

July 7, 2005

## **EUROPEAN AVIATION INDUSTRY JOINT POSITION PAPER ON EMISSIONS CONTAINMENT POLICY**

### **INTRODUCTION**

1. Following its web consultation, the Commission is now preparing a Communication Paper on Aviation and Climate Change which is due to be published by the end of July 2005. The forthcoming Communication will reportedly focus on three market-based options, namely taxes, charges and emissions trading. The third option will be examined particularly closely and will be analysed in the light of the CE (Delft) study on the inclusion of aviation in the European Emissions Trading Scheme (ETS). The study is due to be delivered early in July.
2. The undersigned Associations, which represent European cargo and passenger airlines, aircraft operators and airframe and engine manufacturers, take their environmental responsibilities very seriously and are committed to a focused strategy to tackle climate change.
3. They would like to draw the Commission's attention to two concerns: Firstly, the proposed timeframe would not give the stakeholders enough time to make a meaningful contribution to the Commission's paper; Secondly, if confined to economic instruments the scope of the Communication would be extremely limited and would fail to provide a solid foundation for future policy and subsequent legislation.
4. The European aviation industry reiterates the importance of adequate consultation on the emissions trading study before reaching policy conclusions, so that the fundamental issues raised by the application of emissions trading to aviation within the EU can be studied in depth.

5. The European aviation industry also proposes that the scope of the Communication should be extended to cover **technological progress, infrastructure improvements** and **operational measures** as well as **economic instruments**.
6. The present position paper sets out the European aviation industry's proposed **Emissions Containment Policy**, which is a comprehensive policy based on the four pillars mentioned above.

## **EMISSIONS CONTAINMENT POLICY**

7. A sound Aviation Climate Change Policy should not be made up of economic instruments alone. Many existing instruments are already being used to mitigate the environmental impact of aviation and hence to influence its contribution to climate change. These include technological development, operational measures to reduce fuel burn, fleet renewal and other operating procedures. Economic instruments are therefore only one component of a large battery of existing, tried and tested tools.

*The European aviation industry urges the Commission to take all these elements into consideration, so as to avoid a piecemeal approach.*

## **TECHNOLOGICAL PROGRESS – PILLAR 1**

8. Manufacturers of airframes and engines have a good record of environmental achievements. They are continually developing more efficient technologies and clean manufacturing processes, leading to the reduction and control of energy use, emissions, dangerous substances and waste.
9. The results have been remarkable<sup>1</sup>:
  - 70% reduction in fuel consumption/CO<sub>2</sub> emissions per passenger/km;
  - Oxides of nitrogen (NO<sub>x</sub>) emissions have been progressively reduced to meet three successive increases in ICAO stringency standards;
  - Carbon monoxide, hydrocarbons and smoke virtually eliminated;
  - 75% reduction in typical noise levels.

All this has been achieved without compromising safety, which remains the industry's overriding priority.

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<sup>1</sup> ICCAIA presentation given at the Noise Reduction Technology Workshop, held at the ICAO CAEP Steering Group in 2001 (International Coordinating Council of Aerospace Industries Associations).

10. The industry currently invests some 14% of its annual turnover in Research and Technology Development (R&TD), which is the key to innovation and improved performance. Nevertheless, continued and substantial government funding is necessary to deliver the technological improvements which will be required in the future.
11. Therefore, the European aviation industry fully supports the work of ACARE (Advisory Council for Aeronautical Research in Europe) which is a truly multi-stakeholder initiative involving Member States, the European Commission, research establishments and the aviation industry.
12. Environmental objectives are key elements of the ACARE Strategic Research Agenda (SRA), which contains target concepts for air transport in 2020. The SRA establishes the following targets for products entering service in 2020:
  - 80% reduction in NO<sub>x</sub>,
  - 50% reduction in fuel burn and CO<sub>2</sub> per passenger/km,
  - 50% reduction in perceived noise per aircraft movement.
13. Proposals to meet these targets include airframe and engine technologies and alternative fuels. The results of R&TD must be translated into products that meet high safety and reliability requirements. In turn, products must meet the operating and maintenance cost demands of the customer, since without a market there is no point in developing the product. In short, translating research into products requires the customers to be financially secure.
14. *The European aviation industry urges Member States and the Commission to maintain their political support for and their financial investment in R&TD in partnership with the aviation industry, so as to meet the objectives of the SRA and to promote the technological progress on emissions and noise that will ensure long-term sustainability. R&TD should be included in the forthcoming Communication because the improvement of environmental performance is heavily dependent on research. Investment in this area will have a beneficial impact on the global aircraft fleet and thus on emissions beyond the boundaries of the EU, which itself accounts for only a small proportion of global aviation emissions.*

