

#### Recovering from COVID-19 The Airline Perspective



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# OVERVIEW

- Impact of COVID-19
- Despite the Negative Economic Impacts of COVID-19, Airlines are Committed to Contributing to and Supporting Environmental Progress
- Recovering from COVID: Building on Aviation's Strong Record
- The Important Role of Sustainable Aviation Fuel (SAF)
- Need to Recognize Importance of Maintaining Aviation's Role in Achieving a Sustainable Future





# Impact of COVID-19

### Economic impact has been devastating

- In U.S., particularly significant impact on passenger carriers
- Worldwide passenger traffic (RPK) down 66%, cargo traffic down 11 % (RTK) [Source: IATA]
- International travel and business travel been hit even harder (down ~80%, ~85%), compromising significant revenue streams
- Passenger carrier revenue down 61.5% YOY in first nine months of 2020



Also, <u>accelerated</u> retirement of less-efficient aircraft: as industry recovers and replenishes the fleet it will do so with new, more efficient aircraft





# Impact of COVID-19

### Intensified focus on environment and sustainability

- "Build Back Better" is the more than an aspiration, it is the expectation
- The worst economic crisis in the industry's history has *strengthened* airlines' commitment to sustainability and the environment
- Sustainability of our economy and society depends on healthy, vibrant in other words, a sustainable air transportation system
- We recognize the importance of our sector and our responsibility to ensure its sustainability
- Today's panel focuses on one aspect of sustainability: achieving climate goals





## **Recovery from COVID - Achieving Climate Goals**

#### **Building and Improving on our Environmental Record**

#### **Aviation Is a Relatively Small Contributor**

- Domestic U.S. commercial aviation = 2% GHGs (source: EPA)
- Worldwide aviation = 2% (source: IPCC)

#### We Have a Strong Record - U.S. Airlines:

- Improved fuel efficiency over 135% between 1978 and 2019
- Saved over 5 billion metric tons of CO<sub>2</sub> (equivalent to taking 27 million cars off the road each year since 1978)

#### But There Are Concerns . . .

• Potential for aviation emissions growth and challenges to meeting ambitious reduction targets

#### The Global Aviation Industry Is Working Hard to Address These Concerns





## **Recovery from COVID - Achieving Climate Goals**

**Building and Improving on our Environmental Record** 

#### **Airlines Remain Committed to Ambitious Emissions Targets**

- 1.5% annual average fuel and carbon efficiency improvement, 2009-2020
- Carbon neutral growth starting in 2020
- 50% net reduction in CO<sub>2</sub> in 2050 relative to 2005 levels

#### Key Focus on Technology, Operations, Infrastructure & <u>SAF</u>

# AIR TRANSPORT ACTION GROU

# Implementing 2016 United Nations International Civil Aviation Organization (ICAO) Agreements

- ICAO CO<sub>2</sub> certification standard for new aircraft (2020 and 2023 implementation dates)
- ICAO Carbon Offsetting & Reduction Scheme for International Aviation (CORSIA), emissions monitoring began in 2019, offsetting 2021+ (includes crediting for SAF use)





## **Recovery from COVID - Achieving Climate Goals** *Building and Improving on our Environmental Record*



We are Continuing to Push Hard on Technology, Operations and Infrastructure.

But that Will Not be Enough to Meet Reduction Targets

Expected "gap" to be met by other means, CORSIA, emergence of radical new technologies, *but SAF will be critical to success.* 

#### Source: ICAO CAEP 2019





## **Critical Role of Sustainable Aviation Fuel**

#### **Commercial Aviation Will Rely on Liquid Fuels for Years to Come**

• For example, viable electric or hydrogen alternative unlikely to significantly penetrate the market next several decades, whereas cars can switch from liquid fuels in the nearer term

#### What is SAF? Basic Definition:

• SAF is one of the terms used to describe non-petroleum-derived aviation fuel proven to be safe, which emits less carbon from a life-cycle perspective and meets other environmental and economic sustainability criteria

#### Terms Commonly Considered Synonyms:

• Sustainable Alterative Jet Fuel; "Bio-jet" Fuel; Alternative Jet Fuel; Renewable Jet Fuel

#### **Benefits in Addition to Greenhouse Gas Emissions Reduction:**

- Local air quality benefits (primarily particulate matter)
- "Sustainability" more broadly
- Potential to enhance energy security





## **Critical Role of Sustainable Aviation Fuel**

We've Made Significant Progress through Public-Private Partnerships

### Safety – Paramount Precondition, Achieved Through:

- ASTM specification D7566; and
- Application of procedures to assure fuel quality is maintained

#### **Environmental Benefit – Addressed Through:**

- Lifecycle GHG assessment (LCA), benefits up to 80%; and
- Sustainability review/certification

### **Commercial Viability**

- Need cost competitiveness and
- Supply scale up and reliability of supply





ACCOMPLISHED

PROTOCOLS

**ESTABLISHED** 

**PROGRESS, BUT** 

CHALLENGES REMAIN

## **Critical Role of Sustainable Aviation Fuel**

# What is needed to ensure commercial viability so SAF is available in quantities sufficient to achieve emissions goals?

### ✓ Collaborative, Cooperative Efforts Across Key Stakeholders

We have multiple cooperative efforts (e.g., CAAFI; CLEEN; ASCENT)

### ✓ Market Signals from Fuel Purchasers

Airlines

 United, American, Alaska and JetBlue currently are taking supply; other A4A members have SAF offtake agreements with prospective suppliers

#### ? Consistent and Sustained Policy from Governments

- ? Scale-up Capability and "Positive" Economics (Relative to Renewable Diesel and Petroleum-Based Jet Fuel)
  - Includes opportunities for regionally available feedstocks











## **Critical Role of Sustainable Aviation Fuel**

### Mechanisms to Scale Up and Enhance Cost-Competitiveness

- SAF is still very expensive and scale-up takes time
- Need stable alternative fuels programs
- <u>Tax incentives</u>: e.g., currently none for SAF specifically; the \$1/gallon federal blender's tax credit for biodiesel/renewable diesel expired for 2 years, now reinstated but only through 2022
  - NOTE: The aviation industry and SAF producers are seeking a SAF-specific federal tax credit
- <u>Positive support is good</u> (e.g., tax incentives; loan guarantees; grant programs for promising technologies) – <u>mandates are not</u> (unlike for ground-based alternative fuels, still an immature market)





**Critical Role of Sustainable Aviation Fuel** 

## SAF Should Remain a Priority in the Resource-Constrained Environment During and in the Wake of COVID-19

Global, National, Regional and Local Economies Rely Heavily on Air Transportation Services – Sustainability of Economies Will Depend on Sustainability of Aviation

The SAF Bioeconomy Will Create Jobs and Provide Climate Change, Local Air Quality, Sustainability and Energy Security Benefits

Again, Commercial Aviation Will Rely on Liquid Fuels for Years to Come -The Aviation, Fuel Producer & Bioenergy Communities Remain Committed and Are Devoting Significant Resources to Develop and Deploy SAF





# Looking Beyond COVID-19

Aviation is Critical to Achieving a Sustainable Future







# Looking Beyond COVID-19

Aviation is Critical to Achieving a Sustainable Future

~ 750,000 direct employees



28,000 worldwide flights per day



2.5 million **passengers** per day



58,000 tons of cargo per day



5 percent of the nation's GDP



**2 percent** of the nation's greenhouse gas emissions



**94 percent** reduction in aircraft noise exposure since 1975

And we're committed to flying even greener

\*NOTE: Pre-COVID Levels



