



RAC Response to the proposed ultra-low emission vehicle measures for inclusion on the modern transport Bill.

This response has been written by Nicholas Lyes, RAC Public Affairs Manager, on behalf of RAC Motoring Services

About the RAC

With more than eight million members, the RAC is the oldest and one of the UK's most progressive motoring organisations, providing services for both private and business motorists. As such, it is committed to making driving easier, safer, more affordable and more enjoyable for all road users.

The RAC, which employs more than 1,500 patrols, provides roadside assistance across the entire UK road network and as a result has significant insight into how the country's road networks are managed and maintained.

The RAC is separate from the RAC Foundation which is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users.

The RAC website can be found at www.rac.co.uk.

In September 2016, the RAC published its latest [Report on Motoring](#).

RAC Response

- 1. What are the costs and benefits of requiring infrastructure operators to provide open (static) data on geographical locations of publicly accessible chargepoints and refuelling points? In what standardised format should this most appropriately be provided?**

The RAC is not qualified to comment on specific costs, but the benefits for owners of electric and plug-in hybrid vehicles in terms of information provision will be significant. The availability of standardised and reliable information on geographical locations of charging points will encourage motorists who may have reservations about switching to a pure electric vehicle due to 'range anxiety' to make the change.

In a survey of motorists conducted by the RAC in 2013, concern about vehicle range on a full charge was the biggest worry (31%) followed by the cost of batteries (24%) should it become necessary to replace them.

In the research for the 2016 RAC Report on Motoring, we asked motorists about which type of vehicle they would consider purchasing next. Only 14% are considering a conventional hybrid vehicle, 5% are looking at purchasing a plug-in hybrid and only 2% are considering a pure electric vehicle. Low running costs are a top priority for 27% of motorists when choosing their next vehicle; however this seemingly isn't translating into an intent to

purchase ultra-low or zero emission vehicles, perhaps due to the higher initial purchase price of such vehicles. Therefore, any actions to improve information for motorists to give them the confidence to purchase such vehicles are welcome. Such information needs to include the geographical location, the charging rates and connector types available and should ideally also include real time information on availability. This information should be in a format such that it can be integrated into satnav displays.

2. Do you agree that live (dynamic) data should also be openly available? What proportion of existing publicly accessible charge points and refuelling points have the technical capability to provide information on the live availability of services?

The RAC has no information available on the proportion that have the capability to give information on availability, but regards accurate real time information on availability as absolutely essential, particularly during the early period when the number of charging points is still limited.

3. How could a roaming platform, or bilateral roaming solution between operators be developed to best serve users and operators? Could this be delivered without legislative intervention?

The RAC regards this as essential for the development of the ULCV market. Access to charging networks in most instances requires the payment of a monthly or annual fee, in addition to any charges for the electricity itself. It becomes uneconomic and unattractive for owners of ULCVs to subscribe to multiple networks and so "roaming" agreements are essential.

4. What are the costs and benefits of requiring EV infrastructure operators to deliver a roaming platform solution for open public access? How could the Government best support this?

The RAC is not in a position to give a response on cost but in terms of benefits, ULCV owners want to sign up to one charging network with the understanding that this will enable them to access all available charge points across the UK.

5. Provision for *ad hoc* access to publicly accessible charge points will be mandated by AFID. Is mandating a minimum specific *ad hoc* access method for consumers preferable to a roaming platform / bilateral roaming solution in the UK market? If so, should there be a minimum access method that is most appropriate as a minimum standard?

The RAC welcomes any movement towards harmonisation of charge point standards. In order to encourage take up of ultra-low and zero emission vehicles, motorists will expect it to be both as easy and as rapid as possible to recharge their vehicles.

Ultimately, the Government should be supporting charging infrastructure development with the goal of making the charging of vehicles in public places (such as MSAs and possibly refuelling stations) as quick and convenient as it is to refuel a conventional petrol or diesel vehicle.

6. How should operators of charge points and hydrogen refuelling stations and networks best display and make available pricing information for users?

