

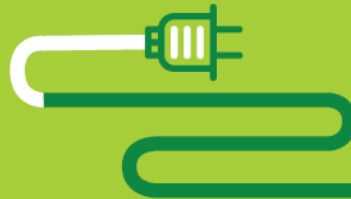


# AVIATION CO<sub>2</sub> REDUCTIONS

## STOCKTAKING SEMINAR

TECHNOLOGY · OPERATIONS · SUSTAINABLE AVIATION FUELS

### PROGRAMME AGENDA

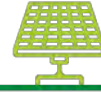


**01.**

# **CONFERENCE AGENDA**



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS

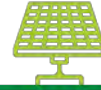


### Day 1 – Tuesday, 08 September 2020

Time (EDT)	Session Description
08:00 – 08:45	<p><b>Opening and green aviation high level keynotes</b></p> <p>The opening session will introduce the objective and dynamic of the four-day event.</p> <p><b>Moderator:</b></p> <ul style="list-style-type: none"> <li>- Mohamed Rahma, Director, Air Transport Bureau – International Civil Aviation Organization (ICAO)</li> </ul> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Fang Liu, Secretary General – ICAO</li> <li>- Valérie Plante, Mayor – City of Montréal</li> <li>- Bertrand Piccard, Initiator &amp; Chairman – Solar Impulse Foundation</li> </ul>
08:45 – 09:00	<p><b>Setting the scene: ICAO’s Environmental work</b></p> <p>This session will provide an introduction to ICAO’s Environmental activities, including a description of how the ICAO Stocktaking process relates to ICAO’s various work streams.</p> <p><b>Presenter:</b></p> <ul style="list-style-type: none"> <li>- Jane Hupe, Deputy Director, Environment – ICAO</li> </ul>
09:00 – 09:45	<p><b>Setting the scene: challenges, trends and energy requirements for aviation</b></p> <p>This session of the event will aim to present the state of knowledge on climate change based on the IPCC findings, as well as to introduce the challenges, trends, achievements and prospects related to aviation. Powering aircraft with clean energy sources could be one of the keys to decarbonise the aviation sector. An overview of the potential CO<sub>2</sub> emissions reductions technologies will be presented, along with the energy requirements for the aviation sector and technical limitations.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Valérie Masson-Delmotte, Co-Chair, Working Group I. – Intergovernmental Panel on Climate Change (IPCC)</li> </ul>



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



- David Lee, Professor, Atmospheric Science and Director, Centre for Aviation, Transport, and the Environment (CATE) – Manchester Metropolitan University (IPCC WG I.)
- Brian Pearce, Chief Economist – International Air Transport Association (IATA)
- Roger Schaufele, Manager, Forecasts and Performance Analysis Division – U.S. Federal Aviation Administration (CAEP-FESG Rapporteur)
- Neil Dickson, Chief, Environmental Standards – ICAO

**BOMBARDIER**

09:45 – 10:00 // BREAK



10:00 – 11:30

### High-level roundtable: roadmaps towards zero emissions

This high-level roundtable will provide inspiration from aviation leaders and decision makers on their zero emissions vision and roadmaps towards accelerating substantial progress to address climate change. High Level speakers will be invited to discuss methods to decarbonize the aviation sector including fuels, technologies and operations, and to provide details on their progress towards a zero emissions future for aviation. The session will include high-level aviation leaders' roadmaps towards zero emissions roadmaps.

This session will include a Question and Answer (Q&A) period.

#### Presenters:

- Lars Kobberstad, Director General – Civil Aviation Authority (CAA) Norway
- Guillaume Faury, Chief Executive Officer (CEO) – Airbus SAS
- Sean Doyle, CEO – Aer Lingus
- John Holland-Kaye, CEO – Heathrow Airport
- Val Miftakhov, CEO – ZeroAvia
- Drew Kodjak, Executive Director – International Council on Clean Transportation (ICCT)



11:30 – 11:45 // BREAK



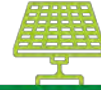
11:45 – 12:45

### Advanced aircraft technologies

Aircraft technologies are continuously evolving. Some of the latest advances on technologies with CO<sub>2</sub> emission reduction opportunities, including engines, aerodynamics and airframes, will be presented during this session, along with the



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



achieved or expected results, entry into service and timeframe for scaling-up and implementation.

This session will include a Q&A period.

**Presenters:**

- Michael Winter, Senior Fellow Advanced Technology – Pratt & Whitney, Raytheon Technologies Corporation
- Greg Steinmetz, Consulting Engineer – Advanced Systems & Preliminary/New Engine Design – GE Aviation
- Stéphane Viala, Senior Vice President Engineering – ATR
- Hubert Wong, Aerodynamics and Configuration Design Engineer – Boeing
- Roei Ganzarski, CEO – magniX
- Marie Masson, Public Affairs Manager – Lilium GmbH
- Cristina Garcia-Duffy, Head of Technology – Aerospace Technology Institute (ATI)
- Andreas Schaefer, Prof. and Director, Air Transportation Systems Laboratory – University College of London (UCL)

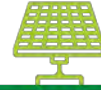
12:45 – 12:50 // END OF DAY ANNOUNCEMENTS

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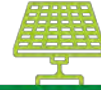


### Day 2 – Wednesday, 09 September 2020

Time (EDT)	Session Description
08:00 – 08:10 // Welcome back. Housekeeping items.	
08:10 – 09:30	<p><b>High-level roundtable: a new vision for the future</b></p> <p>This high-level roundtable will open a dialogue on innovative approaches and help to understand the obstacles that need to be addressed in order to limit and reduce the impact of aviation on the climate. The session will hear from high-level speakers on their vision and roadmaps for a sustainable aviation future.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Sheila Remes, Vice President of Strategy for Commercial Airplanes – Boeing</li> <li>- Paul Stein, Chief Technology Officer – Rolls Royce</li> <li>- Susan Ying, Senior Vice President, Global Partnerships – Ampaire</li> <li>- Jean-Francois Brouckaert, Chief Scientific Officer – Clean Sky Joint Undertaking</li> <li>- Martin Haigh, Senior Energy and Climate Change Adviser – Shell</li> </ul>
<b>BOMBARDIER</b>	
09:30 – 09:45 // BREAK	
	
09:45 – 10:45	<p><b>Novel aircraft technological concepts</b></p> <p>To meet the unprecedented climate challenges of today and tomorrow, novel aircraft technological concepts are being studied, designed and experimented. Novel aircraft concepts will be presented during the session along with expected results in terms of CO<sub>2</sub> emissions reductions, needs for their development and large-scale deployment, and the expected timeframes.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Henri Werij, Dean of Faculty of Aerospace Engineering – Delft University of Technology (TU Delft)</li> <li>- Jim Heidmann, Manager, Advanced Air Transport Technology (AATT) Project – NASA</li> </ul>





# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

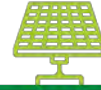
TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



	<ul style="list-style-type: none"> <li>- Bobby Sethi, Deputy Director of Research - School of Aerospace, Transport and Manufacturing – Cranfield University</li> <li>- Grazia Vittadini, Chief Technology Officer – Airbus SAS</li> <li>- Central Institute of Aviation Motors (CIAM)</li> <li>- Tom Grundy, Chief Executive Officer – Hybrid Air Vehicles</li> <li>- Tine Tomazic, Chief Technical Officer – Pipistrel</li> </ul>	
 <p><b>SUSTAINABLE AVIATION FUEL COALITION</b></p>	<p>10:45 – 11:00 // BREAK</p>	
<p>11:00 – 12:00</p>	<p><b>Air operations</b></p> <p>In order to maximize the CO<sub>2</sub> reduction potential, it is essential to study and fully use opportunities to fly more efficiently, as well as optimize air traffic management as much as possible. Information on latest advances, tools and technologies available will be presented as well as the results achieved or expected in terms of CO<sub>2</sub> reduction and their level of deployment.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Jean Brice Dumont, EVP Engineering – Airbus SAS</li> <li>- Daniel White, CEO – Signol</li> <li>- Alexandre Feray, CEO – Open Airlines</li> <li>- Boni Dibate, Regional Director Africa Affairs – CANSO Africa</li> <li>- Arthur Orton, Deputy Program Manager, Continuous Lower Energy, Emissions and Noise (CLEEN) Program – U.S. Federal Aviation Administration (FAA)</li> <li>- Predrag Vranjkovic, Policy Officer (Seconded Expert) – European Commission and David Brain, Operational expert – EUROCONTROL</li> <li>- Robert Brons, Captain – Representing: International Federation of Air Line Pilots Associations (IFALPA)</li> </ul>	



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



12:00 – 12:50

### Ground operations

Operations taking place on the ground have great potential to deliver concrete and rapid results in terms of aviation in-sector CO<sub>2</sub> emissions reduction, by enhancing ground operations improvements and by providing the necessary infrastructure to improve the efficiency of the aviation sector as a whole. Quantitative, results and timeframes will be presented.

This session will include a Q&A period.

#### Presenters:

- Vincent Metz, Executive Vice President, Business Development – Smart Airport Systems
- M. Muthukrishnan, Head – EHS & Sustainability Airport Sector – GMR Group, India
- Susan Nambusi, Fuel Data Analyst Fuel Management – Kenya Airways
- Owen Waithaka, Engineer – Kenya Airports Authority
- Leigh Gapp, Sustainability Manager – Adelaide Airport
- Matt Gorman, Carbon Strategy Director for Heathrow – Heathrow Airport

12:50 – 12:55 // END OF DAY ANNOUNCEMENTS

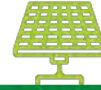
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# AVIATION CO<sub>2</sub> REDUCTIONS




## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS

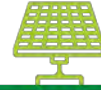


### Day 3 – Thursday, 10 September 2020

Time (EDT)	Session Description
08:00 – 08:10 // Welcome back. Housekeeping items.	
08:10 – 09:15	<p><b>Clean energy</b></p> <p>Clean energy sources, including renewable electricity, biofuels, hydrogen, solar and wind could help to enable the aviation sector's energy transition. The state and maturity of the technologies will be presented during this high-level session, along with their potential in terms of CO<sub>2</sub> emissions reductions, the expected timeframe, energy networks and infrastructure aspects and the planning required.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Paul Durrant, Head of End-use Sectors &amp; Bioenergy – International Renewable Energy Agency (IRENA)</li> <li>- Xavier Vigor, Vice-President Technologies and Industrial Management – Air Liquide</li> <li>- Frauke Pleines-Schmidt, Director environmental protection and consumer rights in aviation, airport coordination, aircraft noise, airport coordination, aircraft accidents, aeronautical research – German Ministry of Transport and Digital Infrastructure</li> <li>- Maria Fiskerud, Clustermanager for the Swedish innovation cluster Fossil-free aviation 2045 – Research Institute of Sweden</li> <li>- Andy Jefferson, Programme Director, Sustainable Aviation – Sustainable Aviation UK</li> <li>- Brice Lalonde, Chair – EDEN Balance of Energies (Former Minister of Environment – France)</li> </ul>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="background-color: black; color: white; padding: 5px;"><b>BOMBARDIER</b></div> <div style="background-color: #90EE90; padding: 5px;">09:15 – 09:30 // BREAK</div> <div style="text-align: right;"></div> </div>	
09:30 – 10:10	<p><b>Sustainable Aviation Fuels (SAF) – Introduction and Frequently Asked Questions</b></p> <p>This brief session will provide an introduction to sustainable aviation fuels, and will answer frequently asked questions about the topic. This session will present ICAO</p>



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

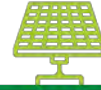
TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



	<p>work on SAF, address common misconceptions and provide an opportunity for all stakeholders to become familiar with the topics before the detailed SAF sessions.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Glenn Johnston, Global Regulatory Carinata – Nuseed (ICAO CAEP Observer representing Advanced Biofuels Association (ABFA))</li> <li>- Jim Herbertson, Technical Director, Climate and Energy – IPIECA</li> <li>- Bruno Silva, Environment Officer – ICAO (CAEP-FTG Secretary)</li> <li>- James Hileman, Chief Scientific and Technical Advisor for Environment and Energy – U.S. FAA (CAEP-FTG Co-Rapporteur)</li> </ul>
10:10 – 11:15	<p><b>Sustainable Aviation Fuels</b></p> <p>Sustainable aviation fuels are one of the key pillars to achieve the transition towards a more climate friendly air transport. Progress made outside and within the aviation community will be presented during the session. Maturity of technologies, the rate and level of deployment, timeframe, results in terms of life-cycle CO<sub>2</sub> emissions reductions and additional opportunities will also be discussed.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Erasmo Carlos Battistella, CEO – ECB Group</li> <li>- Norimitsu Kaneko, Assistant Manager (Process Development), IHI Corporation</li> <li>- Jocelyn Goodwin, Organic Chemist – Advanced Research Associates (ARA)</li> <li>- Alexander Mahler, Advisor, Sustainable Fuels – International PtX Hub Berlin   Deutsche Gesellschaft für Internationales Zusammenarbeit (German Association of International Cooperation) GmbH (GIZ)</li> <li>- Luis Eduardo Ravaglia, Senior Adviser – Solea</li> <li>- Francesco Cherubini – IPCC, Norwegian University of Science and Technology</li> <li>- Kevin Weiss, Chief Executive Officer – Byogy Renewables, Inc.</li> </ul>



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

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International Business Aviation Council



SUSTAINABLE AVIATION FUEL COALITION

11:15 – 11:30 // BREAK



11:30 – 12:45

### SAF competitiveness and scale-up

Initiatives on and uses of sustainable aviation fuels have multiplied in recent years. Nevertheless, they face major challenges, including price, infrastructure and feedstock availability that may limit their development and deployment. The session will discuss means to overcome such challenges now and in the future.

This session will include a Q&A period.

