



# Commercial Aviation Alternative Fuels Initiative<sup>®</sup>

## Fueling solutions for secure and sustainable aviation

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**"We'll need scientists to design new fuels, and we'll need farmers to grow new fuels. We'll need engineers to devise new technologies, and we'll need businesses to make and sell those technologies."**

President Barack Obama, announcing Climate Action Plan (June 25, 2013)

**"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)

**"Aircraft need the high-energy density that only chemical fuels can provide. So if you want low-carbon flying, drop-in biofuels are the only game in town."**

*The Economist* (October 28, 2010)



### CAAIFI Team Leads

Mark Rumizen (FAA) — Fuel Certification/Qualification

Jim Hileman (FAA) & Nancy Young (A4A) — Environment

Bruno Miller (Metron Aviation) & Rob Myrben (A4A) — Business

Michael Lakeman (Boeing), Gurhan Andac (GE) & Stephen Kramer (Pratt & Whitney) — Research and Development

The Commercial Aviation Alternative Fuels Initiative<sup>®</sup> (CAAIFI) seeks to enhance energy security and environmental sustainability for aviation through the deployment of commercially viable alternative jet fuels. As a coalition of commercial aviation interests, CAAIFI is a focal point for engaging with the emerging alternative fuels industry. It enables its diverse stakeholders to build relationships, share and collect data, identify resources, and direct research, development and deployment of alternative fuels. CAAIFI aims to promote the development and deployment of alternative fuels that offer equivalent levels of safety and compare favorably with petroleum-based jet fuel on cost and environmental bases, with the specific goal of enhancing the security of North American energy supply.

CAAIFI is sponsored by the Federal Aviation Administration (FAA) and three trade associations: the Aerospace Industries Association (AIA), Airlines for America<sup>®</sup> (A4A) and Airports Council International-North America (ACI-NA). CAAIFI stakeholders and participants represent the breadth of the international commercial-aviation industry and jet fuel supply chain (current and future), including more than 450 organizations and 800 participants.

### CAAIFI Approach

Aviation is well positioned to employ alternative fuels. The industry is international in scope, has a highly networked supply chain with concentrated nodes of demand, and has a unique capacity to function in an aligned and coordinated manner.

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 and ASTM to establish the drop-in jet fuel concept, followed by FT, HEFA and SIP jet fuel approvals
- Released *ASTM D4054 Users' Guide*
- Achieved *Fuel Readiness Level* endorsement as a best practice by the International Civil Aviation Organization
- Created *Sustainability Overview* and *Environmental Progression* to complement CAAIFI/USDA *Feedstock Readiness Level*
- Published *R&D Critical Challenges Position* & white papers
- Issued *Guidance for Selling Alternative Fuels to Airlines* with A4A
- Completed aviation-fuel-specific greenhouse gas life cycle analyses (LCAs) for multiple fuels
- Contributed to National Alternative Jet Fuel Strategy (NAJFS)
- Formed strategic alliance between airlines (via A4A) and the Defense Logistics Agency, creating "single market" for alternative jet fuel
- Co-organized pioneering events—Sustainable Alternative Fuels Cost Workshop with DOE, ABLCNext Aviation Afternoon with Biofuels Digest
- Facilitated "Farm to Fly 2.0" agreement between USDA and CAAIFI sponsors accelerating commercialization of sustainable aviation biofuels
- Facilitated airline/fuel producer offtake agreements via A4A
- Expanded cooperation with international counterparts (e.g. Brazil, Spain, EU, ASEAN), including the development of joint work plans (e.g. Australia, Germany)
- 2013, 2012, 2011 & 2010 Top 100 People in Bioeconomy, 2011 Washington DC Chapter of Advancing Women in Transportation Innovative Solutions Award, 2011 Washington Airports Task Force Williams Trophy, 2010 Presidential Early Career Award for Scientists and Engineers, 2010 Air Transport World Award



### CAAIFI Administration

Steven Csonka  
Executive Director

Richard L. Altman  
Executive Director Emeritus

Nathan L. Brown (FAA)  
Strategy & Implementation Advisor

Kristin C. Lewis (Volpe)  
Research & Technical Advisor

### CAAIFI Sponsors

Aerospace Industries Assoc. (AIA)

Airlines for America<sup>®</sup> (A4A)

Airports Council International - North America (ACI-NA)

Federal Aviation Administration (FAA)