## **INFRASTRUCTURE IMPROVEMENTS – PILLAR 2**

15. The 1999 Intergovernmental Panel on Climate Change (IPCC) report indicated that improvements in Air Traffic Management (ATM) and other operational procedures could reduce aviation fuel burn by between 8 and 18%. The greatest reductions (6-12%) would come from ATM improvements which were expected to be fully implemented within the next 20 years. All engine emissions would be reduced as a consequence.

16. The European Single Sky in general and the SESAME programme in particular are expected to bring significant environmental benefits, for example through the reduction of holding (aircraft flying in a fixed pattern waiting for permission to land), more efficient routings thanks to the design of functional airspace blocks (FAB), and enhanced optimal flight profiles.
17. Congestion also stems from the lack of airport capacity. The Eurocontrol Report on 'Challenges to Growth 2004'<sup>2</sup> pointed out that, taking a growth scenario of 4.3% p.a., more than 60 European airports will be congested by 2025 and the top 20 airports will be saturated at least 8-10 hours per day. There is an urgent need to develop new airport infrastructure whenever and wherever it is possible. However at airports where expansion is not feasible, efforts should be focused on making the best use of existing capacity.
18. *The European aviation industry urges Member States and the Commission to:*
  - *ensure their political support for SESAME and to secure the financing of the Implementation Phase;*
  - *develop a master plan for airport capacity expansion and to grant the 'European Common Interest' label to key airport projects.*

### **OPERATIONAL MEASURES – PILLAR 3**

19. The term 'Operational Measures' covers the multitude of actions undertaken by aircraft operators to improve their procedures in order to reduce the impact of their emissions. ICAO has detailed all these measures and practices in its Circular 303 published in February 2004 and entitled 'Operational Opportunities to Minimize Fuel Use and Reduce Emissions.'
20. Circular 303 contains ten principles: Fly the most efficient aircraft for the sector, Taxi the most efficient route, Fly the most efficient route, Fly at the most efficient speed, Operate at the most economical altitude, Maximise the load factor, Minimise the empty aircraft weight, Load the minimum fuel commensurate with safety, Minimise non-revenue flights, Maintain clean and efficient aircraft.
21. It addresses eleven areas: Airport Operations, Aircraft Environmental Performance, Maintenance, Mass Reduction, Air Traffic Management, Non-revenue Flying, Flight/Route Planning and other operational issues, Take-off and Climb, Cruise, Descent and Holding, Load Factor Improvement.

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<sup>2</sup> EUROCONTROL CTG04 – 01.12.2004 – European Air Traffic Management Programme, page 2

22. Many of the above measures and good practices have been implemented by airports, ATC service providers and aircraft operators for decades without any regulatory obligation. This clearly demonstrates a voluntary commitment by the whole industry to be environmentally responsible and responsive. National and European regulators should be encouraged officially to acknowledge this fact and to support the industry's efforts.
23. ***The European aviation industry requests that Member States and the Commission promote the wide dissemination of ICAO Circular 303, so as to encourage good operational practices. The Commission should strongly support the industry's continuing voluntary action in its Communication Paper. Incentives should be given to reward the industry's efforts.***

#### **ECONOMIC INSTRUMENTS – PILLAR 4**

24. Economic instruments constitute the fourth pillar of the industry's proposed Emissions Containment Policy. They could be used in combination with the above elements, but should have a clear environmental rather than fiscal objective. The European aviation industry insists that economic instruments should be carefully assessed to quantify their economic impacts, social costs and environmental benefits. They should also take account of the need to preserve the competitiveness of the European aviation industry.

