

ZERO EMISSION VEHICLES AND ROAD PRICING

Evidence to UK Parliament Transport Committee

17 February 2021

1. Key points.

- Zero emission vehicles play a crucial part in achieving a low emission transport system.
- However, irrespective of the fuel source, the over-use of private cars will continue to impose vast negative cost externalities on others: economic, environmental and social.
- If not carefully-targeted and time-limited, subsidies to adopt zero emission vehicles could have the perverse unintended impact of increasing private car use.
- A much greater focus should be placed on supporting the uptake of zero emission technology in public transport and for freight, and the greater uptake of appropriate forms of electric micromobility.
- Government will need to continue to have in place incentives that manage car use, even after the phase-out of fossil fuel cars. It is therefore crucial that the UK Government reforms its fiscal and pricing regimes for road use. We strongly support the introduction of a national road pricing system that includes electric vehicles.

2. About Transform Scotland.

Transform Scotland is Scotland's alliance for sustainable transport. We campaign for walking, cycling and public transport to be the easiest and most affordable options for everyone. Our diverse membership brings together public, private and third sector organisations from across Scotland. We are politically independent and strictly science-based; we are a registered Scottish Charity (SC041516) and Company (SC181648).

3. Accelerating the shift to zero emission vehicles.

Zero emission vehicles play a crucial part in achieving a low emission transport system and over the past decade we have seen a significant increase in the uptake of zero emission vehicles. This is at least in part thanks to government initiatives that have incentivised buyers to consider electric or hydrogen alternatives to petrol or diesel cars and other vehicles.

The commitment to ban the sale of new petrol/diesel cars from 2030 also sets a clear signal that these types of vehicles are due to be phased out in the coming years; while electric vehicles (EVs) remain more expensive, the relative up-front cost compared to petrol and diesel cars has significantly dropped over recent years and is due to drop even further. In addition, the cost of running an electric vehicle is already lower than running a petrol/diesel car, not least thanks to subsidies such as free charging and reduced Vehicle Excise Duty (VED).

While the move from petrol and diesel cars to zero emission cars will lead to a reduction in tailpipe emissions, it remains important to acknowledge the wider costs of private car use that is not associated with fuel type. A large proportion of emissions that cause air pollution in cities are associated with the wear of tyres and brakes: these will not be reduced by the transition from petrol/diesel cars to EVs, and will continue to contribute to health problems. Furthermore, a move from petrol/diesel cars towards EVs will do nothing to address road safety issues for pedestrians and cyclists, congestion and parking problems in cities and the health and cost inequalities associated with over reliance on cars.

Given the current trends, the UK Government should therefore carefully consider whether further subsidies for zero emission cars may result in the perverse unintended effect of encouraging an increase in car use

and miles driven. As such, any further incentives to shift from fossil fuel to electric cars should therefore be introduced as short-term interventions.

A much greater focus should instead be placed on supporting the uptake of zero emission technology in public transport and for freight. Bus operators have been particularly hard hit by the impacts of the pandemic, losing a large proportion of their regular ridership. Many operators are now in a precarious position and will require support to successfully transition to low emission vehicles. We therefore welcomed the Scottish Government's announcement to support zero emission buses with an investment of £120 million. We would like to see continued support for these types of measures from both the UK and Scottish governments.

In 2017 heavy goods vehicles (HGVs) accounted for 12.6% of climate emissions in Scotland. While this is relatively small compared to the emissions from cars, it is still a significant contribution that must be addressed. The first step should be to move heavy freight from road to rail (in particular long-distance hauls) but where this is not possible alternative solutions will be required. The UK Government should match the ambition to phase out fossil fuel cars with a similar ambition to phase out fossil fuel HGVs, in order to reach carbon reduction targets set by the UK Government and devolved administrations. The UK Government should pursue investigating zero carbon electric and hydrogen alternatives to facilitate the transition to zero carbon heavy goods vehicles.

Another area of zero emission vehicles – unfortunately often overlooked in this conversation – is the potential benefits that electric bikes, cargo bikes and other micromobility solutions offer. These forms of transport can offer viable alternatives to private car use and heavy freight transport within cities and should be included in any policy that encourages the uptake of zero emission vehicles.

Finally, a shift to EVs must be accompanied by an increase in the share of renewable energy in the UK grid and a phasing out of fossil fuel generated electricity, to ensure that EVs are in fact zero emission vehicles.

4. Road pricing.

The phase-out of petrol/diesel cars will lead to a significant reduction in the income that the UK Government derives from Vehicle Excise Duty and Fuel Duty, if there is no accompanying change to the current system of charging for road use. This would not only lead to a significant loss of tax revenue for the Government, but would also deprive transport decision-makers the opportunity to impact levels of car use through use of this fiscal power. It is therefore crucial that the UK Government reforms its fiscal and pricing regimes for road use.

