Partnerships

Boeing partners for a clean energy economy

Throughout 2022, Boeing joined forces with innovative partners from around the world to scale renewable energy and sustainable technologies for a more sustainable aerospace and future.

Why it matters: Boeing is aware that no one entity can decarbonize the commercial aviation industry alone. It will take "everyone" to achieve the industry's net zero ambition by 2050. We recognize the significant capital investment required in the journey and appreciate the partnership and support of the financial community to channel liquidity into the ongoing transition pathway.

- **Avolon and SkyNRG:** Boeing partnered with Avolon, ORIX Aviation, SFS Ireland and SkyNRG to identify opportunities for a commercial-scale SAF production facility in Ireland. The country is a global leader in aviation finance and airline operations with a planned growth of renewable energy sources. The study will be completed in 2023.
- **Alder Fuels:** Boeing has committed to support testing and qualification of Alder Fuels-derived SAF on its airplanes to further grow the global SAF market. This technology enables the conversion of sustainable forest and agricultural residues into a low-negative carbon "greencrude" for jet fuel conversion — displacing the typical jet fuel need by up to 75% in the U.S. The first plant will be completed in 2024.
- **ACT FOR SKY:** Boeing is a member of ACT FOR SKY, a voluntary organization of 19 companies that works to commercialize, promote and expand the use of SAF produced in Japan.

At the Farnborough Airshow in June 2022, Boeing and Mitsubishi Heavy Industries announced we will build on our decades-long partnership. (Boeing photo)

- **Mitsubishi Heavy Industries (MHI):** Building on their decades-long partnership, Boeing and MHI agreed to study sustainable technologies for a low-carbon society. Their focus areas include green hydrogen, carbon capture, electrification, sustainable materials, emissions propulsion technologies, new aircraft design concepts as well as new feedstocks and technologies for SAF production.
- **NASA:** Boeing and NASA continued their partnership testing the emissions from SAF. This year, the team conducted tests on the 2022 Boeing ecoDemonstrator, a 777-200ER (Extended Range) with Rolls-Royce Trent 800 engines and a 787-10 with GEnx-1B engines (see Page 44).
- **Rocky Mountain Institute and Five U.S. Airlines:** Boeing, along with five major U.S. airlines and others, joined the Contrail Impact Task Force led by the Rocky Mountain Institute to explore the formation, impact, and mitigation of persistent condensation trails, or "contrails," and their climate effects.
- **Roundtable on Sustainable Biomaterials (RSB):** Boeing has been a member of the Board of Directors since 2021 and has chaired RSB's SAF Policy Platform to advance stakeholders' collaboration on renewable energy.
- **SpiceJet, Council of Scientific and Industrial Research-Indian Institute of Petroleum (CSIR-IIP):** Boeing partnered with these organizations to explore SAF use in India, supporting the country's environmental goals and self–reliance initiative. Boeing is currently assisting in the certification process for SAF developed by CSIR–IIP by providing review and support.
- **Virgin Atlantic:** In December 2022, partnering with Boeing, Virgin won the UK Department for Transport's 100% SAF Trans-Atlantic Flight Fund Competition. This UK government initiative, which will see a 787 cross the Atlantic on 100% SAF in 2023, will showcase the spectrum of sustainable aviation approaches to the flying public and inform our journey toward routine commercial industry 100% SAF flights by 2030.

What's next: The commercial aviation industry's ambition is to achieve net-zero carbon emissions for global civil aviation operations by 2050, while also growing the societal benefits of air transportation. Boeing will continue to work across sectors and industry to ensure the benefits of aerospace remain available for generations to come.