

The Impact of Environmental Regulation on Aviation Finance: Preliminary Document

14 December 2007

The developing regulatory framework addressing climate change and other environmental items will have a significant impact on the aviation sector and the community it serves. The provision of finance to enable the world's airlines to acquire and use modern aircraft and engines with advanced environmental technologies is a critical part of the aviation sector. Among the wide-range of considerations to be taken into account in developing that regulatory framework, therefore, is its impact on the global aviation finance community that will be called upon to finance lower-emissions technology aircraft.

Aviation Working Group and its Work on Environmental Matters

The Aviation Working Group (the 'AWG') is a non-profit entity, chaired by Airbus and Boeing, comprised of the world's major aviation manufacturers and financial institutions. Its members include leading manufacturers or financiers from Asia, the European Union, Latin America, and North America. The purpose of the AWG is to contribute to the development of policies, laws, and regulations that facilitate advanced international aviation financing and leasing. AWG members manufacture virtually all of the world's large commercial aircraft and engines and finance a significant part of such equipment. See www.awg.aero.

The AWG is currently developing a foundational position paper on the impact of environmental regulation on aviation finance, which will include issues to be considered in the regulatory process. That paper is expected to be released in the first half of 2008.

Global Approach to Environmental Policy and Regulation on Aviation

The AWG supports in principle a global approach to environmental policy and regulation impacting the aviation sector, developed under the auspices of the International Civil Aviation Organization ('ICAO'). We are encouraged by the Resolutions agreed at the 36th General Assembly of ICAO, including those relating to the establishment of a new Group on International Aviation and Climate Change and to market-based measures.

The basic reasons for our support for such a global approach are summarized as follows. First, the issue of climate change is a global one, as are its causes. Second, air transport is a key driver of global integration and its regulation, unless global, can have undesirable and unforeseen consequences. Third, aviation emissions do not recognize national borders. Fourth, a significant portion of aviation emissions is released in international airspace. Fifth, aviation's contribution to global warming should be considered holistically, rather than piecemeal, and relative to the contribution of other sources of greenhouse gases. That will enable proportionate

policies to be adopted. Sixth, the environmental impacts of aviation have traditionally been regulated at the global level by ICAO. Seventh, the existing law in this area, the Kyoto Protocol, specifically tasks ICAO with addressing the issues of international aviation emissions. Eighth, regional approaches may impede agreement on an international solution. Ninth, regional approaches may precipitate trade disagreements or protracted litigation, if extra-territoriality is challenged. Tenth, regional approaches may produce conflicting or inconsistent regulation. That would be highly inefficient, both as regards the practicalities of airline operations and the design and manufacturing of aircraft and engines and may ultimately undermine the regulatory objectives.

A second pillar of the AWG's thought on environmental regulation is the need to consider and possibly combine aspects of various policy options (i) on the basis of hard scientific data, (ii) mindful of the environmental trade-offs particular to aviation (*see* IPCC 4th Assessment Report, Working Group III Report 'Mitigation of Climate Change' at pp. 352 – 356), and (iii) in proportion and precisely tailored to the problem area. Emissions trading is one policy option to reduce aviation's role in controlling climate change. There are other policy options to be considered, including: improvements to air traffic management; integrated airport management systems; voluntary reductions; the development (and funding) of alternative technologies; taxation policy; and improved regulatory standards.

European Union's Proposed Emissions Trading Scheme

The AWG is mindful of other developments in this field, and wishes to be as constructive as possible in connection with them. In particular, we are following the development of the proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community (the '*Proposal*').

We believe that the Proposal, like any approach to emissions trading, should have features that reflect and promote key policies, including those relating to aviation finance. Attached as **annex 1** hereto are technical comments on the drafting of the Proposal.

We also believe that the Proposal should add a final clause contemplating its merger into an ICAO-based global program, as and when such is developed.

Closing

The aviation sector has made significant advances in increasing fuel efficiency over the past three decades (*see* graph set out as **annex 2** hereto), and is committed to continuing that process. That should be recognized in policy and regulatory analysis and formulation.

The AWG looks forward to contributing to the important policy and regulatory work on the basis of the above-noted position paper.

END

The Impact of Environmental Regulation on Aviation Finance: Preliminary Document – ANNEX 1

(Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community (the '*Proposal*'))

The AWG wishes to raise the following technical comments on the drafting of the Proposal. Our comments are summarised below followed by suggested amendments to the Proposal.

