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Electric Vehicle Charging Market Study – Invitation to Comment

This submission was prepared by [Motability](#), a national charity with the vision that no disabled person shall be disadvantaged due to poor access to transportation. This document is non-confidential in its entirety and may be published as part of your market study. If you would like to discuss any points raised in or related to this response, please do not hesitate to get in touch.

To whom it may concern,

Motability, the Charity, welcomes the Competition and Market Authority's market study as one of a number of tools the CMA can use to examine and address possible competition and consumer protection issues in the electric vehicle industry.

Having spent several months researching the impact of the upcoming energy transition on disabled consumers specifically, Motability is looking forward to amplifying the voice of people living with disabilities so that Government and industry can ensure they are not left behind in this future shift.

Through our oversight of the Motability Scheme, through which over 600,000 disabled people lease vehicles each year,¹ and the stakeholder engagement we have pursued with electric vehicle (EV) sector bodies, charge point providers, information services, and academia, we believe our comprehensive insight on this particular consumer group and the barriers to EV uptake they might face will prove a vital input into the CMA's assessment of the sector's consumer interaction.

It is important to keep in mind that although our response specifically focuses on consumers living with disabilities, the challenges they face might be common to other key consumer groups. Moreover, given one in five people in the UK are disabled,² and that there will be an estimated 2.7 million disabled drivers in the UK in 2035,³ accessibility cannot be an afterthought when it comes to EV consumer interaction – rather, it should be a focus and a priority.

Motability hopes to support and enable Government and industry by building relationships, providing evidence directly from disabled consumers, and bringing key stakeholders together to innovate accessible EV charging and information services solutions with a view towards guidance. If you are interested in our work, please get in touch.

Best wishes,

Catherine Marris - Innovation Lead, Motability the Charity

[redacted]

¹ [Motability website](#)

² [Family Resources Survey, 2018-2019](#)

³ Motability: research report on electric vehicle charging accessibility for people living with disabilities (Ricardo Energy & Environment, 2020). Available upon request.

Theme one: developing competition while incentivising investment

1. How is the EV charging sector developing and how will technological or other developments (for example smart technologies) impact sector development and competition?

No comments to add.

2. How well is competition between EV charging providers working at present in the different sector segments and what are the key risks to effective competition (including any emerging competition concerns)?

No comments to add.

3. How can competition in the different sector segments be strengthened as the sector develops, either by building on current policies and/or through other approaches?

No comments to add.

4. What are the main existing and potential barriers to entry and expansion for EV charging providers and how can these be addressed?

No comments to add.

5. How can chargepoints be effectively deployed to ensure there is sufficient supply to meet future demand? What factors need to be taken into account?

We are concerned that current charge point infrastructure has not been designed with the needs of disabled users in mind. The user research we sponsored from the [Research Institute for Disabled Consumers \(RiDC\)](#) noted issues exemplified by the images below, including heavy cables which are difficult to lift, presenting problems for those with mobility impairments; connectors which require a certain amount of force to attach, a challenge for those with dexterity impairments; high kerbs or no dropped kerbs around the charge point, creating a dangerous built environment for disabled drivers looking to charge; little consideration for the larger vehicle size of many disabled drivers, including adequate parking space to open the boot and remove equipment; etc.⁴



⁴ Motability: [RiDC report](#)

These are challenges we believe will be faced by a significant proportion of disabled people, and may cross over with difficulties experienced by older drivers as well. The non-inclusive design of said infrastructure is in spite of the fact that one in five people in the UK has a disability² and our own research with Ricardo estimated there will be 2.7 million disabled drivers in the UK in 2035.³

Moreover, the Ricardo report estimated that up to 50% of those 2.7 million drivers – 1.35 million – will be wholly or at least partially reliant on public charging infrastructure, rather than home charging, based on data demonstrating the parking situations and home ownership rates of disabled drivers.³ This means accessibility of EV charging infrastructure is vital in order for disabled drivers to retain their independence. The lack of supply to accessible charging infrastructure – whether on the street, at the office, or at home - means the future demand of disabled consumers and possibly other consumer groups as well will not be met.

