



## A Note from the Executive Director

This [CAAFI Quarterly](#) newsletter describes the CAAFI activities and events that occurred April through June 2020.

In this issue, we share industry updates and CAAFI team accomplishments. We would also like to take this opportunity to make two requests regarding high-quality images. 1) We ask that you share any high-quality images you have related to SAF with captions and sources, so we can start building a repository of such images to be used by us and available to our members and 2) Please review the [Members page on caafi.org](#) and provide us with a high-quality image of your organization's logo if it is not already there. I also want to make sure you are aware of the following upcoming items:

- [UAE SAFI Webinar Series](#), August 5 – September 30 – background discussions pertinent to the potential establishment of a Sustainable Aviation Fuel Initiative in the UAE.
- National Aviation Day, August 19
- 2020 Business Aviation Global Sustainability Summit, September 14-15
- BIO Impact Agriculture and Environment Conference (formerly BIO World Congress), September 21-22, Virtual
- Scaling Up 2020 Bioeconomy Conference Webinar Series, September 8 - October 27 (Aviation Session on September 22)

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/SAJF 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.

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## What's New?

[Neste Purchased Count Terminal Rotterdam](#)

[Planning Committee Approves First Sustainable Aviation Fuel Plant in U.K.](#)

[Air Force Research Laboratory \\$1M Synthetic Biology Challenge](#)

[Renewable Diesel Fuel Production Intent Continues to Expand](#)

[Two New Alternative Jet Fuel Production Pathways Approved](#)

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

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## Ask CAAFI

**Question:** We have received many questions about the impact of COVID on SAF development, and about airline commitments to SAF in their pending recoveries from the industry downturn.

**Answer:** Societal response to the COVID-19 pandemic has brought unprecedented challenges to the entire aviation industry as well as multiple industries closely affiliated with aviation's health, including the global oil markets. In our own industry, and several others, we have seen demand destruction, supply gluts, price shocks, and disruptions to supply chains, as well as the personal toll that these impacts have. Some of these may be

long lived, as well as causing significant future paradigm changes. Only time will tell.

We will not be spending significant effort on trying to read the crystal ball - its futile to do so ... similar to our views with regard to the pending U.S. elections. We have confidence that the value proposition of civil aviation as a safe, efficient, and high-productivity enabler of the transportation of people and goods, will remain so in some form, and SAF will be part of that story.

Even in these times of turmoil, we continue to see progress across the full spectrum of the supply chain; from new interactions with labs and potential producers, to airline personnel who continue to focus on their supply pursuits. We continue to happily work with others who are also focused on progress, and with assisting the civil aviation industry in moving toward a more sustainable future, driven in part by the widespread use of SAF.

We do see signs that societal influences and resulting policy actions continue to propel us in a direction of enhanced sustainability, and some indication that policy makers are willing to address the unique aspects of aviation with more comprehensive policy support to help facilitate SAF commercialization, using both carrots and sticks. We saw such recently in the US with the House version of the CARES act. We also see such in the EU with recent developments that perhaps reflect this changing tide (e.g. see [ReFuelEU](#)). We also see a full range of additional participants coming alongside who can help facilitate progress, including big-oil, fuel suppliers, corporations who have interest in mitigating their Scope 3 emissions, NGOs and others.

Finally, several airlines and fuel suppliers continue to engage with individual producers on discussions of offtakes and related activities.

CAAFI was established under the recognition that we are involved in SAF development for the long-haul. Sometimes the long-haul appears to have more chop, turbulence and route-circuitry than we'd like. However, our work today is no less important than when we started it in 2006, perhaps more so. We continue to work with that in mind, and thank you

for your similar interests.

## CAAFI Team Highlights

### Business —

Activities include:

- ⇒ Facilitating opportunities for airline and other end user engagement, identifying supply logistics needs and informing contract processes. Stay tuned for additional announcements in the coming quarters.
- ⇒ Engaging with several firms approaching commercialization, as well as several new producer entrants.
- ⇒ Continued engagement with the several USDA NIFA-AFRI CAPS with whom CAAFI has strategic engagement.
  - Southeast Partnership for Advanced Renewables from Carinata ([SPARC](#))
  - Sustainable Bioeconomy for Arid Regions ([SBAR](#)) focused on the production of guayule bagasse as a feedstock for SAF production
  - Integrated Pennycress Research Enabling Farm & Energy Resilience ([IPREFER](#)).
- ⇒ Engagement with the OEM and BizAv communities on industry messaging. Responding to inquiries from policy makers and other third parties interested in fostering SAF development.