#### Presenters:

- Cesar Velarde, Advisor of Spanish Civil Aviation authorities – Spanish Aviation Safety Agency (AESAs)
- Christoph Wolff, Head of Shaping the Future of Mobility – World Economic Forum
- Kamal Hingorani, Chief Customer Officer – SpiceJet
- Matthias Spoettle, Programme Manager Renewable Fuels – NOW GmbH (National Organisation Hydrogen and Fuel Cell Technology)
- Jimmy Samartzis, CEO – LanzaJet
- Jean Paquin, CEO – SAF+ Consortium
- Bruno Miller, Managing Director, Fuels and Regulatory Affairs – Fulcrum BioEnergy
- Neville Hargreaves, Vice President, Waste to Fuels – Velocys
- Neville Fernandes, Manager, Sustainable Aviation Fuels – Neste

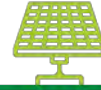
12:45 – 12:50 // END OF DAY ANNOUNCEMENTS

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## STOCKTAKING SEMINAR

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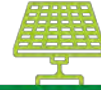


### Day 4 – Friday, 11 September 2020

Time (EDT)	Session Description
08:00 – 08:10 // Welcome back. Housekeeping items.	
08:10 – 09:40	<p><b>Enabling a green aviation transition</b></p> <p>The development of innovative initiatives is enabling a green transition for the aviation sector. This session will show the latest examples of innovative actions being undertaken by States and aviation stakeholders that can enable CO<sub>2</sub> reductions, including those initiatives that focus on how passengers can be involved in CO<sub>2</sub> reductions. Speakers in this session will describe the levels of emissions reductions that can be achieved, highlight the role of financing, and address what additional support would be needed to achieve further emissions reductions.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Remona van der Zon, Sustainability &amp; Reporting Manager – KLM</li> <li>- Charlotte Hardenbol, Head of Customer Programs – SkyNRG</li> <li>- Steve Csonka, Executive Director – Commercial Aviation Alternative Fuels Initiative (CAAFI)</li> <li>- Mohammed Boutouba, Project Portfolio Manager - Green Aviation and Industrial Efficiency – Consortium for Research and Innovation in Aerospace in Quebec (CRIAQ) and Malek Kacem, Project Manager and Business development, Green Aviation Research and Development Network in Canada (GARDN)</li> <li>- Stephen Arrowsmith, Chief Expert, Environmental Protection – European Union Aviation Safety Agency (EASA)</li> <li>- Neil Dickson, Chief, Environmental Standards – ICAO</li> <li>- Daniel Riefer, World Economic Forum Platform Fellow – McKinsey &amp; Company</li> <li>- Michael Rurik Halaby, Head of Aviation Debt Origination – EMEA – Deutsche Bank</li> <li>- Muneeba Kayani, Head of European Transport Equity Research – Bank of America</li> </ul>



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

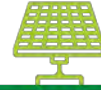
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<p><b>BOMBARDIER</b></p>	<p>09:40 – 09:55 // BREAK</p>	
<p>09:55 – 11:25</p>	<p><b>Boosting innovation and implementation</b></p> <p>Continuous efforts from all stakeholders will be needed to achieve a sustainable future for aviation. Speakers in this session will focus on next steps and efforts to boost innovation and shorten the path from knowledge to implementation of solutions. Information presented will include expected results and the level of potential resources to be mobilized.</p> <p>This session will include a Q&amp;A period.</p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>- Marie-hélène Barroux, Senior Vice President – ISAE-SUPAERO</li> <li>- Rob Miller, Director, Whittle Laboratory – University of Cambridge</li> <li>- Gregory Blatt, Partner Relations Director – Solar Impulse Foundation and Vincent Etchebehere, Director of sustainable development and new mobility – Air France</li> <li>- Tor Iversen, Project Manager – Green Flyway test arena</li> <li>- Kurt Edwards, Director General – International Business Aviation Council (IBAC)</li> <li>- Erin Cooke, Sustainability + Environmental Policy Director – San Francisco International Airport</li> <li>- Christian Pho Duc, Managing Director H2 Projects – Smartenergy</li> <li>- Robert Thompson, Managing Partner – Roland Berger</li> </ul>	
	<p>11:25 – 11:40 // BREAK</p>	
<p>11:40 – 12:45</p>	<p><b>Closing High-Level Roundtable</b></p> <p>Leaders from the aviation industry will be invited to close this event by providing their thoughts on the content presented throughout the course of the event, and present their plans forward.</p> <p><b>Presenters:</b></p>	



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- Patrick Gandil, Director General of Civil Aviation – France
- Eric Fanning, Chair – International Coordinating Council of Aerospace Industries Associations (ICCAIA)
- Nigel Topping, High Level Champion, COP26
- Rob Gurney (oneworld CEO)

### Keynote Closing Remarks:

- Salvatore Sciacchitano, President of the Council – ICAO

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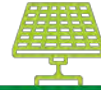
**02.**

**FACILITATOR  
AND SPEAKER  
PROFILES**





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## STOCKTAKING SEMINAR

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### Keynote Speakers

#### Opening Keynotes



**Fang Liu**  
Secretary General – ICAO

The Secretary General of ICAO is head of the Secretariat and chief executive officer of the Organization responsible for general direction of the work of the Secretariat. The Secretary General provides leadership to a specialized international staff working in the field of international civil aviation. The Secretary General serves as the Secretary of the Council of ICAO and is responsible to the Council as a whole and, following established policies, carries out the duties assigned by the Council, and makes periodic reports to the Council covering the progress of the Secretariat activities.

The Secretariat consists of five main divisions: the Air Navigation Bureau, the Air Transport Bureau, the Technical Co-operation Bureau, the Legal Affairs and External Relations Bureau, and the Bureau of Administration and Services. The Secretary General is also directly responsible for the management and effective work performance of the activities assigned to the Office of the Secretary General relating to Finance, Evaluation and Internal Audit, Communications, and seven Regional Offices.

The Council of ICAO first appointed Dr. Fang Liu (China) as Secretary General of the Organization for a three-year term, from 1 August 2015 to 31 July 2018. Dr. Liu was reappointed by the Council for a consecutive three year term on 16 March 2018.



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### **Valérie Plante**

Mayor of Montreal, Projet  
Montréal Leader

First elected city councillor in Saint-Marie district in 2013, Valérie Plante was chosen by Projet Montréal members to lead the party in 2016. Her contagious passion and energy have helped her rally people around her progressive vision. Deeply committed to participatory democracy, Valérie Plante has a bold plan for Montréal centered on increased access to public transit, improved urban planning and public services, the economy and the environment. Her commitment is to bridge the gap on these issues for all 19 city boroughs.

Before jumping into the political arena in 2013, Valérie Plante studied anthropology, museology, multiethnic intervention, and was actively involved with numerous community groups, such as the *Fondation Filles d'action*.

She became mayor of Montréal on November 5, 2017.

As mayor of Montréal, Valérie Plante is a member of various advisory committees and governing boards.

- Chair of the *Communauté métropolitaine de Montréal (CMM)*;
- Executive committee member of the *Union des Municipalités du Québec (UMQ)*;
- Governing board member of *Montréal international*;
- Governing board member of *Fondation Montréal inc.*;
- Member of the Big City Mayors' Caucus of the Federation of Canadian Municipalities
- Co-president of *Metropolis*



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**Bertrand Piccard**

Initiator & Chairman – Solar Impulse Foundation

### Closing Keynote



**Salvatore Sciacchitano**

President of the Council – ICAO

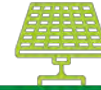
Mr. Salvatore Sciacchitano is the sixth President of the ICAO Council. He succeeded Dr. Olumuyiwa Benard Aliu on 1 January 2020.

Mr Sciacchitano graduated in Telecommunications Engineering from the University of Catania and began his career in aviation in 1980, joining the Italian Airworthiness Authority (RAI) where he held positions of increasing responsibility, serving as the organization's Regulation Director in 1992, then as Technical Director and, in 1996, as Director General.

With the merger of the aviation branch of the Ministry of Transport and RAI and the subsequent establishment of the Italian Civil Aviation Authority (ENAC), Mr. Sciacchitano assumed the position of Deputy Director General. In this position, he played an instrumental role in coordinating the core business divisions of the newly founded structure. He was also entrusted with multiple international mandates, chairing the Permanent Commission of EUROCONTROL, representing



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Italy in the Management Board of European Aviation Safety Agency (EASA), holding the Vice-Presidency of the EUROCONTROL Provisional Council and coordinating the Italian delegation during ICAO Assemblies.

As a result of his extensive experience in aviation international affairs, Mr. Sciacchitano was appointed Executive Secretary of the European Civil Aviation Conference (ECAC) in 2010. In February 2019, he joined the Italian Delegation on the Council of ICAO, where he served until assuming his duties as President of the Council.

### Setting the scene: ICAO's Environmental work



**Jane Hupe,**  
Deputy Director  
Environment, ICAO

Ms. Jane Hupe is the Director responsible for the Environment programme at International Civil Aviation Organization (ICAO), and serves as the Secretary of the ICAO Council's Committee on Aviation Environmental Protection (CAEP). Ms. Hupe has a vital role in providing leadership for ICAO's efforts to define and promote policies and Standards for environmentally sustainable aviation, managing a portfolio that includes aircraft noise, local air quality, global climate, clean energy and sustainable aviation fuels, adaptation, circular economy and a global market-based measure for international aviation. She currently leads the Organizations efforts on green innovation and the assessment of options for long term goals for CO<sub>2</sub> emissions reduction.

Under her leadership, the ICAO Balanced Approach to Aircraft Noise Management policy was established and various new and more stringent global Standards to reduce aircraft noise and emissions affecting local air quality and global climate were adopted, with particular mention of the world's first global CO<sub>2</sub> certification standard for any industry sector, adopted in 2017.

Ms. Hupe was at the forefront of the conceptualization and development of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which was agreed in 2016 as the first global market-based mechanism for any industry sector. She ensures that "CORSIA is on track" by leading its implementation strategy, including putting in place the necessary regulatory frameworks and tools whilst ensuring that "no country is left behind" by implementing ACT-CORSIA (Assistance, Capacity Building and



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Training for CORSIA), one of the most ambitious assistance programmes undertaken by ICAO.

Ms. Hupe holds 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.

### Setting the scene: challenges, trends and energy requirements for aviation



**Brian Pearce**

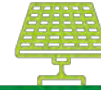
Chief Economist –  
International Air Transport  
Association (IATA)

Brian Pearce is IATA's Chief Economist. The role of his team is to analyse the economic and policy landscape facing the airline industry, to provide credible economic analysis to guide and support IATA's advocacy work. An economist with over 35 years of international experience in several industries, he is also a Visiting Professor at Cranfield University's Department of Air Transport and a member of IATA's senior leadership team. He has been on panels of expert advisers for the UK Airports Commission, the UK Department for Transport and ICAO. He was formerly director of the Centre for Sustainable Investment at the think-tank Forum for the Future, head of global economic research at the investment bank SBC Warburg in Tokyo and then London, and was Chief Economist at Ernst & Young's economic forecasting consultancy.





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**David Lee**

Prof. Atmospheric Science and Director, Centre for Aviation, Transport, and the Environment (CATE), Manchester Metropolitan University, UK

David Lee is Professor of Atmospheric Science at Manchester Metropolitan University. He has specialised over the last 25 years on the impacts of aviation on climate, publishing widely in the peer reviewed literature. David has been a Lead Author for the Intergovernmental Panel on Climate Change since 1999, the Special Report on Aviation and the Global Atmosphere, and subsequent Assessment Reports, including the Sixth Assessment Report, currently in preparation. He is a technical advisor to the UK on CAEP issues and co-leads the Impacts and Science Group of CAEP.



**Neil Dickson**

Chief, Environmental Standards – 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 CO<sub>2</sub> 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 cirrus clouds.



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### **Roger Schaufele, Jr.**

Manager, Forecasts and Performance Analysis Division – U.S. Federal Aviation Administration

Roger Schaufele, Jr. is Manager of the FAA's Forecasts and Performance Analysis Division in the Office of Aviation Policy and Plans. He oversees the development of the FAA's forecasts of U.S. aviation demand and activity as well as forecasts of demand and activity for individual airports contained in the Terminal Area Forecast (TAF). He has more than 35 years experience in forecasting aviation demand in various regions of the world. Mr. Schaufele joined the FAA in October 2000 as an industry economist and was promoted to his current position in 2009. Prior to coming to the FAA, Mr. Schaufele was Manager of System Forecasts at US Airways with responsibility for forecasting the carrier's traffic and revenue. He began his career as an economist for Douglas Aircraft Company forecasting airline traffic for Latin American and Middle Eastern air carriers. Mr. Schaufele holds degrees in economics from the University of California, Berkeley and Northwestern University.



### **Valérie Masson-Delmotte**

Co-Chair, Working Group I. – Intergovernmental Panel on Climate Change (IPCC)

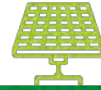
*Senior scientist, Laboratoire des Sciences du Climat et de l'Environnement, Institut Pierre Simon Laplace, Université Paris Saclay / Co-chair of IPCC Working Group I*

Dr. Valérie Masson-Delmotte is a senior climate scientist. She is the Co-chair of IPCC Working Group I for the AR6 cycle and has co-supervised three special IPCC reports on Global warming of 1.5°C; climate change and land; the ocean and cryosphere in a changing climate, and is currently co-supervising the next WGI report on the physical science basis of climate change.

Her initial background is in fluid physics. Her research interests are focused on quantifying and understanding past changes in climate and atmospheric water cycle, using analyses from ice cores in Greenland, Antarctica and Tibet, analyses from tree-rings as well as present-day monitoring, and climate modelling for the past and the future. She has worked on issues such as drought, climate response to volcanic eruptions, polar amplification, climate feedbacks, ice ages, abrupt climate change, and ice sheet vulnerability across different timescales. She is active in outreach for children and for the general public and has contributed to several books on climate change issues.



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Her research was recognized by several prizes (European Union Descartes Prize for the EPICA project, 2008; Women scientist Irène Joliot Curie Prize, 2013; Tinker-Muse Prize for science and policy in Antarctica, 2015; Highly Cited Researcher since 2014; Nature's top 10, 2018; CNRS silver medal, 2019; Milutin Milankovic medal of the European Geoscience Union, 2020; President Medal of the Scientific Committee on Antarctic Research, 2020).

Full publication list : <https://publons.com/researcher/2775636/valerie-l-masson-delmotte/>

More on the Intergovernmental Panel on Climate Change : [www.ipcc.ch](http://www.ipcc.ch)

### High-level roundtable: roadmaps towards zero emissions



**Drew Kodjak**

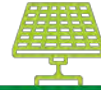
Executive Director –  
International Council on Clean  
Transportation (ICCT)

Drew Kodjak is the executive director of the International Council on Clean Transportation, an organization that he co-founded in 2005 to support governments in the top vehicle markets develop policies to improve the environmental performance and energy efficiency of all modes of vehicles and fuels. Prior to joining the ICCT, Mr. Kodjak served as Attorney-Advisor for the U.S. Environmental Protection Agency, during which time he contributed to regulatory developments of major rulemakings. Mr. Kodjak serves on a number of important committees and organizations related to his work on transportation and air pollution. Mr. Kodjak is a member of the Transportation Research Board Committee on Alternative Transportation Fuels and Technologies and U.S. Department of Energy's Hydrogen Fuel Cell Partnership. Mr. Kodjak previously served on the National Academies of Sciences Panel on Medium and Heavy-duty Vehicle Fuel Economy (2008 – 2010), and was co-chair of the U.S. Mobile Source Technical Advisory Committee (2010 – 2016). Mr. Kodjak is a graduate of New York University and Boston University Law School where he graduated with honors in 1991.





