REA Response to the draft BSI PAS 1879

Submission deadline: *9th December 2020*
Final document for submission to the BSI and other relevant organisations

High-level comments on the draft PAS 1878

The REA sees this PAS as having been developed from a technical device networking perspective but does not yet properly incorporate markets / commercial operations of companies in this space. We would like to more clearly see the objectives of this PAS set out. Additionally, the standard as drafted does not fully incorporate the positive customer experience of smart charging that many companies are seeking to ensure.

Specific high-level issues we have identified with this standard include:

1.1 Overall, we are concerned that will not be active industry involvement with the development of this (and the draft PAS1878) standard once the consultation is over. There needs to be more industry engagement with and increased visibility of the evolution of the standard prior to its publication as many of the unresolved questions identified below could have significant commercial impacts.

1.2 We believe this definition: *"The PAS process enables a specification to be rapidly developed in order to fulfil an immediate need in industry" i*s not enough justification to publish a new standard in such a short period of time considering the new legal framework that will apply in the UK from 2021 (UKCA regulations for products). The interaction between DNO, dwellings and customer regarding EV chargers are fulfilled with:

- the STANDARD TECHNIQUE: SD5G (Part 1) provided by the ENA.
- Wiring Regulations BS7671 132.16 Additions and alterations
- Distribution Code DPC5.2.1
- IET Electric Vehicle Code of Practice v3 Section 11

Additionally:

EV chargers supply a maximum current, this maximum current can be determined by:

- The one provided by the (or multiple) vehicle (battery)
- The one provided by the cord between the EV and the charger.
- The one provided by the installation
- The one provided by the protections.
- The back office (customer app) and the sperate back office from the energy service provider (energy supplier)

1.3 It is difficult to define this PAS without understanding the macro policy and market landscape that will drive flexibility in homes and 'private' settings. The priority should be on establishing market signals that motivate DSR adoption and 'smart' response rather than early standardisation.

The EV Energy Taskforce's Work Group 3 could further develop a high level market architecture that can help industry understand how the larger market will work that these PAS standards, and demonstrate how the standards could relate to the use cases. We would also like to better understand the scope of application of this standard, for example at what capacity (kWh) in a business setting would these standards no longer be required?

1.4 At a Government policy-making level (above the PAS standards development level), there is an outstanding question around how signals will be coordinated between multiple DSRSPs / CEM's in a home to ensure multiple providers are not sending contradictory signals. This could be aggravated by smart energy appliances with machine learning capabilities.

1.5 There is an outstanding question around what happens if the customer is not aware of the changes and/or does not approve the change of DSRSPs.

Management of DSRSPs

2.1 We are concerned with section 9.1 of the draft standard. The need for certification of DSRSPs is a question that should properly sit with Ofgem and/or BEIS. A careful balance is needed between creating new barriers to entry that suppresses DSR participation and deployment, and the desire to ensure a positive consumer experience to encourage widespread adoption.

Third party certification involves availability, time, and resources. Currently there is no Notified body approved for this standard.

Proper justification has been given nor enough evidence provided to demonstrate why such a measure is required. This is too large an outstanding question for it to not be made clear to industry prior to the publication of this standard.

2.2 Additionally, industry would like to better understand what the relationship will look like between the Measuring Instrument Regulation and PAS 1878/1879 prior to implementation.

Interoperability and prescription of communications protocols, particularly between CEMs and DSRPs

3.1 The REA is concerned with section 10.6.2. Without further clarification, we fear that this could be interpreted as a requirement for third-party validation of software / protocols, with the potential for Government itself end up being the third-party who validates this software.

3.2 Following the experience of the SMETS1 and SMETS2 meter roll out, which was time consuming and costly, there should be no formally mandated protocols. The nascent DSR space is very different from the smart metering space with much stronger incentives for delivering high levels of customer service in order to drive adoption. Implementing prescriptive protocols greatly increases implementation and administration costs and inhibits innovation in a very rapidly developing sector with evolving consumer needs.

The risk is that prematurely mandating protocols before industry has sufficiently converged around common features sets will reduce the availability of products in the UK and deter adoption of EVs and smart appliances at a time when acceleration is desired. Interoperability can be successfully achieved without the need for prescribed standards or requirements through contractual arrangements. The Government should be championing the innovation and new IP being generated by companies in this space and focus on the policy goals rather than technical means that create barriers to deployment.

Specifically, paragraph b) of clause 7.2.1 and Clause 7.3 in PAS 1879 imply a mandate for a single standardised Interface A. For the reasons above, this degree of prescription should be removed. These views align with the REA's overarching approach to interoperability – for example in the public charging market we support the principle of 'openness' but consider it premature for

Government to formally mandate any specific protocol or requirement on how that is achieved. Even existing protocols such as OCPP and OCPI are still subject to widespread industry debate whether these are adequately fit for purpose in a rapidly evolving landscape.