### Certification/Qualification —

The detailed work of the Cert/Qual team typically happens at the two annual meetings of [ASTM D02](#), the spring meeting of the [Aviation Committee of the Coordinating Research Council](#), various OEM meetings in the US and UK, and adjacent to the activities of ASCENT, and at venues like the National Jet Fuel Combustion Program.

D4054 updates include:

- ⇒ Version D7566-20 now includes seven annexes with the recent additions of ARA CHJ (Annex A6) and IHI's HC-HEFA (Annex A7). Also, version D1655-20 now includes co-processing provisions at 5% volume for both lipids and FT crude.
- ⇒ Shell IH2: The draft Phase 1 research report was submitted to the OEM review team on June 2. In

recognition of the working constraints imposed by the pandemic, an extended period was to October 31 was specified.

- ⇒ Swedish Biofuels has re-initiated their ASTM project and is finalizing their Phase 1 research report.
- ⇒ Global BioEnergies has established an ASTM task group and has been providing data and updates to the OEM Review Team.
- ⇒ Virent provide an update on their SAK pathway for the June 17 ASTM Emerging Fuels section minutes that indicated that future testing will focus on SAK/Jet A blends to gather data for the research report.

### Sustainability —

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

- ⇒ Continued to participate 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).

### R&D —

- ⇒ Dr. Joe Ellsworth was added to the leadership as a co-chair. CAAFI was very sad to see Dr. Michael Lakeman leave the team as he was a productive and consistent contributor to SAF R&D efforts. However, we feel very lucky to have Joe on-board and look forward to advancing our efforts with him. Welcome, Joe!
- ⇒ Hosted two [CAAFI Webinars](#):
  - European Policies: Opportunities and Challenges for Sustainable Aviation Fuel (SAF) by Valentina Vecchio (Boeing) – Slide deck not available
  - The State of Sustainable Aviation Fuel (SAF) by Steve Csonka (CAAFI)
    - Slide deck available [here](#).
    - Webinar recording available [here](#).
- ⇒ Continued discussing engaging companies with emerging alternative jet fuel pathways.
- ⇒ Continued developing enhanced prescreening

guidance documents.

## SAF State and Regional Efforts

### ◇ Connecticut

- The conversion of the South Hartford-based Materials Innovation and Recycling Authority (MIRA) facility to a jet fuel processing facility remains an attractive opportunity. CAAFI continues to engage with Praxair, Linde, Pratt & Whitney and state government contacts. During the quarter, CAAFI initiated dialogue with representatives of the City of Hartford and the state congressional delegation seeking to focus attention on the opportunity to introduce SAF production at the site.

### ◇ Florida

- CAAFI continued engagement as a co-founder of the Florida Coalition for Sustainable Agriculture, Water and Energy (FCSAWE). The core FCSAWE members include the Florida Department of Agriculture and Community Services (FDACS), University of South Florida (USF), University of Florida (UFL), and subject matter experts on beets, sorghum, pongamia, carinata, elephant grass, and eucalyptus. The group continued working toward establishing a set of focused near-term objectives. CAAFI and FCSAWE achieved significant progress during the quarter.
- A partnership of UFL and Argonne National Labs with CAAFI support for market transformation planning was announced as a recipient of \$3.92 million multi-year award under DOE's BETO Topic Area 4 – Bio-Restore to execute a project that will develop energy cane in the region surrounding Lake Okeechobee.
  - UFL is initiating work under an energy technology grant to better define the

benefits of pongamia (in cooperation with TerViva) to fallow and water farmed citrus lands in the Indian River area.

- The SPARC Supply Chain team, which is led by CAAFI, is progressing on two fronts.
  - Initial resilience modeling of the Carinata supply chain using FTOT was completed by the University of South Florida.
  - An effort to establish a beneficial rotation between Carinata and Sorghum in both Georgia and Alabama has been initiated. The goal is to provide an attractive opportunity for Nuseed, a seed company, to focus commercialization crops in the region.

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

Email [peter.herziq@dot.gov](mailto:peter.herziq@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.

#### ◇ Southeast Regional ASCENT Support

- Regional efforts to support woody biomass based SAF supply chains continued in the quarter. The goal of the effort initially is to utilize the University of Tennessee's Institute of Agriculture's significant array of tools associated with establishing wood residual and slash availability in the region. This could include a focus on supporting a bottoms-up analysis by perspective processors interested in the region as well as service suppliers to the industry. Other customers could include state and regional governments and public/private efforts. The goal is to have an approach to the service that can be tested with candidate customers during the next quarter.

#### ◇ Vermont

- GSR technologies submitted a Value Added Producer Grant (VAPG) application in March to adapt its technology to a new dairy farm site. An award announcement is expected in the next quarter.

*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.*