Electric Vehicles – Consumer Research

February 2024

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1 Executive summary

In September 2023, the Consumer Council commissioned Cognisense to conduct a research project regarding electric vehicles. The findings from this research will be used to bring forward either legislation or a voluntary code of practice for charge point operators (CPOs). The research consisted of the following:

- a quantitative online survey of electric vehicle drivers (n=589);
- five qualitative interviews with electric vehicle drivers;
- three qualitative interviews regarding disability considerations (one interview with a consumer who has a disability, two interviews with members of the Inclusive Mobility and Transport Advisory Committee);
- four qualitative interviews with stakeholders (three interviews with charge point operators, one interview with the Electric Vehicle Association Northern Ireland (EVANI)); and
- a quantitative online survey of those likely to consider switching to an electric vehicle in the next 12 months ('considerers') (n=148).

Some of the key findings from the research are detailed in this section of the report.

Survey with electric vehicle drivers

Charging their electric vehicle

- **84%** had access to a charge point at home

- **76%** charged mostly at home, **11%** charged mostly at work, **9%** charged mostly at a public charge point

Public charge points

- **48%** used a public charge point at least once a month, **33%** used a public charge point a few times a year, **19%** never used a public charge point

- **49%** did not always feel safe at public charge points – a figure higher amongst **females (62%)**

- **46%** preferred to use contactless debit/credit card to pay for public charging

- **31%** had a preference for public charging points at forecourt service stations, **22%** a preference for them at destinations (e.g., hospitality venues), **21%** a preference for them at charging hubs, **18%** a preference for them at public car parks

- **95%** agreed it is important that charge points are located in cities, **97%** agreed it is important that they are located in towns, **89%** agreed it is important that they are located in villages, **81%** agreed it is important that they are located in the countryside, and **91%** agreed it is important that they are located at tourist attractions

Code of practice for charge point operators

- **89%** felt they would benefit from charge point operators having a code of practice
- **90%** believed it would be important for a code of practice to contain a commitment that a charge point operator's network is, on average, reliable 99% of the time
- **85%** felt it would be important for a code of practice to include a commitment to offering a range of payment options, including Chip & Pin and contactless
- **83%** believed it would be important for a code of practice to commit to clearly displaying pricing in pence per kilowatt hour at the charge point
- **77%** felt it would be important for a code of practice to commit to making charge points easy to find
- **76%** felt it would be important for a code of practice to have mechanisms in place to avoid blocking
- **75%** believed it would be important for a code of practice to commit to providing up-to-date information on location online
- **73%** believed it would be important for a code of practice to commit to providing information on how to use the charge point at the site itself
- **65%** felt it would be important for a code of practice to commit to providing measures to ensure personal safety – a higher proportion of **females (76%)** felt this way
- **54%** believed it would be important for a code of practice to include a commitment to providing accessibility features for those with a disability or reduced mobility – a higher proportion of **those with a disability (68%)** believed this to be the case

Attitudes towards public charge points

- **99%** agreed that paying for public charging should be as easy as paying for petrol or diesel at a petrol station

- **94%** agreed that public charge points need to be more easily identified like the current forecourt/motorway petrol and diesel digital displays

- **92%** agreed that charge point operators should be required to make their pricing available to an independent organisation to display online

- **86%** agreed that there should be a single app that can be used at all public charge points

- **85%** agreed that you should not be required to sign up to an app or open an account with a charge point operator in order to use a public charge point

- **82%** agreed that having to use a pre-pay account or upload credit in advance to use a charge point is frustrating

Complaints to charge point operators

- **16%** had made a complaint to a charge point operator, **17%** had not complained as they felt the complaints process was not clear

- **82%** agreed that there is a role for an independent complaint handling body to escalate a customer service-related complaint to regarding electric vehicle public charging infrastructure

Interviews with electric vehicle drivers

All but one of those who participated in an in-depth interview had access to a home charger and used it for most of their charging needs. However, all had experience of using the public charging infrastructure and had encountered a range of problems when doing so, including:

- a lack of available charge points, particularly of the rapid variety;
- poor quality legacy devices;
- challenges in locating charge points;
- insufficient charge points in rural areas;
- charge points not functioning;
- blockage by ICE (internal combustion engine) vehicles;
- electric vehicles overstaying at charge points;
- difficulty understanding pricing; and
- concerns regarding personal safety at charge points.

Most participants were in favour of an independent body to whom complaints could be escalated and most supported the idea of a code of practice for charge point operators.

Interviews regarding disability considerations

All participants would welcome a code of practice for charge point operators; however, there was agreement that the needs of disabled consumers should be given due consideration from the outset and not treated as an afterthought, which would be best achieved via involvement of those with disabilities/advocacy groups at the early stages of development of a code of practice.

There was agreement that a code of practice should include commitments to the following:

- lowering/removal of kerbs at charge points;
- ensuring charge points contain adequate space for maneuvering a wheelchair;
- availability of a 24-hour helpline;
- weatherproofing charge points;
- providing lighting and CCTV at charge points;
- installing charge points in locations close to amenities;
- 99% uptime reliability;
- suppling high-speed charging cables that are lighter than those available currently; and
- making contactless payment an option at all charge points.

Interviews with stakeholders

Amongst participants, there were some who would welcome a code of practice for charge point operators, some who would be in favour of one, but not at the expense of charge point roll-out and/or investment in infrastructure, and some who were unsure about the value offered by such a code of practice.

Most participants agreed that a code of practice for charge point operators should contain commitments relating to reliability, payment methods, pricing, accessibility, and safety; however, it was felt that the specifics of a code of practice must take account of what can be provided feasibly by a charge point operator and that government and those involved in producing a code of practice should work closely with charge point operators to develop it.

All participants thought there are significant knowledge gaps amongst electric vehicle drivers and considerers, and that education regarding the fundamentals of owning an electric vehicle is required urgently.

Survey with considerers

- **49%** intended to switch to an electric vehicle as they are better for the environment, **36%** intended to switch to save money on fuel

- **56%** agreed that it has been easy to find out information about electric vehicles, **19%** disagreed

- **57%** stated that they would like more information about public charging, **55%** would like more information about battery life**, 53%** would like more information about running costs, **47%** would like more information about home charging

- **43%** stated that they would go to car dealerships to get more information about electric vehicles, **36%** stated that they would go to car manufacturers

- **60%** believed that government should provide the information that they need regarding electric vehicles, **55%** thought that car manufacturers should do so, **54%** felt it should be car dealerships

- **61%** had concerns about the range of electric cars, **55%** were worried about finding a working/available public charge point, **46%** were worried about the cost of installing a home charge point, **46%** had concerns about larger electricity bills, **46%** were worried about the sale price of electric vehicles compared to petrol/diesel cars

2 Background and methodology

2.1 The Consumer Council

The Consumer Council is a non-departmental public body (NDPB) established through the General Consumer Council (Northern Ireland) Order 1984. Its principal statutory duty is to promote and safeguard the interests of consumers in Northern Ireland. The Consumer Council has specific statutory duties in relation to energy, postal services, transport, water and sewerage, and food affordability, which include considering consumer complaints and enquiries, carrying out research and educating and informing consumers.

2.2 Project background

The electrification of private transport and associated charging infrastructure is an emerging area for the provision of transport, which has the potential to be confusing for consumers and could even cause consumer detriment in some cases if protections are not put in place. Consumers will need certainty around the accessibility, optimal location planning, reliability, affordability, safety and selling of charging points, as the choice of whether to remain with a conventional petrol or diesel vehicle or move to an electric vehicle diminishes.

The Executive Energy Strategy (The Path to Net Zero Energy[1]) was adopted by the Northern Ireland Executive on 16 December 2021 and a key action in the Action Plan[2] is the development of an Electric Vehicle Infrastructure Action Plan. The Department for Infrastructure (DfI) established an Electric Vehicle Infrastructure Task-Force which published an Electric Vehicle Infrastructure Action Plan in November 2022.

A Consumer Priorities action is detailed in the Electric Vehicle Infrastructure Action Plan which the Consumer Council, as a member of the Task-Force, has responsibility for. This action is informed by the Electric Vehicle Infrastructure Consumer Subgroup, which was established by the Consumer Council to inform the Task-Force from a consumer perspective and in June 2022 published a paper identifying consumer priorities for Electric Vehicle Charging Infrastructure[3].

Within this action, the Consumer Council committed to conducting a survey of Northern Ireland consumers on electric vehicle charging infrastructure. The survey findings will be used to bring forward either legislation or a voluntary code of practice for charge point operators to address the concerns of consumers.

[1] Energy Strategy - Path to Net Zero Energy | Department for the Economy (economy-ni.gov.uk)

[2] The Path to Net Zero Energy. Safe. Affordable. Clean. (economy-ni.gov.uk)

[3] Membership includes Disability Action, Guide Dogs, Inclusive Mobility and Transport Advisory Committee, Trading Standards, Rural Community Network, RNIB and the Disabled Drivers Association.

2.3 Research objective

In September 2023, the Consumer Council commissioned Cognisense to conduct a research project regarding electric vehicles, the findings from which will be used to bring forward either legislation or a voluntary code of practice for charge point operators (CPOs).

2.4 Methodology

Both quantitative and qualitative approaches were utilised for this research project.

The quantitative element consisted of an online survey of electric vehicle drivers (n=589) and an online survey of those likely to consider switching to an electric vehicle in the next 12 months ('considerers') (n=148). These were both sourced via the Cognisense online and face-to-face Omnibus surveys in October 2023, the Consumer Council's Ezine, the contact lists of local car dealerships (the Agnew Group, Donnelly Group, Monaghan Bros) and the membership of EVANI.

The qualitative aspect of the project consisted of the following:

- five interviews with electric vehicle drivers;
- three interviews regarding disability considerations (one interview with a consumer who has a disability, two interviews with members of the Inclusive Mobility and Transport Advisory Committee); and
- four interviews with stakeholders (three interviews with charge point operators, one interview with EVANI).

All fieldwork was conducted October 2023 – January 2024 and was carried out in accordance with the Market Research Society's Code of Conduct.

3 Findings from survey with electric vehicle drivers

This section of the report provides detailed analysis regarding the findings from the research conducted with electric vehicle drivers.

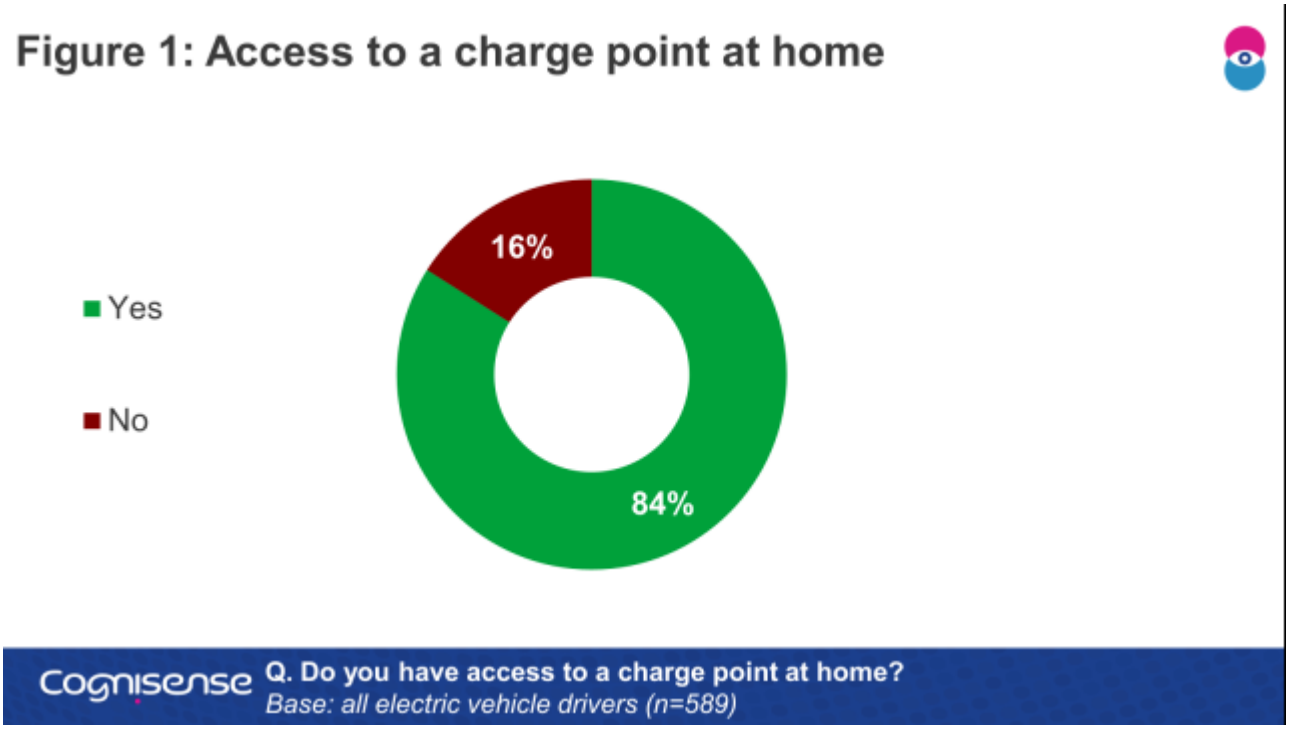
Please note the following:

- Where differences by demographics have been referenced, these have been tested at the 95% confidence level.
- As a result of the rounding of figures or the use of questions for which multiple answers could have been given, the sums on charts may not always total 100 per cent.

