

Consultation: Ending the sale of new petrol, diesel and hybrid cars and vans

ClientEarth response

The UK government is seeking views on bringing forward the end to the sale of new petrol, diesel and hybrid cars and vans from 2040 to 2035, or earlier if a faster transition appears feasible. ClientEarth is replying to this consultation, primarily in the context of the urgent need to protect people's health from illegal and harmful levels of air pollution in the shortest time possible.

1 The phase out date

If the UK government is truly going to show ambition on this issue, the end date for the sale of new petrol and diesel cars and vans should be brought forward to 2030. This should be a legally binding commitment.

A 2030 phase out date is necessary as part of wider government action to protect people's health from illegal and harmful levels of air pollution and tackle the climate emergency. We believe that it is feasible as long as it is: underpinned by legally binding commitments that would give regulatory certainty to all stakeholders, including the public, businesses and in particular the automotive industry; and accompanied by ambitious interim milestones and judicious well-targeted policy and incentives. This will be necessary to ensure that action is taken to reduce these sources of pollution as quickly as possible in order to protect people's health as soon as possible, rather than in ten years' time. The phase out date should be complemented by policies to provide help and support to people and businesses now, in particular people on low incomes and small businesses to move on to cleaner forms of transport in line with other government duties and objectives.

2 The definition of what should be phased out

All cars and vans sold by the phase out date should be Zero Exhaust Emission Vehicles (ZEEVs)¹ with exceptions made for specific vehicles where it is not feasible, either economically or technically, to do so.

Sales of plug-in hybrid and hybrid models of cars and vans should also be phased out as they do not offer the environmental benefits suggested by carmakers' advertising or regulators' laboratory tests. They are at best transitional solutions and distract from the goal of ensuring vehicles emit no tailpipe emissions. Data from the Miles Consultancy,² which tracks fuel use by companies, found that in real life almost all plug-in hybrid cars failed to achieve the mileage found in lab tests, suggesting that many users do not charge them sufficiently.

3 Barriers to achieving the above proposals

Supply of ZEEVs

In the UK, Battery Electric Vehicle (BEV) sales were less than 5% of diesel sales in 2019. By June 2020 they had increased to a third of diesel sales. Demand for ZEEVs is strong and looks set to increase. This needs to be matched by supply.

The average waiting time on a new electric car has significantly dropped in the past year. However, the waiting time for an electric vehicle is still 12 weeks, according to What Car?'s analysis of all 26 electric models currently on sale.³ This needs to be brought into line with waiting times for petrol and diesel vehicles.

There is the risk that car makers will prioritise ZEEVs for other European markets if the UK the right policies are not in place.

Charging infrastructure

Charging infrastructure needs to be scaled up significantly to meet the needs of the projected increase of ZEEVs.

There were approximately 128,500 ZEEVs on UK roads at the end of May 2020 and over 32,000 charging connectors,⁴ with almost 800 connectors deployed a month, across the UK.⁵ Analysis by Transport & Environment suggests that by 2035 there would be 26 million ZEEVs on the road with a 2030 phase out date and 19 million with a 2035 phase out. So, to meet this increase under a 2030 phase out date, the UK needs to be deploying 4,000 per month between 2020 and 2025.

Lack of binding commitments and interim targets

The phase out commitment should be set out in primary legislation, to ensure that future governments are bound by this long-term ambition. This should be backed-up with binding obligations on industry to

¹ The term 'Zero Exhaust Emission Vehicle' is used to recognise the non-exhaust component of emissions from road transport, e.g. brake and tyre wear as well as any emissions from the energy supply.

² <https://www.motoringresearch.com/car-news/plug-in-hybrids-co2-emissions/>

³ <https://www.whatcar.com/news/electric-car-waiting-times-revealed/n21117>

⁴ <https://www.nextgreencar.com/electric-cars/statistics>

⁵ According to analysis by Transport & Environment in May 2020.

ensure interim reductions in new petrol and diesel sales set a clear path towards achieving the phase out date. Possible mechanisms for this are ZEEV mandates and emission performance standards, which are described in section 5 of this consultation response.

Experience demonstrates that regulations are often the most reliable mechanism to get industry to improve their environmental performance, instead of simply leaving it to the market or voluntary agreements. In addition, interim targets are key to ensuring timely improvement instead of allowing action to be delayed to the last moment.

