

Sent via email only to patrick@brightblue.org.uk

7 August 2020

Dear Patrick,

Subject: Energy industry input on maturing the market for electric vehicles

Thank you for the opportunity to feed into your call for evidence on maturing the market for electric vehicles (EVs). Please see below an introduction to Energy UK followed by responses to your questions.

An introduction to Energy UK

Energy UK is the leading trade association for the GB energy industry with a membership of over 100 suppliers, generators, and stakeholders with a business interest in the production and supply of electricity and gas for domestic and business consumers.

Energy UK members are very active in the EV space, offering EV tariffs, smart charging and vehicle to grid, leasing EVs either directly or in partnership with other companies, and installing chargepoints in homes, businesses and in the public domain.

1. How important is fully electrifying private transport to achieving net-zero by 2050?

As you will be aware, the transport sector accounts for around 34% of UK carbon dioxide emissions with emissions having changed little since 1990¹. The improvements made in the power sector meant that transport recently became the largest emitting sector. As such, with only 30 years to meet our net zero target it is clear that cutting transport emissions must be a high priority.

Electric vehicles will play a leading role in decarbonising road transport as a whole. For cars and vans that will be through battery electric vehicles (BEVs). It is less clear what technologies will deliver emissions savings for larger vehicles, such as heavy goods vehicles and trucks, however electrification could also play a leading role in that market segment too.

Electrifying transport will therefore be essential to decarbonising the transport sector and, as a result, in meeting our 2050 net zero target. As such, Energy UK supports an ambitious uptake of EVs and has called on Government to bring forward the phase out date of internal combustion engine vehicle sales from 2040 to 2030, as set out in our [consultation response](#). We believe that from 2030 only zero emission vehicles should be available for a new vehicle purchase in the car and van market. It should not be possible for instance to purchase a new plug-in hybrid electric vehicle (PHEV).

2. What are the key demand-side constraints to the uptake of EVs?

¹ p10

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875485/2019_UK_greenhouse_gas_emissions_provisional_figures_statistical_release.pdf

Please refer to the Energy UK response to the 203X consultation for our detailed thoughts on key barriers to an ambitious EV uptake. As an overview, the most commonly cited demand side constraints to the uptake of EVs include upfront cost, vehicle range, access to charging and vehicle choice. Examining these in turn:

- Upfront cost remains a prominent consumer barrier, hence the introduction and importance of the Plug-in Car Grant (PICG). The upfront cost of BEVs is rapidly dropping as the market grows and it's likely to be cheaper to buy a (subsidy-free) BEV than an ICE vehicle by 2030² or earlier. As this happens grants should be reduced and removed, providing that this is communicated ahead of time and done gradually.
- Vehicle range is a common concern however is largely a perceived rather than real barrier for most drivers. The average range of a BEV is more than adequate for the vast majority of journeys. It is understandable however that drivers are risk averse when it comes to a new technology. Battery sizes in new models are reflecting this concern and tend to deliver 250-300 miles on a single charge.
- Access to charging is another common concern among would-be EV drivers. This is partially down to petrol stations being highly visible, more so than public EV chargepoints, as well as a concern of running out of battery with no access to charging, which is closely linked to the point above. For most drivers with off-street parking the vast majority of their charging will take place at home. That being said, the continued growth in on route, on-street and destination charging infrastructure will be important for those without off-street charging and to provide reassurance generally.
- Vehicle choice is a major sticking point at the moment with many vehicle segments lacking choice. This is changing rapidly for cars, although it appears that commercial vehicle choice is lagging somewhat. Many new models are being launched over the next few years so this constraint looks to be relatively short term.

Demand for EVs in recent years has outpaced supply significantly, creating long waiting lists. As such while the above demand side constraints will need to be – and are being – tackled, Energy UK does not see these issues as being deal breakers. Added to that is the fact that some of the above constraints are down to consumer perception and can be overcome through direct experience with EVs. While that does not make them any less important right now it does suggest that once momentum shifts in the favour of EVs and EVs become the norm these issues will become less influential.

