CATHAY PACIFIC

a focused review

CATHAY PACIFIC AIRWAYS LIMITED

Environmental Report 2005

Chairman's Message

2005 has been a good year for Cathay Pacific with strong growth, plans to expand our fleet further and new passenger and freight services to Mainland China. At the same time, we are conscious of our responsibilities towards the environment and the need for ongoing, substantive programmes in this regard. As such, I am pleased to present our third concise report on these issues, the Cathay Pacific Environmental Report 2005.

Aviation is a growing industry but Cathay Pacific needs to meet its long-term objectives of mitigating environmental impacts in absolute terms and improving environmental performance per unit of traffic and capacity. Achieving these will not be straightforward, requiring carefully considered and well implemented action by ourselves within a framework of concerted efforts by organisations across the aviation sector. We have already made considerable progress in some areas such as fuel consumption, where we have worked closely with air traffic control authorities, governments and other airlines to straighten selected flight paths, and investigate other opportunities to reduce unnecessary fuel wastage. Local air quality affects our daily operations less directly but requires us to look and act beyond our own operations and to reinforce our leading role in the business community to ensure that Hong Kong remains a global hub and premium gateway to Mainland China. In 2005, Cathay Pacific endorsed the Hong Kong Clean Air Charter, which commits us to address this issue both internally and with other organisations.

Climate change is a significant and complex issue which has become a real business concern for aviation. In response, we established a Climate Change Task Group in 2005 to ensure a high level of understanding and to develop options for addressing the issue. Cathay Pacific continues to work proactively with industry associations, other airlines and governments to develop sectorwide solutions.

Environmental issues do not take place in isolation. They have important effects on people and on economies. Whilst this and previous publications have described our efforts in this regard, for 2006, Cathay Pacific's 60th anniversary, we will begin reporting more comprehensively on these interactions in our first social and environmental report.

Christopher Pratt
Chairman

ABOUT THE REPORT

This report describes Cathay Pacific's environmental performance and progress against commitments during 2005 and presents actions for 2006. Commitments which were fulfilled during 2005 are marked ✓. Outstanding commitments are marked ★ and will be completed during 2006. This report presents some operational statistics, for normalising metrics in terms of capacity (ATK[1]), total traffic (RTK[1]) and passenger traffic (RPK[1]). Data are for Cathay Pacific's mainline fleet during calendar year 2005. Other operational data and statistics can be found in the Cathay Pacific Annual Report 2005. It is to be noted that data in the Annual Report also includes joint venture and code sharing flights.

As an internationally recognised reporting standard, the Global Reporting Initiative (GRI) Guidelines are an important reference for Cathay Pacific's environmental reports. This year's report includes the same GRI environmental performance indicators as were included in the 2004 report. We believe that our 2003, 2004 and 2005 environmental reports provide a comprehensive overview of Cathay Pacific's key and significant environmental impacts. In due course, we expect our reporting to be in accordance with the GRI Guidelines.

Cathay Pacific owns, wholly or partially, a number of subsidiaries and associated companies. These companies are now encouraged to produce individual environmental reports and fall outside the scope of this report. Those publishing external reports on their environmental management during 2005 include Cathay Pacific Catering Services, Vogue Laundry Service Limited, Hong Kong Aircraft Engineering Company Limited and Hong Kong Airport Services Limited.

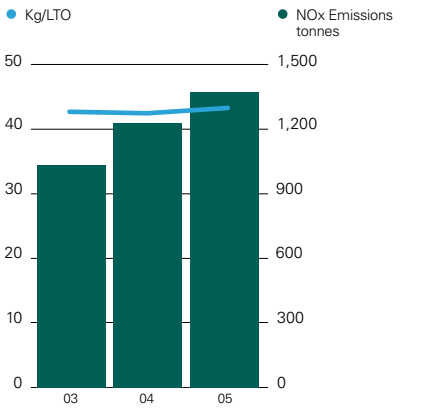
[1] **ATK** Available Tonne Kilometers
Overall capacity, measured in tonnes available for the carriage of passengers, excess baggage, cargo and mail on each sector multiplied by the sector distance.