This could be seen by the motor industry's performance following the EU's 1995 'Community strategy to reduce [carbon dioxide] CO₂ emissions from passenger cars and improve fuel economy'.⁶ This relied on a voluntary agreement, made in 1998, between the European Commission and the European Automobile Manufacturers' Association (ACEA) to reduce average emissions from new cars sold to 140g CO₂/km by 2008. While some progress was made, the voluntary target was not met and, therefore, in 2009 the European Commission decided to establish mandatory CO₂ emission performance requirements for new passenger cars. This set a target of 130g CO₂/km by 2015, which was met by the industry though arguably could have been more ambitious. However, average CO₂ emissions have increased between 2015 and the 2020 target. Provisional data by the European Environment Agency shows that average CO₂ emissions in the EU in 2019 were 30g CO₂/km above the 95g CO₂/km target for 2020.⁷

Without intermediate targets, there will be less pressure on auto manufacturers to increase the short to medium term supply of ZEEVs to help accelerate the transition.

4 The impact of these ambitions on different sectors of industry and society

An earlier phase out date for the sales of new petrol and diesel vehicles would have a number of positive impacts:

Health impacts

Air pollution affects all of us throughout our lifetimes. It can cause premature deaths, with some estimates suggesting that it contributes to the equivalent of 40,000 premature deaths a year in the UK.⁸ It also makes a greater contribution towards disease rates and people's quality of life. Air pollution is linked to low birth weight and premature births, it exacerbates asthma symptoms and can stunt children's lung growth and potentially affect their ability to learn. It can trigger strokes and heart attacks, cause cancer and there is increasing research suggesting links to other impacts such as dementia.

Air pollution also disproportionately affects some members of our communities more than others, such as children, older people and those with pre-existing health conditions, including COPD and heart and circulatory disease. Others are more exposed to higher levels of pollutants due to their social or economic backgrounds, such as outdoor workers, people on low-incomes and people from ethnic minorities.

⁶ <https://www.eea.europa.eu/data-and-maps/indicators/average-co2-emissions-from-motor-vehicles/assessment-1>

⁷ <https://www.eea.europa.eu/highlights/average-co2-emissions-from-new-cars-vans-2019>

⁸ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

Now, more than ever before, we have all become aware of how important it is to look after our health. Initial studies are suggesting that air pollution could increase vulnerability to the most severe impacts of Covid-19. People recovering from the disease may join those in our society who were already more vulnerable to the impacts of air pollution – highlighting that clean air is crucial for living well now, and in the future.

Road transport is the biggest source of illegal levels of nitrogen dioxide (NO₂) in towns and cities across the UK, contributing to up to 80% of the problem where illegal levels are found according to the government's own analysis.⁹ Source apportionment data also highlights the significant contribution made by cars, which account for 43% of road transport nitrogen oxides¹⁰ (NO_x) emissions (diesel cars are responsible for 35%), followed by diesel vans, which contribute to 22% of road transport NO_x emissions.¹¹ Road transport is also a significant source of particulate matter pollution. While according to the government's Clean Air Strategy¹² it is responsible for 12% of fine particulate matter (PM_{2.5}) emissions across the country, this increases in urban areas and in London, for example, it is responsible for 30% of local PM_{2.5} emissions.¹³

Accelerating the transition to ZEEVs will therefore have a significant impact of the health of people across the UK. This is also the reason why action needs to be front loaded as much as possible and not delayed to just before any long-term deadline.

In addition, given the non-exhaust component of PM_{2.5} road transport emissions there is also a need for policies to actively reduce the number of vehicles on the road.

Economic impact

In addition to the health impacts, there are also associated economic impacts directly on the individual, businesses and the NHS when an individual suffers from the impacts of air pollution, for example by affecting their ability to work and requiring medical treatment.

The Royal College of Physicians and Royal College of Paediatrics and Child Health have estimated that the cost to the UK economy resulting from the impacts of air pollution is over £20bn annually.¹⁴

Environmental impact

In addition to illegal and harmful levels of air pollution, we are facing a climate emergency. Transport is now the UK's biggest source of climate-warming greenhouse gases, with road transport the main source. Within this cars are responsible for 55% of domestic transport emissions and vans responsible for 16%.¹⁵

⁹ As detailed in the UK government's 2017 National Air Quality Plan

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633269/air-quality-plan-overview.pdf

¹⁰ Nitrogen oxides (NO_x) are a group of gases that are predominantly formed during the combustion of fossil fuels. The majority of NO_x emitted as a result of combustion is in the form of nitric oxide (NO). When NO reacts with other gases present in the air, it can form nitrogen dioxide (NO₂), which is harmful to health.

