



Zero emission vehicles and road pricing

Campaign for Better Transport submission to Transport
Select Committee inquiry

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About us

Campaign for Better Transport's vision is for all communities to have access to high quality, sustainable transport that meets their needs, improves quality of life and protects the environment. We are a charity and operate in England and Wales.

Thank you for the opportunity to contribute to your call for evidence on the topic of zero emission vehicles and road pricing.

1. Accelerating zero emission vehicles and decarbonisation

Transport is currently the biggest emitter of domestic greenhouse gas emissions, with cars the main contributor (55 per cent), followed by lorries and vans (32 per cent). Zero emission vehicles therefore have a vital part to play in reducing greenhouse gas emissions from transport and cleaning up the air in our towns and cities. This is why Campaign for Better Transport fully supports the government's intention to prohibit the sale of traditional petrol and diesel cars after 2030 (hybrids after 2035). We believe these targets are challenging but achievable and they set the direction and pace of change required for a greener future. However, an additional target is also needed for completely removing the use of all fossil-fuelled cars and vans on the road, bar historic vehicles, in order to improve air quality and cut carbon emissions.

Over the next decade, the government must implement measures that increase the supply of, and stimulate demand for, zero-emission vehicles (ZEVs). On the supply side, the government has been providing targeted grants for electric battery and hydrogen research and development, but more can be done, particularly for heavy vehicles like lorries, buses and trains. The government should introduce a manufacturing sector deal for both electric and hydrogen buses and trains to boost UK supply chains and reduce reliance on overseas technology and suppliers.

On the demand side, the government should provide incentives for businesses, car hire and car sharing schemes to renew their fleets, while the second-hand market develops. These can include subsidised ZEV costs or more attractive benefit-in-kind (BiK) company car tax rates if demand falls below expectations. To accelerate adoption, the government could also mandate that all new company fleet purchases should be zero-emission from 2025. Limiting access for fossil-fuelled vehicles to some local roads through schemes like Clean Air Zones can also accelerate the change, especially if coupled with grants for small businesses to replace non-compliant vehicles.

A wider and faster roll-out of charging infrastructure is also required. Different businesses' charging infrastructure needs vary. Larger businesses and logistics companies would be better placed to invest in dedicated depots with the required charge points and electric grid upgrades. For medium-sized businesses without their own depots, local authorities should be given grants to invest in charging hubs, as well as on-street schemes. To provide certainty to fleet managers, the government should ensure interoperability of different operators' chargepoints and standardised emission requirements across Clean Air Zones.

2. The limitations of zero emission vehicles

It is however important that the roll-out of ZEVs is not overplayed as a solution to the present environmental challenges for a number of reasons. While a shift towards electric vehicles will eliminate tailpipe pollution and greatly reduce nitrogen dioxide pollution, it does not reduce particulate matter pollution from tyre, break and road wear.

Nor can they alone deliver the government's net zero targets. Although the fuel efficiency of the vehicle fleet has been improving, producing fewer tailpipe emissions on average, transport emissions have remained relatively static because traffic from both personal and commercial vehicles has increased substantially. This means, to achieve net zero, we still need to reduce the overall use of cars and vans on the roads. Moreover, a change from diesel or petrol vehicles to electric ones does nothing to tackle congestion – a major drag on the country's economic performance.

Indeed, ZEVs may exacerbate these challenges. Already, the freeze in fuel duty since 2011 has made motoring progressively cheaper. It is estimated it has led to five per cent more traffic, 250 million fewer bus journeys, 75 million fewer rail journeys, an extra five million tonnes of CO₂ and an extra 15,000 tonnes of NO_x emissions.¹ As electric vehicles' affordability improves and running costs reduce, and if the present motoring taxation arrangements were to remain unchanged, people would similarly be incentivised to drive more. The government's own traffic forecasts estimate that if we electrify without sorting out how to transition away from fuel duty, road traffic would increase by 51 per cent between 2015 and 2050.² This would worsen congestion and put net zero and air quality targets further out of reach.

To tackle this, we need to be travelling less and choosing the most efficient and sustainable modes of transport when we do travel. Driving in a medium petrol car with one occupant produces more than four times as much greenhouse gas emissions per passenger kilometre as travelling by rail and almost twice as much as travelling by bus.³ To do this, the pricing signals need to favour of public transport rather than driving. Investing in more public transport, walking and cycling alternatives would not only provide greener alternatives but also support people on low incomes who are less likely to own cars and more likely to rely on public transport.

