



position paper

European Low Fares Airline Association

LOW FARES AIRLINES AND THE ENVIRONMENT

June 2005

1. Executive summary

Environmental impacts of air transport have been the “hot topic” over the past months and some unfortunate myths have been repeated by various stakeholders. The European Low Fares Airline Association (ELFAA) in this position paper aims to clarify these inaccuracies and break the myths in order to promote sensible discussion of the issues.

Successful liberalisation of air transport in Europe and the resulting emergence of the low fares airlines (LFAs) have brought direct benefits to European consumers and regional development in the form of increased employment, cross border investment and cost efficiencies to small and medium-sized undertakings, among others. LFAs contribute to the development of sustainable tourism and environmentally efficient travel throughout Europe. LFAs are actually minimizing environmental impacts given the highly efficient nature of their operations and the fact that they operate modern, fuel efficient fleets, i.e. make the most of current technological achievements by aircraft manufacturers. LFAs are therefore the most environmentally responsible segment of the air transport industry.

There still remains room for improvement, however, mainly in the fields of air traffic control and better use of existing infrastructure, and these should be treated as priorities by European policy makers. Further technological improvements are possible in the near future and new aircraft concepts as well as the use of alternative fuels are expected in the medium to longer term. LFAs will be amongst the first to take advantage of these new technologies.

ELFAA maintains that market mechanisms to reduce environmental impacts of air transport should be discussed on an international level and thoroughly examined from

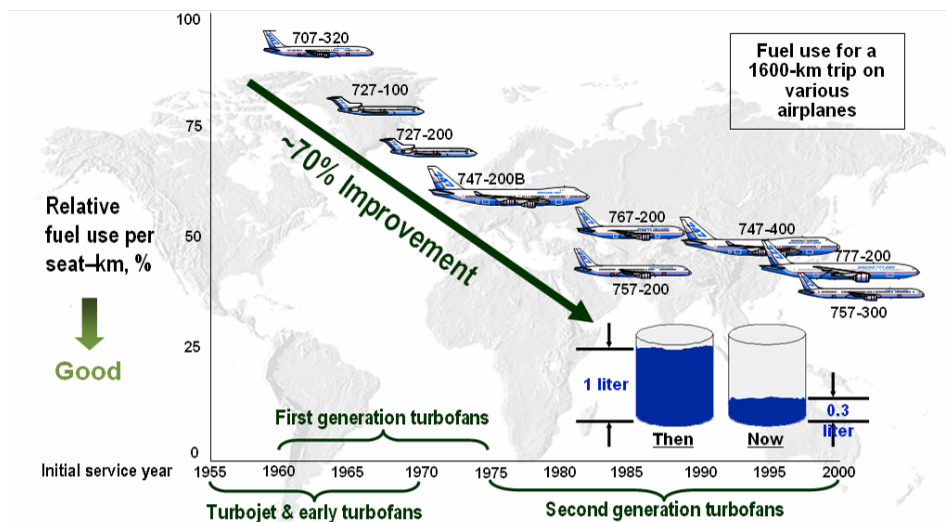
the point of view of aviation’s economic impacts and the fact that it has been showing steady improvement over the past years. Any discussion should be centred on the need to protect free undistorted competition and promote environmental efficiency. Given the importance of air travel – and in particular low air fares - to achieving the objectives of the Lisbon Agenda and the success of the European Union, consideration at a political level is also paramount. Air transport is already the most heavily taxed transport sector¹ and regulators should not use environmental arguments simply to raise their budgets and place a further burden on the industry. This will have no positive effects on the environment and will instead adversely impact the entire European economy.

