House of Commons

Business, Energy and Industrial Strategy Committee

Electric vehicles: driving the transition: Government Response to the Committee's Fourteenth Report of Session 2017-19

Fifteenth Special Report of Session 2017–19

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Business, Energy and Industrial Strategy Committee

The Business, Energy and Industrial Strategy Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Department for Business, Energy and Industrial Strategy.

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Fifteenth Special Report

On 19 October 2018, the Business, Energy and Industrial Strategy Committee published its Fourteenth Report of Session 2017–19, on Electric vehicles: driving the transition. The response from the Government was received on 20 December 2018. The response is appended below.

Appendix: Government Response

The Government welcomes the Business, Energy and Industrial Strategy Committee's report *Electric vehicles: driving the transition* (HC 383) which was published on 19 October 2018. The Government shares the Committee's view that electric vehicles represent exciting opportunities for the UK as a tool to address greenhouse gas emissions, reduce air pollution, and as a new economic opportunity. The Government also agrees that the transition to electric vehicles will need to be led by industry and consumers, and that a shift away from internal combustion engines to zero emission vehicles is essential if the Government is to achieve UK carbon targets at least possible cost.

The UK's low emission vehicle industry is a huge success story and a great source of strength in our economy. The Government wants to take advantage of the economic opportunities now emerging globally, as countries move towards a cleaner future for road transport.

In November 2017, the Government set out its Industrial Strategy,[1] designed to help build a productive, growing and green economy across the UK. The Government published the UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations[2] in July 2017 and the Clean Growth Strategy[3] in October 2017, which set out how we will cut exposure to air pollutants, reduce greenhouse gas emissions and improve our energy security.

The Road to Zero Strategy,[4] published in July 2018, built on these strategies, setting out new measures to clean up road transport and to put the UK at the forefront of the design and manufacturing of zero emission vehicles. The measures in the strategy are underpinned by nearly £1.5 billion of investment in one of the most comprehensive packages of support in the world for the transition to zero emission vehicles.

The market for electric vehicles in the UK is continuing to grow. Since 2011, over 170,000 battery electric, plug-in hybrid and fuel cell electric vehicles have been registered in the UK and ultra low emission vehicles made up 1.8% of all new car sales in 2017. Market share is continuing to increase with between 2 to 2.5% of new car sales ultra low emission so far in 2018. As a result, in 2017 the UK was the second largest market for ultra low emission cars in the EU[5] – behind Germany – and the third largest in Europe as a whole – behind Norway and Germany. These vehicles are being supported by a rapidly expanding charging network with over 15,000 publicly accessible chargepoints now available in the UK and more than 1,500 of these being rapid devices – one of the largest networks in

1 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf
2 https://www.gov.uk/government/publications/clean-growth-strategy tps://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017
3 https://www.gov.uk/government/publications/clean-growth-strategy
4 https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy
5 https://www.acea.be/uploads/press_releases_files/20180201_AFV_Q4_2017_FINAL.PDF

Europe. On average in 2018, chargepoints are being installed at a rate of well over 500 per month, of which around 100 are rapids. Coupled with the fact 1 in 5 of the electric cars sold across Europe in the first half of 2018 were made in the UK, these markets are generating significant industrial opportunities for the UK.

The Government is committed to working in partnership, including with industry, local government and consumers to build on this and deliver our long term ambitions. The Government is working with the international community to accelerate the global shift to cleaner transport and is playing an active leadership role. At the Prime Minister's Zero Emission Vehicle Summit in September 2018, the UK brought together governments and industry from around the world to provide impetus to the development of the global electric car market, including the signing of the Birmingham Declaration.[6]

This response incorporates contributions provided by the Department for Business Energy and Industrial Strategy, the Department for Transport and HM Treasury. The Committee's recommendation is reproduced followed by the Government's response.

Targets

(1) **The Government's lack of clarity on the meaning of the 2040 targets is unacceptable. Industry cannot be expected to make supportive investment decisions when Ministers and officials themselves cannot say how the target should be interpreted. This means that car manufacturers do not have certainty about the types of vehicles they will be able to market in the UK in the near future, and charging infrastructure providers are less able to make assessment about future demand for their product. The unclear messaging from Government is damaging and unfair to those companies wishing to drive the transition to EVs. The Government cannot rely on expectations alone to deliver desired policy outcomes. (Paragraph 16)**

(2) **Plug-in hybrids could have a role to play during the EV transition, at least in the near term—but non-plug-in hybrids are not compatible with the Government's long term climate change commitments. Whilst we support the principle of technology neutrality, the Government should recognise that by allowing the ongoing sale of conventional hybrids, and short-range plug-in hybrids, the current 'ban' fails to ensure that only the cleanest new vehicles will be available for sale from 2040. *We recommend that the Government either acknowledge that petrol and diesel will ultimately need to be fully phased out from cars and vans, or admit that it is not seeking a zero emissions fleet. It cannot have both.***

We recommend that the Government aim for zero emissions, in line with its longstanding 2050 target, and phase out non-plugin and all but the cleanest plug-in hybrid vehicles. This should include more stringent zero emission range requirements for plug-in hybrids to ensure that vehicles deliver on targeted emissions reductions. (Paragraph 19)

6 https://www.gov.uk/government/publications/zero-emission-vehicle-summit-the-birmingham-declaration

The Government's long standing commitment is for almost every car and van in the UK to be zero emission by 2050. To achieve this, we will end the sale of new conventional petrol and diesel cars and vans by 2040 and part of the Government's 2040 mission is for all new cars and vans to be effectively zero emission by this date.

The Government expects this transition to be industry and consumer led, supported in the coming years by the measures set out in the Road to Zero strategy. The Government will review progress by 2025 and will consider what interventions are required if not enough progress is being made. The Government's approach is technology neutral but not outcome neutral. The focus is on zero emissions capability rather than particular technologies like non-plug in and plug-in hybrid vehicles. The technologies on sale and the market share of those technologies must be compatible with achieving the UK's 2050 climate change target and long term air quality goals. The Government wants to see new cars and vans delivering as many zero emission miles as possible, as fast as possible. A combination of Government and industry investment, innovation and consumer demand is expected to deliver our 2040 ambition.

By 2040, the Government expects the majority of new cars and vans sold to be 100% zero emission and all new cars and vans to have significant zero emission capability. Meeting the 2040 ambition will mean that by 2050 almost every car and van in the UK will be zero emission. The 2050 target recognises that certain types of vehicles, including historic or vintage vehicles, may need special consideration.

