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



# Alternative Jet Fuels: Challenges & Opportunities

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# Environmental Protection that Allows Sustained Aviation Growth

## ENVIRONMENT AND ENERGY GOALS



### NOISE

Reduce the number of people exposed to significant noise around U.S. airports



### AIR QUALITY

Reduce significant air quality impacts attributable to aviation



### CLIMATE

Reduce emissions that impact climate

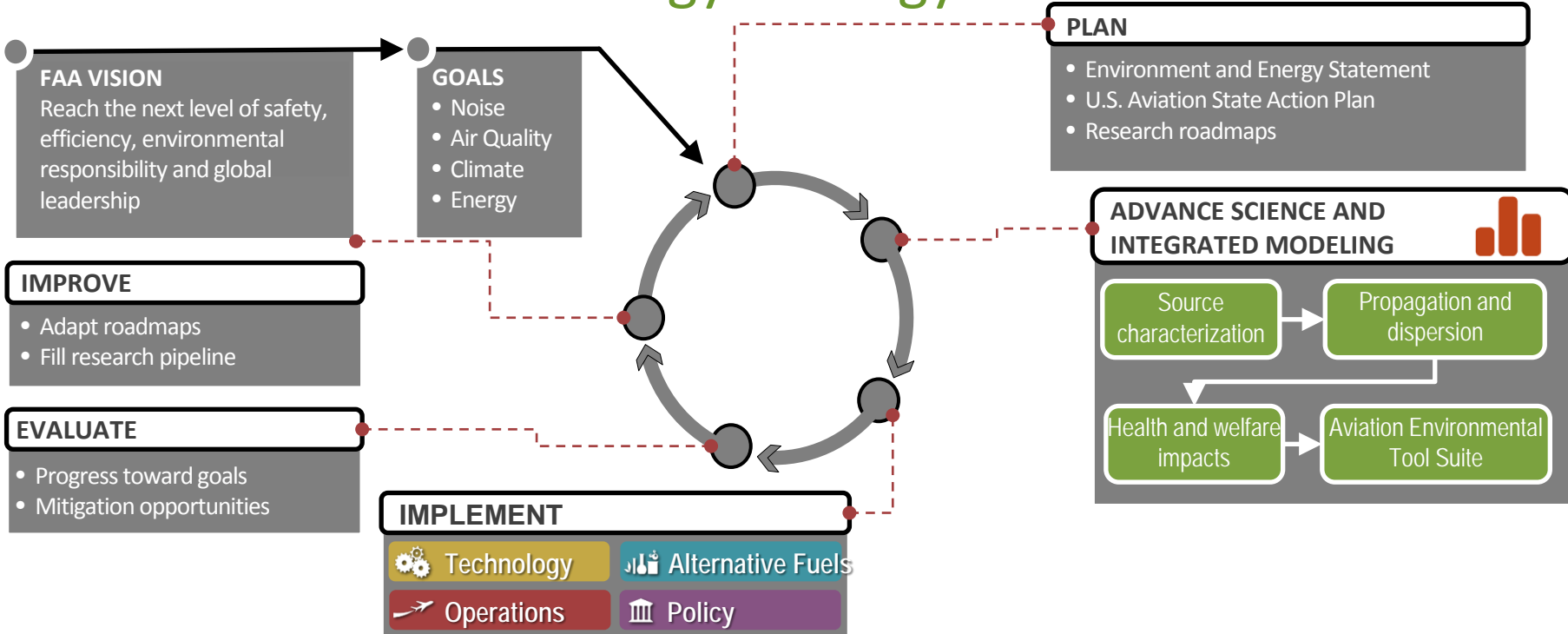


### ENERGY

Develop and deploy alternative aviation fuels



# Environmental and Energy Strategy





# U.S. Aviation State Action Plan

Submitted to ICAO in June 2015

Follows five pillar environment and energy strategy

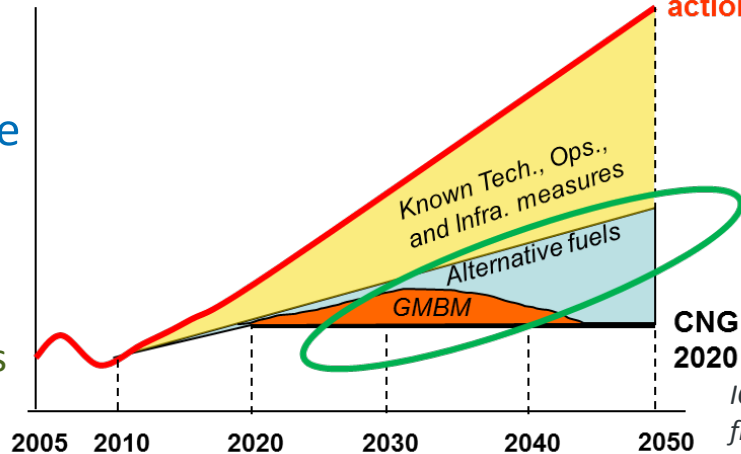
Summarizes efforts across U.S. Government

Includes innovations providing positive impacts on the economy from:

- New aircraft technology
- Alternative jet fuel use
- Air Traffic Management and operations improvements



Int'l Aviation CO<sub>2</sub> emissions



Alternative Fuels Key

No action

CNG 2020

ICAO Goal from 39<sup>th</sup> Assembly



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# Challenges

- Time and resources to evaluate and approve new fuels
- Feedstock production infrastructure
- Logistics and supply chain development
- Demonstration and scaling of conversion technologies
- Investment in commercial scale fuel production infrastructure
- Achieving competitive cost
- Ensuring Sustainability





# Guiding Principles

Alternative Jet Fuel must be “drop-in” – have equivalent safety and better environmental performance and must be cost competitive

Aviation should be lead user of alternative fuels

Government Role is to assist in overcoming barriers

Rely on Public-Private Partnerships

Fund university research

Address the whole supply chain

Credit the use of Alternative Jet fuels in CORSIA

Enable all possible fuels that meet criteria

Leverage domestic and international expertise and resources



# How Our Approach Has Led to Success

## In the United States:

- Government efforts have helped with certification of new fuels
- Public-Private Partnership through CAAFI has facilitated a 15-fold growth in alternative jet fuel use in the U.S.
- Industry has the desire to see increased alternative jet fuel usage, the government helps when barriers arise (e.g., need to certify fuels)

**Policies for alternative fuel should be specific to States – ICAO plays a key role coordinating and country and regional policies make the most sense and allow consideration of unique circumstances**



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# ICAO's Role in Alternative Fuels

## Excellent Forum for Coordination

- Work in CAEP/Alternative Fuels Task Force among experts from Member States, industry, and civil society
- Mexico City conference can enhance coordination and learning among ICAO Member States to enable increased alternative fuel deployment

## Develop Synergies among Solutions

- Creating a method to account for benefits from Alternative Fuels in CORSIA can help further incentivize
- Facilitating technical and information exchanges among ICAO Member States





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# Summary

## Three Key Points:

1. Alternative fuels provide economic benefits and are key to meeting ICAO goals.
2. Public-private partnerships have proven successful in the United States.
3. Approaches to advancing alternative fuel development and deployment should be State and Region based, with ICAO serving to coordinate.





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