While we welcome the move towards vehicles that produce zero tailpipe emissions, it is important to recognise that this does not equal zero total emissions, and nor does it reduce all negative externalities of road traffic to zero for multiple reasons:

1. Embodied emissions: EVs require more energy and resources to manufacture than fossil fuel cars, although the amount of carbon produced by manufacturing a car is expected to fall as more electric grids shift towards renewable power.
2. Particulates: Apart from tailpipe emissions, cars also produce emissions from brakes and tyres. This applies to both electric and fossil fuel vehicles. EVs therefore continue to contribute to air pollution that is detrimental to people's health.
3. Collateral emissions: Building and maintaining roads for heavy vehicles requires a large amount of resources and contributes to the UK's carbon emissions as well as air pollution through the production of particulates in construction.
4. Congestion: High car use leads to congestion, particularly in cities; this imposes high economic costs.
5. Health: As discussed above particulate emissions from road traffic are harmful to respiratory health. But over-reliance on private cars also reinforces a sedentary lifestyle, leading to respiratory health.
6. Social inequality: Prioritising car movement over public transport and active travel options disadvantages those who cannot or choose not to drive for financial or other reasons.

7. Road safety: Large volumes of traffic make streets unsafe and unpleasant for other road users particularly affecting more vulnerable groups, such as children.

The impacts of car use, as set out above, clearly demonstrate that the Government will need to continue to have in place incentives that manage car use, even after the phase-out of fossil fuel cars. At the moment, Government subsidies for EVs *make running an electric car much cheaper than running a petrol or diesel car*. While the number of EVs on UK roads is still relatively low today, this is likely to change very quickly over the next few years. The Government must prevent the low running cost of electric vehicles leading to an overall increase in traffic levels. We therefore strongly support the introduction of a new road pricing system that includes EVs. There are a number of models that would achieve this that should be carefully considered:

1. Tax on energy source: A tax on the energy source would be an equivalent to the current Fuel Duty on petrol and diesel. However, since electricity is used for home use and EV charging, this would either lead to a higher charge on domestic energy consumption or would require a differentiation between electricity used for a car and use in the household. This option is likely unviable and should be dismissed.
2. Road use tax: This form of tax could be set up as a charge per mile or a progressive scheme where the charge increases with a higher number of miles driven. While this would disincentivise driving, it would disproportionately affect people in rural areas who have to drive longer distances and likely have fewer alternative options. Meanwhile shorter distances would remain cheaper, doing little to shift short trips from private car to active travel or public transport.
3. Congestion tax: A congestion tax has the benefit of directly targeting negative externalities, in those places where they are most prevalent, namely cities and towns. While implementing a congestion charge requires complex technology and may lead to issues concerning privacy, the example of the London ULEZ shows that it is possible to implement.
4. Vehicle Excise Duty: While VED is currently connected to the emissions of a vehicle and does not have to be paid on zero emission vehicles, this may have to be reconsidered as and when this effective subsidy is no longer required for take-up of EVs. Instead VED could be connected to the size of the vehicle. This would incentivise car owners to opt for smaller cars and, in particular, deter people from buying SUVs, which are high in energy use, particularly dangerous to pedestrians and cyclists, and are often too large for the UK's roads and parking provision.
5. Miscellaneous: There are a number of other road charging and/or incentives that could be considered, such as company car taxes or workplace parking levies or a requirement to prove availability of parking for a private car. These types of measures can be used to incentivise specific behaviours and should be implemented alongside a more general pricing structure, for instance to tackle parking in city centres or to address on-street parking issues in residential neighbourhoods.

In conclusion, we strongly urge the UK Government to introduce a national road pricing scheme that adequately replaces the current Fuel Duty and Vehicle Excise Duty to cover both petrol/diesel cars but also zero emission cars, reflecting the wide range of negative externalities that will continue to result from the use of these vehicles. In order to make this change palatable to the public, the Government may wish to consider introducing the scheme with initially low charges for zero emission vehicles and increase charges progressively as EVs become more dominant on our roads.

Scotland's alliance for sustainable transport

Transform Scotland
5 Rose Street, Edinburgh, EH2 2PR
t: 0131 243 2690
e: <info@transformscotland.org.uk>
w: <www.transform.scot>

transform
scotland

We campaign for walking, cycling and public transport to be the easiest and most affordable options for everyone. Our diverse membership brings together public, private and third sector organisations from across Scotland. We are a registered Scottish charity (SC041516).