The market is still at an early stage of development and evolving different scenarios and business offerings to deliver the best experience for end customers. Therefore, different customer needs may be fulfilled by protocol A and another set of needs fulfilled by protocol B. In a few years' time, protocol C may provide new solutions for the market.

There should not be barriers or inflexible requirements that prevent evolution and innovation in the market. Cloud to Cloud integrations are common in B2B scenarios and therefore it may be that a single CEM will have different integrations with multiple DSRSPs due to the different benefits that the DSRSPs provide.

3.3 The PAS standard should describe an optional functional layer.

DSR is an emerging industry and as such there is no existing open protocols that are fully mature and indeed where proprietary protocols are being developed to overcome the limitations within existing ones. There are active international efforts to advance a number of standards, some of which have overlapping focus such as appliance level/smart home. The PAS standard needs to clearly articulate the boundary (scope), functionality and data elements it is seeking to address. It needs to do this without specifying the solution which straight-jacket implementation down a single path.

Each CEM and DSRSP should ensure that each interface should ensure that customer data is secure. It is important that the principles of each interface are sufficiently defined so that it is clear what the desired outcome is, without limiting how that is specifically achieved.

An overarching framework should be provided to facilitate and encourage innovation in this market. We acknowledge and welcome the fact that smart meter data can now either be accessed through the Smart Home Area Network as well as through a DSRSP link into the DCC. However, it should be fully recognised that a DSR & CEM & ESA can provide excellent customer offerings without access to the smart meter.

3.4 The PAS needs to be capable of recognising options that enable whole house integration (coordination) to prevent 'countermand'. For instance, where a DSR call asks the EV ESA to start charging, but the in home battery storage sees the increase load and starts dumping the energy from the battery storage device into the EV. As the market evolves, different options for managing some or all of the ESAs in a home will develop. The PAS should provide flexibility to enable such models to be recognised within the framework.

Prevention of 'vendor lock in' and its implications

4.1 The REA would like to see more concrete examples of what the problem is that is being addressed and greater evidence around the concerns about vendor lock in so the industry can better address them. Is there evidence to show consumers are concerned about vendor lock in or that low levels of 'switching' would hinder adoption of EVs and smart appliances?

So long as an ESA/CEM (eg charging point) can communicate via a signal or is networked, there won't be true vendor lock in. If an ESA/CEM manufacturer or CPO were to go out of business, it is possible to switch to a new station operator without having to require one standard communication protocol. The more realistic concern should be focused on contracting details and

not proprietary protocols. The owner/operator contract has to ensure that if the operator leaves, he or she will retrieve all necessary information and access to allow a transition. Vendor lock in can also occur if programs begin to limit or restrict ESA participation to one particular DSRSP (aka vendor). This limits competition and effectively creates a monopoly service but can be avoided by establishing the principle that customers are free to choose their DSRSP. This encourages competition in delivery of enhanced customer service and is fully achievable without prescribing technical standards or requirements on interoperability.

Further to this point, DSRSPs should not be forced at this stage of the market into supporting all makes of a type of ESA within a particular class if that is not consistent with their business model. If a DSRSP wishes to develop a capability to integrate every make of a type of ESA then it should be free to do so. However, forcing this kind of standardisation takes away the incentive to innovate around unique service offerings that deliver a compelling customer experience, and will reduce rather than enhance the variety of offerings available to consumers. The focus for supporting rapid deployment and interoperability should be on ensuring appropriate market signals are put in place to motivate 'smart' demand side response rather than mandating how that is achieved.

To this end, in PAS 1879 clause 7.2.1 paragraph a) delete the words "asset type of".

The more urgent and important task for unlocking the flexibility capability of these assets is to ensure widespread availability and transparency of price signals.

4.2 More details are needed about how preventing vendor lock in would work – the REA is supportive of DSRSP switching but believes it is too far to expect CEMs to be switched from EVSE/ESA as the two are intrinsically linked and are proprietary. We do not see it as reasonable to believe that a CEM could manage the whole house demand and therefore the CEM should be swappable, as this is not presently how the market operates.

In the instance where it was required that customers should be able to swap out the CEM from an ESA, how would the new CEM communicate with the ESA and how could a home owner be certain that the new CEM is fully tested to work with the ESA and wouldn't turn it into a 'brick' (meaning this IT change would render the device functionless or with greatly reduced functionality)?

Security

5.0 The REA believes that the PAS standards should list objectives and allow for industry meet or exceed these objectives. For some in industry, it would be helpful to give indicative non-binding examples of the options that industry could consider adopting to meet these objectives without mandating any specific one. Commonly adopted and open industry protocols that some parties might wish to refer to could for example include:

- ISO27001:2013 Information Security standard
- ISO27005 Information Risk Assessment standard.
- ISO50001:2011 Energy Management standard.