

### ICAO ENVIRONMENT



## ICAO Stocktaking Seminar toward the 2050 Vision for Sustainable Aviation Fuels

ICAO Headquarters, Montréal, Canada | 30 April - 1 May 2019

Final Version

## 01. CONFERENCE AGENDA

#### Monday, 29 April 2019

14:00 – 17:00 On-site registration

#### Day 1 - Tuesday, 30 April 2019

07:30 - 09:30	On-site registration
09:00 - 09:15	Welcome and introduction
	Dr. Fang Liu, Secretary General, ICAO
09:15 - 09:45	Opening Session: Setting the Scene Speaker: Ms. Jane Hupe, Deputy Director Environment, ICAO

#### 09:45 – 11:00 Agenda Item 1: Developments in certification and deployment of aviation fuels

This session will include a review of the conversion processes that have already been approved for use in aviation, and those conversion processes that are within the approval process. Additionally, presentations will provide details of currently operational alternative fuelled flights. This session will include a Question and Answer (Q&A) period.

#### Facilitator:

Mr. Dionisio Mendez, Mexico's Representative on the ICAO Council

#### Speakers:

**Dr. Jim Hileman**, Chief Scientific and Technical Advisor for Environment, US Federal Aviation Administration

**Mr. Aaron Robinson**, Senior Manager - Environment Strategy and Sustainability, United Airlines

Mr. Fokko Kroesen, Environmental Manager, KLM

Ms. Jannike Ludvigsson, Environmental Strategist, Swedavia

#### 11:00 - 11:30 Coffee Break

sponsored by Airlines for America





#### 11:30 – 12:30 Agenda Item 2: State and Organization initiatives for the deployment of alternative fuel

Presenters from States and initiatives will provide details of ongoing research and development projects related to aviation fuels. These presenters will be asked to focus on quantitative values and predictions for the future. Representatives from States that are currently working on sustainable aviation fuel (SAF) policies will also be invited to present the details of their processes. This session will include a Question and Answer (Q&A) period.

#### Facilitator:

Ms. Mitzi da Costa, Brazil's Representative on the ICAO Council

#### Speakers:

Ms. Claire Rais-Assa, Policy Officer, DGCA, France

Mr. César Velarde, Aviation and Environment Expert Consultant Assistance, SENASA and the Spanish Aviation Safety Agency (AESA)

**Mr. Nate Brown**, Senior International Advisor (Acting), US Federal Aviation Administration Office of Environment and Energy

**Mr. Adriano Bonotto**, Division of New and Renewable Energy Resources (DRN), Ministry of Foreign Affairs, Brazil

Mr. Pedro Scorza, Director of Aviation Biofuels at Ubrabio & Technical Advisor for Renewable Fuels

#### 12:30 – 14:00 Lunch Break

sponsored by Bombardier

#### **BOMBARDIER**



#### 14:00 – 15:30 Agenda Item 2: State and Organization initiatives for the deployment of alternative fuel(continued)

#### Speakers:

**Dr. Alejandro Ríos Galvan**, Director, Sustainable Bioenergy Research Consortium and Professor of Practice, Masdar Institute of Science and Technology

Mr. Kurt Edwards, Director General, International Business Aviation Council

Dr. Hassan El-Houjeiri, Saudi Arabia

Ing. Alfredo Ramos, CEMIE-Bio, Cluster Bioturbosina

Mr. Fred Ghatala, Canada's Biojet Supply Chain Initiative

#### 15:30 – 17:30 Networking Session: Facilitating Partnerships for the Deployment of SAF



Event attendees will be invited to participate in a designated Networking Session, with a focus on facilitating partnerships for the deployment of SAF. Speakers from the Seminar will act as facilitators for small group discussions on the topics presented throughout the Seminar. Upon arriving to ICAO, event participants will receive a personalized instruction badge for the Networking Session. Further instructions will be provided immediately prior to the session.

sponsored by GARDN SAF Community



17:30 - 19:30 Cocktail Reception

sponsored by Neste





#### Day 2 – Wednesday, 01 May 2019

#### 08:00 – 09:30 On-site registration

#### 09:00 – 10:30 Agenda Item 3: Financing and assistance programmes for aviation fuels

Presenters from States, initiatives, and projects will discuss various mechanisms available for financing SAF deployment. Presenters in this session will be asked to focus on what their greatest challenges have been throughout the process leading to SAF deployment, and how they have worked to overcome those challenges.