RTK Revenue Tonne Kilometers
Traffic volume, measured in load tonnes from the carriage of passengers, excess baggage, cargo and mail on each sector multiplied by the sector distance.

RPK Revenue Passenger Kilometers
Number of passengers carried on each sector multiplied by the sector distance.

Clean Air

Local NOx Emissions from Cathay Pacific Aircraft

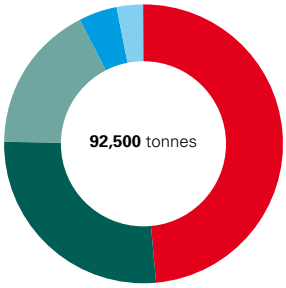


In Hong Kong, air quality is poor especially at certain times of the year. Addressing this issue and developing clean air solutions is extremely complex given the multitude of industrial and transport emission sources in Hong Kong and across the Pearl River Delta. However, this is a challenge that Hong Kong needs to meet if it is to maintain its image as a high quality tourist destination and a preferred place for business. Although aviation's contribution to Hong Kong's poor air quality is relatively small, this, together with increased air quality concerns at a number of our global destinations, has led Cathay Pacific to develop initiatives to reduce emissions and to drive wider action.

Within Hong Kong, the main contributors of nitrogen oxides (NOx) and particulate matter are electricity generation and road transport, which together account for about three-quarters of these pollutants. NOx and particulate emissions from aircraft during landing and take-off (LTO) account for 5% and less than 1% of the Hong Kong totals respectively.

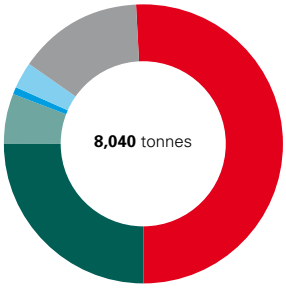
Hong Kong Air Pollutant Emission Inventory (2004)

Nitrogen Oxides



- Public Electricity Generation 44,900
- Road Transport 24,600
- Navigation 15,800
- Civil Aviation 4,290
- Other Fuel Combustion 2,880

Particulate Matter



- Public Electricity Generation 4,090
- Road Transport 2,000
- Navigation 483
- Civil Aviation 56
- Other Fuel Combustion 240
- Non-Combustion 1,180

NOx emissions from newly certified aircraft are controlled through standards imposed by the International Civil Aviation Organization (ICAO). In 2008, the standards will be revised and NOx emissions for new aircraft types will be 12% below the current standards. The development of such standards is inevitably a difficult process as cutting NOx emissions during LTO requires a lower engine temperature and as a result, impaired fuel efficiency. At Cathay Pacific, NOx emissions are incorporated into the procurement process for aircraft and engines and were a consideration in the recent fleet expansion programme.

In addition to our aircraft, Cathay Pacific operates a fleet of nearly 40 ground vehicles in Hong Kong and has contractual agreements to transport staff and equipment to, from and within the airport itself.

To confirm our commitment within the Hong Kong business community, Cathay Pacific has endorsed the Hong Kong Clean Air Charter, which includes actions to measure emissions from operations, adopt energy efficient measures and sharing expertise with business partners. In 2006, Cathay Pacific will ensure compliance with all the commitments of the Charter.

Environmental awareness and energy conservation has been enhanced among staff through various internal communication channels. As a Friends of the Earth 'Earth Partner', an educational workshop enforced good practices towards a clean environment in 2005.

ACTIONS CLEAN AIR

PROGRESS AGAINST 2005 ACTIONS

- ✓ Review how business units consider NOx during procurement.
- ✓ Enhance staff awareness of energy reduction measures at work and home.
- ★ Develop a system for collating information on NOx charges and notifications.

  For each outport, information on environmental charges is being collated and will be completed by mid-2006.
- ★ Define and develop Cathay Pacific's role in improving Hong Kong's air quality.

  The Hong Kong Clean Air Charter commitments will be used as a basis for defining the role of and the clean air strategy for Cathay Pacific.

