



Unite Amicus Section Response to the joint DEFRA DfT Consultation on the inclusion of Aviation in the EU Emissions Trading scheme.

- 1. This response is submitted by Unite Amicus Section. Unite is the UK's largest trade union with 2 million members across the private and public sectors. The union's members work in a range of industries including manufacturing, financial services, print, media, construction, transport and local government, education, health service and not for profit sectors.**
2. The Unite Amicus Section currently represents more than 18,000 members employed in the Civil Aviation Sector, split between Cabin Crew, Engineering, Maintenance and Ground Staff.
3. Unite Amicus section currently has over 30 recognition agreements with employers such as: British Airways, Virgin Atlantic, Bmi, Flybe, JAL, Monarch, My Travel, Thomas Cook, Qantas, Air New Zealand, Easyjet, SR Technics, Bmed, BAA, bmi Baby, Bmi Regional, Jet 2, Astraesus, and First Choice.
4. According to the IPCC report on Climate Change, aviation is currently responsible for just 2% of global emissions although this level has been predicted to rise. It has been the aim of aircraft designers since the 1950's to reduce the running cost of aircraft in the worlds civil aviation fleets. Since that time designers have achieved a 70% reduction on

fuel burn and with the introduction of new aircraft this is set to be reduced by up to a further 20%¹.

5. Since the 1950's the price of aviation fuel has increased dramatically to form the majority running cost of any airline. Each kilo of aviation fuel produces on average 3.16 kilos of CO₂ during flight and hence any reduction in fuel burn has a consequential positive result environmentally. It is this incentive to reduce running costs, which has driven these measures forward over the years and made air travel available to the masses. Any measure which can be employed to reduce emissions still further is therefore being explored by the airlines and would be employed if red tape and budgets permitted. The new Airbus A380 and the Boeing 787 are aiming to achieve a fuel burn of just 3 litres per 100 passenger kilometres which is less than that required to power a typical compact car.
6. The IPCC report states that the level of emissions from aviation is expected to rise to 5% of global emissions by 2030. Within the European Union, aviation contributes 3% of emissions according to the Commission's proposal, and the overall amount has risen by 87% between 1990 and 2004². Unlike many industries, aviation cannot make huge savings overnight by changing the fuel or investing in green energy. The main driver for the increase in emissions has therefore been the need to expand a global economy and the continuing demand on fast connections between world centres of commerce. Consequently, if aviation is incorporated into an emissions trading scheme, it will always be a net purchaser of carbon credits.
7. It has also been argued that emissions at altitude have a greater impact on the environment than at ground level, resulting in a disparity between the value of carbon if traded on an open emissions trading basis with other industries. As a result this may lead to an exchange

¹ Source:- Boeing Heathrow Community Event presentation 11 May 2007.

² Source:- www.dft.gov.uk/about/strategy/whitepapers/air/

rate system being adopted where aviation receives less of an allowance per credit. Such a scheme would mean that aviation would also receive less return for savings it does achieve, which in turn will act as a discouragement to invest. Despite the possible disparity between the overall effects and volume of emissions, UNITE Amicus Section believes, therefore, that there should not be this barrier to any scheme.

8. Unite Amicus Section believes that aviation's inclusion in a trading scheme will serve to create a higher demand for newer and cleaner technology and hence support, in general terms, its inclusion.

9. Giovanni Bisignani, IATA's director general and CEO, told the April 2007 Civil Air Navigation Services Organisation conference in Maastricht that approximately 73 million tonnes of CO₂ could be saved by adopting a Single European Sky policy³. Last year alone IATA's work on over 300 routes resulted in up to 15 million tonnes of CO₂ savings. Stacking in queues on approach and waiting to take off adds additional emissions to the atmosphere accounting for an additional 5% of all emissions. Such changes require government intervention to agree on the use of their airspace and expand runways and increase the efficiency of those already in place. A typical example is Heathrow where due to the lack of investment Europe's current world hub airport suffers queues of up to twenty minutes, during which time aircraft are sitting on the taxiways with their engines on idle or circling in a holding pattern due to the lack of capacity.

