



BRIEFING PAPER

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Automated and Electric Vehicles Act 2018

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Summary

This paper explains the policy background to and contents and purpose of the [Automated and Electric Vehicles Act 2018](#).

The Act received Royal Assent on 19 July 2018. It extends to the whole of the UK with the exception of sections 1 to 8 on insurance for automated vehicles, which extend only to Great Britain. For Part 2 (electric vehicle charging) a legislative consent motion is being sought from the Northern Ireland Assembly in respect of the application of these provisions in Northern Ireland.

Insurance for automated vehicles

The application of 'intelligence' to cars is gathering pace and there is a strong push by manufacturers to develop automated vehicles which will drive themselves. Currently, insurance law is driver-centric: all (human) drivers have to have insurance in order to provide compensation for third parties for personal injury or property damage due to a driving related incident. The Government's view is that such principles need to be extended to cover automated vehicles when the car is the driver and the 'driver' is sometimes a passenger.

The intention behind the legislation is to emphasise that if there is an insurance 'event' (accident) the compensation route for the individual remains within the motor insurance settlement framework, rather than through a product liability framework against a manufacturer.

The Government believes that answering the insurance questions sooner rather than later will encourage manufacturers to develop transport technology in the UK with the confidence that they can exploit market opportunities.

Electric vehicles

Since 2009 UK governments of all parties have sought to provide a framework in which electric vehicles, or 'ultra low emission vehicles' (ULEVs) can grow. The decarbonisation of both private cars and goods and passenger carrying vehicles is seen as critical to helping the UK achieve its climate change obligations and to improving air quality, particularly in cities such as London.

The measures in the Act are intended to help deliver the aim in the Conservative Manifesto commitment for almost every car and van to be a zero emission vehicle by 2050. Taken together, the powers would allow Government to regulate if necessary in the coming years, to improve the consumer experience of electric vehicle charging infrastructure, to ensure provision at key strategic locations like Motorway Service Areas (MSAs), and to require that charge points have 'smart' capability.

Further information on roads/motor vehicle policy can be found on the [transport policy page](#) of the Parliament website.

1. Background

This Act started life in the 2016 Queen's Speech as the *Modern Transport Bill*. The background notes to the speech stated that the Government's intention with the Bill was to cut red tape and "put the right framework in place to allow innovation to flourish". To this end the measures in the Bill would:

- encourage potential investors in autonomous vehicles (AV), spaceplane operations and spaceports;
- put the UK at the forefront of safe technology in the AV industry, including drones and spaceplanes;
- provide appropriate insurance to support the use of autonomous and self-driving vehicles; and
- improve protection for customers by updating ATOL, the UK's financial protection scheme for holidays.¹

However, it became clear by the early part of 2017 that the spaceflight provisions would be part of a separate Bill.² Furthermore, the Government had indicated its intention to include other provisions in the Bill, such as on vehicle testing and the misuse of lasers.³

On 22 February 2017 the Government published its [Vehicle Technology and Aviation Bill](#), which included all those provisions which were intended for the *Modern Transport Bill* (barring space travel) and those subsequently announced in various documents.⁴ That Bill progressed to the end of its Commons Committee stage before the Prime Minister called a General Election on 18 April. The 2015 Parliament was subsequently dissolved on 3 May and the Bill fell.⁵

In the June 2017 Queen's Speech the Government announced an *Automated and Electric Vehicles Bill* to "ensure the United Kingdom remains a world leader in new industries, including electric cars".⁶ The Bill was published on 18 October 2017. The substantive clauses are the same as those put forward in the *Vehicle Technology and Aviation Bill*.⁷

Documentation related to the Act's passage through Parliament is available on [Parliament's dedicated Bill page](#), along with [three impacts assessments](#).

¹ HMG, [Queen's Speech 2016: background briefing notes](#), 18 May 2016, pp17-18

² DfT press notice, "[Government announces boost for UK commercial space sector](#)", 9 February 2017; now the [Space Industry Act 2018](#)

³ See: DVSA, [Motoring Services Strategy](#), 12 May 2016, para 5.4 and DfT press notice, "[New powers to crack down on laser attacks](#)", 5 February 2017

⁴ For further information on the Bill see HC Library briefing paper [CBP 7872](#)

⁵ During the 'wash up' process, see: UK Parliament, [Wash up](#) [accessed 20 October 2017]

⁶ HMG, [Queen's Speech 2017: background briefing notes](#), 21 June 2017, pp27-28

⁷ The air travel protection elements of the old Bill are now contained in the [Air Travel Organisers' Licensing Act 2017](#) and the proposed new offence of shining a laser at a vehicle is now contained in the [Laser Misuse \(Vehicles\) Act 2018](#); the remaining parts of the Bill relating to air traffic services, vehicle testing and fees, and diversionary courses have yet to find a new legislative home

2. Automated vehicles: liability of insurers etc.

2.1 Policy overview

Part 1 of the Act sets out the broad parameters of how automated vehicles (AVs), or self-driving cars, involved in accidents, will be treated for insurance purposes.

Steadily, over a number of years, technology companies and car manufacturers have worked together to develop cars that are increasingly independent of human interaction. Already, new cars are full of technology beyond that which has been used for years to manage the drivetrain.⁸ Fairly common examples include automated parking, 'intelligent' lighting and assisted emergency braking.

