so.

Battery perceptions

We asked people whether the trial changed how they think about their EV's battery level. More than half (55%) of respondents did not change how they thought about their EV's battery level as a result of the trial. Around a quarter (26%) paid more attention, while a minority (16%) paid less attention, owing to more trust that it would be charged when needed.

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Conclusion

The vast majority (90%) did not change how often they drove, indicating that incentives for charging flexibility do not typically lead to a rebound effect in vehicle use.

However, a small minority (8%) reported driving more, primarily because they felt less concerned about costs or battery depletion. While modest in scale, this finding warrants attention. If this represents an overall increase in driving it could, if replicated at population level, have environmental and congestion implications.

However, 10% also said they changed the type of vehicle they used from non-EV to EV, suggesting that reduced concern about costs or battery depletion may also be encouraging a reduction in the usage of people's non-EV vehicles. Further research would be needed to understand how fully this counteracts the environmental impacts of increased driving.

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11. Future directions

This chapter looks at what type of prompts to plug-in respondents would like to see in future.

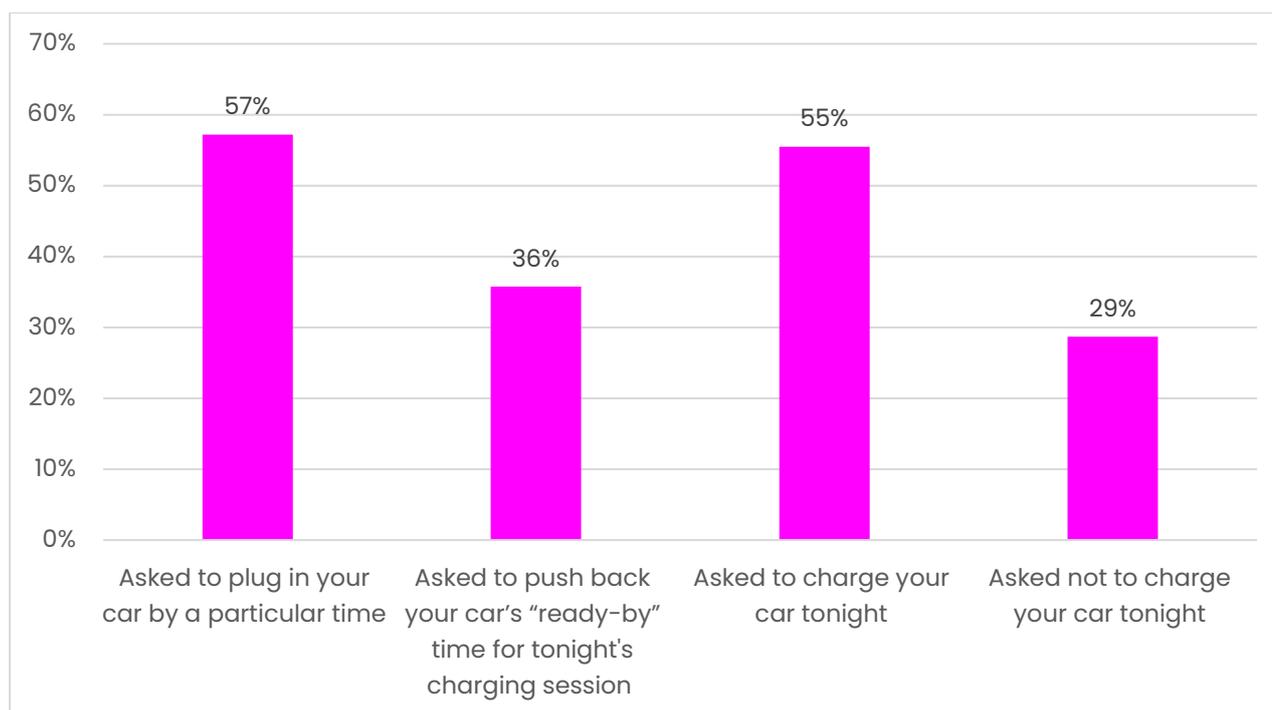


Figure 32 Thinking about the future, what kind of prompt would you prefer if it could realise additional benefits to the grid? (n = 6,923)

The most popular choice of prompt type was being asked to 'plug in your car by a particular time' (57%), followed by 'asked to charge your car tonight' (55%). Markedly less popular were being asked to 'push back your car's ready-by time for tonight's charging session' (36%) and 'asked not to charge your car tonight' (29%)

First time respondents preferred the 'push back your ready-by time for tonight's charging session' option much less than repeat respondents (43% of first time respondents said they would prefer this prompt, compared to 57% of repeat respondents).

