# Including Aviation in the EU's Emissions Trading Scheme (EU ETS)

**Background Briefing**

**Updated November 2007**

European Federation for
TRANSPORT and ENVIRONMENT

# Aviation and climate change: facts and figures[1]

- In 2000 air transport accounted for 4 to 9 per cent of the climate change impact of human activities. The range reflects uncertainty surrounding the effect of cirrus clouds. A figure of 2 per cent, often quoted by the aviation industry, applies only to $CO_2$ emissions and refers to 1992 data.
- Carbon Dioxide ($CO_2$) emissions from EU international aviation increased by 90% between 1990 and 2005[2].
- If this trend continues, growth in the EU's international aviation emissions will offset more than a quarter of the reductions required by the Community's target under the Kyoto Protocol[3].
- Aviation has by far the greatest climate impact of any transport mode, whether measured per passenger kilometre, per tonne kilometre, per € spent, or per hour travelling
- $CO_2$ emissions are directly linked to fuel consumption. Every litre of jet fuel burnt leads to 2.5 kg of $CO_2$ emitted in the air. Today's passenger aircraft are no more fuel-efficient than those that flew half a century ago
- Every segment of the aviation industry including manufacturers, airlines and airports is subsidised and enjoys major tax exemptions (notably the lack of VAT on international tickets and taxes on kerosene)

[1] For further information see: Clearing the air, the myth and reality of aviation and climate change, T&E / CAN-Europe, Brussels, July 2006 - transportenvironment.org/Article201.html

[2] EEA, Annual European Community greenhouse gas inventory 1990–2005 and inventory report 2007, Submission to the UNFCCC Secretariat, European Environment Agency, Copenhagen, June 2007

[3] European Commission, Communication on Reducing the Climate Change Impact of aviation, September 2005

# The EU and aviation emissions trading: timeline

**September 2005**
**Commission communication**
The European Commission published a communication, 'Reducing the climate change impact of aviation' which stressed that:

- there is a need for action
- inclusion of emission trading into the European Emissions Trading System (EU ETS) is the most feasible way forward
- all flights departing from EU airports should be included
- the non-$CO_2$ impacts of aviation should be reflected in the policy
- there is a need to keep all other options open (for example kerosene taxation)

**December 2005**
**Environment Council**
In the last month of the UK presidency of the EU, the 25 EU environment ministers adopted conclusions that were broadly supportive of the Commission communication.

**July 2006**
**European Parliament report**
The European Parliament adopted a resolution stressing that:

- a broad package of measures is necessary to tackle the climate change impact of aviation, including EU-wide kerosene taxation.
- a separate, dedicated emissions trading system for aviation should be set up

**December 2006**
**European Commission legal proposal**

The legal proposal adopted by the European Commission on 20 December 2006 favours the inclusion of aviation in the EU ETS.

**October 2007**
**European Parliament environment committee voted on the Draft Report on the Commission proposal**

**12 November 2007**
**European Parliament plenary voted on the Proposal**

**Mid-December 2007**
**Member State Environment Ministers (Environment Council) to discuss response of to the Commission proposal**

The table below shows the key elements of:

- The European Commission proposal
- The European Parliament official position in July 2006
- The European Parliament vote of November 2007
- T&E's position

A fuller explanation of the main points is given in the table on the next page.

| | European Commission legal proposal December 2006 | European Parliament position (resolution July 2006) | European Parliament (plenary vote in November 2007) | T&E position |
|---|---|---|---|---|
| **Ensuring inclusion of aviation in the EU-ETS results in emissions reductions from the aviation sector.** | No proposal. | Proposed a separate emissions trading system for the aviation sector. | Restrict the number of allowances that aircraft operators can buy from other sectors or from CDM/JI.<br><br>Only aircraft operators in line with the industry objective to improve fuel efficiency by 50% by 2020[4] can buy emission permits from other sectors. | There should be a quantitative limit on the amount of non-aviation permits that can be bought.<br><br>Only operators that improve their efficiency should be able to buy permits from other sectors. |
| **The emissions cap** | 2004-6 average. Equivalent to 90% above 1990 levels. (Approx. 220 MT $CO_2$) | In line with Kyoto targets, i.e. 8% below 1990 levels. (Approx. 106 MT $CO_2$) | 90% of 2004-6 average. Equivalent to 71% above 1990 levels. (Approx. 200 MT $CO_2$) | In line with Kyoto targets for other sectors, i.e. 8% below 1990 levels. (Approx. 106 MT $CO_2$) |
| **Permit allocation** | Estimated 3% auctioning of permits. | 100% auctioning of permits. | 25% auctioning of permits. | 100% auctioning of permits. |
| **Non-CO2 impacts of aviation** | Emissions of NOx to be addressed by the end of 2008.<br><br>Climate impact of cirrus clouds and contrails not addressed. | Emissions multiplier to account for all non-CO2 impacts (NOx, cirrus clouds and contrails). | 2x multiplier to account for impact of NOx in case that Commission fails to introduce a separate NOx instrument. | 2x – 5x emissions multiplier to account for non CO2 impacts of aviation on climate change. |
| **Geographic scope** | Intra-EU flights in 2011. All flights arriving and departing EU airports in 2012. | All flights from start of system | All flights from 2011. | All flights from 2010. |

[4] www.sustainableaviation.co.uk, www.acare4europe.org/docs/es-volume1-2/Env.pdf

**Ensuring emissions reductions from the aviation sector**

All the impact assessments currently on the table show that integrating aviation into the EU-ETS will do next to nothing to reduce aviation emissions. A recent assessment by Ernst & Young commissioned by the industry shows that even in the toughest scenario envisaged, by 2020 emissions would **grow** by 83% rather than 86% in a business-as-usual situation.

