

House of Commons Environment, Food & Rural Affairs Select Committee inquiry into climate change

Response by BAA plc

09 November 2004

BAA is the world's leading airports operator. In the UK, BAA owns, develops and operates seven airports: Heathrow, Gatwick, Stansted, Southampton, Edinburgh, Glasgow and Aberdeen. Overseas we either manage contracts at, or have interests in, airports in the USA, Australia, Italy, and Oman.

BAA's submission will focus primarily on aviation and climate change, which is where BAA's expertise and efforts can add most value to the debate on policy development.

1 Executive Summary

- 1.1 BAA believes in the long-term responsible and sustainable growth of aviation. BAA has two sets of interests in climate change policy: in addition to being a major player within the aviation industry, we also have substantial energy interests, as one of the UK's top 20 consumers of industrial energy.
- 1.2 BAA supports the UK Government's leadership position on climate change and recognises the importance of effective international action to address this issue. We support the delivery of targets adopted by Governments within the framework of the Kyoto Protocol, and favour the mainstreaming of all aviation within EU public policy on climate change, noting that at present only climate change emissions by airports and domestic air transport are included within the Kyoto targets; international air transport emissions are not currently included.
- 1.3 BAA supports the UK Government's Air Transport White Paper commitments both to responsible expansion and to addressing aviation's climate change impact through linking intra-EU flights with the EU Emissions Trading Scheme by 2008, a declared priority for the UK Government's 2005 EU presidency.
- 1.4 While aviation's current climate impact is significant (11% of the UK's total climate impact), it is nevertheless still smaller than the climate impact arising from other sectors of the economy, such as power generation (29% of UK's total climate impact in 2000). However, BAA supports the precautionary approach to climate change policy, and accepts the responsibility of aviation – like all industries – to address its climate change impacts.
- 1.5 BAA believes that industrial climate change impacts are most effectively dealt with by harnessing market mechanisms and corporate self-interest, where possible, since these are powerful drivers and are likely to produce faster, better results than blunt regulation. BAA rejects policy approaches for aviation which are aimed simply at reducing demand by raising the cost of flying through taxes and charges, the revenue from which simply flows to Government and is not hypothecated to addressing the impacts. We believe the right approach, as in all industries, is to target the impacts of the activity, rather than the activity

itself. We recognise that the consequence of a regime of smart, well-targeted instruments for aviation may be higher costs and reduced demand.

- 1.6 The UK aviation industry, most notably BAA and BA, has led the EU debate on aviation's climate change impacts and obligations, and BAA believes that industry co-operation should be built on by policy-makers and Governments. BAA believes that the debate is moving in the right direction in the EU, but that there is weak global political will to tackle this issue, so BAA believes that the Government should focus on the wider international arena through the G8 concurrently with addressing aviation within the UK and EU.
- 1.7 BAA believes EU-level action can provide an effective interim policy response, as a first step towards the development of more co-ordinated global frameworks. We believe that the EU is an appropriate level for action, since unilateral action by individual EU Member States would raise market distortion and competitiveness issues.
- 1.8 BAA will be participating in the EU Emissions Trading Scheme from January 2005, since domestic airport emissions arising from substantial power use (energy infrastructure in excess of 20 megawatts) are included in the Scheme.
- 1.9 We believe that partial integration of intra-EU flights with an environmentally-credible EU Emissions Trading Scheme (where airlines can buy EU emissions allowances from the open EU market, but not sell to that market) is deliverable by 2008, and that full integration (where both buying and selling are allowed) is achievable by 2013.
- 1.10 We accept the IPCC assessment that aviation's total climate impact is some 2.7 times that due to CO₂ alone, due mainly to the climate-warming effects of NO_x and water vapour emissions (contrails) in the atmosphere and to cirrus cloud enhancement effects. We further accept that aviation should address these total climate change impacts. However, we urge a smart, targeted approach to this, which may require a mix of measures, to avoid unintended consequences of a measure adopted to tackle one impact (CO₂) leading to increases in another (NO_x), where there is a known technological trade-off..
- 1.11 For the 2008-2012 phase, the allocation methodology linking aviation with EU emissions trading should therefore be on the basis of both aircraft CO₂ and NO_x emissions. It is not yet possible to effectively differentiate aircraft operations in terms of the en-route climate impacts of aviation contrails and cirrus cloud enhancement, or yet to resolve these impacts. We believe that the long-term future of aviation and the potential to reduce aviation's climate change impacts will therefore be best served by a programme of international research, funded by the aviation industry, to find climate solutions within the sector.
- 1.12 This is consistent with BAA's belief that all industries should meet the external costs of their activities – but only once. Therefore, once smart, effective policy instruments (such as the EU Emissions Trading Scheme), which are targeted at reducing aviation's specific impacts, enter into force and cover aviation's external costs over time, the existing blunt instruments, such as the UK Air Passenger Duty (APD), should be phased out, as they are currently intended to capture some or all of aviation's external costs. This approach could also work to address the climate impact of long-haul flights. For example, reduced rates of UK Air Passenger Duty (APD) could be applied to airlines agreeing, on a voluntary basis, to link their long-haul flights with the EU emissions trading scheme to deliver specific climate change targets.

