

CX Climate Change Strategy

Climate Leadership Programme – Japan
10 December 2010

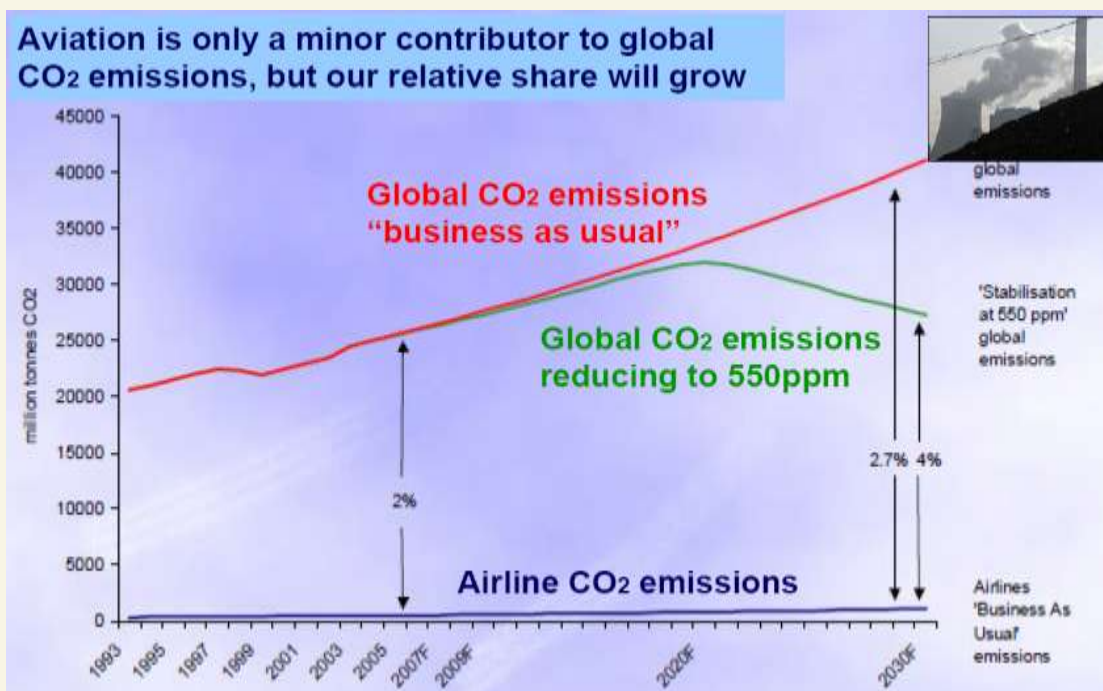
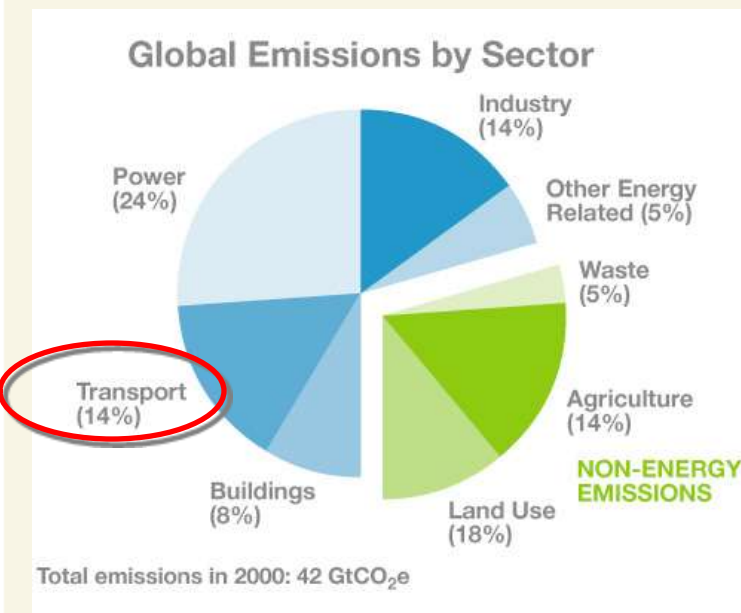
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Aviation: a small but growing contributor to climate change

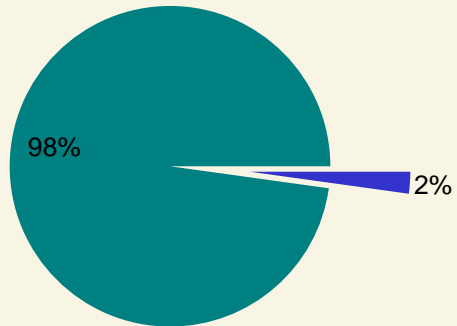
Currently 2%, rising to 3% by 2050



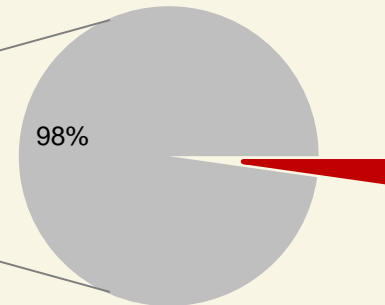
Source: all from IPCC Working Group III Report, May 2007 except (#) Stern Report Annex 7