(3) **The transition to EVs is set to accelerate over the coming decades; the UK will need to match, or better, international commitments if we are to be a 'world leader'. A leadership position would enable the UK to develop sought-after expertise in EV technology, manufacturing and charging infrastructure, with substantial potential export opportunities. The current 2040 target for 'effectively zero emissions' vehicles places the UK in the passenger seat, leaving us to accept vehicle emission standards set by more ambitious international regulations. Stronger ambitions are also needed to ensure that the Government delivers on its goals to mitigate climate change and improve air quality. A more ambitious target date would help to ensure that petrol and diesel vehicle stock is retired by 2050, and would align the goal for England, Wales and Northern Ireland with the Scottish Government's ambition to phase out petrol and diesel cars and vans by 2032. Zero should mean zero.** ***We recommend that the Government prioritise overarching policy goals on climate change and air quality over sectoral interests, and bring forwards a clear, precise target for new sales of cars and vans to be truly zero emission by 2032. This would put the UK in the 'first tier' league of nations leading the EV transition, and help to harmonise objectives across the UK. (Paragraph 24)***

(4) **We welcome the Government's willingness to set interim targets, with the adoption in the Road to Zero Strategy of an ambition for "at least 50%, and as many as 70%, of new car sales and up to 40% of new van sales being ultra low emission by 2030".** ***We recommend that the principle of interim targets is maintained, with the interim targets themselves strengthened and updated to reflect the increase in ambitions to bring forward the phase out of ICE vehicles to 2032. (Paragraph 25)***

The Government recognises the importance of overarching policy goals on climate change and air quality. The Clean Growth Strategy set out pathways for meeting the UK's long term emissions reduction target of 80% on 1990 levels by 2050. The 2040 ambition is consistent with this evidence on pathways for meeting 2050 targets, and sets a clear level of ambition for industry to work towards.

The Committee on Climate Change monitors progress[7] and ambition against 2050 targets and they have reported that the UK should be aiming for 60% ultra low emission vehicle uptake across cars and vans in 2030, which is consistent in terms of carbon with the ambitions set out in the Road to Zero strategy.

The UK was one of the first major economies to announce an end to the sale of conventional new diesel and petrol cars and vans by 2040, going further than almost every other European nation. This is an ambitious but achievable target and this Government believes it is a key part of the answer to the UK's long term transport air quality and greenhouse gas issues. It puts the UK at the forefront of the global transition to zero emission vehicles. The Government has consulted extensively with stakeholders across numerous sectors including environmental groups, the automotive industry and other experts and believes it has identified the right balance between environmental ambitions, deliverability and behavioural changes, giving consumers and industry time to transition supported in the coming years by the measures set out in the Road to Zero strategy.

The transition could conceivably happen much quicker than 2040 and the Government wants to set the right framework to encourage people to choose the cleanest vehicles. A number of thought leaders think the point at which the up-front cost of an electric vehicle is the same as the up-front cost of a conventional vehicle could occur in the mid-2020s. This will be a key factor in the transition to electric vehicles. That is why Government will be actively tracking market developments and we will review progress towards our ambitions by 2025. Against a rapidly evolving international context, we will seek to maintain the UK's leadership position and meet our ambitions, and will consider what interventions are required if not enough progress is being made.

The Government welcomes ambition in other countries and at the Zero Emission Vehicles Summit in September 2018 we encouraged others to sign up to the Birmingham Declaration.[8] This initiative was signed by countries and regions from across the globe, who made a commitment to a zero emission future for transport and working together to promote deployment of zero emission vehicles on a global scale. This declaration was also the foundation for the 'Driving Change Together Partnership'[9] declaration on e-mobility which the UK co-authored with Poland and was launched at the UN climate negotiations (Conference of the Parties 24) on 4 December. Over 30 governments and 15 NGOs signed up to the partnership. It is an important statement, signalling a growing global momentum on the issue and calls on all parties to do more to accelerate the transition to zero emission vehicles.

(5) **It is imperative that Government supports domestic industry and workers through the EV and EU exit transitions by creating an attractive domestic environment for investment. (Paragraph 26)**

7 https://www.theccc.org.uk/publication/reducing-uk-emissions-2018-progress-report-to-parliament/
8 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740366/birmingham-declaration-zero-emission-vehicle.pdf
9 http://cop24.gov.pl/presidency/initiatives/driving-change-together-partnership/

EV purchase support

(6) **The Government's decision to cut substantially grants for pure electric vehicles, and to remove entirely those for plug-in hybrid vehicles, has been made too soon and too suddenly.** ***We recommend that purchase support for EVs should be maintained at October 2018 levels for the time and more generally until the cost of EVs nears price parity with conventional ICE vehicles. We further recommend that the Government sets out its intentions for the future of plug-in grants for the next five years. If the Government is unable to commit to ongoing support, it should at least set out the terms under which grants will be phased out, well in advance of the implementation of any reductions. (Paragraph 36)***

The Plug-in Car Grant was designed to kick-start the early market for electric vehicles, which has progressed significantly since the grant launched in 2011. To date the grant has supported the purchase of over 170,000 vehicles. As the market develops and the number of grant applications increases, it is right that the Government reviews its support for zero emission vehicles in consultation with stakeholders. Whenever the Government reviews the grant it has to balance the state of the market, the Government's environmental aspirations and ensuring value for money for the taxpayer.

Following the latest review, the Government announced that it is now focussing its support on zero emission models such as the UK built Nissan Leaf and the BMW i3. The Government also confirmed that the grant would be available until at least 2020 and would support the purchase of the next 30,000 vehicles.

The Plug-in Car Grant is just one way in which the Government provides support for plug-in hybrid vehicles. These vehicles also benefit from lower rates of car tax, grants for chargepoints and local incentives such as free parking.

(7) ***We recommend that the Government follows the example of EV world leaders, and provides support to make EV prices more competitive with conventional cars and vans. (Paragraph 38)***

Each country that was early to promote the switch to zero emission vehicles has unique characteristics which are reflected in their strategies for developing their zero emission markets. Industrial, tax and structural factors vary considerably between countries and shape the incentives and policies deployed. That said, against a rapidly evolving international context, we will seek to maintain the UK's leadership position and meet our industrial and environmental ambitions, and will consider what interventions are required if not enough progress is being made. The Road to Zero Strategy sets out the package of measures we are taking to do that.