This session will build upon the excellent work underpinning the recent ICAO-EU Project feasibility studies to encourage and facilitate the development of future feasibility studies. This session will include a Q&A period.

#### Facilitator:

Ms. Aysha Al Hamili, UAE's Representative on the ICAO Council

#### Speakers:

Dr. Laurel Harmon, Vice President, Government Relations, LanzaTech

Mr. Thomas Parsons, Biojet Commercial Development Manager, AirBP

Mr. Henrik Erametsa, Head of Aviation Regulation, Neste

Ms. Charlotte Hardenbol, Head of Customer Programs, SkyNRG

Ms. Juju (Zhishen) Wang, Research Assistant, MIT

#### 10:30 - 11:00 Coffee Break

sponsored by GARDN SAF Community





#### 11:00 – 12:30 Agenda Item 3: Financing and assistance programmes for aviation fuels (continued)

#### Speakers:

Dr. Neil Dickson, Chief, Environmental Standards, ICAO

Mr. Juan Veras, Dominican Republic

**Ms. Tjaša Bole-Rentel,** Bioenergy Programme Manager: Policy Futures Unit, WWF-SA

Ms. Jane Hupe, Deputy Director Environment, ICAO

12:30 – 14:00 Lunch Break



#### 14:00 – 15:30 Agenda Item 4: Developments in sustainability of aviation fuels

Presenters in this session will focus on advancements related to the sustainability of aviation fuels. These advancements may be attributable to improvements made to SAF development technologies, oversight by a sustainability certification scheme, or through other means. This session will include a Q&A period.

#### Facilitator:

Mr. Alok Shekhar, India's Representative on the ICAO Council

#### Speakers:

Mr. Timothy Cesarek, Executive VP & Chief Commercial Officer, Gevo

**Dr. Norbert Schmitz,** Managing Director, International Sustainability and Carbon Certification (ISCC)

**Ms. Elena Schmidt,** Standards Director, Roundtable on Sustainable Biomaterials (RSB)

Mr. Mike Lu, Executive Secretary, Consórcio MacaubaBR

**Mr. Romulo Veiga**, Secretary of Economic Development Labor and Tourism in the City of Juiz de Fora

**Dr. Bruno Silva,** Environment Officer, ICAO

#### 15:30 – 16:00 Coffee Break

sponsored by Global Alliance Powerfuels

#### Global Alliance **Powerfuels**



#### 16:00 – 16:30 Agenda Item 5: Current information for updating the 2050 ICAO Vision for Sustainable Aviation Fuels

Similar to the "Mapping the Future" session from the 2017 ICAO Seminar on Alternative Fuels, ICAO will present a summary of what has been presented throughout the sessions, including a quantified expectation of SAF production across time. This session will include a Q&A period.

#### Speakers:

**Dr. Neil Dickson,** Chief, Environmental Standards, ICAO

Ms. Jane Hupe, Deputy Director Environment, ICAO

#### 16:30 – 17:00 Wrap-up and closing remarks

#### **END**

# O2. FACILITATOR AND SPEAKER PROFILES



Ms. Jane Hupe, Deputy Director Environment, ICAO

Jane Hupe is the ICAO Director responsible for the environmental programme of the Organization. Ms. Hupe has been at the forefront of ICAO's efforts to define and promote policies and standards for an environmentally sustainable aviation which encompasses aircraft noise and aircraft engine emissions, local air quality and climate change, sustainable energy and market-based measures. Her responsibilities include directing ICAO environmental activities, and serving as the Secretary of the ICAO Council's Committee on Aviation Environmental Protection (CAEP). Ms. Hupe coordinates aviation and the environment activities with other International Organizations and she is also in charge of the Strategy on assistance and capacity-building of ICAO Member States in this area. Contributing to the IPCC work as a lead author on aviationrelated issues, she received a certificate acknowledging her contribution to the IPCC's award of the 2007 Nobel Peace Prize. Prior to joining ICAO. Ms. Hupe served as advisor on environmental matters to the Brazilian Aviation Authorities for 15 years. Ms. Hupe has a Master's degree in Aviation from the École Nationale de L' Aviation Civile (ENAC), Toulouse, France, and many other post-graduate degrees, including in environmental auditing.

