

UK must create a cap-and-trade pollution market



PMQs on Wednesday opened with an attack on the Government's air pollution strategy from the backbenches. It was by no means the first time in recent years the strategy has been challenged. It wasn't even the first time that day. That morning, Government had – for the third time – lost a legal battle over its plan.

All this controversy is understandable. Estimates have suggested that every year in the UK, 29,000 people die prematurely due to particulate matter air pollution – a number over ten times larger than the quantity of deaths from road accidents.

So far, the Government's plans to reduce road transport emissions run to banning all new petrol and diesel cars by 2040 and handpicking winners with a range of taxpayer-funded subsidies. This falls short of a well-designed strategy. Even a 100 per cent shift to electric cars by 2040 will still require three new generations of internal combustion vehicles powered by hydrocarbons that may or may not be hybrid.

What we need before 2040 is a workable solution that is adaptive and cost-effective, one that drives innovation and focuses on tangible results. We need a strategy that is all-encompassing, and doesn't just focus on cars. To do this we must create a cap-and-trade pollution market that prices in the external costs of air pollution.

This system would incentivise the polluter to pay for solutions, encouraging a range of technologies and services that would have great global export potential.

Conventional engines have – and can – become cleaner and better. Mazda's latest engine breakthrough – homogeneous charge compression ignition, which makes petrol combustion as efficient as diesel – is a huge advance. And there are cleaner hydrocarbon fuels than petrol, like LPG (Autogas) or compressed natural gas. A cap-and-trade system would turbo-charge this kind of innovation.

Beyond cleaner engines, we can already see tremendous innovation dealing with the effects of pollution too, for example with outdoor, large-scale air purifiers. These include Envinity, and the CityTree which, with a surface area of just 3.5 square metres, apparently has the air cleaning power of 275 trees. (Frankly, I don't know why retailers on Oxford Street don't just club together and buy 10 of them now). These provide only a hint at what might happen if we stimulate innovation more broadly.

America shows what can be done with 15 years' successful experience using cap-and-trade for sulphur and nitrogen oxides (SO_x and NO_x) in the Clean Air Markets. They can point to results: bringing down annual pollution from 11m tons of SO₂ in 2002 to 2m in 2015, and from 5m tons of NO_x to less than 2m in 2014.

The key is to set the target and let the market deliver. So we are calling for the Government to take a serious look at establishing a pollution trading scheme that drives innovative solutions and justly shifts the burden of the adjustment away from the taxpayer to industry and road-users.

A huge caveat is required though. We just don't have much precision in measuring air pollution across the country, and it has a highly localised impact. So the first task must be to roll out a real-time air monitoring system that gives us much more regular and comprehensive coverage of the UK. This could be done by offering cash prizes in a reverse auction at the local level for technological solutions that provide the data on an open, free-to-view basis.

We do however have an understanding of what the sources of air pollution are. Despite the focus of the Government's strategy, they are certainly not all from road vehicles or even from inside the country. Only 27 per cent of the pollutants come from UK-based road transport.

And when you break down road transport, the outside impact of diesel becomes clear. The immediate harm of air pollution arises from the by-products of transport fuel combustion, namely SO_x, benzene and, most of all, NO_x and particulates. It is these last two that diesel produces so much of compared with petrol – by some measures, more than 20 times as much.

We need to reverse the fiscal advantage of diesel relative to these cleaner fuels. Petrol and diesel shouldn't be treated equally, with the same cut-off date of 2040. Even though diesel produces less CO₂ per mile, that advantage is squandered with the greater mileage driven by diesel vehicles and through the fact that most of the diesel is imported. This is vital given our members still anticipate buying conventional vehicles for some time – 66 per cent are somewhat or very likely to buy a petrol car but only 48 per cent are somewhat or very likely to buy a diesel vehicle.

With duty currently at 57.5p per litre for petrol and diesel, a major cut in the duty on petrol to 45p, a cut from 31.61p to 25p for LPG, and from 24.7p to 20p for natural gas would do much to encourage cleaner transport in short order. Going forward, new cars should have published particulate and NO₂ emissions per kilometre in the same way they do with CO₂ under EU regulations.

In 2040, I hope to be breathing in lungfuls of cleaner air without a second thought.



Notes:

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