The Government recognises that consumer incentives, in some form, will continue to play a role in driving uptake of electric cars beyond 2020. As stated above, the Plug-in Car Grant was introduced over 7 years ago to support the early market for ultra low emission vehicles and has already supported the purchase of over 170,000 vehicles.

In the coming years, we expect sales of zero and ultra low emission vehicles to be driven increasingly by tougher global emission regulations and accelerating consumer demand, thanks to longer vehicle ranges, improved model availability and lower prices.

(8) **Fiscal signals should send a clear and consistent message about the Government's ambition to move to a zero emission vehicle fleet. There is little sense in introducing changes which reduce incentives to purchase an EV, or which encourage consumers to delay, when the Government has clearly set out its ambition to increase EV uptake.** ***We recommend that the Government aligns new fiscal changes with the zero emissions target. It should bring forward the introduction of preferential rates on company car tax without delay, or at least hold company car tax on EVs level until the preferential rates come into effect. (Paragraph 39)***

The Government aims to announce company car tax rates at least two years in advance of implementation to provide certainty to employers, employees and fleet operators. Unwinding previous announcements, or making changes to announced rates, could undermine this certainty.

Company car tax is explicitly designed to make it more attractive for employers and employees to choose cars which emit the lowest levels of carbon dioxide emissions. As a result, a company car driver choosing a zero or ultra low emission model in 2018–19 or 2019–20 receives a significant discount compared to a conventionally fuelled alternative.

From 2020–21, the Government will introduce five new bands for ultra low emission vehicles to distinguish between models with different plug-in hybrid technologies and improved battery range. This will focus incentives on the very cleanest cars that allow most journeys to be zero emissions. There is only limited evidence to suggest that the current company car tax rates are causing drivers to delay the decision to choose ultra low emission vehicles today.

The wider tax system incentivises the cleanest cars. Zero emission vehicles pay no excise duty (VED), zero emission vans only pay a small proportion of the van benefit charge (40% for 2018–19), and electric vans are not subject to van fuel benefit charge.

As set out in the Road to Zero Strategy, the Government has committed to continuing to ensure the tax system incentivises the purchase of the cleanest vehicles, and in particular zero emission vehicles.

(9) **EVs should not be the sole preserve of the relatively affluent.** ***We recommend that the Government introduces more creative support mechanisms to ensure that all motorists are able to benefit from EVs. This could include public car clubs, and improved communications and documentation to enable consumers to better assess the real world financial and environmental performance of both new and second hand EVs. (Paragraph 42)***

The Government's intervention in the electric vehicle market aims to bring forward as quickly as possible upfront price parity between electric and internal combustion engine equivalents, making electric vehicles more affordable for all consumers. To achieve this, the Government is focused on two areas. First, supporting R&D to ensure that technologies for electric vehicles exist and are brought to market as early as possible. Second, the Government is supporting the early market for electric vehicles with demand incentives (grants and taxes) to allow those technologies to reach mass market and therefore economies of scale as early as possible. The Government has taken this approach

since 2011 and continues to do so. This has resulted in a significant increase in numbers of electric vehicles sold. The cost of electric vehicles relative to conventional vehicles has come down already, and this trend is expected to continue.

The Government understands that the development of a healthy market for used electric vehicles is critical to making electric motoring affordable for more people. Supporting the development and delivery of new technology and the new car market are the two biggest things Government can do to support the used car market. However, the Government is also taking specific steps to support the used car market:

- Consumers who purchase used electric vehicles are able to take advantage of the favourable tax regime the Government has put in place, local initiatives such as free parking, as well as the Government's grant schemes such as the Electric Vehicle Homecharge Scheme to assist with the cost of installing chargepoints.

- To help the used market to develop further, the Government is ensuring that car dealerships have the right knowledge, equipment and systems to be able to sell used electric cars. Through the Energy Saving Trust, Government has funded training for car dealerships and auction houses to improve their understanding of electric vehicles and help consumers make an informed choice.

- The Government agrees with the committee that improved documentation is critical for consumers. Currently no information about battery capacity is included on an electric car's V5C registration certificate. This makes it more difficult for drivers looking at buying a used electric car. The information that is included on the V5C for electric vehicles will be reviewed to ensure that it includes the information consumers need.

A key part of the Government's extensive support for the early market for ultra low and zero emission vehicles is the joint Government-industry Go Ultra Low communications campaign which provides financial and environmental information to consumers on the benefits of switching to a zero emission vehicle, both new and used.

The Government is also supporting the work of the National Franchise Dealers Association to develop an accreditation standard for new and used electric car dealerships. This will set a standard for dealers who are looking to prove their expertise in selling and supporting electric vehicles.

From 1 January 2019 official consumer information for new cars will be based on the new procedure for measuring fuel economy, the Worldwide Harmonized Light Duty Vehicles Test Procedure (WLTP), giving consumers more accurate information on the environmental performance of vehicles. This includes the range for electric vehicles. WLTP provides more representative data over a range of different driving conditions. This information will be available at the point of sale for example the fuel economy label, manufacturers' promotional material and in the Vehicle Certification Agency (VCA) online tools. The point of sale label will be further amended in 2020 which can allow for further information on electric cars.

The Government recognises the role of car clubs to provide access to zero emission vehicles to a wider cross-section of society. All eligible ultra low emission vehicle purchases benefit from OLEV vehicle grant scheme support, including when made by a car club. As part

of the Future of Mobility Grand Challenge, research is being conducted into consumer attitudes to car sharing so the Government can better understand if there are any barriers that need to be overcome. The Government will continue to consider what measures could be taken to make electric vehicles more accessible to all motorists.

Commercial vehicles

(10) **Commercial vehicles have been largely overlooked by emissions reduction policies to date. Whilst we welcome the Road to Zero Strategy, it does not go far enough in setting a clear direction for the decarbonisation of the vehicle sector.** ***We recommend that the Government sets firm targets for deployment of ultra low emission commercial vehicles, provides support to expedite uptake amongst hub-based operations, and supports the development of low carbon solutions for heavy, long-distance vehicles. The voluntary target for HGVs should be monitored, as the Committee on Climate Change has advised, with an option to introduce a firmer target, as for cars, should progress fall off track. (Paragraph 47)***

The Government is taking a number of steps to support the deployment of ultra low emission commercial vehicles. We have set out in the Road to Zero Strategy our ambition that up to 40% of vans are ultra low emission by 2030, and also our long term ambition to make HGVs zero emission.

The Government provides support to this important sector through the Plug-in Van Grant. This provides up to £8,000 for vans up to 3.5 tonnes and up to £20,000 for the first 200 ultra low emission HGVs weighing more than 3.5 tonnes.