Dr. James (Jim) Hileman, Chief Scientific and Technical Advisor for Environment, US Federal Aviation Administration Dr. James (Jim) Hileman is the Chief Scientific and Technical Advisor for Environment and Energy for the Federal Aviation Administration. He has responsibility for the Environment and Energy research portfolio of the FAA, which includes the CLEEN Program, the ASCENT Center of Excellence, and the Commercial Aviation Alternative Fuels Initiative (CAAFI), among other efforts. In addition to being a Chief Scientist for the FAA, Dr. Hileman is the co-rapporteur of the Fuels Task Group of the International Civil Committee Aviation Organization (ICAO) on Aviation Environmental Protection (CAEP). Prior to joining the FAA, Dr. a Principal Research Engineer within the Hileman was Department of Aeronautics and Astronautics at MIT. research focused on alternative jet fuels and aircraft concepts that could reduce the impacts of aviation on noise, air quality and global climate change. He holds a B.S., M.S., and Ph.D. in Mechanical Engineering from the Ohio State University.



Mr. Aaron Robinson, Seninor Manager -Environment Strategy and Sustainability, United Airlines

Aaron Robinson manages the Eco-Skies program for United Airlines, biofuel development. focusina enerav efficiency. emissions reductions. and external communications. previously worked in financial analysis, where he evaluated competitors' actions and financial results for Investor Relations, and Board senior executives. the Directors. Previously at Delta Air Lines and pre-merger Northwest Airlines, he oversaw all aspects of compliance with the EU ETS, represented the airline in developing its climate change strategy, led numerous internal sustainability programs, and published the airline's emissions and sustainability reports. He transitioned to environment after leading the airline's fuel conservation program.

Aaron has also worked in airport operations, operational reliability, and dangerous goods. In addition to serving at Air Transport World, the Metropolitan Washington Airports Authority, and Rolls-Royce, he founded and managed SimAirline.net, a flight simulation organization with 6,000 members from 120 countries. He holds a BA in Economics from Carleton College, an MBA from The University of Texas, and a private pilot license.



**Ms. Jannike Ludvigsson,** Environmental Strategist, Swedavia

When Jannike started working at Swedavia, sustainable aviation fuel (SAF) was unknown for her. Today, 1.5 years later she is involved in leading the transition from fossil jet fuel to SAF in Sweden. Most recently, she has been leading the project "Joint Procurement of SAF in Sweden" together with other organizations, which aims to increase the demand of SAF in Sweden and to start a Swedish production of SAF. Swedavia has taken a leading role for sustainable aviation in Sweden. Her driving force comes from the motto that we need to act now and can't sit and wait for the perfect solution. Jannike have a long background in strategic sustainability work where she helped organizations create value for stakeholders through their sustainability work. She earned master's degrees in both environmental and political sciences.



Ms. Claire Rais-Assa, Policy Officer, DGCA, France

AgroParisTech, After graduating from engineering an the field of environmental sciences agriculture, with a master degree inenvironmental economics, I started to work for the French ministry of transport, at the civil aviation authority. My area of work is the design and implementation of public policies for the sustainable development of air transport. I am notably involved in the deployment of sustainable aviation fuels at the national level. Part of my work is also dedicated to the coordination with the French private sector involved in sustainable aviation fuels production and use. At the international level, I have been involved in ICAO's work as an expert of the Fuel Task Group for the past 2 years, developing CORSIA rules linked with sustainable aviation fuels. and also participated the Mexico's 2nd Conference on Aviation Alternative Fuels in 2017.



Mr. Nate Brown, Senior International Advisor (Acting), U.S. Federal Aviation Administration (FAA)

Nate Brown is currently serving as the Senior International Advisor (Acting) in the FAA's Office of Environment and Energy, the FAA office responsible for U.S. civil aviation environment & energy policy, research and development. Nate also serves as the Proiect Manager .Jet Fuel responsible management of a portfolio of sustainable aviation fuel (SAF) research and development efforts funded by FAA via the Aviation Sustainability Center (ASCENT) center of excellence, and the Continuous Lower Energy Emissions and Noise (CLEEN) programs. He manages FAA's support for the Commercial Aviation Alternative Fuels Initiative (CAAFI) for which he also serves as Head Advisor for Strategy and Implementation. Nate leads FAA coordination with other U.S. government and execution international cooperative agreements. of Nate is also a member of the International Civil Aviation Organization's (ICAO) Committee on Aviation Environmental Protection (CAEP) Fuels Task Group.



