



“GREEN”ER SKIES

Despite airlines’ countless efforts to help “clean up” the skies, they are continually cited for leaving the most damaging affects on the environment.

■ By Benjamin Mussler | *Ascend* Contributor

The trend to “go green” continues to build momentum as companies, including airlines, expand their green, eco-friendly offerings in the name of efficiency and the environment. But as concerns for carbon emissions mount, the aviation industry has increasingly come under scrutiny despite gains in fuel efficiency and measurable reductions of CO₂ emissions. As next-generation aircraft and technology take flight, a more efficient sky has the potential to add to the “green” equation — reducing

carbon emissions while enabling airlines to support increased customer traffic growth expected during the next several decades.

Aviation Industry And Green Policy

The aviation industry accounts for about 2 percent of carbon emissions — a small figure compared to the total footprint of transportation (13.5 percent) or the total output from electricity and heat (24.6 percent). Nevertheless, the industry continues to be targeted as a candidate for emissions

regulation and has struggled to find a balance between what the industry deems realistic and what some governments have proposed or implemented. In the United States, the proposed Lieberman-Warner Bill would gradually cap greenhouse gas emissions to 1990 levels and, if passed, would affect U.S. transportation and other industries. More pressing, the decision by the European Union to include aviation in its Emissions Trading Scheme, or ETS, beginning in 2011 will also introduce



stricter caps on average emissions for not only domestic but international flights to and from E.U. airports as well.

Critics, such as the Association of European Airlines, argue that the measures proposed by the European Union represent “a massive blow to the viability and competitiveness of the European airline industry.” AEA Secretary General Ulrich Schulte-Strathaus added that the action represents “political compromises more than it does the reality of the environmental challenge.”

This decision is being opposed by other industry groups as well. The International Air Transport Association also rebuked the decision.

“Climate change is a serious problem and hypocrisy is not the answer,” said IATA Director General and Chief Executive Officer Giovanni Bisignani. “We could be saving 12 million tons of CO₂ annually with an effective ‘single European sky.’ Instead of making that a reality, Europe is single-mindedly pursuing a political agenda of emissions trading that does nothing to improve environmental performance. I don’t see the European Parliament planting many trees, but somehow they have gotten lost in the woods.”

As recently as 2006, *Ascend* reported how certain groups in the industry were opposed to the charges that airlines had negatively impacted the environment and possibly contributed to global warming. Today, the opinion of much of the industry is shifting to one of increased responsibility and methodical approaches to sustainability. Economic measures are part of the discussion that many industry groups are currently holding over aviation’s role in the future of greenhouse gas management. But mandatory measures such as those being debated today in the European Union are seen by organizations such as the Air Transport Association as “not necessary” arguing that they “will divert funds away from aviation’s ability to continue to invest in the technological and operational improvements through which we have achieved such great gains in fuel efficiency and emissions reduction.”

Similarly, IATA’s four-pillar strategy to address climate change suggests that economic measures should be voluntary. Its strategy, which was accepted by all member states of the International Civil Aviation Organization last September, advocates that economic measures should be used to “boost the research, development and deployment of new technologies rather than as a tool to suppress demand.” Moreover, IATA suggests that in addition to the economic pillar, the industry has an opportunity to work together to find improvements in the areas of technology, operations and infrastructure, including:

- **Technology** — Advances in alternative fuels, airframe, engine and traffic management. IATA is working with manufacturers and fuel suppliers to develop short-, medium- and long-term measures. Short-term advances include improvements to existing fleets such as winglets that have been shown to save significant amounts of fuel and hence CO₂ emissions as well.
- **Operations** — The implementation of more efficient aircraft into carrier fleets. This will be measured in part by a stricter fuel-efficiency goal that IATA passed last year that requires a reduction in fuel consumption by at least 25 percent per revenue ton kilometer by 2020, as measured at 2005 levels. Once achieved, IATA estimates that this will save 345 million tons of CO₂ during that period.
- **Infrastructure** — Open- and single-sky agreements and improved air space management. IATA recognizes that such improvements present a major opportunity for fuel and CO₂ reductions in the near term. To achieve this pillar, IATA suggests that “governments must adopt policies and remove obstacles to allow airspace and airport inefficiencies to be cut in half over the next five years.”

Some carriers have taken this matter into their own hands. Delta Air Lines has demonstrated a successful utilization of global positioning system satellites to allow aircraft to take off at its Atlanta, Georgia, hub an average of three minutes faster than radar previously allowed. The U.S. Federal Aviation Administration approves of this process and understands the need to move away from radar-based air traffic control — encouraging airlines to innovate.

Other regions of the world are also investing heavily in improved air traffic control systems. The Civil Aviation Administration of China purchased a secondary radar system that will allow the Beijing Capital International Airport to safely cut the distance between landings through the use of Automated Dependent Surveillance-Broadcast, or ADS-B. The system cuts the lag time between radar beacon positional updates from 14 to 36 seconds down to just one second. The result is far fewer coverage gaps that equate to faster, safer landings.

As focus on emissions, fuel consumption and improvements to air traffic control continue to gain attention, more

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Infrastructure emerges as one of the key factors in the aviation industry’s success in achieving fuel- and emission-reduction goals and meeting increased passenger volume. Much of the potential fuel savings that improves the efficiency of aircraft comes in the form of more efficient engines and design. But a great deal of this efficiency relies on the carrier’s ability to fly the most efficient route as well as minimize delays and time spent on the runway and in the air waiting to land. According to the Intergovernmental Panel on Climate Change, addressing airspace and airport inefficiencies, governments and infrastructure providers can eliminate up to 12 percent of CO₂ emissions from aviation. IATA approximations suggest that the savings could be even greater; estimating the industry could save 35 million tons of CO₂ emissions per year if obstacles were removed.

than ever before, the aviation industry has an opportunity to work together with suppliers, governments and customers to find solutions to the issues that will ensure a sustainable future. Time will be the ultimate judge about the impact today’s proposed measures and mandates will have on the industry. But as can be gleaned by the efforts of individual carriers and by industry organizations — aviation will continue to be on the forefront of development and implementation of technology that ensures efficient travel for generations to come. ■

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