2. What have low fares airlines achieved so far?

2.1. Technology

Aircraft technology has been significantly enhanced over the past 40 years – something which is often overlooked. Average fuel burn and carbon dioxide and water vapour emissions per passenger seat kilometre in modern aircraft are approximately 70% lower than in the aircraft designed in the 1960s, which on average makes air transport more energy efficient per passenger seat kilometre than road and train transport.²

Figure 1 Fuel efficiency improvement between 1955 and 2000.³



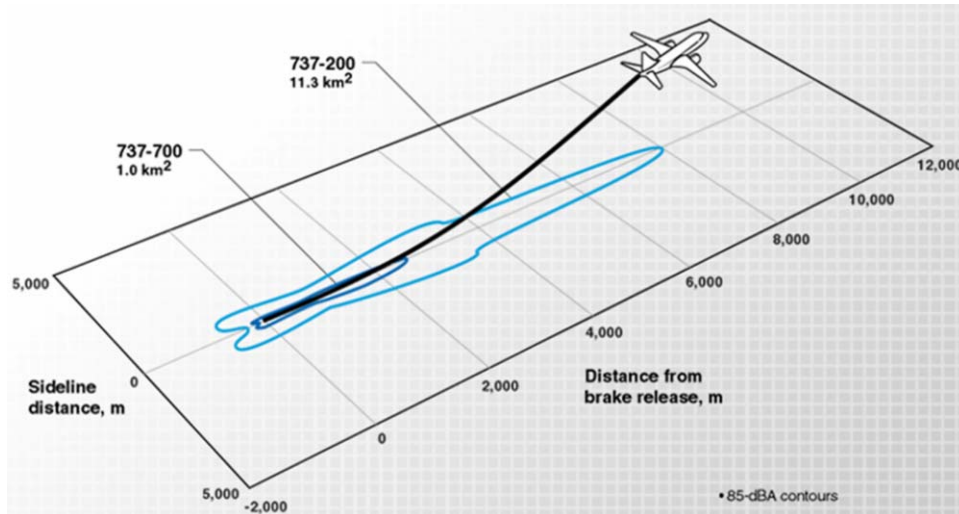
¹ For example, air transport in the UK contributes £4.15 per passenger to the national budget while every rail and bus passenger receives a governmental subsidy of respectively £1.69 and £0.15. For more details see: Volterra Consulting Ltd, Fiscal Treatment of Public Transport. Examining how air travel is taxed in comparison to other forms of transport, November 2003.

² This relation depends on the duration and speed of the journeys being compared.

³ Source: Boeing.

Noise emissions generated by modern aircraft are significantly lower than what used to be the standard in the 1960s and are actually lower than any current noise limitations imposed by legislation.

Figure 2 The sound from modern short haul airplanes affects 82% less area.⁴



These positive developments have been made possible by the advances in engine technology, the reduction of aerodynamic drag of the aircraft and the implementation of numerous other improvements to the aircraft design.

Operating efficient aircraft forms a core element of the LFA business model. ELFAA members operate modern aircraft (mainly Boeing 737 and Airbus 319 and 320) and most of them have implemented, or are currently undergoing, fleet replacement programmes giving ELFAA members youngest and most technologically advanced aircraft fleet. Therefore, LFAs make a direct contribution to reducing the impact of aviation on environment by fully exploiting the achievements of aircraft manufacturers.

2.2. Operational measures

Certain operational characteristics of the LFA business model further reduces its impact on the environment as compared to more traditional modes of operation. These specific features, which are explained in more detail below, include: more efficient seat configuration and higher load factors; use of uncongested airports; limited noise nuisance; point-to-point services; and reduced waste.

⁴ Source: Boeing.

2.2.1. Seat configuration and load factor

LFA's do not offer business class seating and extensive catering and therefore their aircraft have a higher seat density than the same aircraft operated by a traditional carrier. For example, the Boeing 737-800 in service with a traditional airline will generally only have 162 seats, whereas a LFA can configure this aircraft to accommodate up to 189 seats. Together with the fact that LFA's normally achieve on average at least a 10% higher load factor than traditional airlines, i.e. 80% as opposed to 70%, this efficient aircraft configuration decreases the average energy use per passenger in the LFA sector by approximately 25% compared to traditional airlines.

Figure 3 Differences in aircraft configurations and load factors – example of Boeing 737-800⁵



2.2.2. Uncongested airports

LFA's generally operate to uncongested airports where traffic levels are lower than at major hubs and therefore delays occur less frequently, which eliminates additional fuel burn. These secondary airports also have shorter taxiing times and involve little or no time spent holding in aircraft stacks waiting to land which further reduces fuel burn.