There is also a place for other delivery modes including e-cargo bikes. This is why, following the recent call for evidence on last mile deliveries, the Government is providing funding of £2 million to support the uptake of e-cargo bikes. The funding will contribute 20% towards the first £5,000 of the purchase price of new e-cargo bikes. This gives a grant of up to £1,000 per bike. Funding will be conditional on individual businesses following a code of cycle safety good practice.

This new fund will help to cut congestion and improve air quality, encouraging companies to replace older, polluting vans with a zero emission alternative to create a cleaner, greener future. Money will be split between larger fleets and smaller operators to ensure benefits are available to and spread between all sizes of business.

At the recent Zero Emission Vehicle Summit and in association with environmental NGO Global Action Plan, 16 of the UK's largest van fleet operators joined the Clean Van Commitment[10] which will see nearly 2,400 zero emission vans join their fleets by 2020. By 2028, their fleets will be completely zero emission in cities.

With four months left of the financial year we have already received 30% more plug-in van grant orders in the financial year 2018–19 than we saw in the whole of 2017–18. The increased zero emission range of a number of van models looks to be proving popular

10 https://www.cleanairday.org.uk/clean-van-commitment

with purchasers. With even more new products planned for launch by van manufacturers in the coming years this pattern should continue and translate to increased registrations of ultra low emission vans in the UK.

The Government set out in the Road to Zero Strategy that our long-term ambition is the development and deployment of zero emission HGVs.

The EU published a proposal to introduce a carbon dioxide emission standards for heavy-duty vehicles in May 2018. This proposal includes mandatory targets for manufacturers to reduce the average carbon dioxide emissions for large trucks and also incentives for supplying zero and low emission vehicles. The UK is discussing the proposal with Member States and will seek to ensure that it is sufficiently ambitious to help deliver our goals in terms of decarbonising road transport and developing zero and low emission commercial vehicles.

The Government will collaborate with industry in the coming years to help the sector fulfil the commitment to reduce HGV carbon dioxide emissions by 15% by 2025: by providing relevant information on different measures and technologies that can deliver these carbon dioxide savings and ensure hauliers realise the commercial benefits of fuel savings. In particular, Government welcomes the Freight Transport Association's recent launch of its new Logistics Emissions Reduction Scheme and this scheme's adoption of the commitment to reduce carbon dioxide emissions by 15% by 2025.

The Government continues to support research and development into zero and low emission HGVs. The Government provided £20m of grant funding for the Low Emissions Freight and Logistics Trial in 2017 and £18m for the 14th round of its Integrated Delivery Programme earlier this year for projects that focus on clean technologies for commercial vehicles. Government has appointed Transport Research Laboratories to conduct a research project to assess and identify suitable zero emission HGV technologies for the UK and appropriate research and development to progress these technologies.

Charging infrastructure

(11) **We welcome assessments by National Grid, and others, that the EV transition is unlikely to present a risk to the security of national electricity supply. Nonetheless, the increased electricity demand will necessitate investment in new generation capacity. The EV transition therefore strengthens the case for Government to review its support for new generation plant and to ensure that all support is consistent with the Government's overarching aim of least-cost decarbonisation. (Paragraph 53)**

(12) **We welcome the introduction of powers in the Automated and Electric Vehicles Act 2018 for the Secretary of State to make regulations prohibiting the sale or installation of charge points unless they meet certain smart functionality requirements.**

(13) **We welcome the Government's recent £30 million investment in Vehicle-to-Grid R&D to explore the potential of this technology. (Paragraph 57)**

(14) **We welcome the provisions of the Automated and Electric Vehicle Act 2018 to allow government to set and enforce regulations that: standardise and ensure**

interoperability of public charge points, including payment systems; ensure provision and standardisation of information about public charge points; mandate charge points at large fuel retailers; and require smart charging capabilities. ***We very strongly recommend that the Government make full use of these powers by setting and enforcing new regulations to promote the development of convenient, accessible charging infrastructure. (Paragraph 60)***

The Government is committed to ensuring the UK has one of the best electric vehicle infrastructure networks in the world. It agrees with the Committee that central to this will be a public network where chargepoints are accessible, affordable and secure. The Government is looking to encourage and leverage private sector investment to build and operate a self-sustaining network, supported by the right policy framework.

The Alternative Fuels Infrastructure Regulations 2017, which apply to all public chargepoints from November 2018, will improve the experience of using chargepoints by: ensuring that users are able to have ad-hoc access to every publicly available chargepoint, allowing recharging without a pre-existing contract; compelling infrastructure operators to make the geographic location of their chargepoints publicly available; and mandating minimum technical specifications for chargepoint connectors, ensuring greater interoperability.

As noted by the Committee, the Government took powers within the Automated and Electric Vehicles Act 2018 to set a direction for the market. At this early stage, we do not want to intervene unnecessarily – regulatory interventions at such an early stage of market development can risk stifling innovation, hampering competition and have unintended consequences. Government believes there is a strong case for bringing forward the regulations to mandate smart capability for all charge-points and will publish proposals for consultation in the New Year.

There are encouraging signs of improvements to the consumer experience of public infrastructure in response to the Alternative Fuels Infrastructure Regulations and the Act. For example, operators are already improving the accessibility of their chargepoints by offering payment via smartphone apps and contactless payment systems. The Government continues to monitor market developments closely. If the market fails to deliver further improvements across the entire network or takes too long, the Government is prepared to intervene using the powers in the Automated and Electric Vehicles Act to ensure a good deal for consumers.

(15) **Delaying support for rural charge points will only prolong range anxiety amongst potential EV motorists, impeding development of the market.** ***We recommend that the Government should not wait for additional evidence of the need to support the business case for rapid charge points in rural and remote areas, but instead subsidise the provision without delay and by 2022 as recommended by the National Infrastructure Commission. (Paragraph 62)***

The Government is clear that the whole of the UK should benefit from the transition to zero emission vehicles, including those that live in remote or rural areas. The majority of electric vehicle drivers choose to charge their cars at home, overnight, or at their workplace. The Government will continue to support this through the Electric Vehicle

Homecharge Scheme; Workplace Charging Scheme; and On-street Residential Charging Scheme; and by consulting on changing building regulations to ensure that every new home has a chargepoint, where appropriate.

For those who are unable to charge at home, on-street or at work, or who are taking longer journeys, public rapid chargepoints will be vital, whether they be at local hubs or at destinations.

