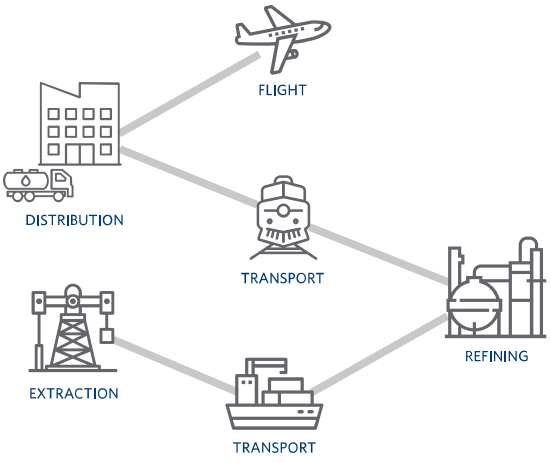
SUSTAINABLE AVIATION FUEL (SAF)
CARBON REDUCTIONS WITHIN DELTA AND OUR INDUSTRY

Sustainable Aviation Fuel is an alternative to fossil fuels and can substantially reduce fuel life-cycle emissions. While often referred to as biofuels, SAF is a broader term as technology has evolved to allow for additional feedstocks such as municipal solid waste.

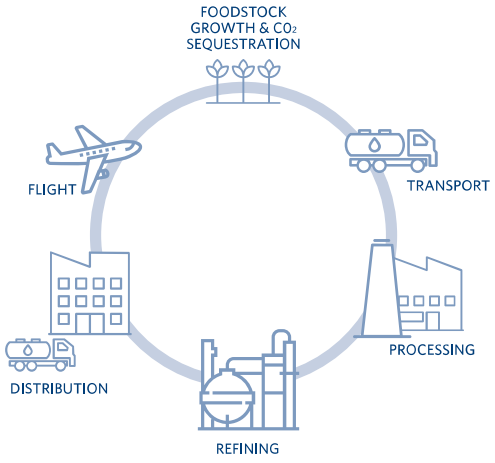
UP TO 80% LIFE-CYCLE EMISSIONS REDUCTION

Compared to conventional jet fuel from extraction to flight, the life-cycle emissions reduction of neat (unblended) SAF from feedstock to flight can be up to 80%, depending on the exact feedstock, technology and transport. There are many feedstock options available for SAF, and currently there are eight approved technology pathways to turn the feedstock into SAF.

FOSSIL FUELS:
LINEAR CARBON LIFE-CYCLE



SAF:
CIRCULAR CARBON LIFE-CYCLE



COMMITTING TO 10% SAF BY 2030

In the short and medium term, the most viable solution for reducing emissions within our industry is investing in and scaling up SAF, because it is an underdeveloped market. Delta aims to replace 10% of its jet fuel with SAF by the end of 2030.

Working closely with international fuel specification bodies like ASTM International, the aviation industry is developing SAF standards and certificates. Once requirements are met, SAF (no more than 50% by volume) is blended with conventional jet fuel and re-tested to show compliance to ensure compatibility with aircraft fueling systems.

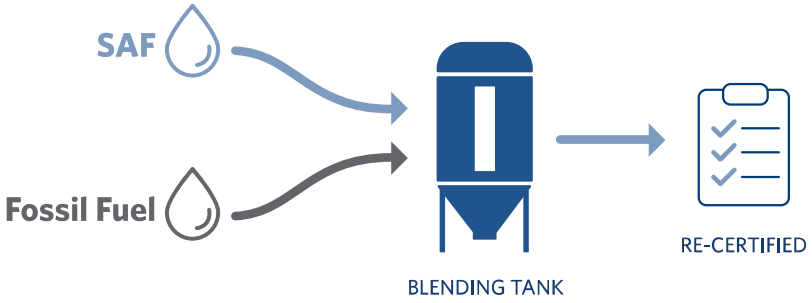


Image source info from: https://aviationbenefits.org/media/166152/beginners-guide-to-saf_web.pdf

FEEDSTOCK SUSTAINABILITY

In order to ensure sustainability of the feedstock being used to produce SAF, and to better understand the actual life-cycle emissions reductions, our internal principles outline that the fuel must have lower environmental impacts (climate, water, air and biodiversity) in addition to a preference that biofuels feedstocks will not displace or compete with food crops.

As we continue to work with producers toward our goal of 10% SAF by 2030, we intend to ensure the SAF we purchase does not have palm oil or PFAD as a feedstock, in addition to requesting that our production partners verify the sustainability of their product to ISCC—a globally applicable sustainability certification system that covers all sustainable feedstocks—or RSB (Roundtable on Sustainable Biomaterials) standards.

OUR EXPECTED SAF JOURNEY THROUGH 2030

2019

Operated our first SAF flights: delivery of four A330-900neos from Toulouse to Atlanta, in addition to committing to 20 carbon-neutral A321 deliveries through the use of SAF and offsets in partnership with Airbus and AirBP.

Invested $2M to partner with Northwest Advanced Bio-Fuels (NWABF) to determine the feasibility of producing fuel using wood residue and wood slash. The project is expected to be located in Washington State.

2020

Launched RFI to identify and potentially support new production over the next decade.

2021

Launched corporate partnership programs that give customers a mechanism to take action on their Scope 3 air travel emissions while helping to stimulate future growth of SAF production.

2024

Deliveries expected to begin under offtake agreement with Gevo—expected to be 10M gallons of SAF/year. The fuel will be powered by inedible, industrial corn products, and Gevo's patented process will separate the sugars from the proteins. The sugars are the feedstock for the fuel, while the proteins are fed to livestock.

2025

Deliveries expected to begin under offtake agreement with NWABF—expected to be 60M gallons of SAF/year.

2030

We aim for 10% of our jet fuel consumption to be SAF by the end of 2030.