

COMMISSION ON TRAVEL DEMAND

1. What is the Commission?

The Commission on Travel Demand is an expert group established as part of a Research Councils UK End Use Energy Demand initiative. It will explore the changing demand for transport, the reasons for these changes and debate new approaches to planning for and shaping demand futures which support social and economic progress whilst being consistent with our environmental obligations.

2. Why was it established?

There are three main rationales for the establishment of the Commission on Travel Demand:

1. Carbon obligations which will increasingly require demand reduction
2. Large scale uncertainty about what demand futures could be
3. Institutional inertia in changing the way we plan

2.1 Environmental Obligations

The UK Committee on Climate Change in its 2016 annual report to Parliament noted that whilst the UK as a whole has achieved CO₂ emissions reductions of 38% on 1990 levels this has almost entirely been achieved through the power sector. If it is to remain on track for the fourth and fifth carbon budget periods to 2032 it requires major action in other sectors. As the figures below show, transport has shown comparatively little overall reduction and there is a very significant gap between what the Committee on Climate Change believes is a cost-effective reduction pathway and the set of transport policies we have in place today.

The European Environment Agency in its December 2016 assessment of transport and the environment concluded that, despite recent technological progress in vehicle technology, emissions would be 15% above 1990 levels by 2030 rather than 60% below (EEA, 2016).

There is, therefore, an imperative to find a far more resource efficient way of life. Whilst new technologies such as electrification of vehicles and increased biofuels offer reductions in emissions, the scale and pace of the transition from where we are today to an entirely technology-led solution seems unrealistic. In transport terms therefore this could mean travelling less far or less often, more by non-motorised transport and by more shared forms of mobility. To do this though, whilst maintaining social and economic progress, requires thinking well beyond just the transport system but to how participation in society is changing. This will help to understand where transport interventions could shape those futures in less rather than more carbon intensive ways.

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Figure 5.1. Domestic transport CO₂ emissions to 2015

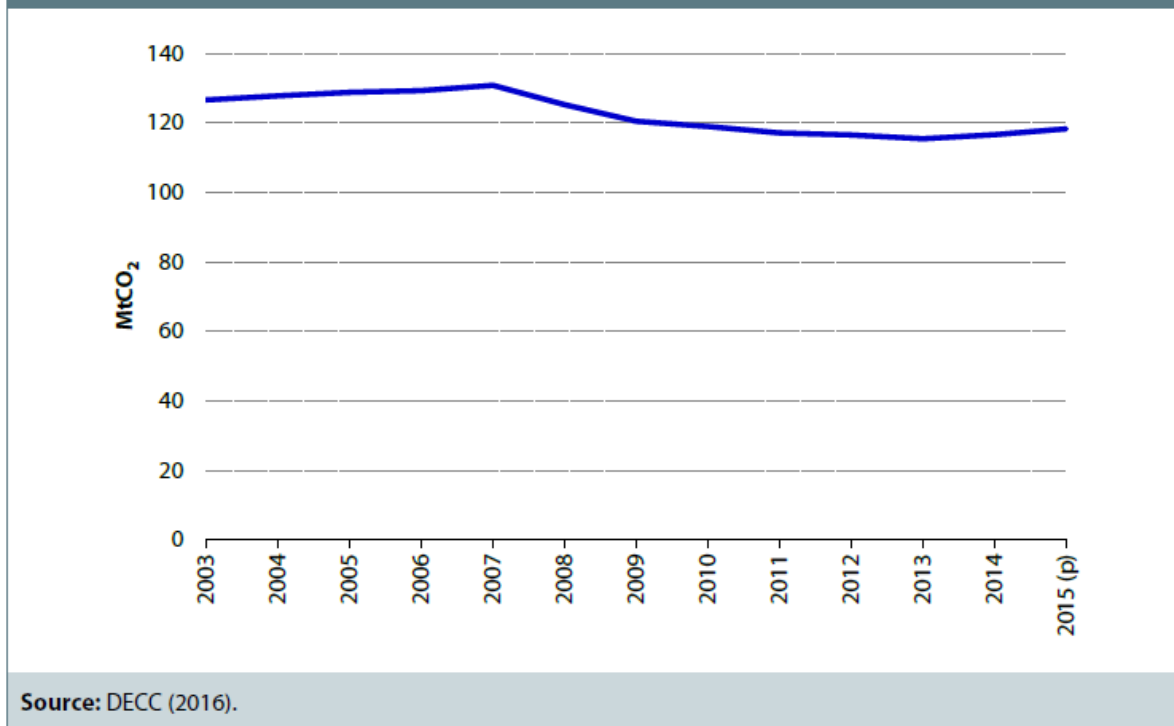


Figure 1: Slow Progress on carbon reduction from transport (Source CCC, 2016, p137)