3.1 Access to a charge point at home

Around four in five electric vehicle drivers (84%) had access to a charge point at home, whilst close to a fifth (16%) did not (Figure 1).

Figure 1: Access to a charge point at home



3.2 Where electric vehicle is charged mainly

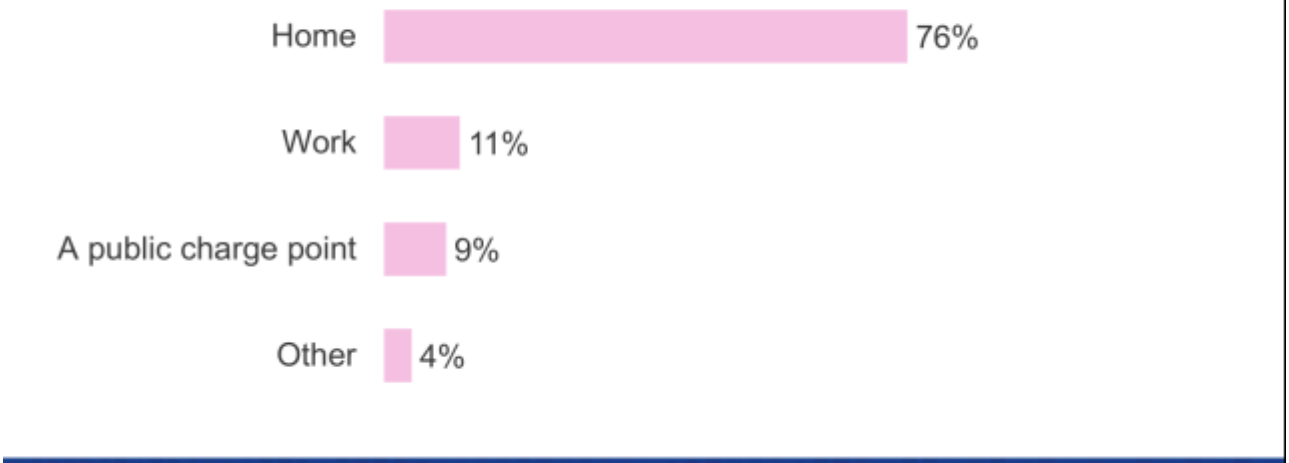
About three-quarters (76%) of electric vehicle drivers charged their vehicle mainly at home, around one in ten (11%) charged mainly at work, whilst a similar number charged mainly at a public charge point (9%) (Figure 2).

Charging mainly at a public charge point was more likely amongst:

- those aged 18-34 (33%) when compared to older individuals;
- those living in a city (14%) when compared to those living in other settlement types;

- residents of Belfast City Council (21%) when compared to those residing in other council areas; and
- those with a disability (21%) when compared to those who were not disabled (7%).

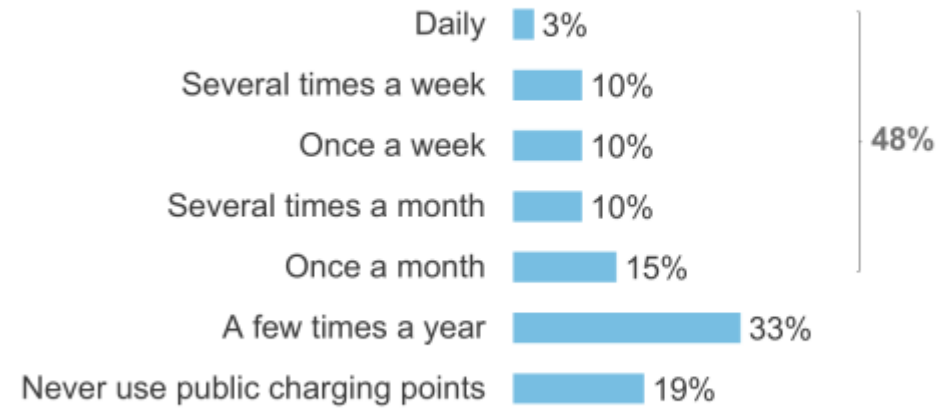
Figure 2: Where electric vehicle is charged mainly



3.3 Frequency of using a public charge point

Almost half (48%) of electric vehicle drivers used a public charge point at least once a month, a third (33%) used a public charge point a few times a year, whilst nearly a fifth (19%) never used public points (Figure 3).

Figure 3: Frequency of using a public charge point



Cognisense **Q. How frequently do you use a public charge point?**
Base: all electric vehicle drivers (n=589)

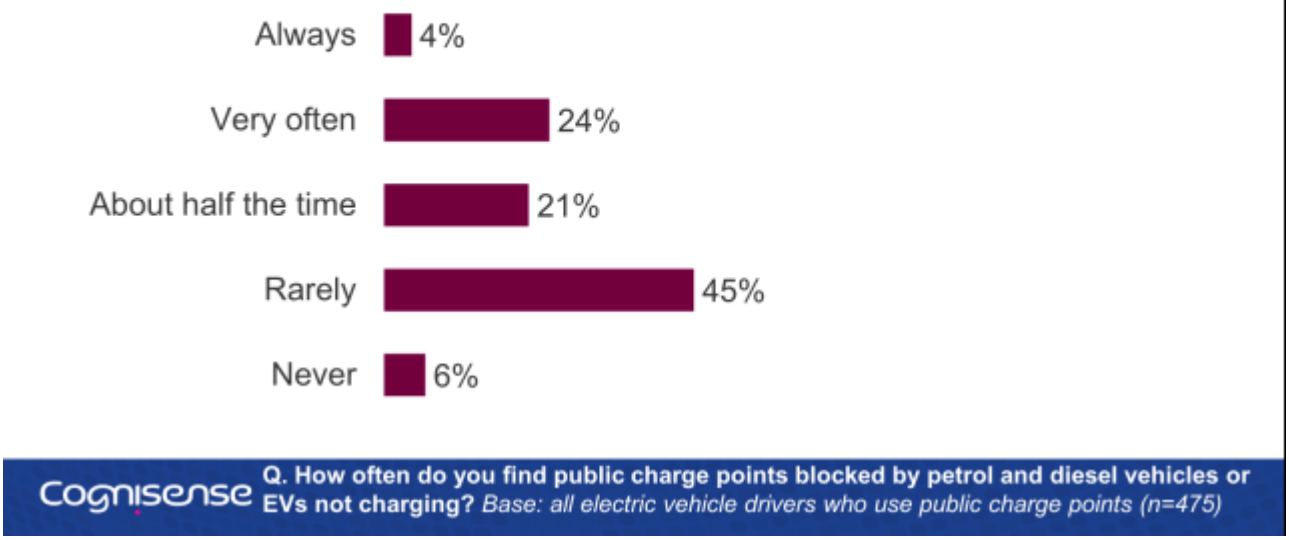
Those who never used public charge points were more likely to be:

- aged 65+ (36%) than from a younger age group;
- residents of Mid & East Antrim (41%) than residents from any other council area.

3.4 How often public charge points blocked by petrol/diesel vehicles or electric vehicles not charging

Close to three in ten (28%) electric vehicle drivers who used public charge points found them blocked by petrol/diesel vehicles or electric vehicles not charging *always* or *very often*, around a fifth (21%) found them blocked *about half the time*, whilst just over half (51%) stated that they found them blocked *rarely* or *never* (Figure 4).

Figure 4: How often public charge points blocked by petrol/diesel vehicles or electric vehicles not charging

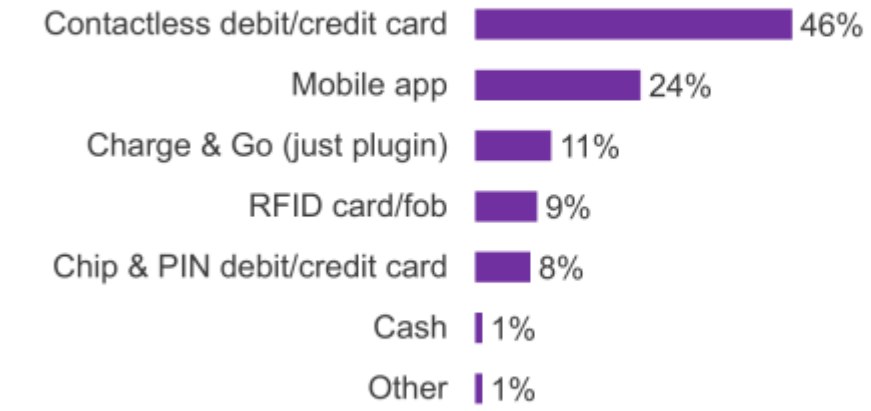


Those aged 18-34 (43%) were more likely than older individuals, and those with a disability (52%) more likely than those without a disability (25%), to have stated that they found public charge points blocked by petrol/diesel vehicles or electric vehicles not charging *always* or *very often*.

3.5 Preferred method of paying for public charging

Contactless debit/credit card was the preferred method of payment for nearly half (46%) of electric vehicle drivers who used public charge points, a quarter (24%) had a preference for using a mobile app, whilst around one in ten had a preference for Charge & Go (11%), RFID card/fob (9%) or Chip & PIN debit/credit card (8%) (Figure 5). A very small number (1%) stated a preference for paying by cash.

Figure 5: Preferred method of paying for public charging



Cognisense **Q. What is your preferred method of paying for public charging?**
Base: all electric vehicle drivers who use public charge points (n=475)

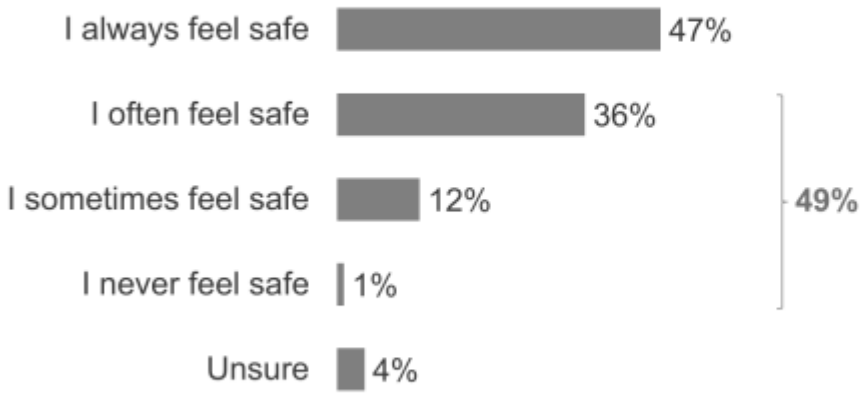
Those aged 65+ (59%) were more likely than those from younger age groups to have had a preference for paying via contactless debit/credit card. Those aged 18-34 (36%) were more likely than older individuals to have had a preference for paying via a mobile app, whilst those with a disability (7%) were more likely than those who were not disabled (<1%) to have had a preference for paying by cash.

3.6 Personal safety at public charge points

Fewer than half (47%) of electric vehicle drivers who used public charge points stated that they always feel safe at them (Figure 6).

Females (32%) were less likely than males (54%), and those with a disability (35%) less likely than those who were not disabled (49%), to have stated that they always feel safe at public charge points.

Figure 6: Personal safety at public charge points

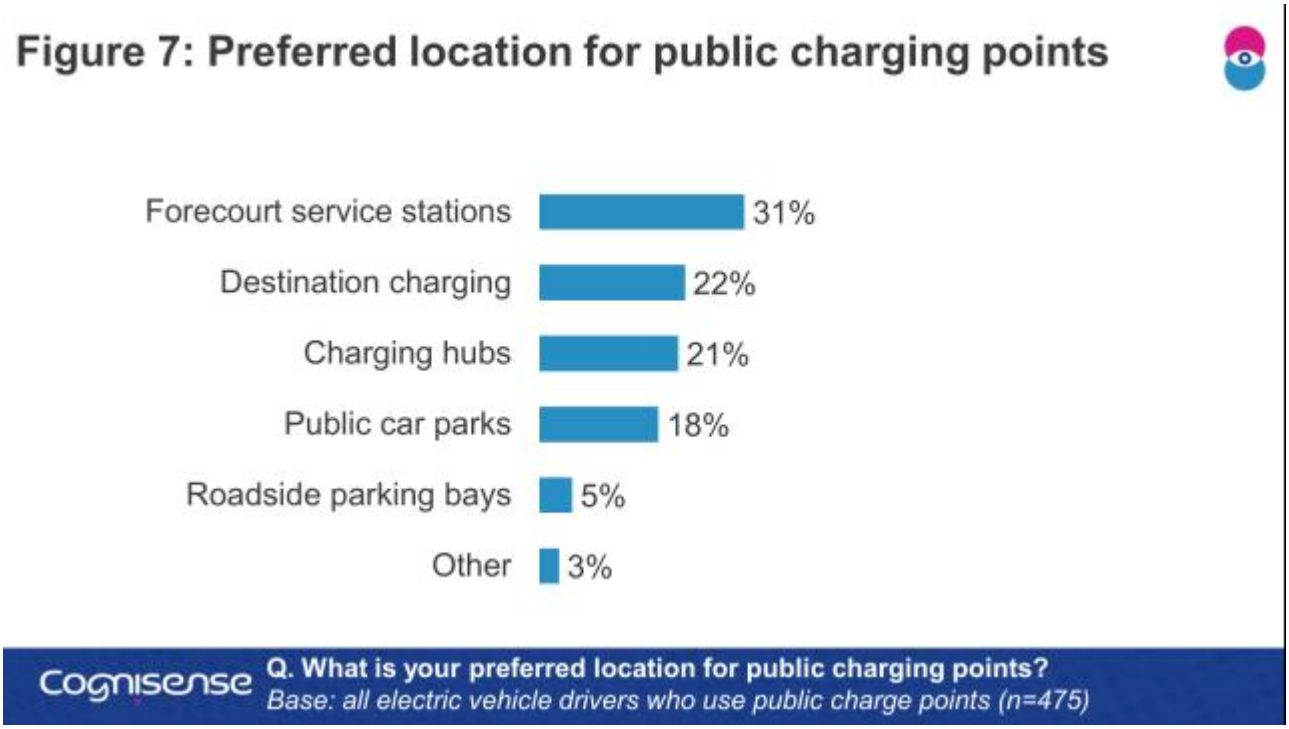


Cognisense **Q. How safe do you personally feel at public charge points?**
Base: all electric vehicle drivers who use public charge points (n=475)

3.7 Preferred location for public charge points

Around three in ten (31%) electric vehicle drivers who used public charge points stated a preference for having them located at forecourt service stations, about a fifth would prefer them located at destinations (e.g. leisure centre, library, shopping centre) (22%), charging hubs (21%) or public car parks (18%) (Figure 7). Only a small number (5%) stated roadside parking bays as their preferred location for public charging points.

