June 2025

# CrowdFlex Availability Winter Trial 2024/25: Customer feedback

**End of Trial Report** 





### **Table of Contents**

Executive Summary	4
1. Introduction	
Consumer groups	
Methodology	
Demographics and Household Characteristics	12
Representativeness	12
Gender	13
Ethnicity	12
Other transport methods	15
Conclusion	15
Trial Engagement and perceptions	17
Trial perceptions	17
Trial engagement	19
Barriers	2
Losing interest	2
Conclusion	23
4. Motivation and Participation	24
Participation	24
Pre-trial habits	26
Habit formation	27
Plug in location	28
Motivation	28
Impacts on driving habits - rebound effects	30
Conclusion	3
5. Group Analyses	33
Conclusion	37





Conclusions and Recommendations	39
Appendices	43
Appendix 1: Extended methodology	43
Appendix 2: Survey questions	45





### **Executive Summary**

This report presents the results of the first customer feedback survey for the CrowdFlex availability trial in winter 2024–25. This trial explored how electric vehicle demand flexibility can be incentivised using availability payments, which reward customers for being plugged in more at home. The survey was sent to participating Ohme and OVO customers. 4,896 responses were received – a 36% response rate.

The customer feedback work within the CrowdFlex availability trial is designed to explore charging behaviour and plug in across different consumer groups, and the different factors that affect plug in behaviour.

Chapters 1 and 2 provide introductory information, including who took part. Chapter 3 explores participant experiences, and how engaged people felt, whether there were any barriers, and whether people lost interest. Chapter 4 outlines changes to participant plug-in behaviour, as well as why people signed up, how aware participants were about the role electric vehicles can play in balancing the grid, and whether the trial impacted how much they used their car. Chapter 5 aims to answer the question of how different consumer characteristics affect participation.

### Key findings

- Participants generally had a very positive response to the trial. 87% said they felt
  positive and 58% gave a score of 10/10 when asked how likely they would be to
  recommend this sort of trial to a friend. Just 1% of the sample were negative about
  the trial.
- The majority of participants did not report facing barriers to taking part. Of the small minority reporting barriers, the most common was fitting in increased plug in with existing routines, or location-based challenges for those in rural settings.
- 65% of respondents changed plug in times in response to the trial. 28% changed their charging location in order to participate - almost always by plugging in more at home.





- Pre-trial habits appear to have a pronounced effect on participation. Households who generally preferred to plug in at cheaper times before the trial were less likely to change plug in during the trial. Households who either plugged in out of habit or around their routine before the trial were more likely to change the time they plugged in during the trial. This may be because their conscious pre-trial habits are well established and harder to adapt, or because they see a tension between what different services are asking them to do: plug in when its cheap, or plug in all the time.
- Of the participants who changed their plug in schedule at least some of the time, the
  majority of these show clear signs of building habits. This indicates the trial may have
  a positive effect on electric vehicles being used to balance the grid after the trial has
  finished because these households will still be in the habit of plugging in more and
  for longer periods.
- Participants primarily involved in the trial for financial reasons were more likely to
  report losing interest in the trial over time, though this was still a minority. Those
  motivated by achieving a cleaner grid were less likely to lose interest. This suggests
  that communicating different benefits of participation may be needed to support
  sustained engagement for some consumers. This is interesting to consider alongside
  the main trial findings around the impact of escalating payments and non-financial
  behavioural nudges.
- A large minority of those who weren't aware of the potential for balancing the grid
  with an electric vehicle became aware of this during the trial, suggesting we may see
  positive long term impacts on the use of electric vehicles for flex beyond direct
  engagement to earn rewards.
- We do find some evidence of a direct rebound effect in the form of people taking longer or more frequent journeys as a direct result of the trial, but only for a very small percentage of the sample.
- Consumer characteristics do impact on experiences. As expected, those who trust in technology are more positive about the trial in general and more likely to change their plug in behaviour. Some findings are unexpected - for example older people





and those with multiple vulnerabilities were more likely to report having trust in technology; those with health conditions and those reporting more than one vulnerability characteristic both reported more positive experiences of the trial; and those with children were more positive about the trial and more likely to change their plug in behaviour for the trial – challenging the thinking that they have more barriers to changing routine. However, positive or negative perceptions of the trial did not always have the expected outcomes in terms of participation. These findings are explored in detail in chapter five.

### Recommendations

Demand side response service providers (DSRSPs) could consider maximising communication around the benefits of participating for a greener grid, as our findings show that people engaging in the trial for this reason were less likely to lose interest.

We do see some misunderstanding about the trial and that plugging in more should not impact existing charging schedules – for example people not wanting to charge more due to risks to their battery life or increasing costs. This suggests there is still some work to do around communicating the trial to participants.

Our findings suggest that more research is needed to understand additional barriers for those in rural settings, for instance, are these due to lack of other transport options, or range anxiety, or something else. This could be explored further in the end of summer trial survey.





### 1. Introduction

This report presents the results of the first customer feedback survey for the CrowdFlex availability trial winter 2024-25. 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 around 13,500 Ohme and OVO customers participating customers (this did not include those in the trial control group). There were 4,896 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 / 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.

This report will be supplemented by a further report, following the summer 2025 trial, which will build on these findings and analyse changes reported between the winter and summer trials.

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.





### **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 definitions<sup>1</sup> and the Priority Services Register eligibility criteria<sup>2</sup>.

**Households who may engage with the trial in distinct ways** – this includes households across different rural urban classifications, those with access to an additional non-electric vehicle, those working from home, those not currently working and those with children in the home.

Survey question	Rationale for inclusion	
People self-reporting financial	People on lower incomes might be	
<b>insecurity.</b> Any participant that selected	considered vulnerable in the energy	
"Finding it quite difficult" or "Finding it very	market because they may be more likely	
difficult" in response to 'How well would	to suffer detriment because of higher	
you say you are managing financially	energy bills. We use a self-reported	
these days? Would you say you are'	measure because income is not a	
	suitable proxy for financial insecurity,	
	since people's outgoings differ for	
	complex reasons.	

• • • • • • • • • •

<sup>&</sup>lt;sup>1</sup> 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

<sup>&</sup>lt;sup>2</sup> 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.





Households containing somebody with a	People with a health condition lasting 12	
long-term health condition. Any	months or more, including chronic or	
participant that selected "Yes" to 'Do you	long-term illness or disability, might be	
(or any other adults / children in your	considered vulnerable in the energy	
household) have any physical or mental	market. They may also be more reliant on	
health conditions or illnesses lasting or	their vehicle if physically disabled.	
expected to last 12 months or more?'		
<b>Older households.</b> Based on responses to	Older people may be considered	
'How many people living in your home,	vulnerable in the energy market because	
including yourself are adults (65 and	they may use more energy due to being	
above)'. Households with an equal	at home for longer periods. However, this	
number of, or more, members over 65	may also allow them to engage with	
than adults under 65 were included in this	charging more freely.	
category.		
Households with multiple vulnerability	Vulnerability should be understood as	
factors. Any participant that reported	intersectional. Multiple vulnerability	
more than one factor (health condition,	factors increase the risk of detriment.	
over 65, financial insecurity).		
<b>Households with children.</b> Any household	Having children can have an impact on a	
with at least one child.	household's driving and charging routine	
	due to the need to manage multiple	
	schedules and needs.	
<b>Home workers.</b> Any household whose	Home workers may be distinct from other	
survey respondent answered 'I mainly	households both in that they are likely to	
work from home' to 'Which of the following	drive less, and in that being at home more	
best describes your work location.'	often means they can manage their	
	charging more effectively.	
Households with access to a non-electric	This group has been included to explore	
<b>vehicle.</b> Households who answered that it	whether households with additional non-	
was 'fairly easy' or 'very easy' for them to	electric vehicles might shift their usage to	
access a non-electric second vehicle.	electric vehicles and provide further	
	environmental benefits from those	
	directly aimed at with the trial.	
Home location. Respondents could	Location and accessibility is likely to have	
answer either 'Urban', 'Suburban' or 'Rural	an effect on journey length, so exploring	
to 'How would you describe the area	this factor is important for understanding	
where you live' and these groupings have	how the trial can impact households with	
been explored individually	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 ho		
	can have an impact on their trial	
	experience.	
Households not working. Households who	Households not working may spend more	
answered 'Retired', 'Unable to work' or	time in their home and so be able to	
'Unemployed' to 'What is your	manage their charging more effectively.	
employment status?'		