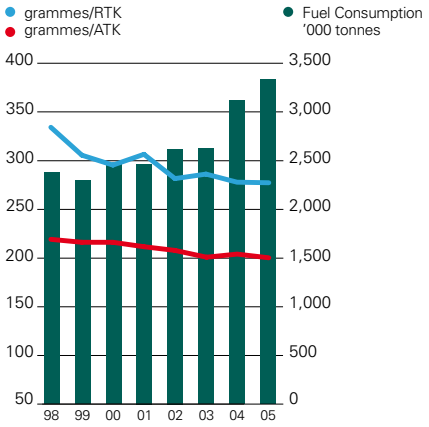
ACTIONS FOR 2006

- ▶ Ensure full compliance with the Hong Kong Clean Air Charter.
- ▶ Investigate alternative technology for ground vehicles.
- ▶ Work with local stakeholders to improve local air quality.

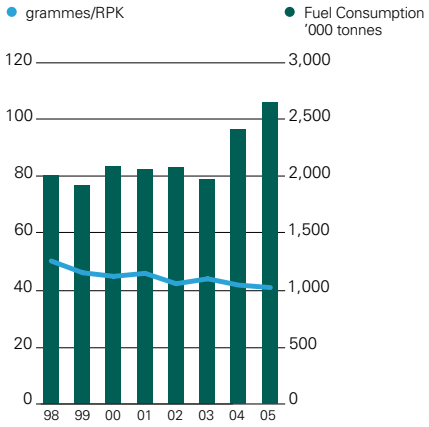
Fuel Consumption

Aircraft Fuel Consumption and Efficiency

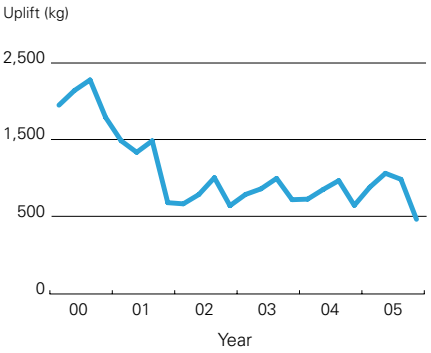
Total Flights



Passenger Flights



Average Additional Fuel Carried Per Flight



As fuel prices rose into 2005, the fuel cost increased from 23.5% of net operating expenses in 2004 to 29.5% in 2005 for Cathay Pacific. Unlike many other industries, aviation currently has no feasible alternative to the fuel it currently uses. We make considerable efforts to reduce fuel consumption through investing in new aircraft, maintaining the fleet to a high standard and maximizing load factors. We continue to ensure that any additional fuel carried is kept to a minimum. We also work with others to address delays caused by congestion, fuel tankering as a result of fuel price differentials and indirect routings caused by differences in air traffic systems and over-flight charges. In the last seven years, Cathay Pacific has reduced fuel consumption per RTK by nearly 18%. A rigorous fleet development programme over the next five years, during which time we will purchase 777-300ER (Extended Range aircraft) for long haul routes and phase out the seven Classic 747-200 freighters, is expected to result in further fuel efficiency improvements.

During 2005, Cathay Pacific developed a number of successful fuel initiatives. We continued our efforts to ensure preferential routings. In addition, we continued to support the relevant authorities to review routings over the Pearl River Delta and assisted the International Air Transport Association (IATA) to adopt these.

ACTIONS FUEL CONSUMPTION

PROGRESS AGAINST 2005 ACTIONS

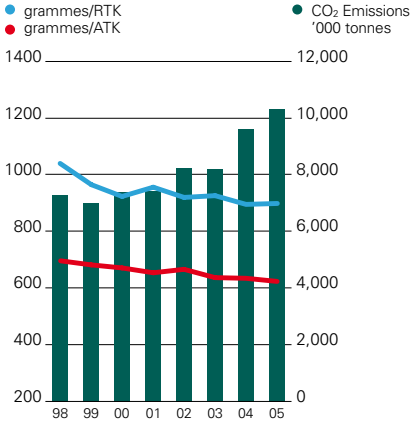
- ✓ Rigorous route planning.
- ✓ Optimise fuel uplift.
- ✓ Engage stakeholders to reduce fuel wastage.

ACTIONS FOR 2006

- ▶ Continue to improve fuel efficiency against 1998 baseline.

