

Aviation 2040 – Future Scenarios for Aviation and Airport Infrastructure consultation paper



Response from the Aviation Environment Federation

6th January 2010

Following our recent meeting with ICE to discuss its work on future scenarios for aviation, we are pleased to make this short, supplementary response on those aspects of the consultation we consider to be within our area of expertise.

The Aviation Environment Federation (AEF) is the principal UK non-profit making environmental association concerned with the environmental effects of aviation and supported by individuals and community groups affected by the UK's airfields and airports. We promote a sustainable future for aviation which fully recognises, and takes account of, all its environmental and amenity effects. These range from aircraft noise issues associated with small airstrips or helipads to the contribution of airline emissions to global climate change.

AEF welcomes ICE's call for a forward-thinking debate about the future of UK aviation in the context of the Committee on Climate Change's recent analysis about how to accommodate aviation in a low-carbon economy.¹ We consider that the labelling of scenarios in which aviation is constrained is, however, oddly negative and alarmist. A future in which historic increases in aviation demand are stemmed can be associated with ideals of slow travel, localised networks, a strong UK tourism sector, and good quality, in-season food, and modern, efficient aircraft (see question 3), trains and coaches. We would suggest that these opportunities be fully explored in any future scenario work.

We were also surprised by the figures given in the for aviation's share of UK emissions. It is stated for all scenarios that currently aviation accounts for 3% of the total. DECC figures for 2007², however (the latest year for which data is available) indicate that domestic and international aviation together accounted for 6.5% of total CO2 emissions. CCC's analysis³ indicates that in 2005 aviation CO2 accounted for more than 5% of total UK greenhouse gases, or 10% if aviation's non-CO2 impacts are estimated.

Even in the ICE laissez-faire scenario aviation's share of UK emissions rises to only 7% by 2040, while passenger numbers increase by 90%. CCC's figures show that if the government's (relatively ambitious) target of stabilising aviation emissions at 2005 levels is achieved by 2050 – just ten year's later – with an increase in passenger numbers of 60%, aviation's share would by that time be 23% of UK emissions, or 47% if aviation's non-CO2 impacts are counted. The scenarios therefore seem to

¹ See for example http://www.envirotech-online.com/news/air-monitoring/6/breaking_news/air_quality_news_airport_emissions_savings_dwarfed_by_flights/7104/

² http://www.decc.gov.uk/en/content/cms/statistics/climate_change/data/data.aspx

³ <http://hmccc.s3.amazonaws.com/Aviation%20Report%2009/21667B%20CCC%20Chapter%206.pdf>

drastically underplay the likely problem of future aviation emissions while at the same time portraying constraints on the sector's growth, either from changes in consumer demand or from government policies, in an unnecessarily negative light.

3. Aviation's role in the economy

Undoubtedly, aviation currently plays a part in UK economic growth, even if the sector itself makes a loss⁴, and the industry has sponsored a number of studies that attempt to quantify this contribution. There are typically two key problems with such analyses, however. First, there are many ways in which to calculate economic benefits (the inclusion of 'catalytic' and 'induced' employment is controversial for example) and environmental costs.

For commentary on the Emissions Cost Assessment for aviation, for example, see http://www.aef.org.uk/uploads/AEF_response_to_ECA_October_2007.pdf for AEF's consultation response; a paper by Brendon Sewill of the AirportWatch Economics Group can be downloaded from the second item at <http://www.aef.org.uk/?p=270>.

Secondly, it does not necessarily follow from a statement about aviation's current contribution to the economy that aviation growth could not be substituted for growth in other economic sectors to achieve a similar outcome in terms of GDP increases. Recent work from the Tyndall Centre on aviation in the north west identified a series of shortcomings in the existing literature on the economic contribution of aviation including "overestimation of the value of the aviation sector" and the fact that the "presence of simple assumptions and lack of consideration of other counterfactual alternative responses... tends to maximise the 'cost' side of limits on aviation growth". It concludes that when defined in terms of airlines and airports, "the aviation sector makes a relatively small contribution to the regional economy of the NW compared with other sectors." The study also highlights the fact that curbs on emissions from the aviation sector could generate economic opportunities, for example stimulating the take-up of new aerospace technologies.

Recent work by academics in the Omega partnership recently reached a similar conclusion; see www.omega.mmu.ac.uk/Downloads/Events/Economic%20Benefits%20of%20Aviation%20-%20Technical%20Report.pdf

AEF's own analysis of the way in which economic benefits of aviation are exaggerated in the area of job creation, including a consideration of the current tourism deficit, the effects of increasing mechanisation at airports and the rise of low-cost carriers, and the relevance of aviation's tax-free status is available at www.aef.org.uk/uploads/Airport_jobs_false_hopes_cruel_hoax.pdf.

