

STEPHEN NELSON, CEO, BAA: Royal Aeronautical Society 14 February 2007

WHAT DOES THE STERN REPORT MEAN FOR UK AVIATION?

It's a privilege to speak at the Royal Aeronautical Society. It's impressive to think that this society was founded in 1866 - 36 years before the first powered flight by the Wright Brothers. It makes you think about the historical context of air travel. The first passenger railway ran from Stockton to Darlington in 1825. Motor vehicles were running in Germany by 1890. But it was 1919 before the first passenger flight – almost a century behind the railways. And it was not until the 1950s that passengers were flying in commercial jet aircraft.

In 1950, there were just 2 million UK air passenger journeys. This year the number will be about 230 million. And this growing demand is underpinned by the advantages that aviation brings. Mile for mile it is the fastest and safest form of travel. It has also brought major economic and social benefits to millions. Now more and more ordinary citizens of countries like India and China are discovering the wonder of flight. Long term demand forecasts indicate growth of international air travel at around 5% pa to the middle of the century. It would appear that the 'Jet Age', at 50 years old, is entering mid life.

And yet, as we begin the third millennium, aviation (in this country at least) is under challenge. Some have even begun to ask the question: have planes had their day? Is the Jet Age already over? What are the problems they can point to? Much of our infrastructure is struggling to meet growth. My own company faces the challenge to design, finance and build two new runways from blue print stage, to completion. All this has to pass through the demanding British planning system. Meanwhile, the constantly mutating threat of terrorism is ever present. Oil prices have been volatile, more than doubling the cost of aircraft fuel in recent years. And the structure of our industry is under review by the competition authorities.

That is the background for the most important challenge of all, namely global climate change. Climate Change is high on the political agenda, and rightly so. 70% of respondents in a recent YouGov poll were concerned about the impact of our travel on climate change, but judging by the media, you might be forgiven for believing that air travel was the sole source. When environmentalists berate the Prince of Wales for flying to Boston to receive a prestigious environmental award (from Al Gore of all people), the irony should not be lost on us.

And against that backdrop, on 30th October last year, the Stern report on climate change was launched. Stern is not without critics- for example questioning his figures on future world economic growth or the discount rate he used. But the direction he is pointing us in is surely correct. Nobel Prize winner Robert Solow commented: "If the world is waiting for a calm, reasonable, carefully argued approach to climate change, Nick Stern and his team have produced one."

So, what does the Stern Review tell us? As an eminent economist Stern describes climate change not as the greatest calamity of nature, but as the greatest market failure in history. Nevertheless, he gives us hope that it is not too late to act. And crucially that market mechanisms can help us succeed. Establishing a market price for carbon is the absolute key to tackle emissions through allocating resources and mediating choices. Climate change is a global problem requiring global action. So he

strongly backs the case for international carbon trading, alongside taxation and regulation.

What does Stern say specifically about aviation? He makes three major points.

First, Stern confirms that world aviation accounts for less than 2% of global greenhouse gas emissions, 7 million tonnes of carbon dioxide out of the world's emissions of 42 billion tonnes. Far less than the 24 % coming from power and heat generation, or the 18% from land use- mainly deforestation in Brazil and Indonesia. But 700 million tonnes is a significant amount by any standard. Stern says aviation's emissions are growing, though not as fast as in power generation. And we know that NOx emissions and contrails - though scientifically uncertain - could add to the impact of aircraft. Stern says this could leave aviation accounting for 5% of global warming impact by 2050.

Second, Stern specifically remarks that restricting airport capacity is a very inefficient way of tackling aviation's carbon emissions. It is pricing carbon into consumer decisions that is the key.

Third, Stern notes that in the near future there is no simple technological fix for aviation. He recognizes the political difficulties of international taxation. So aviation joining international carbon trading markets like the EU scheme seems the most effective way forward. Carbon trading sounds like a sleight of hand to those critics who argue that punitive taxation, cut-backs on airport capacity and the rationing of flights is the answer. But Stern's logic tells us that if we pay the price of carbon through trading we can keep flying and still tackle aviation's emissions. This is simply because the aviation industry will have to pay the full cost of increasing its production of CO₂ by subsidizing those industries which can afford to reduce their generation. Net, less CO₂ is generated in the world.

