

Plane Trading

policies for reducing the climate change effects of international aviation

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Executive Summary

Aviation is the fastest growing source of transport greenhouse gases, although it is still small in proportion to others. Yet emissions from international flights are not controlled by the Kyoto Protocol (KP) and there are no policy instruments directly addressing the problem. The International Civil Aviation Organisation (ICAO) is now developing policy options for reducing greenhouse gas emissions from aviation. It is expected to report to the United Nations Framework Convention on Climate Change in the autumn of 2001. The European Commission (EC) is also reviewing its environmental policies in relation to aviation and the UK Government will produce a White Paper on aviation in the next two years. In this context, this report reviews the current proposals and concentrates in particular on market based options: levies and emissions trading.

In assessing the policy options, we argue that five key criteria must be addressed. The policy must be environmentally effective, economically efficient and technically and administratively feasible. The effects of equity and competitiveness must be examined and the policy should reflect or move towards the polluter pays principle. Bearing these issues in mind, the current proposals for a voluntary agreement to improve fuel efficiency of aircraft would be a welcome development, but not a proportionate response to the seriousness and urgency of climate change. Our report therefore focuses on market based options. There are no definitive solutions because of the scientific and political complexities of reducing the climate change impacts of international aviation. Rather, the purpose of this report is intended to present possible policy proposals that stimulate further debate.

Emissions levies

Most forms of transport now routinely pay either charges or taxes that internalise some of the externalities of their use. International treaties protect aviation from many such policies. The use of such an economic instrument would stimulate more innovation towards emissions reduction than voluntary measures. An emissions charge, where revenue was recycled to the industry would protect competitiveness and, if the revenues were used to support emission-reducing activities, a charge would be more environmentally effective.

ICAO should alter the Chicago Convention, at its next meeting in 2001, to make it clear that national governments could place revenue neutral charges on fuel use to

reduce greenhouse gas emissions. Alteration of the fuel tax exemption would not impose a tax on all flights, but would give a strong signal that ICAO is taking climate change seriously.

NO_x emissions are not covered by the Kyoto Protocol but indirectly create regional climate effects as well as other local pollution problems. This makes a stronger case for unilateral action by the European Union (EU) on NO_x pollution. The EU should encourage and facilitate the introduction of NO_x charges or higher standards for reducing local air pollution. The EU should also explore the option of a revenue neutral NO_x charge for all intra-EU flights to address the regional climate change effects of NO_x.

Emissions trading

CO₂ emissions from international civil aviation should be included in the global emissions trading scheme being established by the Kyoto Protocol. International aviation should be added to Assigned Amounts (AAs) of Annex B Parties and should be treated the same as domestic aviation and other sectors and subject to a 5.2 per cent CO₂ reduction from 1990 levels by 2008-2012. The most advanced global policy instrument to tackle climate change is emissions trading, so efforts should be made for the most global of emission sources, aviation, to be included in that policy. Initially, only CO₂ could be controlled in this way as neither NO_x nor water vapour are covered by the KP.

80 per cent of the initial permits should be allocated on a grandfathered basis through Annex B party governments and 20 per cent should be held back for auction by either ICAO or the UNFCCC. This form of allocation should run until 2012, when we would recommend extending auctioning further. For emissions trading with a cap to be an acceptable instrument in aviation, airlines must have the flexibility to trade their permits with other sectors. This requires an open trading scheme, compatible with the KP. The legal responsibility for the permits would therefore lie with the Annex B Parties (international flights between developing countries would not come under the policy, as they do not have legally binding commitments under the KP). Initial allocation could be based on 1990 emissions with 80 per cent of the permits being allocated freely to airlines. To introduce an element of the polluter pays principle, we suggest that 20 per cent of the initial allocation be handed over to ICAO or the UNFCCC and auctioned to the airlines.

Domestic aviation CO₂ emissions should be included in the UK emissions trading scheme currently being developed by the Emissions Trading Group (ETG) and UK Government. Airlines that accept emissions caps could be exempted from Air Passenger Duty for domestic flights. Global emissions trading will take a number of years to implement. In the meantime, some countries, including the UK, are planning to introduce national emissions trading schemes. As domestic aviation emissions are already covered by the KP, there is no reason why these emissions could not be included in the UK scheme. The current Air Passenger Duty could be used as an incentive for airlines to join the scheme.

Partnership with industry

ICAO and the Intergovernmental Panel on Climate Change (IPCC) should collaborate to set up an international task force with the major aircraft and engine manufacturers on finding alternative designs for passenger aircraft capable of radical reductions in greenhouse gas emissions. The IPCC has stated that global greenhouse gas reductions must be cut by at least 60 per cent to prevent dangerous climate change. The Royal Commission for Environmental Pollution recommends the UK should cut its emissions by 60 per cent by 2050. Demand for air travel is predicted to increase rapidly over that period. The long-term solution to greenhouse gas emissions from aviation may well be in alternative fuels or engines. As the lead time for aircraft design and manufacture is so long, and the planes themselves remain in service for decades, industry experts and climate scientists need to start now on the task of finding alternatives. The revenues from permit auctions could be used to fund a major international collaboration on technological solutions to climate change and aviation.

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