Figure 7: Preferred location for public charging points

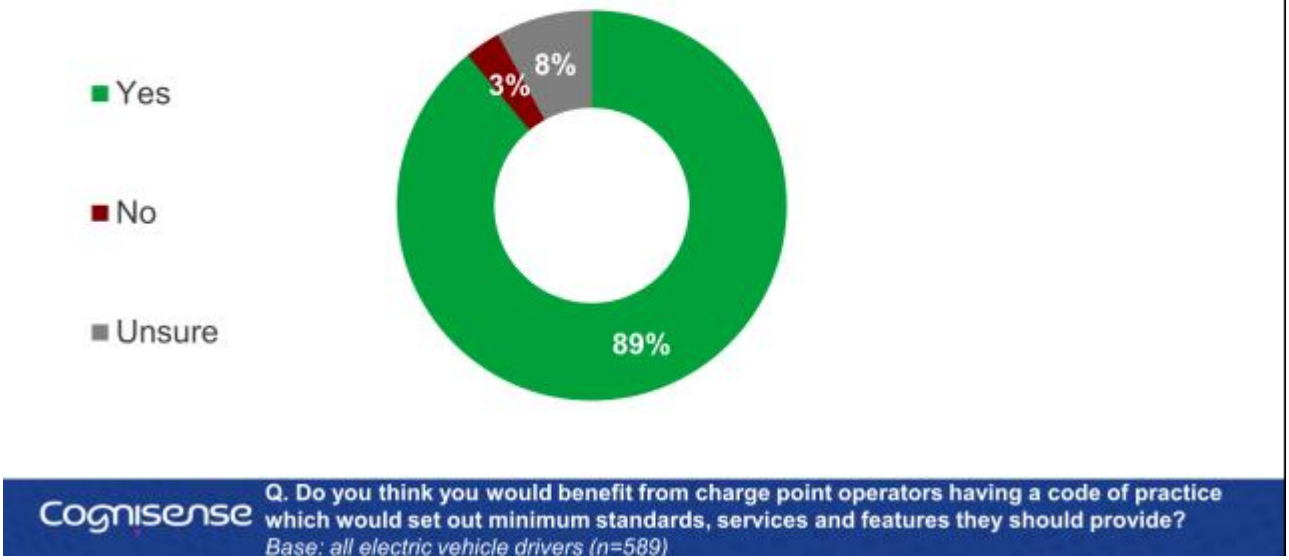


Males were more likely than females to have had a preference for charging hubs (males: 25%; females: 13%) and roadside parking bays (males: 6%; females: 2%), whereas females were more likely than males to have stated a preference for charging points located at destinations (females: 31%; males: 18%).

3.8 Benefit from charge point operators having a code of practice

Almost nine in ten (89%) electric vehicle drivers stated that they would benefit from charge point operators having a code of practice which would set out the minimum standards, services and features they should provide (Figure 8). A small number (3%) felt that they would not benefit from such a code of practice, whilst about one in ten (8%) were not sure.

Figure 8: Benefit from charge point operators having a code of practice

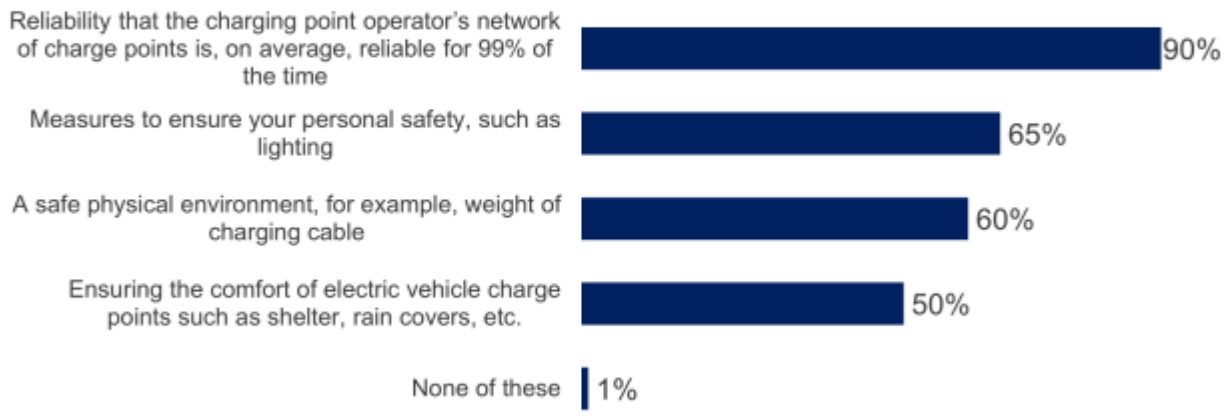


Those aged 18-34 (13%) were more likely than older individuals, and those living in a city (7%) more likely than those living in other settlement types, to have stated that they would *not* benefit from a code of practice for charge point operators.

3.9 Important commitments for a code of practice for charge point operators

Nine in ten (90%) electric vehicle drivers felt that it would be important for a code of practice to include a commitment to reliability for charge point operators' networks, on average, 99% of the time (Figure 9). Around two-thirds (65%) felt that measures to ensure personal safety should be included, whilst three in five (60%) felt that there should be a commitment to a safe physical environment. Half (50%) of electric vehicle drivers felt that a code of practice for charge point operators should include a commitment to ensure the comfort of electric vehicle charge points.

Figure 9: Important commitments for a code of practice for charge point operators



Cognisense **Q. Which, if any, of the following do you believe it would be important for a code of practice for charge point operators to commit to?** *Base: all electric vehicle drivers (n=589)*

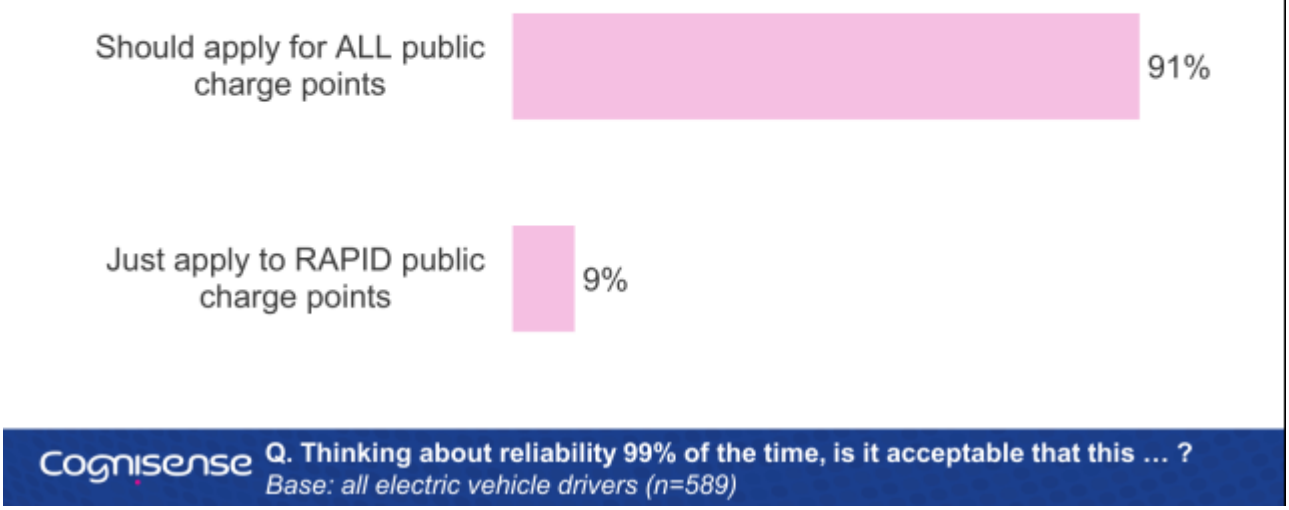
Females were more likely than males to have felt that a code of practice for charge point operators should include commitments regarding personal safety (females: 76%; males: 60%), a safe physical environment (females: 69%; males: 56%), and ensuring the comfort of electric vehicle charge points (females: 57%; males: 47%).

3.10 Acceptability regarding reliability 99% of the time

Around nine in ten (91%) electric vehicle drivers felt that reliability 99% of the time should apply to all public charge points, whereas about one in ten (9%) felt that this should just apply to rapid public charge points (Figure 10).

Those aged 18-34 (33%) were more likely than older individuals, and those living in a city (14%) more likely than those living in other settlement types, to have felt that reliability 99% of the time should just apply to rapid charge points.

Figure 10: Acceptability regarding reliability 99% of the time



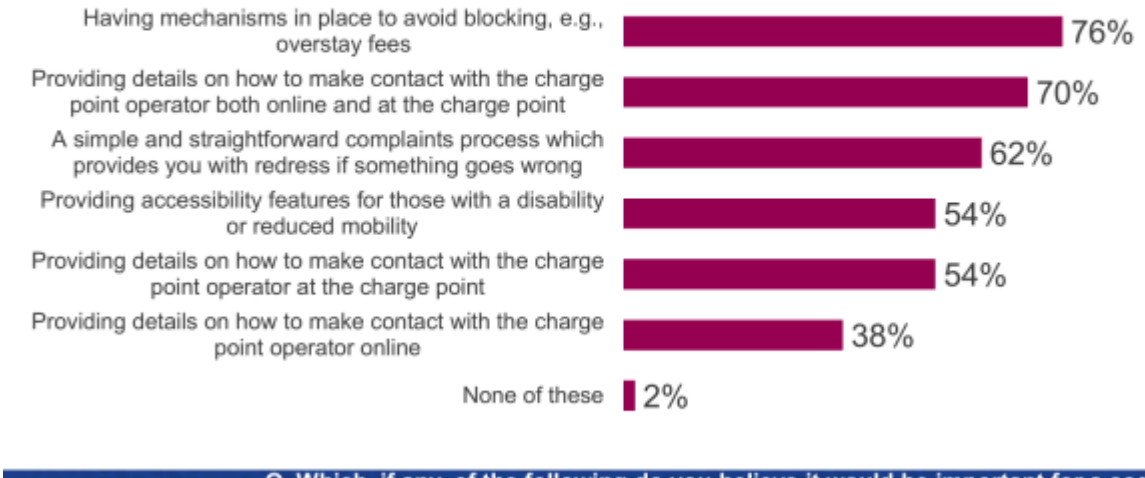
3.11 Important commitments for a code of practice for charge point operators (continued)

About three-quarters (76%) of electric vehicle drivers felt that it would be important for a code of practice for charge point operators to include mechanisms for avoiding blocking, seven in ten (70%) felt it should include details on how to make contact with the charge point operator both online and at the charge point, whilst around three in five (62%) felt that a code of practice should include a simple and straightforward complaints process that provides redress if things go wrong (Figure 11). Just over half (54%) felt that accessibility features for those with a disability or reduced mobility should be included, the same number (54%) felt that details on how to make contact with the charge point operator at the charge point itself should be included, whilst two in five (38%) felt that details should include how to make contact with the charge point operator online.

Females (62%) were more likely than males (50%) and those with a disability (68%) more likely than those who were not disabled (52%) to say that a code of practice for charge point operators should contain a commitment to providing accessibility features for those with a disability or reduced mobility.

Those aged 65+ (71%) were more likely than younger individuals to have felt that a code of practice for charge point operators should contain a simple and straightforward complaints process which provides redress if things go wrong.

Figure 11: Important commitments for a code of practice for charge point operators (continued)



Cognisense

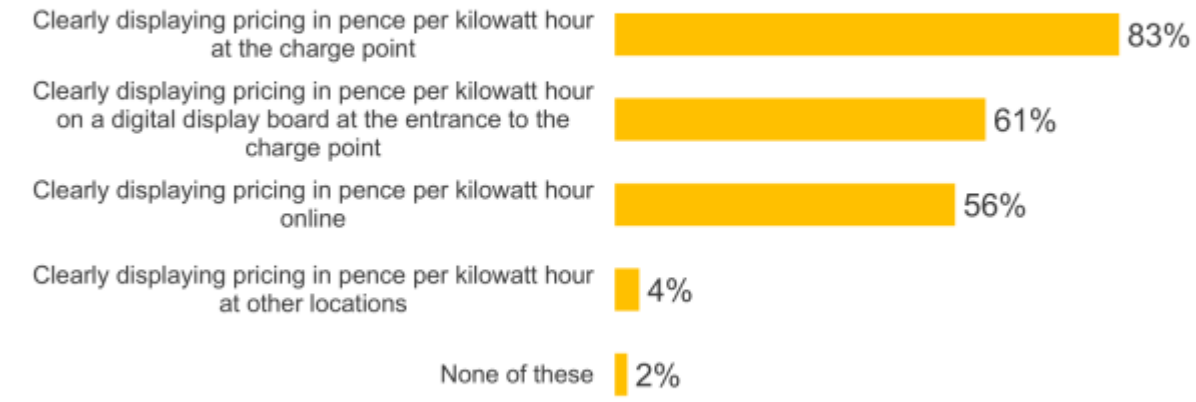
Q. Which, if any, of the following do you believe it would be important for a code of practice for charge point operators to commit to?

