Regulating electric vehicle smart charging

Personal details

Q1. Your name and email address (only used if we need to contact you).

Your name	Sarah Greenslade
Your email	consultation@britishparking.co.uk

Q2. Are you responding as:
on behalf of an organisation?

Organisation details

Q3. Your organisation's name is?
The British Parking Association

Q4. Your organisation can best be described as:
another type of organisation not listed? Not for profit membership association

Smart charging: aims and objectives

Q5. Do you agree with:

	Agree	Neither agree nor disagree	Disagree	Don't know?
our aim to maximise the use of smart charging technologies?	X			
grid protection objective?	X			
consumer protection objective?	X			
consumer uptake objective?	X			
proposed innovation objective?	X			

Phased approach

Q6. Do you agree with having a phased approach?
Agree

Types of chargepoint

Q12. Do you agree with the proposal that all new chargepoints, except for public chargepoints, are smart?
Disagree **Why?** There is no reason for public charge points not to be smart too.

Types of chargepoint: your reasons

Q13. Do you think the proposal is:
too restrictive?

Types of chargepoint: public chargepoint

Q16. Should public chargepoints that are smart comply also with the regulations?
Agree

Definition of a smart chargepoint

Q18. Do you agree with our proposed smart chargepoint definition?
Agree

Cyber security and data privacy

Q20. Do you agree with having outcome-based security requirements alongside technical security characteristics from the BSI standard (or a proven equivalent)?
Agree

Cyber security and data privacy: your reasons

Q21. Why?
External auditors are encouraged when they are up to date with the latest and potential future developments and not just focussed on current technical solutions.

Cyber security and data privacy: outcome based security requirements

	Agree	Neither agree nor disagree	Disagree	Don't know?
protecting the integrity of chargepoints through physical protections?	X			
protecting operational interfaces of chargepoints and prevent use of non-operational interfaces?	X			
protecting communications and messages sent from and received by chargepoints?	X			
protecting firmware on chargepoints and enabling secure updates of firmware?	X			
protecting electric charging, metering, payment charging and other functions of chargepoints where applicable?	X			
protecting data held by chargepoints?	X			
ensure that messages sent to chargepoints are sent from a certified trusted source?			X	

Why and what other requirements do you think are necessary?
Last point needs to be defined. In-system messages can be authenticated by many means.

Q23. Do you agree that chargepoints should undergo mandated security testing and assurance?

Neither agree nor disagree

Why?
We recommend clear guidelines are developed and issued, however formal regulations are likely to restrict development.

Q24. Do you think any other data privacy requirements are needed from these regulations or through other methods?

We recommend certified new methods and protocols are investigated and included.

Q25. [For organisations that manufacture chargepoints only] Which of these outcome-based security requirements do you already comply with?

	Yes	No	Don't know?
Protecting the integrity of chargepoints through physical protections?	X		
Protecting operational interfaces of chargepoints and prevent use of non-operational interfaces?	X		
Protecting communications and messages sent from and received by chargepoints?	X		
Protecting firmware on chargepoints and enabling secure updates of firmware?	X		

Q25. [For organisations that manufacture chargepoints only] Which of these outcome-based security requirements do you already comply with?			
Protecting electric charging, metering, payment charging and other functions of chargepoints where applicable?	X		
Protecting data held by chargepoints?	X		
Ensure that messages sent to chargepoints are sent from a certified trusted source?		X	

How do you meet the requirements?
We recommend that trusted sources and methods of certification are defined.

Interoperability

Q26. Do you agree with the proposed requirement that the chargepoint must be capable of retaining smart functionality if the operator is changed without the need for a visit to the premises?

Agree

Interoperability: your reasons

Q27. Why?

Ease of use, costs, physical access limitations.
The requirement set to a new minimum functionality is good for the market.

Interoperability

Q28. Do you agree that compliance with a BSI standard combined with a certification and assurance regime could help ensure interoperability?