The industry's wish to develop self-driving cars is not simply a 'because it's there' response, but it moves in tandem with other features of the developing market for personal transportation. It is thought that in the future car ownership will decline and new business models that allowing sharing or renting of cars will emerge. There is increasing interest in MaaS (Mobility as a Service). For the technology companies, there are numerous applications for highly sensitive and accurate spatial awareness functionality, well beyond car manufacture.⁹

Insurance

Solving the question of how automated vehicles can be insured is essential if they are to become a feature on British roads. Currently all vehicles have to be insured under [Section 143](#) of the *Road Traffic Act 1988*, as amended. The insurance must cover third party risks as set out in [section 145\(3\)\(a\)](#) of the Act:

the policy—

(a) must insure such person, persons or classes of persons as may be specified in the policy in respect of any liability which may be incurred by him or them in respect of the death of or bodily injury to any person or damage to property caused by, or arising out of, the use of the vehicle on a road or other public place in Great Britain

As it stands now the insurance premium depends on a variety of factors, one of which is the driving record of the driver and their previous history of claims. In many cases of claims there is a determination of 'fault' and it will be the insurer of the 'at fault' driver which will pay the bulk of the claim. However, even where there is no 'fault', victims are assured of compensation. In cases where there is no insurance, or the other driver cannot be contacted, the [Motor Insurers Bureau \(MIB\)](#) steps in as insurer of last resort. In short, the compensation process is driver-centric.

For information on connected and autonomous vehicles more generally, see Commons Library briefing paper [CBP 7965](#)

⁸ For an explanation of the drivetrain, see: Mister Transmission, [What is a drivetrain?](#) [accessed 19 October 2017]

⁹ ABI press notice, "[Automated vehicles: Government consultation response adopts insurance industry proposals](#)", 10 January 2017

Clearly this cannot be the case with self-driving cars. With AVs, the vehicle user could either be a driver or a passenger, depending on which mode the car is in.

The question of 'who pays' and who owes a duty of care to other road users in accidents is not directly connected to the skill or history of the driver but to the manufacturer of the vehicle. Thus, one question might be: should insurance be product liability insurance (on the manufacturer) or still reside with the driver – or both?

The Department for Transport (DfT) acknowledged this issue early in its July 2016 consultation and elsewhere, recognising that in the future the driver of a vehicle may be 'legitimately disengaged' from the driving task.¹⁰ The Impact Assessment published alongside the Bill in October 2016 explained:

Automated vehicles (AVs) will allow the driver to disengage from the driving task, handing full control and responsibility to the vehicle when the automated systems are active, without needing to intervene or monitor. This creates an issue for motor vehicle insurance. UK law requires the driver to be insured, so when the driver uses automated mode, gaps would emerge in the insurance framework, making it difficult and time consuming for victims to claim compensation. Third parties might not be covered without the proposed intervention, which is a market failure. With such vehicles expected to be on the road in 5 to 10 years, Government intervention is required to resolve this issue, to provide clarity to motorists and industry.¹¹

The DfT's July 2016 consultation paper stated:

In a world where all vehicles are fully automated, and require no human input at all, it would be easy to place liability on the manufacturer (i.e. product liability) and let them deal with claims arising from a collision. Collisions should be rarer than they are today because the vehicles will be programmed to drive more safely than humans tend to. As noted in the introduction, it is likely to take a significant amount of time before these vehicles come to market.

The transitional world of mixed fleets, made up of both conventional and automated vehicles, is the more complex and difficult one to handle. Determining liability in the event of a collision where the driver has activated the AVT to come out-of-the-loop to a degree, and has disengaged from the driving task, could prove to be complex and time consuming.

It is possible that the fault could rest with the driver (e.g. if they have failed to retake control when the system exceeds its performance limits), or with the manufacturer (e.g. product failure, which would be covered by product liability). This means there is a significant chance of potential increased friction between the different parties over who and what caused the collision, resulting in delays in compensation to victims. In addition, claiming against product liability has the potential to be more difficult as it could be more complicated to determine issues

¹⁰ DfT, [Pathway to Driverless Cars: Proposals to support advanced driver assistance systems and automated vehicle technologies](#), July 2016

¹¹ DfT, [Pathway to Driverless Cars: Insurance for Automated Vehicles](#), IA No: DfT00366, 7 October 2016, p1

such as when the technology failed and whether the user was asked to take control.

Furthermore, a vehicle owner who is 'driving' the highly automated vehicle might have legitimately disengaged from the driving task, with the vehicle having taken over control. If the technology fails and injures the 'driver', the current legislation only requires insurance to cover third parties and not the driver. It is up to the policy owner to seek additional insurance to cover any injury they do to themselves as a result of their own actions or negligence. If the AVT fails then the driver, in effect, becomes a victim as their injuries are not as a result of their own actions or negligence. We therefore need to protect the driver as a potential victim.¹²

The response of the car industry was not uniform – some were happy to 'self-insure' their vehicles, others not so. Potentially this could create confusion amongst adopters of the new technology as to what their liabilities might be. The Government's proposed approach was:

- Extending the compulsory insurance requirements for automated vehicles so that the owner must also ensure that there is an insurance policy in place that covers the manufacturers' and any other entities' product liability.
- Requiring this additional compulsory product liability insurance for automated vehicles to also cover injuries to the 'not at fault' automated vehicle driver as well as passengers and third parties.
- To develop a system to classify an automated vehicle so that manufacturers, insurers and consumers know which vehicles this particular insurance requirement applies to.¹³

The DfT published its response to the consultation in January 2017 and indicated its intention to "proceed to make the minimum legislative changes required to enable the market to develop appropriate AV insurance products". However, it also indicated that it had amended the insurance proposal to:

... extend compulsory motor vehicle insurance creating a single insurer model to protect victims where the AV causes a crash in automated mode. The victim will have a direct right against the motor insurer and the insurer in turn will have a right of recovery against the responsible party to the extent there is a liability under existing laws, including under product liability laws.¹⁴

The insurance industry generally is positive towards the concept of self-driving cars because, it believes, it will be make a bigger contribution to road safety than even the seatbelt.¹⁵ Oral evidence to the Lords' Select Committee on Science and Technology gave examples as to why:

¹² Op cit., [Pathway to Driverless Cars: Proposals to support advanced driver assistance systems and automated vehicle technologies](#); paras 2.3-2.6

¹³ Ibid., para 2.9

¹⁴ DfT, [Pathway to driverless cars: Consultation on proposals to support Advanced Driver Assistance Systems and Automated Vehicles Government Response](#), 6 January 2017, para 1.10

¹⁵ ABI press notice, "[Automated Driving: Insurers back the safety revolution 100%](#)", 17 May 2016

The accident statistics for the UK fall into two very broad groups. One is “did not look properly” in an urban area. You can see that a higher level of automation might help that. Increased sensors in human-driven vehicles that identify something you have missed might also help that. The other one, on rural roads, is loss of control: you were going too fast, you went round the bend too fast, and hit something. Again, vehicle sensors at the moment could contribute to that, and connected vehicles could tell you that round the corner there is a tractor going quite slowly.¹⁶

The Association of British Insurers (ABI) said in a press release that the Government had broadly accepted their recommendations at the consultation stage:

It’s good to see the Government adopting the insurance industry’s proposals to keep motor insurance as straightforward as possible for customers in a world of increasingly automated vehicles. We look forward to seeing further details in the Modern Transport Bill. In the meantime we will be continuing our productive relationship with the Government’s Centre for Connected and Autonomous Vehicles, helping officials work through the various challenges created by this evolving technology. Automated vehicles have the potential to revolutionise our transport systems and dramatically improve road safety, but it’s right the insurance system is developed in parallel to give motorists confidence in using them.¹⁷

2.2 The Act

Overview

Part 1 of the Act (sections 1–8) addresses the insurance issues that will arise when responsibility for a vehicle is shared between driver and the car itself. Currently it is a requirement that all (human) drivers must have insurance when they drive in order to provide compensation for third parties for personal injury or property damage due to a driving-related incident. The Act extends these principles to cover AVs.

In October 2017 the Commons Public Bill Committee took evidence from insurance industry witnesses. They suggested that data collected by AVs involved in accidents would be far more reliable than current witness statements, and cheaper to collect:

A lot of insurance claims at the current time are based on different opinions with very little evidence to substantiate them. We still send people out to measure skid marks in the road, for instance; so we will be moving to a much clearer but more granular position.¹⁸

The insurers also said that many of the issues about how something would operate or whether, for example, there should be automatic immobilisation of vehicles if no ‘security critical’ update had been loaded, would be solved by what vehicles were on the list of accepted AVs.

¹⁶ House of Lords Select Committee on Science and Technology, [Corrected oral evidence: Autonomous Vehicles](#), 22 November 2016, Q58

¹⁷ Op cit., [“Automated vehicles: Government consultation response adopts insurance industry proposals”](#)

¹⁸ [PBC Deb 31 October 2017, cc4-5](#)

The insurers said that data collection for road safety purposes was 'undeniably useful' and that while some of the data went beyond the needs of an insurer it could provide evidence to traffic experts, manufacturers or the police:

... we will need a method to understand what is going wrong in the real world. We will also need a method to use that information to improve our understanding of vehicle functioning in the real world and how that can be improved by manufacturers or by legislators applying the right tools to ensure that vehicle performance is improved over time.¹⁹

The main data issue for the insurers was who is in control of the car at the time of an accident. The industry thought that there were many data issues (management, access etc.) that remained unresolved:

Our view was that it was better to support a Bill that would be part of a rolling programme of legislation and acknowledge that more needed to be done on that data piece than to delay it. We feel that delaying connected and autonomous vehicles hitting our roads would have a negative impact on road safety.²⁰

Representatives of the UNITE union expressed concern about the impact of the legislation on jobs if the 'platooning' of lorries begins on motorways.

Section 1: Listing of automated vehicles

Section 1 requires the Secretary of State to maintain a list of relevant automated vehicles (AVs) to which the Act would apply. The list will include vehicles that:

- (a) are in the Secretary of State's opinion designed or adapted to be capable, in at least some circumstances or situations, of safely driving themselves, and
- (b) may lawfully be used when driving themselves, in at least some circumstances or situations, on roads or other public places in Great Britain.

During Parliamentary consideration of the Act Labour pushed the Government on how industry and Government could work together on issues such as software development. Labour backbencher Clive Efford said that it was legitimate for policy makers to have a say in the way that AV software makes choices. He gave an example:

For instance, imagine a four-year-old toddler walking in front of a vehicle that cannot stop to prevent a collision. To the left is oncoming traffic, with the risk of a head-on collision; to the right are perfectly innocent bystanders on the pavement or at the bus stop—those are the vehicle's options. Mr Wong noted that this was the "classic trolley problem" referred to in the German ethics commission's report. The commission's conclusion was that it is simple to make a decision when the choice is between property damage and human injury, but when the choice is between different types of injury to different road users or innocent pedestrians who are not part of the scenario, we move into a completely new area of morals and ethics.²¹

¹⁹ [PBC Deb 31 October 2017, c11](#)

²⁰ *Ibid.*, c12

²¹ [PBC Deb 2 November 2017 c78](#)

Conservative backbencher Sir Oliver Letwin raised the subject of when strict liability of insurers for the vehicle began in the case of cars switching between autonomous and driver control. He pointed out that witnesses had said the car would 'invite' the driver to take control in some circumstances. He wanted to know the consequences of the driver failing to accept the invitation, or, alternatively, if the driver tried to hand back control in an environment where the car thought it was unsafe.

