

**Written evidence submitted by
Michael Ellis MP, Minister of State, Department for Transport (CGE0088)**

Thank you for your letter of the 7 May, to Jesse Norman, in which you raised a number of questions on behalf of the Science and Technology Committee relating to clean growth within the transport sector. I am replying as the new Minister of State.

It may be most helpful if I seek to address the questions individually where I can. Questions 12 and 14 relate specifically to taxation and are matters you may wish to raise with HM Treasury.

Question 1: *Given the slow progress over the last carbon budget, what more will the Government do to ensure that transport emissions achieve or outperform the ambition set in the Clean Growth Strategy?*

The UK Government is committed to tackling climate change, and the United Kingdom is a world leader in cutting emissions while creating wealth. Between 1990 and 2017, the UK reduced its emissions by over 40 per cent while growing the economy by more than two thirds. The Clean Growth Strategy (CGS) sets out the UK Government's plans to reduce emissions across the whole of the economy.

The UK outperformed the emissions reductions required by the first carbon budget by one per cent and we are on-track to outperform against the second and third carbon budgets. We are making strong progress towards the fourth and fifth carbon budgets and recognise that ambitious implementation of the CGS will be needed to ensure those budgets are achieved.

Transport is the largest contributor to UK carbon emissions and we recognise the need to increase ambition and step up the pace of progress across all modes. The UK Government has been developing plans to reduce emissions across transport, including last year's Road to Zero Strategy for road transport, and the recently published Aviation Green Paper and Maritime 2050 plan.

Later this year, we will also publish an ambitious Clean Maritime Plan and Aviation 2050 Strategy. In developing these, we are actively considering the potential implications of the Intergovernmental Panel on Climate Change (IPCC) special report on 1.5 degrees, and the advice recently provided by the Committee on Climate Change that the UK Government should legislate as soon as possible to reach net-zero greenhouse gas emissions by 2050.

Question 2: *What is Government doing to encourage consumers to purchase lower emitting vehicles, and to reverse the recent trend in average emissions?*

As set out in the Government's 2017 air quality plan for nitrogen dioxide the UK will end the sale of new conventional petrol and diesel cars and vans by 2040. 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 Road to Zero strategy sets out our ambitions in more detail and gives clarity and certainty to both industry and motorists. By 2030 we want at least half of new cars sold, and as many as 70%, to be ultra-low emission, alongside up to 40 per cent of new vans, and for all new cars and vans to be effectively zero emission by 2040. By 2050 we want almost every car and van to be zero emission.

Progress towards our ambitions will be reviewed by 2025. Against a rapidly evolving international context, the UK Government will seek to maintain the UK's leadership position and meet its ambitions, and will consider what interventions are required if not enough progress is being made.

We are investing nearly £1.5 billion between April 2015 and March 2021, with grants available for plug in vehicles and schemes to support chargepoint infrastructure at homes and workplaces and on residential streets. Ultra-low emission vehicles also benefit from lower rates of car tax, grants for chargepoints and local incentives (such as free parking).

Regulation is one of the most important levers to ensure manufacturers deliver cleaner and more fuel efficient vehicles to the market and help provide a stable environment for industry investment (further detail at questions 3 and 4).

Question 3 and 4: *In October 2018, the Government stated that, as the UK leaves the EU, it "will pursue a future approach to vehicle emissions regulations that is at least as ambitious as the current arrangements". Since then, the EU has agreed new limits on average light vehicle emissions out to 2030. Will the Government adopt emissions regulations at least as ambitious as the new EU regulations for passenger cars and light duty vehicles?*

Does the Government intend to adopt regulations at least as ambitious as the EU's future regulations on heavy-duty vehicles and on public procurement tenders?

The UK was one of the EU Member States that pushed for higher ambition during negotiations on new CO₂ emission reduction standards for new passenger cars and light commercial vehicles and for heavy duty vehicles (HDVs).

The new passenger cars and light duty vehicles CO₂ regulation was published recently by the EU, available online at <https://eur-lex.europa.eu/eli/reg/2019/631/oj>. As noted in the Road to Zero strategy the UK Government is committed to maintaining a future approach that is at least ambitious as the current arrangements for vehicle emission standards.

The new HDV CO₂ regulation has yet to be finalised and adopted by the EU. Therefore, how its requirements might be implemented in the UK will depend on when this is achieved and the terms on which the UK leaves the EU.

Question 5: On what basis does the Government disagree with the Committee on Climate Change on the compatibility of its 2040 low-emissions vehicles target with the overall UK emissions targets for 2050?

The CGS set out pathways for meeting the UK's long-term emissions reduction target of 80 per cent on 1990 levels by 2050.

The 2040 ambition is consistent with this target, and sets a clear level of ambition for industry to work towards. 2040 is an ambitious but achievable target and we believe it is a key part of the answer to our long-term transport emission reduction objectives. It puts us 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 we believe we have identified the right balance between our environmental ambitions and deliverability, giving consumers and industry time to transition.