Mr. Adriano Bonotto, Diplomat, Ministry of Foreign Affairs, Brazil

Adriano Bonotto is a career diplomat, with degrees in History (State University of Campinas - Unicamp) and Diplomacy (Brazilian Diplomatic Academy - IRBr). He currently works at the Division for Energy Progress of the Ministry of Foreign Affairs of Brazil. His responsibilities include, among others: assisting in the collaboration and exchange in energy markets and renewable energy policies; supporting bilateral cooperation in renewable energy, in particular sustainable bioenergy and biofuels; promoting the potential of advanced biofuels and other forms of sustainable low carbon bioenergy, including sustainable aviation fuels; and promoting regional energy integration, including the negotiation of bilateral and regional agreements.



Dr. Alejandro Ríos,
Director of the
Sustainable Bioenergy
Research Consortium
(SBRC) at Masdar Institute

Alejandro Ríos is the Director of the Sustainable Bioenergy Research Consortium (SBRC) at Masdar Institute (MI), a part of Khalifa University of Science and Technology (KU). The SBRC was established by MI and has as its founding members The Boeing Company, Etihad Airways and UOP-Honeywell, that together with Safran, GE, ADNOC Refining and Bauer Resources, spearheading research in the use of salt water and halophytes for the production of sustainable aviation fuels Dr. Rios was Director of ASA Fuel Services for 11 years, where he oversaw the operation and management of a network of 60 fuel farms and their 2,000+ into- plane operations. He was the architect of the "Flight Plan" initiative that promotes the development of a sustainable aviation biofuel industry in Mexico. He holds a Bachelor's degree in Civil Engineering from the Universidad Iberoamericana in Mexico City, and Masters and Ph. D. degrees in Civil and Environmental Engineering, from Cornell University, USA.



Mr. Kurt Edwards, Director General, International Business Aviation Council (IBAC)

As Director General of the International Business Aviation Council (IBAC), Kurt Edwards advocates for business aviation at the International Civil Aviation Organization, a specialized agency of the United Nations, in Montreal, Canada, and through the 14 business aviation association members of IBAC, located across six continents. He is assisted by a team of experienced aviation professionals that promote and manage the industry-leading global codes of best safety practices: the International Standard for Business Aircraft Operations (IS-BAO) and International Standard for Business Aircraft Handling (IS-BAH). Learn more at IBAC.org.



**Dr. Hassan El-Houjeiri,** Saudi Arabia

Dr. Hassan El-Houjeiri is the Climate & Sustainability Group Leader of Aramco Research Center in Detroit. He manages strategic research programs in support of climate strategy and technology planning. Before joining Aramco, he development regulatory mechanisms and platforms for state regulators in the United states and the EU for crude oil carbon intensity regulations. He is a fellow from Stanford University who built crude production GHG models that are used for the assessment of the climate impacts of crude oil production. He also has extensive experience at Shell shaping the  $\mathrm{CO}_2$  strategy. He holds a PhD in Engineering Science from Oxford University.



Ing. Alfredo Ramos, CEMIE-Bio, Cluster Bioturbosina

Mr. Alfredo Ramos is an Electronics and Telecommunication Engineer with studies of Master in Science Degree in the National Polytechnic Institute of Mexico. He has worked 27 years at CIATEQ, Center for Applied Technology, in several positions as principal investigator, manager and deputy director in several areas such as: Robotics, Industrial Processes and Dynamic Equipment. Since 2009, Mr Ramos has collaborated in different working groups to promote the develop of Sustainable Aviation Fuels in Mexico. Currently, Mr. Ramos is CEO of the company QENER, being part of the Executive Committee of the Biojet fuel Cluster and responsible for the market line of work.