New Entrants and Other Intra-Sector Competitive Dynamics

- The Proposal takes insufficient account of the need to provide the fair access to allowances that is necessary to maintain normal intra-sector competitive changes, particularly for new entrants starting aviation activities for the first time during a Scheme period ('*New Entrants*') and to accommodate variations in market share among existing operators ('*Share Variation*').
- The Proposal is therefore likely to distort intra-sector competition with resulting adverse economic and environmental consequences. By creating a bias towards the status quo, the Proposal would frustrate normally occurring environmental improvements attributable to the sector innovation that is prompted by (i) competition from New Entrants and (ii) existing operator efficiencies incentivised through the prospect of Share Variation.
- Increasing the amount of allowances to be auctioned will not solve these problems.
- A better solution is to hold back from the overall cap an appropriate reserve of allowances accessible only to New Entrants or existing operators on the winning side of Share Variation, in the manner proposed below.

Definition of 'aircraft operator'

- The definition of 'aircraft operator' does not adequately reflect the varied financial arrangements and ownership structures prevailing in the aviation sector.
- Where an aircraft is being operated pursuant to a leasing, charter, or similar arrangement, then provided that the owner of that aircraft identifies the relevant lessee, charteror, or equivalent entity, that lessee should thereafter become the party responsible for compliance with the provisions of the Proposal for the period of such arrangement.
- It should be noted that the ability to identify the relevant lessee from publicly available sources would be improved if the Cape Town Convention on the Recognition of International Interests in Mobile Equipment was fully implemented.
- The definition should also be more closely tied to the crucial concept of 'control' over the aircraft's operation.
- The definition should therefore be amended as set out below.

De minimis levels of aviation activity

- Entities that perform only a very limited number of aviation activities per year should be excluded from the requirements of the Scheme, otherwise the significant

administrative requirements of the Scheme will be a disproportionate burden.

- A ‘de minimis’ exemption is already being used in the existing Scheme and should also apply to aviation.

Proceeds of auctioning

- A substantial portion of the proceeds of auctioning should be used towards research into alternative means of tackling emissions inefficiencies in the aviation sector, such as advances in air traffic control and improvements in integrated airport management IT systems.

NOx Multiplier

- An NOx multiplier should not be included in the Proposal, as NOx is regulated under ICAO standards implemented in EU member States and is not targeted by the Kyoto Protocol.

Level Playing Field Aspects

- The Proposal seeks to provide a level playing field among airlines. That will not be ensured unless the Proposal (i) in principle treats flights operated on competing aircraft the same, and (ii) commences for all covered flights on the same date.

Level of the Cap and Emissions Trading with other Sectors

- We reserve our position on the total allowances to be allocated and on whether and to what extent emissions trading should be permitted between the aviation and other sectors.

Technical Drafting Suggestions and Justifications

Text proposed by the Commission

Suggested AWG amendments in bold italics

Amendment 1

Definition of ‘aircraft operator’

Article 3, paragraph (o)

(o) ‘aircraft operator’ means the person who operates an aircraft at the time it performs an aviation activity listed in Annex I or, where the operator is not known or is not identified by the owner of the aircraft, the owner of the aircraft;

(o) ‘aircraft operator’ means the person who ***is in control of, and entitled to determine the flight activity of,*** an aircraft at the time it performs an aviation activity listed in Annex I or, where ***that person*** is not known or is not identified by the owner of the aircraft, the owner of the aircraft, ***save that where the aircraft is being operated pursuant to a leasing, charter, or similar arrangement, the owner of such aircraft shall only be obliged to identify its immediate lessee, charteror or equivalent person, and provided it does so such lessee, charteror or other equivalent person shall thereafter be deemed to be the owner for the purposes of this definition;***

Justification

The definition of an aircraft operator does not completely deal with the reality of aircraft lease and financing transactions. There are a number of situations where the ‘operator’ may not normally be readily identifiable, especially in the aircraft lease and finance scenario.

Firstly, most European countries do not currently permit public filings by owners to record the existence of a lease to a relevant operator.