Table 1 Consumer groups and rationale for inclusion

### Methodology

The feedback survey was shared with all trial participants via email. Responses that were completed in a time below 2 median standard deviations below the median were excluded from this analysis, as we consider these to be abnormally fast response times, which may not have provided accurate responses.

Cleaning the data in this manner left us with 4,896 survey responses.

### Statistical tests

Significance testing shows the difference between a group and the remainder of the population, 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 completed with a 95% confidence interval, meaning we can say with 95% confidence that this finding will hold in a wider population. Throughout this report, all findings reported in this format have been tested to be significant at 95% confidence interval.

Further detail on the statistical methods used throughout the report can be found in appendix 1 (extended methodology).





### Qualitative analysis

Open-ended questions were analysed using thematic coding analysis. 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 to what people were saying. Comments were also back-coded into the existing frame where appropriate. For two questions, coding ended when saturation was reached and no new codes were emerging.

### 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.

In this analysis, participation in the trial has been measured via whether a household changed the time they plugged in their vehicle. Data indicating the periods a household plugged in their electric vehicle would provide a more detailed picture of active participation. This can be explored further in the end of summer trial survey.





### 2. Demographics and Household Characteristics

### Representativeness

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

Group	Count	Proportion of sample	Comparison to GB population
Health condition	1,677	34%	24%
Older household	992	20%	19%
Financially insecure	457	9%	-
Households with children	2,135	44%	26%
Home workers	873	18%	16%
Households with access to a non-electric car	1,965	40%	-
Urban households	1,239	31%	44%
Suburban households	2,157	44%	40%
Rural households	1,500	25%	17%
Not working	1,399	29%	35%
Total	4,896	-	-

Table 2

Amongst survey respondents, there's an overrepresentation of households with a long-term health condition, those with children, and those in rural areas. The latter two groups may have lower mobility flexibility capacity than some other groups (for instance,



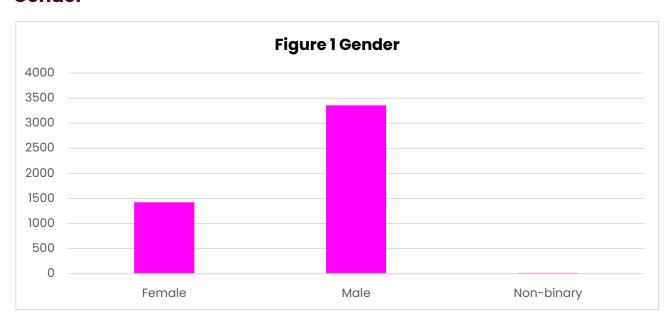
## NESO National Energy System Operator

### **Public**

because of lack of other transport options, or lack of time and flexibility in the case of those with young children), therefore it is useful to note that the availability trial appears to be succeeding in reaching these groups. The over representation of people with a health condition is surprising, particularly as barriers to electric vehicle take for people with a disability are well documented<sup>3</sup>.

The median income band for survey respondents is £50,000-£89,999, which is higher than the Great Britain (GB) population median of £39,700, and all participants own an electric vehicle with a smart charger. This means that although people with vulnerability characteristics are represented, the sample is skewed towards better-off households that are already engaged in smart energy and flex, which may temper our findings about experiences and impacts for vulnerable households to some degree.

### Gender



Women were heavily underrepresented amongst survey respondents and this likely reflects the gender gap in electric vehicle ownership - while women hold nearly half of the UK's driving licenses only 19% currently drive electric vehicles<sup>4</sup>. In the survey, men

•

<sup>&</sup>lt;sup>3</sup> Ricrado / Motability (2020), <u>Electric Vehicle charging infrastructure for people living with disabilities</u>. Accessed at. Energy Saving Trust / Motability (2024), <u>EV design & disability inclusion</u>

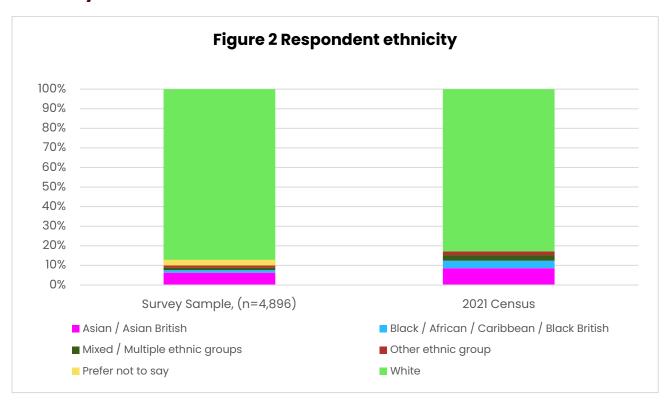
<sup>&</sup>lt;sup>4</sup> Autotrader (2025), <u>No Driver Left Behind: Women and the journey to electric</u>





were significantly more likely than women to say they use their electric vehicle for both commuting or school runs, and leisure activities.

### **Ethnicity**

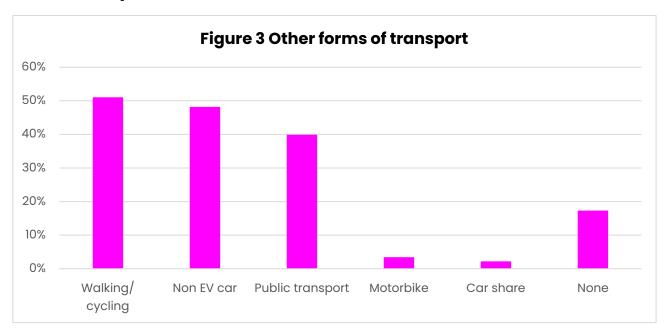


There was also an overrepresentation of white survey respondents, though it's unclear if this is representative of electric vehicle owners' ethnicities, OVO/Ohme customers or is simply a reflection of survey respondents. This suggests that ethnic minorities might be at risk of exclusion if they are not engaging in flex schemes. Further research would be useful to understand the reasons for this, and how it might be mitigated.





### Other transport methods



Responses to the question 'Apart from your EV, are there other transport modes you can use?' (n=4,896)

48% of participants had access to a secondary non-electric vehicle, though only 40% of the total sample had easy access to this (for instance, the car may belong to someone else in the household who uses it regularly). For 17% of respondents, their electric vehicle was the only available form of transport.

### Conclusion

Amongst survey respondents, there's an overrepresentation of some groups we might expect may have lower mobility flexibility capacity than some other groups (because of lack of other transport options, or lack of time and flexibility), therefore it is useful to note that the trial appears to be succeeding in reaching these groups.

The underrepresentation of ethnic minorities participating in this trial mirrors the findings of other flexibility scheme evaluations<sup>5</sup> as well as findings from the CrowdFlex Utilisation

<sup>&</sup>lt;sup>5</sup> CSE (2023) Household engagement with the Demand Flexibility Service 2022/23 https://www.neso.energy/document/282981/download; CSE (2025) Experiences of domestic flex: Two years of the DFS, not yet published





trial<sup>6</sup>. As flagged previously by CSE, further research is needed to understand the reasons for underrepresentation of ethnic minorities and how this might be mitigated to reduce the risk of excluding non-white customers from demand flexibility.

Men are very substantially overrepresented in the availability trial survey, reflecting EV ownership more broadly. Again, attention needs to be paid to gender disparities in this sort of electricity flex. However, the trial engaged with a very substantial proportion of people with a health condition, which is surprising considering that barriers to electric vehicle uptake for people with a disability are well documented.

