

EV Energy Taskforce – Terms of Reference

The Electric Vehicle Energy Taskforce is to be formed to make suggestions to Government and Industry on ‘how to ensure the GB energy system is ready for and able to best exploit the mass take up of electric vehicles?’

Objective

To put engaging the electric vehicle user at the heart of preparing the electricity system for the mass take up of electric vehicles (EV), ensuring that costs and emissions are as low as possible, and opportunities for vehicles to provide grid services are capitalised upon for the benefit of the system, energy bill payers and electric vehicle owners.

Guiding principles

- Engage consumer/motorists
- Ensure security of supply
- Maximise the environmental benefit
- Minimise the cost to all stakeholders
- Accommodate future mobility and transport
- Secure growth opportunities
- Encourage UK innovation
- Identify UK capabilities
- Aim for no regret actions

Scope of activity

To make proposals to Government and Industry on policies and technological options to ensure GB is ready for and able to best exploit the mass take up of electric vehicles, whilst ensuring that consumers, including vulnerable consumers are protected. In particular, this group will support the development the secondary legislation following the AEVB. Due to differences in structure and regulation of the electricity system in Northern Ireland this will not be directly in scope.

The scope would be limited by focusing on certain key questions, with the following for discussion:

1. What are the potential impacts of EVs on the electricity system?
2. How can the EV user be engaged to maximise the benefits and minimise the impact of the growth in EVs through sending price signals for flexibility or procuring flexibility (utilisation of V2G) in the short, medium and longer term.
3. How can the sector work together to ensure proposals protect consumers’ interests (eg data privacy, interoperability and cyber security concerns)?

4. How can we ensure that the network effects of EV uptake in the near term (ie before smart meters and smart tariffs are fully offered) and long term, is managed in an effective and efficient way?
5. What actions and mitigation need to be put in place in case the uptake of EVs is much faster than predicted in the 2020s?
6. How do we remove barriers/ease access to getting a Connection for EV charging infrastructure?
7. How could we get the full benefits from smart chargers, including how they work together with smart meters (and smart cars)?
8. What are the problems smart charging allows us to solve?
9. What can the sector do to ensure that consumers take advantage of smart charging?
10. How do we ensure that the benefits of V2G are encouraged and effectively realised?
11. How does a DNO send a signal to charge points which need to be controlled? (Does this need a platform?)
12. How could data sharing within the energy sector further help it meet the demands of EVs?
13. Are changes required to metering/supply arrangements to accommodate new innovative business models associated with EV charging infrastructure, whilst ensuring that consumers interests are protected?

More broadly, the taskforce could consider:

- All road vehicle sectors including; heavy duty vehicles, powered two wheel vehicles and L-category vehicles.
- Recharging infrastructure impacts from public, residential and commercial sites.
- Integration with potential smart grids to minimise environmental impacts and cost for all stakeholders.
- Implications for GB power generation and increasing availability of sustainable electricity generation and power storage including vehicle to grid (V2G).
- Means of engaging consumers in utilising EV recharging regimes which maximise electric vehicle mileage, grid balancing and minimum cost.
- Responses to potential consumer requirements and behaviours.
- Incorporate system flexibility to accommodate possible future changes to transport service demand and provision including mobility as a service.
- Identifying GB capabilities and the innovation policy framework required to support development, commercialisation and deployment.
- Understanding and taking account of potential new business models.
- Providing a focal point for collating the evidence base and its dissemination to stakeholders.
- Providing watching briefs on developments in adjacent areas e.g. building regulations.

The taskforce will focus on making detailed proposals for the period to 2030, and proposals on broader policy direction for the period from 2030 – 2050.

Assumptions

The EV Energy Taskforce should use the following assumptions in developing its proposals:

- Proposals should be for the GB electricity network not UK (exclude NI)
- The take up of EVs will be in line with trajectory from Road to Zero. (But will need to prepare for faster take up of EVs.)
- The number and location of EV charge points is assumed to be in the correct location to support EV trajectory. (Scenarios looking at mix of charge points types in scope)
- High level recommendations (Development of Standards are not in scope, although recommendations for Standards to be developed in specific areas are in scope)
- Suggestions should be for government and industry.
- Smart charge points can comprise of any combination of charge point, meter, vehicle or cable. The Automated and Electric Vehicles Bill only gives powers for government to influence the smartness of charge points and cables. 3 pin charging and existing non-smart charge points are out of scope.
- ½ hourly pricing for domestic electricity consumers will be introduced.
- Do not assume single bill for car wherever it charges (assume multiple bills for charging).
- Ofgem will consult on locational pricing.

Deliverables

- Provide an online portal for collating and sharing the evidence base for Government and stakeholders. (Q2 2018)
- Taskforce will make proposals on the development of secondary legislation following the introduction of the Automated and Electric Vehicles Bill. (Q3 2018)
- Make proposals to Government and industry to ensure GB is ready for and able to best exploit the mass take up of electric vehicles, whilst ensuring that consumers, including vulnerable consumers are protected. (Q1 2019)