⁵ European Low Fares Airline Association, Liberalisation of European Air Transport: The Benefits of Low Fares Airlines to Consumers, Airports, Regions and the Environment, 2004.

2.2.3. Limited noise nuisance

Since uncongested airports used by LFAs are mostly located in sparsely populated areas, the noise nuisance is minimised. Also, LFAs generally avoid night operations which further reduces overall noise nuisance.

2.2.4. Point-to-point services

The point-to-point model applied by LFAs further decreases the environmental impacts involved in hub and spoke operations as LFAs do not force passengers to connect through major hubs to reach their final destination but offer them a possibility to fly directly from point A to point B. This solution decreases congestion at major hubs and reduces the number of take-offs and landings per passenger. Also increasing numbers of passengers taking advantage of services now offered from their local airports means that road journeys taken to reach the airport are significantly reduced.⁶

2.2.5. Less waste generated

The lack of “frills” offered on low fares services significantly reduces the amount of waste normally generated by traditional services. LFAs do not usually hand out newspapers and do not offer “free” meals and drinks, all of which generate huge amounts of waste on traditional airlines. This lack of extensive catering also reduces additional weight of the aircraft, which further lowers fuel burn.

3. Recommendations

The following are ELFAA’s recommendations to further reduce the environmental impacts of air transport while at the same time promoting growth and maintaining competitiveness. As will be explained in more detail below, there are a variety of results-oriented solutions available and these should be addressed before considering the introduction of any market mechanisms.

3.1. Improved efficiency of air traffic control

The liberalisation of air transport in Europe created a common aviation area extending from Portugal to Finland and from Iceland to Cyprus. However, each national government retained control over its airspace as regards air traffic control (ATC).

⁶ Flybe estimates that a significant portion of the additional 1 million passengers flying out of Southampton have moved from larger South East Airports (Heathrow & Gatwick) reducing car miles travelled by some 17m

Although the European Commission has made considerable efforts to rationalise European ATC, this area is still highly inefficient. For example, airlines are often forced to follow “W-shaped” flight paths which can extend the total flight distance unnecessarily.

Optimisation of flight paths in Europe and other improvements in air traffic management could improve fuel efficiency by up to 12%.⁷ The Single European Skies initiative should therefore be fast tracked, which would immediately reduce flight times and therefore improve emission levels.

3.2. Better use of the existing infrastructure

As explained in more detail above, secondary airports offer less congestion and fewer delays, which significantly reduces the overall impact of air transport on the environment. LFAs are already extensively exploiting underutilised airports around Europe. However, this process is often obstructed by the national carriers trying to protect their dominant position in main hubs,⁸ or by the misapplication of the state aid rules.⁹

There are still numerous underutilised airports in Europe that could be successfully developed as alternatives to the main hubs. The use of uncongested airports should therefore be encouraged by policy makers in line with the objective to better utilise the existing transport facilities in Europe. The European Union and national governments should also divert their efforts from subsidizing the mammoth infrastructure projects, such as Milan Malpensa, towards promoting improved road and train access to existing underutilised secondary airports.¹⁰

3.3. Technological improvements

Aircraft and engine technologies have been tremendously improved over the past 40 years and modern aircraft provide for greater efficiency in terms of fuel burn and emissions. It is projected that fuel efficiency will further increase as a result of technological improvements by 30-50% between 1997 and 2050.¹¹ Furthermore, aircraft

⁷ Intergovernmental Panel on Climate Change, Aviation and the Global Atmosphere, Chapter 8 – Air Transport Operations and Relation to Emissions, <http://www.grida.no/climate/ipcc/aviation/119.htm>.

⁸ National carriers often try to deny secondary airports the right to use IATA-recognised names which include the name of the nearest metropolitan area, e.g. Frankfurt-Hahn for Hahn Airport.

⁹ Arrangements between the airlines and the secondary airports are often being challenged in courts or before the competition authorities even though they comply with the Market Economy Investor Principle (MEIP), e.g. Berlin Schoenefeld.

