Developing Australia’s Aviation Climate Change Action Plan

Andrew Ure
Director, International Division
Australian Department of Climate Change and Energy Efficiency
Overview of Australia’s Action Plan

- Suite of strategies to address emissions from international and domestic aviation
- Encompasses measures to reduce emissions from aircraft operations and within airport boundaries
- ICAO’s goal - 2% annual average fuel efficiency improvement
- Baseline: Emissions data available from 1990
  Domestic fuel efficiency data from 1990
  International fuel efficiency data from 2008-09
  Track emissions from a base year
- Action structured around responsibilities of implementation bodies: AirServices Australia, airlines, airports, government and air traveller
- Quantification of potential CO2 savings where possible
Australian Government Initiatives

- Committed to economy-wide emissions reduction targets of at least 5% by 2020 and 60% by 2050 below 2000 levels.
- Proposes to set a fixed domestic carbon price from 1 July 2012 as an interim measure until a full emissions trading scheme can be introduced in 3–5 years.
- Targeted assistance for the development of new biofuel technologies.
- National Carbon Offset Standard from 1 July 2010.
- Development of carbon footprinting tools.
Air Traffic Management Measures


- Ongoing ATM procedures to improve aircraft operational efficiency
  - Flextracks – flexible routes optimised for prevailing weather
    (saves ~3.4 tonnes CO$_2$ per flight from the Middle East to Australia)
  - RNP approaches and departures (saves ~403 kg CO$_2$ per approach)
  - Gate-to-gate management (saves ~600 kg CO$_2$ per Melbourne-Sydney flight)
  - International collaboration – ASPIRE
    (saves ~18 tonnes CO$_2$ per flight across the Pacific)

- Airservices Australia is employing the use of the Air Traffic and Operations Management Simulator (ATOMS) to quantify potential benefits of individual ATM procedures
Airline Emissions Reduction Measures

- Fleet renewal
- Weight reduction measures
- Improving load factors
- Voluntary offsets for air passengers
- Voluntary offsets by airlines
Airport Initiatives

- More efficient use of ground support equipment
- Reducing the use of APUs
- Solar panels
- Solar-powered airfield lighting
- Improved energy efficiency in airport buildings
- Land transport linkages
Alternative Aviation Fuels

- Sustainable Aviation Fuel Road Map for Australia and New Zealand – May 2011
- Commitment to establish an Australian Biofuels Research Institute

- Qantas in joint ventures with Solena and Solazyme to develop “drop-in” alternative jet fuels
- Microalgal biofuel projects at Australian universities – Adelaide University and James Cook University
- **Challenges:** (1) Commercialisation (2) Competition from other transport sectors for alternative fuels
Next Steps

- Liaise with key industry players to develop Australia’s Action Plan.
- Quantify potential gains for individual measures where possible

Thank You
Australia’s aviation emissions, 1989-90 to 2008-09

Thank You

Back

www.climatechange.gov.au
Australia’s annual domestic aviation emissions, 1989-90 to 2008-09

Aviation Emissions Intensity (kgCO$_2$-e per 100 RPK)

Aviation Emissions (Mt CO$_2$-e)

Financial Year
Australia’s international aviation emissions, 2008-09 and 2009-10