

Kicking the car(bon) habit better for air pollution than technology revolution

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Credit: Peter Griffin/public domain

Changing our lifestyles and the way we travel could have as big—if not more of an impact on CO₂ transport emissions, as electric vehicles and the transport technology revolution, according to new Oxford University research.

Published in *Energy Efficiency*, the study uses Scotland as an example and suggests that, radical lifestyle change can show quicker results than the gradual transition to Electric Vehicles and phasing out of conventional petrol and diesel vehicles.

Scotland has committed itself to reduce carbon emissions by 80% of 1990 levels by 2050. For [transport](#), this includes international aviation and shipping which makes the targets more difficult to achieve.

Led by Dr. Christian Brand, Senior Research Fellow and Associate Professor at the Environmental Change Institute and Transport Studies Unit, in collaboration with colleagues Jillian Anable from the University of Leeds and Craig Morton at the University of Loughborough, the paper explores how plausible changes in the way we travel might reduce energy use and emissions in Scotland over the next three decades, in light of the 5-year carbon budgets up to 2050 and beyond.

"Our study explores how Scotland might achieve these targets in the transport sector. We find that both lifestyle change—such as making fewer and shorter journeys, sharing existing journeys, or shifting to walking, cycling and clean public transport—and a comprehensive strategy around zero emission technologies are needed, but that they have limits to meeting our CO₂ targets, in particular beyond 2030" explains lead author, Oxford Scientist Dr. Christian Brand.

The findings suggest that, only through prioritisation of both demand- (lifestyle, social and cultural change) and supply-side (new technology) transport solutions, might we have a chance of curbing carbon emissions in line with the United Nation's 1.5C Climate Change Agreement. The co-benefits of such change to human health and the NHS are enormous.

"The newfound urgency of 'cleaning up our act' since the Paris Climate Change Agreement in 2016 and Dieselgate scandal suggests that we

cannot just wait for the technology fix," says Dr. Christian Brand.

Traditionally governments have prioritised technology fixes and supply-side transport solutions to the carbon emission problem.

However, the authors suggest that a long-term [carbon](#) and air quality [emission](#)-cutting strategy should consider both demand- and supply-side transport solutions, for the best chance of success.

Change will need to be led by consumers, policy makers and industry alike, they say.

"We need to look at how we can inspire and support consumer lifestyle changes—in travel patterns, mode and vehicle choice, vehicle occupancy—to be in with a chance of reducing our [carbon emissions](#) in line with legislated targets and travelling on the 'Road to Zero' faster, further and more flexible."

More information: Christian Brand et al. Lifestyle, efficiency and limits: modelling transport energy and emissions using a socio-technical approach, *Energy Efficiency* (2018). [DOI: 10.1007/s12053-018-9678-9](https://doi.org/10.1007/s12053-018-9678-9)

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