10. This congestion is not just an environmental problem, as the delays have also caused the estimated financial losses to have almost tripled over the last decade from nearly £600 million in 1995 to £1.7 billion in 2005 in the UK alone⁴

³ Source:- www.iata.org

⁴ Source:- *The Economic Contribution of the Aviation Industry in the UK* – Oxford Economic Forecasting Autumn 2006 p76

11. **Unite Amicus section consequently feels that a major hurdle to the reduction of emissions in this sector is a result of lack of government action in resolving international agreements over the use of airspace and the expansion of facilities to accommodate demand.**

12. As with any industry, if additional levies have to be introduced it should be done universally so as not to provide one nation or airline a competitive edge. The recently agreed Open Skies agreement between Europe and the United States has opened up the intra European market to airlines from that nation. Marion Blakey of the US Federal Aviation Administration stated in Phoenix on the 9th May 2007 that the proposals constitute an illegal act. It is widely believed that the International Civil Aviation Organization (ICAO) Assembly will act to block any provisions to impose a compulsory trading scheme on non EU nations. Consequently, whatever scheme is introduced it would in all probability be legally challenged if it is imposed on these nations. It would appear that the ICAO are not opposed to the idea of a scheme in general terms and it has its supporters outside of Europe, it is the way in which the EU is unilaterally implementing it to which it objects.

13. If emissions trading is to work in this industry all flights originating or departing from a European airport need to be treated equally regardless of their home nation. Should the United States or any other body raise a successful challenge to the introduction of this scheme, the methodology employed in reducing emissions would require significant amendment or even revocation to ensure that Europe's own domestic operators are not disadvantaged.

14. **Unite Amicus section believes in having a level playing field for competition to flourish, any imbalance in that situation will lead to a significant loss of jobs and revenue for the British economy.**

15. The spread of aircraft and civil aviation in general is not even throughout Europe. The UK has the largest fleet of civil aircraft in Europe and is home to over 43 airlines with Germany second with just 25 (see appendix 1). Of the aircraft in service for EU based companies, 20.3% are based in the UK.
16. Aviation is also responsible for a very large slice of the UK economy contributing £11.4 billion to the UK GDP in 2004 alone. The industry directly employs 186,000 people, with over 520,000 jobs in the UK dependant on this industry⁵. The *Future of Air Transport Progress Report*⁶ identified that passenger demand is expected to increase from 228 million passengers in 2005 to 465 million passengers in 2030.
17. The Oxford Economic Forecasting group estimate that if the UK government's White Paper runway proposals were fully implemented, GDP would increase by an additional £13 billion a year in today's prices by 2030. This is based on a present estimated net value of £81 billion, all of which would be at risk if a bias favouring other nations were adopted. A CBI survey conducted in March of 2006 showed that 77% of all the companies surveyed had their global headquarters in the UK, with 47% stating they had subsidiaries in other countries.
18. Air services are practically important for the UK's trade with the fastest growing regions of the world economy such as China and India and with the United States. Without these links, the UK and the rest of Europe will be left behind, possibly leading to a recession. It is therefore vital that the Civil Aviation industry is not asked to carry too heavy a burden.
19. Aviation in Europe faces competition from outside the union who are currently arguing about the legality of the scheme. If they could legally

⁵ Source:- *The Economic Contribution of the Aviation Industry in the UK* – Oxford Economic Forecasting Autumn 2006

⁶ Source:- *Air Transport White Paper Progress Report*, www.dft.gov.uk/162259/165217/185629/progressreport

avoid an emissions trading scheme, it will be the British economy, which will be the most effected.

20. It is to be noted that Aviation is not the most polluting form of transport, although it has become the target of considerable amount of adverse environmental publicity. Unite Amicus Section feels that if Aviation is to be included there is no reason why other forms of transport with comparable or higher levels of emissions should not be included. Transport currently accounts for 14% of global greenhouse gas emissions and of these emissions, three quarters are from road transport with aviation currently accounting for around one eighth.⁷

21. Unite Amicus Section believes that allowance calculations would need to be set at a level which takes into account Fleet Size, Age of Aircraft and Engine Efficiency to be truly effective which will encourage airlines to invest in newer more environmentally friendly aircraft.

22. Given that there is currently a five to six year delay between orders being placed with aerospace manufacturers⁸ and them being fulfilled it is difficult to see what more can be done without government intervention to increase the number of qualified aviation engineers available which is the major stumbling block currently faced by the industry.

23. Aircraft and engine manufacturers are introducing kits to upgrade existing engines and aircraft profiles all the time but these can normally only be installed during a service. The introduction of blended winglets for example can extend cruise mileage by up to 5% by improving the flight characteristics⁹. The introduction of the Trent 1000 Rolls Royce

⁷ The Economics of Climate Change. The Stern Review p172

⁸ Source:- Presentation by Boeing on the 11th May 2006

⁹ Source:- www.aviationpartnersboeing.com

engine that will power the Boeing 787 Dreamliner will reduce CO₂ production by 13.4% when in service¹⁰.

24. Unite Amicus Section believes that even with an effective trading scheme, the financial burden associated with purchasing these upgrades and new aircraft will not be mitigated to any significant degree by the ability to sell off the additional credits alone given the amounts involved.

