Sustainable Alternative Fuels for Aviation

ICAO Environment Branch
Drop-in Alternative Fuels

The airplane and infrastructure can’t tell the difference, either.
The Sustainable Alternative Fuel Difference

- Local Air Quality Improved (less SOx and PM)
- Lifecycle CO₂ Reduced

Algae → Carbon → Airplane

Drop-in Alternative Jet Fuel
Availability of Alternative Fuels

Source: E4tech (2009).
ICAO’s Role

ICAO is a FACILITATOR

- Outreach
- Information exchange
- International collaboration
- Broader view
- Globally
ICAO’s Activities

International Civil Aviation Organization
Assembly - 36th Session

Workshop

AVIATION AND ALTERNATIVE FUELS
ICAO Headquarters,
Montréal, Canada, 10 to 12 February 2009

Conference

ICAO CONFERENCE
AVIATION AND ALTERNATIVE FUELS
RIO DE JANEIRO, BRAZIL
16 – 18 NOVEMBER 2009

Hosted by the
National Agency of Civil Aviation (ANAC) Brazil
Global Framework for Aviation and Alternative Fuels

Initiatives in every region of the world
Consortia and Initiatives

www.icao.int/AltFuels
ASTM D7566

• “Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons”
• First new jet fuel certification in 20 years
  – Fischer-Tropsch fuels
  – Structured to accommodate future types in annexes
  – Hydrotreated Renewable Jet (HRJ) approval underway
From Research to Reality
Challenges

- Financial assistance and incentives
- Regulatory frameworks

Ensure availability
Win-Win

• Local Air Quality and Climate Change benefits

• Stabilize supply and fuel prices

• Create new markets and employment

• No change to existing infrastructure

Sustainable Alternative Fuels are a key element for addressing aviation’s contribution to climate change.
More information

To find out more:

• ICAO Alternative Fuels website www.icao.int/AltFuels

• Report of the ICAO Conference on Aviation and Alternative Fuels (Doc 9933) - Nov. 2009

• ICAO Environmental Report 2010, Chapter 5