Electric Vehicle Round-up

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Spotlight

The future is smart

Government's response to the electric vehicle smart charging consultation

In July 2019, the Department for Transport and OZEV launched a consultation on proposals for new EV chargepoint smart technology regulations, which closed in May 2020. The Government published its final response to the consultation on 14 July 2021 (the "Response"). The Response sets out a two-phase smart charging roll out, which we summarise below (our full commentary of the Response can be found here).

Phase 1 Outcomes

The Government has outlined the following requirements to be expected under the Automated and Electric Vehicles Act 2018 (AEV Act):

1. Chargepoint manufacturers must provide a statement of compliance and technical file which evidences how regulatory requirements will be met.

2. Technical standards that are compatible with the BSI Standard.

3. A 'smart chargepoint' will be defined as an EV charger that has the ability to send and receive information and respond to this information by increasing or decreasing the rate of electricity flowing through the chargepoint and changing the time at which electricity flows through the chargepoint.

4. Implementation of a European cyber-security standard EN 303 645 outlining an outcome-based set of requirements for consumer Internet of Things devices and will apply to smart chargepoints.

5. Smart chargepoints must contain a function that randomly delays the start time of any load control action, helping to reduce the risk of potential grid stability issues where large numbers of chargepoints switch on or off at the same time.

6. Smart chargepoints must prompt users to input a charging schedule during first use, and they must be pre-set to offer users a charging schedule that by default prevents EVs from charging at peak times.

7. Chargepoints must be capable of monitoring and metering energy consumption.

These rules will apply to private (domestic and workplace) chargepoints of 50kW or below, and will apply to the sale of chargepoints, rather than installation. These requirements will be enforced by the Office for Product Safety and Standards.

Phase 2 Outcomes

While the Response notes that Phase 2 is less defined than Phase 1, the Government remains committed to delivering the four objectives that underpin smart charging policy (consumer uptake, innovation, grid protection, and consumer protection).

Phase 2 will build on, and complement, Phase 1 and will also consider requirements beyond the chargepoints themselves. In particular, Phase 2 will consider all organisations performing a "load controlling" role, including electricity aggregators and chargepoint operators.

Comment and Next Steps

The detail of Phase 1 will be welcomed by chargepoint manufacturers, although it remains to be seen how these requirements will be drafted in regulation. It is proposed that most requirements of Phase 1 regulations will be enforceable 6 months after the laying date, which is expected to be Spring 2022. However, as they may require more extensive hardware and software changes, the cyber security requirements will be enforced from 12 months after the laying date.

Update: Policy and Regulation

CMA issues final report on electric vehicle charging market study

The Competition and Markets Authority (CMA) has now completed its market study into electric vehicle charging in the UK, and in July 2021 published its final report in relation to the same. The purpose of the study was to facilitate the development of a comprehensive and competitive electric vehicle charging network that works for all drivers and effectively supports emission reduction targets.

The final report notes that, while some parts of the sector are developing well (such as rapid destinating charging and private charging), other areas are lagging behind, such as charging along motorways, remote locations and on-street. The report considers the following four key areas of improvement and action:

1. Very limited competition along motorways
Along motorways there remains limited competition at service stations and there are constraints on electricity grid capacity and long-term exclusivity contracts to further prevent competitor entry. As such, the Government has committed to fund grid upgrades to improve competition and increase charge-point quantity.

2. Risk of 'charging deserts'
In remote areas, where the commercial case for investment is very weak, there is a risk that these areas will be left unserved which could deter EV take-up for drivers that live in, or travel through, those areas.

3. Challenges for local authorities supporting on-street roll-out
The report notes that local authorities have a key gatekeeper role in facilitating greater deployment of on-street charging as they are responsible for parking and street furniture and also understanding local needs. However, the report has found that generally local authorities do not have dedicated plans, personnel, financial resources and incentives to drive the roll out. The report therefore states that local authorities need to be sufficiently equipped and supported in this area.

4. Frustrations facing EV drivers
There is also recognition of direct issues for electric vehicle drivers, such as difficulties in finding and accessing working charge-points, as well as struggling to compare costs and paying for charging. Developments such as subscriptions and bundling are potentially creating further problems in the future, such as 'lock-ins' (i.e. difficulties in exiting contracts). The final CMA report makes 8 recommendations, across 4 key areas, with the aim of promoting competition, unlocking investment and building public trust in charging infrastructure as follows:

1. Meeting the scale of the overall challenge;
   - The National Strategy for rolling out EV charging between now and 2030, alongside strategies from each of the devolved administrations, are in place and this should continue to build on the work already underway;
   - The relevant energy regulators should make changes to speed up grid connections, invest strategically and lower connection costs in order to support roll-out;

