

SAS SUSTAINABILITY

BIOFUEL AND EMERGING TECHNOLOGY

UNITED NATIONS SUSTAINABLE DEVELOPMENT

To increase the use of biofuel and support technological development, we focus primarily on the following SDGs



SAS ambition is to take a leading position toward a more sustainable aviation. Increased usage of biofuel and support to development of emerging technology are important parts of that journey. SAS goal is to use 17% biofuel by 2030 – which corresponds to our total domestic production in Scandinavia today.

WHAT IS BIOFUEL?

Biofuel or Sustainable Aviation Fuel (SAF) is a certified jet fuel made from renewable and/or re-used sources. There are currently five ASTM certified pathways for producing biofuel for aviation. Biofuel can potentially produce up to 80% lower carbon emissions than conventional jet fuel used today.

BIOFUEL AS AN ANCILLARY PRODUCT

Customers will later this year be able to buy Biofuel in the booking flow to reduce the climate impact of their flight.

BIOFUEL – AN EXPENSIVE SOURCE OF ENERGY

Biofuel cost approximately 3 to 4 times as much as conventional jet fuel. The high price is primarily due to small production quantities and a demand that exceeds the quantity of biofuel that is produced. Stimulating biofuel production in Scandinavia will potentially help reduce prices over time.

Biofuel is a drop-in fuel that can be used together with conventional jet fuel up to 50% today. The neat biofuel and the blended jet fuel are both certified according to strict jet fuel requirements stipulated by ASTM* in order to ensure the same qualities and characteristics as conventional jet fuel. The 100 ton biofuel SAS uses annually comes from waste products, primarily from food production, e.g. used cooking oil. SAS biofuel supplier is primarily AirBP, and to some extent also Shell. SAS asks for biofuel deliveries in all tenders.

Within shortly, agriculture and forestry waste such as sawdust will potentially be one of the available raw materials for a future certified production pathway. The production of the biofuel SAS uses does not compete with food production, land use or access to drinking water, nor does it have a negative impact on biodiversity.

*ASTM, formerly known as American Society for Testing and Materials, is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

COLLABORATION WITH PREEM

SAS has a Letter of Intent with Preem with the intent to finalize a commercial agreement for large scale biofuel deliveries from 2023. Preem plans to build production capacity in Scandinavia potentially producing approximately 200.000 m³ biofuel for aviation in the start, with potential to increase production over the years.



Biofuel reduces emissions with about

80%

from a life cycle perspective.

Preem plans to produce **200.000 m³** biofuel in 2023, which is the equivalent of 10-12% of our total need for fuel

ELECTRIC AIRCRAFT

There are several electric aircraft initiatives ongoing and SAS supports multiple of these, with knowledge and defining prerequisites for potential future commercial operation. Most of the concepts initially target aircraft with 15-20 seats and a flight range of approximately one to two hours. All concepts include stretched versions of aircraft that could fit SAS needs of a 50 to 100 seater. Besides the aircraft and engine development a new energy infrastructure must be developed at airports.

AIRBUS, SIEMENS AND ROLLS ROYCE PROJECT E-FAN

Looking into the possibility of developing a 100 seat aircraft, anticipated commercialization 2040.

