



The inclusion of aviation in the European Union emissions trading scheme

**Memorandum by the World Development Movement to
the Department for Transport consultation**

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Introduction to WDM

The World Development Movement (WDM) campaigns to tackle the root causes of poverty. With our partners around the world, we win positive change for the world's poorest people. We believe that charity is not enough. We lobby governments and companies to change policies that keep people poor. WDM is a democratic membership organisation of individuals and local groups. WDM welcomes this opportunity to comment on the inclusion of aviation within the European Emissions Trading Scheme (ETS).

Introduction

Climate change is a justice issue. It has overwhelmingly been caused by the richest countries and people in the world, yet it is the poorest who will suffer soonest and most from its effects. The UK government has rightly stated that its goal must be to prevent what has become known as 'dangerous climate change'; in other words preventing average global temperatures from rising more than 2°C on pre-industrial levels.¹ This 2°C threshold is widely regarded as a point beyond which the impacts of climate change, particularly on the poorest people in the world, will become truly catastrophic.

The May 2007 IPCC summary report on mitigation outlined that for the average global temperature increase in the 21st century to be kept to 2.0°C-2.4°C requires stabilisation at 445-490ppm of CO₂eq in the atmosphere. This in turn requires global yearly emissions to be reduced by 50 to 85 per cent by 2050.² Because the UK emits more than double the worldwide average CO₂ per person, the UK has to reduce emissions by between 80 and 90 per cent by 2050, on current levels. This translates into a 40 per cent cut by 2020. CO₂ emissions per person for the EU are only slightly less than for the UK, and consequently the level of reductions required for the EU is in the same region of between 80 and 90 per cent on current levels by 2050.

Aviation already accounts for approximately 12 per cent of the UK's contribution to climate change, more than that of UK cars; UK manufacturing and construction; or emissions direct from UK residential buildings.³ Aviation is the fastest growing source of UK CO₂ emissions, having risen by more than 125 per cent between 1990 and 2005.⁴ Within the EU, aviation grew by 87 per cent between 1990 and 2004, and accounts for between 5 and 12 per cent of the EU's contribution to climate change.⁵

The Department for Transport is currently planning to continue this growth in aviation. The 2003 white paper plans for a doubling of air passengers between 2002 and 2020, and a doubling of air freight between 2002 and 2010. The white paper supports new runways at Edinburgh, Birmingham International, Stansted and Heathrow airports. In addition, the white paper supports other airport expansion measures, such as new terminals or longer runways, at a total of 24 different airports in the UK.⁶

The Tyndall Centre for Climate Change has predicted that unless the UK government's policy changes on aviation expansion, CO₂ emissions from UK aviation will have more than doubled by 2030 and trebled by 2050.⁷ The UK's draft climate bill sets a target of reducing UK CO₂ emissions (other than from

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international aviation and shipping) by 60 per cent by 2050 on 1990 levels. However, with aviation expansion, the UK's contribution to climate change will have only been reduced by 17 per cent by 2050 on 2005 levels.⁸ It will be impossible for the UK and EU to reduce their contribution to climate change by 40 per cent by 2020 and 80-90 per cent by 2050, if the current and planned expansion of aviation continues.

In this context it is imperative that the UK government and EU implement the measures needed to halt the growth in emissions from aviation. The Department for Transport has to scrap plans for airport expansion. The Treasury has to introduce proper environmental taxes on aviation to end the generous tax exemptions the aviation industry receives through not paying tax on fuel and VAT.

Unfortunately, the European Commission has already suggested that the inclusion of aviation within the ETS will have little effect on the growth of emissions from aviation. The Commission estimates that by 2020 the demand for air travel will have grown by 135 per cent (on 2005 levels), compared to 142 per cent in the absence of a trading scheme.⁹ The Commission has also predicted that including aviation will only increase prices for air travel by between €1.80 (£1.20) and €9 (£6) on a return ticket.¹⁰ Given the failure of the ETS to reduce EU emissions so far, the inclusion of aviation within the ETS cannot be relied upon to have a significant impact on aviation's contribution to climate change.

