



Asiana Airlines

Environmentally friendly management and sustainability

The business case

Asiana Airlines recognizes the importance of preventing global warming as a part of its corporate social responsibility and makes companywide efforts to do so by saving energy and reducing aircraft emissions. Carbon offsets are applicable to all employees who go on business trip on Asiana operated flights and a carbon offset program for customers is set to be introduced in 2009. The company also has energy savings activities for its operations, ranging from procedural and flight plan improvements to reduced flight distance & altitude and weight management. Asiana Airlines also creates energy savings through maintenance. By combining all of its efforts, Asiana Airlines reduced emissions by 220,000 tons in 2007. The company will continue to reduce CO₂ emissions by introducing high-efficiency aircraft and through other measures.

Situation

Asiana Airlines has rapidly expanded since its establishment in 1988 to become a mid-sized, global carrier with a fleet of 69 aircraft providing international services to 66 cities in 21 countries on 82 routes, and domestic services to 12 cities on 15 routes. In 2007, the airline had net sales of some US\$ 3 billion. Headquartered in Seoul, Korea, the company has more than 8,400 employees.

In line with its aim to be an environmentally friendly airline that harmonizes the needs of nature, humans and businesses, Asiana Airlines is committed to ensuring a clean environment. Asiana Airlines aims to be respected by society, live up to its promises, be sound and trustworthy, fulfill its social responsibilities, and make a contribution to society. Environmental management is part of these objectives. Although CO₂ emissions from aircraft are not included among greenhouse gas reduction targets under the Kyoto Protocol, Asiana Airlines has made systematic efforts to improve energy efficiency and reduce emissions by creating a road map to actively participate in global endeavors to prevent global warming. Additionally, since the European Union currently plans on extending an emissions trading scheme to the airline industry, Asiana Airlines is also making efforts in order to control potential management risk.

Targets

Despite the harsh business environment in which it is currently operating, the airline continually pursues a management style that goes hand in hand with nature, people and fellow corporations even under the most severe conditions. As part of its efforts, Asiana Airlines has set environmental goals as a major practice towards implementing its environmental policy.

Asiana's Environment Goals

1. Minimize energy and resource consumption
 - Introduce up-to-date and fuel efficient fleet and engines

- Continually develop and apply energy-efficient operation techniques
- 2. Establish strict internal environmental standards
 - Set internal standards that are stricter than general environmental laws applied worldwide, and minimize pollutants through systematic management and observance of standards
- 3. Systematically analyze the company's environmental impact and make use of the outcome to carry out reductions
 - Evaluate the environmental impact of its aviation operations, maintenance and service and improve environmentally friendly processes
 - Continually improve environmental systems through feedback
- 4. Systematically practice transparent and sustainable management
 - Carry out sustainable management educational activities and participate in environmentally sustainable activities
 - Continually publicize transparent environmental information as requested by interested parties
 - Thoroughly understand and comply with international climate change agreements

Activities

Asiana airlines started focusing on its environmental efforts in 1994 when it developed and adopted a special emblem and the catchphrase "The one and only Earth, as precious as our customers". In 1995, the airline was the first airline in the industry to ban smoking and the sale of cigarettes on all flights. In 1996, Asiana Airlines achieved certification for ISO 14001 environmental management, another industry first, and through its various initiatives is playing a leading role with respect to the environment.



Asiana Airlines maintains its drive to protect the environment and conserve natural resources through initiatives such as the introduction of environmentally friendly products and in-flight services. In addition, the concentration of pollutants released by Asiana's various facilities is 20% percent lower than mandated by law and the company has increased the recycling of waste to reduce consumption of resources.

Through these various efforts, in 2001, Asiana Airlines was designated as the first environmentally friendly company within the service industry by the Korean Ministry of Environment. In 2006, Asiana was recognized as an environmentally friendly company for its maintenance facilities at Incheon International Airport and is still the only company to have such a distinction within the entire airport and its vicinity.

Asiana Airlines has long recognized the critical nature of global warming. As a major global issue, it has brought further attention to the importance of corporate social responsibility.

In response to the United Nations Framework Convention on Climate Change's (UNFCCC) call for business to become more involved in finding solutions to the climate change challenge, Asiana Airlines has made systematic efforts to reduce emissions by creating a roadmap and actively participating in global endeavors to prevent global warming. Asiana Airlines also makes companywide efforts to do so by saving energy and reducing aircraft emissions.