Mr. Fred Ghatala, Canada's Biojet Supply Chain Initiative

Fred is a principal of Waterfall Advisors Group, a Vancouver based consulting business established in 2011 to support the development of the biofuels and bioenergy sectors in Canada. Waterfall Group has led several biojet project collaborations from 2013 to date, including the Civil Aviation Alternative Fuel Contrail Emission Research project and Canada's Biojet Supply Chain Initiative.

Fred is also the Director of Carbon and Sustainability for Advanced Biofuels Canada, a national industry association working to advance the production and use of advanced biofuels.



Dr. Laurel Harmon, VP Government Relations, LanzaTech

Harmon provides policy direction and leadership on international legislative and regulatory matters and develops collaborative research and demonstration projects for LanzaTech. LanzaTech is the global leader in gas fermentation technology, offering novel and economic routes to a variety of products, including aviation fuel, from waste carbon streams, including industrial emissions. By recycling carbon, LanzaTech's solutions mitigate carbon emissions from industry without adversely impacting food or land security. LanzaTech's unique process, certified by the Roundtable on Sustainable Biomaterials and currently protected by over 500 granted patents, produces sustainable fuels and platform chemicals that serve as building blocks for everyday products such as rubber and plastics. Dr. Harmon received her Ph.D. in Physical Chemistry from the University of Michigan and has over 30 years experience in policy matters and technology development.



Mr. Tom Parsons, Biojet Commercial Development Manager, AirBP

Tom Parsons is the Commercial Development Manager for Biojet in Air BP, overseeing Air BP's sourcing and supply of sustainable aviation fuel. He joined BP as a research chemist, working on the development and scale-up of technologies including BP's Fischer-Tropsch Process. He has since held business development and strategy roles in technology licensing, BP's Fuels businesses and in Downstream commercial development, and led BP's Advanced Bio Products team at its inception before joining Air BP in 2017. He holds a Master's degree and D.Phil in Chemistry from the University of Oxford.



Ms. Charlotte Hardenbol, Head of Customer Programs, SkyNRG

Charlotte Hardenbol is Head of Customer Programs at SkyNRG, focusing on the development of co-funding initiatives to bridge the price gap between conventional and sustainable aviation fuel. Through the customer programs, SkyNRG involves different stakeholders including governments and end-users to create a strong SAF demand signal and enable new production capacity. Before joining SkyNRG, Charlotte worked as a senior consultant at Spring Associates, a strategy consulting firm with particular expertise in Energy and Renewables markets. Charlotte holds a Master's degree in Economics from the University of Amsterdam, specializing in Econometrics & Management Science, graduating at the Amsterdam Center for Entrepreneurship.

Dr. Neil Dickson, Chief, Environmental Standards Section, Air Transport Bureau (ATB), ICAO Neil Dickson is the Chief of the Environmental Standards Section of ICAO, which develops ICAO Standards and Recommended Practices (SARPs) related to Environmental Protection, conducts quantitative studies and assessment of environmental benefits, and provides guidance on aircraft noise and emissions. Neil is an Aeronautical Engineer and previously worked for QinetiQ and AEA Technology in the UK. He worked on civil and military aircraft performance projects, including civil aircraft technology assessments, studies into aircraft NOx reduction and on the development of the ICAO aircraft CO2 Standard. Neil also has a Ph.D in Atmospheric Chemistry from the University of Cambridge, which focused on the formation of contrails and civil aviation induced circus clouds



Ms. Tjaša Bole-Rentel, Bioenergy Programme Manager: Policy Futures Unit, WWF-SA

Tjaša Bole-Rentel holds a BA in Economics from the University of Ljubljana and an MSc in Environment and Resource Management from the Free University in Amsterdam. She joined the Worldwide Fund for Nature South Africa in September 2014, where she holds the position of Bioenergy Programme Manager in the Policy and Futures Unit.

She has over 10 years' worth of experience as a researcher and consultant in the environmental field, having worked on a number of issues related to bioenergy. She has conducted research in feedstock production potentials and policy support options, decision-support developed tools for development practitioners looking to implement bioenergy projects, as well as hands-on policy development experience. Most recently, she has been leading the project "Development of Sustainable Aviation Biofuels in Sub-Saharan Africa" together Sustainable with the Roundtable on Biomaterials. which aims to mainstream sustainability practices in the emerging aviation biofuel market in ththe region.