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### **Guillaume Faury**

Chief Executive Officer –  
Airbus SAS

Guillaume Faury was appointed Airbus Chief Executive Officer in April 2019 and leads the Company's Executive Committee. He was previously President of Airbus' commercial aircraft business, a role he had held since February 2018.

Prior to this, Guillaume was Chief Executive Officer of Airbus Helicopters (2013-2018), where his achievements included restructuring its manufacturing system and introducing new technologies.

Before that, he enjoyed a four-year spell in the car industry at Peugeot (2009-2013), the French automotive manufacturer, rising to become the Executive Vice-President for Research and Development and a member of the company's management board. He presided over significant advances in Peugeot's lower-emissions hybrid-engine technology and the overhaul of the company's product range, among other accomplishments.

Between 1998 and 2008, he held various leadership positions in engineering, programmes and flight testing in Airbus' helicopter business, which at the time operated under the name of Eurocopter. He became Executive-Vice President for Programmes and a member of the Eurocopter Executive Committee, before being appointed as Executive Director for Research and Development.

Guillaume began his career in 1992 as a flight-test engineer for the Eurocopter Tiger helicopter in the Direction Générale de l'Armement (DGA), the French government agency responsible for the development and purchase of defence systems for the French armed forces.

He graduated from the École polytechnique in Paris in 1990 and, subsequently, from the École nationale supérieure de l'aéronautique et de l'espace in Toulouse.

Guillaume's love of flying and aviation dates back to his childhood. He is a qualified light-aircraft pilot and helicopter flight-test engineer with 1,300 hours of flying experience.

He was born in 1968 in Cherbourg, Normandy, and is married with three children.



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**John Holland-Kaye**

CEO – Heathrow Airport

During his time as CEO, Heathrow has consistently improved service levels for passengers, while reducing costs, and it is now rated one of the best airports in the world. Heathrow was named “Sustainable Business of the Year” at the edie awards and one of the Best Companies to work for by the Sunday Times.

He is chair of the Business in the Community Employment and Skills Leadership Team, a member of DEFRA’s Council for Sustainable Business, a member of HRH the Prince of Wales’ Sustainable Markets Council, and a Commissioner with the Energy Transitions Commission. John is also a Non-Executive Director at Thames Tideway.

Before becoming CEO in July 2014, he was Development Director, responsible for delivering the £2.5bn Terminal 2 on time and on budget.

Prior to joining Heathrow, John worked in housebuilding with Taylor Wimpey, in brewing and leisure retail with Bass plc and as a strategy consultant with LEK. He has lived and worked in the UK, US, Australia and the Philippines.

John is married with two daughters.



**Lars Kobberstad**

Director General – CAA Norway

### Career to date

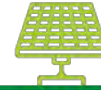
- Director General, Civil Aviation Authority Norway (2017-present)
- CEO Norwegian Air Ambulance (2015-2016)
- CEO Widerøe’s Flyveselskap AS (2008-2015)
- Deputy CEO Widerøe’s Flyveselskap AS (2002-2008)
- CFO Widerøe’s Flyveselskap AS (1997-2002)

### Education

- Program for Executive Development, IMD, Switzerland (1999-2000)
- Master’s degree business administration and management (1982-1987)
- Officer Candidate School (1980-1981)



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**Sean Doyle**

Chief Executive Officer – Aer Lingus

Sean Doyle was appointed as Aer Lingus Chief Executive Officer with effect from 1st January 2019.

Prior to his appointment as Chief Executive Officer, Sean served as British Airways Director of Network, Fleet & Alliances from September 2016.

As part of his role he was accountable for Network and Fleet planning, Airline partnerships and oversight of BA's business units at London Gatwick and BA Citiflyer. Sean is a non-executive director of Comair Holdings SA.

Sean joined British Airways in 1998; he started his career as a Financial Analyst and has served in a number of roles in his time at BA including Finance Director BA Cargo, Head of Corporate Strategy and Executive Vice President British Airways Americas.

He is a graduate of University College Cork.



**Val Miftakhov**

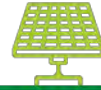
Chief Executive Officer and Founder – ZeroAvia

Val Miftakhov is a Founder & CEO of ZeroAvia, Inc, a California company developing the World's first practical zero-emission aviation powertrain. Val is a serial entrepreneur in EV space - his previous company eMotorWerks has developed the World's leading platform for EV battery aggregation to provide grid services and was acquired in 2017. Prior to that, Val held a number of senior business and product positions at Google and McKinsey & Company and was a nuclear researcher at Stanford Linear Accelerator. Val holds a Ph.D. in Physics from Princeton University, Masters in Physics from Moscow Institute of Physics and Technology, and was a two-time winner of Russian Nationwide Physics competitions. In his spare time, Val makes good use of his airplane and helicopter pilot licenses.

Advanced aircraft technologies



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**Andreas Schaefer**

Prof. and Director, Air Transportation Systems Laboratory – University College of London

Andreas W. Schaefer is a Professor of Energy and Transport at University College London (UCL) and Director of UCL's Air Transportation Systems Laboratory ([www.ATSlab.org](http://www.ATSlab.org)). In addition to leading peer review journals, his work was published in popular science magazines, such as Scientific American and American Scientist. He is lead-author of "Transportation in a Climate-Constrained World", MIT Press (June 2009). Prior to joining UCL, he held appointments at the International Institute for Applied Systems Analysis (IIASA), the Massachusetts Institute of Technology (MIT), the University of Cambridge, and Stanford University. He holds a MSc in Aerospace Engineering and a PhD in Energy Economics, both from the University of Stuttgart, Germany.



**Cristina Garcia-Duffy**

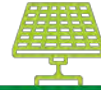
Head of Technology – Aerospace Technology Institute (ATI)

Dr Cristina Garcia Duffy is Head of Technology at the Aerospace Technology Institute with responsibility for the Institute's Sustainability agenda. In her current role, Cristina is accountable for the development and refresh of the ATI technology strategy and for integration of technology cross-cutting areas. Prior to the ATI, Cristina held various management positions within the R&T department at Leonardo Helicopters (previously known as AgustaWestland) and previously researching and teaching positions at two universities. Cristina holds a PhD in Aerospace Engineering from Washington University in St. Louis and an MSc and BSc with honours from Saint Louis University, both in the USA.





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**Greg Steinmetz**

Consulting Engineer – I  
Advanced Systems &  
Preliminary/New Engine  
Design – GE Aviation

Greg is the Consulting Engineer for new commercial engine programs at GE Aviation. Greg's consulting responsibilities include driving innovation into designs, providing design technical review and approval, supporting product strategy development, and sharing best practices and lessons learned from previous programs. He brings to this role 31 years of advanced technology, new product introduction and leadership experience. Prior to this role, Greg provided early design program and technical leadership to several GEAV commercial programs – including the LEAP-1A/B/C, Passport20, and GE9X. Greg also made significant contributions to the GE90-115B, GP7000, and GENx-1B programs. Prior to his roles in preliminary/new engine design, Greg worked in Fan & Compressor Aerodynamic design and Engineering Methods.

Greg received his bachelor's degree in Aeronautical Engineering from The Ohio State University. Greg received his master's degree in Aerospace Engineering from the University of Cincinnati. He holds several patents related to engine design.



**Marie Masson**

Public Affairs Manager – Lilium  
GmbH

Marie is responsible for Public Affairs at Lilium, engaging with government stakeholders globally to prepare the company's entry into service in 2025. After graduating from McGill University in Political Science, Marie spent three years working for Nobel Peace Prize Laureate Prof. Yunus and the United Nations where she drove multiple campaigns. Her interest in smart mobility led Marie to complete her MBA at ESMT Berlin and join Lilium.



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**Michael Winter**

Senior Fellow Advanced Technology – Pratt & Whitney

Michael is the Senior Fellow for Advanced Technology at Pratt & Whitney, where he leads the company’s technology portfolio internally and represents it externally. In over 30 years with United Technologies (now Raytheon Technologies), Michael has made numerous technical contributions working with fuel cells, lasers, HVAC, systems engineering, controls, combustion systems, and propulsion systems. He holds Doctor of Philosophy, Master of Science and Master of Philosophy degrees from Yale University, and a Bachelor of Science degree in Mechanical Engineering from Drexel University; authored more than 40 patents and more than 50 published technical articles, and serves on numerous advisory boards for universities, industry associations, and the National Academy.



**Roei Ganzarski**

CEO, magniX

Roei Ganzarski is CEO of magniX, an electric aviation propulsion company. With a vision of connecting communities with low-cost, clean air transportation, magniX is disrupting the status quo of aviation as we know it.

In addition to his role as CEO of magniX, Roei is the chairman of Eviation, the electric aircraft OEM.

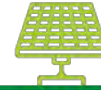
Prior to magniX, Roei was CEO of BoldIQ – a global provider of dynamic real-time scheduling optimization software. Under Roei’s leadership, BoldIQ grew from a seed software startup to a multi-million-dollar profitable SaaS company.

Before BoldIQ, Roei was with the Boeing family of companies in continuously increasing roles of responsibility. His last role at Boeing was Chief Customer Officer for Boeing’s Flight Services division where he led all worldwide customer and market facing organizations and was responsible for revenue growth and customer service.

Other experiences prior to Boeing include private investment banking, corporate finance, advertising, and the military.



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He is a graduate of Wharton's Advanced Management Program, earned an MBA from the University of Washington, and a BA in Economics from The University of Haifa.

Roei sits on the board of the Washington Technology Industry Association and lives with his family in Redmond, Washington, USA.



**Stéphane Viala**

Senior Vice President  
Engineering – ATR

Dr Stéphane Viala was appointed SVP Engineering and Head of Design Organization ATR since end of 2018 and is member of ATR Executive Committee. He was VP ATR Chief Engineer and Head of Engineering Integration in charge of technical definition and development of product, continuous improvement and continuous airworthiness since 2016.

He previously worked for AIRBUS Commercial aircraft division for almost 2 decades.

He worked as A320 Incremental Development Chief Project Engineer in charge of developing next steps for A320 program.

Prior to this position, he was head of R&T Overall a/c Design in charge to define the architecture and technical aspects of R&T Programs during 4 years encompassing flight physics, engine, Flight Test Bed and Methods and Tools perimeter.

He has been also Head of Flight Physics and Flight Dynamics Integrated team in charge of defining what could be a new Single Aisle a/c. The conclusion of those studies led to the launch of A320 NEO.

Prior to those roles, he has been in leading position on A350 program and Aerodynamic within Engineering Flight Physics center of competence.

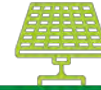
Furthermore, he is the owner of several patents in Aerospace field and has published several technical articles.

He obtained his Ph.D Degree on Turbulence Modeling from ISAE Aerospace Institute and ONERA in 1995 after graduating as an Aeronautics Engineer at ENSMA/ISAE Aerospace Institute in 1992.

High-level roundtable: a new vision for the future



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**Jean-Francois Brouckaert**

Chief Scientific Officer – Clean Sky Joint Undertaking

Jean- François Brouckaert graduated in 1994 from the Faculté Polytechnique de Mons (Belgium) as a Mechanical Engineer. He holds a Master-after-Master in Fluid Dynamics & Turbomachinery from the von Karman Institute and holds a PhD in Unsteady Measurement Techniques (Fast Response Pressure Probes) from the Université Libre de Bruxelles.

Jean-François has been working for 20 years at the von Karman Institute as a Research Engineer, Assistant Professor and Associate Professor in the Turbomachinery and Propulsion Department.

He has been a founding member and Secretary General of EVI-GTI (European Virtual Institute for Gas Turbine Instrumentation) from 2004 to 2014. He also served as Co-Chair of several NATO and ISA Working Groups on Gas Turbine Instrumentation AVT-180, AVT-229, ISA 107.5 until 2014. As an ASME member, he has been actively involved in the IGTI/Turbo Expo Conference Committees and reviews, likewise with the European Turbomachinery Conferences.

In November 2014, he joined the Clean Sky Joint Undertaking as a Project Officer, responsible for the engine research programmes SAGE and ENG. In September 2018, he became Team Leader, responsible for Engines, Systems and Technology Evaluator.

In May 2019, he has been appointed Chief Scientific Officer.



**Martin Haigh**

Martin has been working for Shell for 16 years, and has been a member of the Shell Scenarios Team for the last 14.

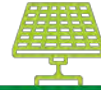
He has led the development of Shell's World Energy Model, which has underpinned the last two Shell scenario rounds and built on Shell's 50-year history in scenario planning. Martin was also a principal contributor to the team's Sky scenario looking at a most plausible pathway for meeting the goals of the Paris Climate Agreement.

He speaks frequently on the scenario approach as well as energy-related issues, for a variety of audiences. He is a judge for Shell's UK-wide schools competition, The Bright Ideas Challenge. He takes particular interest in energy technology development and environmental change. He has jointly authored papers on energy technology deployment, and the long-term potential for renewables. Martin works with many institutions, including MIT's Climate Science team, the IEA, and several UK universities. He is a Fellow of the Royal Geographic Society.





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Senior Energy and Climate Change Adviser – Shell

Martin's background is mathematics, with experience in mathematical and economic modelling in the transport and telecoms industries, as well as for energy.



**Paul Stein**

Chief Technology Officer – Rolls Royce

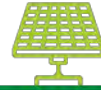
Paul Stein was appointed to the Rolls-Royce Executive Leadership Team as Chief Technology Officer in April 2017, accountable for the company's technology investment and for ensuring close alignment with business strategy, to maintain a competitive edge.

He joined Rolls-Royce in 2010 as Chief Scientific Officer and for two years concurrently acted as the Engineering and Technology Director for the Company's Nuclear business.