<sup>6</sup> CSE (2025), CrowdFlex Summer Trial 2024: Customer feedback End of Trial Report <a href="https://smarter.energynetworks.org/projects/10070764/">https://smarter.energynetworks.org/projects/10070764/</a> and CrowdFlex Winter Trial

https://smarter.energynetworks.org/projects/10070764/ and CrowdFlex Winter Trial 2024/25: Customer feedback End of Trial Report, not yet published



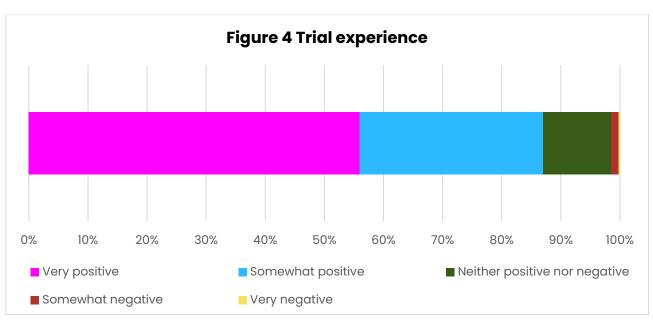


### 3. Trial Engagement and perceptions

Participating in the trial required participants to opt-in following invitation from their demand side response service provider (DSRSP), and to plug in their vehicle more frequently. Their participation will have resulted in more frequent communications from their provider – either simply in the receipt of their rewards each month, or more frequent comms for certain trial groups that received 'nudges' to remind them to plug in. Participants were not specifically notified when events were happening and their existing charging schedules, ready-by times etc should not have been affected. Therefore, aside from the act of plugging in more, active engagement is fairly limited within the trial.

In this chapter we look at whether experiences were generally positive or negative, and how engaged participants felt, if there were any barriers, and if people lost interest.

### **Trial perceptions**



Responses to the question 'Overall, how would you describe your experience of the trial?' (n=4,896)





Survey participants generally had a very positive response to the trial. When asked to describe their overall experience of the trial, 87% said they felt 'very positive' or 'somewhat positive'. Only 72 respondents (1%) reported a negative experience. However, households with vulnerabilities were significantly less likely to report a positive experience than those without any vulnerabilities.

2,840 respondents (58%) gave a score of 10/10 when asked 'How likely is it that you would you be to recommend this sort of trial to a friend or colleague?', with an average of 8.9 for this question across respondents.

We gave participants the option of telling us why they felt positive or negative about the trial. Of those saying why they felt positive (4,236 respondents), 14% said it was easy to take part and required very little (or no) change in behaviour. Around one in ten (8%) said they were positive because they felt they were contributing to something, with 3% explicitly mentioning the environmental benefits of taking part. 5% said they enjoyed the fact that their car was always fully charged and ready to go, whereas in the past they might have had to give more thought to whether it was charged or not.

"I felt like I was making a difference, also financial incentive helped!"

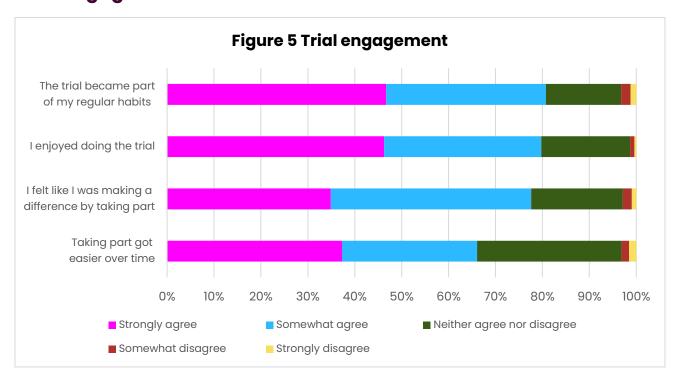
Although respondents were largely positive about the communications they received, a few wanted to receive more information about the impact of the trial overall (1%) rather than just their own performance within it.

Just 1% of the sample were negative about the trial. The main reasons they gave were: needing more support or being unclear about the purpose of the trial; lack of regular updates leading to forgetting; finding the plugging in more to be inconvenient, especially for those who didn't charge very often before the trial; and technical problems with receiving incentives.





### **Trial engagement**

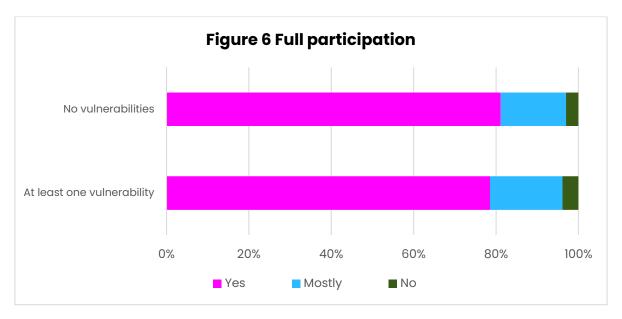


Responses to the question 'Please tell us how much you agree with the following statements: the trial became part of my regular habits; I enjoyed doing the trial; I felt like I was making a difference by taking part; Taking part got easier over time' (n=4,896)

We asked participants four questions related to their level of engagement with the trial (Figure 5 – Trial engagement). We found strong positive responses to all of these questions, indicating strong engagement and a generally positive feeling about the trial from the vast majority of participants. Although there were fewer positive responses for respondents finding the trial easier with time, this isn't measured against a baseline, so participants may have found the trial easy throughout.







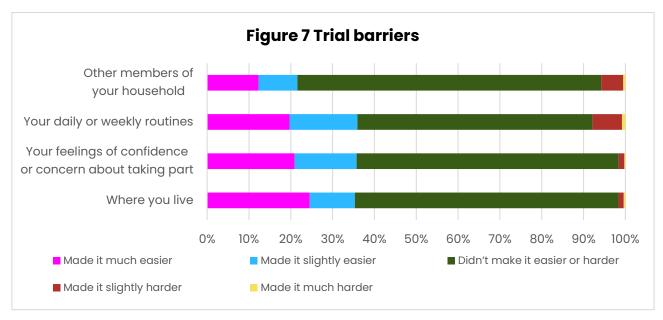
Responses to the question 'Did you feel able to fully participate in the trial?' (n=4,896)

3,911 (80%) of respondents said they felt they were able to fully participate. Households with no vulnerabilities were slightly (but statistically significantly) more likely to say this than those with at least one vulnerability. We also found that households with multiple vulnerabilities changed their plug in time less (explored in more detail in the Group Analysis chapter). This suggests that vulnerable groups may be facing slightly more barriers to participation. However, as we report later, these barriers are not reducing enjoyment of the trial for this group.





### **Barriers**



Responses to the question 'Did any of the following affect how easy it was for you to take part in the trial?' (n=4,896)

The majority of participants did not report facing barriers to taking part in the trial, with less than 10% of the sample reporting that they faced any one of the four barriers that we asked about. 'Daily or weekly routines' was the barrier most commonly said to make participation harder to some extent. This matches the open-ended data, where difficulty fitting in with existing routines was often mentioned.

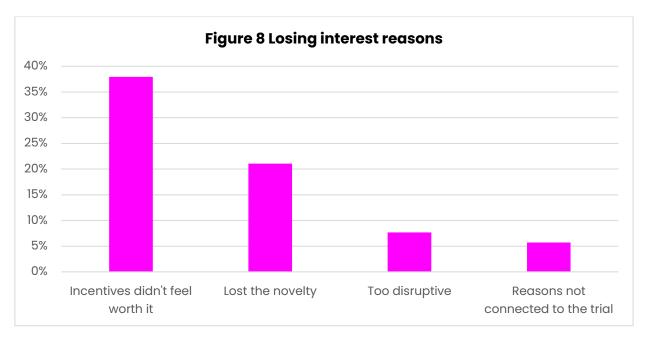
There were significant differences in whether a respondent's location made participation easy or difficult, with urban households finding it significantly easier to participate than either suburban or rural households. This might indicate that those living in rural settings face more barriers to their involvement, however this does not appear to impact their overall participation or enjoyment of the trial. Further analysis of a household's location is explored in chapter 5 (group analysis).