The inclusion of aviation in the ETS is only a small step in addressing the climate change impacts of aviation. It cannot act as an excuse for the UK government not to take other measures which are necessary for halting the growth in emissions from aviation. In particular, the Department for Transport must scrap its plans for a massive expansion in UK airport capacity.

If the inclusion of aviation within the ETS is to have any impact, the following issues must be addressed:

1) The cap on aviation emissions has to be strengthened to ensure a meaningful and fair relationship between aviation other sectors included in the ETS (Q7: *Should the cap be set by reference to emissions in: a) 1990, b) average of 2004-2006, c) 2008, d) an alternative*).

The cap should be set based on aviation emissions in 1990. Both the Kyoto protocol and the government's draft climate bill use 1990 as the baseline for emissions reductions. All other sectors included in the ETS have caps set in reference to 1990. It would therefore place aviation at an unfair advantage over other sectors if it were to have a cap set based on emissions at a later date, and thus force other sectors to take-on the burden of reducing emissions from aviation which are the result of growth since 1990.

As the Department for Transport states in its consultation paper, emissions from EU aviation have grown by 87 per cent between 1990 and 2004. In the UK, aviation emissions have increased by 125 per cent between 1990 and

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2005, or from 16.7 million tonnes of CO₂ in 1990 to 37.4 million tonnes of CO₂ in 2005. If the baseline for aviation's inclusion within the ETS is set at 2004-2006, this means the burden of cutting 20.8 million tonnes of annual CO₂ emissions, in order to get back to 1990 emission levels, falls on other sectors than aviation, even though the emissions have been caused by the growth in aviation.

In addition, the above analysis assumes emissions are to continue at 1990 levels. By 2008-2012, EU emissions should be 8 per cent below 1990 levels. The EU has further committed for CO₂ emissions to be 20 per cent below 1990 levels by 2020, or 30 per cent if other countries sign-up to a global agreement. To include aviation within the ETS in a fair way requires its cap in 2012 to be set at 8 per cent below aviation emissions in 1990 for 2008-2012, rising to 20 or 30 per cent below 1990 levels by 2020. Ideally, the EU should commit to reducing CO₂ emissions by 40 per cent by 2020, and so set ETS caps accordingly.

There are also potential social justice implications from treating aviation more favourably than other sectors included in the ETS. In the UK, the richest 18 per cent of the UK population are responsible for 54 per cent of flights, whilst the poorest 18 per cent are responsible for just 5 per cent.¹¹

The growth in flying over the past few years has been due to richer people flying more, whilst those on the lowest incomes are actually flying less. In 2000, over 8 million leisure trips were taken from UK airports by passengers earning less than £14,374 a year. In 2004, the same group of people flew less, with just over 7 million trips. In contrast, people earning over £28,750 a year made 28.8 million leisure trips in 2000, and this rose to 36.5 million in 2004.¹²

Compared to greenhouse gas emissions reduction in other sectors, it may be that curbing growth in aviation emissions is one of the most socially progressive actions the UK and EU could take. There is no social justice basis for giving aviation a looser cap than other sectors.

2) 100 per cent of allowances need to be allocated through auctioning
(Q8. Which allocation methodology should be used to maximise efficient and cost effective reductions in emissions? Q9. If auctioning is part of the allocation methodology what is the appropriate level of auctioning?)

100 per cent auctioning would be the most economically efficient allocation methodology. It would ensure that there would be no competitive advantages for airlines based on historical emissions. It would remove the need for the administration of a complex benchmarking scheme.ⁱ In addition, it would remove the ability of airline companies to lobby for particular benchmarking schemes which will be advantageous to their particular situation.

100 per cent auctioning would also ensure that the polluter pays, and remove the possibility of airlines making windfall profits. Ensuring that airlines have to

ⁱ The complexity of a benchmarking scheme is highlighted by the range of characteristics which could be used in a benchmarking scheme listed in the Department for Transport's consultation paper.

pay for emissions permits also provides a greater incentive for airlines to reduce their own emissions through technological and operational measures.

3) The non-CO₂ impacts of aviation must be included within the ETS from the beginning or the whole ETS will be further undermined

(Q12. Should the non-CO₂ emissions of aviation be dealt with in the EU ETS, either by a multiplier applied to CO₂ emissions or by direct measurement of nitrogen oxide emissions, or should they be dealt with by ancillary measures).