Figure 5.12. Assessment of emissions savings from current and planned policy against the cost-effective path in transport

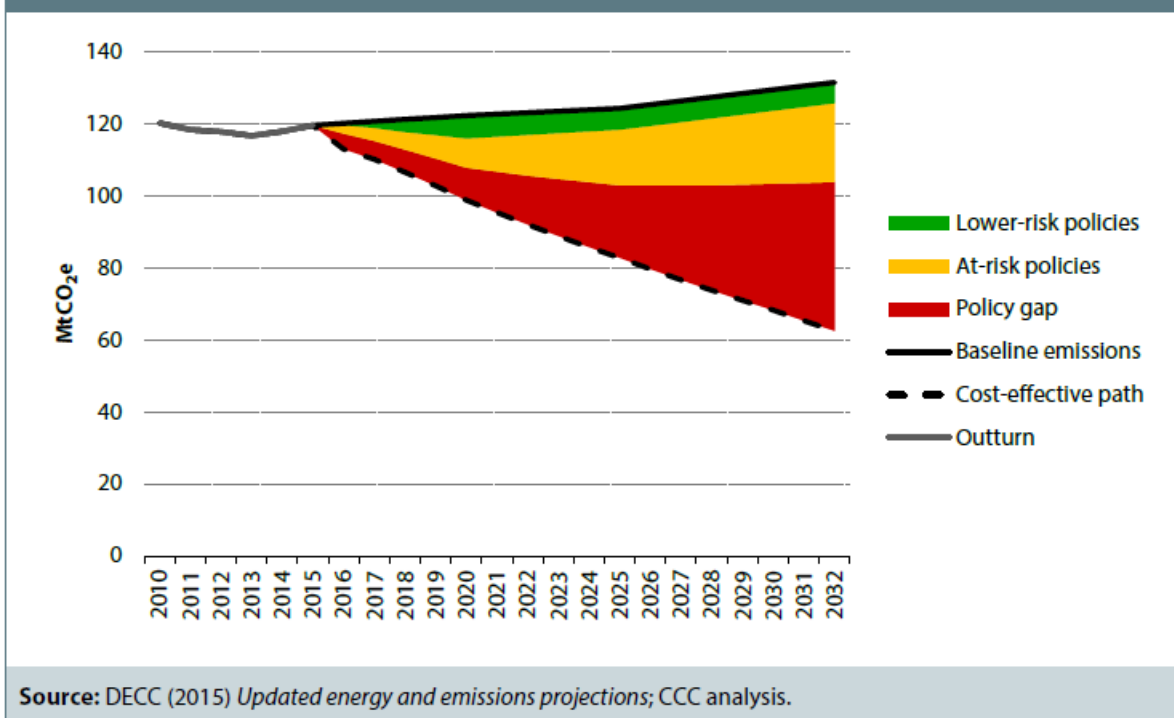


Figure 2: Significant policy gap in the transport sector for carbon emission reduction (Source: CCC, 2016, p168)

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2.2 Uncertainty about future demand

At the same time as the imperative for demand reduction becomes clearer, the degree of uncertainty about what demand futures seem plausible has grown.

The practice of transport planning has grown up around catering for an increase in the demand for travel, most notably car but also more recently air and maritime. Following in the tradition of Buchanan (1964) transport planners have been faced with a situation where the growth in traffic far outstripped their ability to provide infrastructure to cater for the additional demand. It took however until the 1990s for the fallacy of promising to catering for demand to be recognised by policy makers with a shift towards 'managing demand' (Docherty and Shaw, 2004). Whilst automobility took hold, the demand for travel by car boomed so there was little need for a rethink of the technical approaches underpinning planning.

However, after decades of steady (if difficult to accurately forecast – see figure 1) increases in auto use, patterns reversed in the 2000s in many industrialized countries (Millard-Ball and Schipper, 2010; Goodwin and van Dender, 2013). These trends have been attributed to a range of factors from changing socio-economic conditions, norms over parenting, new technology and new tastes or preferences and changing policy (Le Vine and Jones, 2012; Delbosc and Currie, 2014; Polzin et al., 2014 and McDonald, 2015) although the extent to which this represents any form of longer term shift remains contested (Bastian and Börjesson, 2015).