### **Losing interest**

456 respondents (9%) reported that they were losing interest in the trial as it went on. Only 77 respondents (2%) strongly agreed that they were losing interest.







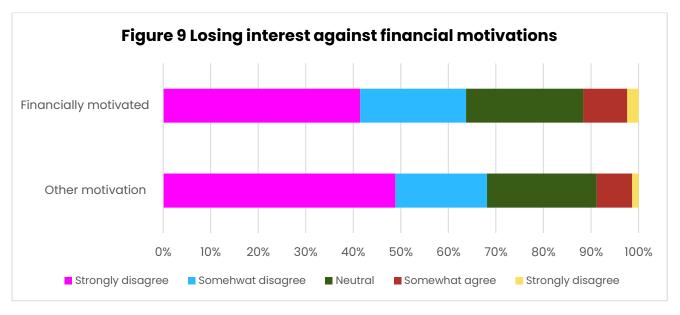
Responses to the question 'Why would you say you started losing interest in the trial?' (n=456)

Of these 456 respondents, poor incentives were given as the biggest reason for a participant losing interest, whilst only 8% lost interest because of the trial being disruptive. In the open-ended responses, a further 4% (20 people) said that they were losing interest because they forgot. 4% said they did not need to charge as much as the trial required – this suggests that for a small proportion of people, there may be some misunderstanding about how the charging within the availability trial works in practice. A further 4% reported losing interest due to technical difficulties with the trial or the car. It is important to note, however, that these responses come from a very small proportion of the full sample.

Interestingly, households without any vulnerabilities were more likely to lose interest in the trial than those with at least one vulnerability. This shows that, although those with vulnerabilities might find aspects of the trial more difficult, this isn't leading to disengagement on their part.







Responses to the question 'Please tell us how much you agree with the following statements: I started losing interest as the trial went on' (n=4,896)

Motivations (explored in the next chapter) appear to have an impact on maintaining interest.

Those who named financial reasons as their main motivation were more likely to say they were losing interest than those with another primary motivation. Though the overall picture is positive, with 63% of those primarily motivated by finances reporting that they were not losing interest. 12% somewhat or strongly agreed that they were losing interest – 3 percentage points higher than those with other primary motivations. This group was also more likely to say they were losing interest because of poor incentives

Those motivated by achieving a cleaner grid were less likely to lose interest.

### Conclusion

There was generally a positive attitude towards the trial, with positive trial perspectives, low perceived barriers to engagement, and few participants losing interest.

Participants primarily involved in the trial for financial reasons were more likely to report losing interest in the trial over time, though this was still a minority. This suggests that communicating different benefits of participation may be needed to support sustained engagement for some consumers.

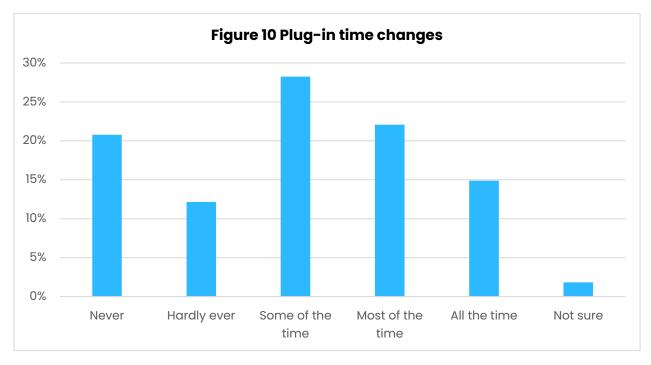




### 4. Motivation and Participation

In the survey we asked participants whether they changed their charging habits, either by changing the times they plugged in their electric vehicle, or changed their main plug-in location, as well as questions on habit formation. This chapter also explores why people signed up, and how aware participants were about the role electric vehicles can play in balancing the grid.

### **Participation**



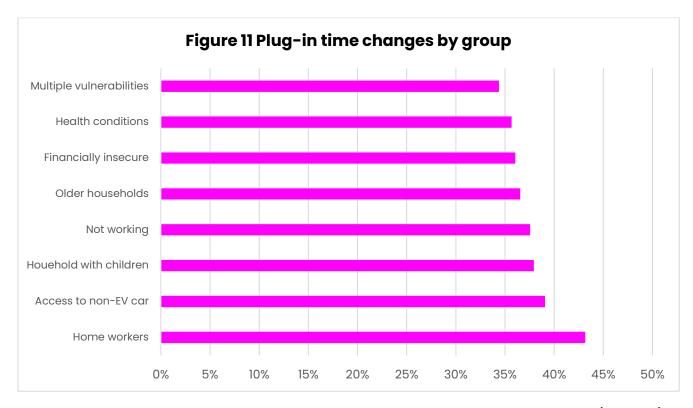
Responses to the question 'For the trial did you plug in your EV at different times compared to before the trial?' (n=4,896)

65% of participants changed when they plugged in at least some of the time. Figure 11 shows the different response rates amongst different consumer groups.

21% of participants never changed the time they plugged in during the trial, although this may be because they already plugged in frequently before the trial.







Percentages of those changing their plug-in time at least 'some of the time' by group (n=4,896)

We asked participants to tell us if they had difficulties fully participating in the trial (open-ended). Only 3% of respondents (161 people) gave reasons. The most common reason was that they were not using the car enough to deplete the battery, and consequently did not feel the need to plug in their EV (38 mentions, 0.8% of all respondents). A further 22 people said they struggled to understand the purpose of the trial or how the incentives worked. Meanwhile 46 participants (1% of the sample) reported difficulties charging, for instance due to being in the wrong location, or due to physical barriers to charging.

"It's awkward to have to open / close the garage and lay or coil the cable each time".

An even smaller subset of participants (15 people, <0.3% of the sample) said that the lack of control over when to charge was an issue – for instance, not wanting to cede control, or just wanting to follow their normal schedule. The desire for control has been highlighted to be a potential barrier to automated flex<sup>7</sup>; therefore it is interesting that such a small percentage of participants reported this concern.

<sup>&</sup>lt;sup>7</sup> Fell, M (2014), Exploring perceived control in domestic electricity demand-side response





"The trial did not allow us to charge exactly when we wanted... [it] was disruptive and caused some anxiety about the charge not being ready on time."

### **Pre-trial habits**

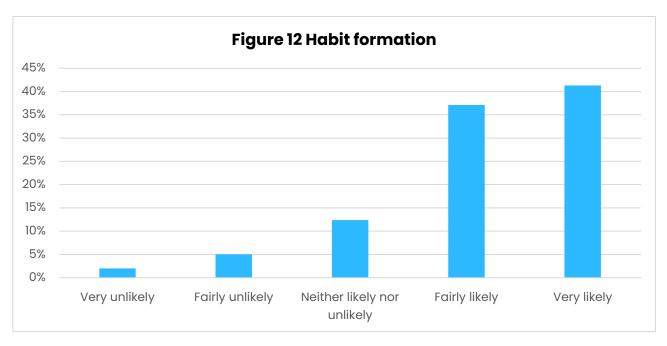
Pre-trial habits appear to have a pronounced effect on participation. Households who generally preferred to plug in at a time to make the most of cheaper electricity before the trial were less likely to change the time they plugged in during the trial. If they did change plug in times for the trial, they were less likely to form a habit of this. This may be because their conscious pre-trial habits are well established and harder to adapt, or because they see a tension between what different services are asking them to do: plug in when its cheap, or plug in all the time. As participation is not supposed to impact charging costs, these decisions may reflect a misunderstanding of the purpose of the availability trial.

Households who either plugged in out of habit or plugged in around their routine before the trial were more likely to change the time they plugged in during the trial. Compared to 65% for the total sample, 73% of those who plugged in to fit a routine and 78% of those who plugged in out of habit changed when they charged their vehicles at least some of the time in the trial. This suggests that households participating in the trial may be becoming more conscious of when they should plug in their vehicles, and that the trial could be informing new habits that are beneficial for electricity flexibility.