The Minister, John Hayes, explained the Government's approach as providing a balance between giving industry certainty, whilst acknowledging that the development of technology had an uncertain trajectory or destination. He said that concepts such as 'safely' were difficult to define.²²

In the House of Lords the Minister, Baroness Sugg, introduced Government amendments to provide greater clarity as to the extent of the Act.²³ She noted that agricultural vehicles, which were capable of automation on land but not on the road, were an example where greater clarity was needed.²⁴

Sections 2 & 5: Liability of insurers in event of accident & claims

Section 2 sets out the conditions under which the insurer will be liable for damage due to an accident. The conditions are:

- (a) an accident is caused by an automated vehicle when driving itself on a road or other public place in Great Britain,
- (b) the vehicle is insured at the time of the accident, and
- (c) an insured person or any other person suffers damage as a result of the accident

'Damage' here means personal injury or death and any third-party property. The limit to the liability is the same as the limit (£1.2 million) that applies in 'normal' motor insurance under section 145 of the 1988 Act. The main extension to insurance law is that where the car is driving automatically, and causes the incident, first instance liability is on the insurer and the (human) driver is also covered.

The key policy point in this section is that following a claims 'event' the process follows the insurance route – as now – rather than becoming a 'consumer-manufacturer' product liability action, which is inevitably longer and more costly.

Section 5 follows on from the effect of section 2. It emphasises that an insurer involved in a claim would have a right to make a subsequent claim against the manufacturer of the car where that is thought to be the cause of the accident.

In Commons Committee a backbench amendment, to make it clear that in dual use vehicles (tier 3) until responsibility had been fully passed

²² *Ibid.*, c89

²³ [HL Deb 5 June 2018 c1245](#)

²⁴ [HL Deb 5 June 2018 c1245](#)

from vehicle to driver, the vehicle was responsible, was withdrawn following debate.²⁵

Section 4: Unauthorised software alterations or failure to update software

Section 4 addresses one of the unique aspects of AVs – the computer software. Under section 4(1), insurers will be able to limit their liability if the operating system of the car is tampered with, or if updates to the system are not installed or updated by the insured. In such cases, if there were damage to a third party and the insurer paid for those damages, they could claim that payment back from the insured in some circumstances.

During Parliamentary consideration of the Act the Commons Committee discussed issues surrounding the requirements for updating software of vehicles and the consequences of failure to do so. It was argued that shifting the responsibility for updates onto the manufacturer was more likely to mean that updates were done and hence the likelihood of delays in settling claims would be reduced. The Minister, John Hayes, stated that he did not want the legislation to be overly prescriptive and that by the time AVs became a ‘fact’ they would have systems in them to address this issue.²⁶

Section 7: Report by Secretary of State

Section 7 requires the Secretary of State to prepare a report assessing the impact of the Act on consumers and industry; the effectiveness of the listing of AVs; and stating whether the provisions in the Act are working to deliver an effective framework for insuring the use of AVs. The report must be laid before Parliament no later than two years after the list of AVs is first published.

This provision was introduced by the Government in the House of Lords.²⁷ The Minister, Baroness Sugg, explained:

Given the uncertainty around the timing of the introduction of automated vehicles, rather than set a date in statute for issuing the report we have chosen to require the report to be laid before Parliament no later than two years after the list of automated vehicles is first published. We want the report to be as meaningful as possible. That will be possible only if the measures have been in operation for a period of time, with automated vehicles being added to the list and insurance policies being offered to drivers of those automated vehicles.²⁸

²⁵ Ibid., c134

²⁶ [PBC Deb 2 November 2017 c126](#)

²⁷ [HL Deb 5 June 2018 c1250](#)

²⁸ Ibid., c1250

Other sections

- **Section 3** limits liability for damage when the injured party contributes to the cause of the accident.²⁹
- **Section 6** ties in the new insurance arrangements with currently existing rights under other legislation in England and Wales and in Scotland.³⁰
- **Section 8** defines the terms used in Part 1. During Parliamentary consideration of the Act the Commons Committee discussed the question of a vehicle's software being 'hacked'. The Minister, John Hayes, reassured the Committee that a vehicle's failure, however caused, would not leave the insured liable.³¹
- The **Schedule** introduces two consequential amendments:
 - It clarifies the regimes for the limitation of time in which actions can be taken both between England and Wales, and Scotland; and as between product liability claims and personal injury claims. The measure sets the period within which actions must start to three years. Actions brought by insurers against manufacturers under section 5 must be started within two years.
 - There is a little-known exemption in the 1988 Act which allows for an alternative to the standard third party insurance requirements, namely the depositing of a bond for £500,000 with the Accountant General. This option will not be available for AVs.

²⁹ [Section 1](#) of the *Law Reform (Contributory Negligence) Act 1945* would apply

³⁰ [Bill 112-EN 2017-19](#), para 22, in particular the [Fatal Accidents Act 1976](#)

³¹ [PBC Deb 2 November 2017 c142](#)

3. Electric vehicles: charging

3.1 Policy overview

Since 2009 UK governments of all parties have sought to provide a framework in which electric vehicles, or 'ultra low emission vehicles' (ULEVs) can grow. The decarbonisation of both private cars and goods and passenger carrying vehicles is seen as critical to helping the UK achieve its climate change obligations and to improving air quality, particularly in cities such as London.