The point is a tonne of CO₂ saved is of equal value wherever it is saved and however it is saved. The trick is to make the biggest reduction at the least cost. Already the EU carbon trading scheme, covering 50% of Europe's industrial emissions, is moving to its second phase. And this very week some leading US companies followed Arnold Schwarzenegger in calling for carbon trading in America, despite President Bush's reluctance. So things are shifting.

And how should UK aviation respond in this context? I would stress four main points.

First, we need to get the size of the problem in perspective. Let's start with some statistics around long-term passenger forecasts.

Last year, the respected Tyndall Centre, commissioned by Friends of the Earth, produced projections for air passenger growth and emissions. They are often quoted as claiming that aviation will account for 100% or more of the UK's permitted CO₂ emissions by 2050. But they base this on predicting 1.2 billion passenger journeys a year - 14 flights a year for every single man, woman and child in Britain, (if Britons maintain their current share of UK flights). That's about double what the Government or industry forecasters expect. The DfT projection is 670 million passenger throughputs by 2050, even in a 'high capacity' scenario, with three new runways in the South East rather than the two that are planned.

The Tyndall Centre get to their number assuming – implausibly - that there will be absolutely no constraints on building new runways. Their calculations imply some 15 new runways the size of Gatwick. They go on to assume that every other sector will somehow reduce emissions by 60%, whilst

assuming that aviation alone will grow unabated. It's hardly surprising that extrapolating these numbers leads some commentators to a doomsday scenario regarding aviation's share of total emissions. The error is compounded if you then ignore the effects of carbon trading in abating aviation's share of emissions. Everyone must understand: it is the output net of carbon trading which counts in cutting overall emissions.

My second point is that policy will only be truly effective at an international level. In reality, UK aviation accounts for a little over 6% of the UK's CO₂ emissions, or 0.1% of global emissions. As the Prime Minister underlined at Davos, this is not an argument for inaction, but an argument for international action. The whole basis of the Kyoto agreement is burden-sharing and carbon trading between sectors and countries. If all UK flights were banned, it would save less than 40 million tonnes of CO₂ - an amount that would be wiped out by new Chinese power stations within one month.

But, for the sake of argument, consider the cost of constraining the air transport industry, which brings me to my third point. Aviation accounts for an estimated 8% of world GDP through direct and indirect effects. Britain is a great trading nation. And the modern British economy depends heavily on the connectivity provided by aviation to global markets. No political party which wishes to be a party of government can afford to ignore this.

Aviation benefits the UK by £11 billion a year and supports half a million jobs. Heathrow airport alone generates 100,000 jobs. Spending by overseas visitors arriving by air is equivalent to 1.1 per cent of GDP and generates around 170,000 jobs. Good air connections attract businesses to the UK, keeping Britain at the top of the European inward investment league. More than 55 per cent of our manufactured exports to countries outside the EU are transported by air.

And aviation also boosts the productivity of other sectors – from finance to tourism, from hi-fi entertainment to hi-tech manufacturing. Sir Rod Eddington's review of transport infrastructure endorses the sector's importance, and Oxford Economic Forecasting last year calculated that £13 billion of annual GDP is at stake if we fail to increase airport capacity in line with Government plans. We need 'green growth' not 'no growth'.

And the social benefits of air travel are manifest by the simple fact that people want to fly. Air travel brings people together. People value their holidays and travel can broaden the mind. And in today's multi-ethnic society, air travel links migrant Britons here with extended family in India, the Caribbean and China – as much as it keeps others in touch with émigré families in Australia or the USA. Thus, social and economic benefits are interlinked.

And, here lies a threat to individual choice – my fourth point. Beware compromising individual consumer choice. Some people forget the aim is to curb emissions, rather than to curb travel. Some even argue that we should close down runways and introduce a national quota for landing slots, to be reduced by 90% by 2030. Some say we should simply favour business travellers. So are we to price less well-off families out of flying? Are we to restrict British holiday-makers? Or turn away foreign tourists? Such regressive prescription takes as its simple premise that the case for aviation to grow cannot be made – a premise, which as Stern shows, is false.