Mr. Timothy Cesarek, Executive VP & Chief Commercial Officer. Gevo

Timothy J Cesarek has over 30 years of business development and private equity experience with over 15 of those years in renewable fuels, chemicals and energy. He is currently the Executive Vice President and Chief Commercial Officer of Gevo, a renewable fuels and chemicals business. Prior to Gevo. Tim was the Senior Vice President, Global Business Development, of Enerkem, a waste to chemicals and fuels company, where he was responsible for leading the commercial and project development efforts. Mr. Cesarek was a Managing Director in the Organic Growth Group and Organic Recycling business for Waste Management, Inc. where he was responsible for directly investing in opportunities for Waste Management to optimize the value of the waste it managed, particularly through waste conversion into biofuels, renewable chemicals, energy and lawn and garden products. Prior to Waste Management, Mr. Cesarek was the President of Koch Genesis Company LLC, an investment arm of Koch Industries, Inc. specializing in commercial ventures, licensing and early stage investments in the refining, petrochemicals, forest products, polymers, resins and consumer products industries. He holds a B.S. in Biomedical Engineering from the Milwaukee School of Engineering and an M.B.A. from Pepperdine University.



Dr. Norbert Schmitz,
Managing Director,
International Sustainability
and Carbon Certification
(ISCC)

Norbert Schmitz has studied business administration at the University of Cologne in Germany where he also acquired his PhD. He has worked several years for a leading European management consultancy before joining Meo Carbon Solutions, a Germany based management consultancy focussing sustainability. While working with Meo, Norbert developed in a multistakeholder initiative ISCC, International Sustainability and Carbon Certification. Since 2010, he is Managing Director of ISCC System GmbH. Today, ISCC is a globally leading certification scheme with system users in 100 countries. 3,500 companies are using ISCC to proof sustainability along supply chains - from agricultural crops production, waste and processing residues collection, trade and conversion to the fuel markets. Lately, Norbert is dealing also with advanced biofuels and recycled low carbon fuels. The regional focus of Norbert's work is Europe, the Americas and South East Asia.



Ms. Elena Schmidt, Standards Director, Roundtable on Sustainable Biomaterials (RSB)

Elena Schmidt has more than 10 years of experience in collaborating with industry, civil society and academic stakeholders and shaping a sustainable bio- and circular economy. In her current position, she leads the Roundtable on Sustainable Biomaterials (RSB) standards & policy team where she is responsible for ensuring the credibility of the RSB standards, working with industry on the implementation of sustainable practices and giving advice to national and international regulators. Prior to the RSB, Elena Schmidt worked for Tüv Süd, in the position as "head of certification body", where she was responsible for multiple audit programs sustainability and supply chain certification as well as innovation projects. She earned master's degrees in both environmental and political sciences.



Mr. Mike Lu, Executive Secretary, Consórcio MacaubaBR

Biologist, business administrator from University of São Paulo, CEO of Curcas Diesel Brasil, co-founder and integrator of the Brazilian Biojetfuel Platform, integrator of Minas Gerais Biojetfuel Platform, integrator of the Zona da Mata Biojetfuel and Renewables Platform, Executive Secretary of MacaubaBR, specialist in highly integrated value chains for production of sustainable biomass for the biofuels segment.



Mr. Romulo Veiga, Secretary of Economic Development and Tourism of Juiz de Fora

Journalist and film director, from January 2017 to June 2018 Rômulo Veiga was secretary of culture of Juiz De Fora, a 600.000 people city from Brazil, where he developed innovative actions of creative economy and public policies for the funding of cultural projects.

In April 2017 after being recognized for his work, he was invited to answer as the Secretary of Economic Development and Tourism of Juiz de Fora. One year later, after an administrative merge, he also became the head of the Secretariat of Agriculture and Food Supply. Rômulo focuses on the work of integrated chains of development, and also on the implementation of the concept of circular economy at the municipality, enhancing productive networks through the rational use of resources and services.

Today, the Secretariat's main goal is to increase the economic complexity of the city by establishing policies aligned with the UN's 17 sustainable development goals.