#### **FUEL TAXATION**

25. The industry has conducted an exhaustive assessment of the economic/financial cost versus the environmental benefits of taxation. The unanimous view is that taxation is not the best way to address aviation climate change, as it is a blunt instrument designed to reduce traffic and there is no guarantee that the revenues will be allocated to measures which would mitigate the environmental impact of aviation. The ICAO CAEP/5 report and the Commission's own analysis<sup>3</sup> both concluded that such a tax is not an effective measure. ***Therefore, the European aviation industry formally objects to taxation.***

#### **EMISSION CHARGES**

26. Whereas the revenue from taxes is directed into State or local funds, revenue generated by charges can only be used for aeronautical purposes. Any other use of this revenue means that the so-called 'charge' is, in practice, a form of tax as described above. Therefore, the only justification for imposing an emissions charge would be if the revenue generated were to be used for the purpose of environmental protection.

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<sup>3</sup> Analysis of the taxation of aircraft fuel. Study produced by Resource Analysis MVA Limited for the European Commission. January 1999.

27. The European aviation industry believes that only under these conditions would this option merit further analysis. However, experience has shown that it is unlikely that States would be prepared to allow all the revenues collected to be used for this purpose.
28. The aviation sector is already burdened with fundamental structural deficiencies which should be properly addressed. By imposing levies on an industry which is constantly fighting for sustainable recovery, the regulator is tackling the effects rather than the underlying causes of the problem. *En-route or emission charges are thus not the preferred option of the industry.*

### **EMISSIONS TRADING SCHEME (ETS)**

29. The industry recognises that work within ICAO has shown that emissions trading is potentially the most environmentally effective and cost-efficient approach to address CO<sub>2</sub> emissions from aviation and, as a consequence, it appears to be a more promising option than taxes and charges. However, as emissions trading is an untried and untested approach in the aviation sector, a number of issues need to be resolved before it could be seen as a practical proposition for aviation.
30. On the occasion of the European Commission's Green Week (June 1, 2005), the European aviation industry publicly indicated what it feels are the key requirements to be fulfilled if aviation were to participate in any ETS:
- A global and open system
  - No cumulative action with taxes and charges
  - No market distortions
  - Focus only on CO<sub>2</sub>
  - Broadest access to the market
  - A simple and manageable system
31. The Consultants CE (Delft), which were hired by the Commission, are almost ready to publish their report on the inclusion of aviation in the current EU ETS. Some options were considered in the Executive Summary which was made public recently. Although the industry will submit comprehensive comments on the final report when it becomes available, it would like to present its preliminary views on the definition of concepts and the key design elements as described in that study.
32. As Kyoto does not cover international aviation and therefore no AAUs (Assigned Amount Units) were allocated to this sector, allowances trading will necessarily be restricted and aviation will be disadvantaged compared to the other sectors.

33. In this context the European aviation industry believes that more reflection and further analysis are needed to improve the understanding of this very complex issue, its competition-related aspects, the technical link with Kyoto and the place of aviation vis-à-vis the other sectors. The European aviation industry wishes to continue the discussion with the Commission and to make a constructive contribution to the debate. It therefore sets out, in the attached Annex, *the key design elements* which are required, should aviation be included in the current EU ETS, with the objective of minimizing discrimination.

34. *The European aviation industry urges the Commission to:*

- *Disregard taxes and charges as they are blunt instruments with marginal environmental benefits but high negative economic impact,*
- *Continue the analysis of emissions trading for aviation which has just started with the CE (Delft) study,*
- *Take the industry's key design elements into account in further studies, to prepare Europe for the forthcoming Post-Kyoto debate and to contribute to ICAO action.*

## KEY DESIGN ELEMENTS

### ANNEX TO THE EUROPEAN AVIATION INDUSTRY JOINT POSITION PAPER ON EMISSIONS CONTAINMENT POLICY

#### A. Coverage of climate impacts

**CO<sub>2</sub> only** The aviation sector should not be treated differently to ground-based emitters. In line with other sectors, an ETS must only cover aviation CO<sub>2</sub> emissions. There is not enough scientific knowledge on the non-CO<sub>2</sub> effects. The nature and understanding of the other emissions is such that their inclusion in the ETS would not be appropriate.