CX Emissions in a Global Context

Global CO₂ Emissions



CX Proportion of Global Aviation Emissions



CX share:
0.05% of
global emissions
(across all sectors)

■ global aviation emissions ■ other emissions

■ CX CO₂ emissions ■ other aviation emissions

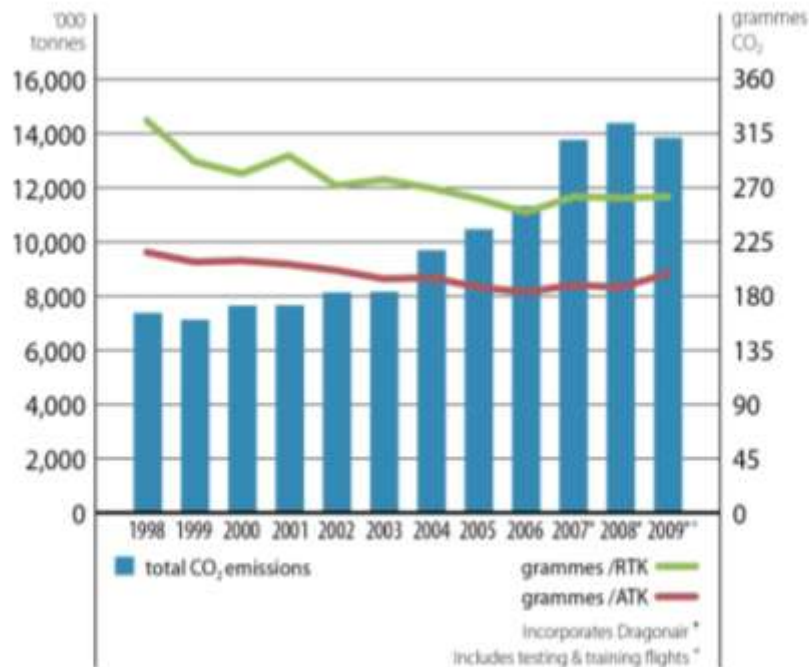
Fact is...

There aren't many industries operating **20% more efficiently** now than they were just 10 years ago - or confidently predict a **further 25% improvement by 2020**

Source: Enviro.Aero website

CX CO2 emissions

Global CO₂ Emissions – Cathay Pacific and Dragonair Fleet



Fuel efficiency improvement since 1998:

- 19.3% in grammes/RTK
- 8.4% in grammes/ATK

Year-on-year increases since 1998:

- Fuel consumption 5.4%
- **CO₂ emissions 5.4%**
- RTK 7.3%
- ATK 6.2%
- **Pax 25%**

IATA Announces “Aviation’s Commitment to Climate Change”



- Fuel efficiency improvement of 1.5% pa from 2010 – 2020
- Carbon Neutral Growth 2020 onwards
- Trajectory to 50% of 2005 by 2050

Cathay Pacific Approach

Mirrors the industry response:

IATA Four Pillar Strategy

- 1 Invest in new technology**
- 2 Effective Operations**
- 3 Build and use efficient Infrastructure**
- 4 Support the development of positive economic instruments**



Pillar 1: Technological Progress

- Fleet Modernisation
- Re-engineer existing fleet

B777-300ER

28% more efficient on the Hong Kong-Toronto route than the 747-400



Sample of actual fuel savings (in tonnes fuel) of Boeing 777-300ERs*

HKG to Los Angeles International Airport (LAX)	39 tonnes
LAX to HKG	40 tonnes
Total saving on a single round trip	79 tonnes
Total CO₂ saved	249 tCO₂

*same day, same payload

Biofuels offer long term potential

Suitability

- energy density
- fuel characteristics



Sustainability

- environmental
- social



Industrialization

- mass production
- distribution

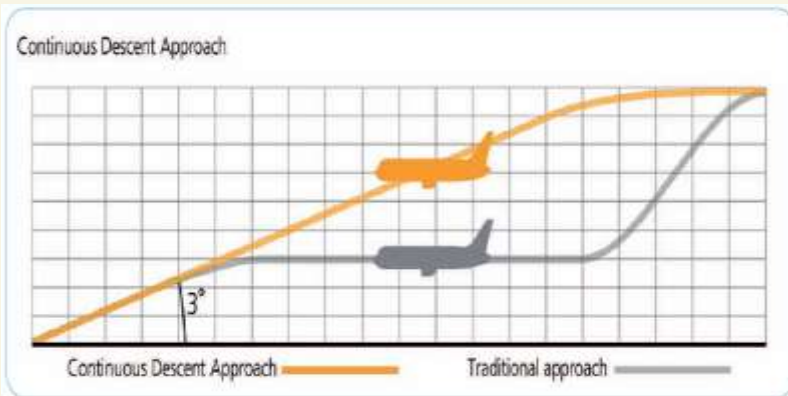


CX a member of the Sustainable Fuels Users Group
(SAFUG)