Disagree

Randomised delay function

Q30. Do you agree that with the proposal that chargepoints should have a randomised delay function?

Disagree

Why?
Depending on the application the chargepoints are required to provide almost real time responses milliseconds for frequency response) down to being able to fully operate in a safe mode when communications links are broken. So there is no need.

Randomised delay function: alternatives

> **Q34. What alternative approaches do you believe could achieve the same outcome as the randomised delay function?**

Smart communication architectures and implementation.

Smart charging and load management must be done on a per devise, per circuit (fuse) per floor and per site level for the EV charging part.

This must be capable of autonomous, safe operation when communication links are not available.

Minimum charging current or power

> **Q35. Do you agree that the regulations should include a requirement for a minimum charging rate?**

Disagree

Against minimum

> **Q36. Why?**

The minimum charge rate or behaviour is vehicle dependent and cannot be generalised.

Default off-peak charging mode

> **Q39. Do you think that chargepoints should:**

another option of your choice?
smart charging profiles

Why?
Adding multiple requirements like this renders really smart charging obsolete as it reduced the available operating envelope.

Default off-peak charging modes: timings

> **Q40. What time should be the specified off-peak or on-peak period?**

We recommend it is location, application and operator dependent and able to be set dynamically.

Safety

> **Q41. Do you agree that regulated chargepoints should be required to be safe by having due regard to the safety framework?**

Agree

Safety: your reasons

Q42. Why?
The Standards cover most aspects of the physical environment. It could also include operation/logistics/information related guidelines, not necessarily regulations though.

Safety

Q43. What other safety requirements do you think should be included in the regulations including why?
It could also include operation/logistics/information related guidelines, not necessarily regulations though.

Q44. Beyond existing regulations, do you think there are safety factors that are not being sufficiently considered in relation to EV charging?
Yes **What and why?** It could also include operation/logistics/information related guidelines, not necessarily regulations though.

Vehicle to grid (V2G) and other advanced smart charging

Q45. Do you agree the regulations should provide adequate space for V2G and other advanced smart charging solutions to develop?
Agree

Q46. Do you believe that there should be specific requirements in the smart charging regulations for:

	Agree	Neither agree nor disagree	Disagree	Don't know?
V2G solutions?			X	
other advanced smart charging?			X	

Why?
Restricting new and upcoming technology will not work.

Monitoring and recording EV electricity consumption

Q47. Do you agree the regulations should include a requirement to:

	Agree	Neither agree nor disagree	Disagree	Don't know?
monitor and record the electricity consumed and exported?	X			
monitor and record the time the charging event lasts?	X			

Q47. Do you agree the regulations should include a requirement to:

Why?
Many companies in the sector already provide this.

Q48. Do you agree the chargepoint must provide a method for the consumer to view information related to monitoring and recording?

Disagree

Why?
The customer should have good access to billing and usage reporting.

Enforcement authority and penalties

Q50. Do you agree that the Office for Product Safety and Standards should be the enforcement authority for the regulations?

Yes

Why?
If they are capable and adequately funded to perform this role.

Q51. Do you agree that the penalty for non-compliance should be a fine for each chargepoint sold and installed?

Disagree

Why?
The market should decide.

Time for compliance

Q52. How long in your opinion should sellers and installers have to comply with the requirements once the final version has been published?

Up to 12 months

Other considerations

Q55. Will any of the suggested proposals in your opinion:

	Yes	No	Don't know?
disadvantage people with protected characteristics, as defined by the Equality Act 2010?		X	

Q55. Will any of the suggested proposals in your opinion:			
cause other equality issues?		X	

Q56. Do you think we should include specific energy efficiency requirements for chargepoints?
No

Against specific energy efficiency requirements

Q58. Why not?
It could be too complex a task to measure the output in large, complex multivendor installations.