We must also note that people living with disabilities are far less likely to be able to rely on public transport than people without disabilities. Previous research we conducted with Britain Thinks and the National Centre for Social Research found that disabled people use buses, coaches and trains less than people without disabilities. 55% of disabled adults never use trains or use them less than once a year, compared to 3% of people without disabilities.⁵ Therefore the use of private vehicles and the ability to be able to independently refuel and recharge is of paramount importance to this group.

6. What incentives are there for private investment in EV charging infrastructure including within the different sector segments? How might incentives need to change for the future growth of the sector and development of competition?

Current incentives for private investment in EV charging infrastructure are mainly Government-enabled, due to the announcement of the 2030 ban on the sale of petrol and diesel vehicles. This creates pressure for charge point providers to begin accelerating rollout of charging infrastructure as quickly as possible, despite current charge point designs being largely inaccessible for disabled people. Although we recognise the need for change at pace to move the UK quickly towards a greener future, we are also concerned that the incentives presented by the current timescales risk large-scale rollout of inaccessible charging infrastructure.

Industry may find the costs of retrofitting charging infrastructure later on in line with their Equalities Act obligations extremely prohibitive. Incentives therefore might need to change in order to ensure that future growth of this sector is inclusive for consumers and affordable for charge point providers. As Motability and others begin to innovate best practice for charge point infrastructure, incorporating inclusive design into formal guidance, it may be in the interests of Government and industry to use said guidance as a blueprint for future legislation or funding mechanisms to encourage uptake of accessible solutions among charge point providers.

7. What impact does public subsidy have on private investment incentives; are there any areas/gaps where public support is most likely to be needed?

As noted in our response to question 6, there is a significant gap when it comes to encouraging innovation and uptake of accessible charging solutions. Public support is likely to be needed, whether in the form of challenge prize funding to innovate accessible charge point solutions, or subsidies for providers who install specific kinds of charge point infrastructure.

⁵ Motability: Secondary Analysis of the National Travel Survey (NTS) 2018 (NatCen, 2020). Available upon request.

8. What is required in order to ensure that rural / remote communities and those without off-street parking are well served by charging infrastructure?

As we noted in our response to question 5, up to 50% of 2.7 million disabled drivers in 2035 – 1.35 million – will be wholly or at least partially reliant on public charging infrastructure, rather than home charging, based on data demonstrating the parking situations and home ownership rates of disabled drivers.³ This means inclusive public EV charging infrastructure is vital in order for disabled drivers to retain their independence. Those users who may not have access to home-based charging will be significantly impacted, making the development and uptake of accessible charge point solutions even more essential.

9. What role should local authorities play to help deliver EV charging in a way that promotes competition? What support would they need?

No comments to add.

10. What can be learned from the different policy approaches taken in the devolved administrations for the EV charging market's development?

One example of devolved administrations being on the front foot when it comes to accessibility and charging infrastructure is a Transport Scotland design challenge being run jointly with Scottish Enterprise. One of two main focusses of the design challenge asks applicants to design a technological solution to accessible charging infrastructure challenges. We believe that challenges of this kind promote innovation in the sector and can be a useful way to test ideas ahead of considering them for inclusion in policy guidance or legislation. We hope other devolved administrations will follow this approach and similarly consider fostering innovation.

It is important to note that the UK has the opportunity to be an international leader when it comes to accessible charge point infrastructure if Government, industry, and the third sector can collaborate effectively to come up with solutions, in guidance and in practice. As our Ricardo report shows, even market leaders in terms of EV uptake such as the Netherlands and Norway, or large technological centres such as the USA and China, have not yet developed standards or guidance for accessible charge point solutions.³

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?

As noted previously in our responses to theme one, we are concerned that current charge point infrastructure has not been designed with the needs of disabled users in mind, creating barriers for this important and sizeable consumer group to switching from a conventionally fuelled passenger vehicle to an EV. We must also note that our previous research has found that people living with disabilities are far less likely to be able to rely on public transport than people without disabilities.⁵ Therefore the use of private vehicles and the ability to be able to independently refuel and recharge is of paramount importance to this group.