Immediately prior to joining Rolls-Royce Paul was Director General, Science and Technology, at the UK Ministry of Defence. Paul holds an Electrical and Electronic Engineering degree from King's College, London. He is a Fellow of the Royal Academy of Engineering, the Royal Aeronautical Society and the Institution of Engineering and Technology.



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### **Sheila Remes**

Vice President of Strategy for Commercial Airplanes – Boeing

Sheila Remes is vice president of Strategy for Commercial Airplanes. In this role, Remes oversees cross-functional efforts to define Boeing's strategic direction and address complex, enterprise-wide business decisions. These include greater life-cycle value for customers and internal capabilities for Boeing, growth opportunities such as services and intellectual property control, product and propulsion strategy, and environment and aviation policy. She is also responsible for international business development strategy and serves on the Boeing International leadership team.

With 30 years of industry experience, Remes brings a deep understanding of commercial aviation from manufacturing and airline perspectives. Previously, as director of Services Strategy for Commercial Airplanes, she developed, integrated and managed a Commercial Aviation Services growth strategy to capture new revenue and ensure that Boeing supports customers affordably.

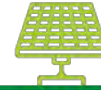
As managing director of Sales Strategy, Remes was responsible for developing go-to-market sales approaches that enabled Commercial Airplanes to maximize sales opportunities. Her organization also sought to identify emerging customers and develop working relationships with key market influencers in the aviation consulting and financing world. The group worked across Commercial Airplanes and with Boeing Capital Corporation to help sales teams develop best practices and unique strategies for success. Earlier, she served as managing director of Regional Marketing for the Americas and Leasing and worked with the 777 Engineering and Americas Sales and Marketing Analysis teams.

Remes came to Boeing with experience at two airlines. At America West, she was responsible for airplane and component acquisition, airplane modification engineering, and flight operations engineering support. At United, she supported station reliability, schedule, inventory and pricing as well as regional promotions for new route development in the U.S. West.

Outside of Boeing, Remes serves on the World Affairs Council of Seattle Board of Directors.



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**Susan Ying**

Senior Vice President, Global Partnerships – Ampaire

Dr. Ying has devoted over three decades to the aerospace industry, with experience at NASA, Boeing, the Commercial Aircraft Corporation of China, and most recently an electric aircraft start-up, Ampaire. She is the Senior Vice President of Ampaire, responsible for global partnerships. She is also a board member of the Lindbergh Foundation.

Demonstrating success both at individual and team levels, Dr. Ying has been the recipient of many honors, including the [People's Republic of China Friendship Award](#), Asian American Engineer of the Year Award, Boeing Professional Excellence Award from the CTO, NASA Group Achievement Award, AIAA Applied Aerodynamics Best Paper Award, and the Professional Achievement Award for Women of Color in Technology. Dr. Ying is the immediate past President of the [International Council of the Aeronautical Sciences \(ICAS\)](#), serving on the Executive Committee which leads in shaping the agenda of this multinational professional aerospace organization. Dr. Ying is recognized as a Fellow of the AIAA and Fellow of the [Royal Aeronautical Society \(RAeS\)](#).

With a deep passion for flight, Dr. Ying holds a Commercial Pilot License and is a FAA-Certified Flight Instructor (CFI). She received her PhD degree in Aeronautics and Astronautics from Stanford University and BS from Cornell University.

## Novel aircraft technological concepts



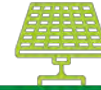
**Bobby Sethi**

Dr. Bobby Sethi (FHEA, PhD) is the Deputy Director of Research for the Cranfield University, School of Aerospace, Transport and Manufacturing. He is a Senior Lecturer in Gas Turbine Combustion and Environmental Impact as well as the Leader of the Cranfield University Technoeconomic Environmental Risk Assessment (TERA) for civil aviation in the Propulsion Engineering Centre. He is also a Fellow of the UK Higher Education Academy.

His research is focussed on investigating the technical and economic benefits, environmental impact and risks associated with novel, low emissions, more efficient propulsion technologies and asset management strategies for civil aviation. He is the coordinator of the ongoing EU H2020 ENABLEH2 project and has made significant



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Deputy Director of Research -  
School of Aerospace,  
Transport and Manufacturing –  
Cranfield University

contributions to a number of past EU H2020 and Framework Program projects including ULTIMATE, LEMCOTEC, CLEAN SKY 1 (SGO-ITD and TE), CLEAN SKY 2 (DEMOS), DREAM, NEWAC, VITAL and VIVACE. He has co-authored 32 journal and 72 conference papers and has supervised 23 PhD and 130+ MSc students.



**Grazia Vittadini**

Chief Technology Officer –  
Airbus SAS

Grazia Vittadini has been appointed Chief Technology Officer (CTO) of Airbus and member of the Airbus Executive Committee, effective May 1st, 2018.

Previously, Vittadini was Executive Vice President Head of Engineering from January 2017 and member of the Executive Committee of Airbus Defence and Space.

Prior to this position, she had been Senior Vice President Head of Corporate Audit & Forensic, responsible for Airbus Group audit activities worldwide.

Starting January 2013 and for one year and a half, Grazia was Vice President Head of Airframe Design and Technical Authority for all Airbus aircraft.

Always leading transnational teams in multiple locations, she also served as Chief Engineer on the Wing High Lift Devices of the A380 in Bremen from First Flight to In-Service (2005-2009) and then contributed to securing First Flight and Type Certification of the A350 XWB aircraft as Head of Major Structural Tests in Hamburg. The Major Tests for A320 Extended Service Goal, A380 and A400M were also in her scope.

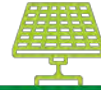
Vittadini began her professional career on the Italian side of the Eurofighter Consortium, before joining Airbus Operations in Germany in 2002 and setting on her path towards senior management positions.

Grazia Vittadini graduated in Aeronautical Engineering and she specialized in Aerodynamics from the Politecnico di Milano.





# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



**Henri Werij**

Dean of Faculty of Aerospace Engineering – Delft University of Technology (TU Delft)

Henri Werij obtained his MSc in experimental physics and PhD in atomic physics and quantum optics at Leiden University (both cum laude). After spending several years in Boulder, Colorado (JILA) and Amsterdam as a postdoc, he started working at the Dutch research organisation TNO in the field of satellite instrumentation for Earth atmosphere monitoring. His last position at TNO before moving to Delft University of Technology in 2017 was Director of Space and Scientific Instrumentation. Since then he is Professor and Dean at the Faculty of Aerospace Engineering. Here, together with a scientific staff of more than 100 professors in aerospace engineering and over 300 postdocs, researchers and PhD candidates, he aims to vastly accelerate the transition towards truly sustainable aviation. Interdisciplinary world-class research, international collaboration and excellent education to the many and highly motivated students at the Faculty are the cornerstones of his policy.



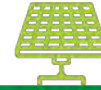
**James Heidmann**

Manager, Advanced Air Transport Technology (AATT) Project – NASA

Dr. James (Jim) Heidmann currently serves as Manager of NASA's Advanced Air Transport Technology Project. In this capacity, he leads NASA's technology development for subsonic transport aircraft. Prior to this role, he served as Acting Deputy Director of NASA's Advanced Air Vehicles Program, managed NASA's Advanced Air Transport Technology and Transformational Tools & Technologies Projects, and also served as Chief of the Turbomachinery and Heat Transfer Branch. In addition to these management roles, Dr. Heidmann spent 20 years as an Aerospace Research Engineer, publishing over 20 papers and journal articles in the area of turbomachinery aerodynamics and heat transfer. He was elected Fellow of the American Society of Mechanical Engineers (ASME) in 2007, Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA) in 2015, and received the Outstanding Mechanical Engineer (OME) Award from Purdue University School of Mechanical Engineering in 2017. Dr. Heidmann received a Bachelor of Science in Mechanical Engineering from the University of Toledo in 1986, Master of Science in Mechanical Engineering from Purdue University in 1988, and Doctorate in



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Mechanical and Aerospace Engineering from Case Western Reserve University in 1997.



**Tine Tomazic**

Chief Technical Officer –  
Pipistrel

Dr. Tine Tomažič (male) was born in 1983 and received B.Sc. and Ph.D. in electrical engineering from University of Ljubljana in 2007 and 2014 respectively. His work in systems automation and human machine interfaces ranges from autopilot technologies for unmanned aerial vehicles to electric and hybrid-electric propulsion systems. Tomažič was involved in development of world's first 2-seat and world's first electric 4-seat aircraft, the Taurus Electro and the Taurus G4. His current research is in the field of certifiable hybrid-electric propulsion systems and their intuitive user interfaces, where besides being involved in the development, Tomazic is active in the working group with ASTM F44.40 to rewrite current General Aviation design standards to allow proliferation of electric flight. He is also a member of SAE, EASA T4S Technology for Safety and a recognised global expert in the field of electric flight. He is the CTO of Pipistrel.



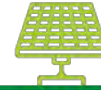
**Tom Grundy**

Chief Executive Officer –  
Hybrid Air Vehicles

Tom joined Hybrid Air Vehicles in 2013 from BAE Systems, where his experience covered a range of senior engineering and programme leadership roles in the development and delivery of new products and services. Tom was the Head of Business Management for BAE Systems' Tornado Availability Support Service, was Assistant Chief Engineer in BAE Systems' unmanned aircraft development business, and prior to that led programmes developing new UAV mission system capabilities in BAE Systems Australia. He also worked on the Airbus A380 and Eurofighter Typhoon programmes. Tom holds degrees in Aerospace Engineering and Advanced Systems Engineering, is a Chartered Engineer, and is a Member of the Royal Aeronautical Society.



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### Air operations



**Alexandre Feray**  
CEO – Open Airlines

Alexandre Feray has 25 years of experience in the Software and Airline Industry, not including his teen years when he invented a programming language that was awarded and commercialized by Apple. He holds an MSc in Engineering and IT from École Centrale Paris and started his career at IBM Thomas J. Watson Research Center in New York, USA working on the first multimedia email system for the Internet. He managed complex IT systems at Alcatel Lucent and at Air France where he was the head architect of Air France Operations Control Center's reengineering program and head of Air France Crew Management IT Department, leading a team of 50 people.

In 2006, he founded OpenAirlines, an innovative company that provides consulting and software solutions to reduce the costs of the airline operations. Drawing on 8 years of R&D, SkyBreathe® eco-flying software comes out on the market in 2013. Rewarded with numerous prizes, SkyBreathe® is today the most widely used eco-flying solution in the world. Its active community federates more than 42 airlines across the planet, including Air France, Transavia, Malaysia Airlines, Norwegian, Cebu Pacific, flydubai, and Atlas Air.

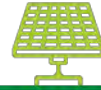


**Arthur Orton**

Mr. Orton is the Deputy Program Manager for the United States Federal Aviation Administration's (FAA) Continuous Lower Energy, Emissions and Noise (CLEEN) Program. This program is the FAA's principal environmental effort to accelerate the development of new aircraft and engine technologies to reduce noise, emissions, and fuel burn. Until recently he managed a portfolio of NextGen air traffic modernization research within the FAA, focused on improving the throughput, efficiency, predictability, and flexibility of air traffic operations by moving the United States National Airspace System towards use of trajectory-based operations.



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## STOCKTAKING SEMINAR

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Deputy Program Manager,  
Continuous Lower Energy,  
Emissions and Noise (CLEEN)  
Program – United States  
Federal Aviation  
Administration (FAA)



### **Boni Dibate**

Regional Director Africa Affairs  
– CANSO Africa

I hold a BA Social Science and a MSC degree in Clinical Psychology from the Medical University of South Africa. Having obtained a Top Management Program for Public Enterprises in South Africa, a certificate at the National University of Singapore. Senior Executive Development Program certificate from Harvard/Wits Business Schools. Airline Management Integration Program certificate from IATA Aviation Training and Development Institute in Singapore, also a Creative Airline Alliances and Strategic Partnerships certificate from Amman Jordan.

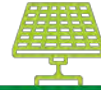
Obtained a Diploma in International Coaching from Newfield Network Boulder in USA, and a member of IOD SA. She held positions as an Executive Human Resources Manager at Transwerk, Chief Executive officer of both Esselenpark Centre of Excellence and South African Express Airways. Group Executive Manager Support Services at TRANSTEL, Chief Operating Officer, and Executive Manager Service Delivery at the Air Traffic and Navigation Services (ATNS) and currently the Director CANSO Africa Affairs.

Having sat an array of boards I have been the Chairperson of Tourism Business Council of SA, East Gate Airport, President of the Business Women Association. Including being a board member of the University of Pretoria and one of the Directors of Dark Fiber Africa (DFA) and South African Express Airways where I held the position of being the chairperson of the Ethics and Transformation Committee.





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**Daniel White**  
CEO – Signal

Daniel White is a behavioral and environmental expert with extensive experience creating successful innovations to save large amounts of carbon, quickly. His company Signal, is founded upon peer-reviewed research with Virgin Atlantic, which in 8 months saved over \$6m of fuel, 24,000 mt of CO<sub>2</sub> and made pilots feel better, a unique triple bottom line. This work is quoted as the lowest ever measured cost to reduce carbon.

Dan's first innovation 'rappel insulation', was his catalyst to becoming an entrepreneur, this created a new \$50m industry for the UK. More recently, Dan has been at the forefront of applied behavioral science, to drive substantial, quick, and measurable changes in environmental outputs. This led to Signal, a 'fitbit for work', which is a unique scalable software to improve operational efficiency and motivation using rigorous behavioural economics and data analytics.

Before launching Signal, he managed the UK's first Energy Natural Field Experiment and was previously CEO and Co-Founder of 'The Behavioralist', a successful USA/UK based research consultancy startup working with corporations and governments to integrate behavioral economics to solve internal challenges. Clients included Centrica, National Grid, Virgin Atlantic Airways, NATS Holdings, Castaic Lake Water Agency, and UK Local and National Government.

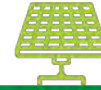


**David Brain**

David previously worked as an Area Air Traffic Controller in the UK and has 25 years experience in ATC, ATM and Project Management. David currently leads EUROCONTROL's environmental efforts on reducing aviation's operational impacts. David chairs the European CCO/CDO Taskforce as well as leading several other European operational projects and is also a co-rapporteur of the ICAO-CAEP Airport and Operations Working Group. David was previously responsible for estimating the global environmental benefits following the planned implementation of the operational concepts within ICAO's ASBU framework and also led the first ever global flight efficiency analysis using a harmonised surveillance data source. David has a private pilot's license, a degree in Geography, a Master's degree in Sustainable Aviation and enjoys travelling across Siberia in his spare time.