Once the Cape Town Convention on International Interests in Mobile Equipment is more widely ratified within Europe it will be possible for parties to a leasing arrangement to publically record their interests but currently Ireland is the only EU Country to have ratified that treaty. Accordingly the ability of the owner to ‘identify’ the person that operates the aircraft may be impaired through no fault of its own due to the absence of registration facilities. To default the liability to the owner in such situations is not an equitable position.

The ability to identify relevant lessees from publicly available sources would be improved if the Cape Town Convention was fully implemented. In the meantime, owners should be allowed to identify lessees, charterors, etc. by production of appropriate information to the relevant administrative body.

Secondly, even if the original lessee can be identified through a public registry, the aircraft may be subsequently subleased to another entity, or wet leased to a different operator. The ultimate sub lessee or wet lessee may often not be identifiable due to absence of filing facilities as per above or in some cases the fact that the owner will not know who the wet lessee party is in a charter situation at any one time. The definition of ‘aircraft operator’ in the Proposal does not take account of this fact. Provided that the owner of the aircraft identifies the relevant lessee, charteror or equivalent entity, that entity should thereafter become the party responsible for compliance with the provisions of the Proposal.

Finally, when an aircraft is leased or subleased/wet leased and then has to be repossessed by an owner on a default, the flights that are required to be made by or on behalf of the owner to recover the aircraft from the defaulting party should not cause the owner to become an 'operator' for the purposes of the Proposal. Repossession flights should be exempt from the parameters of the legislation.

Amendment 2
Definitions relating to New Article 3e
Article 3, new paragraphs (s), (t) and (u)

(s) 'new aviation entrant' means an aircraft operator that (i) has been issued with an Aircraft Operating Certificate (other than in connection with a corporate reorganisation, restructuring, merger or other similar arrangement) for the first time after the start of a period referred to in Article 3b and which (a) has not previously received an allocation of allowances, or (b) is making a further application pursuant to Article 3e, paragraph 8; or (ii) requires additional allowances in respect of an expansion of its aviation activities listed in Annex 1 in the then current period referred to in Article 3b.

(t) 'new aviation entrant reserve' means a central reserve of allowances set aside and managed by the Commission pursuant to Article 3e for distribution to new aviation entrants in respect of new entrant aviation activities.

(u) 'new entrant aviation activities' means aviation activities listed in Annex 1 performed by a new aviation entrant, and, in the case of new aviation entrants of the kind described in part (ii) of the definition of new aviation entrant above, in respect of which no prior application has, or could have, been made pursuant to Article 3d paragraph 1.

Justification

See Amendment 4

Amendment 3
Proceeds of auctioning
Article 3c, paragraph 4

Revenues generated from the auctioning of allowances in accordance with paragraph 3 shall be used to mitigate greenhouse gas emissions, to adapt to the impacts of climate change, to fund research and development for mitigation and adaptation, and to cover the costs of the administering Member State in relation to this Directive. Member States shall inform the Commission of measures taken pursuant to this paragraph.

Revenues generated from the auctioning of allowances in accordance with paragraph 3 shall be used to mitigate greenhouse gas emissions *from aviation*, to adapt to the impacts of climate change, to fund research and development *in this field* for mitigation and adaptation (*including for research into alternative means of tackling inefficiencies in the aviation sector such as advances in air traffic control and improvements in integrated airport management IT systems*), and to cover the costs of the administering Member State in relation to this Directive. Member States shall inform the Commission of measures taken pursuant to this paragraph.

Justification

The implementation of the Proposal should not be, or be perceived to be, a means to financially constrain the aviation industry but a way of efficiently managing the climatic effects of aviation.

The aviation sector is best placed to tackle its contribution to climate change and therefore to make most efficient use of such proceeds.

Use of such proceeds to reduce the burden of taxation for other modes of transport perceived to be more environmentally friendly ignores the fact that in many instances air travel is the only viable option (e.g. trans-ocean and other long-haul journeys).

