



Sustainable Aviation Fuel

4.27.21



ALASKA AIRLINES FLIGHT PLAN TO NET ZERO BY 2040



OPERATIONAL EFFICIENCY

We have long prioritized operational efficiency for safety, reliability, and sustainability, and will continue to expand our best practices to reduce fuel burn and carbon emissions, like single-engine taxiing where possible, using preconditioned air at airports, and partnering to enhance efficiency in the national air space.

FLEET RENEWAL

Alaska Airlines recently finalized its order for up to 120 Boeing 737-9 MAX aircraft, including 68 firm orders and 52 options. These new airplanes are more fuel efficient than the aircraft they replace, and we'll work with Boeing on ways to further improve efficiency over time.

SUSTAINABLE AVIATION FUEL (SAF)*

SAF is a safe, certified fuel that can be blended with traditional fuel, and every gallon of SAF has up to 80% less carbon emissions on a lifecycle basis than traditional jet fuel. Last year Alaska launched a program with Microsoft to use SAF to offset the carbon impact of Microsoft employee travel from Seattle to California. We're also using SAF from producer Neste in San Francisco and working with SkyNRG to advance SAF production on the West Coast. Today, there's not enough SAF and it's not available at a viable cost to scale, so government support and collaboration with producers are critical to expand its availability and use.

** This is the most variable contribution to the pathway. It could contribute more or less carbon emissions reduction, based on how much we can advance the supply and commercial viability of the SAF market in the next 10-15 years.*

NOVEL PROPULSION

Novel propulsion essentially means increasing the use of electric or alternative power without fossil fuels. Increasingly electrified options can be available for regional aircraft by 2040, and we're evaluating partnerships and in-kind exchanges to help enable these emerging and decarbonizing technologies. Alaska's sister regional airline, Horizon Air, is well positioned to leverage this exciting opportunity in the decades ahead.

CARBON OFFSETTING TECHNOLOGY

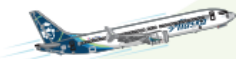
Aviation is one of the hardest sectors to decarbonize, so credible carbon offsets are likely needed to close the gap to our net zero target by 2040, and until SAF and novel propulsion become viable and available at scale. We'll work to identify credible carbon offsets that add net offset value, are verified in carbon accounting, do no harm, are durable, and don't displace emissions to another project.



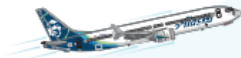
CARBON OFFSETTING TECHNOLOGY



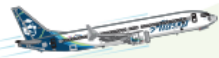
NOVEL PROPULSION



SUSTAINABLE AVIATION FUEL (SAF)*



FLEET RENEWAL



OPERATIONAL EFFICIENCY

Building Employee Culture around Carbon Efficiency

- For 2021, Alaska added a carbon efficiency metric (CO₂e/ASM) into the all-company bonus plan (PBP: Performance-Based Pay)
- All employees (22,000+) have a role in improving our carbon performance, and 10% of the annual bonus comes from achieving our target
- Our foundational belief is that our success in carbon will come from embedding carbon efficiency into our culture, as we have done with safety

ALASKA'S SAF HISTORY

2009: First domestic carrier to join the Sustainable Aviation Fuel Users Group

2011: First airline to fly multiple (75) commercial passenger flights with SAJF from used cooking oil

2015: First “alcohol-to-jet” test flight in partnership with Gevo

2016: First commercial flight globally using forest residuals as a feedstock: WSU & NARA partnership

2018: Partner MOUs with SEA, SFO, and Neste Fuels to scale mainstream adoption



ALASKA'S SAF HISTORY

2020: First ongoing use of SAF (for Alaska, and at SFO airport) in August from Neste -- other airline offtakers include American and JetBlue

2020: October launch of Microsoft “Renewable Routes” business travel, using SAF to zero-out the climate impact of Microsoft employee travel on their most frequent Alaska routes

2021: Partner with WSU / ASCENT on a two-year funding of research to accelerate SAF in the PNW

2021: April announcement of MOU with SkyNRG Americas to jointly work on PNW SAF production



Microsoft SAF Partnership, Fall 2020:

- Long-term, multi-year partnership to forge mutual working relationships to promote environmental sustainability and the use of Sustainable Aviation Fuel (SAF) to reduce carbon emissions associated with airline travel.
- Directly ties to Microsoft's leading climate pledge (carbon negative by 2030, remove all historical emissions by 2050)

What it is:

- Reduce MSFT's travel footprint through "Renewable Routes" on Alaska Air routes from SEA to California.
- Send joint market signals to promote and develop the SAF market
- Aspiration for local PNW SAF projects

SkyNRG Americas MOU, April 2021:

- Partnership to advance sustainable aviation fuel made from municipal solid waste in the PNW
 - Advance truly sustainable production of SAF and develop supply in the Pacific Northwest
 - Engage partners for a commercially viable and scalable future for sustainable fuels
 - Help drive necessary policy changes that will encourage development of the SAF industry across the Pacific Northwest and the nation as a whole
- SkyNRG Americas approach
 - Initially focus on dedicated SAF production facilities to supply Western U.S. airports
 - Use commercially available technologies that enable the use of municipal solid waste and other waste-based inputs as feedstocks, as well as incorporating green hydrogen and renewable energy for minimizing carbon intensity