The 2010 Coalition Agreement contained a commitment to "mandate a national recharging network for electric and plug-in hybrid vehicles".³² *The Carbon Plan*, published in March 2011, reiterated that the Government had "committed to mandating a national recharging network" and that by June 2011 it would "produce a strategy setting out how it will promote the provision of nationwide recharging infrastructure" with the intention of seeing "up to 8,500 charging points installed across the UK by March 2013".³³

The Government's June 2011 paper said that its approach was "not to mandate 'a chargepoint on every corner' – this is not necessary to help the market grow and would be uneconomic". Rather:

... for plug-in vehicles to appeal to, and be a viable solution for, consumers, we want recharging infrastructure to be targeted, convenient and safe. We want to see the majority of recharging taking place at home, at night, after the peak in electricity demand. Home recharging should be supported by workplace recharging for commuters and fleets, with a targeted amount of public infrastructure where it will be most used, allowing people to make the journeys they want.

[...]

The majority of recharging is likely to take place at home and at work, so an extensive public recharging infrastructure would be underutilised and uneconomic. We want public infrastructure to be targeted at key destinations, where consumers need it, such as supermarkets, retail centres and car parks, with a focused amount of on-street infrastructure, particularly for residents without off-street parking.³⁴

Labour said at the time that this represented a renege on the Coalition's commitment to a 'national charging network'.³⁵ However, others, including manufacturers of electric vehicles, supported the Government's claim that most charging would be done at home or in

Further information on electric vehicles and infrastructure can be found in HC Library briefing paper [CBP 7480](#)

³² HMG, *The Coalition: our programme for government*, May 2010, p31

³³ HMG, *The Carbon Plan*, March 2011, para 5.9

³⁴ DfT/OLEV, *Making the Connection: The Plug-In Vehicle Infrastructure Strategy*, June 2011, executive summary

³⁵ Labour Party press notice, "[Ministers must come clean over attempt to bury bad news on strike day – Woodcock](#)", 1 July 2011; also reported in: "[Coalition scraps national network of charging points for electric cars](#)", *The Independent*, 2 July 2011

the workplace and that the need for public recharging points was therefore limited.³⁶

The Transport Select Committee published a report on ULEV in September 2012. It recommended that the DfT “evaluate the effectiveness of providing public infrastructure as a means of encouraging plug-in vehicle sales”.³⁷ In its response, OLEV reiterated the Government’s view that “publicly accessible infrastructure is only part of the equation” and that “private sector provision of infrastructure and the options for home and workplace charging all have a part to play in providing the confidence that plug-in vehicle buyers need when making purchasing decisions”. Further, it said that:

It will not be possible to completely attribute the influence of publicly accessible chargepoints in a particular area to the uptake of plug-in vehicles. But we will be looking at the available evidence to ensure that our package of measures for supporting the early market for ULEVs remain effective in delivering the desired outcomes cost effectively.³⁸

Research for the Government on the UK ULEV market, published in August 2015, commented that public charging was seen to have two overlapping but different roles:

... meeting the needs of existing owners and addressing the concerns of potential future EV owners about buying an EV. Existing EV owners rely mostly on home and workplace charging but consistently report a desire for more extensive – and fast – public charging to enable them to undertake longer journeys. The evidence also suggests that additional public charging infrastructure can help to address the range concerns of potential future EV owners and increase EV uptake. Current public charging provision in the UK is comparable, even favourable in certain respects, to provision in countries with more developed EV markets.³⁹

The Government’s April 2014 strategy paper on ULEVs pledged that by the end of 2014 there would be a rapid chargepoint at every motorway service station and that there would be a network of over 500 rapid chargers across the country by March 2015. It also pledged £32m for charging infrastructure in 2015-20.⁴⁰ At October 2016 there were more than 11,000 public chargepoints across the UK and the Government said at that time that the UK had Europe’s largest network of rapid chargepoints.⁴¹

³⁶ see, e.g. comments by Nissan in “Hammond criticised over car charging points”, *Financial Times*, 1 July 2011

³⁷ Transport Committee, [Low Carbon Vehicles](#) (fourth report of session 2012-13), HC 239, 20 September 2012, p3 and para 31

³⁸ [Government Response to the Committee’s Fourth Report of Session 2012-13](#) (eighth special report of 2012-13), HC 884, 21 January 2013, p6

³⁹ Brook Lyndhurst for DfT, [Uptake of Ultra Low Emission Vehicles in the UK: A Rapid Evidence Assessment for the Department for Transport](#), August 2015, executive summary

⁴⁰ OLEV, [Investing in ultra low emission vehicles in the UK, 2015 to 2020](#), April 2014, p16

⁴¹ DfT press notice, [“Government gears up for zero emission future with plans for UK charging infrastructure”](#), 24 October 2016

Zero emission vehicle target

The Government has long said that it was committed to “ensuring almost every car and van is a zero emission vehicle by 2050”.⁴²

As part of its July 2017 Air Quality Plan the Government announced that “it will end the sale of all new conventional petrol and diesel cars and vans by 2040”.⁴³ The July 2018 Road to Zero strategy stated that it wanted “to see 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”.⁴⁴

In January 2018 the Committee on Climate Change said that three-fifths of new cars must be electric by 2030 to meet greenhouse gas targets.⁴⁵

A study by UBS in 2016 predicted that diesel would “almost disappear” from the global car market within 10 years if competition from cheaper electric cars and tougher stances by regulators come to pass.⁴⁶