In principle, operators with charging points should make pricing information as transparent as it is for conventional vehicles who are refuelling. Most motorists are used to seeing pricing information in the form of a retailer electronic pricing board as you enter the petrol station. Clear and transparent pricing from the offset could encourage early pricing competition in the sector.

However, if roaming agreements emerge that enable motorists to sign up to a pricing agreement with their charging network operator, which applies wherever they recharge their vehicle whether the charge point is operated by their network operator or by a competitor, local price displays may become unnecessary.

7. If required, in what comparable format should the pricing of electricity from a chargepoint and hydrogen from refuelling stations be specified as a minimum? What other relevant regulations / guidance on consumer pricing is already in place, and could this be used for these purposes?

Pricing information should specify both the price per KWH and also any fixed charge that applies. Plug-in hybrid electric vehicles (PHEVs) offer a genuine alternative for many motorists for whom the current generation of pure electric vehicles do not meet their user requirement. However, the pricing structures of some existing charging networks are aimed at pure electric vehicles and are uneconomic for PHEVs because of the fixed price element of the usage charge. The Government should encourage pricing structures that encourage the take-up of PHEVs as well as pure electric vehicles.

Hydrogen is likely to be priced either by volume or weight and pricing arrangements will therefore be very similar to conventional petrol and diesel sales from retail forecourts.

8. Do you agree that the Government should take powers to allow for new technical standards to support smart charging?

Smart charging appears to address the problem of balancing demand at times where there may be high local demand for EV charging. The RAC would support such measures should they provide EV users with a more reliable network.

It would also be sensible to focus on the ability of EVs to smart charge by effectively putting power back into the network when fully charged.

9. Do you agree that that technical standard requirements would best apply on sale and installation of a charge point?

The RAC does not regard itself as having specialist knowledge of such matters but from a common sense perspective, this would seem to be the best approach.

10. What could the direct costs of this capability be, and on which party are they likely to fall?

The RAC is not in a position to answer this

11. Are there any other regulatory or non-regulatory ways by which widespread smart charging capability could be achieved?

The RAC is not in a position to answer this

12. Do you have any other comments on government's proposed intervention in this area?

The RAC has no further comments

13. What provision of fuel for EVs at Motorway Service Areas, and at fuel retailers, is necessary now, and desirable in the short, mid and long-term futures? This might include recharging infrastructure for battery electric vehicles, and/or hydrogen refuelling for fuel cell electric vehicles.

At present, there are approximately 78,000 plug-in vehicles on UK roads¹. New registrations, whilst growing still make up only a relatively small proportion of the total number of newly registered vehicles.

Ultimately, motorists will only transition to an electric vehicle if it is affordable and if they have confidence in the charging infrastructure. It is not sufficient for a single charging point to be installed at a location if the probability is that it will be occupied when a ULCV user needs to recharge their vehicle. There is no better example of this than the charging points outside the DfT building in Horseferry Road in London which are in use for such a high proportion of the time that the chances of a visitor to DfT being able to recharge their vehicle is low.

There appear to be a variety of different charging networks and standards which is confusing for a prospective buyer of such vehicles, so the RAC urges the Government to regulate to ensure that charging networks are interoperable and are as user friendly as possible.

The provision of charging points at MSAs is highly variable. It is important that if users of electric vehicles pull into an MSA, the charging infrastructure is as reliable and as available as the provision of conventional fuel. Looking forward, this will ultimately require large numbers of

¹ <http://www.nextgreencar.com/electric-cars/statistics/> (SMMT data)

charging points in car parks and the planning and development of the electricity distribution infrastructure needs to recognise this future need.

14. Can provision of fuel for EVs at Motorway Service Areas, and at fuel retailers, be improved by non-regulatory means?

An industry led star rating for MSA and fuel retailer plug-in vehicle provision could be adopted to give consumers confidence that they are able to stop and refuel with as little delay as possible. However, ultimately, Highways England will need to make the provision of adequate charging capacity and hydrogen refuelling capacity a condition of their agreements with MSA operators.

