Zap-Map's response to CMA consultation: Electric vehicle charging market study

Ref: https://www.gov.uk/cma-cases/electric-vehicle-charging-market-study

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Theme two: effective consumer interaction with the sector

1. What challenges or difficulties related to chargepoints might act as a barrier to consumers switching from a conventionally fuelled passenger vehicle to an EV and how might these be overcome?

Feedback from Zap-Map users makes it clear that both new and experienced EV drivers are concerned about the reliability of public charge points. While the actual UK percentage (pre-COVID-19) of out-of-service units was around 6% on average, the perception of the number of unusable devices is likely to be higher than this – which may reflect personal experience and local availability issues, the impact of COVID-19 on regular maintenance, and/or be amplified by negative media reporting. Either way, charge point reliability is a major market barrier.

The importance of this issue is confirmed by evidence from the Zap-Map Annual User Survey 2020[1] which, based on more than 1,500 respondents, identified 'reliability' as the top-ranking factor (of five) when considering use of the UK public charging network – see response to Question 3.

A second issue that generates uncertainty when considering switching to an EV is the wide variety and complexity of public EV charging tariffs in the UK market, together with a mix of fixed connection, per kWh, and per minute charges. Most CPOs also offer pay-as-you-go (PAYG) and discounted membership tariffs. Adding to the confusion is the large number of payment access methods which include network-specific and aggregated RFID cards and apps, contactless card readers, QR-codes and other web-based solutions.

Encapsulating the complexity of the payment and access methods is the market demand for 'interoperability', i.e. the ability for users to have standard payment method for the majority of networks.

Different markets have responded to this need and evolved to deliver solutions in different ways. Many European countries have adopted 'roaming' solutions whereby a member of one network can pay for and access other networks via a system of back-office contract links. However, this approach is far from ideal as the roaming platforms add an additional cost layer, and many smaller CPOs using the roaming platforms report difficulties in timely payment reconciliation. It is also important to note that the two major roaming platforms are consortiums of vehicle OEMs who have their own commercial objectives which may not always align with the requirements of the wider EV charging market.

2. What are the key challenges for consumers already interacting with the sector and how might these change over time as the sector grows?

While many market analyses forecast a consolidation of the CPO market, with the continuing appearance of new market entrants, it is likely to remain complex and fragmented for some time. Indeed, the EV charging space is unlikely to become as uniform as the fossil-fuel market due to the

[1] The survey was conducted in November 2020.

necessarily interconnected nature of the EV charging, renewable and domestic energy sectors. The need for dynamic data aggregation platforms is therefore likely to be an enabling feature of the emerging EV charging space.

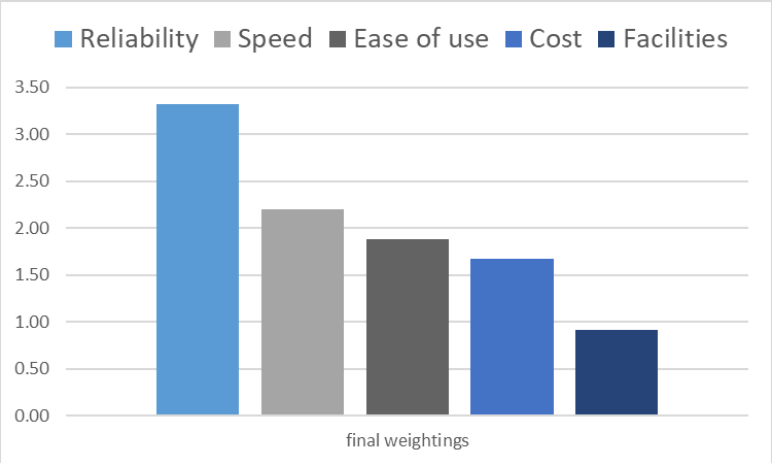
These digital platforms, of which Zap-Map is one of many (including the likes of Google and PlugShare), provide users with aggregated information about the location and availability of charge points at a regional and/or national level. The fragmented nature of the UK charging market also means that interoperability will be a key requirement of all future data platforms offering EV charging services (see response to Q1).

