



CAAFI Biennial General Meeting (CBGM) & Integrated ASCENT Symposium Agenda

December 4-6, 2018

Marriott Metro Center, Washington, DC

Day 1 (Tuesday, December 4th)

7:30 – 8:30 Registration, Hotel Ballroom Level (escalators down from lobby-level)

Commercialization Progress and Value Proposition of Sustainable Alternative Jet Fuel (SAJF)

In the first part of the day, we will hear about SAJF deployment progress and plans, discuss key drivers of value proposition for SAJF, and hear about a variety of emerging technologies.

8:30AM **1.1 Welcome / Intro**

(15 minutes) *Introductory remarks and overall stage-setting*

Speaker Steve Csonka, CAAFI Executive Director

8:45AM **1.2 Value Proposition of SAJF – Panel Discussion**

(1 hour)

Dialogue with key supporters of SAJF development around the topic of, “Affirmation of the value proposition of SAJF, how does it help meet stakeholder goals, and what is your organization doing to promote such development?”

Moderator Chris Tindal, CAAFI

*Panelists Joel Murdock, FedEx
Kevin Welsh, FAA
Bill Goldner, USDA NIFA
Jonathan Male, DOE BETO
David DeGennaro, NWF*

9:45AM **1.3 Morning Break / Networking**

(30 minutes)

Sponsored by GAMA and Avfuel, CBGM Supporters Sponsors

10:15AM **1.4 Special Remarks**

(15 minutes)

Observations from a champion for resiliency, on topics of importance to the SAJF community

Speaker Ray Mabus, The Mabus Group

10:30AM **1.5 The Producer Pack**

(50 minutes)

Hear from the companies that are producing SAJF, or will be soon. What are their near-term plans for production and expansion?

Moderator Steve Csonka, CAAFI

*Panelists Bryan Sherbacow, World Energy
Bruno Miller, Fulcrum
Terry Kulesa, Red Rock
Neville Fernandes, Neste*

For Internet Access please use: Network ID: *eco-skies* | Password: *united*

For speaker bios please go to: http://caafi.org/files/2018_CBGM_Bios.pdf



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- 11:20AM **1.6 Parade of Commercialization Efforts, part 1**
(50 minutes) *Hear from fuel producers at earlier stages of commercialization discuss successes and obstacles. Learn about challenges they face for which CAAFI stakeholders may be able to help.*
- Moderator *Mike McAdams, ABFA*
Panelists *Chris Wilcox, Gevo*
James Andersen, Honeywell UOP
Jennifer Holmgren, LanzaTech
Andrew Miller, Velocys
- 12:10PM **1.7 Lunch: Including special remarks**
(60 minutes) *Sponsored by the Aerospace Industries Association (AIA), a CBGM Advocates Sponsor*
Remarks from the General Aviation Manufacturers Association (GAMA) & Avfuel,
regarding a 2019 planned SAJF demonstration at Van Nuys, CA
Continuation of commercialization progress presentation by SG Preston's Randy LeTang
- 1:10PM **1.8 Parade of Commercialization Efforts, part 2**
(50 minutes) *Hear from companies with new technologies and approaches that are readying for commercialization.*
- Moderator *Stephen Kramer, Pratt & Whitney*
Panelists *Chuck Red, ARA*
Joanna Bauldrey, Shell
Michael Lokey, Sunshine Biofuels
Nick Andrews, USA BioEnergy
- Aligning Efforts to Enable Commercial Deployment**
The rest of this afternoon will focus on additional developments that may impact the timing and rate of SAJF commercialization acceleration, including global policy, regional policy, and airport convening activities.
- 2:00PM **1.9 Policy Discussion: Updates on International, US Federal, and State Approaches**
(70 minutes) *A discussion on progress and requirements of the ICAO Market-based Measure for international aviation, CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), efforts to improve RFS-2, as well as progress being made with inclusion of SAJF in the CA LCFS*
- Moderator *Robert Boyd, IATA*
Panelists *Jim Hileman, FAA*
Kerri Henry, Transport Canada
Nancy Young, A4A
Mike McAdams, Advanced Biofuels Association
Graham Noyes, Noyes Law Corporation
- 3:10PM **1.10 Afternoon Break / Networking**
(30 minutes) *Sponsored by Airports Council International – North America (ACI-NA), a CBGM Allies Sponsor*