Additional suggestions from the 'other' free-text option (n=264) included getting prompted to plug in, depending on the state of the grid, namely the availability of cleaner and cheaper energy (36 responses). These respondents suggested an 'ongoing' notification providing an indication of the best and worst charge times when they arise.

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This could perhaps be a new in-app feature, to avoid a constant influx of notifications that irritated those who received 'ready-by' prompts.

"Be told of "Red" charging periods (i.e. high price and high volume)"

A smaller recurring theme described a prompt that offered a set time slot for plugging in (10 responses). For instance, being asked to 'charge between midnight and 7am', or only receiving these requests over the weekend. This slot would offer discounted rates, similar to an off-peak tariff.

"Setting charging times to cover certain times rather than a ready by"

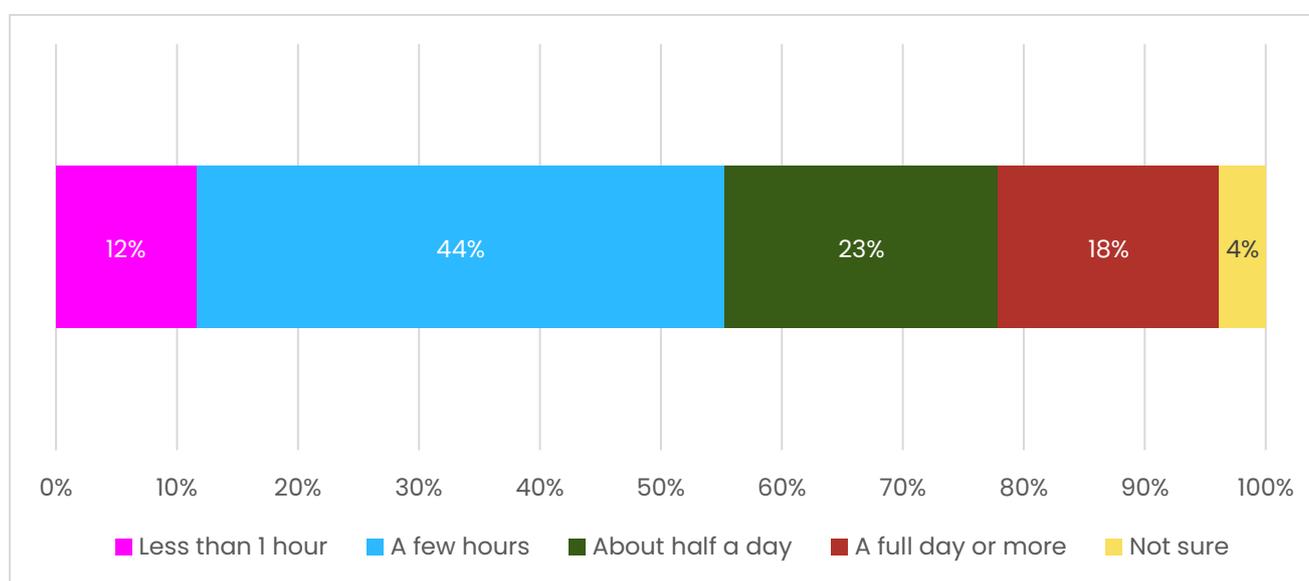


Figure 33 If we needed to prompt you to take action (for example, plugging in or unplugging at a certain time), how much advance notice would you prefer? (n = 6,923)

By far the most popular choice of prompt notice was 'a few hours' (44%) followed by 'about half a day' (23%), 'a full day or more' (18%), and finally, 'less than one hour' (12%).

Conclusion

Prompts could broadly be split into two categories: charging prompts (plugging in by a particular time, asked to charge tonight) and delaying charging (pushing back the ready-by time, not charging). The prompts to delay charging were markedly less popular. To ensure the success of these prompts, respondents need to feel assured that their car will still have enough charge when needed.