The Government wants to encourage and leverage private sector investment to build and operate a self-sustaining public network, supported by the right policy framework, which is why the Government is setting up a £400 million Chargepoint Infrastructure Investment Fund. This includes running pilots to look at options to increase electrical capacity (which can be a barrier to deployment in rural areas too) at a motorway service area to future-proof the Strategic Road Network. There may be cases where low utilisation rates make the business case for rapid chargepoints in rural and remote areas un-economic in the short to medium term. The Automated and Electric Vehicles Act 2018 provides powers to the Government to mandate the installation of charging infrastructure at key strategic locations if required.

As emphasised above, the Government will continue to monitor the market to ensure it is delivering a truly accessible chargepoint network. There are encouraging signs that this market-led approach is working. As of November 2018, there are more than 15,000 publicly accessible chargepoints of which more than 1,500 are rapid, with many more in the pipeline. As stated above, premature intervention may risk distorting that existing market activity and planning, particularly in a nascent market which is changing rapidly. If the market does fail to deliver adequate infrastructure in time, Government will consider deploying the powers it has through the Automated and Electric Vehicles Act.

(16) **We welcome the Government's investment in EV showcase initiatives such as the Go Ultra Low Cities scheme, which have been central to testing and demonstrating innovative deployment approaches. Now that EVs are becoming mainstream, an alternative approach is needed to promote deployment more evenly across regions.** ***The Government should introduce a strategy to support local authorities that have been less successful in accessing funding so far by 2021, for example by replicating Go Ultra Cities in regions which have poor charging provision, or by allocating funds on a more systematic basis. (Paragraph 65)***

The Government welcomes the Committee's comments on the work done by the eight Go Ultra Low cities, supported by £40m from Government, to deliver a step change in ultra low emission vehicle (ULEV) take up in their areas and establish themselves as exemplar ULEV cities. The Road to Zero Strategy is clear that the devolved administrations and local authorities have a crucial role to play during the transition to zero emission vehicles and addressing local air quality issues. That is why Office for Low Emission Vehicles has committed to run a series of roadshows across the UK on best practice approaches to driving the uptake of ULEVs, and Office for Low Emission Vehicles will work more widely with local authorities and others to disseminate good practice across the UK, in particular from the Go Ultra Low cities.

The On-street Residential Chargepoint Scheme is also available to all local authorities wishing to install charging infrastructure in residential areas for drivers of electric vehicles. Under this £4.5 million scheme, local authorities receive significant funding to install recharging points including new and innovative technologies. The Government is providing support for local authorities making applications for this scheme through the Energy Savings Trust.

The Government is aware that buses and taxis play an important role in supporting mobility and social inclusion, with buses offering air quality benefits where they take cars off the road. Such older vehicles are a significant contributor to the UK's air quality problems on some of its most polluted roads. To support the move to cleaner buses, the winners of a new £48m ultra low emission bus scheme for England and Wales will soon be announced. The Government has launched a second round of funding for local authorities to roll out dedicated taxi charging infrastructure.

The Government will also continue to collaborate closely with the devolved administrations in Scotland, Wales and Northern Ireland, alongside partners in local government.

(17) **Rather than dictating the precise solutions to be used,** ***we recommend that the Government increase the flexibility of funding for public charge points, providing local authorities with the autonomy to assess and install charging infrastructure that fits in with local needs and priorities. Future funding schemes that seek to target specific solutions should be considered only if consultation with local authorities indicates that there is a clear appetite for these solutions, and that proposed levels of funding will be sufficient to enable their development. (Paragraph 68)***

The Government agrees that local authorities are well placed to understand local charging infrastructure needs. In July 2018, the Government published a revised National Policy Planning Framework, which requires Local Plans to consider adequate provision of chargepoints according to local needs.

As set out above, in addition to the support provided through the Go Ultra Low Cities the Government is providing up to £4.5 million grant funding to 2020 for the On-street Residential Chargepoint Scheme. As noted by the Committee, take-up for the On-Street Residential Chargepoint Scheme was initially slow. In response to local authority feedback and close engagement, the Government provided greater long-term certainty on the support available and worked closely with partners such as the Energy Saving Trust to help local authorities develop proposals. As a result of these changes, 26 local authorities have applied already to the scheme with plans to install over 1,000 chargepoints with more applications in the pipeline.

Funding is only part of the solution. In line with the best practice guidance for local authorities mentioned above, the Government will also provide guidance to local Highway Authorities in England on how they can consider the installation of infrastructure when roadworks are taking place, working with utility companies and chargepoint operators. Local authorities also have an important role in future proofing roads for on-street charging when street works are underway. Encouraging this will in the long run make the installation of chargepoints on streets easier and reduce the disruption to road users.

The Government agrees with the Committee that financial support is vital to supporting local authorities in their efforts and that flexibility and adaptability is key for ensuring a tailored, local approach and has already demonstrated its willingness to help local authorities secure that support. Government will continue to work with local authorities to share learnings from existing schemes and adapt support where necessary. We will be conducting a review of the on-street residential scheme in summer 2019.

(18) **Central Government's focus on promoting on-street charge points is in conflict with local policy priorities and is not working. Support is needed for alternative solutions such as local charging hubs. The Government should proactively engage with local authorities, motorist organisations, charge point providers and distribution network operators to identify mutually agreeable solutions—including maintenance plans—so that motorists without off-street parking do not remain at a disadvantage.** ***We have seen no evidence that Government has adequately involved local authorities in such discussions so far, and our evidence suggests that it is not realistic to expect local authorities to act spontaneously: proactive engagement from Government is required. (Paragraph 70)***

As set out above, the Government recognises that local authorities understand local charging infrastructure needs. Government is already working closely with local authority partners in helping to drive chargepoint installations and has responded to their feedback. The Government accepts that on-street charging provision will not be practical in all instances, however, as demonstrated by the uptake of On-Street Residential Scheme, there is significant interest from local authorities in this solution and many believe it does provide a viable solution (whether that be on-street chargepoints or, for example, clusters within car parks).

In reality, it is likely that a mix of charging options will be necessary and the Government agrees that local charging hubs will have an important role to play. We have already acted to support deployment. As set out above, the Go Ultra Low Cities scheme will result in the provision of hundreds of additional chargepoints in participating cities, including 17 rapid charging hubs sited at high-profile locations in city centres and outer ring roads. Some hubs will host up to 20 rapid chargers coupled with solar canopies and energy storage facilities. In addition, we are seeing the private market roll-out charge-points in destination locations, for example, supermarkets.