**Dr. Bruno Silva,**Environment Officer,
ICAO

Bruno Silva is an ICAO Environment Officer since 2016, where he acts as the Secretary for the Fuels Task Group from CAEP (Committee on Aviation Environmental Protection). He worked at Embraer for five years as a product development engineer, focused on environmental aspects of aircraft design. After that, he worked for 6 years at ANAC (Brazilian Civil Aviation Authority), where he was involved with environmental certification of new aircraft types. He is an Electrical Engineer with a master degree in Aeronautical Engineering and a PhD in Aeronautical Infrastructure.



## Renewable Jet Fuel

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Production capacity under expansion, will reach 1 million tons in 2022

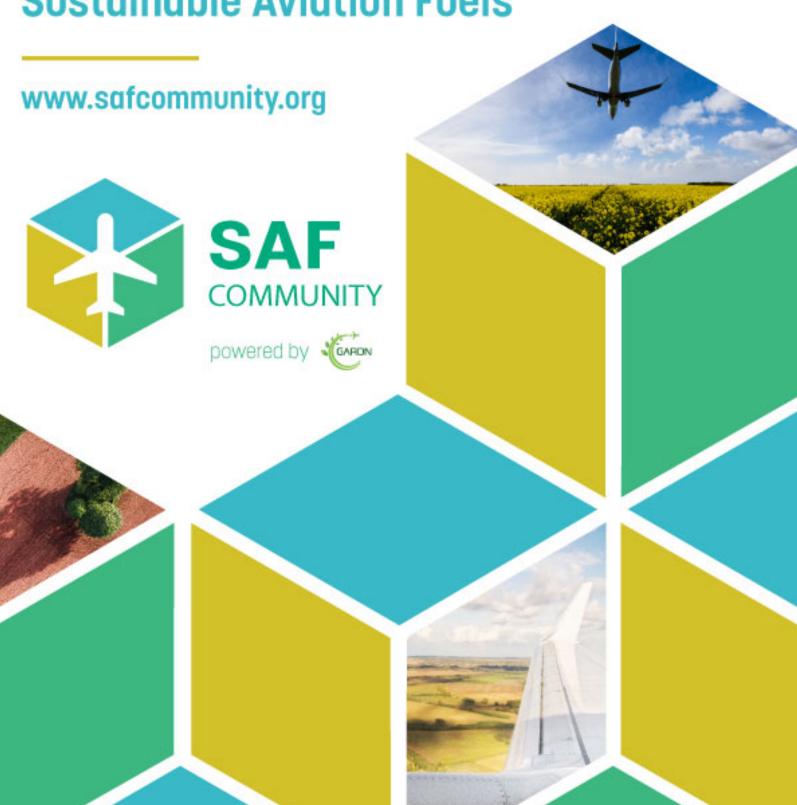


## Leading Sustainable Mobility

**BOMBARDIER** 

Work together to foster Canadian innovation, production and use of

**Sustainable Aviation Fuels** 





**Our Members** 











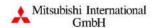






















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#### UNITING AVIATION

### SAVE THE DATE

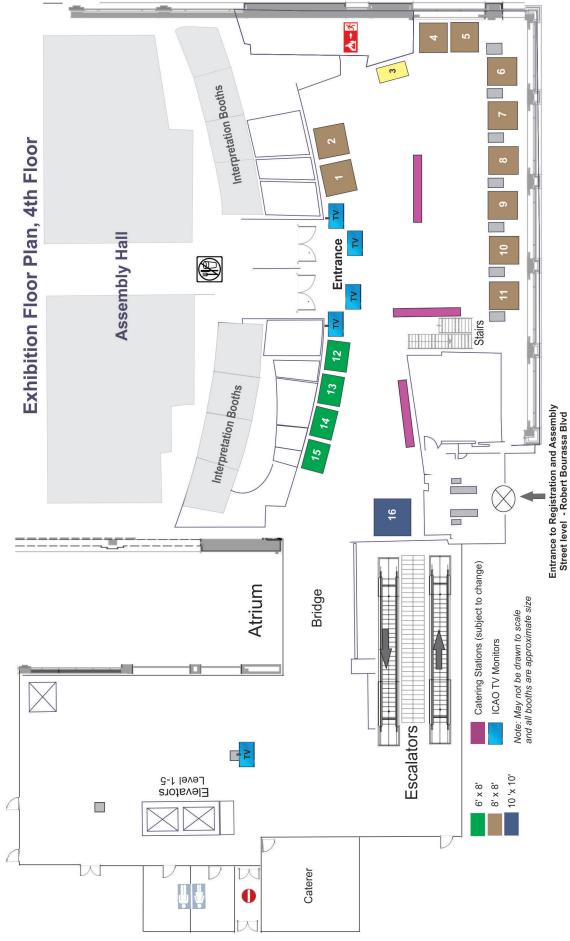
#### 2019 Events on the horizon

Updated on 26 February 2019



#### For a full list of upcoming events visit: icao.int/meetings

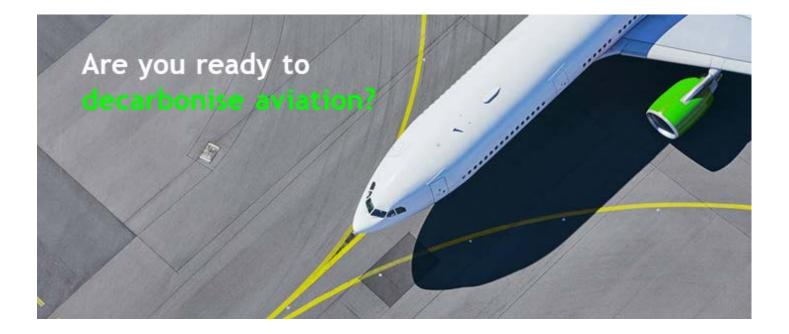
## 03. FLOOR PLAN & EXHIBITOR INDEX



# 04. SPONSOR AND EXHIBITOR PROFILES



#### *NESTE*



Neste creates sustainable solutions for transport, business, and consumer needs. Our wide range of renewable products enable our customers to reduce climate emissions.

We are the world's largest producer of renewable fuels from waste and residues alongside being the leading producer of renewable diesel and sustainable aviation fuel, with an annual production volume of 2.9 million tons. Further capacity increase is underway towards 4.5 million tons in 2022.



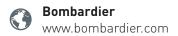
US Contact: Mr. Alex Menotti, alex.menotti@neste.com
European contact: Mr. Henrik Erametsa, henrik.erametsa@neste.com



#### **BOMBARDIER**



Recognized as a leader in environmental life cycle analysis, Bombardier is also actively engaging in the development, commercialization and adoption of Sustainable Alternative Jet Fuel (SAJF). Together with its industry partners, Bombardier spearheaded the development and publication of the Business Aviation Guide to SAJF, and is currently championing pilot projects to increase SAJF availability.









