

**Written evidence submitted by the Parliamentary Advisory Council
for Transport Safety (EVP0087)**

Summary

PACTS welcomes this inquiry and the linking of these two important issues. PACTS supports both the shift to zero emission vehicles (ZEVs) and the introduction of road pricing. Both should provide benefits in relation to their own specific objectives. We urge the Committee to impress on the government that they should be implemented with full consideration of both the implications for road safety and opportunities to improve it. There are pricing and technological opportunities to achieve a safer, greener and more efficient use of road space, but will only be achieved with significant intervention by Government.

Zero emission vehicles

We address the first point in the Committee's terms of reference: the feasibility, opportunities, and challenges presented by the acceleration of the ban of the sale of new petrol and diesel vehicles to 2030.

ZEVs will reduce emissions of tail-pipe gases and pollutants from vehicles at point of use. In light of the increasing evidence of the harmful health effects of oxides of nitrogen (NO + NO₂), oxides of carbon (CO and CO₂) and particulate matter (PM₁₀ + PM_{2.5}), this is important and welcome.

ZEVs are not a solution to all transport and environmental problems. Whilst ZEVs should produce zero carbon emissions at the point of use, substantial carbon emissions may arise in their production and distribution. PACTS recommends that the government requires vehicle manufacturers to inform the public of carbon generated to manufacture and distribute ZEVs, to help consumers take account of environmental factors at the point of purchase or lease of the vehicle. This will require national standards and auditing.

ZEVs do not overcome the other disadvantages of motor vehicle use. They will still contribute to road casualties, congestion, parking demands, deterrents to active travel, trends towards increased trip length, dispersed patterns of land use and car-dependency. We therefore caution against promoting or favouring ZEVs at the expense of public transport, walking or cycling, such as allowing ZEVs to use bus/cycle lanes or exempting ZEVs from road pricing.

We advocate a holistic approach where the shift to ZEVs doesn't create unintended consequences, for example more preventable road casualties. A good example is improving road safety through enhancing the protection of pedestrians, cyclists and motorcyclists (Vulnerable Road Users, VRUs) in the event of a collision. Currently, a vehicle with an internal combustion engine (ICE) has limited space under the bonnet and behind the front bumper to incorporate energy absorbing characteristics. This has historically resulted in a significant compromise with respect to the crashworthiness design for VRUs impacts. With electric powertrains, engineers can utilise the co-benefit of the space freed by removing the ICE to cost-effectively design vehicles to prevent many road casualties. To date, vehicle safety improvements have primarily benefited vehicle occupants. Electric vehicles provide significant opportunities to reduce the dangers to those outside the vehicle, and we recommend that vehicle pedestrian safety regulation is reviewed to maximise the potential. Improving consumer information through the advances to the Euro NCAP ratings will also

help consumers to choose safer and greener vehicles. We urge the Transport Committee to highlight this in its recommendations.

Road pricing

The case for introducing some form of road pricing and the impacts.

The case for introducing road pricing is very strong. It is only fear of public opposition and the political impacts that has prevented it happening on a wide scale in the past.

Road pricing based on the externalities of road use, such as congestion, pollution, and road casualties, would introduce market mechanisms which would encourage drivers (consumers of scarce road space) to moderate their use in these respects. This could lead to a more efficient use of road space, less traffic and fewer externalities, including less road danger and pollutants. It would also provide a source of income to the Treasury to replace the income from fuel duty, VAT and VED which will be lost in the move to ZEVs.

Because the UK has largely failed to introduce road pricing, it has sought to cope with excess and potentially unlimited peak demand by expanding road capacity. This is an expensive and ultimately fruitless strategy. It also leads to undesirable outcomes, including increased traffic, longer trip lengths and more dispersed land use patterns. It does not even deal with congestion.

Pricing mechanisms are the norm for other forms of transport, including rail, air and sea. Indeed, these modes would be almost impossible to operate viably without pricing mechanisms that charge more for use at peak times or on busy routes. There is no good reason why these mechanisms should apply to bus, rail and air passengers but not to drivers. Drivers are accustomed to paying for parking.

If the tax currently raised from fuel excise duty is to be replaced by other taxes on transport, then we should perhaps take the opportunity to think about the wider landscape of transport tax and spend.