In its September 2016 report on sustainability at the DfT the Environmental Audit Select Committee said that the Government should be clearer about its target for ULEV uptake by 2020 and said that it had “no confidence that the UK will achieve 60% market share by 2030”.⁴⁷ The same month *The Times* published analysis showing that drivers faced a “postcode lottery” as regards charging points and that there were “more chargers available in the Orkney Islands than in Blackpool, Grimsby and Hull combined”.⁴⁸

In October 2017 the Department for Business, Energy and Industrial Strategy published its *Clean Growth Strategy*, which stated that the Government was “spending £1 billion to drive the uptake of ULEVs. If battery prices continue to fall there will be less need for Government subsidies for new vehicles in the future”.⁴⁹ On infrastructure it said that in addition to workplace and residential charging support, “the Government has also allocated an additional £80 million to support charging infrastructure deployment, alongside £15 million from Highways England to ensure rapid charge points every 20 miles across 95 per cent of England’s Strategic Road Network”.⁵⁰

The 2017 Autumn Budget announced further measures to support consumer demand for ultra-low emission vehicles, including:

⁴² DfT press notice, “[UK government pledges bold ambition for electric cars](#)”, 3 December 2015

⁴³ DfT press notice, “[Plan for roadside NO2 concentrations published](#)”, 26 July 2017

⁴⁴ DfT/OLEV, *The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy*, 9 July 2018, p2

⁴⁵ “[Most new cars 'must be electric by 2030'](#)”, *BBC News*, 17 January 2018

⁴⁶ “Diesel faces global crash as electric cars shine”, *Financial Times*, 11 December 2016

⁴⁷ EAC, *Sustainability in the Department for Transport* (Third Report of Session 2016–17), HC 184, 1 September 2016, para 25, p14; the response is available at: [Fourth Special Report of Session 2016–17](#), HC 819, 11 November 2016

⁴⁸ “Owners of electric cars are struggling to get plugged in”, *The Times*, 24 September 2016

⁴⁹ BEIS, *Clean Growth Strategy*, 12 October 2017, p87

⁵⁰ *Ibid.*, p87

- the creation of a new £400 million Charging Infrastructure Investment Fund (£200 million Government investment to be matched by private investors);
- regulatory measures to accelerate the deployment of chargepoints; and
- an extra £100m for the Plug-In Car Grant.⁵¹

The Government's draft Clean Air Strategy, published for consultation in May 2018, made little comment on road-based pollution. The details of the Government's future strategy to deal with road-based pollution, including the role of EVs is set out in a separate paper, *Road to Zero*, published in July 2018.⁵²

Alternative Fuels Infrastructure Directive

European Union [Directive 2014/94/EU](#) of 22 October 2014 on the deployment of alternative fuels infrastructure (the Alternative Fuels Infrastructure Directive, or AFID) introduces for the first time requirements around the provision, accessibility and design standards of infrastructure, such as EV charge points.

Compliance will require the publication of a National Policy Framework (NPF) detailing the measures the Government believes necessary to develop the market for alternatively fuelled vehicles in the UK and some new requirements to be brought into force across the UK. The Government indicated in an October 2016 consultation on the implementation of AFID that the majority of requirements "will be met through the adoption of the NPF. It is not intended for the NPF introduce any new measures or targets, but instead will summarise and present information on the UK's ambition and approach to supporting the introduction of alternative fuels infrastructure".⁵³

As regards the impact of Brexit on the implementation of the Directive, the Government said that leaving the EU "is not expected to change substantially the direction of this policy" as:

The development of wider standards on ULEV infrastructure creates a level playing field and encourages economies of scale, with potential benefits for both manufacturers of the infrastructure and vehicles, as well as consumers. This in turn supports the up-take of ULEVs, which is a key part of the UK's transport, environmental and industrial strategy.⁵⁴

The Government published its response to the consultation in September 2017. As a result of the consultation the Government said it would:

- Amend some of the civil penalties associated with non-compliant infrastructure;

⁵¹ HMT, [Autumn Budget 2017](#), HC 587, 22 November 2017, para 4.15

⁵² Op cit., [The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy](#).

⁵³ DfT, [Proposed transposition of European Union Directive 2014/94/EU \(Alternative Fuels Infrastructure Directive\)](#), 24 October 2016, p8

⁵⁴ Ibid., p11

- Clarify the definition of publicly accessible chargepoints, to explicitly exclude residential and workplace shared car parks;
- Amend the definition of 'renewal' to exclude routine maintenance; and
- Allow a year-long grace period for existing chargepoints to implement ad-hoc access requirements, so that they must be compliant by November 2018.⁵⁵

Consultation on legislative change, 2016-17

In October 2016, the Government published a consultation on the proposed ULEV measures it planned to legislate for. The measures proposed would give Government powers to support the roll-out of charging and hydrogen refuelling infrastructure and improve consumer access to the network.⁵⁶ The Government published its response to the consultation on 9 February 2017. It stated that it would proceed with proposals to:

- allow regulation to require operators of public charge points to provide **openly available data on the geographic location and live availability of charge points**, in a standardised format; and
- enable time limited secondary legislation to be introduced, which may be subject to a sunset clause, to incentivise industry to come up with its own solution in the longer term.⁵⁷

The Government acknowledged that "the market is developing quickly in this area so we intend that the primary powers proposed will be sufficiently broad to allow for future innovation and that the format of the data and how it should be provided is more suitably defined in secondary legislation".⁵⁸ It also pledged to explore the associated cost to business of back office infrastructure, operation and maintenances, in particular for dynamic data, which may not be technically feasible for all charge points, before laying any secondary legislation and to ensure that there is "potential to allow exemptions to be set in those regulations where appropriate".⁵⁹