The Government is convinced of the urgency of action on climate change, which is why it asked for this advice from the Committee on Climate Change (CCC) last October. The Government will respond to the CCC's advice in a timeframe which reflects the urgency of this crucial issue.

Question 6: Has the Government conducted analysis on the likely cumulative emissions of different dates for banning the sales of new conventional vehicles, and if so has it published this analysis?

The CGS undertook analysis of scenarios for meeting the UK's long-term emissions reduction target of 80 per cent on 1990 levels by 2050, including three pathways for meeting this target. These all included substantial uptake of zero emission vehicle technologies. The ambition that by 2040 the majority of new cars would be zero emission and all new cars would have significant zero emission capacity falls in the range of these scenarios and sets a clear level of ambition for industry to work towards.

Question 7: Does Government intend or expect the average age of cars at scrappage to decrease in the 2040s? Given the emissions associated with manufacturing cars, what impact might that have on cumulative emissions to 2050?

Given the early stage of the ultra-low emission vehicle (ULEV) market, the Department does not have robust evidence underpinning the difference in lifetime emissions of ULEVs and conventional petrol and diesel vehicles. It will be looking to gather this evidence as the market develops.

Question 8: Does the Government have targets for the annual sales of electric or ultra-low emissions vehicles?

a) if so, what are they? Are they based on cumulative emissions to 2050?

b) if the Government does not have annual targets, does it disagree with Committee on Climate Change's indicator? How does the Government intend to increase sales of ultra-low emissions vehicles?

The projections generated within Government are for, and influenced by, policy development. Uptake modelling makes use of commercially sensitive information that Government is not permitted to share publicly. Officials have previously engaged with stakeholders such as the Committee on Climate Change and Society of Motor Manufacturers and Traders on the Government's modelling process and findings.

A number of experts already publish projections for uptake of electric vehicles, but the Government recognises the value of publishing its own view and will look to do so to at appropriate points in the future.

As described, the Road to Zero strategy sets out our long-term ambitions, to give clarity and certainty to both industry and motorists. As stated, by 2030 we want at least half of new cars sold, and as many as 70 per cent, to be ultra-low emission, alongside up to 40 per cent of new vans, and for all new cars and vans to be effectively zero emission by 2040. By 2050 we want almost every car and van to be zero emission.

Question 9: Does the Government intend to set long-term targets for heavy duty vehicles, beyond the voluntary target of 15% reductions by 2025?

The Road to Zero strategy announced a new industry-wide voluntary target for reducing heavy duty vehicle (HDV) greenhouse gas emissions by 15 per cent by 2025, from 2015 levels. This should help the industry to achieve significant emissions reductions while realising commercial benefits through improved fuel and logistical efficiency. Both the major trade bodies, the Freight Transport Association (FTA) and Road Haulage Association (RHA), support it.

This will see efficiency improvements for the existing HGV fleet that are complementary to the EU HDV CO₂ regulation that will see significant fuel efficiency improvements from new HDVs. The new HDV CO₂ regulation is yet to be finalised and adopted by the EU and how it is implemented in the UK depends on when this happens and the terms on which the UK leaves.

As noted in response to question 4, the Government is committed to maintaining a future approach that is at least ambitious as the current arrangements for vehicle emission standards in the EU. We will also continue to work closely with the freight industry to tackle reductions in emissions.

Question 10: *What emissions reductions are envisaged from heavy duty vehicles in the Government's pathway to reaching 83MtCO₂e by 2032?*

The Government expects to see significant emission reductions from HDVs in the coming years. We have implemented measures to encourage cleaner and more fuel-efficient trucks including through a duty incentive for road fuel gases, increasing rewards for gaseous fuels under the Renewable Transport Fuel Obligation, our £25m Advanced Biofuels Demonstration Competition, our ten-year trial of longer semi-trailers and the £11m Low Carbon Truck Trial.

The Road to Zero strategy sets out a range of actions the Government and industry are taking to further reduce carbon emissions from HDVs, including:

- Introducing a new voluntary industry-supported commitment to reduce HGV greenhouse gas emissions by 15% by 2025, from 2015 levels;
- Launching a joint research project with Highways England to identify and assess zero emission technologies suitable for HGV traffic on the UK road network; and
- Working with industry to develop an ultra-low emission standard for trucks.

Question 11: *The 'Road to Zero' Strategy stated that Government would conduct research into low-emissions technologies for HGVs "with a view to ultimately performing full-scale demonstrator trials on the UK road network if appropriate technologies are identified"*

- a) which technologies are being considered in this research?*
- b) how advanced is this research?*
- c) what would a 'full scale' demonstrator trial entail? Are any yet being planned?*

The Government continues to support research and development into zero and low emission HGVs. We provided £20m of grant funding through Innovate UK for the Low Emissions Freight and Logistics Trial that focuses on clean technologies for commercial vehicles. The programme commenced in 2017 and is due to complete in 2020 with results being published soon after.