Around four in ten (44%) of respondents preferred for prompts to be issued a few hours before an action needed to be taken. Respondents indicated that additional prompts related to planning and organisation – such as specific time slots for charging – would

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help them get additional value out of the trial. Having some indication of the availability of energy on the grid would also mean they could participate with greater autonomy.

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12. Conclusions and Recommendations

This report presents the results of the second customer feedback survey for the CrowdFlex availability trial, summer 2025. This trial explored how electric vehicle (EV) demand flexibility can be incentivised using availability payments, which reward customers for being plugged in and available to respond when events are called. The survey was sent to over 19,000 Ohme and OVO participating customers. There were 6,923 respondents considered as part of this analysis – a 36% response rate.

Demographics and Household Characteristics

Compared to the general population of Great Britain, respondents were more likely to live in rural areas, have children, and report a health condition; all characteristics that we might expect to have lower flexibility capacity. The increase in rural representation between survey waves (from 25% to 33%) is particularly relevant, aligning with the recommendation from the winter trial survey to better understand the experiences of rural households.

Survey respondents were also more likely to be higher-income households, with the median income band in the survey (£50,000–£89,999) notably above the national median of £36,700. Respondents were also less likely to be economically inactive and less likely to live in urban areas. While some indicators of vulnerability are present, such as health conditions and limited transport access, the overall profile suggests a sample that is more affluent than the general population.

Gender and ethnicity gaps were also evident. Women were significantly underrepresented in the survey – a pattern consistent with the previous CrowdFlex trial and reflective of broader disparities in electric vehicle ownership. Similarly, white respondents were overrepresented, with lower participation from Black and Asian groups. Given the known links between ethnicity, income, and energy vulnerability, these gaps warrant further exploration to ensure equitable access to flexibility services and avoid exacerbating existing inequalities in the energy transition.

Motivation and trial perceptions

The most common motivation for taking part was personal interest in the challenge, with financial reasons and helping to achieve ‘cleaner and greener grid’ marginally less common. Motivation does appear to impact sustained interest in the trial. Those

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motivated to achieve a cleaner and greener grid were least likely to lose interest as the trial went on, whilst those participating for financial reasons were the most likely to lose interest.

Overall experiences were positive. The most common reason for feeling positive was the perception of being rewarded for existing behaviour. There was, however, a notable decline in the proportion of survey respondents reporting a ‘very positive’ experience compared to earlier phases of the trial.

Barriers to participation

Barriers to participation were both practical and perceptual. The most frequently cited issues related to charging behaviour, such as not needing to plug in frequently or concerns about energy tariffs, while engagement-related barriers included forgetting to take part and the purpose of the trial being unclear. These barriers were not evenly distributed across the sample: vulnerable groups, including older people, those not in work, and financially insecure respondents, were more likely to report specific challenges.

Home routine is the biggest barrier preventing survey respondents from fully participating. Those who said they were unable to fully participate in the trial were twice as likely to report barriers relating to home routine.

Maintaining interest

Around a fifth said that they are losing interest in the trial over time. Since the trial has only been running since summer 2024 this high proportion may be a crucial finding for the durability of this approach over the long-term.

Importantly, the reasons given for this disengagement closely mirrored the barriers to participation, indicating a relationship between practical challenges and declining interest. Home workers and households with children were both more likely to say they lost interest than the average respondent.

Qualitative responses highlighted the role of information, with respondents expressing confusion about the trial’s purpose and concerns about battery degradation. These findings underscore the importance of clear, timely communication and tailored support to improve respondent understanding and maintain engagement.

Despite this, many respondents said that taking part got easier over time, whereas very few said that it had become more difficult. The most common reason for this was that the trial had become part of their regular habits. Therefore we see a split emerging over time, with some forming habits which increase ease of participation, versus others who encounter barriers and start to lose interest.

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Those who were mainly motivated by achieving a cleaner and greener grid were the least likely to lose interest in the trial. Though initial motivations are most commonly financial, the ongoing importance of environmental motivations for maintaining interest suggest the need for a multi-faceted engagement strategy that may vary over time.

Impacts on charging behaviour

58% changed their plug-in behaviour compared to before the trial. Of those who stated that they changed their plug-in duration, frequency, or both, all said that they were likely to continue with their new plug-in schedule. Around eight in ten said it felt easy to fit into their lives and 73% agreed that the trial became part of their regular habits.

