



# Business Aviation Commitment on Climate Change

## Destination: Net-Zero Carbon Emissions

Business aviation is the manufacture and use of general aviation aircraft, including propeller-driven airplanes, jets, and helicopters, for a business purpose. It is an essential tool to companies and organizations of all kinds and sizes, including nonprofits, agriculture, emergency response, law enforcement, humanitarian services and government agencies. Business aviation provides a critical transportation lifeline to thousands of communities across the globe.

Business aviation is renewing and strengthening its record on addressing climate change with an aggressive commitment to net-zero carbon emissions by 2050.

**In 2009**, the General Aviation Manufacturers Association (GAMA) and the International Business Aviation Council (IBAC) jointly announced the Business Aviation Commitment on Climate Change (BACCC), a program to address the industry's carbon emissions through three main objectives:

- Reducing CO<sub>2</sub> emissions by 50% by 2050 relative to 2005 levels;
- Improving fuel efficiency by an average of 2% per year from 2010 until 2020; and
- Achieving carbon-neutral growth by 2020.

Since then, the business aviation industry has extensively evaluated its progress on meeting these goals. The industry has achieved a 1.9% annual improvement in fuel efficiency since 2010, in line with our goal of an average 2% improvement. Growing use of sustainable aviation fuels (SAF) and voluntary purchasing of high-quality offsets allow operators to reach carbon-neutral growth. Through technology improvements and increased use of SAF, the industry is on track to meet its long-term goal of reducing CO<sub>2</sub> emissions by 50% in 2050 relative to 2005 levels. But we can strive further.

**FAST FACT:** Global business aviation operations represent 0.04% of CO<sub>2</sub> emissions caused by human activity.\* Although a tiny fraction of overall emissions, it is vital that business aviation continues to reduce this footprint.

\*International Civil Aviation Organization (ICAO) 2019 Environmental Report

## Renewed Commitment and More Ambitious Goals

In 2021, industry leaders renewed their commitment to protecting the environment. The Business Aviation Commitment on Climate Change was updated with bold commitments to reduce carbon emissions through three primary objectives:

- **Achieve net-zero carbon emissions by 2050;**
- **Continue to improve fuel efficiency by an average of 2% per year from 2020 to 2030; and**
- **Maintain carbon-neutral growth from 2020 onwards.**



*Business aviation is the test bed for technologies that reduce the aviation sector's carbon footprint.*



We are clear-eyed about the sustainability challenges we face and are completely committed to overcome them to improve the environment, foster economic growth and opportunity, and support emergency relief efforts.

## How Do We Get There?

### TECHNOLOGICAL ADVANCEMENTS



The aviation manufacturing industry is at the forefront of developing technological improvements to aircraft configuration, aerodynamics, systems, materials, and engine

technologies that result in more efficient wing, rotor, fuselage, and engine design and operations. We are also furthering revolutionary innovations like hybrid, electric, and hydrogen-powered aircraft. These technological advancements are moving forward our industry's sustainability commitments to improve the fuel efficiency of aircraft and reduce emissions.

### OPERATIONS AND INFRASTRUCTURE



More efficient operations—stemming from continued progress on air traffic management, along with measures including reduced payload, streamlined flight

planning, and single-engine taxiing—can play a significant role in reducing CO<sub>2</sub> emissions. Improving and enhancing infrastructure can have multiple benefits for the business aviation industry, including system-wide efficiencies that reduce CO<sub>2</sub> emissions. It will be vital for authorities and political leaders to make continued improvements and investments in the industry's infrastructure.