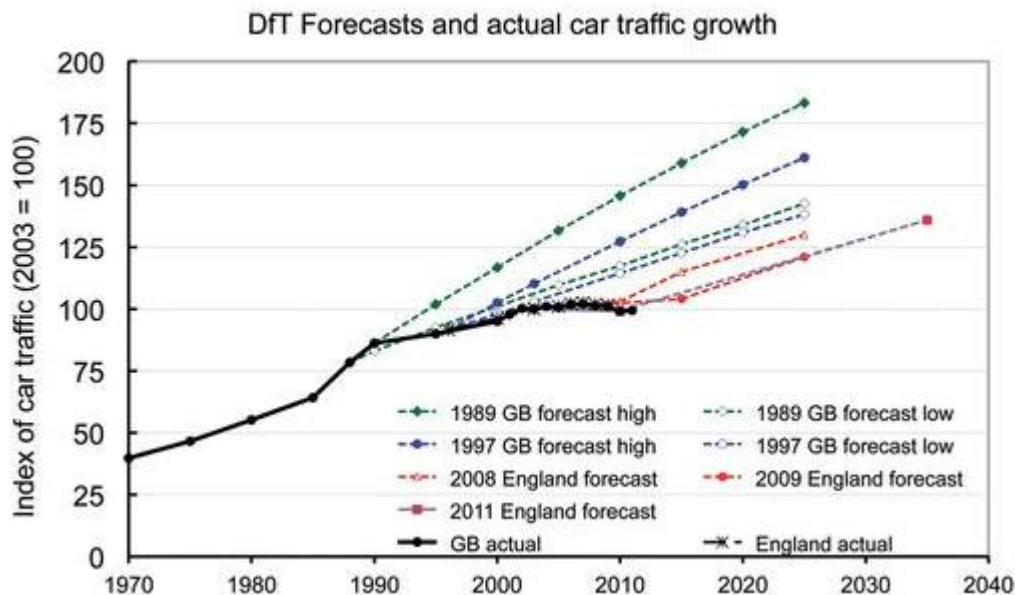


Figure 3: Road Traffic Forecast accuracy in the UK
(Source: Goodwin, Local Transport Today, 13 April 2012)

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Looking ahead, governments and private companies are seeking to stimulate new mobility solutions, building on the rapid rise in information and communications technology which is pervading society more generally. Future policy anticipates increasingly (and sometimes fully) autonomous vehicles and a move from ownership to usership as different services are brought together through user sensitive 'Mobility as a Service' providers. Whilst touted in part as solutions to today's problems more fundamentally such systems would create new and different opportunities for activities and therefore potentially radically change demand (Wadud et al., 2016).

The Commission seeks to explore and understand the key demand uncertainties both from outside and within transport to see whether new approaches to developing demand futures are necessary and how they could be brought about.

2.3 Institutional inertia and changing the way we plan

Recognising that there is greater uncertainty has not, thus far, led to a change in how we plan for transport. Whilst alternative methods such as dynamic and adaptive policy making (Walker et al., 2010; Marchau et al., 2010) and scenario planning (Schofer and Stopher, 1979; Lyons and Davidson, 2016; Banister and Hickman, 2013) exist they are not part of mainstream transportation planning practice. Even where uncertainty is accepted the boundaries of such uncertainty are delimited quite narrowly through, for example, "different assumptions about GDP growth" (Walker et al., 2010; p918).

There is however, a growing dichotomy between government strategy and visions which seem to accept the potential for a radically different supply future and the decision-making machinery which remains rooted in the paradigm developed in the 1960s. We appraise transport schemes over time periods of up to 60 years so require demand estimates for 2076! Billions of pounds of investment are committed and planned for spending on the basis of the current understanding of demand futures and so there are very substantial institutional risks in changing from the current processes.

The Commission will address what the findings on future demand mean for transport planning and the processes and governance of transport planning. It will consider questions such as how should transport be represented in broader city and place making strategies? How can we communicate uncertainty in demand futures and develop planning solutions that fit? How do we deal with an increase in new providers and technologies that could radically change how people try to get around?

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3. Who are the Commissioners?

The Commission is made up of a mixture of academics and practitioners with a range of expertise in demand futures and decision-making from both within and outside the transport sector.

Full biographical details of the Commissioners can be found at <http://www.demand.ac.uk/the-commissioners/>

4. How will it work?

The Commission is coordinated by Professor Greg Marsden at ITS, University of Leeds. The Commission's work is informed by research support at ITS and through open calls for evidence and deliberation with experts and through workshops, presentations and debates.

The Commission will make public all of the evidence it receives, the briefing notes it produces and the outcomes of the debate and discussion.

The work of the Commission can be followed on:

<http://www.demand.ac.uk/commission-on-travel-demand/>

via Twitter @drgregmarsden and @DEMAND_Centre #comotd

5. Funding

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