25. Government has stated within the consultation that it is continuing to explore the role of other economic instruments for tackling aviation's climate change impacts beyond the Emissions Trading scheme. **If this is to be the case Unite 'Amicus Section would want to be assured of its inclusion in all of these considerations.**

26. A typical civil aircraft is serviced once every four years with some airlines extending this period for as long as possible within the safety requirements to ensure that their assets are being utilised to the full. This is especially true in times of recession or following a security or health scare nationally. A clear example of this would be following the foot & mouth outbreak when very few people were flying to the UK and during the last recession. An early introduction of the scheme would potentially stimulate a desire to reduce emissions more swiftly but this should not mean that targets should be set which bear no relation to reality.

27. IATA claim that the overall level of emissions, despite the growth in the industry, has remained almost constant over the last fifty years, due to technical innovation, despite government evidence to the contrary. If this were true the comparison date on emissions could be set anywhere. If the scheme is to represent the current fleet size a date as close as possible to that of the schemes introduction should be used. If the 87%

¹⁰ Rolls Royce Trent 700 produced in 1995 used as a baseline

increase figure is to be believed, a 1990 baseline year for emissions reductions, as in the Kyoto Treaty, would be a very challenging option for aviation. A phased approach to the scheme's introduction would also allow the scheme to be tailored to fit reality as with phase two, the wider EU scheme. Unite Amicus Section feels therefore that as option b the would provide the closest link to the current levels, given projected growth, it would support the link to a 2004 to 2006 baseline.

28. The non-CO₂ emissions from aviation can potentially have a far reaching and more damaging effect on the environment. In the world of aviation design is all about compromises and striking a happy balance. If the engine pressure ratio was increased for example, it would have an immediate positive effect in reducing CO₂ but in the process it would increase the emission of Nitros Oxides (NO_x) which are 200 to 300 times more effective in trapping heat than carbon dioxide¹¹. Likewise by making aircraft capable of cruising at ever higher altitudes, the amount of fuel burnt, and hence CO₂ and NO_x are reduced, but at higher altitudes NO_x are more readily converted into ozone. The other possible disadvantage of increased contrail creation although the jury is still out on their effects on the atmosphere¹². A steep climb to altitude reduces the noise impact of aviation on the ground, but this results in an increase in all other emissions. Consequently any multiplier applied to emissions would be difficult to achieve a correct balance.

29. Dependant on the scope of the scheme introduced, small operators, such as those servicing the many remote islands and oil and gas platforms, would feel the effect more than the large airlines, as they have less of a scope for improvement or investment. Consequently a threshold should be introduced into the scheme to allow small operators with less than a set turnover, level of passengers or size to operate outside the scheme.

¹¹ Source:- The Environment Agency.

¹² Source:- IPCC Report May 2007

30. The EU Commissioners have called on the industry to make a "fair contribution" to the fight against climate change. Unlike other industries aviation has been working on this area for years and there is hence very little scope for large headline savings within the industry without significant government involvement.

31. Unite Amicus section still believes, however, that the inclusion of Civil Aviation into the overall EU trading Scheme is a good idea with reservations given the potential problems highlighted.

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Appendix 1 - Number of Companies and Aircraft per Nation

EU Member State	Country	Aircraft	Companies	Aircraft/Company
	Russia	982	69	14.23
*	UK	925	43	21.51
*	Germany	787	25	31.48
*	France	465	16	29.06
*	Spain	428	23	18.61
*	Italy	352	22	16.00
*	Netherlands	231	9	25.67
*	Sweden	221	15	14.73
*	Ireland	217	6	36.17
	Turkey	205	16	12.81
	Switzerland	127	11	11.55
*	Belgium	126	7	18.00
	Norway	120	6	20.00
*	Portugal	88	9	9.78
*	Denmark	87	6	14.50
*	Bulgaria	77	9	8.56
*	Finland	75	5	15.00
*	Poland	73	6	12.17
*	Greece	71	8	8.88
*	Czech Republic	63	4	15.75
*	Austria	54	9	6.00
*	Hungary	46	4	11.50
*	Romania	41	4	10.25
*	Luxemburg	34	3	11.33
	Moldova	24	6	4.00
*	Cyprus	21	3	7.00
*	Lithuania	18	5	3.60
	Serbia	16	2	8.00
*	Slovenia	15	1	15.00
*	Estonia	14	3	4.67
*	Latvia	13	3	4.33
	Greenland	11	1	11.00
*	Slovakia	11	1	11.00
*	Malta	9	2	4.50

Source: - Flight Air Transport Intelligence