Climate Change

CO_2 Emissions from Cathay Pacific Aircraft



Aviation contributes to climate change through the emission of carbon dioxide (CO_2) from aircraft and ground vehicles together with effects in the upper atmosphere linked to emissions of NOx and water vapour. In 2005, Cathay Pacific established a Climate Change Task Group to ensure that we fully understand the climate change debate, the measures being taken globally, and are well prepared for the potential implications to our business. The group is led by a company Director. In addition, Cathay Pacific has played an active role in the Swire Group Climate Change Task Force.

A high level task force was initiated in 2005 to evaluate weight reduction ideas and to implement those with pay-back periods of less than two years at current fuel prices. For instance, some freighters will now be stripped and polished instead of painted. Furthermore, the purchase of lightweight cargo and baggage containers and lightweight food carts in the cabin will further reduce aircraft weight. In total these initiatives will result in an approximate reduction in fuel burn of 7,600 tonnes per annum with an associated reduction of 24,200 tonnes of CO_2.

A new web-based reporting database has been developed which allows for the collection of a wide range of environmental data, including emissions. An integrated checking mechanism ensures the accuracy of this data.

ACTIONS CLIMATE CHANGE

PROGRESS AGAINST 2005 ACTIONS

- ✓ Understand climate change agenda and raise awareness internally.
- ✓ Establish Climate Change Task Group.

ACTIONS FOR 2006

- ▶ Develop a formalized climate change position.
- ▶ With partners, develop industry specific actions to reduce greenhouse gas emissions.
- ▶ Encourage energy efficiency through our supply chains.

Aircraft Noise

Whilst some people perceive climate change as the principal environmental challenge for aviation, others, especially those close to airports, are mainly concerned about aircraft noise. One of the most effective global noise control mechanisms is ensuring that aircraft meet the ICAO noise standards. All of Cathay Pacific's passenger aircraft are compliant with the most stringent ICAO Chapter 4 noise standards and our new 777-300ERs will be quieter still. The seven Classic 747-200 freighters are our only remaining aircraft which are not compliant with the Chapter 4 noise standards and will be phased out over the next five years. Further technological development and the demand for quieter aircraft is being increasingly driven by operational noise controls and limitations placed on airlines by individual airports.

In the imposition of operational controls, restrictions and charges, we fully support the ICAO Balanced Approach to Noise Management. This provides guidance for examining land management, technological options, operational control and operational restrictions in a balanced way in order to come up with fair and effective solutions to addressing local noise concerns. Despite our best efforts, our mainline fleet continues to receive some noise fines. Whilst we continue to implement specific noise control procedures, we received 29 fines in 2005 amounting to GBP19,000 from Heathrow due primarily to congestion leading to delayed take-off into night periods and alterations to departure routes.

ACTIONS AIRCRAFT NOISE

PROGRESS AGAINST 2005 ACTIONS

- ✓ Liaise with the Hong Kong Government's Civil Aviation Department (CAD) to reduce noise impact of aircraft operations.
- ✓ Complete installation of computerised Fleet Management Systems in the 747-200 freighter fleet.
- ✓ Develop a system for collating information on noise-related incidents.
- ✓ Review how business units consider noise issues during procurement.

ACTIONS FOR 2006

- ▸ Continue to liaise with the CAD to reduce noise impact of aircraft operations in Hong Kong.
- ▸ Work with industry groups, including IATA and the Association of Asia Pacific Airlines in the promotion of the Balanced Approach.

Waste Management

For airlines, reducing the amount of waste generated during passenger flights is a considerable challenge. However, Cathay Pacific is determined to make progress in this area and took a significant step in 2005 with the completion of its comprehensive waste management strategy, which identifies key areas to be addressed in the immediate future.

One of the key initiatives to come from this was the trial of a new mechanism to sort and separate aluminum cans and small plastic water bottles in-flight. The trial was judged a success and will be rolled out to all inbound flights during 2006. As a result, we hope to recycle a considerable portion of the 160,000 aluminium cans and 40,000 small water bottles that are consumed each month on inbound Cathay Pacific flights.

Once these mechanisms are implemented, we will be investigating similar opportunities at outports, whilst recognising that many are constrained by strict hygiene regulations or the lack of local recycling opportunities.

In addition, we launched a number of other programmes including an exercise to sort all waste from a number of in-bound long haul flights. This helped to characterise in-flight waste streams and will be invaluable in developing further waste separation and recycling opportunities.