As part of the RIIO price controls (i.e. the regulatory process for determining investment in the networks), Ofgem is also pushing network companies to engage with local stakeholders, including local authorities, on the roll out of electric vehicle charging infrastructure. The RIIO business plans are assessed by Ofgem to ensure that they reflect comprehensive stakeholder engagement with regional stakeholders. The RIIO price control then includes an ongoing incentive on the network companies to engage with their stakeholders and respond to their needs.

The Government will continue to work with local authority partners, chargepoint installers and the network companies to understand the challenges and opportunities with installing a public network of chargepoints, whether it be on-street, hubs or destinations, sharing lessons learned and considering whether further intervention is necessary.

(19) **We welcome the amendments to the National Policy Planning Framework to encourage the consideration of charge points at new developments and in local parking standards.** ***We recommend that these be made more specific, to set a minimum number of charge points that should be included in both residential and non-residential developments. The number of charge points required should be linked to the expected use and occupancy of the development. (Paragraph 72)***

The Government welcomes the Committee's support for the proposed revisions to the National Policy Planning Framework and agrees that it is important to future-proof the developments we are building today for electric vehicles. To this end, the Government will be launching a consultation in early 2019 on changing Building Regulations to introduce minimum electric vehicle infrastructure requirements for new residential and non-residential developments. This includes consulting on:

- Introducing changes so that every new home has a chargepoint, where appropriate.
- Ensuring that all new non-residential buildings with more than 10 parking spaces have as a minimum ducting infrastructure for 1 in 5 car parking spaces and at least one chargepoint.
- the appropriate minimum requirements for existing non-residential buildings with more than 20 car parking spaces.

The consultation will consider how to meet these measures in the most cost-effective way, mindful of the Government's housing supply objectives. The Government launched the revised National Policy Planning Framework (NPPF) in July 2018, which requires local plans to take into account adequate provision of chargepoints. We will be producing guidance on the NPPF in mid-2019.

(20) **Distribution network operators have the right to reject applications for larger charge point installations. Whilst this is important to maintain secure and reliable local electricity supplies, there are concerns that network companies have sometimes obstructed the development of charging infrastructure and that they have little commercial incentive to promote EVs.** ***We recommend that the Government investigates options to either incentivise or require electricity network companies to facilitate the development of charging infrastructure. (Paragraph 73)***

Under the Electricity Act 1989, Distribution Network Operators (DNOs) must provide a connection offer when requested. DNOs do not have the right to reject an application. There is a cost connecting to the distribution network. On some occasions connections cannot be completed until the network is enhanced. Where investment in the network is needed, the customer connecting will need to pay some of the cost, with the rest being shared between all other users of the network. Connection customers should pay a fair price for the cost of the work required to connect them and there are a number of rules in place that ensure this is the case.

Ofgem, as the energy regulator, encourages network companies to provide a good service through a range of incentives, meaning the network companies are rewarded for providing a good service and penalised for providing a poor service to connection customers, including charging infrastructure providers:

- The Incentive on Connections Engagement incentivises DNOs to engage with larger connection customers and respond to their needs.
- The customer satisfaction survey – encourages DNOs to provide good customer service to small connections.
- The time to connect incentive – drives DNOs to reduce connection times for small connections.
- The complaints metric – incentivises DNOs to resolve any complaints efficiently and effectively.

DNOs also have an obligation to provide a good supply service under the Quality of Service Guaranteed Standards. If the DNO fails to meet the level of service required, it must make a payment to the customer subject to certain exemptions. Independent Distribution Network Operators and Independent Connection Providers compete with the incumbent DNO to offer connections to customers. Competitive pressure can benefit consumers by improving customer service or decreasing the cost of connection, or both.

DNOs can also offer 'flexible connections', where a customer may have a reduced connection capacity during a peak period, to help reduce the connection costs. Pairing with onsite storage or generation, or being flexible with demand, can provide further ways to gain a cheaper connection. Through Ofgem's work on 'Quicker, more efficient connections' the network companies identified further actions that they could undertake to facilitate quicker, more efficient connections to the network (e.g. improving coordination between transmission and distribution).

The UK performs strongly in providing distribution network connections. In the latest World Bank 'Ease of Doing Business' survey, the UK ranked 7th out of 189 countries on 'getting electricity' which ranks countries on time taken to deliver a connection, number of procedures, the cost to the customer and the transparency of tariffs/reliability of the network.

Ofgem is also proposing to reform customers' access to the network and the charges they pay to use it. In November 2017, Ofgem launched its Electricity Network Access project to review how parties get access to the electricity network, the nature of access arrangements and what users pay. New access arrangements could offer more choice for how consumers gain access to the system, leading to more efficient use of the network. More defined flexible access arrangements could incentivise EV users to allow network operators to constrain access to the network, subject to certain considerations, in return for a reduced connection charge. Changes to network charges could give better signals to users about the cost of using the network at different times and locations and, as a result, support more efficient use of the network. Ofgem consulted on the form and scope of their proposed review in July 2018. They are due to make a decision on this by the end of 2018.

As part of RIIO-2, Ofgem will set the revenues that network companies can earn for the next price control periods and review the outputs that the network companies deliver. In summer 2018, Ofgem finalised the framework that they intend to use for the next price controls. The RIIO-2 period for DNOs, which will cover the period 2023 – 2028, will also cover price controls which will drive investment in networks during the period that electric vehicle sales are expected to pick up.

(21) **We welcome the Government's recent commitment, in the Road to Zero Strategy, to "set our definitions of ultra low and zero emission vehicles that local areas may adopt".** ***We recommend that these definitions must be unambiguous, and that the emissions performance criteria used across different departmental policies and incentives should be made consistent to reflect the definitions adopted. (Paragraph 76)***

The Government agrees with the Committee that definitions need to be clear and unambiguous. This will be taken into consideration as we take forward work to set the definition. This will help local areas who may need to define which vehicles are ultra low or zero emission so that they can implement local support measures.