Whilst hydrogen is likely to be supplied through conventional fuel retailers, it seems more likely that recharging facilities will be located in shopping centre car parks and at places like supermarkets where motorists can use their time productively whilst their vehicle is recharging.

15. What standards of provision and availability should be provided by EV infrastructure at Motorway Service Areas, and at fuel retailers?

Motorway Service Stations are likely to be the only practical location for recharging facilities when owners of pure electric vehicles undertake longer inter-urban journeys and therefore large numbers of charging points will be needed at MSAs. It is less clear that a conventional fuel retailer's site is best suited for recharging vehicles because the space available will generally restrict the number of charging points and the facilities are not suited to motorists usefully passing time whilst their vehicle recharges.

We support 24 hour charge point access as outlined in the document, however the Government should note that many owners will have the ability to charge their plug-in vehicles at home and will generally do so because of the associated convenience.

16. What would the impacts of mandatory provision of fuel for EVs be on Motorway Service Areas and fuel retailers, and how might this vary between different sizes and types of fuel retailer?

Typically, smaller independent fuel retailers will be located in more rural areas. The number of independently owned garages has been declining² for some time now, and mandatory provision of charging points may put further strain on their finances. The Government should consider assisting those smaller retailers should legislation make charging point provisions mandatory. However, the RAC has already questioned whether fuel retailer forecourt is the right location for charging points.

17. Should provision just be required at some fuel retailers, and how should they best be differentiated?

Please see our answer to earlier questions.

² http://www.racfoundation.org/assets/rac_foundation/content/downloadables/racf_deloitte-fuel_retail-jan13.pdf

18. Are there any other strategic sites might it be appropriate to require provision of fuel for EVs? For example, train stations, bus stations, public car parks, retail/leisure developments, hospitals, educational establishments. For any such locations, who should be responsible for providing the fuel for EVs?

The RAC regards the majority of the suggested locations for charge points as more appropriate than retail fuel forecourts. The most appropriate locations are where parking facilities already exist. Charging network operators are probably best placed to take the lead on installing such facilities though there may be a case for Government assistance for the supporting infrastructure, e.g. the laying of power cables to provide additional electricity on site.

At present, motorists who have a private driveway will be able to charge their EVs when at home. However, many motorists will also leave their vehicle parked on-street and as such would not consider switching to a plug-in vehicle whilst there is a lack of infrastructure on local residential roads. In the same way that there was Government action to accelerate the provision of broadband infrastructure to all UK residents, the Government and local authorities will at some point need to adopt a similar approach to the provision of charging facilities for EVs parked on residential roads.

There is also the question of communal, private car parking facilities for residents, such as adjacent to flats and apartments. Mandatory provision risks increasing service charges for residents; however managing companies should be required to consult with residents in the block as to whether there is a desire to implement EV charging facilities.

19. Would granting franchises for hydrogen refuelling infrastructure help attract investment?

The RAC is not in a position to answer this with any certainty. However the major oil companies are also likely to be suppliers of Hydrogen and the Government may want to consult with them to understand the main inhibitors to investment

20. Do you agree this method of enforcement is proportionate to potential offences?

The RAC does not have anything further to add to what is listed.

21. Are there other measures, that alongside enforcement, the Government should consider to encourage compliance? If so please explain your views.

Presently at MSAs, the price of petrol and diesel can be over 10p a litre more expensive than in non-MSA stations. The RAC understands there is a motorway fuel price signage trial on the M5 currently taking place; however we believe that it is important that going forward, EV charging is more competitively priced at MSAs than petrol and diesel prices currently are.

Therefore, we believe it is appropriate that the Competition and Markets Authority also has powers to monitor pricing and act when necessary.

22. What appropriate factors should be taken into account when determining the level of civil penalty which should be levied for non-compliance with data accessibility requirements?



The RAC would argue that any civil penalty for non-compliance should go to local authorities to re-invest into local, sustainable infrastructure, including road safety and road surface quality.

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