GLOBAL SUSTAINABLE AVIATION FORUM / COP28

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Moderator:

Haldane Dodd Executive Director









Background

The scope of global aviation, 2019







4.5 billion

Passengers carried by airlines **1,478** Commercial airlines



3,780 Commercial airports



162

Air navigation

service providers



33,299 Commercial aircraft in service



48,044 Routes served (with 21,187 unique city pairs)

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Taking account of our changing world









Waypoint 2050 Charting a course for 2050: net-zero globally 5,200 Mt 5,000 Frozen 1990 efficiency 4,000 CO2 (millions of tonnes) 3,000 **Emissions reductions already achieved:** over 11 Gt of CO2 avoided through investment in technology and operational improvements since 1990 **Required emissions** reductions 2050 2.000 emissions without additional efforts: TOFM 2,000 Mt

1990

992

1994

9661

2002

2000

1998

2004

2006

2008

2010

2012

2014

2016

2018

2020

2022

2024

2026

Carbon-neutral

2028

growth

2030

2032

2034

2036

2038

2040

2042

2044

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2048

2026

 \odot

2050

Net-zero CO₂

2054

2056

emissions

2052

Meeting the industry goal by exploring different levers



Pushing technology and operations

Industry prioritises technology and operational improvements



Electric and hybrid short-range (<100 seat) aircraft from 2035/2040. High-range operational improvements. 380 Mt of SAF by 2050.

Scenario 2

Aggressive sustainable aviation fuel deployment

Industry prioritises investment in sustainable aviation fuel over technology



New airframe configurations such as blended wing body. Mid-range operational improvements. 445 Mt of SAF by 2050.

Scenario 3

Aspirational and aggressive technology perspective

Highly ambitious technology developments: electric and/or hydrogen for up to 200 seat aircraft before 2035



Very aggressive zero emissions aircraft (electric, hydrogen) by 2035-2040. Mid-range operational improvements. 330 Mt of SAF by 2050.





Welcome and high-level session: getting to net-zero

Moderator:

Haldane Dodd Executive Director







Deep dive on SAF

Operations and infrastructure

Technology

The big picture



Welcome and high-level session: getting to net-zero





Jane Hupe Envoy of the ICAO Secretary General to the UNFCCC COP



for Aviation

Affairs







HH Sheikha Mozah Bint Marwan **AI Maktoum** Chairperson







Sustainable aviation fuel: the key statistics

Speaker:

Yasar Yetiskin Manager, Sustainable Aviation







Presentation



The yesterday, today and tomorrow of SAF



An ICF presentation for **COP28**

SAF is a key tool for solving aviation's climate challenge



+2

■ SAF Biofuels ■ SAF PtL ■ Tech./H2/electric ■ Operations ■ Residuals

Let's celebrate the progress, concentrate on delivering near term targets, and calibrate for long term success



CF ATAG Waypoint 2050



Time to celebrate: Impressive momentum, strong SAF demand



5% Vision

agreed by ICAO States to reduce emissions with SAF and LCAF by 2030

40+ Countries

with SAF policy in place or under discussions

50+ Airlines

with 5% or more SAF target by 2030

Time to concentrate: Delivering announced capacity



130+ facilities

under development in 30+ countries across the world

23 Mt SAF

production capacity is plausible by 2030

\$45 billion

worth of SAF offtake contracts covering 40 Mt SAF through 100+ contracts

The yesterday, today and tomorrow of SAF

Time to calibrate: Advanced SAF





ATAG Waypoint 2050, ICF analysis



SAF demand

Airlines also making longer-term commitments: 2030





Sustainable aviation fuel: the challenges, the opportunities

Moderator:

Matt Gorman Director of Carbon Strategy

Heathrow







Lauren Riley Chief Sustainability Officer



IBERIA

Teresa Parejo Head of Sustainability



🔷 SAF One

Mounir Kuzbari Co-Founder/Director





Jen Houghton Head of Environmental Strategy





Chris Raymond Chief Sustainability Officer

Technology and operational efficiency, SAF and Hydrogen





Aviation energy transition creates opportunities



Building:

5,000 – 7,000 production facilities

Investment of:

\$1.0-1.45 trillion

And will create:

Up to 14 million jobs

Improving energy security and resilience

Creating opportunities in all countries – 90% of current oil production is in 22 countries

Assumes small-scale production close to feedstocks and airports – likely opportunities for some consolidation ~6% of annual fossil and gas investment

Aviation currently uses ~7% of liquid fuels

However, aviation will be a sector more important to the energy industry in the future as other transport shifts to electric. With 90% across the supply chain

Supporting collection of feedstock and construction of facilities

Helping to support a just transition from fossil fuel jobs to clean energy



Moderator:

Michael Rossell Deputy DG









Bertand Millot Chief Sustainability Officer



n gevo

Dr Patrick

Gruber

Chief Executive

Officer





Francis Mwangi Senior Planning Officer / CAEP Vice Chairperson



Announcement

Airport Carbon Accreditation

Speaker:

AIRPORTS COUNC INTERNATIONAL

Olivier Jankovec Director General







Moderator:

Nancy Young Chief Sustainability Officer









Amal Osman Managing Director Middle East and North-Africa



Fredrik Jaresved Director of Strategy and Innovation



مطاراتديني DUBAIRPORTS

Sven Deckers Director of Strategic Planning





Jane Boyle Head Sustainability



Moderator:

Rohini Sengupta Director, Decarbonisation











Roger Martella Chief Sustainability

Officer

Stephane Albert **ICAO** Executive Liaison and SAF

GO BEYOND

Lead



Virgin Atlantic 100% SAF transatlantic flight

Speaker:

Luke Ervine Head of Sustainability

virgin atlantic





+1

Presentation

Flight100 the first transatlantic 100% sustainable aviation fuel flight by a commercial airline



100% SAF combined with operational, cargo and customer journey initiatives to reduce the environmental impact of long-haul flight





Zero Carbon









Moderator:

Aimen Al Hosni Chief Executive Officer



مطارات عُمان Oman Airports





AIRBUS



Marc Hamy Vice President of Corporate Affairs **Claire Waghorn** Sustainability Transition Leader



Moderator:

Kevin Welsh Chief Sustainability Officer











Conrad Clifford Deputy Director General





UNIVERSITY OF CAMBRIDGE

Prof. Rob Miller Director, Whittle Laboratory

Rob Johnston Asst. General Secretary



icct

Dan Rutherford Program Director Aviation and Maritime



Aeroporti ADR di Roma

Veronica

Pamio

Vice President.

External Relations

and Sustainability





Faustine Delasalle **CEO** and Executive **Director**, Industrial Transition Accelerator



Speaker:

Haldane Dodd Executive Director

















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Thank you for

attending

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