It said it would also take powers to:

- require operators of publicly accessible charge points and hydrogen refuelling stations, and networks, to ensure consumers can use them **without the need for multiple memberships**;⁶⁰

⁵⁵ DfT, [Consultation on proposed transposition of Alternative Fuels Infrastructure Directive: Government Response](#), 5 September 2017, p5; see also the *Alternative Fuels Infrastructure Regulations 2017* ([SI 2017/897](#))

⁵⁶ op cit., "[Government gears up for zero emission future with plans for UK charging infrastructure](#)"; and: [Proposed ULEV measures for inclusion in the Modern Transport Bill](#), 24 October 2016

⁵⁷ DfT, [Proposed ultra low emission vehicles measures for inclusion in the Modern Transport Bill: government response](#), 9 February 2017, p9

⁵⁸ Ibid., p9

⁵⁹ Ibid., p9

⁶⁰ Ibid., p13

- enable the introduction of regulations, as needed, to specific **minimum technical standards for charge point connectors or socket outlets** for future installations, to ensure they meet the needs of drivers;⁶¹ and
- allow for regulations on **smart technical standards for charge points**, including powers to require that any access requirements or protocols necessary to access smart functionality are made openly available to ensure interoperability. These requirements would apply to retailers and installers of charge points.⁶² It also said it would ensure that the scope of the powers for smart charging allowed for requirements relating to communication of geographic information.⁶³

The Government also announced its intention to oblige **large fuel retailers and Motorway Service Area (MSA) operators** to have provision of electricity and/or hydrogen available in their forecourts to refuel ULEVs. It argued that, given the strategic location of many fuel retailers and their familiarity to motorists, “many may be attractive locations for EV infrastructure and the Government would welcome commercial arrangements which capitalise on this opportunity and might make regulation unnecessary”.⁶⁴ However, it was also keen to emphasise that legislative measures would “have no immediate effect” and would require secondary legislation to introduce any requirement for new mandatory provision.⁶⁵

Finally, on the question of **enforcement**, the Government indicated its intention to deploy a civil, rather than criminal approach and that the level of penalty would be set in secondary legislation.⁶⁶

Two further proposals in the paper have not yet been taken forward (and are not in the Act). The Government intended to bring forward separate secondary legislation sometime in 2017 requiring operators of publicly accessible charge points and hydrogen refuelling stations, and networks, to publish **transparent and comparable pricing information**.⁶⁷ Secondly, a proposal to **franchise hydrogen refuelling**, met strong opposition from respondents to the consultation. With that in mind, the Government concluded that it would instead “actively monitor market developments in the hydrogen for transport sector and continue to engage with key stakeholders to ensure that any appropriate frameworks are in place to support its growth”.⁶⁸

⁶¹ Ibid., p16; AFID will introduce a minimum level of standardised connectors for electric vehicle charge point connectors and socket outlets

⁶² Ibid., p21

⁶³ Ibid., p21

⁶⁴ Ibid., p27

⁶⁵ Ibid., p27

⁶⁶ Ibid., p33

⁶⁷ Ibid., p16

⁶⁸ Ibid., p30

3.2 The Act

Overview

Part 2 of the Act (sections 9-19) introduces the enabling provisions that were subject of the Government's consultation at the end of 2016 (see above). The Government believes that these provisions are necessary to help deliver the aim in the Conservative Manifesto commitment "for every car and van to be zero-emission by 2050".⁶⁹

Taken together, the proposed powers allow Government to regulate if necessary in the coming years, to improve the consumer experience of charging infrastructure, to ensure provision at key strategic locations like Motorway Service Areas (MSAs), and to require that charge points have 'smart' capability.

In October 2017 the Commons Public Bill Committee took evidence from a number of witnesses during which they discussed the provisions in Part 2. Brian Madderson, chairman of the Petrol Retailers Association (part of the Retail Motor Industry Federation), argued that the measures were too interventionist and geared towards 'sticks' rather than 'carrots', i.e. there was no incentive for the industry to install charging points. In particular he was concerned about the Government intervening in what he perceived as an essentially unstable market.⁷⁰ However, Steve Gooding, director of the RAC Foundation, argued that for the market in EVs to grow there has to be some assurance to the consumer.⁷¹ Marcus Stewart, head of energy insights for National Grid, and Suleman Alli, director of strategy for UK Power Networks, argued that key locations on the Strategic Road Network, destinations, workplaces and supermarkets would be key sites for the location of charging points.⁷²

Section 14: Transmission of data

Section 14 was inserted at Commons Report stage in January 2018 by the Government to confer power to make regulations for the purpose of ensuring the transmission to specified persons (e.g. National Grid) of certain kinds of data relating to charge points. The data could include, for example, data relating to energy consumption and geographical data).⁷³

The Minister, Jesse Norman, explained that the provision was introduced to address concerns relating to smart charging functionality, in particular that:

... there is a chance that data from a domestic or public charge point may not be transmitted to the specified persons after the installation is completed. That could mean that bodies such as the

⁶⁹ [Conservative Manifesto 2017](#), p24

⁷⁰ [PBC Deb 31 October 2017, c46](#)

⁷¹ *Ibid.*, cc39-40

⁷² *Ibid.*, cc51-2

⁷³ [HC Deb 29 January 2018, c613](#)

national grid and distribution network operators do not receive information that would help to plan for demand on the grid.⁷⁴

In the House of Lords the Government amended section 14 to clarify that it would not place regulations directly on domestic users.⁷⁵ This was in response to a recommendation from the Delegated Powers and Regulatory Reform Committee, which suggested that this intention should be made explicit.⁷⁶

Section 16: Enforcement

Section 16 sets out a civil penalty regime and the process for determining whether there has been a failure to comply with any of the requirements.

