



# Commercial Aviation Alternative Fuels Initiative®

## Fueling solutions for secure and sustainable aviation

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Since 2006, the Commercial Aviation Alternative Fuels Initiative (CAAIFI) has sought to enhance energy security and environmental sustainability for aviation through the use of alternative jet fuels. CAAIFI is a coalition of airlines, aircraft and engine manufacturers, energy producers, researchers, international participants and U.S. government agencies. Together these stakeholders are leading the development and deployment of alternative jet fuels for commercial aviation.

CAAIFI's goal is to promote the development of alternative jet fuel options that offer equivalent levels of safety and compare favorably on cost with petroleum based jet fuel, while also offering environmental improvement and security of energy supply for aviation. CAAIFI collaborators includes more than 500 organizations & 1100 participants.



### CAAIFI Approach

The CAAIFI coalition focuses the efforts of the commercial aviation sector to engage the emerging alternative fuels industry. CAAIFI enables its diverse participants - representing all the leading stakeholders in the field of aviation - to build relationships, share and collect data, identify resources, and direct research, development and deployment of alternative jet fuels. The four CAAIFI teams - Fuel Certification and Qualification, Environment, Business, and Research and Development - meet regularly to share progress, identify gaps and hurdles, determine next steps to facilitate earliest possible development and deployment of jet fuel alternatives, and to expand global engagement.

### Accomplishments

- Collaborated with FAA, ASTM, & aircraft manufacturers to validate & establish the drop-in jet fuel concept, followed by 5 alternative jet fuel qualifications in ASTM D7566 (as of June 2016)
- Created *Fuel Readiness Level* & *Feedstock Readiness Level* (with USDA) evaluation frameworks, *ASTM D4054 Users' Guide*, and *FRL Exit Criteria*
- Achieved *Fuel Readiness Level* evaluation framework best practice endorsement from International Civil Aviation Organization
- Created *Sustainability Overview* & *Environmental Progression frameworks* to complement *Fuel* and *Feedstock Readiness Level* frameworks
- Published *R&D Critical Challenges Position* & white papers
- Host regular webinar series on key topics for the alternative jet fuel community.
- Issued *Guidance for Selling Alternative Fuels to Airlines* with A4A
- Contributed to Federal Alternative Jet Fuel R&D Strategy (FAJFRDS)
- Formed strategic alliance between airlines (via A4A) & the Defense Logistics Agency, creating "single market" for alternative jet fuel
- Co-organized pioneering events—Sustainable Alternative Fuels Cost Workshop with DOE, feedstock workshops, aviation focused sessions at major biofuel symposia
- Facilitated "Farm to Fly 2.0" agreement between USDA, DOE, & CAAIFI sponsors accelerating feedstock development, executing various feasibility assessments, & fostering regional development activities in several states
- Facilitated airline/fuel producer offtake agreements via A4A
- Expanded cooperation with international counterparts in Australia, Brazil, Spain, Germany, & Indonesia.

*"After a decade of dedicated effort, we know sustainable alternative jet fuel can deliver all the attributes the industry is seeking; now we must deliver on cost and volume, and we're engaged in multiple pursuits to do just that. We continue to be encouraged by our steady progress."*

— Steve Csonka, CAAIFI Executive Director

*"By continuing to work together to produce American made 'drop-in' aviation fuels from renewable feedstocks, we will create jobs and economic opportunity in rural America, lessen America's reliance on foreign oil and develop a thriving biofuels industry that will benefit commercial and military enterprises."*

- Secretary of Agriculture Tom Vilsack (April 15, 2013)

### Leadership Team

Steve Csonka, Executive Director

Richard Altman, Executive Director Emeritus

Nate Brown (FAA), Strategy & Implementation Advisor

Dr. Kristin Lewis (Volpe), Research & Technical Advisor

Peter Herzig (Volpe), Program Specialist

Sara Forni (Volpe), Communications Manager

### Sponsors

Aerospace Industries Assoc. (AIA)

Airlines for America® (A4A)

Federal Aviation Administration (FAA)

Airports Council International - North America (ACI-NA)

### Team Leads

Fuel Cert/Qual: Mark Rumizen (FAA)

Environment: Dr. James Hileman (FAA) & Nancy Young (A4A)

Business: John Heimlich (A4A)

R&D: Dr. Michael Lakeman (Boeing), Gurhan Andac (GE), & Dr. Stephen Kramer (Pratt & Whitney)