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Operational expert –  
EUROCONTROL



### **Jean Brice Dumont**

EVP Engineering – Airbus  
SAS

Jean-Brice Dumont was appointed Executive Vice President Engineering at Airbus in April 2019 and is a member of the company's Executive Committee.

With over two decades of industry experience, he joined Airbus Commercial Aircraft in this role in January 2018 after six successful years as Executive Vice President, Engineering and Chief Technical Officer at Airbus Helicopters. Beyond his Engineering leadership, Jean-Brice strongly promotes diversity, teamwork and core human values such as humility and respect.

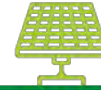
Jean-Brice Dumont joined Eurocopter, the predecessor company to Airbus Helicopters, in February 2004. There, he worked as an Engineer and Development Project Manager for the NH90 programme, prior to becoming the NH90 Chief Engineer and NH Industries' Technical Director from 2008 to 2012.

A licensed French Army Aviation pilot, Dumont started his career with the country's DGA military procurement agency in 1996, where he worked on the Tiger and Super Puma rotorcraft programs before ultimately being appointed the organization's Chief Test Director for the Tiger helicopter in 2002.

Jean-Brice Dumont is a graduate of France's École Polytechnique and of the ISAE Aerospace Institute. He was born in 1971, is married with two sons and enjoys running marathons and swimming.



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**Predrag Vranjkovic**

Policy Officer (Seconded Expert) at European Commission

Predrag Vranjkovic is an experienced senior aviation expert with a history of working across the aviation industry, in both private and public international sector.

Skilled in air traffic management policy planning and development, ATM innovation and deployment, international relations and negotiation, Predrag holds master degrees in aeronautical engineering and international relations with a professional qualification in the aviation management.

Predrag is currently working as a policy officer in the European Commission, Directorate General for Transport (MOVE), Aviation Directorate, where he deals with the Single European Sky policy matters.



**Robert Brons**

Captain – Representing: IFALPA, International Federation of Airline Pilots' Associations

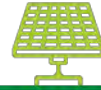
Robert Brons was born in Rotterdam, the Netherlands, on May 23<sup>rd</sup>, 1965. He graduated as MSc from Delft University of Aerospace Engineering in 1989, on human-machine interface design and human modelling. He completed his airline pilot training on the Rijksluchtvaartschool in Eelde (1990) and attained his engineering-pilot post-graduate degree at Delft University (1991).

In 1991 he started as airline pilot for KLM, Royal Dutch Airlines, based in Amsterdam. Flying experience ranges from Cessna C500, DC-10, A310, B767, B737 to A330; since 2002 as a captain. At present he is captain on the Airbus A330, conducting intercontinental flights. He has been flight instructor/type rating examiner from 1996 until 2002. He accumulated over 14000 hrs flying hours.

Since 1993 Robert Brons acted as policy advisor and director in several technical committees, both in the national ALPA, the European Cockpit Association, the Dutch Birdstrike Committee and IFALPA. Since 1999, R.C. Brons is member of the Aircraft Design and Operations Committee of IFALPA, the International Federation of Airline Pilots' Associations. Since 2004, he represents IFALPA at ICAO CAEP, the Committee on Environmental Protection. IFALPA



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represents over 100.000 airline pilots from 101 Member Associations around the globe.

He is specialised in aircraft operations, bird control, crosswind operations, environmental sustainability and safety management.

### Ground operations



**Leigh Gapp**

Sustainability Manager –  
Adelaide Airport

Leigh is Adelaide Airport's Sustainability Manager and has over 15 years' experience as an environmental professional across the waste, infrastructure and aviation sectors. Leigh takes a strategic approach to sustainability and seeks to highlight the commercial benefits of pursuing sustainable objectives.

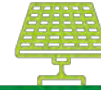
Leigh has led a number of sustainability initiatives at Adelaide Airport including an airside irrigation trial looking at benefits that cooling with irrigation can deliver including improved aircraft performance, leading the transition to the use of all compostable foodservice ware in the terminal and developing a suite of long term performance based sustainability targets, including science based carbon emission reduction targets. Leigh also led AAL's sustainability ratings to support its A\$50 million 7-year Sustainability Performance Linked Loan with ANZ, the first loan in Australia that incentivized a borrower to even further improve its performance against a set of Environment, Social and Governance (ESG) criteria.

Leigh is a member of the Airport Council International Asia Pacific Environment Committee.





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**M. Muthukrishnan**

Head – EHS & Sustainability  
Airport Sector – GMR Group,  
India

Dr. M. Muthukrishnan, Head – EHS & Sustainability, Airport Sector, GMR Group, India

- **Head EHS & Sustainability –Airport Sector & Delhi International Airport Limited, GMR GROUP**
- **Vice Chair (Current) of ACI Asia Pacific Regional Environment Committee.**
- **Chemical Engineer** with over 16 years of experience in **Environment & Sustainability Management**, with very strong command in **Strategic Planning & Implementation, Risk Management; Business Continuity & Business Excellence processes of Airport and Aviation business.**
- **Certified ICAO Trainair Plus Course Developer and ICAO Safety Management System Professional.**
- **Developed ICAO – Standardized Training Package of DIAL’s - Leadership in Energy and Environmental Design and Operation of Airport Infrastructure Course.**



**Matthew Gorman**

Carbon Strategy Director,  
Heathrow Airport

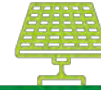
Matthew is Carbon Strategy Director for Heathrow, in a newly formed department which has brought together the airport’s business strategy and sustainability teams into a new “Carbon & Strategy Department”. He has been Sustainability & Environment Director at Heathrow for the last 12 years, leading the the team that developed “Heathrow 2.0”, the airport’s award-winning leadership plan for sustainable growth, launched in 2017. He is a member of the company’s senior leadership team and played a key role in developing the new approach to expansion - putting local communities and environment at the heart of the airport’s growth plans. Those plans were recommended by Airports’ Commission, supported by the Government, and won strong parliamentary backing.

Matthew works closely with community, business and government stakeholders in the UK, Europe and internationally. He has chaired the Heathrow Community Noise Forum, engaging a range of neighbouring boroughs. He is a Council member and past Chair of Sustainable Aviation, a unique coalition of UK airlines, aircraft and engine manufacturers and airports which promotes cleaner, quieter, smarter flying. He has represented the global airports industry in the International Civil Aviation Organisation’s working group on aviation





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and climate change, and Heathrow on the Prince of Wales's Corporate Leaders Group on Climate Change since its foundation in 2005.

Prior to Heathrow, Matthew worked at leading sustainable development not-for-profit Forum for the Future, advising FTSE 100 companies on. He started his career on the graduate programme of global consultancy Environment Resources Management. He is a trustee of the Hillingdon Community Trust and a past Vice-Chair of SERA, the Labour Environment Campaign, of Tourism Concern, which campaigns for ethical tourism, and of the Heathrow Community Fund.

Matthew is a fluent French and Spanish speaker and has co-authored a book on corporate responsibility: *'Big Business, Big Responsibilities. From villains to visionaries - how companies are tackling the world's greatest challenges'*. Matthew has a BA in French and Hispanic Studies from the University of Liverpool, an MPhil in Environment & Development from the University of Cambridge and an MProf in Sustainable Development from Middlesex University/Forum for the Future.



**Owen Waithaka**

Engineer – Kenya Airports Authority

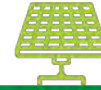
Has been the Airport Engineer at Moi Airport, Mombasa for the last 2½ years with the responsibility of maintenance and development of the airport's facilities.

Prior to this, he has worked at Kenya Airports Authority Headquarters as an electrical engineer for 34 years mainly handling design, tender specification and supervision of engineering projects for the various airports in Kenya. These projects involved upgrading or installation of new facilities which include medium voltage distribution networks, backup power supplies, airfield ground lighting systems, terminal building services, passenger boarding bridges, baggage handling systems, solar power plants, and security screening equipment among others. During this period, he also participated in establishment of a training institution for the airport's electrical and mechanical maintenance technicians from within the East African region through the funding of the International Civil Aviation Organization (ICAO)

He is an electrical engineer by profession, having graduated from the University of Nairobi in 1986.



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**Susan Nambusi**

Fuel Data Analyst & Carbon Emissions Lead – Kenya Airways PLC

Susan Nambusi is an Aviation Environment specialist with a focus in Fuel Data Analysis, Fuel efficiency and Carbon emissions reduction at Kenya Airways where she drives resource and process optimization through recommendation of policy and process improvement. She oversees Kenya Airways critical data collection and coordinates with the Kenya CAA in the review of State action plan for CO<sub>2</sub> mitigation activities in accordance with Doc9988.

Her tenure has seen the airline achieve savings through:

- Removal of Flight Level Allocation scheme (FLAS) restrictions which hindered use of optimum flight levels on the Asia-pacific route
- Implementation of redispatch flight planning policy
- Reduction of contingency fuel from 5% to 3%

She is a licensed Flight Dispatcher with over 9 years extensive technical knowledge in Boeing and Embraer aircraft performance which has complemented her current role.

Currently, Susan sits as a member, in the Airline's Occupational Safety and health committee where she champions the improvement of employees working environment and also sits as an observer, in the IATA Sustainability and Environment Advisory Council (SEAC) where she champions inclusivity of Africa member airlines.



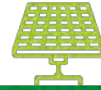
**Vincent Metz**

Vincent Metz is Executive Vice President Business Development at Smart Airport Systems (SAS). He joined SAS on February 1, 2020, after having worked 22 years in the aviation industry for KLM Royal Dutch Airlines in many leadership roles. Decision to join SAS was driven by realization that Sustainability is one of Aviation's biggest challenges today. But where many of the potential solutions will take a long time to "make it to plane", SAS has a couple that only wait for market acceptance and implementation.

In KLM his last position was Head of Strategy, Marketing & Communication of Air France Industries KLM Engineering & Maintenance. Before that he held positions as VP Commercial Asia Pacific and in Revenue Management as Director Pricing Long Haul Flights in the AFKL passenger business. Earlier in his career he has been Director Component repair and Area Manager Asia & Americas for KLM Engineering & Maintenance.



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Executive Vice President,  
Business Development –  
Smart Airport Systems

### Clean energy



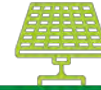
**Andy Jefferson**

Programme Director,  
Sustainable Aviation (UK)

Dr Andy Jefferson has a passion for finding how we secure a sustainable future for the aviation industry. An independent consultant, he supports Sustainable Aviation (UK) in directing its work programme and representing the coalition at a range of events and meetings with stakeholders. Prior to joining Sustainable Aviation (UK), Andy spent eight years working for the then BAA at Stansted Airport resulting in him heading up their sustainability and planning work. Before this Andy spent eight years in the airline business for a range of companies including buzz and KLM covering a range of roles from operations, commercial development and fleet planning.



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### **Brice Lalonde**

Chair – EDEN Balance of Energies (Former Minister of Environment – France)

Mr. Brice Lalonde is the president of the Business and Climate Summit, an annual gathering of companies tackling climate change, and of EDEN Balance of energies, an organization devoted to decarbonizing the European economy. He also chairs the Water Academy of France. Earlier, he was advisor to the UN Global Compact, Undersecretary of the United Nations in charge of the Rio+20 Conference, and, before, the French ambassador for climate change negotiations.

Prior to this, he served as French minister for the Environment from 1988 to 1992, and was strongly involved in global issues. Afterwards he chaired the Round Table for Sustainable Development at the OECD. He was the elected mayor of his village in Brittany for thirteen years.

Mr. Lalonde also served as chair of the French chapter of Friends of the Earth in the seventies. He stood in the French presidential election in 1981.



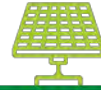
### **Frauke Pleines-Schmidt**

Director environmental protection and consumer rights in aviation, airport coordination, aircraft noise, airport coordination, aircraft accidents, aeronautical

From 1990 – 1997 Frauke studied technical environmental protection at the Technical University of Berlin and holds a degree in Technical Environmental Engineering. She started to work for the German air traffic control (DFS) in 1998 in Offenbach, Düsseldorf and Langen (near Frankfurt). She was mainly responsible for calculating minimum noise departure routes for major German airports. In 2006 she changed to the German Ministry of Transport and Digital Infrastructure in Bonn and became the German ICAO CAEP (Committee on Aviation Environmental Protection) Member. Her focus was and still is on environmental issues in aviation, noise and emissions. In 2018 she became director of her division and now also deals with consumer rights, airport coordination (slots) and aircraft accidents.



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research – German Ministry of Transport and Digital Infrastructure



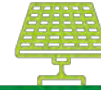
**Maria Fiskerud**  
Clustermanager for the Swedish innovation cluster Fossil-free aviation 2045 – Research Institute of Sweden

Maria Fiskerud a pioneer in sustainable aviation, business developer and entrepreneur, with more than 20 years' experience, from industry leaders to start-ups. Award winning with a proven track record. Multidiscipline skills in information design, change management, crisis communication, reputation management, project management, marketing and business development. A personal drive for innovation, sustainability and a passionate futurist. Demonstrated know-how in multicultural environments and geographically spread teams; building partnerships to reach results.





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### **Paul Durrant**

Head of End-use Sectors and Bioenergy, International Renewable Energy Agency (IRENA)

Paul joined IRENA's Innovation & Technology Centre in Germany in 2018 after 20 years working for the UK government shaping UK and international innovation policies and programmes. In IRENA he initially led on innovation strategy and engagement with the aim of fostering deeper international partnership working to accelerate the adoption of the renewable energy technologies. Since May 2020 Paul leads IRENA's End-use Sectors & Bioenergy team which supports IRENA's member countries and the wider community in making maximum use of renewables in the industry & transport sectors and in maximizing the sustainable use of biomass in national energy transitions.

Paul graduated with a PhD in Nuclear Physics from the UK's University of Southampton before taking on technology policy roles in the UK Home Office and Department for Transport. For 10 years Paul led on Energy Innovation Policy & Strategy in the UK's Department of Energy & Climate Change and the Department of Business, Energy & Industrial Strategy. From Autumn 2015 onwards Paul led UK engagement with the Mission Innovation initiative and later was the head of Mission Innovation's Secretariat.



### **Xavier Vigor**

Vice-President Technologies and Industrial Management – Air Liquide

Xavier Vigor began his professional career in 1988 within the Air Liquide Group. He has successively held positions in research and development, sales, engineering and management, always in innovative fields. In particular, he has been Managing Director of the Chicago and the Loges-en-Josas (near Paris) Research Centers, of small standard production plants Engineering, of the Group industrial IT. Recently he was the Managing Director of Air Liquide advanced Technologies in Grenoble.

