

## A Note from the Executive Director

This CAAFI Quarterly newsletter describes the CAAFI activities and events that occurred January through March 2022. In this issue, we share industry updates and CAAFI team accomplishments. I also want to make sure you are aware of the following items:

- DOE Award: [BETO Scale-Up and Conversion](#), \$64.7M over 22 projects
- USDA NFO: [Climate Smart Commodities](#), \$1,000M, 50 projects, 2 tranches, LOI 27May
- DOE/SC/BER FOA: [Biosystems Design ... Biofuels](#), \$1-5M for 6-12 projects
- RFI: [Biomass Conversion R&D and Analysis](#)
- RFI: [Community-Scale Resource and Energy Recovery from Wastes](#)
- RFI/NOI: [BETO Scale-Up and Conversion](#)
- DOE BERCC Renewals: 2 of 4 centers have SAF-specific thrusts

Don't forget to register for our own CAAFI Biennial General Meeting (CBGM), Washington, DC, 1-3 Jun

- [Register here](#)
- [Agenda here](#)

We appreciate questions, comments, and suggestions at any time. Enjoy!

*Steve Csonka and the CAAFI Team*

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## Quick Links

- ⇒ Check out "[What's New](#)" for a brief review of noteworthy SAF news from the last quarter, including funding opportunities.
- ⇒ Go to "[Ask CAAFI](#)", a segment that highlights and explains relevant topics that impact the SAF industry.
- ⇒ See "[CAAFI Team Highlights](#)" for a snapshot of CAAFI work teams' projects and progress last quarter.
- ⇒ Jump to "[SAF State and Regional Efforts](#)" for a summary of select deployment projects around the United States.

## What's New?

[Pratt & Whitney and Air bp Collaborate on 100% SAF Testing and Research](#)

[Boeing to Purchase 2 Million Gallons of SAF from EPIC Fuels](#)

[Research Team Turns Carbon Waste into Fuel](#)

[U.S. FAA Discusses SAF and Overarching Climate Action Plan](#)

[UGI and Vertimass to Produce Renewable Fuels in U.S. and Europe](#)

*Additional information on these news items and additional funding opportunities can be found at [caafi.org](http://caafi.org).*

Please take a look at the [Frontiers in Energy Research Sustainable Aviation Fuels "Research Topic."](#) This collection is an open-source resource for SAF research and perspectives. Twenty-four papers have been published in the special topic on a range of topics from feedstocks to process chemistry and from policy to supply chain analyses.

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## Ask CAAFI

**Question:** Why attend the CBGM?

**Answer:** There's more attention on SAF now than ever before. There's also a lot going on in the SAF space from near-term commercialization, policy pushes, feedstock development, pathway approvals, airline, airport and business aviation engagement, etc., and not the least of which is the U.S. SAF Grand Challenge with its targets of 3 billion gallons of SAF per year by 2030 and 35 billion gallons per year by 2050. Hear from industry leaders, subject matter experts and government agency leadership on the topics that matter most to decarbonizing the aviation sector and how we will achieve the ambitious goals of the Grand Challenge.

As always, we welcome your feedback and/or comments.

## CAAFI Team Highlights

CAAFI hosted the following [webinars](#) highlighting the SAF work being done at U.S. DOE's National Labs and Bioenergy Centers during this reporting period:

- ⇒ In January, Dr. Zia Abdullah from the National Renewable Energy Laboratory (NREL) presented "[To 35 Billion Gallons of SAF by 2050](#)".
- ⇒ In February, Dr. Blake Simmons talked about the [SAF work being done at the Joint BioEnergy Institute \(JBEI\)](#) – [Recording of Webinar](#).
- ⇒ Corinne Drennan provided an Overview of the [SAF Work at the Pacific Northwest National Laboratory \(PNNL\)](#) - [Recording of Webinar](#)

