



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



WELCOME AND INTRODUCTION

A VISION FOR THE FUTURE

OF AVIATION ALTERNATIVE FUELS

JANE HUPE – DEPUTY DIRECTOR ENVIRONMENT, ICAO



ICAO

ENVIRONMENT

ICAO SEMINAR ON ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



ICAO Sectoral Aspirational Goals:

- 2% per year fuel efficiency improvement
- Carbon neutral growth from 2020

ICAO Basket of Measures:

- Technology improvements
- Operational changes
- Alternative fuels,
- Market-based measures



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



2016 - Historic year for Aviation and Climate Change

- Surpassed the benchmark of **100** Action Plans, representing more than **90 per cent** of the global air transport activity
- First ever global certification **CO₂ Standard for aircraft**
- **GANP** 2016 - 2030 endorsed by the by the 39th ICAO Assembly
- Landmark agreement on **CORSIA** - the Carbon Offsetting and Reduction Scheme for International Aviation



ICAO

ENVIRONMENT

ICAO SEMINAR ON ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



Achievements on Aviation Alternative Fuels

2008

- First flight powered by alternative fuels

2009

- ASTM Standard which provides the framework for approving alternative jet fuel pathways
- Seminar and Conference on Aviation and Alternative Fuels
- ICAO Global Framework on Aviation Alternative Fuels

ICAO Global Framework for Aviation Alternative Fuels

5
Certified pathways to produce drop-in jet fuels

3
Airports distributing alternative fuels to regular flights

2,500+
Commercial flights flown on sustainable alternative fuels

Live Feed of Flights Operating with Alternative Fuel



Click on any flight to see more information.
Zoom in or out with the zoom function on your device.
Click and drag to reposition the map.

**This live feed shows commercial flights operated by airlines that have signed alternative fuel purchase agreements. Those agreements are:*

- United Airlines and KLM flights departing from LAX
 - Lufthansa, SAS, and KLM / KLC flights departing from OSL
 - SAS, KLM, and BRA flights departing from ARN
- Biofuel is also available at BMA and OSD*



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



Achievements on Aviation Alternative Fuels

2011

- Certification of the first pathway - HEFA fuels
- First airline to run regular commercial flights powered with biofuel

2012

- Flightpath to a Sustainable Future – The Rio+20 Global Biofuels Initiative





ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



Achievements on Aviation Alternative Fuels

2013

- First regular flights by KLM on alternative fuel between New York and Amsterdam
- ICAO Assembly Resolution A38 refers to sustainability criteria in relation to aviation biofuels