3. What are the key supply-side constraints to the uptake of EVs?

The supply of EVs is a significant barrier to uptake with long waiting times for many EVs. While many manufacturers are bringing forward new models and ramping up production long waiting times are still being reported. This is the key supply side barrier affecting the uptake of EVs in the UK.

The supply of electricity for EVs is an important consideration however Energy UK members do not see this as a major blocker. Providing that the appropriate frameworks are in place to support low carbon generation, deliver flexibility markets and incentivise smart charging, we do not anticipate any problems in delivering the additional electricity that will be required with a rapid EV uptake, including as part of a 2030 phase out of the sale of new ICE vehicles and PHEVs. Government should however set a policy objective within the Energy White Paper for deployment of flexibility as an enabler of meeting net zero at least cost. Please see our 203X consultation response for further detail.

4. What types of policy interventions are required to catalyse the EV market?

- **Targets:** high level targets are important to signal to consumers and industry that Government intends for a rapid uptake of ZEVs and that it is taking its carbon emission reduction

² pp141-143 <https://www.theccc.org.uk/publication/net-zero-technical-report/>

commitments seriously. While a range of policies must be put in place to deliver on the target it can nonetheless be a powerful tool. Energy UK believes that the UK Government should commit to phasing out the sale of all non zero emission cars and vans by 2030.

- **Grants:** Continued support with the upfront cost of EVs through the PICG remains important as long as there remains an upfront cost premium over ICE vehicles. Equally grants for the installation of home and workplace EV chargepoints are important in the short term. Targeted support for public charging where provision is not commercially viable will be important in the coming years as access to charging is a public good, see response to Q5 below for more detail.
- **Tax:** reforming vehicle taxation will be important to ensure there are sufficiently strong (dis)incentives for (more) less polluting vehicles. First year VED rates should be increased for non-ZEVs and ongoing liabilities should be linked to vehicle emissions. Company car tax benefit in kind rates can also be a very effective lever for stimulating uptake of EVs. Finally, it will be important to address fuel duty over the coming years to ensure that all tax levers are pulling in the same direction and that drivers are effectively incentivised to make the switch to a ZEV. There are different options on the table which will need to be considered in full, however Energy UK would urge against transferring fuel duty onto electricity bills: this would be a very regressive and impractical solution.
- **Regulation:** CO2 regulations will continue to be important to ensure that vehicle manufacturers prioritise the UK market for the supply of EVs and form an integral part of delivering the switch from ICE to zero emission vehicles. On the energy side, it is essential that smart charging becomes the norm to be able to successfully and optimally integrate EVs into the energy system. Upcoming smart charging regulations need to nurture innovation and competition to deliver good consumer outcomes.

5. What are the policy recommendations that would help mature the EV market?

- Setting out a clear trajectory for the removal of the PICG should be introduced by linking its level to the market share of EVs. This would provide clarity and certainty to consumers and industry. Crucially it will also provide a smooth trajectory for subsidy removal for the PICG and other grants while creating a mechanism to accurately forecast and cap its expenditure.
- The reduction in benefit in kind rates for company car tax to 0% for 2020/21 was a very welcome step however given the COVID-19 outbreak the impact of this policy will have been reduced. We suggest extending the 0% rate to 2021/22 and pushing back the subsequent increases accordingly by one year.
- Targeted support for EV charging infrastructure will be important over the coming years. This includes for on-street parking, for ultra-rapid charging connections at strategic locations and for locations where it is not commercially viable to deploy chargepoints but where there is an unmet need. The Rapid Charging Fund is looking to support ultra-rapid charging, which will be an important step. The on-street residential chargepoint scheme (ORCS) is seeking to address on-street charging, however the amount set aside for this is very small given the scale of the challenge. A more comprehensive strategy and set of policies will be needed.

I hope this input is useful, if you have any questions please do not hesitate to get in touch.

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