Base: all electric vehicle drivers (n=589)

3.12 Important commitments for a code of practice for charge point operators (continued)

About four in five (83%) electric vehicle drivers felt that it would be important for a code of practice to have a commitment to the clear displaying of pricing in pence per kilowatt hour at the charge point, around three in five (61%) felt that there should be a commitment to clearly displaying pricing in pence per kilowatt hour on a digital display board at the entrance to the charge point, whilst a similar number (56%) felt that there should be a commitment to clearly displaying pricing in pence per kilowatt hour online (Figure 12). Only a small number (4%) felt that there should be a commitment to clearly displaying pricing in pence per kilowatt hour at other locations.

Figure 12: Important commitments for a code of practice for charge point operators (continued)



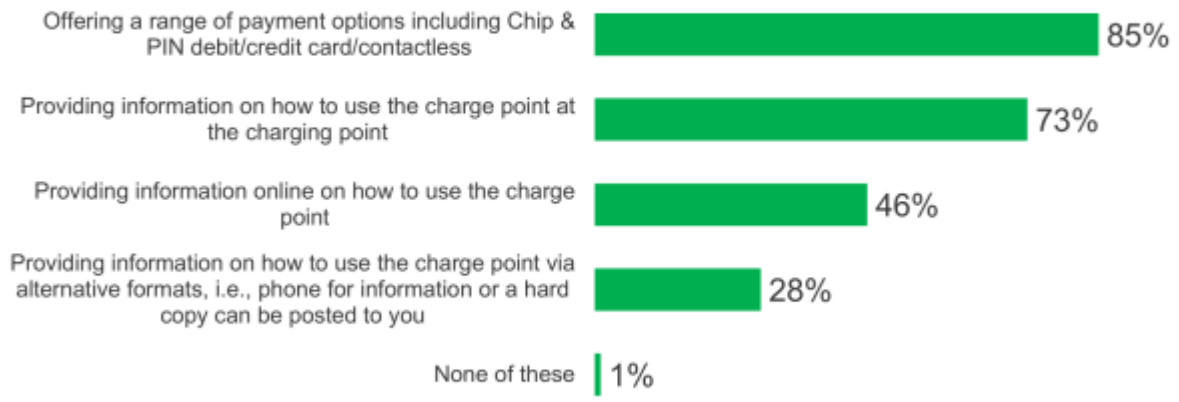
Cognisense **Q. Which, if any, of the following do you believe it would be important for a code of practice for charge point operators to commit to?**
Base: all electric vehicle drivers (n=589)

3.13 Important commitments for a code of practice for charge point operators (continued)

Close to nine in ten (85%) electric vehicle drivers believed it would be important for a code of practice for charge point operators to commit to offering a range of payment options (Figure 13). Nearly three-quarters (73%) felt that there should be a commitment to providing information on how to use the charge point at the site itself, whilst almost half (46%) believed that there should be a commitment to providing information online about how to use the charge point. Almost three in ten (28%) believed there should be a commitment to providing information on how to use the charge point in alternative formats, such as hard copy.

Those aged 18-34 (54%) were less likely than older individuals to have believed that it would be important for a code of practice for charge point operators to offer a commitment to providing a range of payment options. The same age group was also less likely than older individuals to have felt that there should be a commitment to providing information on how to use the charge point at the site itself (52%).

Figure 13: Important commitments for a code of practice for charge point operators (continued)



Cognisense **Q. Which, if any, of the following do you believe it would be important for a code of practice for charge point operators to commit to?** *Base: all electric vehicle drivers (n=589)*

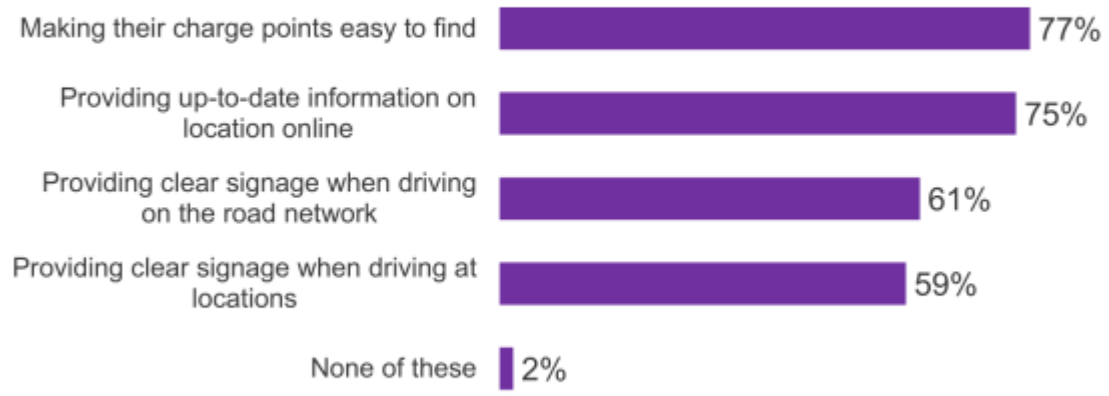
3.14 Important commitments for a code of practice for charge point operators (continued)

Nearly four in five (77%) electric vehicle drivers believed that it would be important for a code of practice for charge point operators to include a commitment to making charge points easy to find (Figure 14). Three-quarters (75%) felt it would be important that a commitment to providing up-to-date information on locations online be included, whilst about three in five (61%) believed it would be important to have a commitment to providing clear signage when driving on the road network. Almost three in five (59%) believed that it would be important to have a commitment to providing clear signage when driving at locations.

Females (84%) were more likely than males (74%) to say that a commitment to making their charge points easy to find would be an important inclusion to a charge point operator code of practice.

For each commitment (at 3.14), those aged 18-34 were less likely than older individuals to believe that their inclusion in a charge point operator code of practice would be important.

Figure 14: Important commitments for a code of practice for charge point operators (continued)

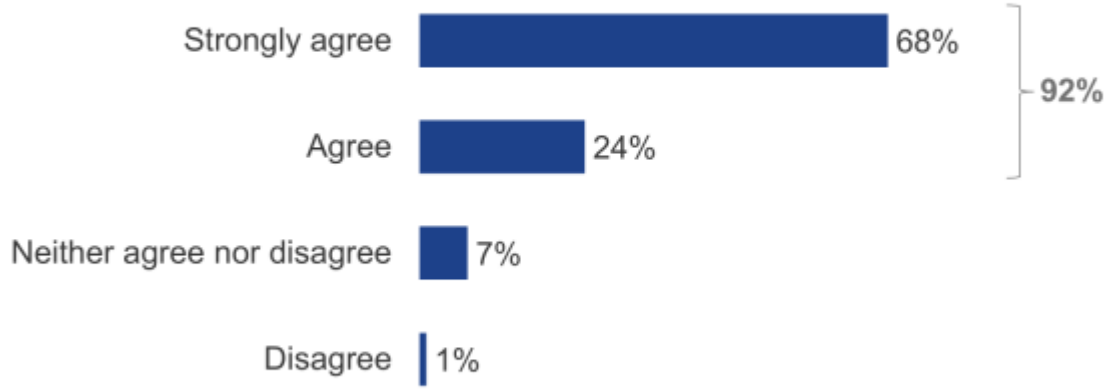


Cognisense **Q. Which, if any, of the following do you believe it would be important for a code of practice for charge point operators to commit to?**
Base: all electric vehicle drivers (n=589)

3.15 Extent of agreement: *Charge point operators should be required to make their pricing available to an independent organisation to display online*

About nine in ten (92%) electric vehicle drivers agreed that charge point operators should be required to make their pricing available to an independent organisation to display online, close to one in ten (7%) were ambivalent, whilst a tiny number (1%) disagreed that this should be the case (Figure 15).

Figure 15: Extent of agreement: *Charge point operators should be required to make their pricing available to an independent organisation to display online*



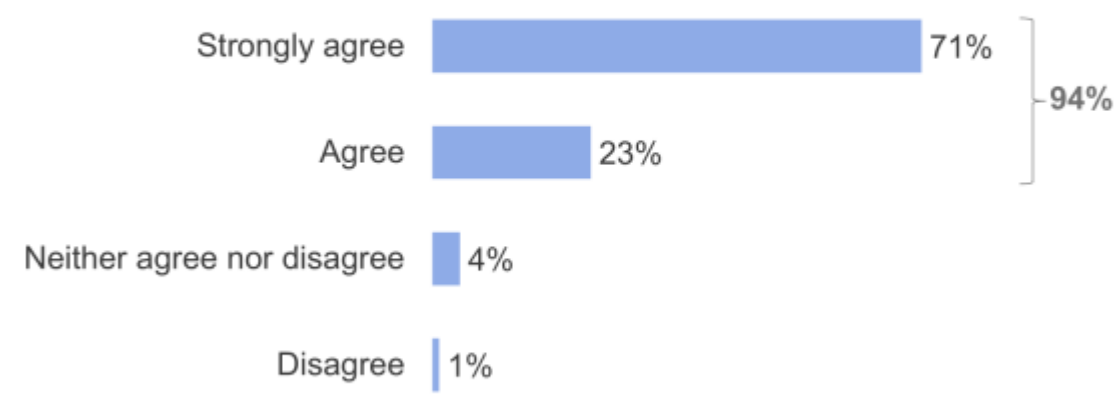
Cognisense **Q. To what extent do you agree or disagree with the following … ?**
Base: all electric vehicle drivers (n=589)

3.16 Extent of agreement: *Electric vehicle public charge points need to be more easily identified like the current forecourt/motorway petrol and diesel digital displays*

More than nine in ten (94%) electric vehicle drivers agreed that public charge points need to be more easily identified like the current forecourt/motorway petrol and diesel digital displays, around one in twenty (4%) were ambivalent, whilst a small number (1%) disagreed that this should be the case (Figure 16).

Those aged 18-34 (81%) were less likely than older individuals (35-49: 94%; 50-64: 95%; 65+: 99%) to have agreed that public charge points need to be more easily identified in this fashion.

Figure 16: Extent of agreement: *Electric vehicle public charge points need to be more easily identified like the current forecourt/motorway petrol and diesel digital displays*



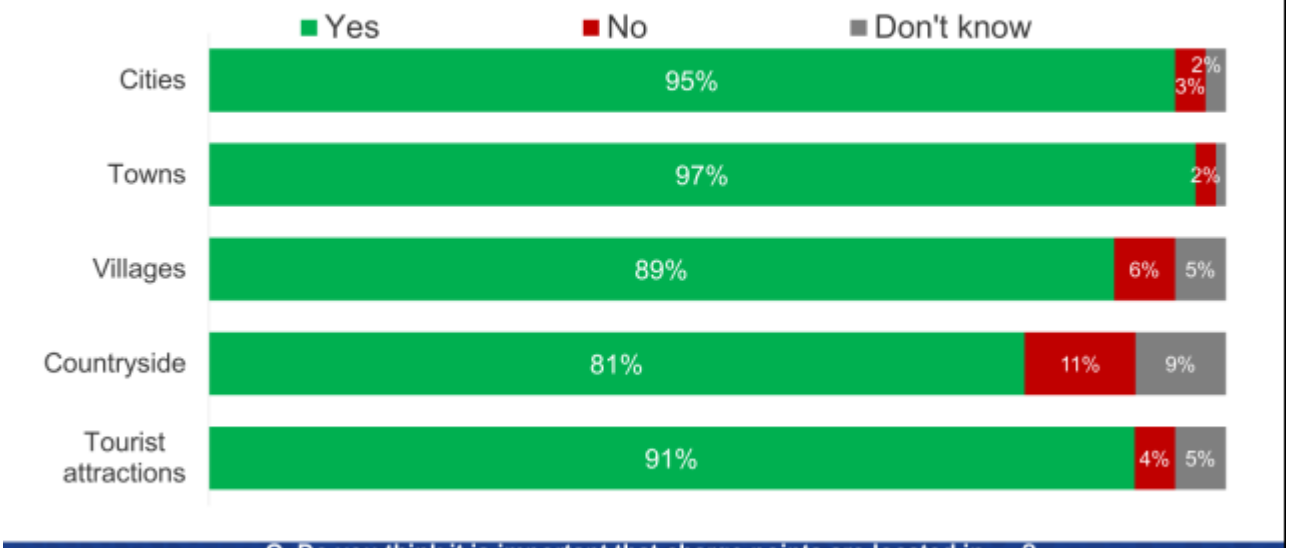
Cognisense Q. To what extent do you agree or disagree with the following … ?
Base: all electric vehicle drivers (n=589)

3.17 Important that charge points are located in cities, towns, villages, the countryside and at tourist attractions

There was almost unanimous agreement amongst electric vehicle drivers that it is important that charge points are located in cities (95%) and towns (97%); around nine in ten felt that it was important that charge points are located in villages (89%) and at tourist attractions (91%), whilst about four in five (81%) felt that it was important that charge points are located in the countryside (Figure 17).