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- 3:40PM **1.11 SAJF Opportunities at Airports – Fostering Collaboration**
(60 minutes) *An exploration of how airports are working to convene SAJF engagement, and understand infrastructure limitations, and a discussion of current progress and challenges*
- Moderator Melinda Pagliarello, ACI-NA*
- Panelists Stephanie Meyn, SEA-TAC*
Erin Cooke, SFO
Nancy Young, A4A
Tom Cuddy, FAA
- 4:40PM **1.12 Recognition of CAAFI Members**
(25 minutes) *Presenter Mike Wolcott, ASCENT*
John Gardner – in-memoriam
- Presenters Various CAAFI Steering Group members*
- Awards for:*
- Contributions to fuel qualification*
Stan Seto, Randy Williams, Cliff Moses, Joanna Bauldrey
- Contributions to industry support and recognition*
Mike McAdams, Jim Lane
- Contributions to enabling finance of the industry*
John May, Mark Riedy, Cindy Thyfault
- Contributions to ensuring a focus on sustainability*
Barbara Bramble
- 5:05PM **1.13 Closing Remarks and Overview of Day 2**
(10 minutes) *Presenter Chris Tindal, CAAFI*
- 5:15PM **1.14 Networking Reception, at the Marriott**
(2 hours) *Sponsored exclusively by Airlines for America (A4A), a CBGM Champion Sponsor*
Hors d'oeuvres & libations



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Day 2 (Wednesday, December 5th)

Aligning Efforts to Enable Commercial Deployment (continued)

On our second day, we provide an introduction to the Aviation Sustainability Center (ASCENT) Center of Excellence and how the work of ASCENT is applicable to commercialization efforts. We will hear about modeling efforts to assess future U.S. SAJF production and specific efforts related to lipid-based fuel production. We will also explore ongoing supply chain development efforts across the U.S., including ASCENT and CAAFI's regional supply chain projects, the USDA Coordinated Agriculture Projects focused on SAJF, and real-world supply chain tools and resources from ASCENT.

8:30AM **2.1 Opening Remarks**

(15 minutes) *An introduction to the synergies between ASCENT Project 01, CAAFI, U.S. Government Agencies, and Industry*

Speaker Steve Csonka, CAAFI

8:45AM **2.2 Introduction to ASCENT**

(15 minutes) *Overview of research activities in the FAA's Center of Excellence for Aviation and Environment.*

Speaker Mike Wolcott, WSU, ASCENT

9:00AM **2.3 Future Production Potential of SAJF in the U.S.**

(45 minutes) *Future feedstock and fuel availability potential – a summary of recent modeling and analysis efforts.*

Moderator Jim Hileman, FAA

Panelists Mark Staples, MIT, ASCENT

Emily Newes, NREL

Kristin Lewis, Volpe

9:45AM **2.4 Morning Break / Networking**

(30 minutes) *Sponsored by Jet Blue, a CBGM Allies Sponsor*

10:15AM **2.5 Enabling Lipid-based Fuel Production**

(60 minutes) *Looking ahead at commercialization of multiple lipid-based pathways and feedstock availability*