(22) **There is a mismatch between the Government's ambition to develop national charging infrastructure and its decision to leave delivery largely to local authorities and private actors. A whole systems perspective is needed to identify solutions that will deliver required functionality at least overall cost, and which will ensure adequate provision of charge points nationwide.** ***We recommend the Government recognise its responsibility in this role and coordinate a shared approach to planning national charging infrastructure at least cost by December 2019. This should ensure sufficient provision of charge points in all regions, including remote areas. It should also take into account electricity grid impacts, including potential interactions with a more widespread move to electrification in heating. We further recommend that the Government and Ofgem work with charge point providers and electricity network companies to assess, by June 2019, the potential for investments ahead of need which could hasten the growth of charging infrastructure and reduce the cost of its implementation. (Paragraph 79)***

The Government fully accepts its responsibility to lead and help coordinate efforts to deploy charging infrastructure across the UK. This has been demonstrated by: the publication of the Road to Zero setting clear ambitions for ultra low emission vehicle uptake; the significant financial support that it has made available; its ongoing engagement with local authorities, chargepoint manufacturers and beyond; and the powers taken within the Automated and Electric Vehicles Act 2018 which set a national framework for regulatory intervention in the case of market failure, as set out above.

The Government is already working closely with the energy sector and Ofgem, as the independent regulator, to understand the impact of EV take-up on the electricity system. To strengthen this dialogue and collaborative approach, we have established an Electric Vehicle Energy Taskforce to bring the Government and the energy and automotive industries together in order to plan for future electric vehicle uptake, and ensure the

energy system can meet future demand in an efficient and sustainable way. The taskforce will report in 2019 with proposals for Government and industry to take to ensure the energy system is ready for the transition.

As set out above, Ofgem is already working with network companies to design the RIIO-2 regulatory framework that will consider the impact of the uptake of electric vehicles and the case for strategic investment. Ofgem has been clear that it expects the network industry to engage closely with local partners and wider stakeholders when considering investment needs.

Given the extent of the work already underway and Ofgem's pathway to formalising the regulatory regime, we do not think a further additional assessment is necessary and risks duplication or confusing existing work. However, given the importance of this matter, the Government will continue to monitor developments.

(23) **The nature of 'sufficient provision' will differ between areas according to population density, parking arrangements, the road network and local amenities. In some areas it will require the installation of charge points and electricity grid upgrades which are not commercially viable, but which are necessary to make EVs accessible to residents and to ensure accessibility of the region to other EV motorists.** ***We recommend that the Government sets out a strategy by June 2019 that allows for the nature of local provision to be determined locally, and to deliver charging infrastructure to 'difficult' and remote localities, so that these are not further isolated by the EV transition. Care should be taken to ensure that investments in the charging network are futureproofed, taking account of possible changes in technology and use, to minimise the risk of constructing infrastructure that later becomes redundant. (Paragraph 81)***

The Government agrees that sufficient provision will vary depending on local needs and that local authorities are best placed to understand these requirements. Recapping and building on the measures we have already set out above, and within the Government's Road to Zero strategy, steps Government is taking to support local partners in determining local provision and help future-proof charge-point provision, include:

- Providing a range of financial support, through the On-Street Residential Charging Scheme and Go-Ultra Low Cities Scheme, to support local authorities in deploying chargepoint infrastructure.
- Providing guidance to local Highway Authorities in England on how they can consider the installation of infrastructure when roadworks are taking place, working with utility companies and chargepoint operators.
- Providing guidance for local authorities to inform them about electric vehicle infrastructure and encourage best practice on levers that they have at their disposal to incentivise infrastructure, including planning, parking and street works.
- Including adequate provision of chargepoints in the revised National Planning Policy Framework, which guides planning policy in England.

- Highways England have also committed £15 million to ensure that its users are always within 20 miles of a rapid chargepoint along 95% of the Strategic Road Network in England.
- Planning to launch a consultation in early 2019 on changing Building Regulations to introduce minimum electric vehicle infrastructure requirements for new residential and non-residential developments.
- Taking powers through the Automated Electric Vehicles Act, which would enable elected mayors (the Mayor of London and Mayors of Combined Authorities) to designate locations – at large fuel retailers – to require the installation of charging infrastructure within their areas.
- Taking forward regulations (as provided by the Automated Electric Vehicles Act 2018) to mandate smart capability for all chargepoints, which will help manage the impacts of charging on the network, reducing costs.
- Taking forward a pilot exercise with Highways England to increase electrical capacity at motorway service stations, designed to determine what combination of increased network connection, technologies and storage could be pursued for the increased number of rapid chargepoints, including the higher-powered rapid chargepoints that will be needed to meet demand in the future. The learning here should be transferable to other cases where upfront network upgrades act as a barrier, such as a local charging hubs.

Given the range of activity already underway and steps already taken, combined with the work being led by Ofgem to design a supportive regulatory regime for network investment, the Government is not convinced that a further strategy is needed at this stage and risks distracting from existing efforts. As stated above, Government is committed to working with local authority partners to share lessons to learn and adapt our approach where necessary.

EVs and Industrial Strategy

(24) **We welcome the Government's ambitions on EV and battery technologies, and its investments so far through schemes such as the four-year Faraday Challenge. However, more support is needed to ensure we retain our status as an international automotive leader, and to minimise the economic impacts of declining ICE trade through the 2020s. It is important that as any jobs in ICE production are lost, so new ones are created in EVs, batteries and associated technologies.** ***We recommend that the Government set out a longer-term, 10-year strategy for batteries to help the UK to take a lead in this technology. If we do not act other countries will go first, and there is a risk that part of the UK automotive sector's market share could be lost to emerging EV leaders. Funding for R&D should focus on areas where UK has existing strengths and so a realistic chance of taking a lead, for example in battery design and development, electrolyte manufacturing, traction motors, lightweight materials, and power electronics. (Paragraph 89)***

Securing the industrial benefits of electrification is a key element of Government and industry's priorities as set out in the Automotive Sector Deal and is supported through £246m funding allocated for the Faraday Battery Challenge.

Establishing a UK battery cell Gigafactory is a Government priority, as announced in the Automotive Sector Deal. The Automotive Council and the Faraday Institution have both identified significant and growing UK demand for batteries for electrified vehicles. BEIS and DIT are working closely with the Automotive Council to exploit this demand as an opportunity to attract inward investment.

Together, the Faraday Battery Challenge, the Advanced Propulsion Centre (APC) and the Office for Low Emission Vehicles' (OLEV) Integrated Delivery Programmes make the UK uniquely placed to support the global competitiveness of cell makers who choose to locate here, and it is this work that will provide the foundation of longer term UK competitiveness in this area. The UK has significant activity in key parts of the lithium-ion battery supply chain, and there is significant potential to develop battery chemical supply chains further. This is being supported through work for the APC Energy Storage Spoke led by the Knowledge Transfer Network and the Warwick Manufacturing Group, with the Chemicals Growth Partnership, to bring together UK chemical companies and introduce them to the battery manufacturing opportunity.

