HEATHROW AIRPORT
CONSULTATIVE COMMITTEE

Agenda Item: 8	Reference: HACC. 582
Date : 28 Sep 11	
DfT UK Aviation Forecasts	

The DfT has published revised UK aviation forecasts. These cover the numbers of passengers moving through UK airport terminals each year and the levels of CO2 emissions attributable to aviation in the UK each year. The document can be found in full at http://www.dft.gov.uk/publications/uk-aviation-forecasts-2011/ .

Introduction

The updated forecasts presented in the report represent the DfT's assessment of how activity at UK airports and the associated CO2 emissions are likely to change into the future, given existing policy commitments. Their primary purpose is to inform long term strategic aviation policy.

Developments since 2009 have contributed to changes in the forecasts. They are explained in more detail in the report, but they include:

- The Government's policy not to support new runways at Heathrow, Gatwick or Stansted;
- the decision to include aviation in the EU Emissions Trading System (ETS) from 2012;
- the Government's policy to support the development of a high speed rail route running from London to Birmingham, Manchester and Leeds;
- changes to Air Passenger Duty rates;
- changes to projections of economic growth and oil prices; and
- developments to the forecasting methodology resulting from a process of continual development

The forecasts are presented as ranges to reflect the inherent uncertainty involved in forecasting to 2050. Low and high forecasts have been defined to represent either end of a range of reasonably likely outcomes, and a central forecast has been defined to lie broadly in the middle of the range. The results of a series of sensitivity tests, in which the key inputs to the forecasts are varied, are also reported.

All aspects of the DfT's forecasting methods used to produce the updated forecasts have been subject to independent peer review. A series of peer review reports, assessing different aspects of the updated models, and a covering letter from the main peer reviewer summarising the conclusions of the review, are being published alongside the report on the DfT website.

Air Passenger Numbers

The number of air passengers using UK airports is forecast to recover from the recent downturn, rising from 211 million passengers per annum (mppa) in 2010 to 335mppa in 2030 (within the range 300mppa to 380 mppa), and to 470mppa in 2050 (within the range 380mppa to 515 mppa). These forecasts imply average annual growth in passenger numbers to 2050 of 2.0% (within the range 1.5-2.3%) significantly lower than the 3.7% average seen over the past twenty years.

If there were no airport capacity constraints, UK air travel demand would rise from 211 million passengers per annum (mppa) in 2010 to 345mppa in 2030 under the central forecast, within the range 305mppa to 400mppa. By 2050 the central forecast is for 520mppa within the range of 400mppa to 700mppa.

If there are no new runways in future, by 2050 the number of passengers is forecast to be 50mppa (within the range 20mppa to 185mppa) lower than it would have been if there were no airport capacity constraints. Capacity constraints have a greater effect at the airport level. For example, the central forecasts suggest that without new runways the three largest London airports will be at capacity by 2030, and all growth beyond 2040 will occur at regional airports.

CO2 Emissions

The forecasts of UK aviation CO2 emissions cover emissions produced by all flights departing UK airports to 2050, adjusted to match the DECC published estimate of outturn aviation CO2 emissions in the base year. The forecasts therefore include CO2 emitted from all domestic and international flights departing UK airports, irrespective of the nationality of passengers or carriers and include all freighter traffic.

The approach taken to producing UK aviation CO2 forecasts remains broadly the same as that reported in *UK Air Passenger Demand and CO2 Forecasts 2009*. However, like the air passenger and ATM forecasts, the updated forecasts reflect an extensive programme of model updates and enhancements.

The upper and lower bounds of the range are defined by combining the range of ATM forecasts with ranges of assumptions about fuel efficiency improvements and penetration of alternative fuels in the fleet of aircraft using UK airports.

Following the drop in emissions associated with the impact of the recent financial crisis and global economic slowdown on aviation activity, UK aviation CO2 emissions are forecast to grow steadily without further government intervention over the next twenty years. They grow from 34 MtCO2 in 2010 to 48 MtCO2 in 2030 in the central forecasts. Post 2030, the effects of market maturity and airport capacity constraints cause the growth of activity at UK airports to slow. Improvements in aircraft fuel efficiency are expected to continue beyond 2030 and, in the central and high forecasts, biofuels are expected to penetrate the aircraft fleet as kerosene and EU ETS allowance prices increase. By 2040, the balance of these two effects causes emissions to stabilize, before starting to fall by 2050.

Emissions in the aviation sector will be capped. Airlines operating flights into, within and out of the EU will be required to surrender allowances and credits to cover their annual CO2 emissions. Therefore, although CO2 emissions from aviation are forecast to continue to grow in the UK and other EU countries, this growth will not result in any overall increase in the total CO2 emissions from sectors included in the ETS, because the aviation sector will have to pay for reductions to be made elsewhere.

The overall result will be that the net contribution of the aviation sector to CO2 emissions will not exceed the level of the cap.

PHC/582