The company has developed a fuel management information system (MIS) that includes aircraft emissions information. The system as led to the development of a program to



reduce emissions through engine washing. Atmospheric pollutants that enter the engine during flight hinder air flow inside the engine and lower engine efficiency. By washing the engines of 83 airplanes with water during 2006, Asiana Airlines improved fuel efficiency by 0.5% to 0.6%, resulting in the reduction of some 5,000 tons of CO₂ emissions. In 2008, 48 engines were washed with water, reducing CO₂ emissions by 2,860 tons. By using the Ground Power Unit (GPU) at aircraft ramps instead of the Auxiliary Power Unit (APU) inside aircraft for power supply during ground maintenance, jet fuel consumption and gas emissions have been reduced.

In flight operation section, Asiana Airlines has been carrying out various fuel reduction activities like improvement of flight procedure, flight plan, fuel loading policy and short cut operation. 210,135 tons of CO₂ were reduced by those activities.

By combining all of its efforts, Asiana Airlines reduced emissions by 220,000 tons in 2007. The company will continue to reduce CO₂ emissions by introducing high-efficiency aircraft.

Fuel & emissions reductions, 2005-2007

	2005	2006	2007
Fuel reduction	66,400tons	63,140tons	69,057tons
Emission reduction	211,920tons	201,548tons	220,292tons
Remarks	Operation/maintenance/ purchase/general, etc.	Operation	Operation/maintenance

※ The amounts of fuel in the above table are calculated by the deduction of economical effects through economic operation & efficient maintenance.

Aircraft emissions trends, 2005-2007

AIRCRAFT EMISSION AMOUNT & INDEX

	2005	2006	2007
Emission(CO ₂ TON)	3,812,938	4,313,188	4,515,190
Index(ATK)	614	605	610
Index(RTK)	798	772	771

ATK index = g/ATK RTK index = g/RTK

As of May 2008, Asiana Airlines started offsetting the carbon generated by all employees who go on business trips on Asiana Airlines operated flights. All accumulated carbon offset costs from employee business trips are fully supported by Asiana Airlines and the airline introduced a system for verifying carbon footprint and offset costs in July 2008.

Passengers can also check their carbon footprint and offset costs via the airline's carbon offset website. Offset costs are purely voluntary. The airline uses all funds from the carbon offset program to invest in offsets held by independent organizations (for example, government agencies).

▶ 출장FOC 신청 및 취소

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현발령	재직	현발령일	계약기간	-	

구간 국제선 Class / 예약조건 Y / NOSUB 출장목적 업무출장

노선 인천 방콕 인천 선택

탄소발생량 0,448 톤 탄소상쇄비 15,986 원

문의서번호

※ 관련통보서의 문서번호 FULL로 기재요람
 ※ 해당통보서는 문서종류가 '출장'인 경우에만 유효하며 일치번호 없을 경우 신청불가

[Website of Carbon Offset Program for Employees]

This picture shows the employee carbon offset program website. For example, when an employee in the Environment & Facilities Team applies for a business trip to Bangkok from Incheon, the tool automatically calculates CO₂ emissions (0.448t) and carbon offset costs (15,986 KRW, US\$ 14.5).

Results

As a result of these efforts, Asiana Airlines has won numerous awards and accolades, including the 2001 designation by the Korean Ministry of Environment as the first environmentally friendly company within the service industry; the 2006 environmental distinction for its maintenance facilities at Incheon International Airport; and the 2008 Presidential Award of the National Environmental Management Grand Prix for the company's energy savings and CO₂ reduction activities, most notably the introduction of Korea's first carbon offset program, improvements in route operations procedures and aircraft engine washing, and providing on-board Rainforest Alliance coffee.



Rainforest Alliance coffee

The Rainforest Alliance is an international nonprofit conservation organization that certifies coffee farms, ensuring that they meet rigorous standards for the conservation of natural resources and the rights and welfare of farm workers and local communities. Just one cup of coffee with the Rainforest Alliance Certified™ seal of approval can help protect the environment and subsequently improve worker's rights and welfare in the developing world. Coordinated by the Ministry of Knowledge Economy and the Ministry of Environment, this award has strengthened corporate environmental competitiveness and plays a key role in setting standards for sustainable industrial development.

About the WBCSD

The World Business Council for Sustainable Development (WBCSD) brings together some 200 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. Our members are drawn from more than 30 countries and 20 major industrial sectors. We also benefit from a global network of around 55 national and regional business councils and partner organizations.

Our **mission** is to provide business leadership as a catalyst for change toward sustainable development, and to support the business license to operate, innovate and grow in a world increasingly shaped by sustainable development issues.

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