**ICAO Standards for the other gases** In the future, when scientific research has been able to provide a better understanding of the effects of other emissions, new stringency standards could be defined through ICAO.

#### B. Geographical scope

**Worldwide system** The best objective is the inclusion of aviation CO<sub>2</sub> in the Kyoto process under ICAO guidance. Only a worldwide system would have an effective environmental impact, while avoiding distortion of competition within the air transport sector. This would not be possible unless and until the Kyoto Protocol can be renegotiated.

**Intra-EU routes** For further studies and analysis, the geographical scope could be limited to flights between airports located in EU States (with a possible extension to associated European States), irrespective of nationality or type of operations. This excludes overseas territories of EU States and over flights of EU airspace. As this design element could have different effects on aircraft operators and hence could lead to imbalances between them, it should be carefully assessed.

#### C. Trading entity

**Aircraft operator** The aircraft is the source of emissions and aircraft operators control their capacity, fleet composition, abatement measures and monitoring data.

#### D. Allocation method

Allocation means the determination of the total amount of allowances to be granted to the aviation sector. This allocation should be done according to the chosen geographical scope.

**EU Level** Because aviation is not included in the EU Burden Sharing agreement, the total amount of international aviation allowances should only be defined at EU, and not Member State, level. Allocation of international emissions at Member State level would result in unacceptable distortions of competition. It is essential that a unified approach to allocation and target setting is adopted for aviation.

There would clearly be benefits in terms of operability and simplicity if domestic emissions could also be captured by this unified approach. Certainly the regimes for domestic and international emissions should be harmonised as far as possible.

## **E. Interplay with the Kyoto Protocol**

**Extension of the scope of the Kyoto Protocol** This is the only option that would avoid any trade restrictions and therefore ensure equal and fair treatment of the aviation industry compared to the other sectors already included in the Kyoto Protocol. However, this is a long-term objective which could be achieved only if Kyoto is re-negotiated by 2012.

Under the existing Kyoto framework, aircraft operators could not receive the so-called 'Kyoto allowances' because no corresponding AAUs were created for international aviation. Aircraft operators as trading entities could only receive initial allowances created outside Kyoto. As a result aircraft operators cannot trade these 'non-Kyoto allowances' with the other sectors in the EU ETS. If necessary aircraft operators can buy additional allowances from other sectors, but if they want to sell they could only sell what they have bought from the other sectors. Nevertheless, they do have the possibility to trade allowances freely (initial/additional) between themselves. However, this ability would be of limited use, given that most airlines will be buyers whereas a market requires both buyers and sellers. This is the principle of the **Gateway (Trade Restriction)** as described in the CE (Delft) Study. Although restrictive, the Gateway option would be the European aviation industry's interim option, pending a re-negotiation of the Kyoto protocol to include international aviation.

Another option known as 'Borrowing of AAUs from sectors not covered by the EU ETS' requires further clarification and is currently being studied by the European aviation industry.

## **F. Distribution method**

In the CE (Delft) study, the term allocation is also used to designate the distribution of allowances to entities. As a matter of definition we are proposing the following distinction: **allocation** is the determination of the total amount of allowances granted to the aviation sector, whilst **distribution** is the determination of the specific amount of allowances attributed to individual entities (aircraft operator).

In this respect, the ‘allocation’ of allowances granted to the aviation sector should be determined on the basis of grandfathering. The method for determining the ‘distribution’ of allowances granted to the entities should be done on the basis of benchmarking.

**Grandfathering** – This allocation method, which encompasses forecasted growth, is used for the sectors already included in the current EU-ETS. It should also apply to the aviation sector to minimize discrimination.

**Benchmarking** - This is the only method that takes into account the efforts already made by aircraft operators (early actions - for example fleet renewal) to improve their operations and thus contributes to reducing their fuel burn.

#### **G. Monitoring method**

**Measured trip fuel by aircraft operators** - The environmental effectiveness of the ETS would certainly benefit if actual trip fuel were used, as operational measures to reduce emissions would be duly rewarded and ATC inefficiencies duly identified. Where aircraft operators are not equipped to report on actual trip fuel, they can consider another suitable method to be based on as accurate as possible fuel burn/emission data per specific aircraft type/engine combination, preferably to be provided by manufacturers or other qualified sources.