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# The end of diesel & petrol cars? What about changing mobility?



Last week, the press was aflutter with the headline-grabbing announcement of the demise of not just diesel cars, but petrol by 2040 to help tackle the UK's air quality problems. This might be great for all sorts of reasons – if a little late – but will the lights stay on? And is this the right way of looking at the urgency of today's urban air quality crisis anyway? Before we get much further, it's worth being clear about what we mean by these different terms – data, evidence, and information. Confusion of terms here often leads to fuzziness when making arguments.

The Government's announcement continues the near-fetishism of car ownership, perhaps wrapped this time in the Industrial Strategy, but always in denial of developing a modern mobility system that is not based around the flawed 20th century idea of car ownership.

But let's consider this first in terms of the gritty pragmatism of whether it's even possible to electrify all car travel anyway. Even with the grid getting smarter and generation becoming localised, there are serious misgivings about adding a whole new sector (car travel) to an already strained electricity and distribution network. While the National Grid in its *Future Energy Scenarios 2017*<sup>1</sup> suggests that the projected growth in EVs is (just?) possible in terms of impact on generation and distribution, this was before the announcements of no petrol or diesel cars after 2040. Serious misgivings have been voiced elsewhere – such as Green Alliance's 'People Power – How consumer choice is changing the UK energy system'<sup>2</sup> on peak loading and the impacts of EV charging clustering leading to "brownouts", all of which points to the need for some pretty serious upgrading of the grid to accommodate the proposed numbers of EVs.

Smart grids, targeted upgrading and the use of storage (including in EV batteries) to manage peaks are all possible and compelling, but do we need

to take this approach? If access to clean electricity is likely to be limited, then the shift to EVs should be in city centres in shared contexts in order to tackle immediate air quality problems.

If we step back and consider what we are trying to achieve, then my question is whether we are taking seriously the potential of new mobility systems and new behaviours instead of being blinded by drivetrain technology, tailpipe emissions and car ownership.

Let's make an assumption that energy use can be taken as a proxy for overall emissions; data from the [www.MOTproject.net](http://www.MOTproject.net)<sup>3</sup> shows that total emissions are more closely related to how far people travel per year than how clean their cars are. In short, to tackle emissions, we need to get to grips with demand.

Tackling demand is too often seen as being in the "too hot to handle" box. Why? It's increasingly clear that there are fairly fundamental shifts in travel behaviour. This is often associated with the replacement of the right-of-passage of getting a car with the desire to keep connected.

However, the more interesting question relates to where the intractable direction of travel behaviour trends point. This is shown by the pesky black line in Phil Goodwin's graph of

DfT traffic forecasts and actual car traffic growth, or by the consistent reduction in trips, distance and time travelled from the National Travel Survey (*see charts below*).

So let's return to the question of how we might tackle poor air quality. These charts suggest that there is an imperative to tackle distance travelled and that the trend is for people travelling less. How do we at least maintain and at most maximise these trends?

I'd suggest that the answer lies in a focus on what future mobility lifestyles might look like. So take a household with a couple of children, or a double-income urban couple, or a suburban retiree – isn't the question that we should be asking about what their low emission mobility lifestyles might look like? Zero emission vehicles will be a component, but wouldn't these be best accessed through shared schemes to maximise (evidenced) mileage reduction? These would also mainly be used only when appropriate because the Mobility as a Service (MaaS) accounts would be set up to ensure – as one objective – that emissions are minimised.

Bringing this back to the reality of today, shouldn't there be a serious focus on influencing travel behaviour through the design of future mobility (positively, constructively, in ways that

nurture innovation/deliver on the industrial strategy etc) rather than being hung-up on tailpipe emissions?

There are two clear and deliverable interventions that could help to tackle air quality that could be delivered with the urgency required.

Firstly, the conditions need creating for comprehensive mobility accounts – especially for cities. This is probably best done through devolved powers, but need not be restricted by this. This would open broad opportunities for targeted mobility accounts that would be powerful instruments for locking-in low emission lifestyles.

Secondly, any scrappage scheme for diesels should explicitly include mobility packages at least as an option instead of cash. If we are confident that urban mobility is fit for purpose, then shifting from owned diesels to mobility packages cuts out the intervening step on non-diesel car ownership – and hence mainlines to reduced mileage and hence effective emissions reduction. Most cities have car share schemes, so this does not block access to car use.

I would also question the drive for lacing up motorways with EV charge points. A modern mobility system – looked at from an emissions perspective – would involve long-distance travel being done by rail or the need being reduced through ICT.

So where does this get us? We need to tackle air quality problems urgently. Focusing on tailpipe emissions is important, but designing a modern low-emission mobility system that reduces demand should move closer to centre stage. Visions of future mobility are still restricted to the visuals relating to the single-hit of autonomous vehicles or HS2. Why doesn't someone commission visions for future mobility lifestyles? I'd like to buy in to my future lifestyle – as would many other completely different types of people. We'd probably then be able to maximise the trends in the right direction and get serious about locking out air pollution. **LT**

<sup>1</sup> <http://fes.nationalgrid.com/fes-document/>

<sup>2</sup> [http://www.green-alliance.org.uk/people\\_power\\_consumer\\_choice.php](http://www.green-alliance.org.uk/people_power_consumer_choice.php)

<sup>3</sup> MOT project (EP/K000438/1), [www.MOT-project.net](http://www.MOT-project.net), EPSRC/RCUK Energy Programme, University of Leeds, TRL, UWE, University of Bristol, University of Aberdeen and UCL

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