Moderator Steve Csonka, CAAFI

Panelists Matt Langholtz, DOE, ORNL

Roy Scott, USDA ARS

Burt English, UTK, ASCENT

John Cusick, The Jacobsen



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- 11:15AM
(45 minutes) **2.6 Real World Supply Chain Development ASCENT & CAAFI Regional Projects**
How we are laying the groundwork to enable specific tactical deployment efforts (ASCENT Project 01 and F2F2 examples)
Moderator Kristin Lewis, Volpe, CAAFI
Panelists Mike Wolcott, WSU, ASCENT – Inland Northwest Analysis
Scott Turn, UofHI, ASCENT – Tropical Feedstocks Concepts
Tim Rials, UTK, ASCENT – Southeast U.S. Concepts
Rich Altman, CAAFI – CAAFI State Initiatives
- 12:00PM
(75 minutes) **2.7 Lunch/Networking: Special Remarks**
Sponsored by Shell Aviation, a CBGM Advocates Sponsor
Remarks from John Heimlich, Chief Economist at A4A about airline growth, economics, and implications for fuel demand, entitled “Air Service and Airline Economics”
- 1:15PM
(45 minutes) **2.8 Real World Supply Chain Development: USDA Coordinated Agriculture Projects**
Project summaries of significant regional supply chain efforts with a focus on SAJF
Moderator Bill Goldner, USDA NIFA
Panelists John Field, CSU
BANR – Bioenergy Alliance Network of the Rockies
David Wright, UoFL
SPARC – Southeast Partnership for Advanced Renewables from Carinata
Alix Rogstad, UoAZ
SBAR – Sustainable Bioeconomy for Arid Regions
- 2:00PM
(75 minutes) **2.9 Real World Supply Chain Development: Supply Chain Tools**
Overview of current supply chain assessment and analysis tools: Problem, solution, sample results, how commercial entities can engage (3 slides, 5 minute format)
Moderator Nate Brown, FAA
Panelists Mark Staples, MIT, ASCENT – GHG LCA
Wally Tyner, Purdue, ASCENT – ILUC modeling
Xiao Zhang, WSU, ASCENT – Open source TEA and Design Cases
Saurabh Bansal, PSU, ASCENT – Supply Chain Financial/Risk Modelling
Gaby Gilbeau, PSU, ASCENT – Legal & Regulatory Landscape
Mike Gaffney, WSU, ASCENT – CAAM
Kristin Lewis, Volpe, CAAFI – Freight and Fuel Transportation Optimization Tool
- 3:15PM
(5 minutes) **2.10 2019 Goals Prioritization Activity**
A review of CAAFI’s 2018 priorities and a request for input on priorities for 2019.
Moderator Chris Tindal, CAAFI
- 3:20PM
(55 minutes) **2.11 Afternoon Break / Networking, Poster Session and Expo**
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Fuel Qualification

The latter part of this afternoon will focus on the current status of ASTM fuel qualifications, ongoing efforts to streamline the fuel qualification process, and ongoing research related to jet fuel combustion.

4:15PM [2.12 ASTM and Fuel Qualification: Current Status, Forthcoming Specifications, and the D4054 Clearinghouse \(ASCENT Project 31\)](#)
(30 minutes)

Overview and discussion

Moderator/Speaker Mark Rumizen, FAA
Speakers Steven Zabarnick, UDRI, ASCENT
 Joanna Bauldreay, Shell (IH² progress)

4:45PM [2.13 National Jet Fuels Combustion Program Activities](#)
(30 minutes)

An overview of ASCENT research efforts to improve our understanding of how fuel composition and characteristics determine performance

Moderator Jim Hileman, FAA/ASCENT
Panelists Med Colket, Independent Consultant
 Josh Heyne, University of Dayton, ASCENT
 Tonghun Lee, UIUC, ASCENT

5:15PM **2.14 Summary of Day 2**
(10 minutes)

A summary and reflection upon the tools being developed, and the work being done with those tools and Q&A.

Speaker Jim Hileman, FAA

5:25PM **2.15 Closing Remarks and Overview of Day 3**
(5 minutes)

Speaker Chris Tindal, CAAFI

5:30PM **2.16 Networking Reception, at the Marriott**
(2 hours)

Sponsored by Boeing, CBGM Champion Sponsor
Heavy hors d'oeuvres & libations



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Day 3 (Thursday, December 6th)

Implementing Tools and Best Practices

Our final day will start with air quality impacts and benefits of SAJF. This will be followed by a discussion of tools and best practices that can facilitate feedstock and technology maturation, commercialization, and deployment. CAAFI will present our new approach to connecting fuel producers and airlines, we will discuss CAAFI readiness resources. We then want to hear from you, our stakeholders, on your views of the SAJF value proposition and CAAFI's role in moving SAJF forward.