¹¹ See Figure 3 of the UK government's 2017 National Air Quality Plan

¹² <https://www.gov.uk/government/publications/clean-air-strategy-2019>

¹³ <https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/pm25-london-roadmap-meeting-who-guidelines-2030>

¹⁴ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

¹⁵

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878642/decarbonising-transport-setting-the-challenge.pdf

There is a broader global trend towards heavier vehicles, such as SUVs which means that the average CO₂ emissions per mile for new UK cars has been increasing over the past decade.¹⁶

Contributing towards meeting legal targets and limits for air pollution

The adoption of a more ambitious binding commitment to phase out petrol and diesel cars and vans alongside supporting policies to accelerate the take up of ZEEVs will help to reduce air pollution and greenhouse gas emissions. This in turn will help the UK meet a number of existing and potential new legal obligations:

Air pollution

The UK government has a duty to meet legal limits of air pollution as set under the EU Ambient Air Quality Directive and transposed into domestic law through the Air Quality Standards Regulations 2010. The UK government failed to meet legal limits for NO₂ by the 2010 attainment deadline. It has subsequently lost three legal challenges brought by ClientEarth over its failure to put adequate plans in place to tackle the problem, and has been repeatedly ordered by the courts to produce new compliant air quality plans. The proposal to bring forward the end date for the sale of new petrol and diesel cars and vans needs to be considered in the light of the judgments resulting from ClientEarth's legal action.

The High Court's ruling on ClientEarth's second case gave a clear and definitive finding that where air quality limits are breached, the Secretary of State must put in place appropriate measures to achieve limits in the shortest possible time, via a route that reduces human exposure as quickly as possible.

Over ten years after the deadline for compliance with legal limits for NO₂ pollution, they are still being breached in 83% of reporting zones in the UK.¹⁷ Some areas, such as the A3 in Guildford, are not projected to comply until after 2030 unless urgent action is taken. Given that emissions from cars and vans are the biggest contributors to illegal concentrations of this harmful pollutant, a more ambitious national phase out commitment is necessary to accelerate compliance in accordance with the clear legal obligation on government to tackle the problem in the shortest possible time.

In terms of current legal limits for PM_{2.5}, however, while the UK complies with these, they are double the World Health Organization's (WHO) recommended guideline levels. Therefore, the need to set a new target to reduce PM_{2.5} exposure and examine what action needs to be taken to reduce concentration levels to meet the WHO guidelines has been recognised by the UK government in its Clean Air Strategy. The draft Environment Bill contains a commitment to set a new binding target for ambient PM_{2.5} concentrations.¹⁸

The Secretary of State also has an ongoing obligation under the National Emission Ceilings Regulations 2018 to reduce national annual emissions for five pollutants, by reference to 2020 and 2030 targets. This will require action across a number of sectors, including transport. Unless action is taken, the UK government's own analysis shows that it is on track to miss its 2020 target for PM_{2.5} emissions (by an 11% margin), as well as its 2030 targets for NO_x and PM_{2.5} emissions (by a 16% and 24% margin, respectively).¹⁹

¹⁶ <https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/>

¹⁷ <https://www.clientearth.org/uk-air-pollution-how-clean-is-the-air-you-breathe/>

¹⁸ <https://www.gov.uk/government/publications/environment-bill-2020>

¹⁹ See the analysis in the UK's 2019 National Air Pollution Control Programme:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/791025/air-quality-napcp-march2019.pdf; and the European Commission's 2020 review of the UK's National Air Pollution Control Programme:

Climate change

In order to achieve the Government's binding target of net-zero GHG emissions by 2050 (and tackle the air pollution crisis), the Committee on Climate Change recommends ending the sale of petrol and diesel cars, vans and motorcycles "ideally by 2030".²⁰

The Home of Electric Vehicles

In the current economic context, it is increasingly clear the route to a strong, resilient economy and the creation of good quality jobs will come through linking economic recovery to clean growth, which in turn will help to reduce emissions, including those from transport.

In his first speech to Parliament in July 2019, the Prime Minister stated his commitment to make the UK "the home of electric vehicles", acknowledging the range of economic benefits that would accompany this.²¹ The Faraday Institute estimates that a focus on the manufacture of electric vehicles and associated technologies could increase employment in the UK's automotive sector by almost a third – from 170,000 to 220,000 by 2040.²²

ZEEVs not only offer opportunities for UK manufacturing and technology development – they also hold potential for improving smart use of the electricity grid. ZEEVs can be programmed to charge at times when the costs for producing and delivering electricity are low. This means ZEEVs can help to integrate and absorb variable renewable generation, smooth the power load curve, limit overall grid costs, and make better use of existing assets.²³ This brings down electricity costs for all consumers, not just those with ZEEVs.