50% said that they learnt something new about their energy use or their EV, and 18% said that they are now aware of how their vehicle can help support grid balancing despite not being aware of this before the trial, showing that CrowdFlex has helped build this understanding and awareness. Building awareness and understanding of how electric vehicles can support grid balancing – and thereby contribute to a cleaner, greener grid – may encourage sustained participation in smart charging.

Experiences of the ‘ready-by’ prompts given to a subset of trial participants were generally positive, with qualitative feedback reflecting overall positive experiences of the trial (helping with organisation and learning). There were subgroup variations, with first-time respondents and those with a health condition or multiple reporting more favourable views, while home workers were more likely to report negative experiences. Here the qualitative feedback revealed challenges around inflexible schedules and technical errors that need addressing.

Households that may be vulnerable

Households that may already be vulnerable in the energy market reported generally more positive experiences compared to those outside these groups. Those with health conditions, and those with multiple vulnerabilities, felt more strongly than others that they had learned something new and that participation became easier over time, as well as having a more positive experience of the ready-by prompts. Therefore the CrowdFlex Availability trial appears to be gaining positive engagement from these groups.

However, these groups also reported some concerns in higher numbers. Those who are financially insecure and those with a health condition had more concerns about the costs of peak charging and more concern about their battery range, and were also less likely to have other transport options available to them. The challenge of not driving enough to deplete the battery was prevalent for those with multiple vulnerabilities. Older

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people had slightly less positive experiences of the trial, but were also less likely to be losing interest.

Households who may engage with the trial in distinct ways

We expected that those working at home or not working may be able to manage their participation more effectively. This does appear to be true to some extent as those not working were less likely to say that their home routine was a barrier to taking part, and home workers were more likely to have successfully changed the duration and frequency of their plug-ins. This does present other challenges however as both non-working households and home workers were more likely to report lower car usage as a barrier to participation.

Having children in the home did increase reported barriers around routines, but did not appear to impact overall participation or enjoyment, as they generally reported more positive experiences of the trial.

In another challenge to our hypotheses, those living in rural areas had more positive experiences and more effective participation on a number of measures, despite some challenges around internet signal and lack of other transport options. Urban dwellers rather than rural dwellers were more concerned about their battery range. It is suburban dwellers that have reported the most negativity overall.

We found substantial differences between those with different levels of propensity to trust in technology. The low trust group were less likely to have formed a habit, less likely to have learned something new, and less likely to have found participation enjoyable or have a positive experience overall.

Change over time

For the majority of repeat respondents views have not changed between the winter and summer surveys. However, across several measures, we do see slightly more negative views in this trial compared to the end of winter 2025 trial. Notably:

- Repeat respondents were less likely to report a positive overall experience, and less likely to agree that they enjoyed the trial compared to the previous trial.
- Repeat respondents were less likely to say that the trial had become part of their habits, and more likely to say that they had lost interest as the trial went on compared to the previous trial. This may be indicative of fatigue with the trial, or may reflect respondents' feelings about trial design changes.
- However, repeat respondents were more likely to report that the trial was easier, compared to the previous trial. This suggests that adaptation and learning may be occurring.

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- Of those who completed both trials, we see a doubling of those saying they were losing interest in the second survey compared to the first.

It is also important to highlight that these changes were broadly consistent across the highlighted user groups: whatever is driving these changes is either applicable to all respondents, or is impacted by factors outside the scope of this research.

It is not currently possible to rule out a time-of-year effect: people's EV use may vary seasonally, which may drive the difference between in responses given the different times of year the two trials were held. Since the Availability trial has only run for two surveys, a full longitudinal analysis or seasonal comparison was not possible. Therefore, at this stage, it is unclear whether these differences can be ascribed to effects related to repeat participation (learning, adaptation, fatigue), seasonal effects, or effects related to the trial itself (sampling processes, trial structure).

Impacts on driving habits - rebound effects

The vast majority of survey respondents (90%) said that they did not change how often they drove, indicating that incentives for charging flexibility did not typically lead to a direct rebound effect in vehicle use. However, a small minority (8%) reported driving more, primarily because they felt less concerned about costs or battery depletion. While modest in scale, this warrants attention. If this represents an overall increase in driving it could, if replicated at population level, have implications for congestion and for environmental pollution.