Internally we continue to encourage responsible waste management practices and have improved the monitoring of our waste streams at our headquarters.

ACTIONS WASTE MANAGEMENT

PROGRESS AGAINST 2005 ACTIONS

- ✓ Complete development of comprehensive waste management strategy.
- ★ Ensure waste disposed of in accordance with applicable regulations.
  Identification of compliance at all outports to be completed in 2006.
- ✓ Develop a system for measuring in-flight wastes.
- ★ Implement system for recycling in-flight aluminium cans and plastic water bottles.
  System to be implemented in 2006.
- ★ Improve collection of recyclable plastic at Cathay Pacific City.
  Improved monitoring system implemented in March 2005. Year on year improvements to be monitored starting in March 2006.

ACTIONS FOR 2006

- ▸ Implement system for sorting and collection of plastic water bottles and aluminium cans on all inbound flights.
- ▸ Develop guidance documents for all outport offices to improve resource use and waste management practices.

Environment Community Initiatives

As well as Cathay Pacific's own programmes, we support a number of external environmental groups and activities. For instance, as a Double Diamond Member, we provide corporate sponsorship to WWF Hong Kong, part of the World Wide Fund for Nature network. In addition, we sponsored a Cathay Pacific team at WWF Hong Kong's Big Fish Count and donated HK$500,000 to WWF's Asian Waterbird Conservation Fund, which aims to conserve wetland habitats of migratory waterbirds. Our contribution was made by donating HK$1 for each passenger that flew with Cathay Pacific during July on routes followed by migratory waterbirds.

During 2005, we were involved with two Greenpower activities. We sponsored two Cathay Pacific teams for the Greenpower Hike and sponsored the Global Biodiversity Hotspot Map Project, whose aim was to increase the awareness of ecological diversity amongst secondary school children. Through the International Wilderness Experience, organized by Cathay Pacific and the Hong Kong Federation of Youth Groups, 51 young people from Asia Pacific traveled to the 10,000-hectare Entabeni Game Reserve in South Africa to learn about key ecological issues and to take part in community service projects.

The Environment Office organised a number of staff outings in 2005. Approximately 600 staff, family and friends visited shrimp ponds 'gei-wais' at Mai Po, took part in a 'green farm adventure tour' and assisted with maintenance work for 10,000 trees planted on Lantau Island through Cathay Pacific sponsorship.

Passenger and Staff Well-Being

At Cathay Pacific, we are committed to the health and well-being of our passengers and staff and ensure this through a wide range of programmes. Our comprehensive website contains information on special needs such as wheelchair and oxygen assistance, cosmic radiation and fitness to fly guidance for passengers and doctors. Our in-flight magazine and in-flight entertainment system provide advice on in-flight health issues such as jetlag, Deep Vein Thrombosis (DVT), communicable diseases and cabin air quality. Our passenger fleet is equipped with several different types of first aid and medical kits and automatic external defibrillators (AEDs). Our cabin crew are trained in first aid, Cardiopulmonary Resuscitation (CPR) and the use of the AEDs. In addition, we have onboard access to a 24-hour aeromedical advisory service, providing expert medical consultations to crew for handling medical incidents in-flight.

Internally, Cathay Pacific has a Medical Department looking after the health and welfare of staff. This includes providing health services through an aviation medical unit, a medical, dental and physiotherapy center at Cathay Pacific City and through the Airport Medical Clinic. In addition, the Corporate Medical Department encourages health promotion and injury prevention through induction training, workstation assessments, periodic health lectures and fitness fairs, influenza vaccine campaign and luncheon talks. We have an obligation to ensure that crew are fit to discharge their duties and make recommendations on fitness to fly determinations. Our Employee Assistance Programme allows staff to seek free confidential professional counseling on health issues 24-hours a day. Should an employee be injured or suffer from long term sickness, Cathay Pacific assists with their rehabilitation and helps them return to work in a safe manner. We are committed to developing an improved tracking system in order to monitor the trends and develop proactive steps to minimize injuries at work.