### **Habit formation**



Responses to the question 'How likely are you to continue with your new plugging in schedule?' (n=3,191)

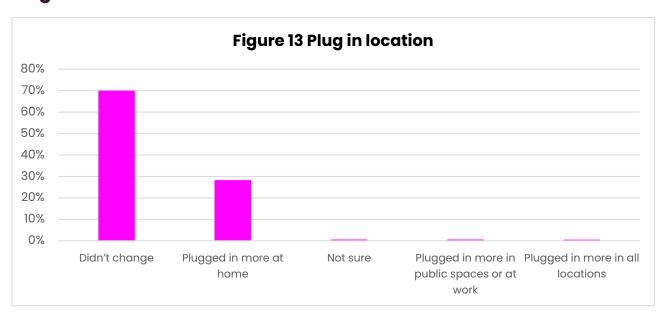
For the participants who said they changed their charging practices, we asked whether they would be likely to continue with this after the trial, as a measure of potential habit-formation, which could be crucial for the long-term success of EV flex schemes. Of the participants who changed their plug-in schedule at least some of the time, the majority of these show clear signs of building habits, with 78% saying they were "very likely" or "fairly likely" to continue their new schedule after the trial. This indicates the trial may have a positive effect on electric vehicles being used to balance the grid after the trial has finished as these households will continue with their new habits. This view is bolstered by the findings that trial participants are becoming more aware of the role an electric vehicle can play in balancing the grid.

•





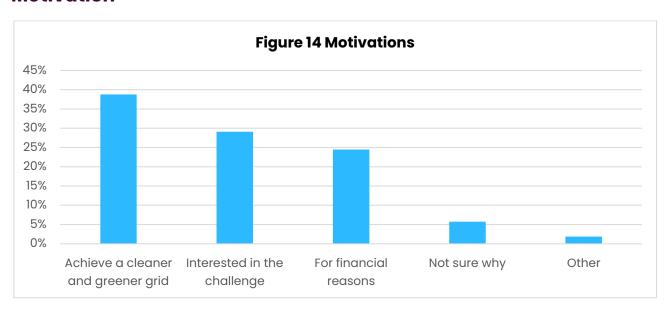
### **Plug in location**



Responses to the question 'Did you change where you plugged in your car at all?' (n=4,896)

The majority of respondents did not change their charging location. However, for the 28% who did change charging location, this was almost always by plugging in more at home, which may indicate more engagement with the trial.

### **Motivation**



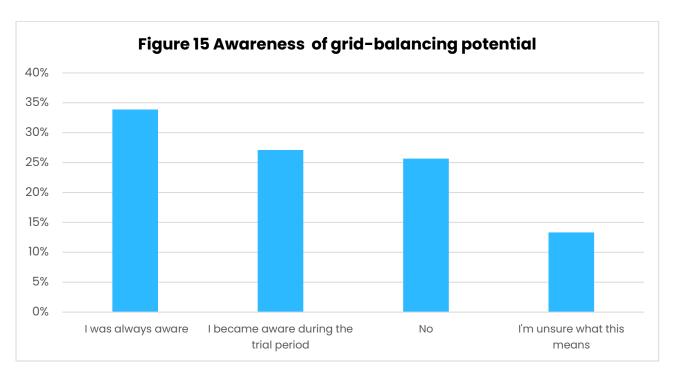




Responses to the question 'What was your main reason for wanting to take part in the trial?' (n=4,896)

The most commonly reported motivation for participating in this trial was the opportunity to achieve a greener grid, followed by interest in the challenge and for financial reasons. Of the 2% of respondents who answered 'other', 1/3 said that they wanted to help and were interested in the study.

Further, 41% of participants who weren't aware that their electric vehicle could be used to help balance the grid when the trial commenced became aware of this during the trial period. Thus, the trial is succeeding in educating individuals who want to achieve sustainable goals in how they can participate in this with their electric vehicles.



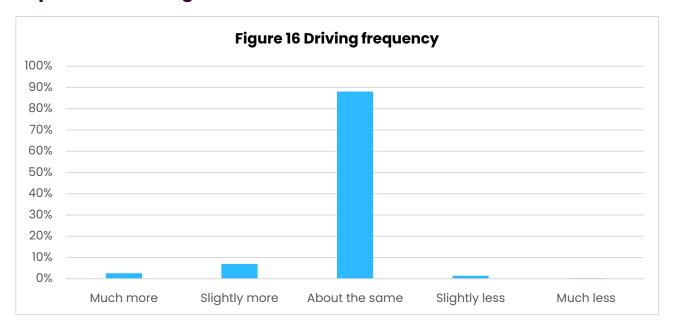
Responses to the question 'Are you aware that your EV can be used to help balance the electricity grid in your area?' (n=4,896)

•





### Impacts on driving habits - rebound effects



Responses to the question Did you find yourself driving more or less?' (n=4,896)

We were interested in the potential for the trial to impact people's driving habits. For instance, earning rewards for charging the car could potentially encourage people to drive more (demand creation), creating a direct rebound effect which could undermine efforts to reduce overall environmental impacts. Additionally, the rewards could lead to an indirect rebound effect where people spend the money on high-carbon activities elsewhere in the economy, though these effects are very challenging to measure. Conversely, however, the trial may have increased awareness of vehicle and energy use, potentially reducing overall demand.

### Driving frequency

88% of households reported that the frequency they drove their electric vehicles didn't change through the trial. For those that did report changes, most of the time, this was due to something unrelated to the trial, such as a change of job or routine (53% of those driving more; 55% of those driving less). Only 83 households said they were driving less; of these, 20% (17 respondents) said that this was because they were concerned about the battery running out or not having enough charge. This is slightly concerning since it could be a reason to switch to a non-electric vehicle for these journeys; however, it is a very small percentage of the total sample.





Only 3% of respondents gave reasons why they were driving more during the trial. The most common reason (1% of total sample) was that they were less concerned about the cost of driving or that the trial made driving cheaper generally. Nearly half of this group specifically said that they were driving more because they wanted to get the rewards available through the trial, or that the trial rewards made the cost of driving much lower. Again, this may suggest a misunderstanding of the aim of the trial to *plug in* more rather than *charge* more, as driving more would mean less time plugged in at home and therefore lower rewards.

An additional 10 people said they drove more because they thought they needed to in order to support the trial; and an additional 24 said that the trial helped to tackle their range anxiety, because by plugging in more their car was always charged. Only 13 people said they used their electric vehicle more for journeys they might have previously made in a petrol/diesel car. Thus, there is some evidence of a direct rebound effect, but only for a very small percentage of people (1.7% of the total sample).

Meanwhile very few people (<0.5%) drove less during the trial. The main reasons were related to the hassle of unplugging; and driving less and walking more.

### Journey length

The length of journeys undertaken in electric vehicles was also largely unaffected by the trial. 92% of respondents indicated that the length of their journeys didn't change. However, 7% of respondents said that they drove longer distances, showing again that any changes in driving habits are more likely to be increases in usage.

340 people gave reasons for driving longer. The most common reasons for driving longer distances were unrelated to the trial (26%). 18% of these respondents (1.2% of the total sample) said they wanted to drive more – either because they worried less about the cost, or because the car was always charged and they had less range anxiety. A few also mentioned using their EV more instead of another car as a result of the trial (2%, 6 mentions).

### Conclusion

A household is most likely to engage with the trial by changing the time they plug their vehicle in, compared to changing the plug-in location.

•





We see households building a habit of changing the time they plug in, which shows that incentive-based trials such as CrowdFlex could have a positive impact in balancing the grid beyond the scope of the trial as people continue with their new plug in habits, particularly as achieving a greener grid was a strong motivation for involvement. A large minority of those who weren't aware of the potential for balancing the grid with an electric vehicle became aware of this during the trial, suggesting we may see positive long-term impacts on the use of EVs for flex beyond direct engagement to earn rewards.

