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Transport's answers to the cost of congestion

We all know that traffic congestion pushes up fuel consumption. We see that every day on our trip computers. But how many of us knows just how much? You might be shocked to find out that, on average, congestion is responsible for a full 100% increase in fuel burnt per km. So that's double the fuel usage, twice the cost to the transport industry and double our greenhouse gas emissions.

That is key among findings of simulations run by the Cambridge Vehicle Dynamics Consortium (CVDC), under the guidance of Professor David Cebon, using its fuel consumption modeller. And, as Cebon points out, not only does it mean that Britain's congested roads are causing their users to rip into dwindling fossil fuels at double the rate that they might, but it also makes all the work currently being done through improvements in truck, van and bus technology look relatively trivial.

Operators, quite rightly, get excited about saving sub-5% of fuel bills, by buying into fuel-saving interventions, dual-fuel conversions, re-optimised engines and transmissions, trucks and trailers with enhanced aerodynamics, reduced rolling resistance tyres, telematics-assisted driver training etc. How much more excited might we all get if, at a stroke, we could chop fuel use in half?

Except, of course, that this is all hypothetical. Or is it? Yes, in this country's straitened circumstances, the coalition government's Comprehensive Spending Review has determined that such new road building as remains on the table isn't going to begin to cut into congestion woes. So there's no help there. However, what about the curfews on night-time transport? Society wants quiet nights, but a result of that choice is the familiar sight of our road infrastructure grinding to a halt every weekday morning – causing that same society inconvenience but also unnecessarily damaging the environment through massively wasteful fuel burning.

At first sight, any relaxation of night movement restrictions would have to be down to political decisions, not influenced by technology. But engineering can play more of a part than perhaps many realise. Quieter engines, low noise suspensions and couplings, noise suppressed tail lifts and the rest, can all play their part in making this bitter pill more palatable for the electorate.

Just as important, proving the viability of extending semi-trailer lengths by 2.05m – including in urban environments – would reduce the impact by cutting the total number of combination movements. Not only that; it might also reverse some of the current trend towards increasing numbers of LCVs and rigids for urban distribution. CVDC's modelling also reveals that two rigids consume 40% more fuel than a standard tractor-trailer combination. Longer semi-trailers would reduce that figure by a further 20%. And adding the kinds of autonomous steering advances that make even longer Scandinavian-style combinations safely manoeuvrable on the UK's roads (also currently being developed by CVDC), would make further serious inroads into slashing fuel usage.

Given the fundamental requirement to cut CO₂ emissions and costs – and to improve the country's competitiveness – now is surely the time for a change of heart from the Department for Transport on longer semi-trailers, and more work on the technologies and trials that promise so much.

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