Amendment 4
New Aviation Entrant Reserve
New Article 3e¹

Article 3e

New aviation entrant reserve

- 1. For each period referred to in Article 3b, the Commission shall set aside from the total quantity of allowances available to be allocated pursuant to Article 3d in that period a new aviation entrant reserve.*
- 2. The total quantity of allowances to be included in the new aviation entrant reserve for each period shall be determined at the same time as the matters set out in Article 3d paragraph 3, shall take account of comments received from the public and shall be equivalent to the number of allowances necessary to cover the sum of the emissions that will result from forecast new entrant aviation activities for the relevant scheme period, as adjusted to reflect the overall cap on allowances applied to the aviation sector in the relevant period and the duration of such period.*
- 3. New aviation entrants may apply for an allocation of allowances from the new aviation entrant reserve at any time in a relevant period by submitting an application in the prescribed form to the Commission. The Commission shall adopt a Regulation containing detailed provisions for the application and allocation process for allocations from the new aviation entrant reserve.²*

¹ Existing proposed Article 3e to be renumbered 3f

² The AWG envisages that the application would be subject to verification and quality assurance by the Commission. Speculative or unrealistic applications would be identified and rejected. The Regulation should deal with the form of the application, and when and how applications can be made.

4. *Allowances shall be allocated from the new aviation entrant reserve by the Commission during the relevant scheme period in the order in which successful applications are determined by the Commission.*
5. *The method of allocation of allowances from the new aviation entrant reserve shall so far as possible be on the same basis as allowances are allocated to other aircraft operators in the relevant scheme period. In particular:*
 - (a) *The same proportion of allowances allocated from the new aviation entrant reserve should be allocated free of charge as is allocated free of charge in respect of non-new entrant aviation activities in the same period;*
 - (b) *Allowances allocated from the new aviation entrant reserve that are not issued free of charge should be issued to new aviation entrants at the then prevailing buy side price of EUAs available on the market at the time of allocation, as determined by the Commission;*
 - (c) *The number of allowances that are allocated to a new aviation entrant should be calculated by applying the average emission efficiency benchmark referred to in Article 3d paragraph 3(c) to tonne-kilometre data provided by the new aviation entrant and accepted by the Commission, in respect of the aviation activities listed in Annex 1 that the new aviation entrant predicts that it will perform in the remainder of the period; and*
 - (d) *Allowances will be issued to new aviation entrants on an annual basis (pro rata for the remainder of the period in the case of the year of application).*

6. *Allowances allocated to new aviation entrants from the new aviation entrant reserve shall be credited by the Commission against the new aviation entrant's surrender obligation pursuant to Article 12 paragraph 2a but shall not be issued to it and shall not be capable of being traded by the new aviation entrant. Such allowances shall not be so credited until the purchase price for such allowances calculated pursuant to Article 3e paragraph 5(b) has been paid in full by the new aviation entrant.*
7. *Any allowances left unallocated in the new aviation entrant reserve at the end of any period shall first be made available to aircraft operators by way of auctioning and any remaining allowances at the end of the period shall then be cancelled.*
8. *An aircraft operator that satisfies the definition of 'new aviation entrant' in one scheme period shall, whether or not it receives an allocation of allowances from the new aviation entrant reserve in that period, be allocated allowances in the same manner as non-new aviation entrant aircraft operators from the start of the next following scheme period where it has available to it the verified tonne-kilometre data referred to in Article 3d paragraph 1 for the aviation activities listed in Annex I. If the new aviation entrant does not have such verified tonne-kilometre data available to it at the relevant time, it shall be treated as a new aviation entrant for the purposes of the next scheme period and be entitled to apply for allowances pursuant to this Article 3e in that scheme period but not in any subsequent period.*

Justification

The Proposal takes insufficient account of the need to provide the fair access to allowances that is necessary to maintain normal intra-sector competitive changes, particularly for new entrants starting aviation activities for the first time during a Scheme period (*'New Entrants'*) and to accommodate variations in market share among existing operators (*'Share Variation'*).

It must remain possible for New Entrants to enter the aviation market and for existing operators to gain market share (for example, by responding to competitive challenges from New Entrants), in each case without undue competitive disadvantage.³

In spite of the collective losses of the airline industry over recent years, there is still a significant flow of new aircraft operators to the sector. As at March 2007, at least 39 new airlines had started operations since the beginning of 2006. Another 60 airlines were proposed start-ups seeking equipment, funding or route licences.

If the Proposal is not amended, New Entrants will be forced to try to purchase 100% of the allowances they need to operate either (i) from the amount that is auctioned (even assuming that auctions are held at sufficiently regular intervals for New Entrants to access them when they are needed) or (ii) by trying to buy EUAs and/or CERs and/or ERUs on the secondary market.

In contrast, existing Scheme members will be allocated a significant number of allowances (between 50% and 97%) in respect of their existing operations free of charge.