### Business —

New producers, new suppliers, new customers, and many adjacent participants continue to contact us for guidance and assistance (now on a weekly basis) or asking for introductions to others who can assist with their commercialization efforts. We are very pleased to see this continued level of engagement from the previous quarter, and to help many! We would like to remind any producer of this available resource document: [Guidance for Selling Alternative Fuels to Airlines](#)

### Certification/Qualification —

The work of the Cert/Qual team is aligned with the activities of ASTM's aviation fuel subcommittee, the [Aviation Technical Committee of the Coordinating Research Council \(CRC\)](#), and the National Jet Fuel Combustion Program. [It is supported by](#) periodic OEM meetings in the US and UK and various ASCENT projects. The qualification process is described in a recently issued paper "[Qualification of Alternative Jet Fuels](#)". This paper may be found at the Frontiers in Energy Research Sustainable Aviation Fuels "Research Topic."

ASTM D4054 updates include:

- ⇒ Swedish Biofuels is in process of conducting some additional testing in response to the OEM comments. They should be able to finalize their Phase 1 research report soon after completion of the testing, but it is unlikely that it will be ready for ASTM balloting before the June ASTM meeting.

- ⇒ Global BioEnergies has completed D4054 Tier 1 and Tier 2 testing and prepared their Phase 1 research report. The report was submitted to the OEMs for review in January and we are awaiting the final few responses.
- ⇒ The recent interest in unblended, or 100% SAF has reenergized the Virent SAK D4054 effort. Virent SAK is a pure aromatic stream that when blended with other SPKs such as FT or HEFA will result in a fully formulated fuel. Virent has worked with the OEMs to define the remaining qualification tasks and is now conducting the final round of testing.
- ⇒ Shell IH2: Shell has finalized their D4054 Tier 3 & 4 test plan with the OEMs and is now working with the OEMs to identify test facilities. Shell is also working on scaling up production to supply the necessary quantities of test fuel to conduct the testing.
- ⇒ CSIR – Indian Institute of Petroleum has provided another fuel sample for Tier 1 and 2 fuel property testing.

OMV Downstream GmbH has some preliminary fuel property data that they wish to present at the upcoming CRC aviation fuel committee meeting in early May.

An ASTM task force is continuing its work to develop specification criteria for an unblended (or 100%) alternative jet fuel. The basic format has been finalized but we are still sorting out one remaining property requirement. It is expected that this effort will take some time before the draft D7566 specification revisions are ready for balloting to the ASTM aviation fuel subcommittee.

We continued to see increased engagement from petroleum refiners and suppliers who are interested in increasing the types and maximum blend levels for SAF co-processing at existing refinery installations. ASTM task forces have been established to develop specification criteria for co-processing of hydroprocessed biomass, pyrolysis oil derived from discarded tires, and to increase the current approved 5% limit on co-processing of lipids feedstock to 30%. Note that these specification provisions will be incorporated into the ASTM D1655 conventional jet fuel specification upon approval.

### Sustainability —

Most of the effort and focus of the Sustainability team continued to support deliberations of ICAO and its work on CORSIA.

- ⇒ Continued participation in the LCA, sustainability and alternative fuels tracking work in the ICAO CAEP Fuels Task Group (FTG), Working Group 4 (CORSIA), and Sustainability Certification Scheme Evaluation Group (SCSEG).
- ⇒ ICAO has a [set of sustainability criteria](#) available covering the pilot and voluntary phases.

#### R&D —

- ⇒ The team continued hosting a [webinar series](#) spotlighting the SAF work being done at U.S. Department of Energy's National Labs and Bioenergy Centers.

Feel free to reach out to [Josh Heyne](#) if you have interest in fuel screening efforts.

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*If you are aware of other scenarios that could be appropriate for a regional development effort, please let us know. For more information, see [CAAFI's State Initiatives](#) page.*

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*Please check the [CAAFI website](#) on a regular basis for more detail on pending activities.*

*Email [peter.herzig@dot.gov](mailto:peter.herzig@dot.gov) with any ideas for CAAFI Quarterly items of interest, [caafi.org](http://caafi.org) news suggestions, or inquiries about subscription to the CAAFI Membership group.*