

Business aviation continues flying toward a sustainable future

Ed Bolen says business aviation's outstanding
commitment means it has an impressive story to tell
about carbon emissions reductions

As readers of *World Commerce Review* are likely aware, the National Business Aviation Association (NBAA) has long promoted our industry's many contributions to companies and communities of all sizes, and its outstanding record on safety and security.

However, you may not be aware of business aviation's outstanding commitment and accomplishments in decreasing its carbon footprint. Our industry has an impressive story to tell about carbon emissions reductions; a story driven by the efforts and commitment of a variety of business aviation stakeholders and not by government regulators.

Although global business aviation operations represent but a tiny fraction of overall CO₂ emissions – less than 2% of all aviation and 0.04% of global man-made carbon emissions – our industry has demonstrated a serious commitment to the ongoing exploration of new methods and technologies to further improve on this figure, and our industry has a proven record for reducing greenhouse gas (GHG) emissions from aircraft.

The latest innovation holds tremendous promise to reduce such emissions across the entire business aircraft fleet: sustainable aviation fuels, or SAF. In fact, these fuels – derived from renewable feed stocks from a range of biological sources – have the potential to cut emissions by up to 80%.

They're also safe and available today; in fact, our industry has actually utilized SAF for more than a decade, although use and awareness of this environmentally friendlier alternative fuel has ramped up within the past three years. NBAA has been at the forefront of these efforts.

In January 2019, our association helped stage at California's Van Nuys Airport the first business aviation demonstration of the viability and benefits of SAF. The event, attended by media representatives and civic leaders alike, was a major industry milestone.

The Van Nuys showcase was followed four months later by a similar SAF event, held for the first time in Europe at Farnborough Airport. Just days later, 23 SAF-fueled business aircraft flew from several US and European airports to Geneva for the European Business Aviation Convention & Exhibition (EBACE).

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At the 2019 Business Aviation Convention & Exhibition (NBAA-BACE) in Las Vegas, NV, every refueling turbine aircraft on display departed from Henderson Executive Airport powered by SAF. Most recently, in January 2020 NBAA and its industry partners made SAF available for flights departing from the World Economic Forum in Davos, Switzerland.

While these efforts have promoted greater awareness of SAF and its benefits, we now want to get everyone in the fuel value chain to find the best ways to further spotlight the availability and use of SAF.

On March 24 in Washington, DC, NBAA will join with several sister associations in hosting the first-ever Business Aviation Global Sustainability Summit, which will focus on finding ways to accelerate the production and use of SAF. With the summit we want to bring stakeholders together to determine what we can do – individually and collectively – to encourage large-scale production and consumption of SAF.

Sustainable aviation fuel is a key technology that will help us meet our industry's emissions goals, and NBAA is looking forward to the summit and other opportunities to demonstrate to government policymakers, regulators, the media and the general public how business aviation is continuing to work toward reducing its carbon footprint.

The growing use of SAF will be a critical component of business aviation's global commitment to mitigate and reduce carbon emissions, and to meet our aspirational goal of carbon-neutral growth from 2020. Many individual operators are doing all they can to achieve sustainable operations, but it is equally important that our entire industry is recognized as leading the way on flight sustainability because safety, security and sustainability are fundamental to the future of business aviation worldwide.

A continuing commitment to reduce emissions

Of course, business aviation has always been an early adopter of technologies that have improved fuel efficiency and reduced environmental impacts, and SAF is just one aspect of our industry's ongoing sustainability efforts. As we look ahead to the next five, 10 and even 20 years, we know that our industry will continue to advance toward even greater advances in this area.

For example, business aviation has pioneered emissions-lowering technologies, including lightweight composite materials, winglets, GPS and more efficient engines that have helped aircraft fly quieter and consume less fuel.

While the industry's environmental sustainability and responsibility have been in the spotlight, development of ever-more-efficient business aircraft is hardly a new idea. Fuel efficiency, in particular, has been a focus area for decades, and it's difficult to see why. More efficient engines mean more range, meaning fewer fuel stops are required, and that means faster travel for passengers – all competitive advantages. Additionally, less fuel burned also means lower carbon emissions.

These impressive efforts continue today, with advances in fly-by-wire (FBW) controls in new business aircraft that allow the aircraft to constantly 'tune' its flight attitude in cruise to present the optimal aerodynamic profile, further increasing efficiency. Manufacturers are firmly committed to continue on this path, and it's expected that a business aircraft built in 2050 will be 45% more fuel efficient than one built in 2005.

We are also advancing toward adoption of hybrid gas-electric and, ultimately, fully electric propulsion in urban air mobility and business aircraft applications. These emerging technologies offer the promise that travel within metropolitan areas around the globe – and even to the airport for longer-distance trips – will also be safe, efficient and environmentally friendly.

Explore this sustainable future at NBAA events

It's evident that our industry is embracing sustainability across several fronts, and these efforts will continue to be in the spotlight throughout the year ahead at NBAA events, including the 2020 edition of EBACE taking place in Geneva, Switzerland from 26-28 May.

The latest advances in efficient and sustainable business aircraft will also be showcased throughout the 2020 edition of NBAA-BACE, the largest event in the world dedicated to the business aviation industry, comes to Orlando, FL from 6-8 October.

Without question, business aviation is well-suited to confront the challenges of global carbon emissions reductions and dependence on petroleum fuels, and our industry looks forward to promoting a sustainable and exciting future across multiple fronts.■

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