2 BAA and the climate change debate

- 2.1 BAA is the world's leading airports operator. We believe in the long-term responsible and sustainable growth of aviation. Our position in the industry – planning airport infrastructure developments over 30-year time horizons – requires us to take a long-term view.
- 2.2 BAA has two sets of interests in EU climate change policy. In addition to being a major player within the aviation industry, we also have substantial energy interests, as one of the UK's top 20 consumers of industrial energy.
- 2.3 BAA supports the UK Government's leadership position on climate change and recognises the importance of effective EU and international action to address this issue. We support the delivery of targets adopted by Governments within the framework of the Kyoto Protocol, and favour the mainstreaming of all aviation within public policy on climate change, noting that at present only climate change emissions by airports and domestic air transport are included within the Kyoto targets; international air transport emissions are not currently included. While aviation is perceived as receiving special treatment, we believe there remains a material risk that national governments, or the EU, may seek to apply blunt taxation to reduce demand, and curb the growth of aviation's emissions, thereby putting at risk the substantial economic and social benefits that aviation brings.
- 2.4 BAA is committed to making a significant contribution to reducing greenhouse gas emissions arising from energy use at our seven UK airports, through a new CO₂ strategy announced in July 2003. Our aim is to reduce absolute CO₂ emissions from energy consumption by 15% by 2010, compared to 1990 levels. This objective is particularly challenging in the face of passenger numbers rising substantially over the same period. The strategy is set to save 110,000 tonnes of CO₂ every year. This objective represents a step change in targets from the company's previous commitment of a five per cent reduction on 1990 levels.
- 2.5 We believe that airports are on the public frontline on all of aviation's negative impacts – principally climate change, local air quality, noise, and surface access congestion. While we do not fly the planes, we firmly believe that unless we take aviation's negative impacts seriously, and deliver performance improvements, airports will not be allowed to grow. BAA therefore accepts its responsibility to lead change within the industry, talking with our airline customers, our communities, and our other stakeholders.
- 2.6 During 2003, therefore, BAA led a process of engagement with Government, airlines, aerospace manufacturers and environmental NGOs to inform and develop our thinking on a smart approach to addressing aviation's climate impact, as an alternative to increasing blunt taxation. Building on this dialogue, we updated our public policy position on aviation and climate change in October 2003.¹

¹ "Aviation and climate change: A BAA perspective", October 2003. The position can be downloaded by clicking on "Aviation and climate change seminar" within:
http://www.baa.co.uk/main/corporate/sustainable_development_frame.html