The vast majority of households did not change the frequency or length of journeys in electric vehicles during the trial. However, those that did change almost always changed in favour of longer or more frequent journeys; and only a tiny proportion of these said they used their EV instead of a petrol/diesel car. Therefore, we do find some evidence of a direct rebound effect, but only for a very small percentage. Hardly any participants said they drove their EV less.





### 5. Group Analyses

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

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 definitions and the Priority Services Register eligibility criteria.

Households who may engage with the trial in distinct ways – this includes households across different rural / urban classifications, those with access to an additional non-electric vehicle, those working from home, those not currently working and those with children in the home.

### Financially insecure

Those feeling financially insecure (as defined in Section 2) were more likely to have financial reasons as their main motivation. They were less likely to feel they could participate fully in the trial, but this didn't result in any other significant differences between financially insecure and secure households in the measures analysed through this report. This is an encouraging sign that finances aren't having a significant impact on the positivity experienced in general by trial participants.

We measured self-reported financial insecurity, rather than income, because financial security is also determined by household outgoings (which could also include vulnerability factors such as health conditions and poor-quality housing). However, we should also note that the respondents had a generally high income - whilst the UK

• • • • • • • • •





median household income in 2021 was £39,7008, the median income bracket for the respondents in this analysis was £50,000-£89,999.

### Older Households

Older households were less likely to change their plug in time during the trial than younger households. However, they were more likely to build a habit when they did change the time they plugged in. Older households were also more likely to be motivated by achieving a greener grid; and more likely to have higher propensity to trust in new technologies.

Older households found it easier to fit the trial into their routine; however, they also reported significantly more negative trial experiences than younger households in other areas. They were less likely to find the trial enjoyable, feel that they could participate fully or report a positive experience of the trial. They were also less likely to recommend the trial to others.

These negative sentiments may suggest that older people will be less likely to remain actively engaged. However, they were no more likely to lose interest than other households.

### **Health Conditions**

Households with a health condition generally reported more positive trial experiences than households without a health condition. They were less likely to lose interest in the trial, and more likely to find the trial easier with time, report a positive trial experience and recommend the trial to others. They also found potential barriers such as their location and routine easier to deal with.

Despite this, this group did feel less like they could participate fully in the trial than those outside the group.

The surprisingly positive perspective held by those with health conditions could be partially explained in that they are significantly more likely to also fall into the 'not working' group explored below. Of the 1,677 households with a long-term health condition, 801 (48%) were also not working, and so more likely to be at home for longer periods and able to manage their vehicle charging more closely.

-

<sup>8</sup> Income and wealth - Office for National Statistics





### **Multiple Vulnerabilities**

Households with multiple vulnerabilities were more likely to find the trial easier with time, enjoyable, and to feel that they were making a difference. They also found potential barriers such as their home location, other household members and their routine easier to deal with. Further, they had a greater trust in new technologies, which is promising for future engagement with demand shifting schemes.

Despite these positive trial perspectives, those with multiple vulnerabilities were less likely to report that they could participate fully with the trial and were less likely to change the time they plugged their vehicle in than households with one or no vulnerabilities.

### Not working

Those respondents who were not working or in full-time education were less likely to change their plug in time in response to the trial. However, when they did change the timing, they were more likely to build a habit of doing this. They were more likely to have an environmental motivation for taking part.

Those not working reported generally positive trial experiences, for example being significantly more likely to find the trial enjoyable. They were less likely to be losing interest in the trial and found barriers (such as their routine, home location and other household members) easier to deal with. They were also more likely to trust new technologies.

### Households with Children

Households with at least one child, when compared to those without children, were more likely to change their plug-in time in response to the trial, though less likely to form a habit of this.

They were also more likely to feel they could participate fully, recommend the trial to others and have an overall positive trial experience.

### **Home Workers**

Respondents working from home proved to differ from respondents who worked in any other location, or who didn't work. They were more likely to be motivated by an interest in the challenge, but less likely to be environmentally motivated. They were more likely to change the time they plugged in their vehicle to participate in the trial, but less likely to form a habit of changing their plug in time.



# NESO National Energy System Operator

### **Public**

They also found the trial less enjoyable than those outside the group, were less likely to feel they were making a difference with their participation and found each of the suggested barriers (their routine, home location, other members of the household and confidence in the trial) more difficult to overcome.

However, the fact that non-working participants reported generally more positive trial experiences than those working from home indicates that being at home more often doesn't fully explain the experience of home workers, and that there may be factors beyond those in this report that influence this.

### Those with access to non-EV car

Households who had easy access to a second, non-electric, vehicle had few significant differences to those without. However, they were less likely to find the trial enjoyable, easier with time or that they were making a difference and more likely to find that their routine was a barrier to their involvement. Despite this, they were more likely to feel they could fully participate in the trial.

### Home location

Rural households were more likely to report barriers to involvement but were more likely than those in urban locations to change when they plugged in their vehicle.

Urban households were more likely to find the trial enjoyable and easier with time, and suggested barriers such as their routine and home location easier to overcome.

There were no other differences in terms of whether households felt they could participate fully, had a positive trial experience or would recommend the trial to others across different rural-urban classifications.

### Trust in technology

Respondents were asked a series of questions to evaluate their trust of new technologies. The methodology for this is detailed in appendix 1.

Those with more trust in technology were more likely to plug their vehicle in at different times, and more likely to build a habit around this.

Greater trust in technology also resulted in significantly better trial perceptions, with respondents more likely to find the trial easier with time, feel they were making a difference, enjoy the trial and build a habit. A high level of trust also meant a respondent was less likely to lose interest in the trial.





They were less likely to be motivated by financial rewards, but more likely to be motivated by an interest in the challenge.

Trusting technology also reduced the barriers to participation faced by respondents, whilst more trusting participants were more likely to have a positive trial experience, feel they could participate fully in the trial and recommend the trial to others.

These findings echo those of the utilisation trial, which found technology such as automated demand shifting to be important in trial involvement.

#### **Conclusion**

For some groups new plug in behaviour appears more likely to become habit – older people, those not working, and those who trust technology were all more likely report this. Those with children and home workers were less likely to report forming new plug in habits. As expected, those who trust in technology are also more positive about the trial in general and more likely to change their plug in behaviour.

Some findings are unexpected:

- Older people and those with multiple vulnerabilities were more likely to report
  having trust in technology. This is likely due to the self-selecting nature of the
  sample (EV owners only), but challenges expectations that all older people or all
  those with more complex circumstances may struggle more with smart
  technology needed to participate in the low carbon transition, and emphasises
  the diversity within these groups.
- Those with health conditions and those reporting more than one vulnerability characteristic both reported more positive experiences of the trial. It is encouraging that the trial is providing a good experience for those we might consider to be vulnerable in the energy system, suggesting a potential opportunity for availability-based payments to reduce energy and driving costs for these groups.
- Those with children were more positive about the trial and more likely to change their plug in behaviour for the trial – challenging the thinking that they have more barriers to changing routine.

Positive or negative perceptions of the trial did not always have the expected outcomes in terms of participation:





- Several groups including those with multiple vulnerabilities, and financially insecure households report that they didn't feel they could fully participate in the trial, yet were still generally positive about their experience of the trial.
- Older people reported more negative experiences but also were less likely to lose interest, suggesting that many older people remain engaged despite experiencing some challenges. However, since the trial took place over a relatively short period of time (eight months), more data is required from the next phase of the availability trial to explore loss of interest and habit formation.
- Rural households were more likely to report barriers to involvement but were more likely than those in urban locations to change when they plugged in their vehicle.

•





### **Conclusions and Recommendations**

Demographics and Household Characteristics

Amongst survey respondents, there's an overrepresentation of some groups we might expect may have lower mobility flexibility capacity than some other groups – most notably those with health conditions, and those with young children. Therefore, it is useful to note that the trial appears to be succeeding in reaching these groups.