However, 10% also said they changed the type of vehicle they used from non-EV to EV, suggesting that reducing concern about costs or battery depletion may also be encouraging a reduction in the usage of people's non-EV vehicles. Further research would be needed to understand how fully this counteracts any environmental impacts of increased driving.

Future directions

In future schemes, prompts could broadly be split into two categories: charging prompts (plugging in by a particular time, asked to charge tonight) and delaying charging (pushing back the ready-by time, not charging). The notion of prompts to delay charging was markedly less popular. To ensure the success of these prompts, respondents need to feel assured that their car will still have enough charge when needed.

Around four in ten (44%) of respondents preferred for prompts to be issued a few hours before an action needed to be taken. Respondents indicated that additional prompts related to planning and organisation – such as specific time slots for charging – would

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help them get additional value out of the trial. Having some indication of the availability of energy on the grid would also mean they could participate with greater autonomy.

Recommendations

Messaging and communications

Motivation matters. Emphasising how the scheme contributes to a cleaner, greener grid may help to sustain interest over time. Regular feedback on users' contributions to broader goals – for instance, avoiding the use of fossil power stations for grid backup – could reinforce intrinsic motivations. Users could also be segmented by motivation type, for instance using an onboarding questionnaire, with tailored messaging; for those who are mainly financially motivated at the start, non-financial rewards could be gradually introduced over time.

Those who drive less may encounter more barriers to participation in availability-type schemes, and run the risk of becoming disillusioned, or even driving more in order to take part. Whilst this does reflect a misunderstanding of how the availability trial works, the prevalence of this misunderstanding across the respondents does suggest that some changes to messaging and communication may be required. Tailored messaging could be developed to support those who are known to have lower mileage.

Though a very small proportion of survey respondents, those with low propensity to trust in technology had markedly more negative experiences of the trial, therefore future schemes need to ensure that this group receives additional support. For example, using reassurance from peer testimonials and trusted third parties, and providing learning support to ease apprehension. Confirmation cues (e.g. "your settings are safe and charging is happening as expected") may help to reduce anxiety amongst this group.

Future service design

In terms of future scheme design, people would generally prefer positive charging messages – for instance, requests to plug in by a particular time, or to charge tonight – to any requests to delay or forego charging. Where prompts and notice periods are used, the most popular time period is a few hours before an action needs to be taken. A service that prompts people to plug in depending on the availability of energy on the grid, enabling them to participate with greater autonomy, may work well for some.

Longer term, the fact that plugging in more frequently or for longer appears straightforward for many and easily becomes habit, but we do see people losing interest in the trial itself, suggests that efforts could focus on introducing maximum plug-in as the standard way of using a smart charger, rather than a prompted action. This could

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be provided as a default option when purchasing an electric vehicle and smart charger, and as a requirement of EV tariffs, with integrated availability payments.

Further research

More research is needed to understand direct rebound effects from availability-type schemes, and the implications this might have for additional congestion and non-exhaust particulate pollution. Vehicle data could be used to calculate total additional mileage from the small minority who report driving more as a result of the scheme.

As in the winter trial, we have seen underrepresentation of women and non-white customers in the survey. It is not clear whether this is reflective of CrowdFlex participants in general, or just survey respondents. Further exploration of these gaps, and consideration of their needs within service design, may help ensure equitable access to flexibility services and avoid exacerbating existing inequalities in the energy transition.

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Appendices

Appendix 1 Customer groups and rationale for inclusion

We aim to understand how different types of electric vehicle (EV) owners participate in the trial, and whether certain personal or household characteristics impact upon one’s experience of the trial. To do this, we have defined the following broad groups:

Survey question

People self-reporting financial insecurity. Any respondent that selected “Finding it quite difficult” or “Finding it very difficult” in response to ‘How well would you say you are managing financially these days? Would you say you are...’

Households containing somebody with a long-term health condition. Any respondent that selected “Yes” to ‘Do you (or any other adults / children in your household) have any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?’

Older households. Based on responses to ‘How many people living in your home, including yourself... are adults (65 and above)?’. Households with an equal number of, or more, members over 65 than adults under 65 were included in this category.