Creating thriving cities, good places to work, live, and visit.

If a 2030 phase out date for sales of petrol and diesel vehicles is accompanied by the promotion of cleaner forms of transport we will see the UK's towns and cities cleaner, less congested, more open to pedestrians and cyclists and better places to work, live and visit. In addition to societal benefits, this could have related economic benefits for tourism.

Business support for more ambition

Businesses recognise the health and environmental importance of increasing take up of ZEEVs, are already investing in cleaner vehicles²⁴ and are increasingly supportive of more ambition from government. Leading UK businesses such as members of the UK Electric Fleets Coalition are in favour of a 2030 phase out date for the sale of new petrol and diesel cars and vans.

https://ec.europa.eu/environment/air/pdf/reduction_napcp/NAPCP%20review%20report%20UK%20-%20Final%20updated%2018May20.pdf

²⁰ <https://www.theccc.org.uk/publication/letter-ccc-writes-to-the-new-prime-minister/>

²¹ <https://www.gov.uk/government/speeches/pm-statement-on-priorities-for-the-government-25-july-2019>

²² https://faraday.ac.uk/wp-content/uploads/2020/03/2040_Gigafactory_Report_FINAL.pdf

²³ See Dr. Julia Hildermeier, Christos Kolokathis, Dr. Jan Rosenow, Michael Hogan, Catharina Wiese, and Andreas Jahn, 'Start with smart: Promising practices for integrating electric vehicles into the grid' (April 2019) *Regulatory Assistance Project*, available at <https://www.raponline.org/wp-content/uploads/2019/03/rap-start-with-smart-ev-integration-policies-2019-april-final.pdf>.

²⁴ <https://www.theclimategroup.org/ev100-members>

5 What measures are required by government and others to achieve the earlier phase out date?

Clean Air Zones

The UK government has identified Clean Air Zones (CAZs) as the most effective measure for meeting legal limits for NO₂ in the shortest time possible.²⁵ However, it has deferred task of determining where CAZs are necessary to achieve urgent compliance to those local authorities mandated to develop their own local air quality plans – a number of which are either planning or considering implementing some form of CAZ.

The prospect of CAZs have been cited by the motor industry as one of the reasons for the decrease in diesel car sales²⁶ and initial analysis from London's Ultra Low Emission Zone has shown an increase in the use of compliant vehicles (while at the same time reducing the number of vehicles).²⁷

Whilst some cities outside of London, such as Birmingham, have committed to ambitious CAZ proposals, in many areas the plan-making process has suffered from severe and continuing delays. Information recently obtained from the Department for Environment, Food and Rural Affairs by ClientEarth suggests that 26 authorities are still yet to submit final air quality plans for ministerial approval, with many missing multiple government-imposed deadlines. This includes major cities such as Bristol and Greater Manchester.

A more coordinated approach by government is needed to push forward the urgent implementation of CAZs where they are needed to tackle illegal pollution levels across the country. In addition, the government could seek to go beyond compliance with existing legal limits and use CAZs to set a path towards a zero emission transport network through for instance the development of CAZs into zero emission zones. Such a roadmap would help to give consumers and business a clear sense of direction and help influence purchasing decisions towards ZEEVs.

Environment Bill

As has already been referenced in this consultation response, the UK government has acknowledged the importance of further action to reduce concentration levels of PM_{2.5} and has committed to establishing a new binding target for this.

ClientEarth, alongside health experts²⁸ and many others, believe that the Environment Bill should include a binding commitment to meet stricter WHO guideline levels for PM_{2.5} pollution by 2030 at the latest. This should provide a further driver for the UK government's ambition to phase out the sale of new petrol and diesel cars and vans by setting an ambitious direction of travel for new policies to help meet the target.

²⁵ As detailed in the UK government's 2017 National Air Quality Plan
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633269/air-quality-plan-overview.pdf

²⁶ <https://www.smmmt.co.uk/2020/01/record-year-for-zero-emission-cars-fails-to-reboot-uk-market-as-sector-calls-for-supportive-policies-to-boost-uptake/>

²⁷ https://www.london.gov.uk/sites/default/files/ulez_ten_month_evaluation_report_23_april_2020.pdf

²⁸

<https://www.blf.org.uk/sites/default/files/Joint%20parliamentary%20briefing%20on%20the%20Environment%20Bill%20and%20air%20pollution%20standards%20-%20June%202019.pdf>

Supply Side Incentives

Investment in Zero Emission technology solutions

Provide increased funding for businesses developing technologies that support a zero emission transport system. This will give the UK a real stake in the future of automotive manufacturing, including cars, taxis, vans, buses and lorries, and create high quality jobs that are distributed across the country. A broad range of growth opportunities exists for the UK in relation to ZEEV manufacturing, from research and development through to manufacture and assembly, and from the production of batteries to their reuse and recycling.

