REA Response – BSI PAS 1878 Draft Standard

Final for submission
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About the REA

The REA is the UK's largest trade association for renewable energy and clean technologies, representing around 550 companies operating across the decarbonisation of heat, power, transport and natural capital.

This response has received extensive input from three REA Technology Forums, including our Solar, Energy Storage, and Electric Vehicle Forums. In these Forums, we represent a wide breadth of companies including those involved in energy supply, equipment manufacture, software management, installation and operations.

REA comments on the draft BSI PAS1878 standard

The REA welcomes the development of this standard and the intent by Government to mandate that all chargers being installed in UK homes and businesses are 'smart' – which we take to mean as 'being able to send and receive load control signals' (as defined in the 2019 Smart Charging consultation).

The REA has developed the following comments based on member priorities which have emerged over the past 2 years, including through the REA's response to the OLEV Smart Charging consultation (2019, view the response here). These include:

- **Interoperability** – charge point standards should be able to integrate with management systems of other smart home and low carbon devices, including heat pumps, battery storage, and solar PV.
- **Flexibility markets** – Government should ensure deep and transparent markets for flexibility emerge behind the meter and not embed processes that would hinder the development of such markets.
- **Security** – standards in the market should alleviate concerns about cyber security of smart charge points and other low-carbon devices.
- **Integration with other markets** – the UK should not 'island' itself by the development of standards, which would increase costs and reduce competition in the provision of smart EV charge points. This risks encouraging the proliferation of country specific standards that makes convergence and compliance more challenging and ultimately restrict the availability and increase the cost of smart charge point and smart appliances in the UK. Standards developed in the UK should emerge with an eye to those in Europe, in the USA, and at the international (ISO and IEC) level. UK standards should also align with widely-used industry protocols such as OCPP to avoid added costs for the sector.

Based on these principals, the **REA would like to make the following comments on the draft BSI PAS 1878 standard:**

- We would welcome an outcomes-based approach, whereas the standard outlines what should be achieved (e.g. around cyber security) but not be overly prescriptive as to achieving it.

- The PAS1878 standard should build on OCPP, Open ADR, and other protocols in the market that meet the outcomes sought by PAS1878. The Standard should not yet prematurely mandate any one particular protocol. This will also ensure that as industry protocols develop, that PAS1878 will not exclude them if they deliver the outcomes.

- The REA considers that it is too soon to specify a data model accompanying this standard. At this stage, the REA would welcome if the BSI addressed the questions that relate the draft standard as it is. If the standard is pursuing an outcomes-based approach, which the REA believes it should, we do not necessarily think a data model is required before this standard is published and linked to accompanying legislation. Our priority is for the Government to introduce legislation mandating smart charging. We are concerned that the development of an accompanying data model, whilst potentially delaying the introduction of legislation, may also result in the standard being out of step with existing and widely-used protocols such as OCPP.

- The REA welcomes the acknowledgement in this standard that there should be multiple forms of accessing a charge point, either by HCALC / APC (smart meter) but also via DSRSP. **The REA strongly opposes policy or regulation that would force charge point operators or manufacturers to solely route their communications through smart meters and the DCC** (although provision for this should be accommodated).

- The REA welcomes the principal that the consumer should be able to override the smart charging functionality if required. However, we would welcome clarification around *how* a consumer would override the smart charging aspect of their charge point. Is it the CEM, ESA, or another actor that has final responsibility for this?

- Overall, the ESA should be the master / in control in the cases where a customer wants to override the system and 'charge now'. Greater clarity on this is required in the draft standard, for instance where there are two EV charge points managed by a single CEM, would the user inform the CEM?

- There remains uncertainty around how multiple ESAs in a home environment would interact. We think that the best way to resolve this and ensure coordination between ESAs is to ensure market signals for flexibility are revealed, incentivising the market to develop solutions and coordination.
    - Specifically, what is the expected functional content of the CEM, ESAG and ESA? The document makes an attempt to explain this but does not break down ESAG in great detail. For example, can a system have multiple ESAs

with one ESAG? How would this work as some CEMs are cloud-based, and others could be built into the ESA.

- We are concerned at the risk of ESAs creating competing environments and not being aware of each other. For instance a Solar diverter that monitors excess energy from Solar PV going on to the grid, where a battery storage system sees an increase in demand (from the heating element being switched on) and starts dumping power.

    - That said, we believe it is too early for PAS1878 to extend to address this concern as this aspect of the market is still emerging. This standard could be extended in the future if market-based solutions to this issue do not come forward.

- We are concerned that the requirements that a CEM shall connect to no more than one DSRSP at any given time fails to recognised models using cloud-based CEMs capable of simultaneously interfacing with multiple DSRSPs (for different subsets of ESAs controlled by the CEM). Such prescriptive limitations on architecture immediately illustrates the risk that the PAS1878 is unable to keep up with existing, let alone future, market innovation and technological developments if it deviates from an outcomes-based approach. As a result, we ask that this requirement is removed.

- We request clarity around how multiple CEMs from different technologies (e.g. CEMs from smart fridges or other products that are not EV charge points) integrate. We acknowledge that it is not clear how this standard integrates with Z-Wave, Zigbee, and Bluetooth Low Energy (BLE) which are all fairly common domestic protocols between smart home devices. We would not want PAS1878 mandating what capabilities a CEM needs in order to integrate other technologies, this should be market driven, but some language acknowledging these other protocols would be welcome.

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