3. Zero emission vehicles and taxation

The roll-out of ZEVs is also problematic for national taxation revenue, with electric vehicles exempt from Vehicle Excise Duty (VED) and paying no fuel duty. This presents a major challenge for the Treasury, made worse by the fuel duty freeze in place since 2011. In revenue terms, this freeze has already cost the Treasury more than £50 billion in foregone revenue and, with diesel and petrol vehicles being phased out after 2030, the £40 billion annual take from fuel duty is set to steadily decline and eventually reach zero. In the short

¹ Greener Journeys (10th March 2020), Ending fuel duty freeze could treble NHS budget for doctors and nurses, Press release, <https://greenerjourneys.com/press/ending-fuel-duty-freeze-could-treble-nhs-budget-for-doctors-and-nurses/>

² Department for Transport (2018), Road Traffic Forecasts 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873929/road-traffic-forecasts-2018-document.pdf

³ Our World in Data (2020), using the BEIS/DEFRA Greenhouse gas reporting conversion factors 2019, <https://ourworldindata.org/travel-carbon-footprint>

term, it is right that zero emission vehicles are exempt from VED and other taxation in order to improve their affordability and encourage their uptake. Left unchecked long-term however, that would represent a huge hole in the Treasury's income column, and constitute a huge further encouragement to switch from public transport to private car. This makes it ever more urgent for the Treasury to change radically the mix of motoring taxes.

4. The need for road pricing

VED is, we argue, fundamentally flawed in that it is a tax on ownership of a vehicle rather than its use. Nor are the present bands sufficiently differentiated to encourage motorists to move to cleaner vehicles. We believe it should be abolished, save perhaps for a small administrative cost to cover expenditure by DVLA. While fuel duty does effectively charge the motorist per mile driven, the rate has remained unchanged since 2011, while public transport fares have continued rising, leading to a move of traffic off rail and bus and onto the private car. This is not a sensible policy.

Road pricing – or charging drivers for road use – is not a new concept. Different types of schemes are already in place in many countries, including Singapore, Sweden, Norway, France, Italy, the USA, etc. While road pricing can also take the form of tolls for use of specific roads (like the M6 toll road bypass or the Dartford Crossing charge) or cordon-based set charges (like the Congestion Charge and Ultra Low Emission Zone in London), we use the term here to signify distance-based charging, whereby drivers are charged on the basis of miles driven.

In the UK, there have long been calls for the introduction of a road pricing system. In 2004, the Department for Transport published a report entitled *“Feasibility Study of Road Pricing in the UK,”* which said road pricing was “becoming feasible” and identified a number of potential benefits.

We believe HM Treasury should be looking to replace VED and fuel duty with a system of distance-based road pricing that vary by time of day, type of road (also reflecting availability of alternatives methods of travel) and vehicle class and emission levels. Such an approach would have a myriad of benefits:

- It would support the transition to cleaner vehicles by charging diesel and petrol vehicles proportionately more.
- It would promote the use of public transport where this is a viable alternative, as well as car sharing.
- It would promote driving at less busy times of day and cut overall vehicle miles, thereby reducing congestion, air pollution and carbon emissions.
- Based on the “polluter pays” principle, it would be fairer to the consumer and to society, reflecting more closely the negative impacts of individual journeys
- Less car dominance would reduce road danger and improve public health.
- Crucially, it would replace revenue lost from existing vehicle taxation.

5. National and local schemes

Here we focus mainly on a national road pricing scheme that applies only to the Strategic Road Network and revenue is collected for general taxation. However, cities in England have had the power to establish distance- or cordon-based road pricing schemes since the Transport Act 2000, but only as a way to mitigate for congestion and air pollution. While any revenue generated can be reinvested in transport provision, it cannot be a reason for its implementation.

This means that local and national schemes could exist in parallel but are two distinctly different propositions.

A national scheme on the Strategic Road Network, with rates set by the Treasury and collected by Highways England, would be for revenue raising towards general taxation and replacing the existing motoring taxes. We advocate at inception charging only on motorways or motorway-equivalent A roads, with potential further roll-out with time.

On the other hand, local schemes – be they cordon- or distance-based – can apply to local road as a way to combat congestion and pollution. The revenue raised from local schemes would be retained at the local level and ringfenced for road maintenance and investing in local sustainable transport options.

At the national level, central government should now launch a review of existing vehicle taxation and set a plan for moving towards distance-based road pricing as a way of supporting net zero ambitions. This should be through a Green Paper with encouragement for cross-party discussions and involvement of bodies like the ORR. It would clearly be beneficial if any new scheme could apply across England, Scotland and Wales. Although taxes are an issue reserved to Westminster, some discussions with the Scottish government in particular could be necessary. Ultimately it could be introduced in England, or England and Wales only, but that would clearly be sub-optimal.

Central government should also encourage and support local and combined authorities to explore how local road pricing (in the form of congestion charging, charging Clean Air Zones or distance-based schemes) can support local policy objectives. In London specifically, the current Mayor has committed to expanding the Ultra Low Emission Zone but also exploring a new London boundary charge for drivers coming into London. While this can be a sensible transition measure, a better solution would be to replace all existing schemes with a London-wide distance-based variable charge, as described in a 2019 Centre for London report.⁴

6. How to make road pricing feasible

While road pricing makes eminent sense in policy terms, the barrier to its adoption at the national and local level has always been public acceptability. Here we outline answers to common public misconceptions about road pricing.

