

One Small Airport, One Big Impact

*How Truckee Tahoe Airport is Leading the Way in Sustainable Aviation
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When you book your next flight, you may not think about the environmental impact of your trip, but we all know that air travel is a significant source of carbon emissions. Worldwide, aviation accounts for 2% of all human-caused carbon dioxide (CO₂) emissions (with general aviation accounting for 2% of that total) and 12% of all transportation CO₂ emissions. And despite improvements in aircraft efficiency, the aviation sector's impact on climate change is a growing concern.

To address this concern, the International Civil Aviation Organization (ICAO) established the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which aims to help reduce aviation greenhouse gas (GHG) emissions. Working toward reducing its carbon footprint, the international aviation industry has set an aspirational goal to reach net zero carbon by 2050.

One way to meet this goal is to use sustainable aviation fuel (SAF) made from renewable sources. It has a lower carbon footprint than conventional jet fuel and can be used in existing aircraft without any modifications. Incentives for its use exist in the Inflation Reduction Act of 2022, which provides financial support for the biofuel industry, including a new blending credit for SAF.

In line with the broader goals of the aviation industry and the values of the North Lake Tahoe / Truckee community, Truckee Tahoe Airport District (TTAD) offers SAF to its clients—one of the first general aviation airports in the area to do so. In July 2022, they set a goal to increase the SAF percentage of its Jet A fuel sold from 10% to 25% SAF by year-end.

They achieved that goal and more—today, they've increased the percentage of SAF in its fuel mix to 75%. The airport plans to reach 100% SAF usage by January 1st, a lofty goal.

"Truckee Tahoe Airport has been a front-runner in adopting SAF. The customer base made Truckee an ideal place to implement sustainable fuel, with the average customer caring deeply about the environment and willing to pay for that by reducing impacts through SAF. The district's goal to ultimately reach 100% SAF is unheard of for general aviation airports," says Hardy Bullock, supervisor for Nevada County's fifth district and former Director of Aviation and Community Services for TTAD.

Adopting SAF took a certain level of buy-in from stakeholders and clients. On average, it costs between two to three times more than conventional jet fuel. "When we ask our clients to spend more on sustainable aviation fuel, we're asking for their buy-in to our community's values. They already come here because of the natural beauty of the North Lake Tahoe area; we're asking them to buy into the values that help sustain that natural beauty," says Robb Etnyre, TTAD General Manager.

As a renewable fuel that doesn't rely on fossil fuels for production, SAF has lower lifecycle carbon emissions than conventional jet fuel. It's produced with various feedstocks, which can include corn grain, agricultural and forest residues, non-food energy crops, agricultural waste, used cooking oil, and more. Any aircraft powered by standard jet fuel can use SAF as it can be blended with conventional jet fuel at different levels, from 10% to 50%, depending on the feedstock and how the fuel is produced.

Avfuel Corporation, a leading independent global supplier of aviation fuel and services, and Neste, the largest global renewable fuels manufacturer, have partnered to supply SAF to its customer base, including TTAD. Feedstocks for producing SAF in the U.S. are resourced both internationally and domestically. The SAF sold at the Truckee Airport is refined in Houston, Texas and then shipped to Richmond, California to be blended with regular Jet A fuel.

Avfuel says that in its neat form and over its production and distribution lifecycle, SAF can reduce greenhouse gas emissions by up to 80% compared to conventional jet fuel. Once blended at a 30% ratio, Avfuel anticipates a 19 metric ton reduction in carbon emissions per 8,000-gallon truckload. That's equivalent to the amount of carbon sequestered by 22.7 acres of U.S. forests in one year.

As TTAD works toward its goal of 100% SAF usage, their client base straddles the line between acceptance and avoidance of the significantly higher cost of SAF jet fuel over regular jet fuel. Some pilots are extremely price conscious and choose not to buy SAF fuel in Truckee, as it's the only fuel offered.

Other pilots believe the positive impact is worth the higher cost. "As pilots flying out of Truckee, we're aware of our responsibility towards the environment. It's not our intention to harm the planet; if sustainable aviation fuel can help us reduce emissions and minimize our carbon footprint, then we're all in," says Chris Barbera, CEO and Director of Operations at Mountain Lion Aviation. "We want every flight we take to contribute to offsetting our carbon footprint, which is why we've teamed up with the Tahoe Fund in support of projects that help lower and sequester carbon emissions."

According to the International Civil Aviation Organization (ICAO), over 500,000 commercial flights have used SAF at 46 different airports, primarily in the United States and Europe. And the adoption of sustainable aviation fuel by Truckee Tahoe Airport is a significant step in reducing carbon emissions. However, it's important to recognize that SAF alone will not fix all environmental challenges. It serves as a single blade in the propeller of progress toward more environmentally friendly air travel. The continued exploration and implementation of various sustainable practices and technologies are necessary to achieve a truly sustainable and low-carbon aviation sector.

To learn more about Truckee Tahoe Airport's SAF usage and goals, visit their website at <https://truckeetahoeairport.com/environment/sustainable-aviation-fuel>.