



## TRANSPORT SELECT COMMITTEE CALL FOR EVIDENCE

### ZERO EMISSION VEHICLES AND ROAD PRICING

#### SUBMISSION BY THE CONFEDERATION OF PASSENGER TRANSPORT

##### About CPT

1. The Confederation of Passenger Transport (CPT) represents the operators of bus and coach services across the UK, as well as vehicle manufacturers and other suppliers to the industry. CPT has more than one thousand enterprises in membership, ranging from major PLCs, through to municipally-owned companies and family businesses with fewer than ten vehicles.

##### Executive Summary

2. The ban of the sale of new petrol and diesel vehicles will not on its own bring about the necessary reductions in emissions from road transport. It is estimated that even if all new cars from 2030 were zero emission (as opposed to the current policy of zero emission capable from 2030, zero emission from 2035) we will still need to reduce traffic on our roads by up to 20% by 2030 (relative to 2017) if we are to achieve the Government's climate change goals.<sup>1</sup>
3. The best way to achieve this reduction in traffic is to promote modal shift away from the private car and towards active travel and mass transport, in particular buses and coaches.
4. As well as helping us to meet our climate change goals, such a shift will also reduce congestion which has a negative impact on the economy and on everyday lives and improve social inclusion by ensuring that everybody has access to good quality, good value transport (24% of all households and 44% lowest income households have no access to a car).
5. We must avoid public transport passengers becoming a major casualty of the roll out of electric vehicles through a lack of investment and increased congestion slowing journey times for buses and coaches.
6. Buses are already the greenest vehicles on our roads. Nonetheless, the industry welcomed the Prime Minister's commitment to deliver 4,000 new zero emission buses during this Parliament, which would reduce carbon dioxide emissions by 2 million tonnes.
7. Any financial support model for the purchase of new buses needs to recognise the impact of the pandemic on operators' ability to invest. Available capital for investment in new vehicles has disappeared as a result of Covid-19 so a model which requires no upfront capital and which

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<sup>1</sup> Friends of the Earth (February 2019) *More than Electric Cars* <https://policy.friendsoftheearth.uk/print/pdf/node/17>

reduces operators' monthly costs is required. A leasing model, whereby the lease cost to operators is set so that the total operating cost is lower than or equal to the total operating cost of a diesel bus, including depreciation, could be the way to deliver this.

8. Given the greater challenges involved in transitioning to zero emission vehicles in more rural areas, we suggest that the transition to zero emission buses should happen first in urban areas. These routes are used more heavily and will have more significant environmental benefits.

### **The contribution of electric vehicles to the achievement of the UK's net zero goals**

9. The ban of the sale of new petrol and diesel vehicles will not on its own bring about the necessary reductions in emissions from road transport.
10. At present, electric vehicles are not zero emission across their whole lifetime (taking materials and manufacturing processes into account) - research shows that average 'lifetime' emissions from electric cars are currently around 30% lower than from petrol cars in the UK<sup>2</sup>. Therefore, whilst it is likely that the lifetime emissions of electric vehicles will become steadily more favourable as we shift to clean electricity, there still needs to be a reduction in vehicles on the roads if we are to meet our zero carbon targets. It is estimated that even if all new cars from 2030 were zero emission (as opposed to the current policy of zero emission capable from 2030, zero emission from 2035) we will still need to reduce traffic on our roads by up to 20% by 2030 (relative to 2017) if we are to achieve the Government's climate change goals.<sup>3</sup>
11. The most obvious immediate benefit of switching to electric vehicles is the reduction in local air pollutants such as NOx emissions. However, these air quality benefits will be undermined if in reducing the running costs of motoring, electric vehicles lead to more traffic and congestion on our roads; there will continue to be a significant number of petrol and diesel cars on our roads for many years which will also be stuck in that congestion and we know that halving traffic speeds leads to a 50% increase in harmful nitrogen oxide emissions from such vehicles.<sup>4</sup>
12. It is also important to reduce tyre particulate pollution which is increasingly recognised as a serious health issue. Tyres grating on the surface of the road throw microscopic particles into the air which are damaging to our health. Tyre wear is also the biggest source of microplastics pouring into our rivers and the sea. And when tyres come to the end of their lives there is currently no means of properly recycling them.<sup>5</sup>
13. The best way to achieve a reduction in traffic is to promote modal shift away from the private car and towards active travel and mass transport, in particular buses and coaches. As well as helping

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<sup>2</sup> Research from the universities of Exeter, Nijmegen and Cambridge, cited in Harrabin, R. (23 March 2020) *Electric car emissions myth 'busted'* BBC News

<sup>3</sup> Friends of the Earth (February 2019) *More than Electric Cars* <https://policy.friendsoftheearth.uk/print/pdf/node/17>

<sup>4</sup> Greenerjourneys.com/blog/congestion-not-just-drag-economy-kills/

<sup>5</sup> George Monbiot (23 September 2020) *Electric cars won't solve our pollution problems – Britain needs a total transport rethink* The Guardian

us to meet our climate change goals, such a shift will also reduce congestion which has a negative impact on the economy and on everyday lives and improve social inclusion by ensuring that everybody has access to good quality, good value transport (24% of all households and 44% lowest income households have no access to a car). It is worth noting that if everyone switched just 6 journeys a year from car to bus the impact would be equal to transitioning the entire bus fleet to zero emission.

