

## **Written evidence submitted by Mr Jim Chisholm (EVP0100)**

I concentrate, in some 1,200 words, on action that could and should be done, as part of the path to zero emission vehicles and a national road-pricing scheme.

I'm retired, but worked at the Transport & Road Research Laboratory in 1970s & early 80s. In more recent years I've been a volunteer campaigner for Sustainable Transport both locally to my home in Cambridgeshire, and Nationally. Although I only achieved a University level degree later, I gained, at TRRL, much experience of many issues, now so valuable, as I worked in research areas, such as the environmental effects of HGVs, and on Urban Traffic Control models and systems.

It is urgent that fuel duty is raised, as the current low rates disincentives the use of public transport, as costs there have risen at a rate faster than the cost of living whereas with the suspension of the fuel duty escalator, has significantly reduced true fuel costs. If the duty were raised to meet historic costs it would be a shock, but would aid public acceptance of the later move to better road pricing, including for Electric Vehicles (EVs). It would also be a fairer way of supporting a move to more EVs than the current cash support for purchase. The current support of EVs benefits mainly the better off, and is a far from equitable use of resources.

It is crucial that actions taken to reduce CO2 and congestion target the 'use' rather than the 'ownership' of motor vehicles. It must also be better recognised that congestion and pollution is also created by electric vehicles and that, especially in urban areas, much of which is caused by tyre particulates, road dust and noise so created, and is not just by local emissions from petrol and diesel powered vehicles,

Current incentives for reduced use of motor vehicles are perverse. Once you've paid for vehicle excise duty and insurance, the marginal cost of those extra miles is small compared with the costs imposed on society especially in urban areas. In addition, because the perceived 'marginal cost' of miles is small compared with the perceived cost of 'time' drivers will often drive many miles to save an almost zero amount of time. Any charge needs to far better follow the cost of driving imposed on society. With EVs being subsidised, and the perceived cost of charging being low (or zero), such perverse behaviour may be even greater without such measures!

We need, NOW to correct the charges to better follow the full true costs of trips.

I attempt to explain two simple different process or ideas, in which I feel I've some expertise, and that might better aid to transition to the sort of road charging regime that WILL be needed within 20 years, but could be introduced gradually over a far tighter timescale to the benefit of all.

A simple flat charge for use of the Strategic Road Network (SRN)

Behaviour, based on user's marginal costs, in urban areas and even small towns leads to commuting trips by car that may be double the 'crow flies' distance, and where many trips should easily be achievable by pedal bike, EPAC, or public transport given appropriate facilities. In addition the 'variance' of trip time influences choice. A '20min' 15 mile commute round a town by the SRN may only vary in trip time by a minute or so except on

the rare exceptional day, whereas the far shorter but slower trip via an 'inner-ring' A road, time may vary by 5 minutes or more even on successive days! We are creatures of habit. The unreliability of trip time creates stress so the longer trip may be chosen.

We are spending or proposing to spend, absolutely huge amounts of money on upgrading parts of the SRN mainly in and around urban areas. Yet often the congestion is only 'peak hour', and much private car traffic may only use the SRN for a couple of junctions on short trips.

IF we were to have a fixed daily fee of say '£5' to use any part of the SNR it would bring in a very large amount of money. It would not be likely to affect the decision of a driver from London to, say Exeter, but might well change the behaviour of many drivers over the use of the strategic network for short commuting trips.

Although this may seem a perverse idea, it could bring in sufficient funds to support a significantly improved public transport services, and create far better routes and facilities for cycling and walking in those congested urban areas or towns. Investing, in advance, much smaller sums than proposed for those sections of the SRN, in local transport for walking, cycling and public transport, would enable many more trips under 5 miles to be switched to such modes with consequential benefit for health and reduce congestion. It would also give capacity for short trips to move to the local network, removing any need to do the difficult, controversial, and expensive upgrades of many sections of congested SRN. As much of the SRN is grade separated at junctions collecting of data via mostly existing ANPR cameras would not be difficult. See also (2014):

<https://www.gov.uk/government/statistics/use-of-the-strategic-road-network>

Satellite Navigation for commercial vehicles with real or shadow charging.

Many more drivers have satnavs, with those in HGVs and light vans, being very reliant on them, even those designed for car travel. This is also leading to changing and inappropriate route choice. Following the 'A420' & M4 from Oxford to Chippenham might have been the route choice 20 years ago, but now if a shorter and quicker route through Swindon, especially 'off peak' is determined by satnav what does the driver do?

Changing road numbers or reducing their status, a method commonly used in the past, will now have little or no effect. Parts of the old A420, have for long been the A3102, & B4069.

For HGVs where the road damage factor, and noise, may be a significant factor in the 'true' cost (to others) of trips, Satnav direction to use minor and inappropriate road is becoming a very serious issue. The damage done to some roads, especially in villages is very clear. It would be a trivial exercise to modify an existing satnav system, to 'weight' roads by their appropriateness for such trips by goods vehicles. Any algorithm could then tend to give preference to the SRN or main roads and hence reduce the use of inappropriate 'short cuts'. A simple weighting could have a multiplier for the SRN of 1.0, with 1.1 for 'A' roads, and 1.25 for 'B' and 'C' with 1.5 for unclassified lanes or streets. An HGV satnav that reduces the damage inflicted on minor roads and local communities should be an early requirement.

Requiring HGVs to use such a system would be a form of shadow charging and could easily be modelled and then trialled, initially for the largest HGVs, If linked to real charging, and to a more sophisticated tachograph, perhaps with portable units for none UK registered vehicles,

it would give a more equitable charge for all. Such a system could later be a requirement for all vehicles of over 2 tonnes. A 'plain' per mile charge for a small car and a large one weighing 2.5 tonnes is hardly equitable. See also (2016):

<https://hansard.parliament.uk/Commons/2016-03-22/debates/16032241000001/GPSAndHeavyGoodsVehicles>

I've a copy of the Smeed report on my shelves, as well as 'Paying for Roads' (The Economics of Traffic Congestion-1967), and more recent volumes. Others will better explain the ultimate need for a comprehensive system road pricing system, and I leave that to them, but hope the above is useful.

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