Last March, European leaders committed to **reduce** emissions at least by 20% by 2020. The Commission's Impact Assessment suggests that integration of aviation into the EU-ETS policy will only reduce aviation emissions by about 3%. In other words it would offset just one year's growth of the sector's emissions.

The reason why integration in the ETS will not change the emissions of the sector is that the CO2 prices in the system will be around €15 per tonne, which is a significant amount for powerplants, steel mills and the like, but translates into an insignificant 3.8 cents per litre of kerosene (the fuel used in aircraft).

However, the aviation industry has set itself an objective to improve fuel efficiency by 50% by 2020 compared to 2000 (3.5% per year)[5]. But the European Commission proposal contains no guarantees that the sector will actually deliver these improvements.

Therefore, in parallel with the introduction of emissions trading, T&E supports the idea that the sector's fuel-efficiency objective should be made legally-binding to ensure these improvements are made. It is also important to restrict the number of non-aviation allowances that can be bought to ensure that emissions reductions are made within the aviation sector.

**The emissions cap**

The level of the cap proposed by the European Commission - average emissions from aviation in the years 2004-6 – in practice means that the cap is set at approximately 90% above 1990 levels, the base year of the Kyoto agreement. Other sectors have to reduce their emissions by 8% compared to 1990 emissions. Aviation therefore would get roughly twice the amount of permits it would get if the cap was set in line with EU climate targets.

T&E recommends a cap in line with EU's climate targets.

**Permit allocation and windfall profits**

Auctioning is the best distribution mechanism, because it is the most efficient and fairest way to issue permits, and also to avoid the errors of the current EU ETS where electricity firms are reported to have made billions of euros of windfall profits by passing on the price of permits to customers that they received for free. The aviation industry would follow this precedent.

The proposal from the European Commission proposes an allocation through benchmarking with a minor fraction to be auctioned (less than 3% in practice).

According to the official impact assessment: 'since every airline on each route covered by the scheme would be treated equally, airlines can be expected to pass on, to a large extent or even in full, compliance costs to customers'. The size of these profits has been estimated to be in the in the range of €3.5bn a year.

[5] www.sustainableaviation.co.uk , www.acare4europe.org/docs/es-volume1-2/Env.pdf

The use of a benchmark parameter to allocate allowances will also create market disruptions since some airlines will benefit relatively more than others. It will also create extra difficulties for new entrants, since they will have to buy 100% of their permits while existing companies will receive 97% of the permits for free.

**Non-$CO_2$ impacts**

There is a scientific consensus that the climatic impact of the sector is 2 to 5 times that of $CO_2$ emissions alone[6]. The uncertainty is related to the climate impact of cirrus clouds that can form out of aviation-induced contrails.

If non-$CO_2$ impacts are not addressed, the environmental integrity of the system is at risk. Airlines will be buying permits to emit a tonne of $CO_2$ from ground sources, but in practice the environmental impact of the use of such allowances will be 2 to 5 times greater.

**Additional instruments**

The price of permits in the EU ETS has historically been in the range of €15 per tonne of $CO_2$ – which is equivalent to 3.8 cents per litre of kerosene. The Commission's Impact Assessment suggests that this will reduce aviation emissions by only 3%, equivalent to one year's growth.

Fuel taxes in road transport are around 65 cents per litre – more than 10 times higher than equivalent $CO_2$ prices in the EU ETS. Also, high carbon prices in aviation would not put the EU aviation industry at a competitive disadvantage since every airline on each route covered by the scheme would be treated equally. Therefore, environmental NGOs insist on introduction of fuel taxation and VAT on airline tickets alongside integration of aviation into the EU ETS.

**Geographic scope**

The European Commission proposed a two stage approach, with intra-EU flights to be included in a first stage – starting in 2011 – and all arriving and departing flights to be added only in a second stage – in 2012.

There are no technical or legal reasons to apply the system only to intra-EU flights. Indeed the Commission's Impact Assessment[7] recommends the opposite: a broad geographical scope would be better for the environmental effectiveness of the scheme while reducing to nearly zero any effects on the competitiveness of European airports and EU tourist destinations.

For that reason environmental NGOs have argued for all flights from and to the EU to be included from the onset.

---

[6] See Sausen et al., 2005, Aviation Radiative Forcing in 2000: An Update of IPCC (1999), Sausen, R., Isaksen, I., Grewe, V., Lee, D.S., Myhre, G., Schumann, U., Stordal, F. and Zerefos, C., June 2005

[7] Available at http://ec.europa.eu/environment/climat/pdf/ia_aviation.pdf

# For further information:

João Vieira
Policy Officer - Aviation and Shipping
Transport and Environment (T&E)
rue de la Pépiniere, 1
B-1000 Bruxelles

Tel: +32 2 289 1043

joao.vieira@transportenvironment.org

www.transportenvironment.org