For public health issues such as Severe Acute Respiratory Syndrome (SARS) and Avian flu, we have an internal task force led by a company Director. This group is responsible for keeping track of communicable diseases and other public health concerns as they impact the airline, to educate staff through a dedicated internal website and to ensure that appropriate measures are in place to protect staff and passengers.

ACTIONS
PASSENGER AND STAFF WELL-BEING

PROGRESS AGAINST 2005 ACTIONS

★ Implement methodology and standards for data capture and monitoring systems for work related injuries.

The systems for capturing and tracking work related injuries are under development and will be in place in 2006.

Data Summary

Fuel Consumption / Efficiency and Air Emissions

Aircraft operations	Units	**2005**	2004	2003	2002	2001	2000	1999	1998
Operating Statistics									
ATK	million	**16,634**	15,244	12,976	12,493	11,452	11,121	10,379	10,544
RTK	million	**12,047**	11,182	9,114	9,256	7,947	8,275	7,431	6,974
RPK	million	**65,018**	57,167	44,006	49,661	44,466	47,042	41,247	40,594
All Flights									
Fuel Consumption	thousand tonnes	**3,325**	3,077	2,590	2,583	2,431	2,429	2,263	2,343
Fuel Efficiency	grammes/ATK	**200**	202	200	207	212	218	218	222
improvement since 1998	%	**9.9**	9.0	9.9	6.8	4.5	1.8	1.8	0.0
Fuel Efficiency	grammes/RTK	**276**	275	284	279	306	294	305	336
improvement since 1998	%	**17.9**	18.2	15.5	17.0	8.9	12.5	9.2	0.0
Global CO_2 emissions	thousand tonnes	**10,436**	9,700	8,242	8,308	7,472	7,445	7,064	7,326
	grammes/ATK	**627**	634	635	665	653	670	681	695
	grammes/RTK	**866**	865	904	898	940	900	951	1,051
Global CO emissions	tonnes	**10,190**	10,056	8,873	8,268	8,062	8,751	9,827	13,982
Global NOx emissions	tonnes	**48,566**	45,271	38,537	39,213	36,402	38,061	37,800	40,294
	grammes/ATK	**2.9**	3.0	3.0	3.1	3.2	3.4	3.6	3.8
	grammes/RTK	**4.0**	4.0	4.2	4.2	4.6	4.6	5.1	5.8
Global HC emissions	tonnes	**2,171**	2,228	2,112	1,885	2,090	2,560	3,401	5,736
NOx emissions during LTO at HKIA	tonnes	**1,382**	1,238	1,040	–	–	–	–	–
Passenger Flights Only									
Fuel Consumption	thousand tonnes	**2,646**	2,404	1,953	2,074	2,050	2,068	1,912	2,007
Fuel Efficiency	grammes/RPK	**41**	42	44	42	46	44	46	49
improvement since 1998	%	**16.3**	14.3	10.2	14.3	6.1	10.2	6.1	0.0

Cathay Pacific City

Issue	Units	**2005**	2004	2003	2002	2001	2000	1999	1998
Electricity consumption	mWh	**30,892**	29,948	29,885	32,325	31,318	33,045	29,107	–
Seawater consumption	thousand m^3	**7,279**	7,236	6,846	7,698	7,081	8,903	8,756	–
Potable water consumption	m^3	**9,644**	11,113	11,482	11,460	14,571	17,942	12,277	2,956
Paper recycled	tonnes	**260**	236	233	279	276	171	187	154
Aluminum cans recycled	kg	**775**	734	721	701	488	479	202	–
Plastic recycled	kg	**4,816***	18,157	17,070	8,400	–	–	–	–
Printer cartridges recycled	pcs	**1,685**	1,447	1,888	1,295	855	1363	1103	905
Office waste disposed of	tonnes	**382**	388	381	388	–	–	–	–
Food waste disposed of	tonnes	**163**	169	172	171	–	–	–	–
Metal waste recycled	kg	**222**	–	–	–	–	–	–	–

*A change in waste contractor has resulted in more accurate reporting of recyclable plastic.

CONTACT US

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Related publications from Cathay Pacific Airways:
Cathay Pacific Airways Annual Report 2005
Cathay Pacific Airways Environmental Report 2004

This report is also available in both English and Chinese on www.cathaypacific.com

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