In respect of Share Variation, the Proposal is likely to distort intra-sector competition with resulting adverse economic and environmental consequences. By creating a bias towards the status quo, the Proposal would frustrate normally occurring environmental improvements attributable to the sector innovation that is prompted by (i) competition from New Entrants and (ii) existing operator efficiencies incentivised through the prospect of Share Variation.

Increasing the amount of allowances auctioned will not remove the New Entrant or Share Variation defects because:

- Uncertainty over the outcome of the auction process and the availability of CERs and ERUs will have a disproportionate negative effect on New Entrants and their funders as well as existing operator planners;
- If auctions are held at the beginning of Scheme periods, potential New Entrants wishing to join the Scheme after the auction has taken place may have to wait up to 5 years or more to do so. Even if auctioning takes place more regularly, this will still cause significant delay to entry of New Entrants.
- By the same token, existing operators would be forced to predict their needs five years in advance in an industry where competitive changes on individual routes can occur on a daily or even hourly basis.

A better solution is to hold back from the overall cap an appropriate reserve of allowances accessible only to New Entrants or existing operators on the winning side of Share Variation, in the manner proposed above.

³ See for example the opinion of the European Economic Social Committee on [the Commission's Proposal], Brussels, 21 April 2006

Amendment 5
De minimis level of aviation activities
Annex I, paragraph 2, table, new category, point h)

h) flights performed by an aircraft operator that performs no more than [...] aviation activities per annum that would, but for this point h) constitute aviation activities

Justification

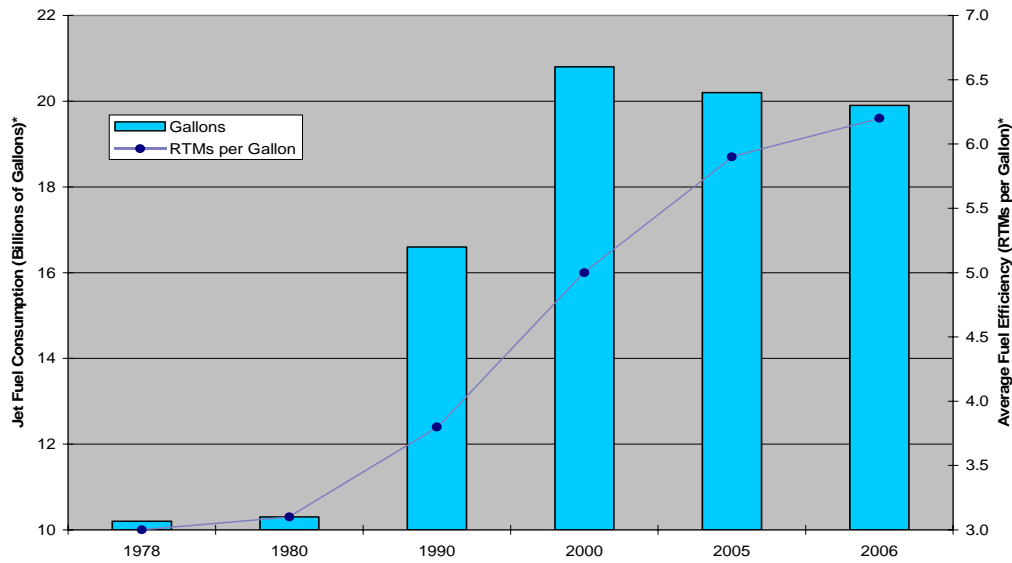
Excluding de minimis levels of aviation activity is the simplest and most effective means of avoiding the disproportionate impact of the administrative obligations on small aircraft operators.

Provision has been made to exclude small installations from the existing Scheme. For example, the UK has introduced a de minimis rule of 3 MW per installation for the large electricity producer's sector. An analogous approach should be taken in respect of aircraft operators.

Further research should be carried out at EU level to determine what the appropriate de minimis level of activity should be.

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Industry* Fuel Efficiency Has Doubled Since Deregulation
2006 Performance Up 22% from 2000 and Up 103% from 1978



Data for graph taken from ATA analysis for DOT Form 41 data (T2-Z240) and DOT monthly fuel consumption

*U.S. passenger and cargo airlines operating worldwide – scheduled and nonscheduled passenger and cargo revenue ton miles (RTMs)