The underrepresentation of ethnic minorities participating in this trial mirrors the findings of other flexibility scheme evaluations<sup>9</sup> as well as findings from the CrowdFlex Utilisation trial<sup>10</sup>. As flagged previously by CSE, further research is needed to understand the reasons for underrepresentation of ethnic minorities and how this might be mitigated to reduce the risk of excluding non-white customers from demand flexibility.

Men are very substantially overrepresented in the availability trial survey, reflecting EV ownership more broadly. Again, attention needs to be paid to gender disparities in this sort of electricity flex. However, the trial engaged with a very substantial proportion of people with a health condition, which is surprising considering that barriers to electric vehicle uptake for people with a disability are well documented.

Trial Engagement and Perceptions

There was generally a positive attitude towards the trial, with positive trial perspectives, low perceived barriers to engagement, and few participants losing interest.

Participants primarily involved in the trial for financial reasons were more likely to report losing interest in the trial over time, though this was still a minority. Those motivated by achieving a cleaner grid were less likely to lose interest. This suggests that communicating different benefits of participation may be needed to support sustained

• • • • • • • • • •

<sup>&</sup>lt;sup>9</sup> CSE (2023) Household engagement with the Demand Flexibility Service 2022/23 https://www.neso.energy/document/282981/download; CSE (2025) Experiences of domestic flex: Two years of the DFS, not yet published

<sup>&</sup>lt;sup>10</sup>CSE (2025), CrowdFlex Summer Trial 2024: Customer feedback End of Trial Report https://smarter.energynetworks.org/projects/10070764/ and CrowdFlex Winter Trial 2024/25: Customer feedback End of Trial Report, not yet published





engagement for some consumers. This is interesting to consider alongside the main trial findings around the impact of escalating payments and non-financial behavioural nudges.

#### Motivation and Participation

A household is most likely to engage with the trial by changing the time they plug their vehicle in, rather than changing the plug-in location.

It's also likely a household will build a habit of changing the time they plug in, which shows that incentive-based trials such as CrowdFlex could have a positive impact in balancing the grid beyond the scope of the trial because these households will still be in the habit of plugging in more and for longer periods.

A large minority of those who weren't aware of the potential for balancing the grid with an electric vehicle became aware of this during the trial, suggesting we may see positive long-term impacts on the use of EVs for flex beyond direct engagement to earn rewards.

The vast majority of households did not change the frequency or length of their EV journeys. However, those that did change almost always changed in favour of longer or more frequent journeys, often as a direct result of the trial, and only very seldom due to using the EV instead of a non-electric car. Therefore we do find some evidence of a direct rebound effect, but only for a very small percentage of the sample.

#### Group Analyses

For some groups new plug in behaviour appears more likely to become habit – older people, those not working, and those who trust technology were all more likely report this. Those with children and home workers were less likely to report forming new plug in habits.

As expected, those who trust in technology are also more positive about the trial in general and more likely to change their plug in behaviour.

Some findings are unexpected:

Older people and those with multiple vulnerabilities were more likely to report
having trust in technology. This is likely due to the self-selecting nature of the
sample (EV owners only), but challenges assumptions that all older people or all





those with more complex circumstances may struggle more with smart technology needed to participate in the low carbon transition, and emphasises the diversity within these groups.

- Those with health conditions and those reporting more than one vulnerability characteristic both reported more positive experiences of the trial. It is encouraging that the trial is providing a good experience for those we might consider to be vulnerable in the energy system, suggesting a potential opportunity for availability-based payments to reduce energy and driving costs for these groups.
- Those with children were more positive about the trial and more likely to change their plug in behaviour for the trial challenging the thinking that they have more barriers to changing routine.

Positive or negative perceptions of the trial did not always have the expected outcomes in terms of participation:

- Several groups including those with multiple vulnerabilities, and financially insecure households report that they didn't feel they could fully participate in the trial, yet were still generally positive about their experience of the trial.
- Older people reported more negative experiences but also were less likely to lose interest, suggesting that many older people remain engaged despite experiencing some challenges. However, since the trial took place over a relatively short period of time (eight months), more data is required from the next phase of the availability trial to explore loss of interest and habit formation.
- Rural households were more likely to report barriers to involvement but were more likely than those in urban locations to change when they plugged in their vehicle.

#### Recommendations

Demand side response service providers (DSRSPs) could consider maximising communication around the benefits of participating for a greener grid, as our findings show that people engaging in the trial for this reason were less likely to lose interest.

We do see some misunderstanding about the trial and that plugging in more should not impact existing charging schedules – for example people not wanting to charge more due to risks to their battery life or increasing costs. This suggests there is still some work to do around communicating the trial to participants.





Our findings suggest that more research is needed to understand additional barriers for those in rural settings, for instance, are these due to lack of other transport options, or range anxiety, or something else. This could be explored further in the end of summer trial survey.





## **Appendices**

#### **Appendix 1: 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 correct 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 participants 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 size of the surveys were sufficiently large.

A Welch Two Sample t-test was used when the dependent variable was ordinal (such as a Likert scale of "Agree", "Neither agree nor disagree" and "Disagree"). This test allowed us to see whether the difference in the means between populations within groups and outside of groups were significantly different. The assumption of normality required for this test was handled given the large sample sizes provided by the survey responses.

When the factor being evaluate was a categorical variable, such as was the case when analysing home location, and the outcome variable was ordinal, a one-way ANOVA test was used, and a Tukey post-hoc test was performed to evaluate difference between specific levels. The variance within each level was established with a visual inspection of the residuals of the model.

When the factor was categorical but the outcome binary, a binomial logistic regression was used. Two separate reference levels were used to capture differences between all 3 surveys. Multicollinearity was not an issue with these models given there was only a single regressor.

To evaluate whether trust in technology differed amongst different groups, three similar questions were asked of participants on their propensity to trust technology (question 20 in appendix 2). To measure the reliability of these questions, Cronbach's alpha





coefficient was calculated between the responses. This returned a score of 0.83, indicating there was sufficient agreement between the questions to produce a summed variable measuring a participant's trust in technology. This variable was then used to evaluate differences between groups and measure the effect a participant's trust in technology affected their trial participation.

For most qualitative questions, all comments were coded. For two questions (Q16B, where participants were asked to explain more about why journeys stayed the same length; and (Q18B) explain more for those participants answering that they felt positive or very positive about the trial), saturation was reached quite quickly, and coding ended at this point.

For most questions, all comments were coded. For Q16B, 3081 comments (out of 4896) were coded. The 1815 uncoded comments relate to the statement "My journeys stayed the same" as the coder found the comments to explain why nothing changed were not providing much insight. For Q18B, 3448 comments (out of 4896) were coded. The 1448 uncoded comments relate to the sentiment that they were positive or very positive about the trial.





#### **Appendix 2: Survey questions**

- 1. What do you mainly use your electric vehicle (EV) for:
  - a) Commuting or school runs
  - b) Leisure (e.g. weekend trips, visiting friends, hobbies)
  - c) Everyday tasks (e.g. shopping, appointments)
  - d) All of the above
- 2. Apart from your EV, are there other transport modes you can use?
  - a) Non-EV / Hybrid car (second vehicle)
  - b) Walking or cycling
  - c) Motorbike
  - d) Car share
  - e) Public transport
  - f) None of the above
- 3. How easy is it for you to use these other options?
  - a) Very easy
  - b) Fairly easy
  - c) Neither easy nor difficult
  - d) Fairly difficult
  - e) Very difficult
- 4. What was your **main** reason for wanting to take part in the trial?
  - a) For financial reasons
  - b) Interested in the challenge
  - c) Achieve a cleaner and greener grid
  - d) Other
  - e) Not sure why
- 5. Before the trial, when did you usually plug in your EV? (tick all that apply):
  - a) Morning (6am-10am)
  - b) Middle of the day (10am-3pm)