Households with multiple vulnerability factors. Any respondent that reported more than one factor (health condition, over 65, financial insecurity).

Rationale for inclusion

People on lower incomes might be considered vulnerable in the energy market because they may be more likely to suffer detriment because of higher energy bills. We use a self-reported measure because income is not a suitable proxy for financial insecurity, since people’s outgoings differ for complex reasons.

People with a health condition lasting 12 months or more, including chronic or long-term illness or disability, might be considered vulnerable in the energy market. They may also be more reliant on their vehicle if physically disabled.

Older people may be considered vulnerable in the energy market because they may use more energy due to being at home for longer periods. However, this may also allow them to engage with charging more freely.

Vulnerability should be understood as intersectional. Multiple vulnerability factors increase the risk of detriment.

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Households with children. Any household with at least one child.

Home workers. Any household whose survey respondent answered 'I mainly work from home' to 'Which of the following best describes your work location.'

Households with access to a non-electric vehicle. Households who answered that it was 'fairly easy' or 'very easy' for them to access a non-electric second vehicle.

Home location. Respondents could answer either 'Urban', 'Suburban' or 'Rural' to 'How would you describe the area where you live' and these groupings have been explored individually.

Households not working. Households who answered 'Retired', 'Unable to work' or 'Unemployed' to 'What is your employment status?'

Having children can have an impact on a household's driving and charging routine due to the need to manage multiple schedules and needs.

Home workers may be distinct from other households both in that they are likely to drive less, and in that being at home more often means they can manage their charging more effectively.

This group has been included to explore whether households with additional non-electric vehicles might shift their usage to electric vehicles and provide further environmental benefits from those directly aimed at with the trial.

Location and accessibility is likely to have an effect on journey length, so exploring this factor is important for understanding how the trial can impact households with different travel demands. We use a self-reported measure as we're interested in how a respondent's perception of their location in relation to their driving habits can have an impact on their trial experience.

Households not working may spend more time in their home and so be able to manage their charging more effectively.

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Appendix 2: Extended methodology

R language was used to complete the analysis presented throughout this report, including the statistical testing outlined below.

The surveys were cleaned of Personally Identifiable Information before importing into R, and they were further cleaned to ensure responses were correctly aligned with the options available to them in the question routing, and to remove ‘speeders’ who we suspect of having rushed through a survey. We did this by removing anyone who completed the survey in a time shorter than two median absolute deviations below the median completion time.

To assess differences between respondents that fall within a group versus those outside the group (for example, older households versus non-older households) with regard to a given binary survey question, a chi-square test was performed. This is an appropriate test given that the group classifications are binary and the sample sizes were sufficiently large.

A Welch Two Sample t-test was used when the dependent variable was ordinal (such as a Likert scale). This test allowed us to see whether the difference in the means between samples within groups and outside of groups were significantly different. The Welch’s correction allows the test to deal with unequal sample variances; meanwhile the required normality assumption for this test was handled by the Central Limit Theorem, given the large sample size.

To assess differences between responses to the same question in both survey rounds as answered by the same respondents, two tests were used depending on the nature of the question. As data is paired (i.e., the same respondents), the tests described above cannot be used. In cases where a binary question was compared across surveys, a McNemar test was used, which is appropriate given that this is the paired equivalent of a Chi-square test. For ordinal variables, a pairwise t-test was used.

Eleven open-ended questions were analysed qualitatively. For most of these questions, all comments were coded thematically; this involved identifying and labelling recurring patterns or themes within the dataset. For Q16 (Could you tell us a bit more about how you felt about the ‘ready-by’ prompts?), given the large amount of qualitative data we received for this question (n=1023), we focused on those who previously said they had a positive or negative experience of the ready-by prompts, with neutral responses removed. Analysis of Q16 was then split in two, coding those who had a positive experience of the prompts separately from those who had a negative experience. For the former, coding ended when no new codes were emerging (362 out of 733 comments coded).

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Each question had a different number of respondents, a subset of the total sample, due to the survey's routing and optional 'other' response boxes. Open-ended response sample sizes are as follows Q6 (n=377), Q16 (n=1,023), Q20 (n=374), Q21 (n=81), Q24 (n=36), Q26 (n=105), Q31 (n=99), Q32 (n=59), Q34 (n=264).