Air transport’s response to climate change challenge

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To represent, lead and serve the airline industry
Excellent fuel efficiency track record

Fuel efficiency of commercial airlines worldwide, litres/100 tonne km flown

Fuel use per 100 tonne km halved 1990-2014

Source: IEA, ICAO, IATA Carbon Model
Challenge is very strong demand for air transport

Fuel use, tonne km flown and CO2 emissions from commercial air transport

- Fuel use per 100 TKP: 0.5x
- Demand for flights (tonne km flown): 3.3x
- CO2 emissions: 1.6x

Source: IEA, ICAO, IATA Carbon Model
The economics of CO₂ abatement within aviation

Source: McKinsey & Company, IATA
Much cheaper to abate outside air transport

Global GHG abatement cost curve beyond business-as-usual – 2030

Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures below €60 per tCO₂e if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.

Source: Global GHG Abatement Cost Curve v2.0

Source: McKinsey & Company
Within-sector abatement slows CO$_2$ growth

Worldwide CO$_2$ emissions from commercial air transport, mT per year

After fleet renewal and higher load factors
Operations
Infrastructure
Biofuels

Source: IEA, ICAO, IATA Carbon Model
Note: Biofuel wedge is subject to considerable uncertainty
CO₂ cap will be met by investing in cuts outside.

Worldwide CO₂ emissions from commercial air transport, mT per year

After fleet renewal and higher load factors
Operations
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Source: IEA, ICAO, IATA Carbon Model

Note: Offsets and CNG2020 cap shown here for system wide emissions are illustrative. ICAO global MBM will cover international. Domestic covered by Kyoto.
Cost of investing in offsetting CO$_2$ cuts low but rising

Cost of offsetting to meet 2020 CO$_2$ cap

Assuming offset cost of US$50/tonne CO$_2$

Cost as % of operating revenues

Cost per passenger

Source: IEA, ICAO, IATA Carbon Model

Note: Cost numbers illustrative only and based on CO$_2$ price assumption
Global air transport industry
climate action plan

3
GLOBAL GOALS

4
PILLARS OF
CLIMATE ACTION
Three industry goals...

1.5% IMPROVEMENT IN FUEL EFFICIETY PER YEAR

STABILISE NET CO₂ EMISSIONS FROM THE SECTOR AT 2020 LEVELS THROUGH CARBON-NEUTRAL GROWTH

-50% CO₂ EMISSIONS FROM AVIATION BY 2050 (2005 BASELINE)
Four pillars of climate action

TECHNOLOGY
(INCLUDING SUSTAINABLE ALTERNATIVE FUELS)

OPERATIONS

INFRASTRUCTURE

GLOBAL MARKET-BASED MEASURE
Working to develop a global market-based measure

2009: industry presents Governments at ICAO with climate plan.

2013: Governments agree to develop global MBM for sector.

Currently: parties at ICAO are undertaking political and technical work to design MBM for agreement at 2016 ICAO Assembly and implementation from 2020.
ICAO (governments) Global Market Based Measure

To implement a cap on international net emissions from 2020

– Cap-and-offset looks most likely
– ICAO’s High Level Group replaces Environment Advisory Group
– Debate over distribution of obligations
  • Emissions share (collective) or growth (individual)
  • Early-mover, growth, new entrant complexities or simplicity
  • Developed vs developing (special treatment: CBDR /SCRC)
  • Operator vs phased-in routes
  • Exclusions
– October 2016 Assembly deadline for agreement