3 Aviation and climate change: a BAA perspective

Climate change in context: sustainable development and aviation

- 3.1 BAA believes the debate on aviation and climate change needs to be seen in the wider framework of UK, EU and international commitments to sustainable development. Like many companies, we work within the UK Government's policy approach, which entails meeting four objectives at the same time:
- maintenance of high and stable levels of economic growth and employment
 - social progress which recognises the needs of everyone
 - prudent use of natural resources
 - effective protection of the environment.
- 3.2 BAA believes that responsible air transport and airport growth should take place only where it is in accordance with these sustainability objectives. BAA further accepts that there are certain known environmental limits, such as the earth's capacity to handle greenhouse gases, which demand a clear and specific response.
- 3.3 However, in keeping with the emphasis placed by a sustainable development framework on policy integration, BAA believes the debate on aviation needs to recognise both the realities of environmental limits and aviation's socio-economic benefits. Economically, aviation plays a crucial role in promoting the high-knowledge and high-value-added industries, such as electronics, pharmaceuticals, insurance, and finance.
- 3.4 Socially, air travel is a facilitator – for people to visit friends and family scattered around the world, to seek new cultural experiences, to learn, to visit parts of the world inaccessible to their parents or grandparents. Sustainable development rightly places emphasis on improving quality of life for all. In this context, the fact that aviation is now accessible to most people, at least in the more prosperous countries, is both significant and welcome.
- 3.5 BAA regards the emphasis placed by a sustainable development framework on policy integration as fundamental, and we therefore reject approaches to tackling aviation's environmental impacts, including greenhouse gas emissions, which are aimed simply at reducing demand by raising the cost of flying through taxes and charges. However, we do recognise that the consequence of a regime of smart, well-targeted instruments may be higher costs and reduced demand. We believe this approach – of targeting the impacts of the activity rather than the activity itself – is the right approach.

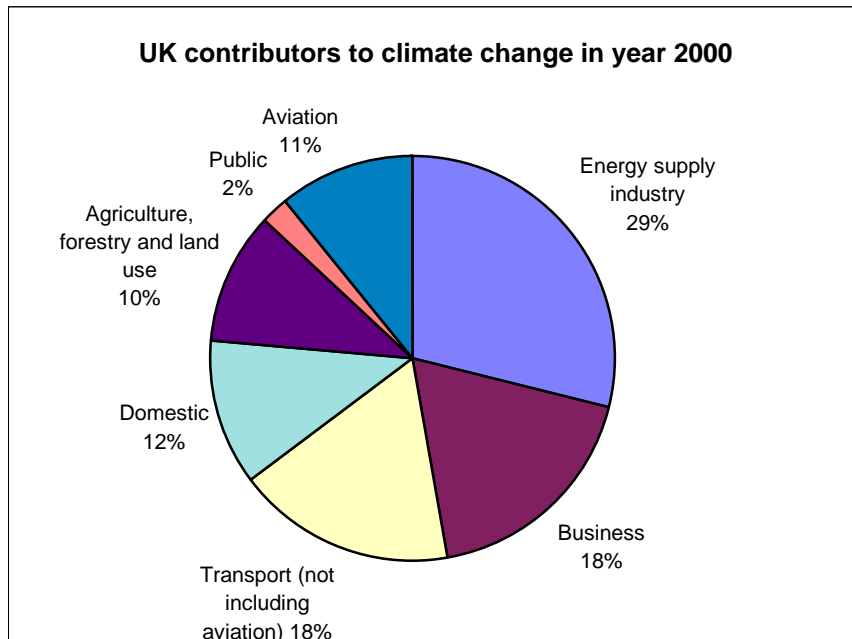
Climate change and aviation: the overall challenge

- 3.6 BAA supports the UK Government's leadership position on climate change. We note the commitment of the UK and Swedish Governments to a target of 60% CO₂ emissions reductions against 1990 levels by 2050. Moreover, BAA notes the EU's publicly stated long-term climate change policy objective:

“a long-term objective of a maximum global temperature increase of 2° Celsius over pre-industrial levels... In the longer term this is likely to require a global reduction in emissions

of greenhouse gases by 70% as compared to 1990, as identified by the Intergovernmental Panel on Climate Change (IPCC)²

- 3.7 Globally, the IPCC analysis on aviation indicates that aviation is responsible for approximately 3.5% of total human radiative forcing, or climate change impact³. For the UK, in the year 2000, aviation's total climate impact amounted to about 11% of the UK's total climate impact. Thus, while aviation's current climate impact is significant, it is nevertheless still smaller than the climate impact arising from other sectors of the economy, such as power generation (29% of UK's total climate impact in 2000)⁴.