2. Unlocking competition along motorways and targeting rural gaps;
   - The Government should roll-out the Rapid Charging Fund as quickly as possible to increase capacity at motorway service stations, and also attach conditions to the funding so that competition is opened up, alongside competition law investigations into the long-term exclusivity of these contracts;
   - The Government should consider targeting funding at gaps in remote areas which may otherwise not be served;

3. Boosting investment and maximising competition in on-street charging;
   - Local authorities should take a more active role in the roll-out of on-street charging to maximise competition and protect local residents, including through the use of local plans;
   - Governments should take action to properly equip and incentivise local authorities while also providing greater support and oversight to achieve a step change, and working with local authorities to explore and pilot other ways of rolling-out on-street charging;

4. Creating a sector that people can trust and have confidence in; and
   - The Government should set open data and software standards for home chargepoints so that people can benefit from smart charging and flexible energy systems;
   - The Government should take into account the following principles to ensure charging is as simple as filling up with petrol/ diesel and tasks a public body with implementing, overseeing and monitoring these as the sector develops in order to build people's trust:
     1. It is easy to find working chargepoints for example, people can access open data on live availability and working status and rely on minimum reliability standards.
     2. It is simple and quick to pay for example, no sign-ups needed, contactless bank account payment is widely available and charging networks keep up with payment technology.
     3. The cost of charging is clear for example, prices are presented in a simple standardised pence-per-kilowatt hour format.
     4. Charging is accessible and interoperable for example, all chargepoints can be used by all drivers, are not limited to a single brand of car, and follow inclusive design principles.

The final report notes that the CMA will continue to oversee progress as the sector evolves over the next few years. The CMA will take further action if the sector, or parts of it, are developing in a way that is damaging competition and investment and is not working well for the public.

OZEV issues consultation on the future of transport regulatory review

On 28 September 2021, OZEV issued a third consultation as part of its "Future of Transport regulatory review" which aims to address areas of transport regulation which are outdated, prevents innovation or are not designed with new technologies and business models in mind. The consultation seeks views on new primary legislation that would give the Government powers to introduce regulatory requirements in four areas:

1. a statutory obligation to plan for and provide charging infrastructure;
2. requirements to install chargepoints in non-residential car parks;
3. new powers to support the delivery of the Rapid Charging Fund; and
4. requirements to improve the experience for electric vehicle consumers.

OZEV considers that these requirements will that there is a sufficient charging infrastructure and appropriate consumer protections in place to meet the needs of electric vehicle drivers. The consultation closes on 22 November 2021.

Zero emission vehicles report delivered by Transport Committee

In July 2021, following a series of inquiries, the Transport Committee published a report into the implications of accelerating the UK's transition towards zero-emission vehicles in light of the Government's 2030 and 2035 phase-out dates. The report states that in order to

ensure that the Government has set achievable targets, a clear policy framework is now required to ensure that the industry can deliver the vehicles and charging infrastructure needed to meet the Government's ambitions. The report highlights the following key areas:

Uptake of zero emission vehicles
The Government will need to incentivise car manufacturers to sell an increasing number of zero emission vehicles through a ZEV mandate and should also explore the potential of alternative fuels;

Charging infrastructure
The Government must:

- support sub-national transport bodies and local authorities to deliver sufficient and well-maintained charging infrastructure solutions tailored to local needs;
- ring-fence a portion of the GBP 90m local charging scheme so local authorities can employ dedicated 'charge point champions' to deliver local charging infrastructure strategies;
- identify and address under-provision at locations outside the strategic road network, where grid connection costs and grid upgrades are expensive and the business case for investment is weak;
- amend the wayleave regime for installing charging infrastructure to ensure that that regime does not act as a barrier to roll-out;
- protect the consumer from excessive costs when charging in public; and
- address the discrepancy between the 5% VAT incurred for home charging and 20% VAT for on-street charging.

Managing energy demand and smart charging
The government must mandate that industry uses price as a lever to move consumer behaviour away from conventional refuelling habits towards 'a little but often' approach.

Are vehicle-to-X energy technologies the future? BEIS calls for evidence

On 20 July 2021, the Department for Business, Energy & Industrial Strategy (BEIS) published a call for evidence on the use of Vehicle-to-X (V2X) energy technologies in the future of the energy system in Great Britain. V2X technology transfers the power from the electric vehicle battery back to other systems, including homes or business premises.

An EV with a 12 kWh battery stores as much electrical power as the average family consumes in one day, so rolling V2X out could deliver significant value in terms of managing the demands of the energy system. V2X can also be applied on a larger scale – for example, there are trial sites in development that integrate large-scale battery technologies to provide a fast EV charging hub for several vehicles and amenities. V2X could provide an effective network balancing solution by offering distributed battery storage that would complement grid scale storage that is currently being developed.