Females (86%) were more likely than males (78%), and those with a disability (92%) more likely than those who were not disabled (79%), to say that it is important that charge points are located in the countryside.

Figure 17: Important that charge points are located in cities, towns, village, countryside and tourist attractions

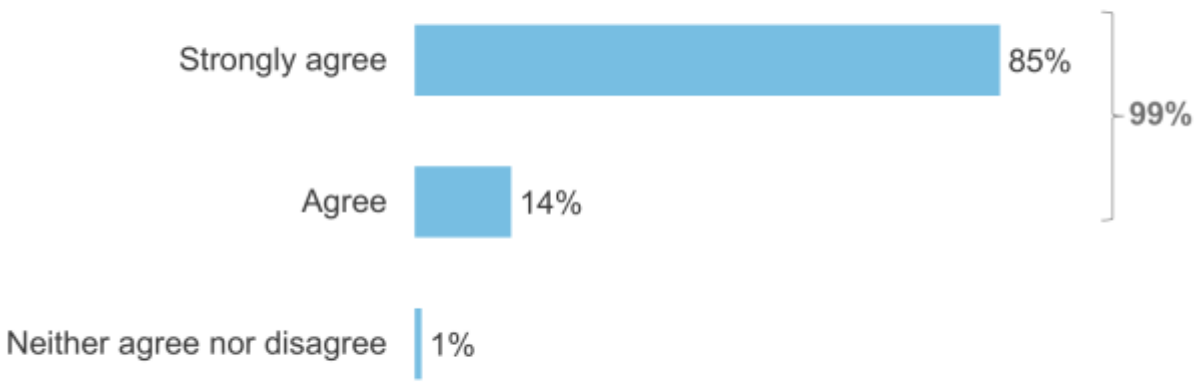


Cognisense
Q. Do you think it is important that charge points are located in … ?
Base: all electric vehicle drivers (n=589)
Note: the chart segment without a data label = 1%

3.18 Extent of agreement: *Paying for public electric vehicle charging should be as easy as paying for petrol or diesel at a petrol station*

There was almost unanimous agreement (99%) amongst electric vehicle drivers that paying for public charging should be as easy as paying for petrol or diesel at a petrol station (Figure 18).

Figure 18: Extent of agreement: *Paying for public electric vehicle charging should be as easy as paying for petrol or diesel at a petrol station*

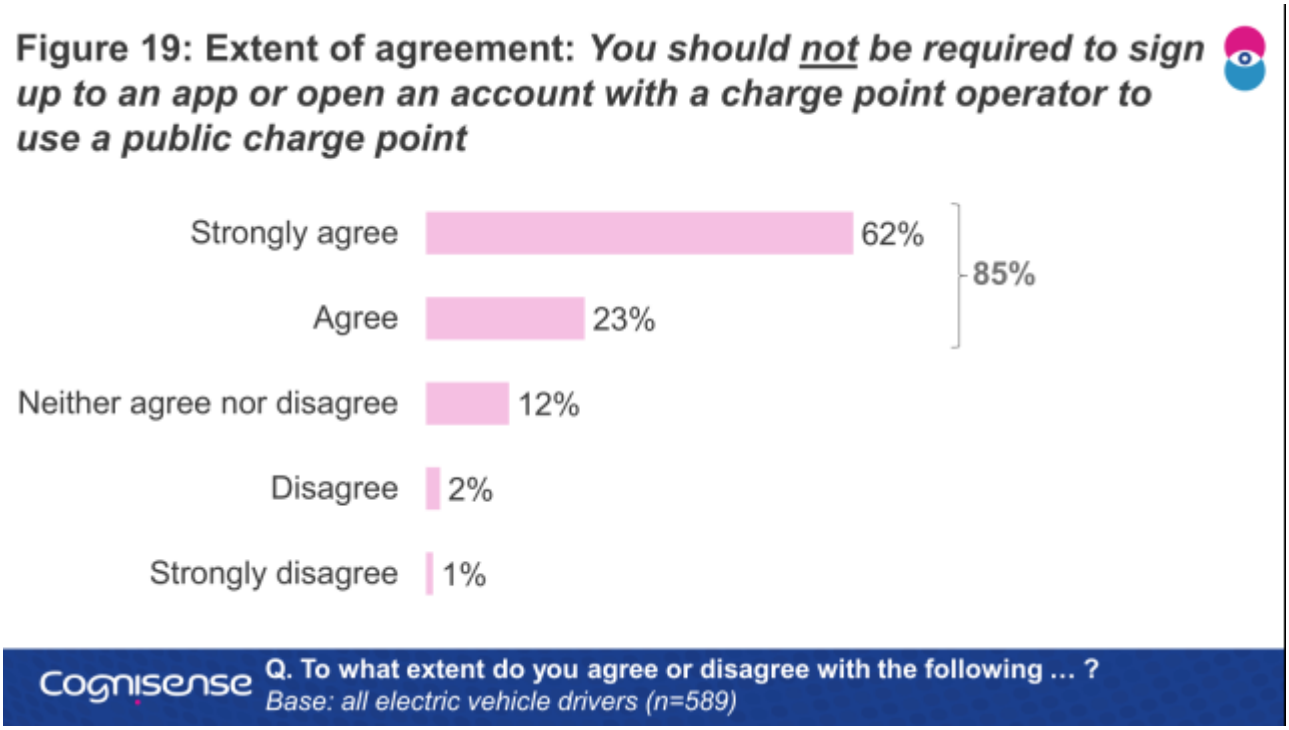


Cognisense
Q. To what extent do you agree or disagree with the following … ?
Base: all electric vehicle drivers (n=589)

3.19 Extent of agreement: *You should not be required to sign up to an app or open an account with a charge point operator to use a public charge point*

Nearly nine in ten (85%) electric vehicle drivers agreed that it should not be necessary to sign up to an app or open an account with a charge point operator to use a public charge point, around one in ten (12%) were ambivalent, whilst a small number (3%) disagreed (Figure 19).

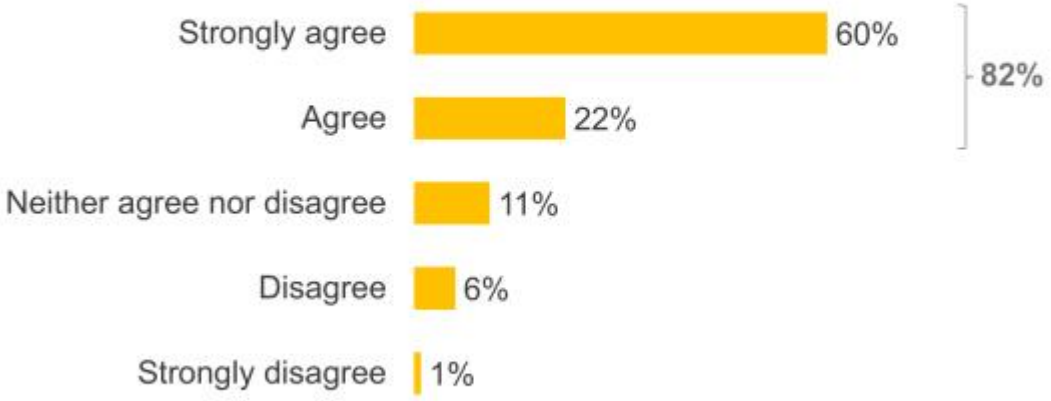
Figure 19: Extent of agreement: *You should not be required to sign up to an app or open an account with a charge point operator to use a public charge point*



3.20 Extent of agreement: *Having to use a pre-pay account or upload credit in advance to use a charge point is frustrating*

Around four in five (82%) electric vehicle drivers agreed that it is frustrating to have to use a pre-pay account or upload credit in advance to use a charge point, around one in ten (11%) were ambivalent, whilst a similar number (7%) disagreed (Figure 20).

Figure 20: Extent of agreement: *Having to use a pre-pay account or upload credit in advance to use a charge point is frustrating*

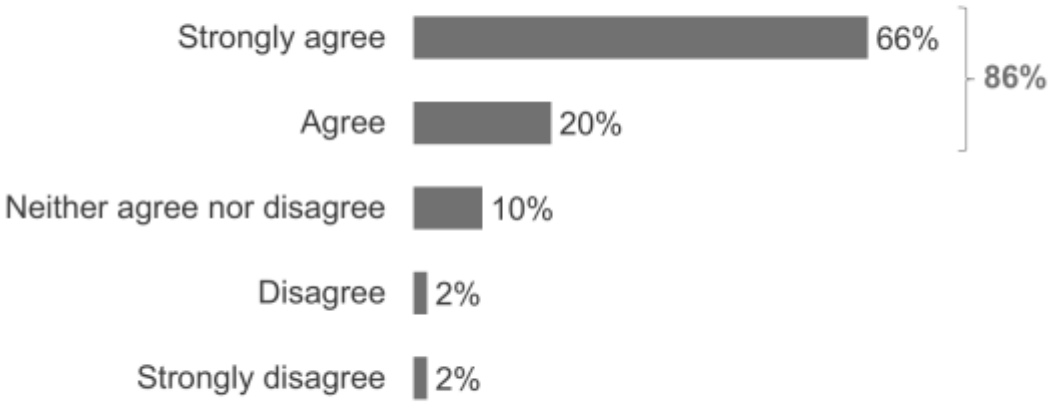


Cognisense **Q. To what extent do you agree or disagree with the following … ?**
Base: all electric vehicle drivers (n=589)

3.21 Extent of agreement: *There should be a single app that can be used at all public charge points*

Almost nine in ten (86%) electric vehicle drivers agreed that there should be a single app that can be used at all public charge points, one in ten (10%) were ambivalent, whilst a small number (4%) disagreed (Figure 21).

Figure 21: Extent of agreement: *There should be a single app that can be used at all public charge points*

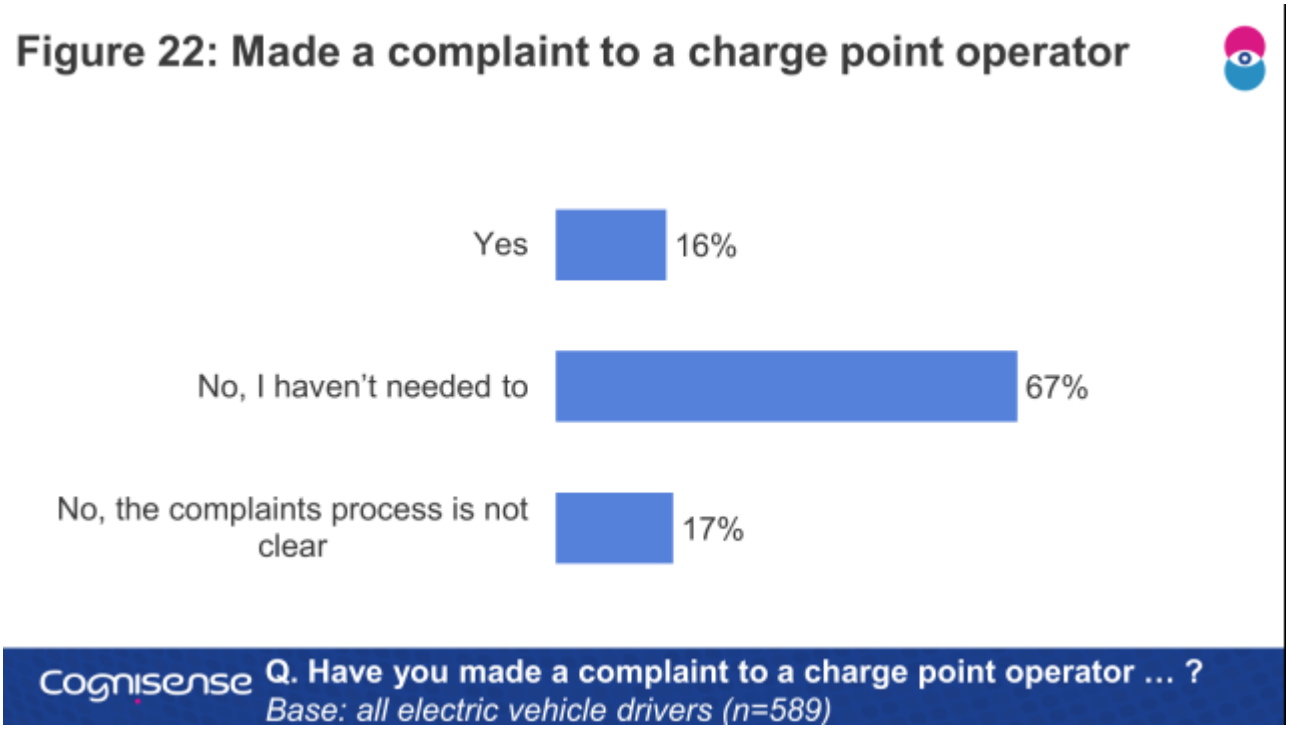


Cognisense **Q. To what extent do you agree or disagree with the following … ?**
Base: all electric vehicle drivers (n=589)

3.22 Made a complaint to a charge point operator

Close to one in five (16%) electric vehicle drivers had made a complaint to a charge point operator, a similar number (17%) had not made a complaint as they felt that the process for doing so was not clear, whilst about two-thirds (67%) had not needed to make a complaint (Figure 22).