- “We already pay vehicle taxation”

Politicians have in the past shied away from introducing road pricing for fear of opposition from the electorate. Indeed, in 2006-7 government plans for national pay-as-you-drive scheme were shelved after a public petition against the plans attracted 1.8 million signatures, while in 2008 a proposed charge in Manchester was heavily defeated in a local referendum. It is absolutely crucial, for public acceptance, that the move to road pricing is seen as fair and not an extra tax on the motorists. Recent Ipsos Mori polling shows that a majority of the public will support a transition if it is overall revenue neutral, with revenue used to invest in public transport and air quality improvements, but that the acceptance level drops sharply if it is seen as an extra or increased tax.⁵

The money raised from inter-urban national road pricing should be offset by the abolition of VED and the abolition or at least significant reduction in fuel duty, with the calculated intention of raising overall the same amount of money for the Treasury as motoring taxes presently do. Clearly a scheme that is neutral overall will see some motorists gain, and some lose. Those who drive on motorways, where there are likely to be rail alternatives, will pay more, while those who, for example, drive in rural areas where there are few alternatives will

⁴ Centre for London (2019), Green Light: Next generation road user charging for a healthier, more liveable London, <https://www.centreforlondon.org/publication/road-user-charging/>

⁵ Ipsos Mori (20 December 2020), Public support charging motorists to use roads, but want it to be done for the right reasons, <https://www.ipsos.com/ipsos-mori/en-uk/public-support-charging-motorists-use-roads-want-it-be-done-right-reasons>

pay less. This is a socially progressive outcome, which encourages beneficial modal shift while protecting those who have no alternative but to drive.

- “This is just another way to raise money”

Designing a revenue neutral scheme that replaces existing taxation should convince people that it is not about raising more money but about moving a new system that better suits future technology. Furthermore, the government should emphasise the air pollution, health and environmental benefits of the change, as people are generally well disposed towards these messages. Ringfencing at least a proportion of revenues towards road maintenance, measures to encourage active travel, and to ensure that gradually more and more people have access to quality, affordable, reliable public transport options, would also increase acceptance.

For example, the Ipsos Mori poll found that, while 21 per cent of the public oppose road pricing schemes in principle, this falls to 17 per cent if revenues are used to improve public transport, 15 per cent if charges are higher for more polluting vehicles and 14 per cent if revenues are used to improve air quality.⁶ Another international survey found 81 per cent of people in the UK believe that climate change is a global emergency – the highest proportion of 50 countries polled, and 77 per cent of those say we should do everything necessary, urgently in response.⁷

- “I don’t have alternatives”

A distance-based charge can take into account a number of different variables. One of them should be how busy a given road normally is at certain times of the day and what alternative travel options there are. This means that travelling at peak times on busy roads with good public transport alternatives would be charged more than travelling off-peak on less busy roads with no viable public transport options. So for example, people travelling on rural roads where there will often be few alternative to the private car will be better off. A person who insists on driving from London to Newcastle where there is a good train service will be worse off.

- “The technology is not there yet”

National road pricing on motorways and motorway-equivalent A-roads can easily be implemented straight away through automatic number plate recognition. This is well established and a common way of detecting vehicle movement and could work to approximate distance travelled. With time, as acceptance of distance-based pricing grows, other A-roads and local roads can be added through a shift to more sophisticated technology already available. For example, satellite (GNSS) technology can communicate with GPS systems already built into all new vehicles to more accurately detect distances travelled and charge accordingly.⁸ This technology can be used for city schemes, with drivers given the option to pay a flat charge equivalent to the maximum day charge as an alternative.

- “I feel uneasy about being tracked everywhere”

Some people may be concerned about the privacy implications of linking GPS tracking to a personal account. However, a national road pricing scheme on motorways and motorway-equivalent A-roads can be implemented and enforced through automatic number plate recognition, at least initially. For local schemes enforced through GPS, there will need to be high levels of data protection through enhanced encryption to ensure the authorities cannot

⁶ Ibid.

⁷ UNDP/University of Oxford (2021), Peoples’ Climate Vote, <https://www.undp.org/content/undp/en/home/librarypage/climate-and-disaster-resilience-/The-Peoples-Climate-Vote-Results.html>

⁸ This is already the technology in place in Singapore. See ZDNet (9 September 2020), Singapore readies satellite road toll system for 2021 rollout, <https://www.zdnet.com/article/singapore-readies-satellite-road-toll-system-for-2021-rollout/>

match people's details to their movements. An alternative flat daily rate would also be an option for people worried about privacy.

- "I can't afford a cleaner vehicle"

The government will need to introduce a range of measures to mitigate for the impact of the scheme on people on low incomes. These could include for example targeted discounts or a vehicle scrappage scheme for small businesses and people on low incomes, similar to the scheme introduced as part of the Ultra Low Emission Zone.⁹ However, poorer people are less likely to have access to a private car and are disproportionately affected by the negative impacts of car use, such as air pollution and road danger. Therefore, improved air quality and public transport provision would also benefit poorer people more.

Conclusion

Road pricing will have a key role to play in reducing car dependency and moving to a cleaner, greener future. We hope this submission provides practical suggestions for how road pricing schemes, both at the national and local level can be implemented easily, with schemes designed in such a way as to promote public acceptance. We are committed to working with the Select Committee and with government to progress road pricing policies nationally and locally.

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⁹ For more information, see <https://tfl.gov.uk/modes/driving/scrappage-schemes>