The call for evidence outlines barriers to wider adoption and rollout, including high equipment costs and barriers for technology suppliers to participate in a highly regulated energy system. Nevertheless, the industry has welcomed proactive steps from BEIS to develop a deeper understanding of V2X technology and a pathway to commercialisation. It remains to be seen whether BEIS considers greater regulation is required in this space at this stage, for example, if V2X is going to be included in EVs ahead of the 2030 internal combustion engine ban, then standards and requirements will have to be implemented quickly.

Our full commentary on the call for evidence can be found here.

More change for network charging – Access and Forward-looking Charging Significant Code Review and proposal to review market competition

Following Ofgem's Significant Code Review ("SCR") in relation to network access and forward-looking charges, on 30 June 2021 it published its minded-to decision. The consultation sets out Ofgem's proposals on access rights, connection charging and transmission charges. Any implemented proposals would take effect from 1 April 2023 in line with RIIO-ED2. These reforms are relevant in the context of the expected number and range of electricity connections to allow the deployment of future EV charging infrastructure.

Ofgem has offered three main proposals as a result of the SCR:

1. Distribution Connection Charging Arrangements
Ofgem proposes to completely remove the contribution to reinforcement within the connection charge for demand connections and reduce the contribution to reinforcement within the connection charge for generation connections.

2. Definition and Choice of Network Access Rights

Ofgem proposes to introduce new non-firm distribution access options that allow users to choose the percentage of time that they are willing to have their connection be non-firm and at risk of curtailment. A higher percentage will likely result in a quicker or cheaper access to the network and choose time-profiled access such that a user would either have no access or non-firm access during peak periods. A user would be able to select the percentage of their access rights that are time-profiled. A higher percentage of the connection being time-profiled will likely result in a quicker or cheaper access to the network. However, this option would not be available to small users.

3. Transmission Charges for Small Distributed Generators

In the SCR Consultation, Ofgem proposes to charge TNUoS generation charges for all users over 1MW irrespective of whether they are directly connected to the transmission system.

Our full commentary on the minded-to decision can be found here.

DfT partners with Motability for EV charging accessibility standards

The Department for Transport has announced a partnership with UK charity, Motability, to commission the British Standards Institution to develop accessibility standards for electric vehicle chargepoints. The standards will categorise public chargepoints into 'fully accessible', 'partially accessible' and 'not accessible' in a bid to provide clarity and consistency to drivers. The DfT has acknowledged that improvements could be made to the design of chargepoints to ensure they are as accessible as possible.

Suggestions include expanding space between bollards, adjusting height for wheelchair users, and altering the size of bays and curb height. Motability has also enlisted the help of Designability, a charity dedicated to giving disabled people greater independence, to identify key requirements for accessible charging.

The DfT has advised that standards will be provided to ensure the industry has sufficient guidance by summer 2022.

Update: Funding, Innovation and Collaboration

Rapid charging fund

In September 2021, OZEV announced that it will shortly be publishing guidance on how to apply to the Rapid Charging Fund (RCF). The RFC is a GBP 950m fund available to motorway and major A road service area operators. The fund is to be used for the purpose of future-proofing England's EV charging capacity at service areas and preparing the network for 100% zero emission vehicles.

The RFC is intended to help meet the UK Government's commitments to have 6,000 high-powered charge points across England's motorways and major A roads by 2035. The RFC sits alongside the existing grant schemes for workplaces, homes and on-street charging. More information can be found here.

DfT widens Workplace Charging Scheme eligibility and launches new EV app

In accordance with the Transport Decarbonisation Plan published in July 2021, the DfT has announced changes to several EV charging schemes and launched a new app in order to support the roll-out of EV chargepoints in the UK. Small businesses like B&Bs can access the Workplace Charging Scheme, and leaseholders and renters can now access the Electric Vehicle Homecharge Scheme, both of which offer support towards the upfront costs of installing EV chargepoints.

It comes alongside the launch of a new app called EV8 Switch, which is backed by GBP 2.7m of UK Space Agency Funding, which shows drivers how close their nearest chargepoints are and which journeys can be completed without the need to top-up en-route.

Major British businesses join forces to accelerate EV uptake

A collection of seven British businesses (BP, BT, Direct Line, Royal Mail, ScottishPower, Severn Trent and Tesco) have formed the Electric Vehicle Fleet Accelerator (EVFA) to boost the uptake of EVs in the UK. The EVFA has published a report setting out recommendations for action by industry and government, focusing on four key areas:

1. Future-proofing the electricity network;
2. Enabling the UK-wide rollout of charging infrastructure;
3. Overcoming demand obstacles; and
4. Expanding the supply of UK-made EVs.

The EVFA's members have committed to converting their fleets to EVs and buying 70,000 British-made vans by 2030. The EVFA believes that, if implemented, their recommendations could unlock private sector investment of GBP 50bn in EV infrastructure and fleets over the next five years.

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