

# 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 sustainable aviation fuels (SAF) for commercial aviation.

CAAFI's goal is to promote the development of SAF 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 SAF. Key areas of CAAFI activities include Fuel Certification and Qualification, Sustainability, Business, and Research and Development. Members 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 SAF deployment. CAAFI's priorities are to:

- → Reinforcement of the Value Proposition of SAF
- → Enhancement of the SAF Fuel Qualification Approach
- → Alignment of Efforts to Enable Commercial SAF Deployment
- Implementing and Sharing Best Practices

"After more than 15 years 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

## **Key Accomplishments**

- Collaborated with FAA, ASTM, & aircraft manufacturers to validate & establish the drop-in jet fuel concept, followed by 7 SAF qualifications in ASTM D7566, with more in progress
- → Created "single market" for SAF with strategic alliance between airlines (via A4A) & Defense Logistics Agency
- → Created Fuel Readiness Level, Feedstock Readiness Level (with USDA) & Environmental Progression frameworks, ASTMD4054 Users' Guide, FRLExit Criteria, & Prescreening Guidance for Alternative Jet Fuels
- → Created Feedstock Readiness Level Repository (data.nal.usda.gov/farm-2-fly)
- → Achieved Fuel Readiness Level 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 foster SAF development
- → Contributed to Federal Alternative Jet Fuels R&D Strategy (FAJFRDS) and the SAF Grand Challenge Roadmap
- → Contributed to SAF Interagency Working Group Roadmap Development
- → Contributed to the development of the 2021 SAF Grand Challenge
- → Expanded cooperation with international counterparts around the world
- → Developed R&D Critical Challenges white paper repository
- → Hosts CAAFI meetings and webinar series and co-organize pioneering SAF events and 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)

**Sustainability**: Dr. James Hileman (FAA)

**Business:** Chris Tindal (CAAFI)

R&D: Dr. Joseph Ellsworth (Boeing), Dr. M. Gurhan Andac (GE), Dr. Stephen Kramer (Pratt & Whitney), & Dr. Josh Heyne (UDRI)

# Public-Private Partnership Focals

USDA: Dr. Bill Goldner (OCS)

**DOE:** Zia Haq (EERE/BETO)

FAA ASCENT: Dr. Mike Wolcott (WSU)