14. Modal shift towards active travel and public transport will also help to improve the efficiency of our transport system both in terms of carbon and movement of people. Single occupancy trips are at around 60% and 96% of the car fleet is stationary at any given time.<sup>6</sup>
15. We must avoid public transport passengers becoming a major casualty of the roll out of electric vehicles through a lack of investment and increased congestion slowing journey times for buses and coaches.

#### **The challenges around decarbonising buses and coaches**

16. Buses are the greenest vehicles on our roads and have a crucial role to play in helping to meet the Government's targets on improving air quality and fighting the climate emergency.
17. Operators have led the way in decarbonising road transport and have invested £2bn in new cleaner and greener buses over the last five years, meaning the UK now has its cleanest ever bus fleet. In our bus strategy *Moving Forward Together* published in September 2019 the bus industry committed to only buying zero emission or ultra- low emission buses from 2025, in return for Government support for the extra purchase cost of ultra-low and zero emission buses until prices progressively align with comparators, and support for delivery of the necessary infrastructure. We also stressed the need for Government to put in place a clear plan, under its Industrial Strategy, to support the UK's manufacturing and supply chain in improving and developing technologies around ultra-low and zero emission vehicles.
18. The industry therefore welcomed the Prime Minister's commitment to deliver 4,000 new zero emission buses during this Parliament, which would reduce carbon dioxide emissions by 2 million tonnes. We want to see this transformational pledge delivered but the mechanisms used need to reflect the industry's own constraints on investment at a time when passenger revenue has been held back by Covid-19 restrictions. Forward orders have already been drastically reduced as operators are forced to defer or cancel orders for new buses. The Covid-19 crisis therefore represents an immediate threat to the future of the UK bus manufacturing industry and its extensive supply chain.
19. UK bus manufacturers have already had to start scaling back their workforce and production lines. Ongoing uncertainty and lack of orders not only puts around 10,000 jobs and apprenticeships at

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<sup>6</sup> Haigh, C (24 November 2020) <https://greenerjourneys.com/blog/an-idea-whose-time-has-come/>

risk, but could seriously impact the industry's ability to deliver orders of zero emission buses in the future.

20. Any financial support model for the purchase of new buses needs to recognise the impact of the pandemic on operators' ability to invest. Available capital for investment in new vehicles has disappeared as a result of Covid-19 so a model which requires no upfront capital and which reduces operators' monthly costs is required.
21. A leasing model, whereby the leasing cost to operators is equal or lower to the depreciation costs of a diesel bus, could be the way to deliver this. Sufficiently low leasing costs could be achieved through a combination of: Combining Government funding with private finance; having Government guarantees over either part of the lease and/or the residual cost of the vehicle; and long lease agreements. When combined with the lower operational costs of a zero emission bus over a diesel bus, this would be an attractive proposition to operators who might otherwise be unable to invest in new vehicles in the current climate.
22. Ensuring sufficient infrastructure is in place to support the investment in new cleaner vehicles is also vital. CPT has estimated the cost of upgrading a single depot at around £1.5 - £2m. There may also be additional supplier connection charges which vary from place to place.
23. Our *Moving Forward Together* commitment included ultra-low as well as zero emission buses. The battery range of fully electric vehicles is still not adequate for some longer/more rural routes and so, if battery electric were used on these routes, more electric buses will be needed than their equivalent ultra-low or diesel options to cope with higher mileage operations/longer working days, etc. Whilst the emergence of hydrogen vehicles can help with this, for the deployment of any type of zero emission bus on e.g. school, rural and SME operations more time is needed for issues around infrastructure and price to be worked through.
24. We therefore suggest that transition to zero emission buses focuses in the first instance on heavily used urban services where economies of scale and air quality benefits can be achieved, and where there is scope to encourage significant modal shift from private car to public transport. Getting people out of their cars and onto the bus would have a dramatic impact on carbon emissions and air quality. If everyone took one more bus journey a month there would be a billion fewer car journeys and we would reduce the UK's carbon dioxide emissions by 2 million tonnes a year.<sup>7</sup>
25. By improving bus journey times, bus priority measures will not only help bring about modal shift as people are encouraged to switch from private car to bus, but will also decrease operational costs for bus operators which further strengthens their ability to invest in zero emission vehicles. A 10% decrease in bus speeds increases operating costs across the bus network by £400m a year – money which could be spent on improving services for passengers, including greener vehicles.