The user research we sponsored from the [Research Institute for Disabled Consumers \(RiDC\)](#) noted issues with heavy cables which are difficult to lift, presenting problems for those with mobility impairments; connectors which require a certain amount of force to attach, a challenge for those with dexterity impairments; high kerbs or no dropped kerbs around the charge point, creating a

dangerous built environment for disabled drivers looking to charge; little consideration for the larger vehicle size of many disabled drivers, including adequate parking space to open the boot and remove equipment; etc.⁴ These are challenges we believe will be faced by a significant proportion of disabled people, and may cross over with difficulties experienced by older drivers as well.

We propose overcoming these barriers by supporting and enabling Government and industry through building relationships, providing evidence directly from disabled consumers, and bringing key stakeholders together to innovate new charge point solutions with a view towards guidance. If said guidance can be promoted throughout the EVs sector as best practice for charge point providers and manufacturers, eventually incorporated into or referred to in official legislation, we believe we can work together towards an inclusive energy transition that does not leave anyone behind, while avoiding stifling innovation and the market. If you are interested in working with Motability on these solutions, please get in touch.

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

As noted in our response to theme 2, question 1, the user research we sponsored from the [Research Institute for Disabled Consumers \(RiDC\)](#) noted key challenges for disabled consumers already interacting with the sector, particularly in terms of charge point infrastructure. These include heavy cables which are difficult to lift, presenting problems for those with mobility impairments; connectors which require a certain amount of force to attach, a challenge for those with dexterity impairments; high kerbs or no dropped kerbs around the charge point, creating a dangerous built environment for disabled drivers looking to charge; little consideration for the larger vehicle size of many disabled drivers, including adequate parking space to open the boot and remove equipment; etc.⁴

There are indications that current EV uptake among disabled consumers is limited to date. Results from a 2020 survey run by Zap-Map with input from Motability shows an 8% disability rate among Zap-Map users, less than half of what one would expect given disability prevalence in the UK population.⁶ We believe that without action, these challenges will therefore only multiply and become more apparent as the sector grows and more disabled people who are not early adopters begin to make the shift to driving an electric vehicle.

It is possible that change could be positive instead of negative, if Government, industry, and disability organisations are able to work together to innovate new accessible charge point designs and solutions and encourage their uptake through guidance and perhaps even legislation. Motability is beginning to convene this work with partners and hopes to develop early design standards over the next eighteen months.

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?

Our Ricardo report revealed that the main information provider in the UK in 2020 is Zap-Map, whose coverage of charge points is much greater than any competitors. Zap-Map was interviewed as part of our research to identify whether it provides information services to aid disabled drivers. According to Zap-Map, its service covers 97% of the UK's public charge points, and has 120,000

⁶ [Zap-Map survey](#)

active users per month in 2020, out of an estimated 130,000 plug-in vehicle drivers in the UK, 94% of which use public charging infrastructure.³

The report also found that none of the UK-based information services provide information on the accessibility of charge points for disabled drivers, although some do provide the ability to add comments and pictures.³ This leaves disabled drivers at a disadvantage and if information services were to have an accessibility feature on their application then this could indicate to a disabled EV driver whether or not the charge point nearest to them has accessible features.

We imagine a system in which charge points could be rated – whether through accessibility expertise or through crowdsourcing – on a number of factors, such as the built environment around the charge point, if there are staff on hand to lift the heavy cable, if there is enough space between the charge point and the vehicle to open doors and the boot, etc. This would enable greater awareness and choice for disabled consumers so they encounter fewer difficulties or uncertainties when charging, and is an idea we have discussed and will continue to discuss with Government and information services providers.

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

No comments to add.

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?

As discussed throughout our responses, we believe that disabled consumers will face additional challenges to interacting with the sector due to the current inaccessibility of charging infrastructure, as well as a lack of information about what charge points might serve disabled consumers best.

It is also crucial to note that our previous work has found that people living with disabilities are far less likely to be able to rely on public transport than people without disabilities. Research we conducted with Britain Thinks and the National Centre for Social Research found that disabled people use buses, coaches and trains less than people without disabilities. 55% of disabled adults never use trains or use them less than once a year, compared to 3% of people without disabilities.⁵ Therefore the use of private vehicles and the ability to be able to independently refuel and recharge is of paramount importance to this group.