3. How do consumers decide which chargepoint services and providers to use? What information do consumers need to make this decision and at what stage in the decision-making process?

Based on a recent Zap-Map annual survey of more than 1,500 EV drivers, at least 90% of EV users access the public charging network with frequencies ranging from 'once per day' to 'less than once per month', the modal average being 'a few times per month'.[2] The public networks chosen by these users are selected using a mix of rational and perception-based factors. Foremost is proximity, with many EV drivers relying on their local public networks and/or the need to access charging facilities on strategic routes when on longer journeys.

More generally, however, when location is not the over-riding determination of charger selection, a number of key factors influence EV user behaviour. Based on the results of the Zap-Map survey,[3] the factors (ranked in order using a relative metric) are: reliability, speed (power), ease-of-use, cost (price) and the facilities at the location – see Chart 1.

Chart 1 – User ranked factors when selecting UK public charging locations



4. Can consumers easily understand and compare charging tariffs in this sector and what barriers, if any, do they face?

Zap-Map publishes publicly available information on the costs to charge for the different networks both on the website,[4] and on the Zap-Map app. However as there are more than 40 different providers with, typically, several different prices depending on the speed and access methods, it is difficult for consumers to understand and compare pricing.

[2] The survey was conducted in November 2020 with a question sample size of 1,880.
[3] Question sample size of 1,512.
[4] https://www.zap-map.com/charge-points/public-charging-point-networks/

5. Do particular groups of consumers face additional challenges to interacting with the sector and if so, who and why? How might these be overcome?

In 2020, Zap-Map partnered with Motability, the national disability charity, to assess how EV drivers who consider themselves to have a disability face any challenges when charging their electric vehicles. 8% of respondents self-identified as having a disability, which is below the 20% rate of disability we expect to see within the UK population.

The results found that one-third of people surveyed with a disability had difficulties locating a suitable charger that could meet their needs, with one in seven noting their very specific challenges with the weight of charging cables. The survey also revealed that some users experienced difficulties with the force required to attach the connector, the lack of dropped kerbs around charge points, and unsuitable parking arrangements (including narrow parking bays).

Image 1 – Zap-Map team-member Luke Manson using a CCS rapid charger

6. Are there any technological developments or tools that could support consumers to navigate the sector, for example by helping to make more informed choices?

The emergence of electric Mobility Service Providers (eMSPs) which provide digital tools to assist EV drivers locate and access charging services are a key recent development. eMSPs, of which Zap-Map is only one of a large number in the UK and Europe, are well placed to provide aggregated and consumer-facing solutions to support EV drivers wanting to locate suitable public charge points and compare different CPO services.

Another technological development is the use of international data standards, which enable the efficient sharing of information. One such standard is the Open Charge Point Interface (OCPI) which is now widely adopted across the EU and North America and looks set to become a global standard.

7. Are existing protections offered by consumer law and other measures (such as sector regulations) sufficient?

A common issue reported is the 'ICEing' of EV bays where a petrol or diesel (internal combustion engine) vehicle illegally parks in a bay reserved for EV charging. In most locations where this occurs there is no or little policing of these events, and the most users can do is to photograph the offending vehicle and post to other users. A simple consistent penalty throughout the UK on public or private property, such as penalty points and a fine could be considered to deter this behaviour.

8. What, if any, open data measures are needed to support consumer interaction, such as through the growth of comparison sites and apps?

The EV market is likely to benefit from the provision of high-quality aggregated data platforms based on open data standards such as the Open Charge Point Interface (OCPI), a standard that is emerging as a global standard for Mobility Service Providers (MSPs) to enable efficient peer-to-peer and MSP to CPO communications.

9. What else is required to help ensure that the EV charging sector develops in a way that is responsive to consumer needs?

Whilst the charging point infrastructure is growing steadily, there are two key areas of provision which need some focus. Firstly there needs to be a robust provision of rapid chargers in areas of the country where it may not be economic for commercial providers to install charge points. Secondly there needs to be ongoing focus on solving the "no off-street parking" issue, whether this is more on-street provision or local charging hubs – in either case the local authorities, as they understand local needs, need to be involved.

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