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Competition and Markets Authority
The Cabot
25 Cabot Square
London
E14 4QZ

By email to: EVCharging@cma.gov.uk

Dear Sirs

Electric vehicle charging market study

On behalf of Calisen plc ("Calisen") I am pleased to provide this submission to the Invitation to Comment issued in respect of the *Electric vehicle market study*.

Executive Summary

Calisen is a leading domestic energy Meter Asset Provider ("MAP") in the UK. Calisen procures, investment, installs and manages smart and traditional energy meters in excess of 8 million assets. We have played a successful role since 2002 in Great Britain's transition to Smart Metering ("Smart"). Bringing our operational, technical and investment capability to the market and providing attractive, low risk and efficient investment solutions to the market has been central to maintaining the Smart Metering Implementation Program ("SMIP") installation targets.

We welcome this market study and believe our significant experience of driving nationwide roll-out and adoption of low carbon infrastructure in both residential and commercial settings, will be helpful to the CMA and ultimately to consumers. Indeed, we believe there to be important themes present in the Smart roll-out that are being replicated in this sector. Therefore, Calisen would greatly welcome bringing our experience to the discussions, to help with the quality of the consumer experience, just as we did in smart metering.

Calisen

Calisen, based in Manchester, is a leading procurer, investor, installer and owner of smart meter and traditional meters. Since 2002 we have grown to a portfolio of greater than 8 million smart meters and have contracts in place for a further 6 million. Calisen has two operating arms, Calvin Capital and Lowri Beck. The former provides investment solutions and the latter provides meter installation and meter reading services. Lowri Beck has recently gained accreditation to install domestic residential installers under OZEV (Office for Zero Emission Vehicles).

It is our belief that our 15 years of experience means that Calisen has much to offer on strengthening the consumer experience in the residential installation scenarios, with Electric Vehicle ("EV") charging:

- We have over 15 years of experience on working with manufacturers to ensure that meters have up to 15-year warranties. Protecting the consumer from unnecessary disruption and product defects
- We have navigated the interoperability issues from inception (pre SMETS smart metering, SMETS1 and SMETS 2) and we have advocated consistently for open standards to protect the consumer from disruption and allow assets to stay 'on the wall' for as long as the product is designed
- Calisen have worked with BEIS and other government bodies to be transparent and helpful on shaping industry legislation to support the rollout of Smart

- Calisen have always seen smart metering as the *first* step in digitising energy for consumers and bringing our experience to the EV market will be a natural continuation of that legacy

Summary statement on EV charging

The recent announcement from the UK Government on the 2030 target is greatly welcome and necessary to meet the net zero emissions target in 2050. However, we have observed that the early developments of smart metering in late 2008 contain similar themes to the current developments of EV charging today:

- The residential sector clearly is in an embryonic state, while growing quickly.
- A consistent view on standards, will bring certainty and investment. It was the eventual clarity on the Smart standards that allowed Calisen (and others) to able to bring substantial efficient investment to the Smart rollout. (In tandem to standards being clear, precise and enforceable – e.g. SMETS 1 and 2)
- The public charging sector (DC charge points) have other constraints which localise around Distribution Network Operator (DNO) connection costs and perhaps too many 'trials' with seed funding, inhibiting larger scale infrastructure investments.

Theme 1: ***Developing competition while incentivising investment***

EV charging, both in the residential and business sectors, is lacking investment certainty around four key areas – which overarch the two themes set out in the ITC:

- Long term technical standards – primarily around customer use cases and customer interaction requirements
- Interoperable Communications standards – Central comms infrastructure to allow consumers to shop around for "better" and not be stuck with proprietary hardware & pricing solutions
- Manufacturer warranties – MAPs brought certainty to the market by ensuring sufficient warranties to reduce the risk of replacements and the risks of stranded assets in smart
- Installation experience – the installation experience in the home needs to be safe, quick and repeatable

In the residential market, we can foresee that it is the removal of uncertainty that will enable faster growth and quicker consumer benefit. To incentivise investors, like Calisen, we need clear technical roadmaps and clear interoperable secure communications. In addition, we would also welcome improving warranties aligned to the product lifetime and products that are quick easy and cheap to install.

In the public charging space, as referenced in Question 7 and Section 20 of the ITC, public subsidies are impeding the acceleration of private investment to roll out DC charge points. Often public initiatives are trials, which are insufficient to meet consumers needs (for example one DC charger in a car park, when a consumer needs multiple chargers to assure availability) or provide 'free' charging, which the private sector cannot match.

The example given of ChargePlace Scotland has had an interesting effect on consumers. It could be argued that it has disincentivized private investment, as a network of 1,400 'free' chargers makes it unattractive to establish a competing 'pence per kWH network' alongside it. Anecdotally, the feedback on many EV forums from consumers is that it has led to limited choice, with variable reliability of charge and uncertain availability due too few DC chargers in key locations.

Theme 2: ***Effective consumer interaction with the sector***

The EV transition is vital to facilitating the de-carbonisation, de-centralisation and digitisation of energy in the UK to meet net zero emissions in 2050. Setting the goal for 2030 on internal combustion engine (ICE) sales, is an important and very welcome step. However, we feel that there is much to be learned from the Smart rollout to speed up the adoption of EV and assurance of assets that are installed in the domestic residential setting/

The four areas cited above in relation to Theme 1 are key to addressing certainty and growth in this sector. This applies to whether it is residential chargepoints or DC chargepoints at key destinations. Certainty around these themes accelerates competition, incentives large scale investment and brings the costs (i.e. risks) down,

therefore realising faster delivery and more immediate consumer benefit. Calisen are seeing a significant uptake in off street parking, as called out in the ITC (section 17) aligned to increased Battery Electric Vehicle (BEV) sales. However, what is becoming clear is that the technical standards are moving faster and in an uncoordinated manner, which is causing consumer uncertainty and confusion. Consumers are unclear on the future proofing of their charge point. Many consumers resort to social media forums to knowledge share and better understand the right charge point for them. Common issues are:

- Which is the best charger for overnight cheap rates and timing of charging?
- Which charger works with my car?
- Which ones work with solar energy?
- Can I use the v2g (vehicle to grid) – Do I need it?