CO₂ emission performance standards

Effective regulation of the automotive industry is key to ensuring adequate supply of ZEEVs at competitive prices. The EU regulations setting CO₂ performance standards for new passenger cars and new light commercial vehicles²⁹ is the biggest driver for increasing manufacture and sales of ZEEVs in Europe.

It is essential that the ambition set at the EU level is at least matched in the UK going forward. ClientEarth is concerned, however, that the government is seeking to weaken these regulations. The current Department for Transport's consultation on CO₂ emission performance standards for new passenger cars and light commercial vehicles³⁰ suggests a relaxation of the 2021 target from 95g CO₂/km for cars to over 100g CO₂/km. In order to ensure that the UK is a market for ZEEVs, the UK must provide certainty to the market post Brexit and maintain standards of at least the same level of ambition. Ambitious standards set a clear direction for car makers to shift investment and bring forward new technologies. ClientEarth will be submitting a separate response to that consultation.

Zero Exhaust Emission Vehicle mandate

Auto manufactures should be required to sell an increasing share of ZEEVs each year to help increase the availability of cleaner vehicles for consumers and businesses. A clear roadmap showing the increasing requirements for ZEEV sales will ensure that car manufacturers don't wait until the last possible moment before implementing environmental regulations.

Charging infrastructure

A clear, long-term plan for delivering electric vehicle infrastructure is needed in order to meet future charging demand is. This will help unlock the private sector investment necessary to help shape the UK's electric vehicles market.

Demand incentives

The UK government should develop a package of consumer and business incentives to support the purchasing of ZEEVs³¹ until they reach cost-parity with petrol and diesel counterparts.³² This could include:

²⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0631>

³⁰ <https://www.gov.uk/government/consultations/regulating-co2-emission-standards-for-new-cars-and-vans-after-transition/co2-emission-performance-standards-for-new-passenger-cars-and-light-commercial-vehicles>

³¹ Though out of the scope of this consultation this package should also include electric bicycles and cargo bicycles.

³² According to Deloitte this is expected to happen in 2024 - https://www.lowcvp.org.uk/news,deloitte-projects-ev-tipping-point-when-price-parity-with-ice-vehicles-is-reached-in-2024_3905.htm

- Extending the 0% company car tax (BiK) rate for ZEEVs to ensure the UK's 890,000 company car drivers have the opportunity to take full advantage of the policy.
- Extending the plug-in grant scheme until ZEEVs reach cost-parity with their petrol and diesel counterparts. In February 2020, the Chancellor announced that grants for ZEEVs would be extended to 2022-23 but will be reduced to £3,000 from £3,500.
- A time-limited VAT exemption to reduce the upfront cost of ZEEVs. The UK government will be able to do when we have left the EU but could also consider a VAT rebate in the meantime.³³
- Reforming Vehicle Excise Duty to ensure it better reflects the health and environmental impacts of petrol and diesel vehicles. First Year VED registration taxes for petrol and diesel vehicles should progressively increase while remaining at a zero rate for ZEEVs, until they reach cost parity. The previous bandings based on CO₂ emissions for yearly charging should be reinstated and account for NO_x and particulate matter emissions, all based on real world driving. This will help to further incentivise the purchase of ZEEVs and revenue should be used to support cleaner mobility programmes.

Help and support

Given the problems caused by car manufactures producing diesel cars that are more polluting on the road than would be expected under the original emission standards, the UK government should work with the motor industry to fund and deliver a targeted diesel scrappage scheme to help consumers and businesses that bought cars that are more polluting than they believed them to be. This should prioritise people on low incomes and small businesses in local authorities that have illegal levels of air pollution and in particular where CAZs are planned. It should help people and businesses purchase ZEEVs, but could also go towards car/van club membership, public transport season tickets or electric bicycles, including cargo bicycles, for example.

Funding

The UK government should repurpose the £28bn funding for RIS2 to accelerate the transition to cleaner vehicles and fund the above measures.

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³³ As recommended by WPI Economics - <http://wpieconomics.com/site/wp-content/uploads/2018/05/Helping-people-and-business-to-move-towards-cleaner-forms-of-transport-WPI-Economics-FINAL-1.pdf>

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