2014

- 21 airlines already used alternative fuels on their commercial flights

2016

- CAEP environmental trends showcase the full potential of alternative fuels



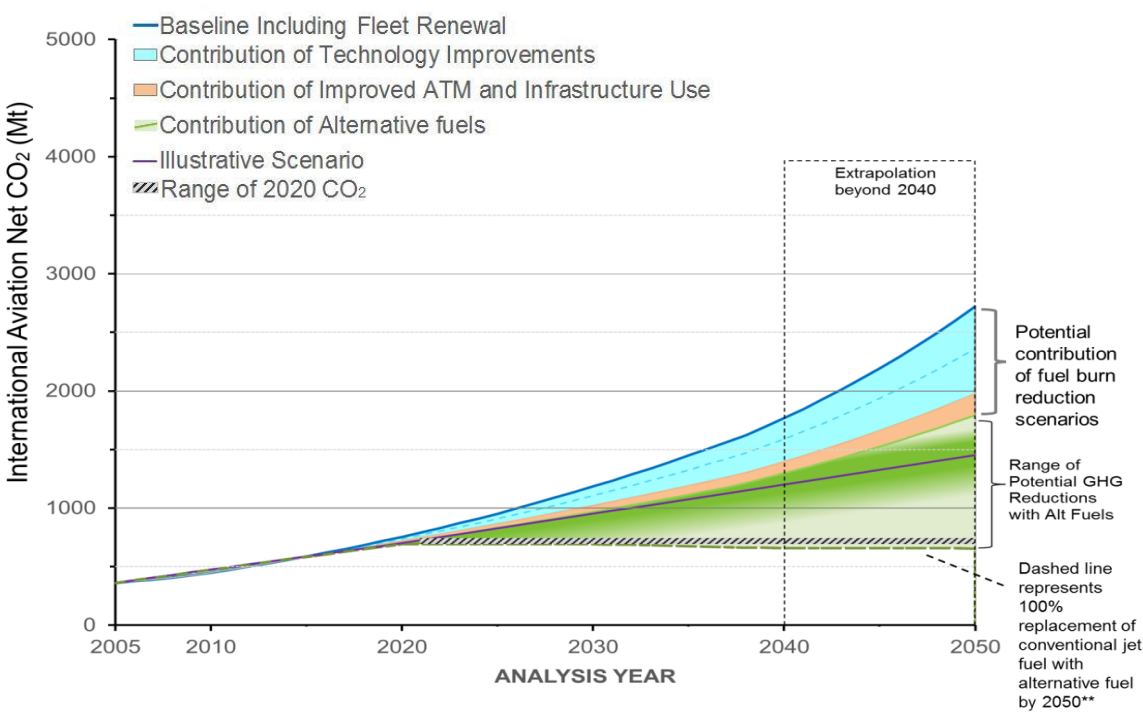
ICAO

ENVIRONMENT

ICAO SEMINAR ON ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



Environmental Trends – Contribution of alternative fuels



- Aspirational goal: carbon neutral growth from 2020
- To be achieved through a basket of measures, including MBM as a complementary measure to bridge the emissions gap
- Sustainable alternative fuels have significant potentials, but also significant uncertainties exist in the long-term



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



Achievements on Aviation Alternative Fuels

2016

- Oslo airport in Norway becomes the first “bio-port”, followed by Los Angeles airport.
- Assembly Resolution A39 encourages States to accelerate the development and deployment of alternative fuels.
- A39 requests the ICAO Council to ensure that offsetting requirements under CORSIA could be reduced through the use of sustainable alternative fuels.



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



Achievements on Aviation Alternative Fuels



2017

- Five approved pathways for producing alternative jet fuel,
- Three bio-ports
- More than 5,000 commercial flights by 25 airlines



ICAO

ENVIRONMENT

ICAO SEMINAR ON ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



Session I - Stamped



Certification and Sustainability of Aviation Alternative Fuels

Speakers will discuss existing alternative fuels certification processes and fuels sustainability criteria.



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



Session II - In the Tank Now



Successful Deployment of Aviation Alternative Fuels

*Fuel producers, airlines
and alternative fuels
coalitions will share their
experience in deploying
aviation alternative fuels.*



ICAO

ENVIRONMENT

ICAO SEMINAR ON ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



Session III - Next in the Production Line



What to Expect for Future Development and Production of Aviation Alternative Fuels

Speakers will provide insight on short and long term plans for the development and deployment of alternative fuels and will highlight the importance of innovation for the deployment of new concepts.



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



Session IV - Catalysing Energies



Initiatives & Partnerships for Aviation Alternative Fuels

Speakers will showcase innovative approaches and successful joint-initiatives to catalyze the efforts from governments, researchers, and fuel producers including new business models for the sector.



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



Session V - Game Changers



Financing and Assistance

Representatives from various financing and assistance projects will highlight how investment can unlock the potential for aviation alternative fuels deployment.



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



Session VI - Policy Challenges and New Mechanisms



States and International Organizations will identify the main components of their policy frameworks for aviation alternative. The discussion will also include the role of alternative fuels in CORSIA.



ICAO

ENVIRONMENT

ICAO SEMINAR ON
ALTERNATIVE FUELS 2017

ICAO Headquarters, Montréal, 8-9 February 2017



High-level Round Table - **Flightpath to Mexico**



State Representatives will discuss essential building blocks for the ICAO High-Level Conference on Aviation Alternative Fuels in October 2017.



THE BEST WAY TO PREDICT
THE FUTURE
IS TO
CREATE IT