- Roads are built and maintained by the public sector from general taxation and are free at the point of use. Vehicles and fuel are both taxed. Tax rates differ for private and commercial uses.
- Railway tracks are built and maintained by the public sector and are paid for partly from general taxation and partly from charges levied on companies running trains at point of use.
- Public transport (bus, train) is paid for partly by general taxation and partly by charges paid at point of use ('fare box')
- Airlines are managed by more complicated mixtures of public and private money but benefit from comparatively low fuel tax rates (which are difficult to change because the inherently international nature of the business). Low level airways are currently underexploited: we can imagine that imminent electric drones used for last mile delivery could explode when the market is appropriately regulated, and the low airspace traffic control problem is solved.
- Much of the 'external costs' of each of these modes is currently borne by the public purse.

The result of this is well documented differences in the perceived and actual prices per journey of various travel choices. A private car is an expensive capital asset which is visibly taxed but is often perceived as a sunk cost. Fuel is paid for infrequently, and not in a way that is clearly psychologically linked to any given journey. The marginal cost of a journey by private car is often not transparent and may not be compared to the marginal cost of a journey by public transport. The external costs of a journey by private car (e.g. carbon footprint, particulate pollution, negative health impacts of exercise foregone and of crashes involving harm to drivers, passengers, or others) are not transparent.

Rather than framing road pricing as a way to replace lost tax revenue which puts the focus on cost to the user for an asset (the road) which people think they are paying for ‘anyway’, subsidies, taxes and pricing should signal positive choices and discourage those which involve significant negative externalities.

Road pricing schemes most appropriate for the UK

There is a large body of knowledge in this area and PACTS is not a specialist. However, we would say that it is important that any scheme is designed to address the externalities listed above. In that respect, it needs to charge for all road use, and to price congestion, road casualties, road damage and vehicle emissions more highly. A standard per mile charge would have benefits but would not achieve these important objectives. Current fuel duty and VED relate, if imperfectly, to road use and emissions. If these are phased out as a result of ZEVs, they will need to be incorporated in any new charging scheme.

City centre congestion charging schemes, such as in central London, have proved successful in terms of reducing traffic and raising revenue for public transport. However, if road pricing is applied only to cities, it will encourage dispersal, more traffic in rural areas and lifestyles that are ever more car dependent.

The overall level of revenue to be derived from road pricing schemes is a matter for the Treasury. PACTS has no particular view, other than to say that it should probably not be lower than current revenue levels or there may be an overall shift towards car dependency. We do not think it needs to be higher as a more subtle pricing system should deliver many of the benefits without an overall increase in payments by drivers. Making it revenue neutral would also be more appealing to the public.

Public support for road pricing and lessons learned

It is unfortunately true that the idea of road pricing has proved unpopular with voters and drivers in the UK. Schemes in Manchester, Edinburgh and elsewhere which were subject to public consultation and referenda were defeated overwhelmingly. This is a major problem for any government or local authority and we recognise this. However, this need not be the case if a systematic approach to mobility is applied as set out by Government and the opportunities for innovative solutions such as Mobility as a Service are pursued.

Where schemes have been introduced and allowed to operate and demonstrate benefits, they have proved acceptable and public support for them has grown. The London congestion charge scheme is such an example. This was introduced as a manifesto commitment by the London mayor, and not as a specific one-off policy subject to a local consultation.

The Committee has supported use of citizens’ assemblies to debate complex matters such as climate change policy. PACTS believes that road pricing is a topic which is very suitable for

citizens' assemblies. It requires a process of deliberation to explain the options, their advantages and to counteract myths. We believe that once people better understand it, most will accept that road pricing is fair and beneficial.

Another lesson from London and elsewhere is that good public transport needs to be introduced in advance of the road pricing scheme to make road pricing acceptable. There is no viable level of public transport that will satisfy the current needs or convenience of all drivers. But as road pricing moderates rather than eliminates car use, in practice this is not critical for most people.

Oslo has a combined congestion charge and low emission zone. We understand that the system of road tolls was introduced on a trial basis. It proved successful and has been extended to Trondheim and Bergen.¹

Unlike the UK, many other European countries have accepted the principal of charging for road use on their motorways. This provides revenue to maintain the network and moderates demand. The UK has applied charges only to certain bridges and tunnels and to the private M6 Toll. Given that the Government and Highways England refer to road users as customers, paying for road use and not vehicle ownership would seem logical.

The Committee's 2009 inquiry into taxes and charges on road users includes much valuable information, including details of the pay per km scheme in the Netherlands which was developed in partnership with the lead motoring organisation. Despite reaching an advanced stage, it was not fully introduced due to a change of government. This shows the need for sustained, cross-party understanding and support.²

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Endnotes

¹ [Oslo - CS \(urbanaccessregulations.eu\)](https://urbanaccessregulations.eu)

² [House of Commons - Taxes and charges on road users - Transport Committee \(parliament.uk\)](https://parliament.uk)