Pillar 2 Operational Efficiency

- Optimizing flight routes and speeds
- Aircraft maintenance – core washing, weight management
- Fuel monitoring (now essential for EU ETS compliance)
- Reduced taxiing time
- Single engine taxi
- Continuous descent (CDAs)

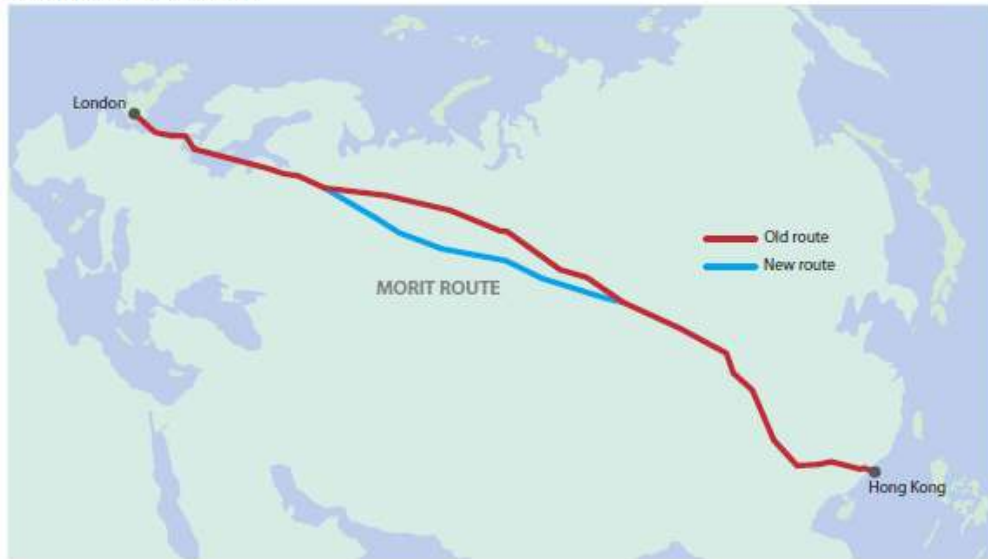
Photo courtesy: Cuthbert Lo, FOP



Pillar 3 – Improved Infrastructure

- Route improvements, reduced holds
- Collaborative decision making
- Single European Sky (EU)

Saved 0.6-0.9 tCO₂ per flight



Illustrative diagram of new arrival tracks from north & west of Hong Kong



Cathay Pacific a founder of the Aviation Global Deal Group

AIRFRANCE 



BAA 
The world's leading airport company

BRITISH AIRWAYS 

THE CLIMATE GROUP

FINNAIR 

 CATHAY PACIFIC

 atlantic

 QATAR AIRWAYS



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Pillar 4 - Economic Instruments

- Support for appropriate economic measures
- Carbon trading
- Support cap and trade approach
- We are calling for a global approach to addressing aviation emissions
- Carbon offsets
 - *CX Flygreener*

“There must be a recognition that international aviation emissions are best tackled at a global level by a single global sectoral agreement, encompassing all air transport operators.”

Tony Tyler, Chief Executive

Carbon Offsets: FLY greener

- **FLY greener Carbon Offset Scheme (since Dec 2007)**
 - **First Asian airline to offer carbon offset scheme**

2009 offset	Carbon	Cost
Passengers	3,263 tCO ₂	USD\$245,088
CX & KA staff travel	8,097 tCO ₂	USD\$504,000

- **Offset projects tend to be based in Mainland China**
- **New projects highlight social/community benefits, as well as environmental**



www.cathaypacific.com/flygreener or www.dragonair.com/flygreener

Carbon Offset Projects

2009 - Initiatives in Mainland China offering 20,000t of offsets:

- a natural gas project in Beijing;
- a micro hydro power plant project in Guizhou; and
- a group of 20 wind turbines in Heilongjiang.

2010 – New portfolio in SW China, Shandong and PRD

Wind farm project in Heilongjiang



Courtesy of JP Morgan ClimateCare

Run-of-river Lankou hydropower project



Courtesy of David McKintyre

Tackling Emissions

Not just in the Air, but also on the Ground



- renewable energy
- waste management
- sustainable sourcing
- water management
- ground vehicles
- local air quality
- ISO 14001
- GHG monitoring



CX Partnership – Climate Change Business Forum



Microsoft
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End
Thank you