In terms of charge point infrastructure, to recap on our response to theme two, question 1 - the user research we sponsored from the [Research Institute for Disabled Consumers \(RiDC\)](#) noted issues with heavy cables which are difficult to lift, presenting problems for those with mobility impairments; connectors which require a certain amount of force to attach, a challenge for those with dexterity impairments; high kerbs or no dropped kerbs around the charge point, creating a dangerous built environment for disabled drivers looking to charge; little consideration for the larger vehicle size of many disabled drivers, including adequate parking space to open the boot and remove equipment; etc.⁴ Moreover, these issues are large in scale; as we noted in our responses to theme one, up to 50% of 2.7 million disabled drivers in 2035 – 1.35 million – will be wholly or at least partially reliant on public charging infrastructure which hasn't been designed with their needs in mind and where they are less likely than home charging to receive regular assistance to charge. This based on data demonstrating the parking situations and home ownership rates of disabled drivers.³

With respect to information services, as we discussed in our response to theme two, question 3, no information services providers currently have an accessibility feature on their application which

might indicate to a disabled EV driver whether or not the charge point nearest to them has accessible features. Again, we imagine a system in which charge points could be rated – whether through accessibility expertise or through crowdsourcing – on a number of factors, such as the built environment around the charge point, if there are staff on hand to lift the heavy cable, if there is enough space between the charge point and the vehicle to open doors and the boot, etc. This would enable greater awareness and choice for disabled consumers so they encounter fewer difficulties or uncertainties when charging.

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?

As outlined in our response to theme two, question 5, we believe greater awareness of and dissemination of information regarding charge point accessibility would support disabled consumers – one in five of the UK population² – to better navigate the sector. This would enable disabled consumers to make more informed choices about which charge points they could use and would suit their needs.

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

The Ricardo report highlighted that the right to reasonable adjustment via the Equality Act and/or reasonable accommodation via the UN Convention for the Rights of People with a Disability (UN CRPD) could be applied in the case of the EV sector; these laws are underpinned by UK and international examples, and include legal precedent for similar types of infrastructure to EV charging to consider disabled users. The background EU legislation on alternative vehicle infrastructure (the Alternative Fuels Infrastructure Directive, FID) is currently being updated and may include the principles of the UN CRPD.³

Rather than rely on future litigation and retrofitting charge point infrastructure to be accessible once obligations are made clear – something that would be extremely expensive for Government and industry - we believe there is an opportunity to design inclusively from the start, and use sector specific legislation, such as the Automated and Electric Vehicles Act (AEVA), to incorporate best practice guidance and design standards, encouraging widespread uptake in the sector of accessible charge point solutions ahead of the 2035 phase-out of hybrid vehicle sales. Motability the charity is beginning work to convene key stakeholders, innovating accessible solutions with a view towards guidance and this eventual legislation. If we are successful, we believe the protections offered by consumer law and other measures will be sufficient. However, if the regulations under AEVA do not ensure inclusivity, then further measures will be needed to protect consumers.

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

To achieve the information services accessibility feature set out in our response to theme two, question 5, it is likely that accessibility information will need to be shared across a wide range of applications and platforms – charge point provider apps, charge point aggregator apps, and disability information apps. Although it remains to be seen exactly what open data measures would be needed, Motability is interested in building links between EV information services providers and accessibility experts so the sector can understand more specifically how such a solution could be implemented.

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

We believe that constant monitoring and reporting of consumer experiences with charge point infrastructure and information services is required to help ensure that the EV charging sector continues to innovate in an inclusive way. In order to assess whether the sector is successfully responding to consumer needs, we must first understand where the gaps and challenges are, measuring change over time and uptake of accessible charging solutions.

Motability wants to make it easy to understand what 'accessible' means for EV charge points, and to develop inclusive design solutions. Over the next year we intend to convene work to develop new guidance and materials to support Government and industry, without stifling innovation. We look forward to your market study report on this important subject and would be pleased to discuss any aspect of our own work further.