The Government introduced amendments at Commons Report stage to provide clarification about the enforcement of regulations under Part 2 of the Act. The Minister, Jesse Norman, explained:

It provides for an appropriate civil enforcement regime to ensure that any requirement under the power can be properly enforced so that the desired effects are achieved. The clause gives explicit examples of the expected elements of such a regime, including details about identifying failures of compliance. The amendment adds further detail to what one should expect to be included in regulations to assist inspectors in determining whether a breach of the rules has taken place.

Examples of that detail include taking photographs or removing materials from a site to provide evidence of compliance or non-compliance when inspections are carried out. In general, the Government aspire to be as transparent as possible regarding what they intend to include in regulations, and the amendment adds further clarity on what will be included in the inspection regime.⁷⁷

Section 18: Regulations

Section 18 contains the regulation-making powers and provides that the Secretary of State must consult as he “considers appropriate” before issuing regulations. With two exceptions,⁷⁸ where they are the *first set of regulations* under a particular section they must be approved by both Houses of Parliament (the ‘Affirmative Procedure’). Any regulations made under section 11 (Large fuel retailers etc.) must also be subject to the Affirmative Procedure. Otherwise Regulations would be subject to the Negative Procedure.⁷⁹

The impact assessment states that the full impact of the regulations, which could be made under these sections, is “entirely dependent on the detail of the regulations”, which of course we do not know.⁸⁰ It further states that that the powers in the Act do not create any

⁷⁴ Ibid., c615

⁷⁵ [HL Deb 5 June 2018, c1279](#); amendments 39-41 were consequential on this change

⁷⁶ DPRRC, [16th Report of Session 2017–19](#), HL Paper 85, 6 March 2018, pp2-3

⁷⁷ Ibid., c617

⁷⁸ Section 10(3) (prescribed requirements for connecting components) and section 15 (prescribed requirements for charge points)

⁷⁹ For more information on the affirmative and negative procedures for secondary legislation, see the [Parliament website](#) [accessed 12 June 2018]

⁸⁰ DfT, [New legislative powers for ULEV infrastructure](#), IA No: DfT00376, 20 December 2016, p2

regulation in itself, but that this would be a product of the relevant secondary legislation which would be preceded by consultation and impact assessments:

The Government recognises that market-driven solutions would be preferable, and is encouraged by the progress being seen. However, it may prove necessary to introduce regulation to compel faster improvements for the benefit of consumers and keep sales growth on track. The proposed legislative provisions would enable the future creation of such regulation, and give a clear early signal to the market of Government's vision for electric vehicle infrastructure. Any secondary legislation would involve industry in developing the detailed provisions.⁸¹

Other sections

- **Section 9** defines various terms used in this part of the Act. In the House of Lords the Government introduced an amendment to change the definition of a public charging point to include the term 'refuelling'. To make it clear that it includes both hydrogen fuel cell and battery electric vehicles.⁸²
- **Section 10** gives the Secretary of State power to make regulations to require operators to provide an appropriate uniform method of accessing public charging or refuelling points, and the attendant standards and connections. Regulations can also impose requirements on operators of public charging and refuelling points in connection with performance, maintenance and availability of said points, to ensure that faulty charge points are repaired.⁸³
- **Section 11** gives the Secretary of State power to make regulations to require large fuel retailers and service area operators to provide public charging points and to ensure that public charging points are maintained and easily accessible to the public).
- **Section 12** enables metro mayors (the Mayor of London and mayors of combined authorities in e.g. Manchester and Liverpool) to designate locations defined in section 11 (i.e. those places where large fuel retailers and service area operators must provide public charging points). This is limited to locations within the defined key route networks of these devolved areas.⁸⁴ The Government's intention is that these powers "could only be exercised once the definitions of large fuel retailers and the factors that would determine the suitability of a particular location have been adopted in regulations".⁸⁵

⁸¹ Ibid., p5

⁸² [HL Deb 5 June 2018, c1251](#); amendments 10-12, 14-15, 17, 22, 24-26, & 36-37 made the same change of wording to other clauses

⁸³ Ibid., c1254; amendment 16 made a consequential amendment to clause 10 in furtherance of the change

⁸⁴ e.g. [Greater Manchester's Key Route Network](#), [West Midlands Key Route Network](#) and the [Transport for London Road Network \('red routes'\)](#)

⁸⁵ [HL Deb 5 June 2018, c1273](#)

- **Section 13** gives the Secretary of State power to make regulations to address the lack of consistency in the content and format of publicly available information on public charging points)
- **Section 15** gives the Secretary of State power to make regulations to prohibit the sale or installation of charge points unless they can meet certain requirements, relating to the 'smart' functionality of the charge point).⁸⁶
- **Section 17** gives the Secretary of State power to make regulations to create exceptions from any of the requirements under this Part of the Act).
- **Section 19** requires the Secretary of State to produce a report laid before each House of Parliament every year, commencing two years after Royal Assent. It was inserted at Lords Report stage by the Government.⁸⁷

⁸⁶ This power would enable to Government to require infrastructure installed for the purposes of charging EVs to have 'smart' functionality to receive, understand and respond to signals sent by energy system participants (e.g. National Grid); see: op cit., [New legislative powers for ULEV infrastructure](#), p8

⁸⁷ [HL Deb 5 June 2018, cc1282-3](#)

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