Airlines for America® (A4A), the principal trade and service organization of the U.S. airline industry, vigorously advocates for the industry as a model of safety, customer service and environmental responsibility and as the indispensable network that drives our nation's economy and global competitiveness. While representing only 2 percent of the nation's greenhouse gas emissions, the U.S. airlines are committed to continuing to improve fuel efficiency and reduce emissions through technology, operations, energy and infrastructure advances coupled with ICAO-agreed policies. We are vigorously pursuing the deployment of sustainable alternative aviation fuels through the Commercial Aviation Alternative Fuels Initiative® and other initiatives.

Airlines for America (A4A) www.airlines.org







The SAF Community is an online social platform that gathers stakeholders all along the supply chain of sustainable aviation fuels. This interactive tool provides users with the latest news and information resources on SAF development and it facilitates community members to exchange their ideas, opinions and expertise through engagement in discussion groups, collaborative projects and events. Even if most of its current users are in Canada, the platform is open to worldwide players to ensure a better global contribution to accelerating the innovation and development of sustainable aviation fuels in North America and abroad.

## Global Alliance **Powerfuels**



The Global Alliance Powerfuels was initiated by the German Energy Agency (dena) together with 16 renowned corporate partners as founding members. The strategic objective of the Alliance is to foster the development of a global market for renewable, electricity-based powerfuels. It aims to achieve this by raising awareness and acceptance of powerfuels as missing link to reach global climate targets, supporting the further enhancement of regulatory frameworks and fostering project development to enable production capacities on industrial scale, thus increasing cost competitiveness with fossil fuels.

**Global Alliance Powerfuels** www.powerfuels.org