The Government also announced up to £78 million in the 2018 Autumn Budget to support innovation in power electronics and electric motor technology.

(25) **Second life battery applications, EV end of life disposal and battery recycling are nascent areas that could offer significant industrial opportunities.** ***We recommend that the Government explores the potential value of these to the UK and take a lead in developing those that are promising, before other countries gain a competitive edge. (Paragraph 93)***

The Government agrees with the Committee that these areas offer significant industrial opportunities for the UK. One of the objectives of the Industrial Strategy Challenge Fund's Faraday Battery Challenge is: "A thriving UK industry in battery re-cycling / materials recovery/ reconditioning - enabling a circular economy and feeding a UK supply chain". In 2018 Birmingham University, as part of the Faraday programme, has led several collaborative Research & Development projects involving leading UK recovery and recycling companies and events to bring science and industry together to identify what is required in order to realise this potential.

Among the collaborative R&D projects funded by InnovateUK includes a project that will look at reusing, remanufacturing or recycling end-of-life, automotive lithium-ion batteries. It will support the building of a complete supply chain network, and the development of legal and regulatory knowledge on end-of-life batteries in the UK. This will help to optimise battery design and increase use in second-life applications, improve recyclability and whole-life environmental impact, whilst building UK capabilities.

A further project will aim to create a safe, economically sustainable battery recycling supply chain in the UK, which allows industrial batteries from vehicles to be recycled into base components and materials and then reused.

(26) **We welcome the Road to Zero Strategy's acknowledgement of these concerns and the commitments to review the adequacy of existing regulation to protect mechanics and to work alongside the IMI to ensure mechanics are well trained; we recommend the Government further develops EV-specific qualifications for mechanics and engineers. The intentions of the Automotive Sector Deal to develop EV and battery manufacturing are also helpful, but the Deal does not go far enough in providing support for actors across the supply chain to transition from ICE to EVs. We recommend Government and business work together to develop a clearer joint plan to help companies repurpose ICE manufacturing facilities, to help workers develop new EV skills, and to ensure that independent dealerships and mechanics are equipped to advise on buyers on EV options and to conduct repairs safely. This will be essential to help the UK automotive sector retain top-level expertise and relevance as global demand moves from ICEs to EVs. We recommend the Government further develops EV-specific qualifications for mechanics and engineers. The intentions of the Automotive Sector Deal to develop EV and battery manufacturing are also helpful, but the Deal does not go far enough in providing support for actors across the supply chain to transition from ICE to EVs.** ***We recommend Government and business work together to develop a clearer joint plan to help companies repurpose ICE manufacturing facilities, to help workers develop new EV skills, and to ensure that independent dealerships and mechanics are equipped to advise on buyers on EV options and to conduct repairs safely. This will be essential to help the UK automotive sector retain top-level expertise and relevance as global demand moves from ICEs to EVs. (Paragraph 99)***

The Automotive Sector Deal secures joint investment and long-term commitments from the sector, including to develop world leading battery technologies and to build up a competitive skills base within the UK, in line with Government and industry's priorities for the transition to electrification.

The joint Government/industry £1 billion APC programme is also able to support innovative activity that leads to carbon savings, including projects that look at new manufacturing capability and processes.

The Government's substantial investments in the £246 million Faraday Battery Challenge and the £78 million for power electronics and electric motors are both founded on a recognition that the UK makes 2.6 million ICE units today which will inevitably decline over time.

Our Industrial Strategy sets out plans to tackle our shortage of Science, Technology, Engineering and Maths (STEM) skills, and the growing need for digital skills, through a major programme of reform. We want our technical education system to rival the best in the world, with new T-levels backed by over £500 million annually by the time the programme is rolled out fully. A coordinated, industry led approach at both national and local levels is required to provide employees with the appropriate skills to develop and manufacture the next generation of vehicles.

The industry led Automotive Industrial Partnership has identified strategic skills priorities for the automotive sector, informing new Apprenticeship Trailblazer standards and new

industry wide qualifications. There must be more focus on the skills required to establish the UK as a world-leader in the manufacture and engineering of ultra low emission vehicles. Employers must embrace the opportunity that new technology will bring and play an active role in producing the highly skilled workforce required.

(27) ***We recommend the Government further develops EV-specific qualifications for mechanics and engineers.***

The Government is actively supporting industry-led work into what skills and qualifications may be required currently, and in the future, to ensure a thriving electric vehicle skills base. As part of this effort, the Government is reviewing whether current regulations are sufficient to protect mechanics working on electric and hybrid vehicles. We are working with the Institute of the Motor Industry (IMI) to ensure the UK's workforce of mechanics are well trained and have the skills they need to repair these vehicles safely.

It is important for vehicle technicians to have the right skills, training and qualifications to safely repair and maintain electric vehicles. As the professional body for the automotive industry, the IMI is well placed to help Government understand the challenge of ensuring that vehicle maintenance and repair is carried out in a professional and safe manner for both technicians and drivers.

A lack of trained technicians to look after these vehicles could be a barrier to uptake. Electric vehicle drivers will clearly expect the same level of knowledge and customer service they have come to expect from conventional vehicles. On the other hand, one of the many benefits of pure electric vehicles is that they are simpler and therefore easier to maintain and service than conventional vehicles.

The Government recognises the need to develop manufacturing and servicing skills to support the UK's transition to ultra low emission vehicles. The Government's apprenticeship reforms provides an industry-led approach to skills training putting employers in the driving seat of apprenticeships standards.

The establishment of the employer-led Institute for Apprenticeships (IfA), and the introduction of an employer levy fund for apprenticeships, provide an opportunity for the growing ULEV sector to lead the development of training programmes to meet the skills needs they have identified. A number of employer developed standards already include skills, knowledge and behaviours relevant to the design, manufacture and maintenance of clean energy vehicles as part of the overall standard. Furthermore, the Chancellor recently announced at the 2018 Autumn Budget that the Government would provide £5m of additional funding to help the IfA intensify its work with employers, including those in the automotive sector, to identify and address gaps in standards.

Electric vehicle manufacturers are ensuring their dealer networks have appropriately trained technicians, and we also expect the numbers of trained technicians at independent repairers to increase in line with electric car uptake. This is an important transition for the entire automotive sector. IMI have developed and accredit Level 1–3 qualifications in EV maintenance and repair and there are 30–50 UK colleges and training providers offering these courses at the current time. City & Guilds also offer equivalent qualifications.