¹⁰ For more information on secondary airports see: Richard de Neufville, The Future of Secondary Airports: Nodes of a parallel air transport network?, http://ardent.mit.edu/airports/de_Neufville_airport_papers.html.

¹¹ Intergovernmental Panel on Climate Change, Aviation and the Global Atmosphere, Chapter 7 – Aircraft Technology and Its Relation to Emissions, <http://www.grida.no/climate/ipcc/aviation/089.htm>.

manufacturers constantly study innovative aircraft and engine concepts, however, introduction of any of these should rather be seen in the long term perspective. In the meantime, airlines should be encouraged to invest in modern aircraft and/or to introduce improvements to existing aircraft such as winglets, in order to steadily improve the environmental performance of their fleets.¹²

This solution requires regulation at the International Civil Aviation Organisation (ICAO) level in order to introduce binding requirements on airlines to increase their environmental efficiency. These requirements should be accompanied by a system of strong penalties on airlines that do not meet the required standards.

3.4. *Use of alternative fuels*

The use of alternative fuels may be the future of air transport as it is expected to reduce both the environmental impacts and the cost base of this industry. However, similar to the introduction of new aircraft and engine concepts, the use of alternative fuels in air transport should be perceived in the medium to long term perspective. The European Union should actively support the R&D in this area under one of its funding projects.

3.5. *Incentivise efficient operations*

The efficiency-oriented operational measures applied by LFAs bring, as explained above, significant reductions in terms of fuel use and emissions. These operations, which include more efficient seat configuration, higher load factors, point-to-point services, reduced waste, etc., should be recognised and actively encouraged by policy makers so that they are eventually applied by the entire industry.

3.6. *Market mechanisms*

A discussion on market mechanisms as means of reducing environmental impacts of air transport should be held on an international level, preferably within the existing structures of the ICAO, as any market based mechanism affecting air transport should cover the entire industry throughout the world. Unilateral introduction of any of such mechanisms, on a national or multinational level, risks distorting competition in this increasingly global industry.

For example, making all flights in the European airspace subject to a market mechanism would be discriminatory against European airlines that conduct all of their operations in

¹² Winglets are shown to reduce fuel burn by up to 6% and noise affected area by 6.5% (source: Aviation Partners Boeing).

Europe as it would affect their entire network. Other European airlines, which concentrate on intercontinental traffic, could easily absorb the increased cost of their European operations and spread it over their entire network. These airlines would therefore be able to cross-subsidise their European operations from the revenue generated from intercontinental routes, which would place Europe-only airlines at a competitive disadvantage. Similarly, submitting all Europe originating / bound flights to the scheme would place all European carriers in a competitive disadvantage against non-EU carriers for whom flights to / from Europe constitute just one part of their business.

3.6.1. Fuel tax and emissions levy

ELFAA is strongly opposed to the introduction of any fuel tax or emissions levies as such measures would have no impact on reducing emissions or encouraging greater efficiency and would only increase costs and deny the most price sensitive consumers the ability to travel by air. The UK Air Passenger Duty (APD) is an example of an “environmental levy” that has simply become part of the UK Exchequer funds. Also fuel surcharges introduced recently by the majority of traditional carriers prove that these airlines if faced with an extra cost simply pass it on to consumers without making any effort to increase efficiency and reduce fuel burn. This pattern will be followed by traditional carriers if a fuel tax or an emissions levy is introduced. Ordinary citizens will be denied the ability to travel by air and the European tourism and regional development will suffer.

3.6.2. Emissions trading

Any discussion on the emissions trading should always take into account the need to: (i) protect undistorted competition; and (ii) incentivise moves towards more efficient fleets and operational models. Emissions trading cannot penalise growth and should reward airlines with technologically advanced aircraft and efficient operations. Air transport should also not be discriminated against as one of the modes of transport. Any additional burden should equally affect other transport modes like ferries, trains and cars which are in direct competition with low fares airlines. Airlines should be encouraged to expand in an environmentally friendly fashion by growing the fleet of modern aircraft and should be incentivised to and rewarded for reducing the fuel burn and emissions per passenger seat kilometre.