So, how then should we choose to fly whilst tackling climate change? Collectively the industry has already made a start in tackling aviation's environmental impacts. Modern aircraft are 70% more fuel efficient than those of 40 years ago. These days UK aircraft are on average 79% full - a dramatically better rate of utilization than trains or buses. Last year a report from the *Sustainable Aviation* group outlined considerable progress in improving efficiency in design and manufacture, in how aircraft operate, in how airports work and in air traffic management.

And of course the industry will be asked by passengers to do more. Going forward, the group has set targets to cut carbon emissions from new planes by half, and reduce NOx by 80%. And crucially members are all committed to undertake practical work to aid aviation's entry into the European carbon trading scheme. This includes BAA's own work direct with European politicians and through the ACI, the international federation for airport operators.

Stern urges that all sectors should meet their full environmental costs, and we in aviation accept that. But how should that best be achieved? Compare the case for a tax like Air Passenger Duty, which now raises £2 billion a year. Doubling APD from 1 February will save 1 million tonnes of CO₂ a year, says the Treasury. That's £1,000 per tonne. A carbon offsetting company can do the same for £7.50 per tonne. Such a tax is a poor way to curb emissions, when set against carbon trading.

In December the European Commission published legislation to extend its Emissions Trading Scheme to aviation. They proposed to freeze the CO₂ impact from European flights at 2005 levels. Airlines must cut their own emissions or pay for cuts elsewhere. That means effectively a 45% cut in emissions against forecast growth by 2020. The incentives will be there to accelerate the development of cleaner aircraft and long-term solutions like jet biofuels. And passengers will know they are covering the environmental cost of their flight in an effective way. The desire for continued consumption whilst paying the debt to the environment is reflected in the action of other sectors, such as supermarkets. We must do the same.

BAA's own record to date is strong, and with shareholder backing, we will respond more strongly still. We are on target to cut energy use at our airports by 15%, despite a 70% rise in passengers. We are experimenting with airlines to reduce the need for aircraft to fire up their engines simply to taxi around the airport. Like many other firms, we offset business travel.

And we have ambitious targets for public transport for each of our airports, to save car journeys. BAA built and operates the Heathrow Express, recently voted the country's favourite railway. And we are about to champion a new rail link to the West of Heathrow, known as *Airtrack*, which could carry 3.2 million passengers a year and tempt 800,000 people from car to train. We should approach discussion on new initiatives with an open mind. BAA will support the government as it explores innovative ways of managing congestion on our roads. And we are engaging with Government on the proposed Energy Performance Commitment covering commercial and retail sectors.

Airports are major construction clients, so we must build sustainably too. Our proposed Heathrow East terminal will produce 40% less CO₂ in absolute terms than the buildings it will replace. And we will continue to play our part in addressing this agenda.

So, looking forward, not only do we face great challenges, but we also need a more balanced debate, based on sound science and sound economics. Only this week we saw Al Gore and Richard Branson encouraging new inventions to tackle climate change. With groups like *Sustainable Aviation* and *Greener by Design* to the fore, we need to present a vision of what the future might hold - with cleaner aircraft, cleaner airports, better air traffic management, and long-term developments like biofuels.

In conclusion, we must all take the environment seriously. And we must take the economy seriously too. People should be free to choose to fly, provided they cover their external costs. Carbon trading allows us to do that efficiently. The Stern Review argues that economics can help save us from dangerous climate change. Stalling the economy is the wrong response. Pricing carbon into consumer choices is the right one.

Aviation is a relatively small but significant contributor to climate change. We as an industry must engage in debate, strive to find innovative solutions and tell people about the work we are doing. Making a success of European carbon trading is the next great step for aviation.

So I believe we should face the future both with confidence and with eyes wide open. Optimism because international emissions trading can help the industry meet its commitment to the environment whilst continuing to grow. Optimism because an industry which invented jet propulsion and designed the Concorde, the jumbo jet and (for all its teething troubles) the A380, can surely find new ways to tackle environmental problems. Optimism because those few parties within the industry that are in denial about these commitments have no place to go. And clear sighted that unless we press this case, the UK economy will suffer to the cost of billions of pounds, jobs will go, and over-stretched airports will fail the most basic of passenger needs and the joy of flying - whether you are visiting a maiden Aunt in Mexico, your business contact in Madrid, or your mates in Glasgow - will be lost.