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<sup>7</sup> Greener Journeys (2013) [greenerjourneys.com/blog/help-us-take-one-billion-car-journeys-off-the-road/](http://greenerjourneys.com/blog/help-us-take-one-billion-car-journeys-off-the-road/)

26. The coach is also one of the most environmentally friendly ways of travelling, with average carbon dioxide emissions per passenger per journey being around 1.5 times higher for rail, 5 times higher for air and 6 times higher for car travel.<sup>8</sup> With the latest Euro VI diesel coaches emitting less nitrogen oxides (NOx) per vehicle than the latest diesel cars, just one coach-load of people – which can keep up to 50 cars off the roads - amounts to notable savings in carbon and NOx emissions. Coaches are therefore part of the solution to the problem of climate change, with buses and coaches together currently contributing only 3% of domestic transport emissions of carbon dioxide whilst cars contribute two-thirds.<sup>9</sup>
27. Some manufacturers have begun to develop ultra-low and zero emission capable coaches to help in the fight against climate change. There are two manufacturers offering electric coaches with a range of between 200 and 300km, a hybrid model is being trialled in the UK and both Compressed Natural Gas and Liquefied Natural Gas models are available. Whilst these developments are great news for the industry, range, infrastructure and reliability are concerns for operators. If we are to really make the transition to ultra-low and zero emission coaches a reality, support from Government is needed to ensure the continued development of adequate technology.
28. In addition, the cost of ultra-low and zero emission coaches is currently considerably more – we estimate around 75% more - than the latest Euro VI diesel vehicles. Even before the pandemic it was the case that, until prices progressively align, support for the increased purchase cost from government was likely to be needed for many operators to invest. This is even more the case now, given that the pandemic has hit the coach sector particularly hard, meaning it will be difficult, if not impossible, for most operators to invest substantially in zero emission vehicles in the immediate future.
29. As we exit the pandemic, we would welcome the opportunity to work with Government on a national strategy for sustainable long-distance road transport. This can provide the policy and funding framework which would provide the certainty that operators and manufacturers need to invest in new technology against a realistic timeframe.
30. Given the likely need for electric (and other alternative fuel) coaches to recharge on route/location, investment by government is also needed in a network of national charging infrastructure.

### **Road pricing**

31. We recognise that Government needs to find a way to replace fuel duties with another source of revenue along with the need to develop fiscal policies that decrease the incentives to use the private car.

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<sup>8</sup> [BEIS/Defra greenhouse gas conversion factors 2019](#)

<sup>9</sup> Department for Transport (July 2019) *Carbon offsetting in transport: A call for evidence*

32. Switching from the blunt instrument of charging people for fuel to charging them for using roads in specific places at specific times could assist in the delivery of other Government priorities such as tackling air pollution and congestion, as well as net zero goals.
33. Vehicles should be charged according to their contribution to carbon emissions, pollution and congestion. This means that:
  - Diesel and petrol vehicles will pay more than electric vehicles at any time
  - Drivers using busy roads at busy times will pay more than others
34. Vehicles which solve the problems of congestion and pollution – such as buses and coaches – should be exempt. This will encourage the shift to more sustainable and environmentally friendly forms of transport and ensure that affordable methods of transport are available, including for those that have no other option.
35. The charging structure should be transparent so that people are able to compare the (currently-invisible) cost of a journey by car with the cost of the same journey by public transport.
36. To help with public acceptability, a proportion of revenue from road user charging should be hypothecated to fund public transport environments. A 2007 survey of almost 2000 adults by Ipsos-Mori found that support for road charges strongly increased – from 34% to 61% - if it was proposed that revenue was spent on improving public transport.<sup>10</sup>

#### **Lessons learnt from other countries**

37. Norway's policy on encouraging electric vehicles has been extremely successful but has been to the detriment of public transport. Norway has the most ambitious target in the world, with all new cars to be ULEV by 2025. By 2018 already 45% were ULEV. Measures have included tax incentives, free parking, free access to bus lanes and no charges on toll roads. However, Norway's policy has encouraged more driving. Public transport's share of commuting has fallen from 23% to 6%. The car's share has risen from 65% to 83%.
38. It is essential that we avoid public transport passengers becoming a major casualty of the roll out of electric vehicles. This would have negative impacts on congestion, which in turn has a negative impact on the economy and on everyday lives, and on social inclusion, with 24% of all households and 44% of the lowest income households having no access to a car.

**Alison Edwards**  
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<sup>10</sup> Ipsos-Mori (2007) *Road pricing at the crossroads*