

DRAFT

Electric Vehicle Smart Charging Action Plan;

the roadmap for delivering energy flexibility from
electric vehicles



The "Smart Systems & Flexibility Plan" included a commitment for a joint BEIS + Ofgem statement on EV energy flexibility

EVs have significant potential for providing flexibility on the energy system

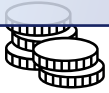
DRAFT

The Action Plan Intent

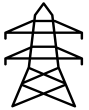
1. Ensure the auto, energy and EV charging markets are aware of government and Ofgem's ambition for smart charging as a key plank of an affordable, sustainable energy system
2. Describe an exciting vision of what EV-energy flexibility through smart charging could be like in 5-10 years.
3. Set out the top-down strategy for smart charging and the specific actions government and Ofgem will take in ~5 year timescale

Vision for energy flexibility from electric vehicles

DRAFT



Widespread electric vehicle smart charging keeps costs down for all electricity bill payers



Smart charging enables a secure, stable, net zero energy system as EV demand grows.



It is the norm for EV drivers to smart charge at all long duration charging.



EV drivers will find information and advice about EV charging online, from consumer groups, and from businesses, to help them understand the charging basics and choose the most suitable products.



It will be straightforward and convenient to use smart charging at home, the workplace or in public settings to access cheaper charging.

In future, it will also be the norm that EV drivers export energy from their EVs using Vehicle-to-X technology



The UK is an incubator for competitive EV energy and charging businesses creating net zero jobs and boosting international trade

Challenges to delivering the vision

DRAFT

- Consumers who are considering electric vehicles are not always aware of the benefits of smart charging.
- Today, households without off-street parking have more limited options for accessing smart charging.
- EV drivers are not likely to continue regularly smart charging if the economic savings or other form of incentives are not attractive to them
- The cyber security and grid stability risks of the future integration of digital, connected, smart energy assets, such as EV charge points, with the energy system need to be managed.
- Vehicle to-X (V2X) bidirectional smart charging is still a nascent technology.
- The electricity demand, and flexibility capacity from EV public charging is not clear for energy system and network operators..



Our key commitments

DRAFT



Government, with Ofgem, will work with industry to improve smart charging information provision to customers from 2023

Government and Ofgem will build a shared evidence base of how the different levels of smart charging uptake will reduce electricity unit costs and use this evidence to inform policy from 2023.

Government will support industry to implement voluntary EV energy consumer service standards [in 2023], signposting them in the information provision and monitor their take-up by 2025.

Our key commitments



Government will ensure that all EV private charge points are secure and interoperable with DSR service providers, enabling consumers to access the full range of smart tariffs and DSR services with confidence.

Government will investigate the technical and economic potential of public smart charging and address the barriers to smart charging at all long duration public charging settings by the late 2020s.

Government will deliver the Vehicle-to-X innovation programme to address barriers to wide scale deployment specific to this technology by 2025.

DRAFT

DRAFT – Not Government Policy



Department for
Business, Energy
& Industrial Strategy

Our key commitments



Government, Ofgem and industry will build the evidence base to understand the relative costs and benefits of smart public and rapid public charging. This will include quantifying the energy system costs, carbon emissions, and potential charging costs to inform future policy direction by 2023.

Ofgem will work with the Distribution Network Operators (DNOs) through the Energy Networks Association (ENA), building on the incentives for an efficient connection process for all low carbon technologies, to ensure that there is a consistent connection process for V2X across all regions.

Ofgem and Government will consider and assess what barriers may exist to the development and uptake of innovative new products and services.