### SUSTAINABLE AVIATION FUELS



The business aviation industry, along with other industry stakeholders and energy producers, has driven the research, development, and deployment of commercially

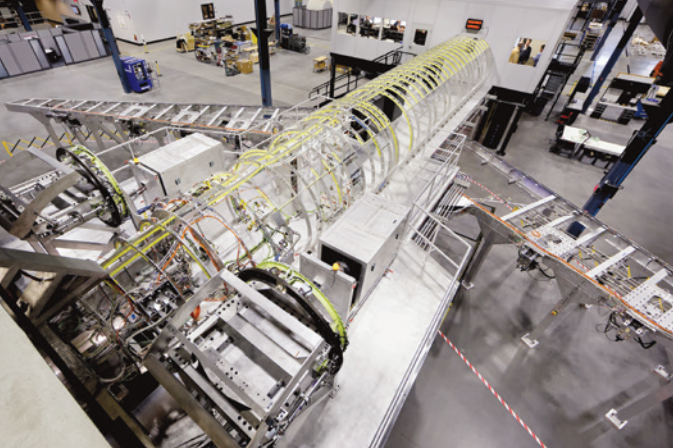
viable, sustainable aviation fuels (SAF) that can be used today. The transition to using drop-in SAF blends, approved to the same fuel specification of conventional jet fuel, will play a key role in decarbonizing business aviation. Relative to petroleum-based fuels, SAF blending components will deliver a net reduction in lifecycle CO<sub>2</sub> emissions. It is vital that we work to boost the production, distribution, and uptake of SAF, including through the use of Book & Claim, and make it the sustainable energy alternative to conventional jet fuel.

### GLOBAL MARKET-BASED MEASURES



As business aviation continues to improve technologies, advance the production and uptake of SAF, and push for operational efficiencies, it will also utilize market-

based measures to offset emissions to fulfill its commitments. A hard-to-abate industry, aviation may need such out-of-sector measures to address some of its emissions. It is essential that global market-based measures are environmentally meaningful and that the administrative and implementation costs do not exceed the environmental benefits from compliance, particularly for small operators.



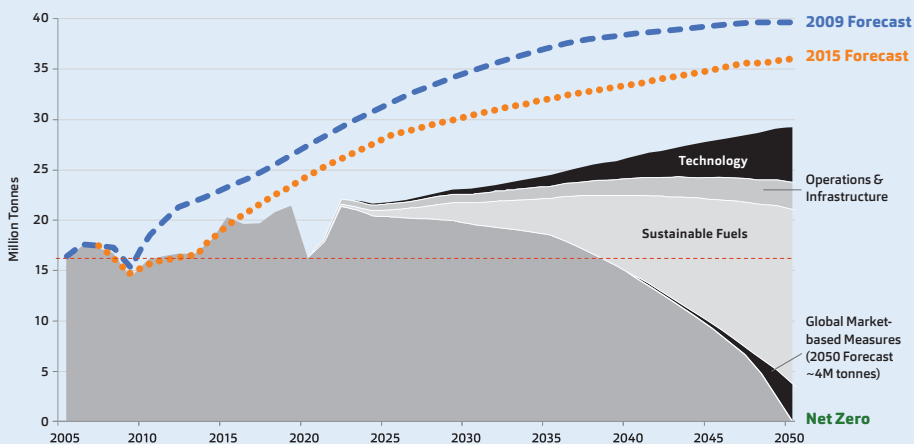
The various propulsion concepts and other technological developments that are emerging in the aviation industry, including the Advanced/ Innovative Air Mobility sector, will benefit our industry and accelerate the achievement of our goals as we transform the future of aviation.

## What Will Be Needed?

Business aviation industry partnerships with governments and regulators will be crucial to achieving our goals. Our commitment to addressing climate change is dependent on the support that can be provided from authorities to implement policies that accelerate the uptake, distribution, and use of SAF as well as investments in research, development, and deployment projects to advance technology

and facilitate operational improvements. An effective, reliable certification and regulatory process, that can keep pace with industry's progress, is critical to furthering advancements in sustainability and new technologies. Additionally, it will take buy-in from all sectors of the industry, especially operators, which we have been able to secure, to follow through with our commitments.

BUSINESS AVIATION TOTAL CO<sub>2</sub> EMISSIONS—2021 FORECAST



## Our Goal Is Achievable

Through our collective and ongoing work on technological advancements, alternative fuels, operational and infrastructure improvements, and global market-based measures, our forecasts show that we can achieve goal of our net-zero carbon emission by 2050.

*In addition to the collaboration of our fellow industry organizations, we are appreciative of our many manufacturers and operators who contributed to our updated modeling, and we are especially thankful for the leadership of Bombardier, which spearheaded the effort.*



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