Other considerations

Q59. How do you think our proposals will affect:	
consumers?	encourage EV uptake
chargepoint manufacturers?	challenges product development
distriution network operators?	need to thing about energy
energy suppliers?	no effect
chargepoint operators?	current equipment will be obsolete
local government?	-
national government?	OLEV working well and other departments need to work in a joined up way
other, in your opinion, relevant parties?	user groups, car clubs, Mobility as a Service, eMobility platforms all affected

Call for evidence: smart charging long-term approach

Q61. Do you agree that, to implement a long-term approach to smart charging by 2025, we need to make a decision between 2020 and 2022?
Yes
Why? Not later than 2020.

Call for evidence: preferred timeline agreement

Q62. What is your preferred timeframe for a decision?
2020

Call for evidence: preferred timeline evidence

Q64. Supply any evidence of the impact that an earlier or later decision could have?
Comments: The earlier EV infrastructure is available the sooner EV take-up will increase and contribute towards improving our air quality and incentivise corporate car policies to change.

Call for evidence: preferred timeline factors

Q65. Do you agree that these factors are the correct criteria to consider in determining a decision point?
Agree

Call for evidence: using smart meters for EV charging

Q66. Do you believe that the smart metering system, with appropriate modifications and improvements, could offer a viable solution for the smart charging of EVs?
No **Why?** Metering will need to happen with the EVSE side at the point of consumption/energy transfer.

Q67. In your opinion how do you think would the smart meter system needs to be improved in order to meet customer expectation of smart charging and what would be required to do this?
This will not work in the timeframe required.

Q68. In your opinion what would be the implications of the UK not considering relevant international standards by requiring the GB smart meter system for smart EV charging?
The UK will be left behind and become a small isolated market in the EU whilst international markets will potentially grow. UK based manufacturers need to follow international markets and regulations in order to stay competitive.

Call for evidence: alternative options

Q69. Do you think that the alternative approach described in the consultation could deliver our objectives on smart charging by 2025 with similar outcomes to the smart meter system regarding:

	Agree	Neither agree nor disagree	Disagree	Don't know?
cyber security?			X	
interoperability?			X	

Why?
This is too long a time frame.

Q70. Do you think there are other approaches that could deliver our objectives on smart charging by 2025 with similar outcomes to the smart meter system on:

	Yes	No	Don't know?
cyber security?	X		
interoperability?	X		

Which approaches?
Open architectures and international best practice.

Q71. Supply any evidence you have on these approaches including how much time you think developing the approach would take and what costs may be incurred?

Comments:
Difficult to say - mostly one to two years.

Q72. What are your views on smart charging via the vehicle rather than the chargepoint and how do you think government should approach regulating this area?

Chargepoints are part of the permanent infrastructure.

They should talk to the vehicle, drivers apps and building energy management systems as part of a holistic solution.

Call for evidence: smart meters the current lead option for a long-term solution

Q73. Do you agree that the use of the smart meter system for smart charging should be the preferred option for Phase Two?

Disagree

Why?
The smart meter system is not working and cannot be relied upon in the UK. Estonia, Finland and Norway could provide answers.

Call for evidence: using the powers in section 14 of the AEV act for transmission of data relating to chargepoints

Q74. What do you think could be the:

benefits of introducing regulations under section 14 of the AEV act?	generally available information
disadvantages of introducing regulations under section 14 of the AEV act?	complicated communications regimes, interoperability issues

Q75. Do you agree with our views of the minimum data to be made available?
Yes

Q76. What do you think should be the criteria used to determine when the regulations relating to section 14 of the AEV act should be introduced?
When there is consensus in the market and adequate EV take-up.

Q78. What, in your opinion, data privacy considerations will be affected and how do you think they could be resolved?
Data privacy issues are similar to any other embedded and distributed IT system.

Q79. Who, in your opinion, should have access to this data?
All relevant parties.

Final comments

Q82. Any other comments?
We are happy to support this and the wider work you do with our members.