If non-CO₂ impacts of aviation are not included from the start of aviation's inclusion in the ETS, then there is a danger that including aviation in the ETS will actually lead to an *increase* in the EU's contribution to climate change. For example, to cover a growth in emissions of 100,000 tonnes of CO₂, an airline could buy a permit to emit 100,000 tonnes of CO₂ from a power station. The power station will reduce its CO₂ emissions by 100,000 tonnes whilst the airline will increase its emissions by 100,000 tonnes. However, the actual warming effect caused by the aviation emissions will be 200,000 to 400,000 tonnes of CO₂. In this example, including aviation in the emissions trading scheme would actually lead to an *increase* in global warming of the equivalent of 100,000 to 300,000 tonnes of CO₂.

Non-CO₂ effects have to be accounted for from the start of aviation's inclusion in the ETS. Until effective ancillary measures are available, there should be a multiplier of at least 2 on aviation CO₂ emissions. As the Department for Transport has previously stated that UK aviation causes 2.5 times more warming than CO₂ alone,¹³ it would be expected that the Department for Transport will argue for a multiplier of 2.5.

If and when ancillary measures are developed, it will not be enough if they only address nitrogen oxide emissions. Water vapour, and the resulting contrails and cirrus clouds, need to be addressed as well.

4) All emissions reductions need to take place within the EU; there should be no mechanism to use project credits from Joint Implementation or the Clean Development Mechanism *(Q17. We welcome comments on the links with Kyoto credits).*

As stated in the introduction, the IPCC recently highlighted that to have any chance of keeping the average global temperature increase this century to 2°C on pre-industrial levels requires global cuts in emissions on current levels of 50-85 per cent by 2050. The only way that such cuts will be made is if:

- Rich countries, including the EU and UK, make radical cuts in emissions. The EU and UK need to cut emissions by 80-90 per cent by 2050.
- Large scale-funds are made available from rich countries to enable developing countries to have adequate energy resources to tackle poverty, without rapidly increasing greenhouse gas emissions.
- New technologies are developed. When technologies are developed in rich countries which are suitable for developing countries, they need to be easily transferred.

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Funds have to be made available for low carbon development in poor countries. But they have to be made available *in addition* to emission cuts in rich countries, not *instead* of emission cuts in rich countries.

The argument that it is cheaper, easier and thus more efficient to buy emissions reductions in developing countries and that this is legitimate because it makes no difference *where* emissions reductions are made sounds fine in theory but in practice is riddled with problems.

It is notoriously difficult to monitor and verify emissions reductions in the developing world. Under the Clean Development Mechanism the largest number of carbon credits have been generated by projects claiming to reduce the gas HFC-23, rather than CO₂. One study has found that the value of credits given to HFC-23 projects at current carbon prices is €4.7 billion. However, an estimate of the cost of technology needed to capture and destroy the same amount of HFC-23 is €100 million.¹⁴ Around €4.6 billion has been generated in profit by HFC-23 generating plants, which could then further expand their operations with the reinvestment of this profit.¹⁵

One Indian chemical company, SRF, made €87 million from the sale of carbon credits in 2006/07. Ashish Bharat Ram, managing director of SRF, claimed "Strong income from carbon trading strengthened us financially, and now we are expanding into areas related to our core strength of chemical and technical textiles business."¹⁶

Mandatory regulations should exist stating that companies have to capture and destroy HFC-23, especially given the relatively low cost of doing so. However, if such regulations exist in a country, then a company cannot claim carbon credits as they would not be viewed as 'additional'. The existence of the carbon market creates a perverse incentive for governments *not* to regulate HFC-23, so that companies can make a windfall profit by selling credits.

The same process is now likely to happen for plants producing N₂O. N₂O projects are now expected to account for 11 per cent of projects under the Clean Development Mechanism. Again, the price of carbon credits is far higher than the cost of cutting N₂O. This will allow industrial producers of N₂O to reinvest profits, expand their operations and so ultimately expand the quantities of greenhouse gases they produce.¹⁷

If the aviation industry can buy CDM/JI credits to account for increases in emissions, the inclusion of aviation in the ETS will be further undermined.

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