How the latest DfT forecasts show that any new runways would be incompatible with the Climate Act

11th February 2013

Background

The previous government set a cap that aviation emissions should not, in gross terms (aside from carbon trading) exceed their 2005 level (37.5 Mt CO2) in 2050. The Committee on Climate Change, the Government's independent advisory body, has never endorsed the idea of a firm cap but has given clear advice to Government not only to include aviation in carbon budgets at the level of the EU ETS cap (the 'net' level), but also that "in the context of infrastructure investment (e.g. airport capacity development and possible expansion)" Government should plan based on the assumption that gross emissions from international aviation in 2050 will not exceed their 2005 level.

In December 2012, the Government decided against including aviation in carbon budgets, citing complications relating to the one-year suspension of the EU ETS for international aviation. However, it made clear that aviation must be included in the 2050 UK climate target, and that "emissions from international aviation and shipping should be treated the same as emissions from all other sectors".

AEF has always argued that a target of 2005 emissions levels by 2050 is unduly generous to aviation:

(i) It allows aviation emissions to increase by 120% of 1990 levels by 2050, while other sectors, including many that are less discretionary than aviation such as home heating, are required to make more than 80% cuts

(ii) It fails to take account of aviation's non-CO2 effects, though the latest science suggest these are such that aviation emissions have around twice the impact of their CO2 alone.

(iii) It assumes a great deal from other sectors, including decarbonisation of road transport by 2030, significant wind and nuclear energy (rather than reliance on shale gas), and carbon capture and storage technology for power plants; a review of progress in these other sectors may well indicate that there is not the slack available for aviation growth that was originally imagined.

Even this generous emissions cap, however, should rule out any consideration of an increase in aviation capacity from today's levels. The clearest and most recent evidence leading to this conclusion is in the latest official forecasts of passenger demand between now and 2050.

Target-compatible growth and the latest forecasts

The Government periodically issues two sets of demand forecasts, one unconstrained (allowing for new capacity to be built to meet demand), and one constrained by current infrastructure (as well as by CO2 pricing through EU ETS or a comparable global scheme and by Air Passenger Duty). The forecasts published in 2013 were the lowest since 2000 and represent the 4th downgrade to the figures during that period.

But even with figures as low as they are now, the central forecast for 2050 is for passenger numbers of 445 million per annum: a 93% increase on 2005 levels, generating 47 Mt CO2. By contrast, CCC's figure for possible aviation growth given likely improvements in aviation and air traffic management technology, together with 10% of aviation fuel coming from biofuels, was for a 60% growth in passenger numbers between 2005 and 2050.

Conclusion

Even assuming that airport capacity is constrained to current levels, that APD continues, and that CO2 costs are incorporated at the levels set out by DECC for traded sectors, forecast demand growth remains significantly higher than the level compatible with climate targets, suggesting the need for additional measures to constrain aviation emissions. New runways should be out of the question unless significant capacity is withdrawn elsewhere.