Today, he is Vice-President Technologies (CTO) and Industrial Management of the Air Liquide World Business Line for Hydrogen Energy

Xavier Vigor is a graduate of the Ecole Centrale des Arts et Manufactures.



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## STOCKTAKING SEMINAR

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### Sustainable Aviation Fuels (SAF) – Introduction and Frequently Asked Questions



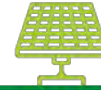
**Glenn Johnston**

Global Regulatory Carinata – Nuseed (ICAO CAEP Observer representing Advanced Biofuels Association (ABFA))

Glenn Johnston is Global Regulatory Carinata for Nuseed. Mr. Johnston has over 30 years' experience in the biotech/chemical global regulatory arena. He currently serves as the chair of the regulatory committee, leads ICAO CAEP ABFA Observer group and board member of the Advanced Biofuels Association (ABFA). Mr. Johnston has been recognized multiple times by ASTM with the "Award of Excellence" for his dedication and contributions to developing standards. Prior to joining Nuseed, Mr. Johnston was Executive Director Regulatory Affairs for Agrisoma Biosciences Inc. where he worked on stewarding the new energy crop carinata through the international biofuels policies. Previously Mr. Johnston was Vice President of Regulatory Affairs for Gevo Inc. There he accelerated establishing a pathway for fuel isobutanol with US EPA policy makers. He also established ASTM specifications for new alternative jet fuel pathways (ATJ). Proceeding his tenure at Gevo Inc., Mr. Johnston was Director of Regulatory Affairs with NatureWorks, LLC, where he managed product stewardship issues and integrated his work with global influences regarding toxicology, environmental, and safety around the renewable plastic PLA. During his long-standing career, he has gained extensive experience related to food legislation (FDA, EU, JHOSPA, KFDA, MERCOSUR, etc), chemical legislation (TSCA, EINECS, DSL, METI, KCL, and AICS), animal feed requirements (US FDA, AAFCO), and other regulatory laws that affect the biotech supply chain. He has worked with industry groups in Japan (JHOSPA), Taiwan (EBPA), the U.S. (BPI), the European Union (IBAW) and China (BMG). He is currently a Member of ASTM D02, and has also been a Delegate of ISO TC61 and CENTC249, and a Member of ASTM D20. Mr. Johnston has participated on the board of directors of various industry trade associations and has published papers and given speeches throughout the globe.



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



**Jim Herbertson**

Technical Director, Climate and Energy – IPIECA

Jim joined IPIECA in 2017 as Technical Director, Climate and Energy, after nearly 40 years in the oil and gas industry. He graduated in Chemistry from Oxford University and spent the first part of his career in various technology roles. During that time he worked in the UK, France and the USA and led global teams developing new fuels and lubricants and providing support to refining and marketing. More recently, he worked on environmental and safety for the upstream business functions with a focus on policy development.



**James Hileman**

Chief Scientific and Technical Advisor for Environment and Energy – U.S. FAA (CAEP-FTG Co-Rapporteur)

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 Aviation Organization (ICAO) Committee on Aviation Environmental Protection (CAEP). Prior to joining the FAA, Dr. Hileman was a Principal Research Engineer within the Department of Aeronautics and Astronautics at MIT. His research focused on alternative jet fuels and innovative 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.

Sustainable Aviation Fuels



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



### Alexander Mahler

Advisor Sustainable Fuels –  
International PtX Hub Berlin |  
Deutsche Gesellschaft für  
Internationales  
Zusammenarbeit (German  
Association of International  
Cooperation) GmbH (GIZ)

Alexander Mahler works as an Advisor at the International PtX Hub Berlin. The International PtX Hub is implemented by GIZ and is funded by the German Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). Jointly with its partner countries and organisations, the PtX Hub aims to catalyse a global breakthrough in the adoption of sustainably produced synthetic Power to X (PtX) fuels and feedstock in sectors that cannot directly use renewable electricity. At the PtX Hub, Alexander mainly works on sustainable fuels for aviation and shipping.

Before joining the International PtX Hub and GIZ in 2019, Alexander was Deputy Managing Director and Head of Transport and Agriculture Policy at Green Budget Germany (GBG), a non-partisan economic think tank in Berlin. During his time at GBG he focused on economic instruments in environmental policy and advised governmental bodies, NGOs, foundations and political parties in Germany and Europe.

He has a background in geography and economics and gained his first professional experiences in 2009 at the UNEP Headquarters in Nairobi.



### Erasmo Carlos Battistella

CEO – ECB Group

- Graduated in Business Administration and Agriculture;
- More than 20 years of experience in Fuels, Oil, Gas and Agro Energy operations;
- Founder of BSBIOS in 2005 and CEO since then;
- Founder and CEO of ECB Group;
- Co-Founder and President of the Association of Brazilian Biofuels Producers (APROBIO);
- Among the 100 most influential people in the Brazilian agribusiness sector, according to magazine "THIS IS MONEY" 2013 until 2017;
- Young Leadership Award for Agribusiness – 2012;





# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

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- Guri Trophy - Awarded by the RBS Group – 2013;
- Trophy the Equilibrist - Awarded by IBEF / RS – 2018.



**Francesco Cherubini**

IPCC, Norwegian University of Science and Technology

Prof. Francesco Cherubini is the Director of the Industrial Ecology Programme at the Norwegian University of Science and Technology (NTNU). He has been a Lead Author of the IPCC Special Report on Climate Change and Land. His main research activities focus on climate change mitigation, environmental sustainability analysis of biomass and biofuel systems and sustainable land management. He has a large research portfolio that includes projects with public authorities and industries.



**Jocelyn Goodwin**

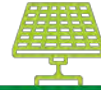
Organic Chemist – Advanced Research Associates (ARA)

Jocelyn Goodwin is a PhD Organic Chemist who has led the analytical work and assisted with technology development in ARA's Better Fuels Group for 7 years. She assisted Ed Coppola with acquiring the ASTM certification of Catalytic Hydrothermolysis Jet (CHJ) under ASTM D7566.





# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

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**Kevin Weiss**

Chief Executive Officer –  
Byogy Renewables, Inc.

Kevin Weiss is a co-founder of Byogy and serves as CEO. He has over 25 years' experience as a CEO with a record of operational excellence, financial discipline, and exponential revenue growth.

Formerly CEO for 18 years of a Silicon Valley Engineering firm in San Jose, California, he has worked on more than 2,000 infrastructure and development projects in both public and private sectors developing some of the leading environmental engineering criteria for Net Zero Green, water quality and sustainable energy design specifications currently used throughout the United States and abroad.

Kevin's knowledge of sustainable and environmental design and processing has enhanced his abilities to be at the forefront of renewable energy implementation. He has held numerous leadership positions by providing seminar discussions for both the private sector and local government environmental agencies on sustainable practices.

Kevin is a licensed Professional Engineer and holds BS degrees in Civil Engineering, Physics, and Math from Penn State University.



**Norimitsu Kaneko**

Assistant Manager (Process  
Development), IHI Corporation

I am an engineer and a researcher of renewable fuel production process development in IHI's Algae-Based Biofuel Group.

After earning a master's degree in Chemical Engineering from the University of Tokyo in 2009, I started my career at R&D center of IHI and I had worked with Bio ethanol production process development from cellulosic feedstocks from 2009 to 2013. I was mainly in charge of chemical process development and whole process evaluation in terms of cost and energy.

After that, I joined the algal biofuel project in 2014, and have worked with algal biofuel production process development. I am mainly in charge of chemical process development, whole process evaluation of algal biofuel production process in terms of GHG emission, cost and energy, analyses of algal feedstock and products.



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



### SAF competitiveness and scale-up



**Bruno Miller**

Managing Director, Fuels and Regulatory Affairs – Fulcrum BioEnergy

Dr. Bruno Miller is Managing Director of Fuels and Regulatory Affairs at Fulcrum Bioenergy, a pioneer in the development of a reliable and efficient process for transforming everyday household garbage into low-carbon transportation fuels including jet fuel and diesel. He is responsible for directing Fulcrum’s fuels activities including sales, logistics, regulatory compliance, and sustainability. Dr. Miller has more than 20 years of experience in the air transportation industry. As a strategic sourcing manager in the fuel department at Northwest and Delta Airlines, he was responsible for the airline’s fuel supply chain in the U.S. Northeast, Latin America, and Africa. He has consulted for global airlines, leading fuel producers, the National Academy of Science, the FAA, and other government entities with respect to aviation sustainability, environmental performance, energy transition, and regulatory mechanisms. He has successfully led fuel registrations and fuel specification changes with US regulatory agencies and ASTM International, respectively. He holds a Ph.D. in Air Transportation Systems from the Massachusetts Institute of Technology (MIT).



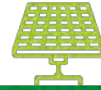
César Velarde is an Aviation and Environment Consultant, which main activity is supporting the Spanish Air Safety Agency (AESA) through the State Company SENASA.

Appointed by Spain, he is expert and co-rapporteur of the International Civil Aviation Organization (ICAO) Committee on Aviation and Environmental Protection (CAEP) Fuels Task Group (FTG) and advisor of the Spanish CAEP member, and has been involved on several Sustainable Aviation Fuels (SAF) initiatives and projects in Spain, Europe, and worldwide.

He has supported ICAO as trainer for the ICAO ACT-CORSIA program and between 2014 and 2018 he was ICAO Technical Cooperation



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### **Cesar Velarde**

Advisor of Spanish Civil Aviation authorities – Spanish Aviation Safety Agency (AESA)

Bureau staff based in Jakarta (Indonesia) as international expert and Project Coordinator, providing technical support to the Indonesia Civil Aviation Authority on the development of an aviation and environment regulatory framework structure, as well as supporting the country's contributions to ICAO CAEP work.

He holds an engineering degree from the Madrid University and prior to joining SENASA he spent most of his career in the environmental assessment of transport infrastructures and ecological restoration.



### **Christoph Wolff**

Head of Shaping the Future of Mobility – World Economic Forum

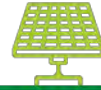
Dr. Christoph Wolff is the Global Head of Mobility and Member of the Executive Committee at the World Economic Forum since June 2018. He oversees the Forum's work with Partners from the Automotive, Supply Chain, Aerospace and Aviation, Travel and Tourism sectors. He is leading the Forum's System Initiative on "Shaping the Future of Mobility" which strives to achieve mobility of goods and people that is safe, clean and inclusive, and includes projects on the transition to "Autonomous, Shared and Electric Mobility," "Drones and Tomorrow's Airspace" and "Security in Travel."

Prior to his role at the Forum, Christoph served as Managing Director of the European Climate Foundation, delivering policy solutions for EU and Member State Governments in decarbonizing the energy, transport, cities and energy-intensive industries.

Christoph is a Chemical Engineer by training with 17 years' consulting experience from McKinsey & Co., where he was a Senior Partner and Global Practice Head in Travel and Logistics. He worked with airlines and airports on digitization, operations management, customer experience improvement, retail optimization and the optimization of mobile resources on airport aprons. He was Member of the Board of German Rail, DB Schenker, for four years leading International Railfreight and served Ferrostaal and ABB in executive positions in renewables.



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## STOCKTAKING SEMINAR

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**Jean Paquin**

CEO – SAF+ Consortium

Jean has over 25 years of experience in developing and managing renewable energy projects worldwide. After several entrepreneurial experiences in Europe (Spain-France), he became Director of Business Development for one of the world's leading wind energy consultants. Subsequently, he became director of the hydroelectric generation department and senior director of business development for one of the largest independent power generators in Canada. Jean cofounded SAF+ in 2019 to bring his deep expertise to the development of a large commercial SAF project in east-end Montréal. An outstanding communicator, he is regularly solicited as a speaker. Jean holds an eMBA from the John Molson School of Business and a degree in Civil Engineering (B.Sc.) from Concordia University.



**Jimmy Samartzis**

CEO – LanzaJet

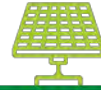
Jimmy Samartzis is the Chief Executive Officer of LanzaJet, Inc., a global leader in sustainable energy technology and production of low-carbon aviation fuel and diesel. He is leading the company through scale-up and commercialization, with sustainable fuel production plants being planned on multiple continents with the first one operational in 2022. The majority of his 20+ year career has focused on climate change, advancing the decarbonization of industries reliant on fossil fuels.

While in the airline industry, his contributions led to pioneering test flights, the first commercial-scale sustainable jet fuel deal and commercial production, and to a global industry agreement to enable a reduction in aviation emissions and adoption of low-carbon fuels. Additionally, he established a global coalition of stakeholders across the value chain to break down the barriers associated with the commercialization of sustainable fuels.

He currently serves on the Board of Directors for the Fermi National Accelerator Laboratory, a global leader in high-energy particle physics. He previously served as chief executive of a \$2B business unit at



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United Airlines, and as an executive advisor to clients globally through his work with Oliver Wyman, Booz Allen Hamilton, and Slalom.

He earned his M.B.A. from the Saïd Business School at the University of Oxford, a M.A. from John Hopkins University, and an B.A. from the University of Chicago.



**Kamal Hingorani**

Chief Customer Officer at SpiceJet

Kamal Hingorani currently serves as Chief Customer Officer at SpiceJet, looking after Inflight Services, Customer Experience and Corporate & Industry Affairs.

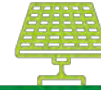
He is a transformational professional with 13 years at SpiceJet in Leadership roles ranging from Sales, Marketing, Distribution, Operations (Commercial, Revenue, Airports, In-flight etc.), Training, Strategy & Network management, Policy and Regulatory management and all Customer Experience touch points. Prior to this, he has spent 20 years with global legacy carriers and another 4 years with multinational travel management companies.

He studied Executive General Management at the Indian Institute of Management (IIM) Bangalore and did his Post-Graduation in Business Management. He is a Science Honours graduate from Delhi University. He is also a Yoga enthusiast/trainer.





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### Matthias Spoettle

Manager Renewable Fuels,  
NOW GmbH (National  
Organisation Hydrogen and  
Fuel Cell Technology)

Matthias Spoettle (Dipl.-Pol.) has 13 years of experience in sustainability of renewable fuels. After graduating with a diploma in political science and Islamic science in 2006 he gained in-depth experience in international development cooperation, before he started to work as a freelancer within the field of sustainability and renewable fuels.