Based on data from:
Climate change: The UK Programme, Defra, February 2001 and
Aviation and Global Warming, DfT, January 2004

- 3.8 However, BAA recognises that aviation's climate impact is set to grow, and grow significantly, while a UK economy-wide total reduces in line with the requirements of the earth's global environmental capacity, and that in line with the precautionary principle, aviation must accept its responsibility to address the climate effects of this growth. In addition, as recognised by Governments at the Johannesburg Sustainable Development Summit, the priority to meet key human development needs such as clean water, food, and sanitation (in both developed and developing countries) will rightly use up a significant proportion of the earth's environmental capacity.
- 3.9 BAA believes there is a powerful economic and social case for aviation to take up some of the remaining capacity, given the absence of short-term technological solutions within the aviation sector, compared with the availability of solutions in other sectors of society. Importantly, this would only be permissible by users of aviation paying for emissions reductions (clean development) in other economic sectors – in developed countries, in transition economies, or in developing countries.⁵

² Article 2, the 6th EU Community Environment Action Programme, adopted in co-decision in 2002

³ Based on 1992 data. IPCC (1999) *Aviation and the global atmosphere*. Cambridge University Press.

⁴ 2000 figures, based on: *Climate change: The UK Programme*, Defra, February 2001 and *Aviation and Global Warming*, DfT, January 2004

⁵ The Kyoto Protocol (KP) provides for three 'flexibility mechanisms', to assist Annex B countries (those taking on legally binding emissions reduction targets) to deliver against their targets. These flexibility mechanisms are: Joint Implementation (article 6 of the KP), the Clean Development Mechanism (article 12 of the KP), and Emissions Trading (article 17 of the KP). It is recognised that the JI and CDM mechanisms will help facilitate clean development in transition economies and developing countries.

Solutions to aviation's climate change impacts

- 3.10 BAA believes that effectively addressing climate change requires action at all levels – local, regional, national, EU and international. While climate change is a global problem and unified global action is the ideal, BAA recognises that regional political and trade blocs such as the EU have a key role in shaping public policy on climate change, and BAA is pleased that the EU is engaging seriously and constructively on the issue of aviation and climate change. In particular, EU-level action can provide an effective interim policy response prior to the development of more co-ordinated global frameworks.
- 3.11 BAA supports the EU Emissions Trading Scheme, and points out that domestic airport emissions arising from substantial power use (energy infrastructure in excess of 20 megawatts) are already included in the first phase of the EU Emissions Trading Scheme from January 2005. To meet our obligations under the EU Emissions Trading Scheme, BAA has therefore registered three sites: the two Gatwick terminal buildings and the Heathrow central boiler house, which supplies Terminals 1, 2 and 3. In addition, we would like to register a fourth site (Terminal 5) for entry into the scheme during 2005/6. The EU Emissions Trading Scheme does not apply to our other sites, as the energy plants are below the threshold of 20 megawatts.
- 3.12 BAA very strongly supports the UK Government's objective to try to extend the EU Emissions Trading Scheme, by linking intra-EU flights within the scheme by 2008, and we welcome the Government's intention to make this a priority for the UK's EU presidency in 2005. We believe that this will help to bring aviation within the club of climate-responsible industries. We believe that all intra-EU flights should be linked with the EU Emissions Trading Scheme, irrespective of the nationality of the airline (including EU and non-EU airlines). The full legal allocation of international aviation's climate change impact to country governments should therefore be urgently addressed, so there is clarity over which countries are responsible for which aviation emissions.
- 3.13 BAA believes that partial integration of intra-EU flights with EU emissions trading (where airlines can buy EU emissions allowances from the open EU market but not sell to that market) is deliverable by 2008, and that full integration (both buying and selling) is achievable by 2013.
- 3.14 BAA believes that an environmentally-credible emissions trading scheme should embrace a number of key principles, and these should guide EU public policy on addressing aviation's climate change impacts. These principles include deliverability, environmental effectiveness, economic efficiency and equity.
- 3.15 BAA believes that linking intra-EU flights with EU emissions trading must be seen as a first step towards including all aviation within a global system of open emissions trading. Parallel pressure should therefore be brought by EU member states on the US, Russia, and other non-EU regions across the whole climate change agenda, including on aviation. BAA welcomes the UK Government's declared intention to use its Presidency of the G8 to press for further international progress on the climate change agenda, and hopes that this will lead to non-EU nations taking a more constructive, international approach to resolving the issue of aviation's climate change impacts.
- 3.16 *The Future of Air Transport* White Paper highlighted:

“The Intergovernmental Panel on Climate Change report Aviation and the Global Atmosphere included a central estimate that the impact of aviation emissions was 2.7 times the impact of CO₂ alone” [due mainly to the climate-warming effects of NO_x and water vapour emissions (contrails) in the atmosphere and cirrus cloud enhancement effects]... “A decision would be needed on how the extra impact of aviation should be taken into account when designing the sector's participation in the trading regime”⁶.

- 3.17 To the maximum extent practicable, BAA would like to see the allocation methodology take a smart, targeted approach and not adopt an allocation methodology based simply on multiplying CO₂ emissions by a radiative forcing factor of 2.7. We believe that a CO₂ x 2.7 approach could send perverse incentives to the aviation industry to reduce CO₂ at the expense of other non-CO₂ climate impacts. For instance, there is a known trade-off between CO₂ and NO_x, and it would be perverse to encourage an increase in NO_x in order to achieve reductions in CO₂. In addition to this being a problem from a climate change perspective, it could also compromise progress towards the delivery of EU public policy objectives on NO_x and local air quality.
- 3.18 BAA has therefore suggested that, for the 2008-2012 phase, aviation should be linked with EU emissions trading on the basis of both aircraft CO₂ and NO_x emissions. Provided airlines were prevented from selling Aviation Allowance Units into the open EU trading market, the targeting of both CO₂ and NO_x would not compromise the EU Emissions Trading Scheme's compatibility with the Kyoto Protocol. It should be noted that this is true even though NO_x is not yet legally designated as a greenhouse gas within the Kyoto Protocol basket.
- 3.19 From 2013, BAA would also like to see aviation's contrail and cirrus impacts directly, separately, and fully integrated into EU emissions trading. The legal designation of aviation's non-CO₂ impacts should be prioritised as a step towards enabling the direct, separate, and full integration of aviation's CO₂ and non-CO₂ impacts within emissions trading. However, while it is possible to differentiate aircraft in terms of CO₂ and NO_x emissions performance, further scientific research is necessary in order to move towards differentiating aircraft operations in terms of contrails and cirrus effects. Without advances in scientific understanding, contrail and cirrus impacts could only be incorporated within EU emissions trading on the basis of an averaged “per kilometre” impact. BAA would therefore welcome international research, funded by the aviation industry, to develop a predictive system capable of assessing, to a reasonable degree of accuracy, the CO₂, NO_x, contrail and cirrus impact of any given flight.
- 3.20 We strongly oppose alternative policy instruments of blunt taxes and charges, where the revenue raised flows into the public purse for general government expenditure and is not exclusively and entirely hypothecated to purchasing emissions reductions in other parts of the economy. Such instruments offer limited positive environmental benefit, impact negatively on competitiveness, and essentially act to tax away demand and the positive benefits that aviation brings.

Conclusions

⁶ Paragraph 8, Annex B, *The Future of Air Transport*, Department for Transport, 16 December 2003

- 3.21 Aviation has a small, but significant and growing impact on climate change, and this must be addressed.
- 3.22 Aviation should be brought within the mainstream of industry and climate change policy within the UK and the EU, as quickly as practicable. The most effective way of achieving this is for intra-EU flights to be linked with the EU Emissions Trading Scheme from 2008.
- 3.23 EU policy to address aviation's climate change impacts is a welcome and necessary first step to global solutions, but the UK Government and the EU must rigorously pursue this agenda internationally through the G8 and other bodies.