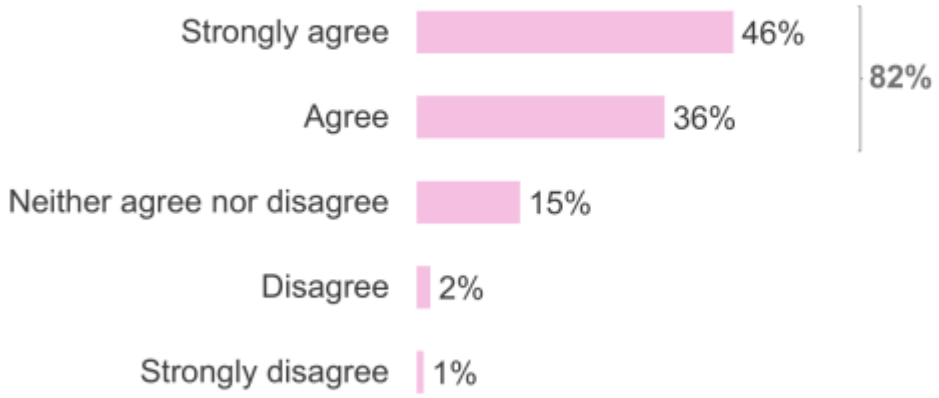
Figure 22: Made a complaint to a charge point operator



3.23 Extent of agreement: *There is a role for an independent complaint handling body to escalate a customer service-related complaint to regarding electric vehicle public charging infrastructure*

Around four in five (82%) electric vehicle drivers agreed that there is a role for an independent complaint handling body to escalate a customer service-related complaint to regarding public charging infrastructure, close to a fifth (15%) were ambivalent, whilst a small number (3%) disagreed that there was a role for such an organisation (Figure 23).

Figure 23: Extent of agreement: ***There is a role for an independent complaint handling body to escalate a customer service-related complaint to regarding electric vehicle public charging infrastructure***



Cognisense **Q. To what extent do you agree or disagree with the following … ?**
Base: all electric vehicle drivers (n=589)

4 Findings from interviews with electric vehicle drivers

4.1 Charging at home

All participants had experience of using the public charging infrastructure. However, all but one had access to a home charger and used it for most of their charging needs.

"Vast majority of car charging done at home. We have an electric pod at the side of the house. Only tend use a public charging point when doing long journeys … try to avoid charging in the middle of a trip."

"All charging done at home. I put the car on the charger every other evening. No pod at the house … have an adaptor which allows the car to plug into a standard household plug in the garage which creates a trickle charge, but the car only ever has partial charge."

"Charge mostly at home. In the summer, we would use the public charge network more often as we are out and about with the kids, going to the caravan. We have the Economy 7 meter and electric meter installed so the electricity rate is 17/18p between the hours of 2am – 9am. You can schedule your car to start charging during those times … charging at the cheaper rate."

"Predominately charge at home … probably split 90/10 home to public. Convenience and expense are the main reasons for charging at home … home charging is the cheapest means of charging an electric vehicle … using Economy 7, mainly charging overnight to take advantage of the better rates."

4.2 Number of public charge points, legacy devices

Participants cited the lack of available charge points (particularly of the rapid variety) and the quality of legacy devices as issues when using the public charging infrastructure.

"I believe there's about 300 public chargers in NI which is way too few. When you look at the app, there is undoubtedly a concentration around Belfast and towards Antrim."

"The ESB charging points are not great. A lot of the earlier, slower types are not heavily in demand anymore. When you see one, they tend not to be occupied. ESB started charging [money] from April … those charge points were OK when they were free … are you really going to pay for a slow charge? Where the public infrastructure is lacking is with the need for faster charging points".

"Eighteen months ago, all public charging points were free as it was communicated that the infrastructure wasn't there so there wouldn't be a charge. Since April, they charge us, but there has been no additional infrastructure and the machines have not been upgraded … as an NHS worker, I have access to free NHS chargers; however, there are not enough of them. Recently, more electric vehicle NHS cars have been introduced but no more chargers, so I am forced to use public points, but there are not enough of those either."

"There are very poor quality ESB chargers that were free until earlier this year. People were using them because they were free, but they were not good chargers."

"If there was series of 150 chargers throughout Northern Ireland, that would be brilliant, but that's not the case. Anything over 50 is considered a 'rapid' … these are good for giving a bump while you get a coffee, but there needs to be a lot more truly rapid chargers … not the stock that ESB were offering."

4.3 Ease of locating charge points

There were mixed views amongst participants regarding the ease of locating charge points: some found the process very frustrating, others felt that through experience they knew where the charge points that they liked were located. Most participants were familiar with Zapmap and found it easy to use, however some noted that there were information gaps when using the app. All participants were in agreement that planning was required when using an electric vehicle, particularly if travelling long distances and/or somewhere unfamiliar.

"Having to look for one [a charge point] and then hope that there is one free would cause anxiety, especially if in a rush."

"You get to know where the charge points you like are located … if you are driving the same roads, you know where the chargers are on your journeys."

"In the same way that you know where petrol stations are along the routes that you normally travel, you will know where your electric vehicle charging points are."

"I have downloaded the Zapmap app and to be fair, it's pretty easy to use, but it is an incredible inconvenience to try and search the app when you are in the middle of a journey."

"If you are into it [electric vehicle usage], you know you need to look on Zapmap and that will detail most of the chargers."

"There is an app called Zapmap … you can see the chargers available via the app, but when you actually go to the location, a lot of the chargers are different … they run off a different app, or a different payment system, then you have to create an account."

"You need to do your research before you leave the house to assess a suitable [charge] site on your journey route, then keep your fingers crossed it's available when you need it and actually working."

"If travelling somewhere unfamiliar, I would definitely research the fastest charge points on the journey."

4.4 Urban vs rural provision of charge points

There was agreement amongst participants that there is a lack of charge points in rural areas.

"Suspect there are very few outside the main towns and cities."

"Provision of rural charge points is poor … I do not know of any charge points in my local town … which is why a charger at home is essential for me … I am too rural to have considered the move to electric vehicle without a home charger."

"There is definitely a lack of provision of charge points in rural areas."

"Move out towards Mid Ulster, Tyrone, Fermanagh direction and they [charge points] seem to be few and far between. If I'm travelling west or south-west, I have no confidence in the network availability so take our diesel car instead. I suspect those living in rural areas are more likely to have off-street parking and therefore access to a charging point at home, but if not, then I believe rural areas really have a difficulty."

"There are large geographical areas without coverage."

4.5 Charge points not working

Most of the participants had encountered charge points that were not functioning.

"Have had an experience recently whereby the charger was out of operation in Belfast City Centre. To find an available point is hard enough, but to then find it out of operation is soul-destroying."

"Charge points not working is experienced regularly enough … [though], it's getting better the more they come about … a couple of new companies, like Weev, have invested into it."

"Experienced issues with ESB chargers, which are of poor quality and have not been improved. I walked past a charger in Belfast that was off for months and was covered with a black plastic bag. It is not unusual for legacy ESB chargers to be broken … it wouldn't be unusual for the app to say one of these charge points is available but when you arrive it's out of order."

4.6 Charge points blocked by ICE (internal combustion engine) vehicles, penalty charges

Most of the participants had experienced charge points being blocked by ICE vehicles and were in favour of the issue of penalty charges to the owners of such vehicles. However, there were questions as to how penalty charges could be enforced.

"I have witnessed this [ICE vehicles blocking charge points] frequently … difficult to enforce [use of electric vehicle spaces by ICE vehicles] … car park owners do not deal with it … the police don't deal with it … there is nothing you can do."

"Totally agree there should be penalties for blocking an EV bay, but if you're not charging you would then be relying on someone catching you … if the penalties are not severe, then it's not going to work. Even parking tickets at £40 odd quid don't put everyone off double parking [on double yellow lines]."

"Penalty charges are fair. The spaces are marked clearly … if you park an ICE vehicle you should get a PCN in the same way that you would if you parked on a double yellow line … that's a deterrent. People who park ICE vehicles know that they

shouldn't be in those spaces ... nothing has happened to them. Until people start getting tickets, they won't stop."

4.7 Queuing at charge points, charge points blocked by electric vehicles not charging, electric vehicles overstaying, overstaying fees

Some participants had experienced queueing at charge points, but most believed that this is rare and easily manageable.

"Have had to wait in a queue at Tesla for the superfast chargers; however, because of the speeds, the turnaround is fast … it's an orderly process. People wait in their cars and move quickly; they are not leaving their cars to go for a coffee."

"I have not experienced many queues … on the app, you can see if a charger is available in advance … you know before you go if someone is using it and can plan around it."

Some participants had encountered charge points being blocked by electric vehicles not charging, but felt that this did not happen often.

I know of electric vehicles not charging blocking spaces, but I believe this is rare … there is a bit of 'gentlemanly conduct' with electric vehicle charging … people tend not to use the spaces opportunistically … if the cable is out, an attempt to use it has probably been made.

All participants had experience of electric vehicles overstaying and all were in favour of fees being charged for doing so. One participant suggested that there should be a means of disconnecting an electric vehicle which has reached its full charge.

"Many people are using the point for up to an hour and a half which creates a massive bottleneck ... there needs to be heavy fines communicated for anyone going over the limit."

"I completely accept overstay charges. Charge points are meant to be public … if it's a rapid charge you are not meant to be staying there for a long time … overstay charges will help prevent queues … not too much of a problem at the moment, given the small number of electric vehicles on the road. Charges tend to be £10, £15, £25 … they act as a deterrent to staying."

"I think overstay charges are OK … I don't mind that. Probably comes down to my use of them [charge points] … going to the superfast ones … generally you don't need to leave your vehicle … the rotation on them is quite high. For Tesla, anything over 5 minutes gets charged … their overstay window is quite small. The penalties for overstaying are expensive."

"If another car is plugged in and fully charged, there is no way of disconnecting it to free up the charger. There should be a means of automatically disconnecting."

4.8 Accessing information on price, knowledge of price per kWh before charging, transparency of pricing, paying for charging

Knowledge of price per kWh and understanding of pricing varied considerably amongst participants, with some very confident and others struggling to comprehend the details.

"If you are driving an electric vehicle, kWh makes sense to you. You get to know it … it's just a different metric."

"You know the kWh charge before you start. It is understood that kWh is how you are charged … like pence per litre for diesel or petrol. You get used to it as an electric vehicle driver … price per kWh varies depending on the type of charge point and how quickly it can charge … superfast tends to be about 59p per kWh down to your cheap ones being 37p per kWh."

"Pricing went from zero to 49p/kWh. It now costs me £20 for a full charge which equates to 120 miles … public electric charging is more expensive than petrol or diesel and my electric vehicle was twice the price of a regular petrol/diesel car!"

"Price is displayed but doesn't make sense to the average person, [in terms of] how much it will cost overall. What does 0.60 per kWh actually mean to the lay person … how many people know how much they pay per unit for electricity in their home? The machine should be able to give you a rough indication of price in pounds based on 50% charge to 80% charge."

"Not sure people have a clue what is meant by kWh … I'm only interested in the overall cost … people will be able to compare prices, but I don't think they will understand price per kWh. I'm sure most people don't know the price of their home electricity per kWh or many kW they use in a typical quarter."

There was agreement amongst participants that the price at charge points is not as transparent as the prices displayed typically at petrol stations.

"Definitely not [as transparent as petrol stations]. The price for petrol is clearly communicated on billboards and can be spotted from 500 yards away. Based on other petrol stations you can see at a glance whether the price per gallon/litre is broadly in line with the competition. More importantly though, as you fill up your car, the monetary value is displayed on the screen, so you can make a judgement on what resources you have on your card/in your wallet."

Some participants had experienced issues when trying to pay for charging via apps or by using a charge card – for each of these participants, contactless payments were preferred.

"Tried to do a one-time payment through the ecar connect app and it was a total nightmare. How do they expect people to do this, especially when sitting in a car under pressure? This will prove a problem for so many people … one-time payment needs to be much more consumer friendly. Why can't you just flash your debit or credit card like at a petrol station."

"Have had difficulties trying to pay through the ESB app. Never had issues paying via contactless."

"Poor system at present … have to get a charge card that you top up … to receive the actual card took a week after purchasing the car so couldn't use the car until the card was received. It's a problem if you have to top up your card and have no internet connection in a rural area. The payments should be contactless. Also, different charge points use different providers … if you don't have the card for that provider, then you can't use the charging point. Why can't it just be direct like buying petrol or diesel?"

4.9 Charging speed advertised vs available charging speed

Knowledge regarding charging speeds varied amongst the participants, with some being very well informed and others having very little understanding.

"Generally, you get the advertised speed. Where it drops a little is when all of the bays are being used … not sure if that's to do with the electricity being spread over more units. When you drive an electric vehicle, there is a need to pre-condition the battery to use the superfast chargers … I encountered that early … hadn't pre-conditioned and expected 170 miles in 15 minutes, the car ended up charging at a lower rate to protect the battery. Those are learnings."

"The ability of the car to take a higher level of charge requires the battery to pre-condition, to heat up to take a higher rate … if you haven't done so and visit a charge point, you will take in electricity at a slower speed … the speeds are as advertised in most instances, but there are environmental factors which can impact on your vehicle being able to take the advertised speed. Never had too many issues."

"The top charging speed is only offered at service stations and can only be used on limited electric vehicles."

"I really don't know. I think there are three charging speeds with varying prices for each … don't know enough about the detail, just glad to get a slot and get the car charging in truth."

4.10 Accessibility of charge points: size of parking bays, weight of charging cables

Only one participant had an issue with the size of the parking bays at charge points.