# NESO National Energy System Operator

#### **Public**

- c) Afternoon (3pm-7pm)
- d) Evening (7pm-11pm)
- e) Overnight (11pm-6am)
- f) I'm not sure
- 6. What was the **main** reason why you generally plugged in at these times? (Please select one answer only)
  - a) Fit best with my routine
  - b) My tariff means energy costs less at these times
  - c) To help balance the grid by avoiding peak times
  - d) To fit in with my solar panels
  - e) Just out of habit
  - f) Another reason (write in)
  - g) Not sure.
- 7. Are you aware that your EV can be used to help balance the electricity grid in your area?
  - a) Yes
  - b) No
  - c) I'm not sure what this means
    - 7B. [If 'yes'] Were you aware of this before taking part in the trial?
- 8. For the trial, did you plug in your EV at different times compared to before the trial?
  - a) Yes, all the time
  - b) Yes, most of the time
  - c) Yes, some of the time
  - d) Hardly ever
  - e) No, not at all
  - f) Not sure



- 9. [If answering a, b or c to Q8] How likely are you to continue with your new plugging in schedule?
  - a) Very likely
  - b) Fairly likely
  - c) Neither likely nor unlikely
  - d) Fairly unlikely
  - e) Very unlikely
  - f) Not sure
- 10. Did you change where you plugged in your car at all?
  - a) Plugged in more at home
  - b) Plugged in more in public spaces or at work
  - c) Plugged in more in all locations
  - d) Didn't change
  - e) Not sure
- 11. Please tell us how much you agree with the following statements: [Matrix question; each of the options on a 5-point Likert scale (strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, strongly disagree, not sure)]
  - a) Taking part got easier over time
  - b) I felt like I was making a difference by taking part
  - c) I enjoyed doing the trial
  - d) The trial became part of my regular habits
  - e) I started losing interest as the trial went on
- 12. [If answering 'strongly agree' or 'somewhat agree' for 'losing interest']: Why would you say you started losing interest in the trial? Tick all that apply
  - a) Lost the novelty
  - b) Too disruptive
  - c) Incentives didn't feel worth it
  - d) Reasons not connected to the trial e.g. a change of job
  - e) Another reason (write in)
  - f) Not sure



# NESO National Energy System Operator

#### **Public**

- 13. Did any of the following affect how easy it was for you to take part in the trial? (Matrix question, 5-point scale, 'Made it much easier; made it slightly easier; didn't make it easier or harder; made it slightly harder; made it much harder; not sure):
  - a) Your daily or weekly routines
  - b) Where you live
  - c) Other members of your household
  - d) Your feelings of confidence or concern about taking part
- 14. Did you feel able to fully participate in the trial?
  - a) Yes
  - b) No
  - c) Mostly

14B. (Those answering 'no'): Why didn't you feel able to fully participate in the trial? (Open-ended)

- 15. Did you find yourself driving more or less?
  - a) Much more
  - b) Slightly more
  - c) About the same
  - d) Slightly less
  - e) Much less
  - f) Not sure

15B. [Those answering 'slightly more' or 'much more']: What were the reasons for driving more?

- o Something related to the trial or the rewards
- o Something unrelated to the trial, such as a change of job or routine
- Not sure

15C. [Those answering 'something related to the CrowdFlex trial']: Could you tell us a little more about why you found yourself driving more? (open-ended)





15D. [Those answering 'slightly less' or 'much less']: what were the reasons for driving less? Tick all that apply

- o Not enough charge in my vehicle
- o Worried about the battery running out
- Something else related to the trial (write in)
- o Something unrelated to the trial, such as a change of job or routine
- Not sure
- 16. Did you find that your journeys got longer or shorter?
  - a) My journeys got much longer
  - b) My journeys got slightly longer
  - c) My journeys stayed the same
  - d) My journeys got slightly shorter
  - e) My journeys got much shorter

16B. Why was this? (Write in)

- 17. Did you find that the purpose of your journeys changed? (Tick all that apply)
  - a) Yes used the car more for leisure
  - b) Yes used the car more for work or school
  - c) Yes used the car more for other activities (e.g. errands, appointments)
  - d) Yes something else (please specify)
  - e) No
  - f) Not sure
- 18. Overall, how would you describe your experience of the trial?
  - a) Very positive
  - b) Somewhat positive
  - c) Neither positive nor negative
  - d) Somewhat negative
  - e) Very negative
  - f) Prefer not to answer





18B. Please explain your reasons for how you would describe your experience of the trial, in the box below (Open-ended)

19. How likely is it that you would you be to recommend this sort of trial to a friend or colleague? (Ranking scale (0 being not at all likely, 10 being extremely likely) - Net Promoter Score)

Finally, we'd like to ask you some general questions about you and your household.

- 20. Please tell us to what extent you agree or disagree with the following statements: [Matrix question, all on a 5-point scale, 'strongly agree; slightly agree; neither agree nor disagree; slightly disagree; strongly disagree; not sure']
  - a) My typical approach is to trust new technologies until they prove to me that I shouldn't trust them.
  - b) I usually trust a technology until it gives me a reason not to trust it
  - c) I generally give a technology the benefit of the doubt when I first use it
- 21. How many people live in your home, including yourself? Please include all those who are there regularly, even if not every day. Please write in numbers below. If there is nobody in a category, please write 0.
  - a) Number of children (17 and below)
  - b) Number of adults (18 to 64)
  - c) Number of adults (65 and above)
- 22. How would you describe the area where you live?
  - a) Urban
  - b) Rural
  - c) Suburban
- 23. What is the total annual income of your household (before tax and deductions, but including any benefits/allowances)
  - a) £0-£19,999
  - b) £20,000-£49,999





- c) £50,000-£89,999
- d) £90,000-£129,999
- e) £130,000 or above
- f) Prefer not to say
- 24. How well would you say you are managing financially these days? Would you say you are...
  - a) Living comfortably
  - b) Doing alright
  - c) Just about getting by
  - d) Finding it quite difficult
  - e) Finding it very difficult
  - f) Don't know
  - g) Prefer not to say
- 25. What is your employment status?
  - a) Employed full-time
  - b) Employed part-time
  - c) Freelance or self-employed
  - d) Unemployed
  - e) In full-time education
  - f) Retired
  - g) Unable to work
  - h) Other
  - i) Prefer not to say
  - 25B. [Those answering a, b or c]: Which of the following best describes your main work location?
    - a) I mainly work from home
    - b) I mainly work at my workplace (e.g. shop, office, factory, school)
    - c) I split my time between home and my workplace
    - d) I work in multiple locations but do not travel long distances
    - e) I usually travel long distances for work
    - f) Other (please specify)



- 26. 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?
  - a) Yes
  - b) No
  - c) Prefer not to say

26B. [If Yes]: Does the condition(s) or illness(es) reduce your (or their) ability to carry out day to day activities?

Yes, a lot

Yes, a little

Not at all

Prefer not to say

- 27. Do you know anyone else taking part in this trial?
  - a) Yes
  - b) No
  - c) Prefer not to say

27b [If Yes]: What is their relationship to you?

- a) Friend
- b) Family-member
- c) Neighbour
- d) Colleague
- e) Other
- 28. What is your ethnic group? (copy options from Utilisation summer trial)
- 29. Gender. Would you describe yourself as...
  - a) Male
  - b) Female
  - c) Non-binary
  - d) Prefer to self-describe (write in)
  - e) Prefer not to say





Thank you for taking the time to complete our survey. We now have a few questions about your consent to share and store your data. Further information can be found here: <a href="https://www.cse.org.uk/crowdflex-research-participant-information-ovo/">https://www.cse.org.uk/crowdflex-research-participant-information-ovo/</a>

Transfer of my survey data to OVO

You can choose to share your survey answers with OVO. This will include any special category data you provided about your health, income, ethnicity and gender. If you consent, CSE will securely transfer a copy of your survey answers to them. By sharing your results, OVO will be able to identify you - meaning your response will no longer be anonymous.

OVO will use your survey data to understand more about services like Power Move Flex for Charge Anytime and help shape future products and services.

- 30. I consent to OVO receiving a copy of my survey response.
  - a) Yes
  - b) No