5. Impact on the aviation sector of the UK's system of carbon budgets

Given the lack of progress in tackling aviation emissions at an international level, AEF very much supports both the UK's commitment to take the UK's share of

⁴ <http://www.iata.org/pressroom/pr/2009-12-15-01.htm>

international aviation emissions into account in calculating the carbon budget for 2050 and the fact that the Government has set a specific, gross target for aviation emissions. We were disappointed that Parliament took the decision not to formally include aviation emissions in the first set of carbon budgets, however, and would urge that this omission be rectified at the earliest opportunity. We also have concerns about whether the target of stabilising aviation emissions at 2005 levels has been given sufficient scrutiny.

One of our concerns relates to the social justice implications of giving aviation a more generous target than other UK sectors. While aviation remains an activity undertaken primarily by people in higher income groups, industries such as the power sector are used by everyone in the UK. Yet to allow for aviation emissions simply to stabilise at 2005 levels (an increase of 120% on their 1990 level) while achieving an overall cut in UK emissions of 80%, sectors such as power will need to make significant *additional* investments (with the costs likely to be passed on to consumers) such that they can achieve cuts of 90%.

We believe that a more detailed consideration about the role of aviation in a low-carbon future for the UK, of the kind that ICE's scenario work is designed to stimulate, should inform a review of the government's aviation target.

We were, however, impressed by the CCC's recent work on *how* this target could be achieved. See <http://www.aef.org.uk/?p=979> for our commentary.

For our view on the decision not to include aviation formally in the first set of carbon budgets, see <http://www.aef.org.uk/?p=287>.

9. Action needed to address other environmental impacts of airport infrastructure

AEF campaigns for the full range of environmental impacts from aviation to be appropriately regulated. While individual aircraft are becoming quieter, people's perception of noise has been increasing both in the UK and across Europe and noise levels at night routinely exceed the levels recommended for the protection of human health by the World Health Organisation and WHO-Europe. AEF believes that in order to appropriately manage noise from UK airports a suite of measures is required including the following:

- Either the UK Government or the EC should set limit values for acceptable maximum noise levels at UK airports.
- Attention should be given to developing alternative metrics for aircraft noise that are able to correlate noise levels and annoyance more accurately than currently-used averaging measures such as Leq and Lden.
- The noise standards agreed by the International Civil Aviation Organisation should be tightened such that they drive (rather than simply following) the development of new technologies
- Controls should be introduced for the management of noise from light aircraft, which are often subject to no noise constraints at all.

For our commentary on the government's study on Attitudes to Noise from Aviation Sources in England, see <http://www.aef.org.uk/?p=209>.

For a recent academic paper on increases in annoyance from aircraft noise in Europe, see http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V7X-4X24C2D-1&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&_docanchor=&_view=c&_searchStrId=1156242521&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=7eddce650c017b427f0e9cfe76fe7c02

For links (1) to an EC report on increases in the number of European citizens affected by noise disturbance from aircraft and (2) AEF's views on how European legislation should be tightened in order to meet the commitment to reduce transport noise, see <http://www.aef.org.uk/?p=276>.

For WHO-Europe's recent work on night flights, which recommends a maximum noise level of 40Db see <http://www.aef.org.uk/?p=956> and for an indication of the number of airports generating greater than 50 Db, see http://services.defra.gov.uk/wps/portal/noise!/ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3hnd0cPE3MfAwMD42BTA093f1Nvk2ATAwNnA6B8JG55A2MCusNB9uHXD5I3wAEcDfT9PPJzU_ULciMMskwcFOHW4PMe/dl3/d3/L2dBISEvZ0FBIS9nQSEh/, selecting 'air' and 'Lnight'.

AEF is also concerned about the extent to which airports contribute to air pollution and we have argued that Heathrow expansion should not be approved at a time when the Heathrow area remains in breach of European law on levels of nitrogen dioxide.

For a detailed analysis of why we considered the government's confidence in the future ability of the Heathrow area to meet air pollution laws even with an expanded Heathrow, please see <http://www.aef.org.uk/?p=232>.

Another impact we consider not to be regulated appropriately is public safety around airports. Government policy does not require planning authorities who are considering applications for airport expansions, or for changes in airport activity, to take account of impacts on public safety in the area until after approval has been granted. Yet local communities may suffer both increased risk of mortality and restrictions on the kinds of properties that may be constructed within an airport's 'public safety zone'. AEF is calling a number of changes to third party risk policy around airports.

For a brief explanation of the problem, see page 2 of http://www.aef.org.uk/uploads/Flying_Green_Spring_09_A4.pdf

AEF would welcome the opportunity to take part in any future work conducted by ICE on considering how a sustainable path for aviation could be mapped out, taking account of climate, noise, air pollution, safety and other environmental impacts. Alternatively we will be happy to provide further information on any of the topics covered by this consultation response.