8:30AM **3.1 Opening Remarks**
(15 minutes) *Speaker* Chris Tindal, CAAFI

8:45AM **3.2 SAJF Benefits: Air Quality and Other Atmospheric Research**
(75 minutes) *A review of several ongoing efforts to quantify the improvement in air quality and atmospheric impacts associated with SAJF usage:*

- MIT/ASCENT evaluation of aromatic content changes on emissions
- ACRP 02-80 – Quantifying Emissions Reductions at Airports from the Use of SAJF
- Deutsches Zentrum für Luft- und Raumfahrt and NASA performed joint research flights in Germany to study particulate emissions from SAJF and influence on cloud formation, contrails, and climate.

• Canadian GARDN CAAFCEER work
Moderator Angela Surgenor, NASA
Presenters Jim Hileman, FAA
Uven Chong, Booz Allen Hamilton
Bruce Anderson, NASA
Patrick LeClercq, DLR
Fred Ghatala, Waterfall Group, GARDN

10:00AM **3.3 Morning Break / Networking**
(30 minutes) *Sponsored by Airbus, a CBGM Allies Sponsor*

10:30AM **3.4 CAAFI Fuel, Feedstock and Commercial Maturity Tools**
(45 minutes) *Updates on the Readiness Level applications to real-world feedstocks, a tour of CAAFI's updated web resources.*

Moderator Nate Brown, FAA
Presenters Kristin Lewis, Volpe/CAAFI
Steve Csonka, CAAFI
Peter Herzig, Volpe/CAAFI



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11:15AM **3.5 Open Discussion on Commercialization and SAJF Value Proposition**
(45 minutes) *Discussion of 2019 Priorities and Q&A with audience*
Moderator Steve Csonka, CAAFI

12:00PM **3.6 Lunch/Networking: Special Remarks**
(1 hour) *Sponsored by World Energy, a CBGM Allies Sponsor*
Remarks from Carl Bureson, FAA Acting Deputy Administrator

Global Activities

The latter part of Day 3 will focus on activities of partners and stakeholders around the globe. We'll hear from international partners on unique research projects, deployment activities, and public-private partnerships.

1:00PM **3.7 The Global Scene: Public-Private Partnerships and Deployment Activities**
(105 minutes) *Hear from SAJF collaborators around the world about their current activities and opportunities*
Moderator Sean Newsum, Boeing
Panelists Chris Tindal, CAAFI, Australia
Juan Jose Veras, IDAC, Dominican Republic
Siegfried Knecht, aireg, Germany
Alfredo Ramos Aparicio, QENER, Mexico
Cesar Velarde, AESA, Spain
Michelle Carter, KTN SAF-SIG, UK

2:45PM **3.8 Afternoon Break / Networking**
(30 minutes) *Sponsored by SG Preston, a CBGM Allies Sponsor*

3:15PM **3.9 Canada's SAJF Activities**
(45 minutes) *An overview of Canadian engagement efforts including the Green Aviation Research & Development Network (GARDN), the CBSCI Project, Online Community, The Sky's the Limit Challenge, The Alberta Innovates/WestJet Aviation Biofuel Challenge, Canadian Clean Fuel Standard, and the Canadian Government offtake commitment.*
Moderator Ted McDonald, Transport Canada
Presenters Fred Ghatala, Waterfall Group
Kerri Henry, Transport Canada
Stu Porter, Forge Hydrocarbons

4:00PM **3.10 Closing Remarks**
(15 minutes) *Summary and Looking Ahead*
Speaker Steve Csonka, CAAFI