



Commercial Aviation Alternative Fuels Initiative®

Fueling solutions for secure and sustainable aviation

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Since 2006, the Commercial Aviation Alternative Fuels Initiative (CAAFI) has sought to enhance energy security and environmental sustainability for aviation through the use of alternative jet fuels. CAAFI 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.

CAAFI's goal is to promote the development of alternative jet fuel options that offer equivalent safety and favorable costs compared with petroleum based jet fuel, while offering environmental improvement and energy supply security for aviation.



CAAFI Approach

The CAAFI coalition focuses the efforts of the commercial aviation sector to engage the emerging alternative fuels industry. CAAFI 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 CAAFI teams - Fuel Certification and Qualification, Sustainability, Business, and Research and Development - meet regularly to share progress, identify gaps and hurdles, determine next steps to facilitate ongoing development and deployment of jet fuel alternatives, and to expand global engagement.

CAAFI Priorities

CAAFI pursues a set of key priorities to enable the success of sustainable alternative jet fuel (AJF) deployment. CAAFI's priorities are to:

- Communicate the value proposition of sustainable AJF
- Enhance the fuel qualification approach and achieve fuel qualifications
- Implement frameworks & share best practices
- Develop U.S. alternative jet fuel supply by aligning efforts to enable commercial deployment

"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, CAAFI Executive Director

Key Accomplishments

- Collaborated with FAA, ASTM, & aircraft manufacturers to validate & establish the drop-in jet fuel concept, followed by 5 AJF qualifications in ASTM D7566, with more in progress
- Formed strategic alliance between airlines (via A4A) & the Defense Logistics Agency to create a "single market" for AJF
- Created *Fuel Readiness Level*, *Feedstock Readiness Level* (with USDA) & *Environmental Progression* evaluation frameworks, *ASTM D4054 Users' Guide*, & *FRL Exit Criteria*
- Created Feedstock Readiness Level Repository (data.nal.usda.gov/farm-2-fly)
- Achieved *Fuel Readiness Level* evaluation framework best practice endorsement from International Civil Aviation Organization
- Issued *Guidance for Selling Alternative Fuels to Airlines* with A4A
- Facilitated "Farm to Fly 2.0" agreement between USDA, DOE, & CAAFI sponsors to accelerate feedstock development, execute feasibility studies, & foster regional development activities
- Contributed to Federal AJF R&D Strategy (FAJFRDS)
- Expanded cooperation with international counterparts in Australia, Brazil, Spain, Germany, UK, Canada, Mexico & Indonesia
- Developed *R&D Critical Challenges* white paper repository for ongoing key topic information sharing
- Hosts CAAFI meetings and webinar series and co-organize pioneering events addressing costs, feedstocks and SAJF at major biofuel symposia
- Facilitates airline/fuel producer offtake agreements

Leadership Team

Steve Csonka, Executive Director
Chris Tindal, Assistant Director
Nate Brown (FAA), Strategy & Implementation Advisor
Dr. Kristin Lewis (Volpe), Research & Technical Advisor
Peter Herzig (Volpe), Program Specialist

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

Public-Private Partnership Focals

USDA: Chris Cassidy (RBCS)
DOE: Zia Haq (EERE/BETO)
FAA ASCENT: Dr. Mike Wolcott (WSU)