From 2011 - 2019 Matthias was working on decarbonising the transport sector at Ecofys/Navigant, with a special focus on biofuels and e-mobility in road transport but also sustainable aviation fuels (SAF). For the International Air Transport Association (IATA) Matthias was steering a project on developing a sustainability umbrella standard for SAF as well as on design options for SAF reporting and accounting.

Since February 2020 Matthias is Programme Manager Renewable Fuels at NOW GmbH, a company fully owned by the German Government, with a focus on sustainable aviation fuels. Matthias is supporting the German Ministry of Transport and Digital Infrastructure (BMVI) in developing a funding regime for advanced biofuels and Power-to-X fuels.



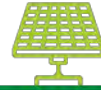
### Neville Fernandes

Manager, Sustainable Aviation  
Fuels – Neste

Neville Fernandes has been a keen promoter and supporter of renewable fuels in USA and Canada for the past decade. He has managed the market development, sales and marketing teams at Neste US, Inc., that successfully commercialized renewable diesel in the USA and Canada several years ago. Neville has held many roles at Neste including General Manager and President of Neste US, Inc., and he is now focusing his efforts on commercializing sustainable aviation fuel. Neville is passionate in his belief that sustainable, low-carbon, biofuels are an important contributor to the responsible management of greenhouse gases and to the fight against climate change. He has presented and given testimony at numerous conferences and proceedings on renewable fuels. Neville is the Chairman Emeritus of the Advanced Biofuels Association based in Washington, DC.



# AVIATION CO<sub>2</sub> REDUCTIONS



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TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



**Neville Hargreaves**

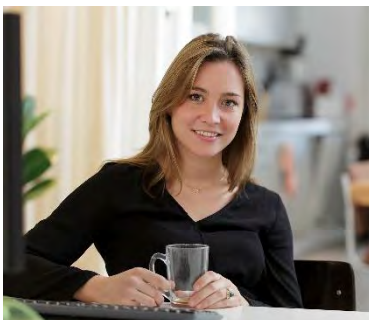
Vice President, Waste to Fuels  
– Velocys

Neville is responsible for Velocys' waste to fuels business, including the commercial, financial and corporate development of the Altalto waste-to-jet-fuel project in the UK. This project is planned to take half a million tonnes of municipal and commercial solid waste, otherwise destined for landfill or incineration, and use it to make sustainable aviation fuel.

Neville has over 30 years' experience in the oil, renewable energy and consulting industries, including 12 years with Exxon and 4 years with Bain and Company, the strategy consulting firm. At Exxon he led technical and commercial teams in areas including marine fuels and product development, bringing over 70 new products to market. He has delivered complex projects with many stakeholders across global public companies, contributing hundreds of millions of dollars to corporate value; he has also led two small businesses and launched a successful innovation programme for the UK government.

He holds an MA in chemistry from Cambridge University and a PhD from University College London, and is a Fellow of the Royal Society of Chemistry. He is a member of the Jet Zero Council, set up by the UK Government to oversee the path to zero-carbon aviation.

### Enabling a green aviation transition

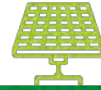


**Charlotte Hardenbol**

Charlotte Hardenbol is Head of Programs & Solutions at SkyNRG, focusing on the development and growth of initiatives that help bridge the price gap between conventional and sustainable aviation fuel and support market development. Before joining SkyNRG, Charlotte worked as a senior consultant at Spring Associates, a strategy consulting firm with expertise in Energy and Sustainability. Charlotte holds a Master's degree in Economics from the University of Amsterdam, specializing in Econometrics & Management Science.



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Head of Customer Programs –  
SkyNRG



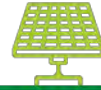
**Daniel Riefer**

World Economic Forum  
Platform Fellow – McKinsey &  
Company

Daniel Riefer is an Associate Partner and aviation expert at McKinsey & Company, based in Munich, Germany. He focuses on operations and sustainability, and is a Platform Fellow with the World Economic Forum, supporting the Clean Skies for Tomorrow coalition. Daniel started his career at Lufthansa's Verkehrsflieger-Schule in Bremen and Phoenix and received his commercial pilot license in 2004. He collected more than 4,000 flight hours on Airbus A320 and Boeing 747, and supported several internal projects as a management pilot. As a project manager of Lufthansa's research project BurnFAIR, he conducted the company's first flight on biofuel in 2011. In 2015, Daniel joined McKinsey & Company. Since then he has served numerous travel and aviation clients, including airlines, airports, MRO providers, ANSPs, and global industry associations. He has expertise in the areas strategy, operations, and sustainability. Since 2020, he has been a Platform Fellow with the World Economic Forum, supporting Clean Skies for Tomorrow. This cross-industry coalition of more than 40 members, including Lufthansa, Shell, and Rolls Royce, aims at decarbonizing the industry with the help of sustainable aviation fuel. Daniel holds a German diploma in business administration and an MBA from business schools in New York and Hong Kong.



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### **Michael Rurik Halaby**

Head of Aviation Debt Origination – EMEA – Deutsche Bank

Based in London, Michael Halaby is Head of Aviation Debt Origination – EMEA at Deutsche Bank; he is responsible for client coverage of airlines, aircraft operating lessors and aviation-related businesses across the debt product suite (eg secured bank debt, EETC, unsecured bonds, private placements, ABS, Schuldschein, Jolco) and increasingly on equity private placements and M&A

Previously Michael was a Senior Transactor in Deutsche Bank's Structured Finance team structuring secured debt transactions for airlines and aircraft leasing companies located in EMEA as well as for the helicopter sector

Prior to joining Deutsche Bank, Michael worked at Valais Advisory providing issuers and investors with impartial, independent assistance in securing and understanding debt capital markets financing

Previous to Valais, Michael was at BNP Paribas in New York as Managing Director – Debt Capital Markets where he was responsible for financials and aviation DCM. He personally executed 104 transactions with a total value of US\$66.8 billion as lead manager/bookrunner. Michael also built and ran the Yankee bond product group

Before BNP Paribas, Michael worked for ABN AMRO initially in Amsterdam then London and New York in their Debt Capital Markets group covering US aviation, auto and FIG clients. At ABN AMRO, Michael executed 152 transactions with a total value of US\$55.3bn as lead manager/Bookrunner

Michael received his MBA from Columbia Business School and received his BSBA from the University of Denver; he also attended the Université de la Sorbonne (diplômé in French Civilisation)

Before business school, Michael worked for American Express Carte – France and for American Express Bank, both in Paris

Michael often speaks at company presentations and conferences on the state of the debt markets for borrowers and lenders/investors

He also is quoted in various publications including the Financial Times, Airfinance Journal, Airline Economics

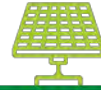
He is FSA registered and a US registered representative (Series 17, 24 and 63)

Michael is a member of ISTAT and sits on the ISTAT Humanitarian Committee; he is also a member of The Aviation Club UK

He was a helicopter pilot (R44) and designed a line of aviation-themed notebooks: [halaby.aero](http://halaby.aero)



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## STOCKTAKING SEMINAR

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### **Malek Kacem**

Project Manager and Business development, Green Aviation Research and Development Network in Canada (GARDN)

Malek Kacem has been in charge of projects and business development for GARDN since September 2017. His position has placed him at the forefront of project coordination in several areas of green aviation including the development of new aircraft configurations, additive manufacturing, the greening of aerospace value chains, biofuels and many others.

Malek completed a Bachelor of Commerce degree in Finance from the University of Ottawa and a graduate degree in Management at HEC Montreal before joining GARDN.



### **Mohammed Boutouba**

Project Portfolio Manager - Green Aviation and Industrial Efficiency – Consortium for Research and Innovation in Aerospace in Quebec (CRIAQ)

Mohammed Boutouba holds a Master of Business Administration in International Management (M.B.A.) from Laval University. He joined the Consortium for Research and Innovation in Aerospace in Quebec (CRIAQ) in April 2019 as a Project Portfolio Manager. His role is to put companies in contact with each other and with academic researchers around project ideas as well as to accompany them in setting up and carrying out the research project.

Prior to joining CRIAQ, Mohammed held various management, sales and business development positions within several organizations. Organized, curious, rational and competitive, he is always eager to deepen his knowledge and constantly seeks to improve his skills. Thanks to these qualities, Mohammed wishes to support innovative projects that will have an impact on the aerospace industry, especially those that are part of green aviation and contribute to the reduction of greenhouse gases.





# AVIATION CO<sub>2</sub> REDUCTIONS



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**Muneeba Kayani**

Head of European Transport  
Equity Research – Bank of  
America

Muneeba Kayani is a Director and head of European Transport.

Prior to joining the firm in 2019, Kayani spent 12 years at Morgan Stanley in equity research where she most recently led the EEMEA Industrials coverage.

During her time, she was ranked the #2 analyst in the sector in 2018 and #3 in 2017. In the Institutional Investor survey, she ranked #4 in EEMEA Real Estate and Transportation in 2017, and top three for EEMEA Construction and Transport in 2016. Before this, she worked in U.S. credit research at Lehman Brothers from 2005 to 2007 and also in U.S. investment banking at Morgan Stanley from 2000 to 2003.

Kayani has an MBA from Harvard Business School and a bachelors from Smith College in mathematics and economics. She is based in London. She speaks fluent English and Urdu.

For more information about any awards cited, visit <https://rsch.baml.com/awards>.



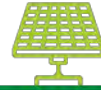
**Remona van der Zon**

Sustainability & Reporting  
Manager – KLM

Remona van der Zon is Sustainability & Reporting Manager at KLM, working mainly on sustainable aviation fuel, carbon offsetting, annual reporting on sustainability indicators and communications on sustainability related content. She also supports the development of KLM's customer programs: voluntary CO2 compensation service CO2ZERO and the KLM Corporate Biofuel Programme. Remona has a Master's degree in Sustainable Development from the University of Utrecht, with special focus on International Development.



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**Stephen Arrowsmith**

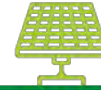
Chief Expert – Environmental  
Protection – European  
Aviation Safety Agency  
(EASA)

Mr Arrowsmith began his career at Dowty Aerospace before moving to the UK Civil Aviation Authority and then subsequently to the European Aviation Safety Agency (EASA) in 2005. He has worked in a variety of areas covering aviation environmental protection, including the development of ICAO SARPs on aircraft engine NOX emissions, aeroplane CO<sub>2</sub> emissions and CORSIA. Over the past 5 years, he has helped develop the triennial EASA European Aviation Environmental Report, which provides an objective overview on the environmental performance of the European aviation sector and considers options to address the gaps with European policy objectives.

Boosting innovation and implementation



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**Christian Pho Duc**

Managing Director H2 Projects  
– Smartenergy

Christian Pho Duc is heading the hydrogen activities of Smartenergy and is also in charge of solar projects in Germany. His many years of international management experience, his marked technical background and, last but not least, his multicultural roots make him ideally suited for this task. After over 5 years of expanding e-mobility on the water as SVP Sales at market leader Torqeedo he is now eager to provide clean energy to the installations worldwide. Christian spent already 5 years in the Solar Industry at Smartenergy Renewables, Nanosolar and Solyndra developing solar projects as managing director and VP Sales in EMEA and India. Prior to his engagement in the renewable energy space, Christian worked for 15 years in the semiconductor industry, always at the leading edge of technical innovations launching what were then the most highly integrated memory chips. He marketed high-end products for Infineon, Giesecke & Devrient and Siemens on the international stage, holding a number of management positions. Christian holds a master's degree in semiconductor physics and microelectronics engineering from Cambridge University and master's degree in physics from the Ludwig-Maximilian-University of Munich and showed an early interest in the market potential of new technologies. He undertook research at the Max Planck Institute for Astrophysics into high resolution detectors that today orbit the earth in satellites.



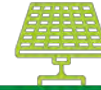
**Erin Cooke**

Sustainability + Environmental  
Policy Director, San Francisco  
International Airport

Erin currently serves as SFO's first Sustainability Director, Zero Energy and Resilient Outcomes (ZERO) Committee Chair and Sustainable Aviation Fuel Working Group Co-Chair where she co-creates, implements, and annually reports on the Airport's Strategic, Sustainability, Zero Waste and Climate Action Plans. By brokering and implementing high-impact emissions reduction investments across campus-wide and facility-specific projects, SFO has cut its greenhouse gas emissions by 41%, operationalized its first zero net energy building, and banned plastic food ware and water bottles. Erin is honored to serve on the Board of Directors of the Institute for Sustainable Infrastructure (ISI), as the co-chair of the ACI-NA International Working Group and SAF Task Group, and on the ACI World Environment Standing Committee (WeNSC). Erin previously served the City of Cupertino as its first Sustainability Manager and Deputy City Manager, drafting and activating the City's first Climate Action Plan, including lead roles in the launch of a countywide community choice aggregation program (Silicon Valley Clean Energy), Silicon Valley Collaborative Energy Procurement (SV-REP) and Silicon



# AVIATION CO<sub>2</sub> REDUCTIONS



## STOCKTAKING SEMINAR

TECHNOLOGY - OPERATIONS - SUSTAINABLE AVIATION FUELS



Valley's Climate Adaptation & Resilience Plan. Erin was also a member of climate planning teams at the Conservation Law Foundation, Goddard Institute of Space Studies, and National Park Service. Erin is a LEED AP and holds a MPA in Environmental Science and Policy from Columbia University.



**Gregory Blatt**

Partner Relations Director –  
Solar Impulse Foundation

Gregory began his journey with Solar Impulse in 2009 where he was Managing Director for Marketing, Communications and External Relations. Gregory worked directly with both the Chairman and CEO, with responsibilities in marketing and communications, fund raising, partnership development, mission planning and coordinating relations with governments, airports and other stakeholders.

Gregory began his career at the World Economic Forum where he rose to the position of Director and Member of the Executive Board. From there he moved into media and technology, occupying senior management positions whereby he played a key role positively impacting revenue and growth through spearheading business expansion which included entering new markets, developing new products, managing group wide marketing, and making acquisitions in technology, content and e-commerce companies.

Educated in Canada, the USA, and Switzerland, Gregory holds postgraduate degrees in economics, diplomacy and negotiations.

At the Solar Impulse Foundation, Gregory is Director of Partner relations and development.

Gregory is also one of the Co-Founders of H55, a technological spin-off born from the Solar Impulse project developing electric propulsion solutions for clean, quiet and efficient aviation. At H55 Gregory head's up business development, marketing, government relations, worldwide certification and relations with technical and institutional partners.