"The bays are too small. Charge points tend to be tucked away and obstructed by a wall or tree on one side and if the person beside you hasn't parked right, it can be very difficult to maneuver in and out of the car. There is not enough availability to go search for another space when this happens."

All participants acknowledged that rapid charger cables are heavier than the standard version and although none of them struggled to use them, they all believed that this could pose challenges for people with accessibility issues.

"The greater the charge, the heavier the cable. I can see how this would be a problem for people with disabilities or in a wheelchair."

"No issues for me, but the superfast charging points are bulky units with heavier cables which need to be lifted up and out of the socket … if somebody was frail or elderly, they might struggle."

"The weight of the higher charge cables is heavier … imagine that some people may have some difficulty using them as a result."

4.11 Personal safety when using charge points

Most participants noted personal safety concerns when using public charge points, with this felt to be a particular concern for women.

"Personal safety is a serious concern, especially for females. If you don't leave your car to go elsewhere, which won't be possible in rural locations, you're actually loitering around or sitting in your car which leaves you vulnerable … some of the locations I have been at are also quite dodgy, especially in Belfast City Centre, with people hanging around car parks, drunks, etc."

"This is going to be a massive problem, especially for women. Not sure I would feel completely comfortable myself charging in a city or rural location at night. There's no way my wife would do it, especially with the kids on board … sitting stationary at a charging point would only make you more vulnerable."

"Points can be secluded with little lighting. I would not like my wife sitting and waiting for the car to charge in some of the areas where points are available. Due to lack of charging point availability, sometimes you are required to use them at unsociable hours … the safety of person and car is a concern."

"A lot of the ESB chargers are in bad locations in random parts of town centres. If I was going to charge at night and they were poorly lit, I wouldn't use them. If you absolutely had to charge, you would be out of your car for 30 seconds then back in with the door locked."

Most participants felt that charge points would benefit from CCTV coverage.

"Although it does little for you at the time, it would certainly act as a deterrent for some criminals. As you're negotiating the charging machine, your car may be open, while you search your purse or wallet for cards, etc … a criminal's dream, unlike the typical petrol station which I regard as pretty safe … with plenty of cameras, other consumers filling up or shopping".

"To prevent against fraud, vandalism and for personal safety."

"It would be preferable to have CCTV but no choice due to lack of availability."

Some participants believed that charge points located in busy areas could be beneficial, but that it was not guaranteed to make them feel safe.

"This very much depends on the types of people around. A lot of areas are perfectly fine and do make you feel more at ease, others not so, for example, Bruce Street car park, which feels very unsafe, with lots of [people] loitering, watching."

"Obviously, the more people around the better, but might not be so good in a city centre at night when the people around may include criminals loitering, looking for an opportunity."

For some participants, the weather proofing of charge points would be welcome.

"An absolute necessity to protect not only the equipment, but also provide shelter for consumers."

"They need to recreate the safety and comfort that a petrol station provides. Covered and very well lit."

4.12 Reporting charge point issues

Two participants had reported charge point issues via apps and were aware that they could have done so via telephone.

"[I] reported a broken charge point, which was easy to do via the app. I never received a reply but didn't expect to either. You can make a complaint via app or via telephone number on the charge point."

"Thumbs up or down via the app. Could report it at source using the number … pretty easy to do."

Most participants were in favour of an independent body to whom complaints could be escalated, though one participant questioned what it would add at this stage.

"I believe this would be a very important channel for consumers to have access to and believe it should be independent. My understanding is that ESB are managing the roll-out and network. NI consumers have little experience of them directly and therefore need confidence in our ability to challenge."

"I think an independent body is important in order to protect consumers."

"I suspect this will be needed."

"There would be merit in an overarching body."

"An independent organisation couldn't hurt, but not sure about the value that would be added".

4.13 Information about charge points

Most participants felt that there is a lack of information about charge points and would welcome more detail.

"There is nowhere near enough information about them. This will have to change as demand increases. As we head towards 2030 (or 2035) consumers are going to need to get up the learning curve quickly. One fears for those with no charging at

home, those with disabilities, or the elderly being expected to adopt a new electric system which at the moment is far from intuitive."

"Very little information at all. Suspect NI will lag behind the curve as usual … government pushing people to switch to electric as it is the latest big thing and they have targets to hit, but little thought given to the impact on consumers."

"There should be more information on the charge points and also charge point operators should be communicating their plan to deal with the current lack of availability."

4.14 Charge point operator code of practice

The majority of participants were in favour of a code of practice for charge point operators.

"There is definitely going to need to be a code of practice for this, but … it needs to be in consumer-friendly language and accessible to all. There needs to be a transparent channel of accountability."

"Makes perfect sense and probably absolutely necessary so there's consistency."

"Definitely need a code of practice … frustrating when cars are left fully charged!"

"Definitely a good idea. It's important to have the consistency factor … with standards, commitments to uptime [reliability], repair schedules, announcements of price changes."

One participant was uncertain about the value a code of practice would have at this stage, feeling instead that as the infrastructure grows, the competition between providers would lead to self-regulation.

5 Findings from interviews regarding disability considerations

5.1 General thoughts on electric vehicles and charging

All participants believed that usage of an electric vehicle would only be practical if home charging was available. There was agreement that using an electric vehicle requires more planning in general than using a petrol or diesel vehicle, with a number of factors to be considered before making a journey such as whether public charging will be required and the location of charge points on the route. Those with disabilities were felt to have additional considerations, such as the accessibility of charge points and the availability of assistance.

"Having an electric car is more complicated. It requires thought and planning before you make your journey."

"How long will the charge last, how long will it take to charge, will there be somewhere to sit, are there going to be toilets … so many things required in order for me to have a safe, reassured journey."

"If trying to find an accessible charge point is anything like trying to find an accessible toilet, there will be great difficulty."

5.2 Views on a code of practice for charge point operators

All participants would welcome a code of practice for charge point operators, which it was felt would bring standardisation to the charging network. However, there was agreement that the needs of disabled consumers should be given due consideration from the outset and not treated as an afterthought. There was a feeling that this would be best achieved by involving those with disabilities/advocacy groups at the early stages of development, so that the requirements needed for accessibility, often overlooked by those who are not disabled, would be included from the start. There was one suggestion that charge point operators would benefit from accompanying disabled consumers to some of their charge points to better understand the challenges that those with disabilities could face when using them. Participants believed that a charge point suitable for use by those with disabilities would also be suitable for use by those who are not disabled, whilst the reverse would not necessarily be the case.

"What is required in the system is complete consistency … a code of practice will be necessary so that all suppliers conform."

"A code of practice needs to take into account people with disabilities … we can be overlooked for an attitude that suits the greater number of people … the needs of people with disabilities cannot be an afterthought … needs built in from the start."

"Disability groups need to be part of the conversation … at the planning and development stage."

"People who don't have disabilities don't see steps."

"Research needs to be done with these groups … 'accompanied user research' so the charge point operators could observe the difficulties across a whole range of different disabilities."

"If a charge point meets the accessibility needs of those with disabilities, then those who do not have disabilities will be able to use them as well."

5.3 Content of a code of practice for charge point operators in relation to those with disabilities

There was agreement amongst participants that for those with a disability, it would be particularly important that a code of practice included commitments to the following:

- lowering/removal of kerbs at charge points to enable access for those with mobility issues;
- ensuring charge points contain adequate space for maneuvering a wheelchair;
- availability of a 24-hour helpline to address emergencies;
- weatherproofing charge points to provide protection from the elements during the process of connecting an electric vehicle – a process which may take longer for those with a disability;
- providing lighting and CCTV at charge points to offer reassurance regarding personal safety;
- installing charge points in locations close to amenities in order to reduce a sense of isolation and afford the opportunity to seek assistance from others, if needed;
- 99% uptime reliability of charge points and meaningful enforcement of penalties for overstaying to reduce the likelihood of needing to travel to multiple locations in search of a charge;
- supplying high-speed charging cables that are lighter than those available currently, making them easier to lift for those with mobility issues; and
- making contactless an option at all charge points to make paying more straightforward.

"A charge point up a step would make it virtually impossible for me to use … when you are in a wheelchair you are that much lower … it can be inaccessible."

"Not to feel vulnerable … CCTV and lighting would help … don't want to be looking over my shoulder constantly."

"I would feel intimidated if it [charge point] was somewhere where there was nobody around … if I got into trouble and couldn't ask for help."

6 Findings from interviews with stakeholders

6.1 A code of practice for charge point operators

Amongst participants, there were some who would welcome a code of practice for charge point operators, some who would be in favour of one so long as it did not have a negative impact on charge point roll-out and/or investment in infrastructure, and some who were sceptical regarding the value of such a code of practice.

"A code of practice is something that needs to be looked at … all competitors should be up to the same standard."

"A code of practice needs to come in … we need a checklist of things to tick off when new charge sites are being scoped out."

"We like the consumer protections [that would be offered by] a code of practice, as long as they don't hold up or delay the catch-up [with GB] that we have to do in regards to charger roll-out … as long as they don't put off investors in the infrastructure … private investment is driving progress [with charge point roll-out]."

"With new players in the market and competition, I don't believe there is a particularly strong argument for a code of practice as competition will sort out issues naturally. If your chargers don't work and are not readily available in good locations, you won't survive … [a code of practice] is a nice to have rather than anything that's going to provide material benefit."

6.2 Content of a code of practice for charge point operators

Most participants agreed that a code of practice for charge point operators should contain commitments relating to reliability, payment, pricing, accessibility and safety. However, it was felt that the specifics of a code of practice must take account of what can be provided feasibly by a charge point operator, both practically and financially, and that a balance must be struck between what consumers would like and what charge point operators are able to supply.

"There are limits to what can be done … it has to be commercially viable to implement any code of practice requirements."

"Some things cannot be changed. There is no industry fix for cable weight at the moment [for example] … that will change, I'm sure … somebody will come up with a lighter cable at some point, but it's not available at the moment."

Most participants felt that numerous bureaucratic and legal issues, along with a lack of uniformity regarding the requirements of councils and landowners in Northern Ireland restrict what charge point operators are able to achieve with existing infrastructure and hinders the development of the charge point network.

"Unique issues in NI hold up progress … too much red tape … seriously hampers planning for CPOs."

"Laws, regulations and red tape restrict what is possible for CPOs to provide."

"[There is a] lack of consistency regarding planning permission across the councils."

"Councils own massive chunks of the land … a lot of landowners own the land that the charge points are on … there is no one-size-fits-all policy for the councils and landowners."

"Sometimes problems are not always the fault of the CPOs … landlords can be a problem."

Most participants agreed that government and those involved in producing a code of practice should work closely with charge point operators to develop it, so there is understanding between all parties as to what is required to improve and develop the charging infrastructure.

"Working with government to determine what needs to happen to deliver a safe, reliable and sustainable [charge point] network for customers … a code of practice would be a great incentive/guideline for councils to have a reference to … and will show what they need to provide … to push the charging networks ahead."

"Government input will [also] be required for a code of practice and all councils will need to feed into it."

"Spend [time with] CPOs … look at all the barriers and hurdles faced, the stakeholders that need to be engaged with [in order to get] a better understanding of what is involved."

"Bring CPOs with you [rather] than get their backs up."

6.3 Education of electric vehicle drivers and considerers

All participants believed that there are significant knowledge gaps amongst electric vehicle drivers and considerers, and that education regarding the fundamentals of owning an electric vehicle is required urgently. It was felt that better informed electric vehicle drivers would be less likely to encounter many of the problems that a code of practice would seek to protect them against.

"Newbies [are] hitting the electric vehicle market every month, and they need educated … the car salesman only tells them how to start and stop the thing … at the moment, you have a huge range of customer knowledge, from the newbies to those who have been doing this for several years."

"When people get their new electric vehicles, they are not having the necessary information explained to them … preparing for ownership documents are required."

"Customers need to be educated regarding EV usage … they need to understand what they can get from a home charger and the range of the car they are buying … education is required regarding battery charge … charge to 80% is fine [but] people want 100% … [the batteries] are not built for 100% charge … and customers do not need it!"

"A massive education piece for drivers using the public network is needed regarding etiquette … you cannot go peer through someone's window at night to see how much charge they have left to pressure them out of their bay … you do not need to charge 80% - 100% if you are out and about on the road as this takes too much time … 'icing' should be considered as bad as parking in a disabled space."

"Speed of education needs to match the speed of consumer uptake."

6.4 A role for an independent body for the escalation of complaints

There were mixed views regarding a role for an independent body for the escalation of complaints, with some in favour, some doubtful about the potential effectiveness of such a body, and others unsure of its relevance.

"Any company should be able to be independently reviewed … there should be accountability."

"Definitely a role for it … on the enforcement side, would it be able to get any results?"

"Best for customers to go directly to the CPO … [an independent body] adds a layer that may not be relevant. Does the size of the [current electric vehicle] market merit it?"