Further confusion is arriving in the form of newer standards OCPP2, PAS1878/79, ISO 15118, OpenADR, EEBus, DCC 4G comms hubs and Consumer Access Devices.

Our clear view is that this technical uncertainty and opacity is a major restriction on deployment and consumer adoption, as was witnessed in the early stage of Smart rollout. At this time there is no single authority to set out and roadmap the standards for EV charging, to protect the consumer from buying nascent technology, that will very quickly be 'out of standard' and represent a significant sunk cost and deliver consumer detriment.

A lesson could be learned from Smart rollout by bringing these market developments under one clear standards authority (for example as seen with the SMETS (Smart Metering Equipment Standards) / Smart Energy Code).

Currently, the market looks to 3 tiers for guidance, on EV's, with unaligned timeframes (fig. 1 below):

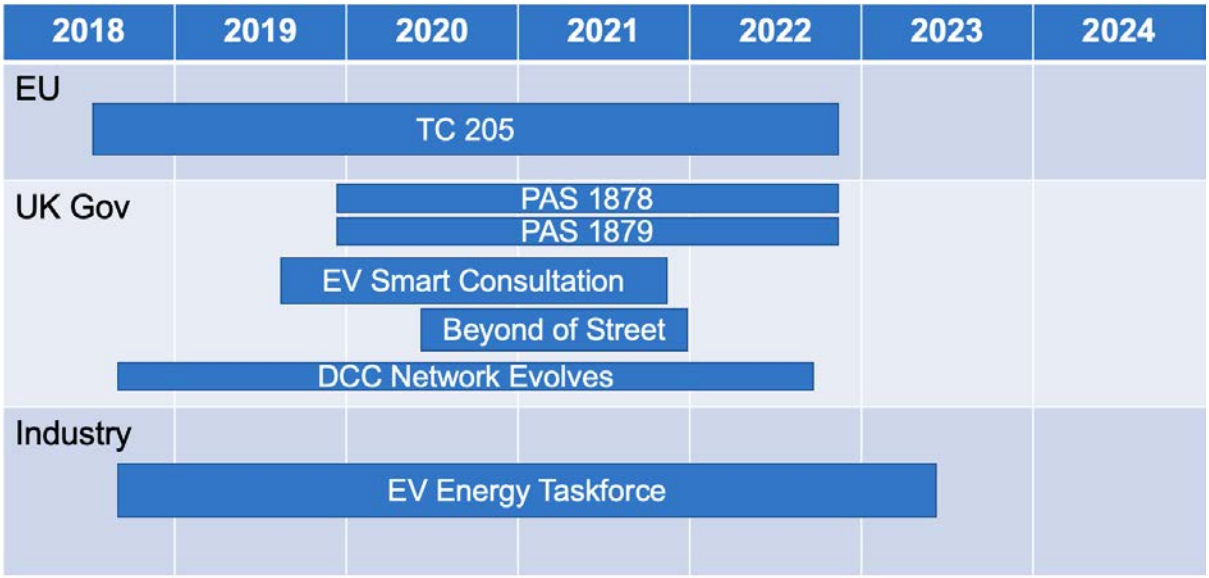

Figure 1

Again, the key areas of focus that we as a MAP can bring is around reducing uncertainty and providing a stable risk profile for these asset classes to enable cheap facilities, thereby, facilitating the accelerated growth of residential EV and faster consumer access to all the benefits available through EV adoption:

- Long term technical standards – primarily around customer use cases and customer interaction requirements
- Interoperable Communications standards – Central comms infrastructure to allow consumers to shop around for "better" and not be stuck with proprietary hardware solutions
- Manufacturer warranties – MAPs brought certainty to the market by ensuring sufficient warranties to reduce the risk of replacements and the risks of stranded assets
- Installation experience – the installation experience in the home needs to be safe, quick and repeatable

In the absence of a single market approach, EV charging providers are naturally fulfilling customer needs with the best knowledge they have. However, this is also leading to a similar replication of interoperability issues that we saw in the early days of Smart:

- Consumers have no certainty that the charge point they buy today, will last for 5 or 10 years. Most will not last beyond 2/3 years
- Some consumers, if they procure a charge point with a ToU (Time of Use) / Tariff solution with an energy retailer, may no longer be able to enjoy the same benefits if they change supplier – or charge point
- Consumers have no clear way of understanding if what they procure today, will be fit for purpose in future years as the standards evolve

This has seldom been an issue for early adopters. However, as the market grows into more mass market consumers this will lead to high levels of dissatisfaction and thereby vocal consumer resistance to the 2030 targets and significant consumer detriment through stranded assets and associated sunk costs.

Conclusion

In summary, Calisen believe that we can bring insight and expertise obtained from participation in Smart roll out and deployment that will be critical to delivering consumer benefit:

- To help avoid the earlier issues of the Smart rollout with product certainty, to reduce risk and enable scalable investment solutions, thereby dramatically reducing consumer risk
- Share lessons learned on how to enable cheaper, better quality assets; to speed up the adoption and installation of assets
- Provide more investment solutions to the Public charging network, by working with government to bring cheaper investment capital to the market

Calisen stand ready to work closely with the CMA throughout the course of the Market Study and look forward to our further engagement over the coming months.

Kind Regards

George Donoghue
Chief Technology Officer