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**Kurt Edwards**

Director General –  
International Business Aviation  
Coalition

Kurt Edwards joined IBAC as the Director General in September 2012. He has overseen IBAC's increased outreach to industry, greater engagement with the International Civil Aviation Organization, and growth of IBAC's codes of best safety practices for business aircraft operators and ground handlers. Prior to IBAC, Mr. Edwards held various senior-level positions in the U.S. Federal Aviation Administration (FAA) responsible for liaison with European authorities and for global environmental matters.



**Marie-Hélène Barroux**

Head of Sustainable  
Development – ISAE-  
SUPAERO

Marie-Hélène BAROUX started to work in DGA in 1993 as SATCOM task leader. In 1999, she worked in the domain of Electromagnetic compatibility and vulnerability in a DGA test center.

In 2003, she became part of the A400M OCCAR Programme Division, taking all security and cyber-related activities on aircraft and ground systems.

In 2008 she was designated as technical director of a DGA Test center: DGA Aeronautical systems. She was in charge of all the test center production, expertise strategy and process.

In 2013, she took the head of the CERES program team (satellite constellation for electromagnetic intelligence, DGA program), and launched the production of the system in 2014. She also was in charge of the ELISA demonstrator, using micro-satellites for electromagnetic intelligence.

In 2015, she was appointed director of DGA aeronautical systems (650 people, 53 M€ turnover), and managed the modernization of facilities and processes of the unit.

In 2017 she worked in the Strategy Directorate of DGA. She was also the French representative to the European Defense Industry Development Plan (EDIDP) Programme Committee.





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Since August 2019, she is now deputy president of ISAE-SUPAERO, in charge of Sustainable development strategy of ISAE-SUPAERO.



**Rob Miller**

Director, Whittle Laboratory – University of Cambridge

Professor Rob Miller is Professor of Aerothermal technology, Director of the Whittle Laboratory, Director of the Rolls-Royce Whittle University Technology Centre and Director of the UK EPSRC Centre of Doctoral Training in Future Propulsion and Power.

His research focuses on the decarbonisation of the aerospace and the power generation sectors. He is passionate about the practical applications of his research, holding 11 patents and working closely with industries such as Rolls-Royce, Mitsubishi Heavy Industries, Siemens and Dyson.

Rob's research awards include the Institution of Mechanical Engineers Thomas Hawksley Gold Medal (2010) and the American Institute of Aeronautics and Astronautics Air Breathing Propulsion Award (2008). He has won the American Society of Mechanical Engineers Best Paper Award eight times and the most prestigious award in the field, the Gas Turbine Award, three times, one of only three people to have won it more than twice since it was first awarded in 1963.

**Robert Thompson**

Managing Partner – Roland Berger

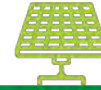
Robert Thomson is a Partner in Roland Berger's London office and is an expert in the Aviation and Aerospace & Defence sectors. After reading Engineering at Cambridge University he worked for Rolls-Royce and Kleinwort Benson, prior to studying for an MBA. With over 20 years' experience in consulting he focuses on strategy, mergers & acquisitions and operational performance improvement for leading companies worldwide, governments, trade bodies and industry associations.

His work on sustainability spans all of Roland Berger's ESG framework, and he is the author of several publications on sustainable aviation, including:

- Electrical propulsion: "The next chapter of aviation?" and "Onwards and upwards"



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- Hydrogen: "A future fuel for aviation?"
- Sustainable aviation fuels: "The best solution for large commercial aircraft?"

Copies of these publications and further details on Roland Berger's work in sustainable aviation can be found at: [www.rolandberger.com](http://www.rolandberger.com)



**Tor Iversen**

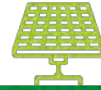
Project Manager –  
Greenflyway Test Arena

Mr. Iversen has an extensive career within media, communications and aviation, spanning three decades. From 2008 to 2016 he held the position as Communications Director with the Norwegian Civil Aviation Authority. After leaving the CAA he established his own company, offering strategic consultancy services in a broad spectrum of services within strategy, communications and networking. He has delivered several feasibility studies, reports for municipalities and regional authorities in Norway and Sweden, amongst these are the initial feasibility study on the Green Flyway project. He therefore has extensive knowledge on the development of sustainable aviation in Norway and Sweden.

He is now part time project manager (aviation matters) in Green Flyway, a joint interregional project in Mid-Sweden and Mid-Norway. The project is developing a world class, one-of-a-kind test arena test arena for electric aircraft, UAS, ATS and ground support located in the middle of the countries. With state-of-the-art test environments, two international and several other airports offering the possibility to fly point to point cross border, the area also offers stable conditions for winter testing. The area also offers two international universities, research institutions and aviation industry actors within sustainable aviation development, autonomy and more.



# AVIATION CO<sub>2</sub> REDUCTIONS



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**Vincent Etchebehere**

Director of sustainable development and new mobility  
– Air France

A 14-year veteran of the Group Air France-KLM, Vincent Etchebehere began his career in Stockholm as a business intelligence analyst, helping the airline grow its business in Northern Europe. He then worked in Paris then Rome occupying various revenue management positions, and coordinating the partnership with Alitalia. Back in Paris, he was performance manager for Europe and North Africa Area, before becoming chief of staff to the EVP commercial, sales and alliances for the Group. In 2016, he was named General Manager Mexico, and in 2018, General Manager for Canada. He took the position of VP Sustainability and new mobilities for Air France in Jul 2020.

Vincent is also Vice President of A Tree for You association's Board, a plantation operator that enables individuals and companies to support planting projects around the world.

### Closing High-Level Roundtable

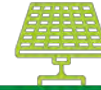


Eric Fanning is President and CEO of the Aerospace Industries Association (AIA), the leading advocacy organization for the American aerospace and defense industry. Fanning joined AIA after serving as the 22nd Secretary of the Army, providing leadership and oversight of our nation's largest military service. He previously served as Chief of Staff to the Secretary of Defense, Acting Secretary of the Air Force and Under Secretary of the Air Force, and Deputy Under Secretary of the Navy/Deputy Chief Management Officer. He is the only person to have held senior appointments in all three military departments and the Office of the Secretary of Defense.

During more than 25 years of service, Fanning worked on the staff of the House Armed Services Committee, was Senior Vice President of Strategic Development for Business Executives for National Security, was Deputy Director of the Commission on the Prevention of Weapons



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### Eric Fanning

Chair – International Coordinating Council of Aerospace Industries Associations (ICCAIA)

of Mass Destruction Proliferation and Terrorism, and was associate director of political affairs at the White House.



### Nigel Topping

High Level Champion, COP26

Nigel Topping is the UK's High-Level Climate Action Champion, appointed by the UK Prime Minister in January 2020. Nigel works alongside the Chilean High-Level Climate Action Champion, Gonzalo Muñoz. The role of the high-level champions is to strengthen collaboration and drive action from businesses, investors, organisations, cities, and regions on climate change, and coordinate this work with governments and parties to the United Nations Framework Convention on Climate Change (UNFCCC).

Nigel was most recently CEO of We Mean Business, a coalition of businesses working to accelerate the transition to a zero carbon economy. Prior to that he was Executive Director of the Carbon Disclosure Project, following an 18 year career in the private sector, having worked across the world in emerging markets and manufacturing.



Patrick Gandil graduated from the Ecole polytechnique in 1978, and Ecole nationale des ponts et chaussées in 1980.

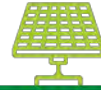
During his long and successful career, Patrick Gandil has worked within the department of public works and transport, in several positions in headquarters and regional offices, with an exception from 1995 to 1997 when he was deputy director in the cabinet of M. Dominique Perben, then Minister for State Reform, decentralisation and public service.

From 1979, when he started as a trainee in charge of planning of Loing river improvement scheme to 2005 when he created the post of Secretary General of the Department of public works and transport, he held a number of high level positions in this department :

He was deputy Director of the regional office of « Haute Saône » (1981 to 1984), and director of « Val d'Oise » (1994 to 1995), before heading



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### **Patrick Gandil**

Director General of Civil Aviation – France

the airports department at DGAC (1997 to 1999) and the roads and highways Directorate (1999 to 2003).

He then was called to the Cabinet of the Minister where he acted as head of the Cabinet from 2003 to 2005.

Patrick Gandil has been promoted to the post of Director general of civil aviation on october the third 2007. He is Vice President of ECAC and was President of the provisional council of Eurocontrol from 2010 to 2013.

Patrick Gandil was born on march the 29th 1956.

He is married with two children and 3 grand children.

He received the distinction of « Officier de la Légion d'honneur » in 1999 and of « officier de l'ordre national du mérite » in 2007 and la "médaillon de l'aéronautique en 2014".

He had also been director for engineering training at the Ecole Nationale des Ponts et Chaussées and he taught from 1986 to 1996 as a professor of highway engineering .

He is a private pilot of planes and ultra light.



# 03. SPONSOR PROFILES

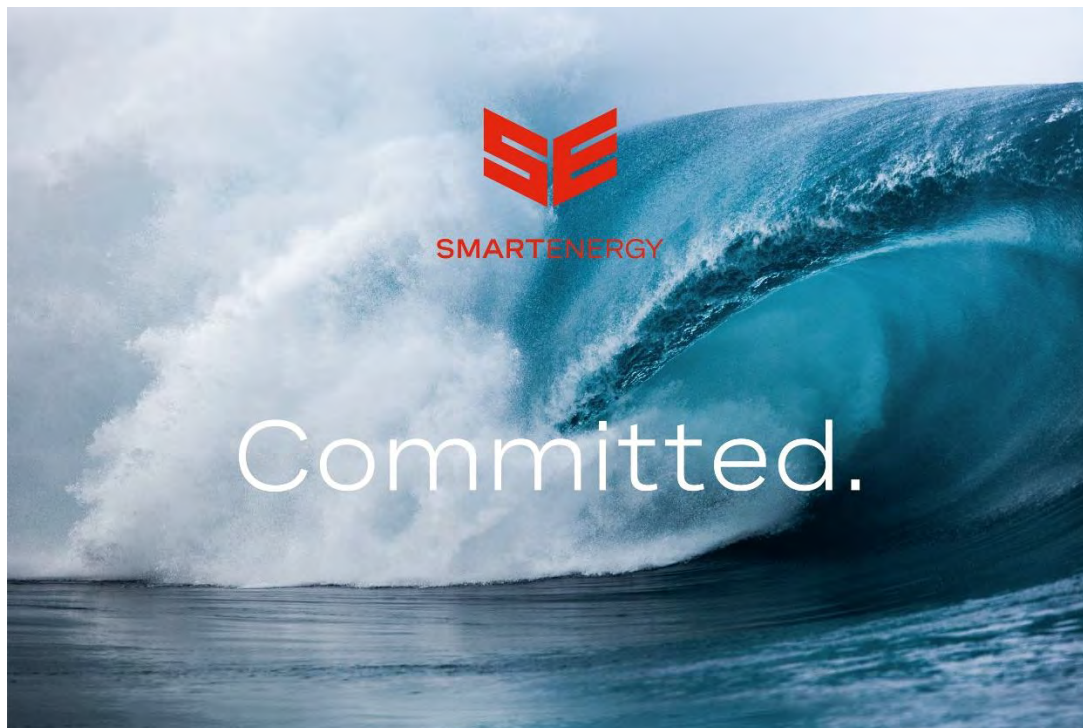


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Bombardier Aviation is a longtime leader of the increasingly important Environment portfolio – ranging from its strong commitment to ICAO’s Committee on Aviation Environmental Protection (CAEP) and its multi-pronged engagement in key aviation manufacturer and operator associations to its unique Eco-Design approach and industry-leading Environmental Product Declarations. Bombardier is also deeply involved in the development, scalability and adoption of Sustainable Aviation Fuel (SAF) worldwide, and currently supplies SAF to Challenger and Global aircraft customers from its facilities at Montreal-Trudeau-International Airport.



Bombardier  
[www.bombardier.com](http://www.bombardier.com)



Mr. Leo Knaapen  
[leo.knaapen@aero.bombardier.com](mailto:leo.knaapen@aero.bombardier.com)





### **The International Coordinating Council of Aerospace Industries Associations**

ICCAIA is the international organization representing the aerospace manufacturing community. It brings together the individual national and regional associations of the USA (AIA), Europe (ASD), Canada (AIAC), Brazil (AIAB), Japan (SJAC) and the Russian Federation (UAI) under one umbrella, representing manufacturers at ICAO and on the international stage. Our members represent companies at the leading edge of all aspects of global aerospace technology; technology that continues to bring not only substantial reductions in CO<sub>2</sub> and engine emissions but also in noise levels and who's products ensure the safe transportation of millions of people and thousands of tonnes of cargo daily.



International Coordinating Council of  
Aerospace Industries Associations  
(ICCAIA)  
[www.iccaia.org](http://www.iccaia.org)



Mr. Daniel Carnelly  
[dcarnelly@iccaia.org](mailto:dcarnelly@iccaia.org)



International Business Aviation Council



**SUSTAINABLE AVIATION FUEL COALITION**



### **The International Business Aviation Council (IBAC)**

IBAC represents the interests of business aviation worldwide. IBAC is a non-profit, international trade association with official observer status at the International Civil Aviation Organization, the UN Specialized Agency for aviation matters, in Montreal, Canada. IBAC promotes and manages the industry-leading standards for best safety practices through its International Standard for Business Aircraft Operations (IS-BAO™); International Standard for Business Aviation Handling (IS-BAH™); Safety Management Tool Kit; SMS eLearning training; and Aircrew Identification Card. [www.ibac.org](http://www.ibac.org)

### **The Business Aviation Coalition for Sustainable Aviation Fuel**

The Business Aviation Coalition for Sustainable Aviation Fuel (SAF Coalition) is a coalition of leading international aviation groups including the Commercial Aviation Alternative Fuels Initiative (CAAFI), the European Business Aviation Association (EBAA), the General Aviation Manufacturers Association (GAMA), the International Business Aviation Council (IBAC), the National Air Transportation Association (NATA) and the National Business Aviation Association (NBAA). The SAF Coalition's work is supported by a Steering Committee that includes dozens of aviation businesses, representing every point in the SAF development-and-supply chain.



International Business Aviation Council (IBAC)

[www.ibac.org](http://www.ibac.org)

[www.futureofsustainablefuel.com](http://www.futureofsustainablefuel.com)



Mr. Kurt Edwards  
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