7 Findings from survey with considerers

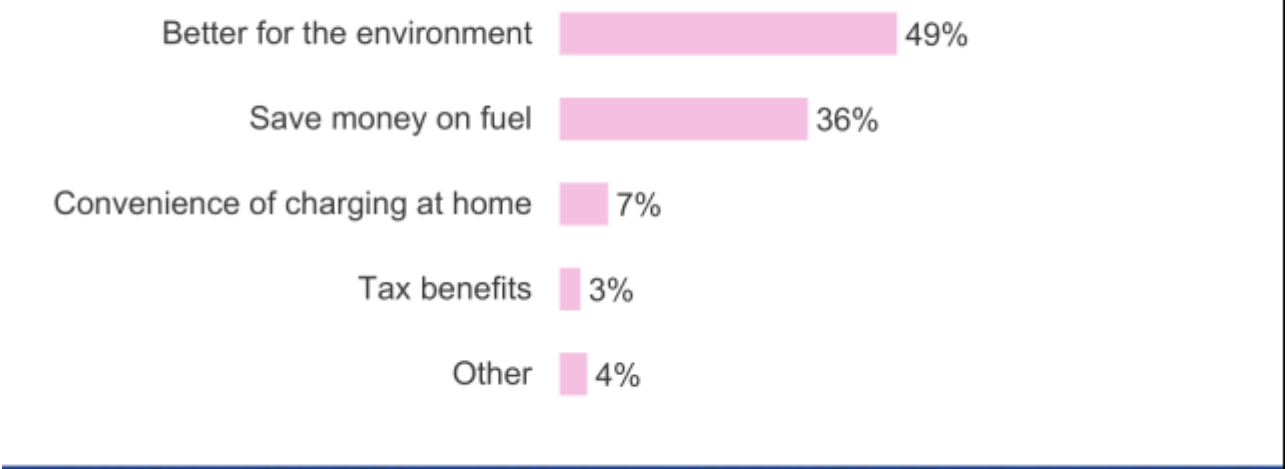
This section of the report provides detailed analysis regarding the findings from the research conducted with considerers.

Please note that as a result of the rounding of figures or the use of questions for which multiple answers could have been given, the sums on charts may not always total 100 per cent.

7.1 Main reason for intending to switch to an electric vehicle

That they are better for the environment was the main reason for intending to switch to an electric vehicle for almost half (49%) of considerers, whilst nearly two in five (36%) were intending to switch to save money on fuel (Figure 24). Close to one in ten (7%) considerers were thinking of switching to an electric vehicle for the convenience of charging at home, whilst a small number (3%) were intending to switch for tax benefits.

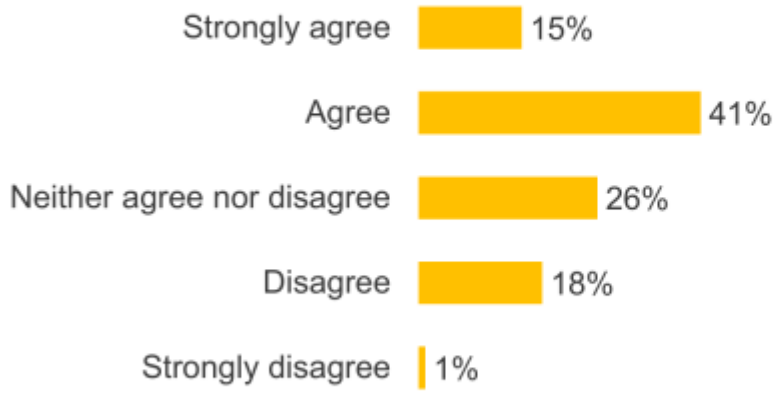
Figure 24: Main reason for intending to switch to an electric vehicle



7.2 Extent of agreement: *It has been easy to find information about electric vehicles*

Nearly three in five (56%) considerers agreed that it has been easy to find information about electric vehicles, around a quarter (26%) neither agree nor disagreed, whilst almost a fifth (19%) disagreed (Figure 25).

Figure 25: Extent of agreement: *It has been easy to find information about electric vehicles*

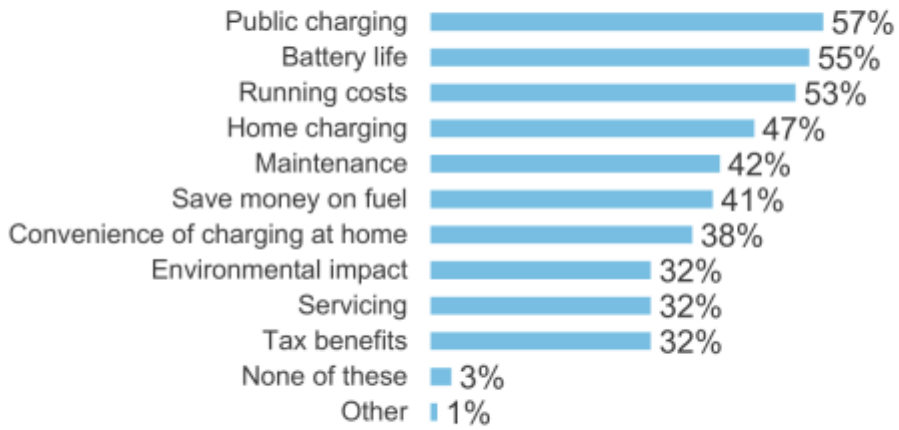


Cognisense **Q. To what extent do you agree or disagree with the following … ?**
Base: all likely to consider swapping to an electric vehicle in the next 12 months (n=148)

7.3 Electric vehicle topics you would like more information about

The topics that considerers were most likely to want more information about were public charging (57%), battery life (55%), running costs (53%) and home charging (47%) (Figure 26).

Figure 26: Electric vehicle topics would like more information about



Cognisense **Q. Which, if any, of the following would you like more information about?**
Base: all likely to consider swapping to an electric vehicle in the next 12 months (n=148)

7.4 Where you would go to get more information about electric vehicles

The sources of information most likely to be used by considerers to get more information about electric vehicles were car dealerships (43%) and car manufacturers (36%) (Figure 27). Around a quarter of considerers would look for more information from government (26%), EVANI (25%), independent organisations (24%) or friends/family (23%).

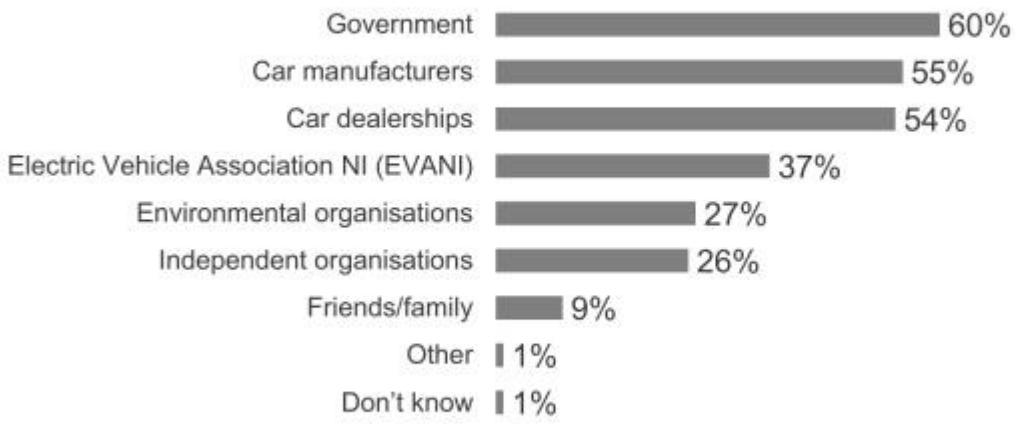
Figure 27: Where would go to get more information about electric vehicles

Cognisense **Q. Where would you go to get this information?**
Base: all likely to consider swapping to an electric vehicle in the next 12 months (n=148)

7.5 Who should provide the information sought on electric vehicles

Government (60%), car manufacturers (55%) and car dealerships (54%) were the sources that considerers were most likely to feel should provide the information that they seek about electric vehicles (Figure 28).

Figure 28: Who should provide the information sought on electric vehicles

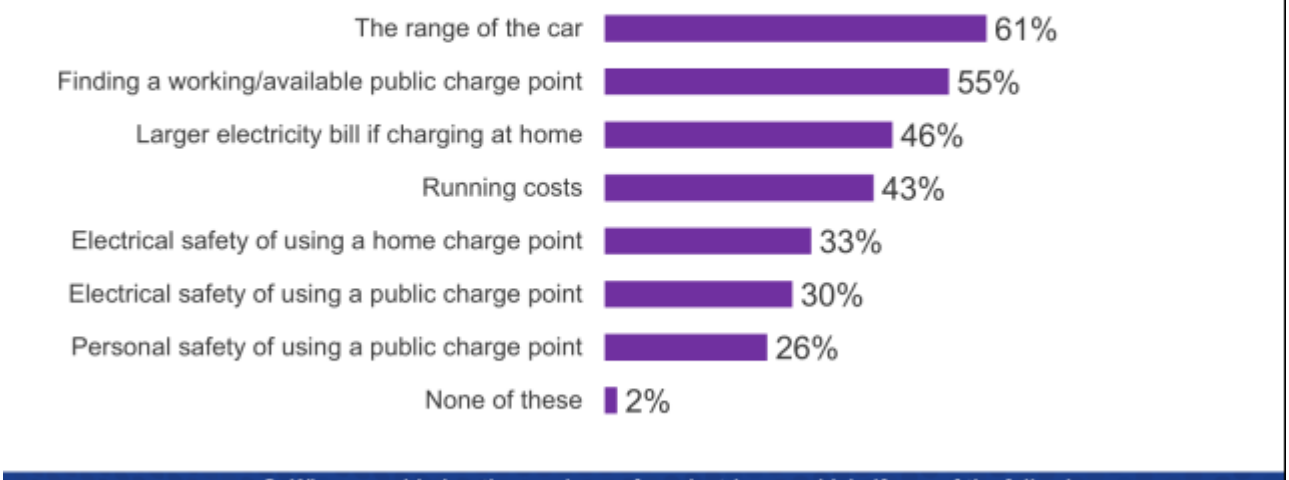


Cognisense **Q. Who do you think should provide this information?**
Base: all likely to consider swapping to an electric vehicle in the next 12 months (n=148)

7.6 Concerns when considering the purchase of an electric vehicle

About three in five (61%) considerers cited the range of the car as a concern when thinking about purchasing an electric vehicle, whilst a similar number (55%) were worried about being able to source a working/available public charge point (Figure 29). Close to half (46%) of considerers were concerned about larger electricity bills if charging at home, around two in five (43%) were worried about running costs, a third about electrical safety when using a charge point at home, three in ten (30%) about electrical safety when using a public charge point, whilst about a quarter (26%) were concerned about personal safety when using a public charge point.

Figure 29: Concerns when considering the purchase of an electric vehicle

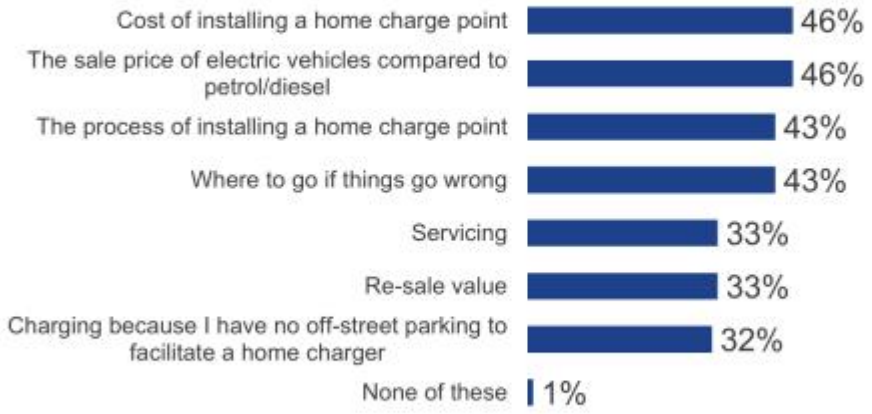


Cognisense **Q. When considering the purchase of an electric car, which, if any, of the following are you concerned about … ?** *Base: all likely to consider swapping to an electric vehicle in the next 12 months (n=148)*

7.7 Concerns when considering the purchase of an electric vehicle (continued)

When thinking about the purchase of an electric vehicle, almost half (46%) of considerers were concerned about the cost of installing a home charge point, whilst the same number (46%) were worried about the sale price of electric vehicles compared to petrol/diesel vehicles (Figure 30). Around two in five (43%) considerers were concerned about the process of installing a home charge point, the same number (43%) about where to go if things go wrong, whilst a third were concerned about servicing (33%), re-sale value (33%) or charging as they had no capacity for charging at home (32%).

Figure 30: Concerns when considering the purchase of an electric vehicle (continued)



Cognisense **Q. When considering the purchase of an electric car, which, if any, of the following are you concerned about … ?** *Base: all likely to consider swapping to an electric vehicle in the next 12 months (n=148)*

8 Conclusions

Findings from the research show that the vast majority of electric vehicle drivers felt that they would benefit from a charge point operator code of practice. Most believed that it would be important for its content to include commitments relating to reliability, location, payment, pricing, accessibility and safety.

The research suggests that those with disabilities would welcome a code of practice for charge point operators provided their needs were given due consideration with regards to the commitments that it would contain. It was felt this would be best achieved by involving those with disabilities/advocacy groups at the development stage.

The research indicates that stakeholders have mixed views regarding a code of practice for charge point operators. Some were supportive, some in favour provided charge point roll-out and/or investment in infrastructure is not negatively impacted, and some sceptical about the value it would offer. However, most agreed charge point operators face practical and commercial realities, challenges that should be understood if charge point operators are to be encouraged to cooperate in the development of a voluntary code of practice.

The results from the survey show that the majority of electric vehicle drivers felt that there is a role for an independent body to escalate a customer service-related complaint to regarding electric vehicle public charging infrastructure. There were varying views amongst stakeholders however, with some in favour, some unsure about the potential efficacy of such a body, and others unconvinced by its relevance.