Highways England and the Department for Transport are jointly leading on a project with the aim to review the full range of solutions available to deliver zero emissions at the tailpipe for HGVs and to consider which may be most appropriate for the UK road network. Tackling carbon emissions and air pollution from HGVs, and ultimately finding zero emission solutions is a priority for the Government, in order to ensure HGVs play their part in helping to meet our climate change and air quality commitments.

Question 12 and 16: Given that electric vehicles will not pay fuel duty, is the Government considering reforming the taxation framework for transport to account for a growing proportion of low-emissions vehicles on the road, if so, which options is it considering? / Following ten years of fuel duty freezes, does the Government intend to use the tax and price control regime to promote public over private modes of transport?

The Government's approach to taxation is a matter for HM Treasury.

Technology is changing many aspects of the economy, including the vehicles we drive, and the Government is considering how the tax system will need to adapt to manage those changes.

Question 13: Does Government intend to introduce any regulations subsequent to the Automated and Electric Vehicles Act 2018, or consult on any potential regulations? If so, what might such regulations entail, and when would it be introduced?

Section 15 of the Automated and Electric Vehicles Act gives the Government the power to require all new installed chargepoints in the UK to have smart charging functionality. Smart charging allows consumers to charge EVs off-peak, at times that are cheaper for the consumer and more beneficial for the energy system. The regulations could also entail requirements for cyber security, interoperability of smart functions (meaning consumers can change who operates the chargepoint), grid stability and other device-level requirements relevant to smart charging. We intend to launch a consultation on the secondary legislation in the coming months with a view to laying the regulations by early next year.

We also intend the consultation to include questions about section 14, the transmission of data relating to chargepoints. This could cover questions about when this section should be introduced and what the regulations should entail.

The Government also took powers within the Act to improve the consumer experience of using chargepoints. At this early stage of the market, we do not want to intervene unnecessarily and stifle innovation. However, we continue to monitor market developments closely. If the market fails to deliver further improvements across the entire

network or takes too long, we are prepared to intervene using the powers in the Automated and Electric Vehicles Act to ensure a good deal for consumers.

Question 14: *Does the Government have a target for future average vehicle occupancy or shared mobility?*

a). if so, what emissions reduction potential is the target estimated to have?

b). What is the Government doing to drive more efficient use of vehicles, and to reduce the number of total vehicles required in the UK's future transport system?

The Government's Future of Mobility: Urban Strategy, published earlier this year, set out nine key principles for shaping the future of urban mobility.

One of these key principles is that mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.

The Department is currently developing its plan for implementing the Future of Mobility: Urban Strategy including a project which explores who shares transport and the factors that contribute to people's decision-making when choosing shared mobility services. This will inform further action to embed the principle, including considering whether setting shared mobility targets would be appropriate.

Question 15: *What emissions reductions are this Government's actions supporting walking, cycling and public transport estimated to have achieved? What reductions are projected?*

The 2018 Energy and Emissions Projections submission projected the impact of sustainable travel interventions since 2009 on reducing the amount of car kilometres travelled and therefore carbon emissions, at some 2.2bn km per year by 2020/21 (or a 0.5 per cent reduction).

In the statutory Cycling and Walking Investment Strategy (CWIS) of April 2017, the Government set out a range of aims and targets for increasing active travel, including to double cycling by 2025. Almost £2 billion of investment is projected over this Spending Review period to 2020/21 to increase cycling and walking and the Government is committed to further investment over the next spending review period.

This is expected to further reduce car kilometres travelled due to higher uptake of more active travel modes by 2025.

Question 17: *What is Government doing to support the development of consolidation centres or other approaches to make 'last mile' delivery systems more efficient?*

The Government has stated in its response to the Last Mile Review that it will seek to support the increased provision and availability of micro distribution hubs whilst recognising the importance of ensuring such facilities are supported by local bodies.

It explores the opportunities to consider the challenges of last mile delivery as part of the Future of Mobility: Urban Strategy Grand Challenge and how Government can support the development of micro distribution hubs.

The Government recognises the opportunities presented by supporting the growth of e-cargo bikes for last mile deliveries to improve air quality and support economic growth through the development of a new sector and opportunities in research and development. On April 1st, 2019 the Government launched a £2 million e-cargo bike grant programme, which is being delivered by the Energy Saving Trust. The funding will contribute 20 per cent of the purchase price of a new e-cargo bike, with a maximum grant of £1,000 per bike available.

In terms of promoting the use of micro distribution hubs the National Planning Policy Framework (NPPF), in particular Paragraph 82, supports the provision of storage facilities that may be required. It states that planning policies and decisions should recognise and address the specific locational requirements of different sectors, this includes making provision for storage and distribution operations at a variety of scales and in suitably accessible locations.

The Department has worked with the Connected Places Catapult, who produced a business case outlining the feasibility of an urban consolidation centre being used by Southampton General Hospital. Following this work, the Connected Places Catapult was approached by Greater Manchester Health and Social Care Partnership, to produce a business case for a consolidation centre for hospitals in their area. The Department is currently investigating how the experience gained and the analytical model produced from these two exercises could be best promoted.

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