WELCOME ON BOARD TOWARDS A SUSTAINABLE JOURNEY

SAS environmental sustainability goals 2030

Accelerated to be achieved by 2025

Reduce CO_2
25%
vs. 2005

SAF
used equivalent to SAS total domestic production (17% in 2019)

50%
noise reduction vs. 2010

100%
sustainable materials in SAS customer offering

100%
recycling where applicable

2030 ambition
Reduce CO_2
50%
vs. 2005

INCREASED ENERGY EFFICIENCY

SAF AND EMERGING TECHNOLOGY

SUSTAINABLE PRODUCTS AND SERVICES

FLEET RENEWAL REDUCE EMISSIONS

Continuous fleet renewal is a vital part of our efforts to reduce greenhouse gas emissions from our aviation operations. SAS' strategy is to ensure long-term profitability through a well-balanced fleet plan.

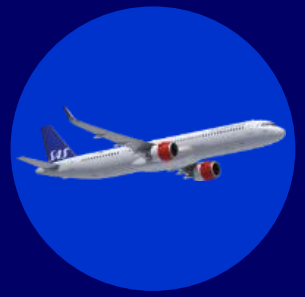
As we are phasing out the 737-fleet, the aircraft is either returned to the owner, sold for spare-part or sent to recycling. Most of the parts of an aircraft can be used for recycling and the share increases for each generation.

LONG HAUL – A350 AND A321LR (NEO)

A350 reduces fuel consumption with more than

30%

per passenger compared to the A340 it replaces. 8 aircraft ordered with first delivery in the end of 2019.



A321LR (neo) is expected to reduce fuel consumption with

15–18%

compared to similar aircraft of the previous generation. 3 aircraft is ordered with first delivery in summer 2020.

MORE EFFICIENT AERODYNAMICS
winglets reduce fuel consumption

LIGHT-WEIGHT CABIN INTERIOR
With modern feel, better materials and lower weight makes the aircraft more fuel efficient

MORE QUIET
50% reduction in noise footprint

MODERN AND MORE EFFICIENT ENGINES REDUCE EMISSIONS
15-20% less CO_2 and 40% less NOX emissions compared to aircraft of previous generation.

UPGRADING OF EXISTING FLEET

SAS has continuous upgraded the B737-fleet, with new engines and interior to reduce emissions. The interior is also upgraded on the existing 320-fleet. An example of the upgraded interior is replacing the carpet, where the old carpet weighed 1,695g/sqm, and the lighter ones weigh 1,250g/sqm. For a single A320, this means that the carpet is approximately 38kg lighter.

AIRBUS 320NEO

Reduces emissions with

15-18%

compared to aircraft of previous generation

INCREASED USE OF SAF

Sustainable Aviation Fuels, SAF

WHAT IS SAF?

SAF is a renewable source of energy, solid or liquid fuels made from renewable sources. It produces up to 80% lower carbon emissions than regular jet fuels used today. The SAFs SAS use today come from waste products, primarily from food production, eg. used cooking oil. Within shortly, agriculture and forestry waste such as sawdust will be the main raw material. The production of the SAF SAS use does not compete with food production, land use or access to drinking water, nor does it have a negative impact on biodiversity.

SAF – AN EXPENSIVE SOURCE OF ENERGY

The high cost of SAF is an effect of it being a scarce resource, the market being very small and a demand that exceeds the quantity of SAF that is produced. Stimulating SAF production in Scandinavia will help reduce prices over time, which we will do in our partnership with different energy suppliers.

SAF AS AN ANCILLARY PRODUCT

Customers can buy “Biofuel” in the booking flow to reduce the environmental impact of their flight.

DIFFERENT PRODUCTION PATHWAYS

As of today, SAS uses small amounts of SAF produced on the HEFA pathway.

SAS is heavily involved in several initiates aiming at commercializing the AtJ, GtL and PtL pathways.

From 2024 and going forth, SAS plan to receive SAF deliveries based on AtJ and potentially from GtL and PtL on the other side of 2025.

SAF reduces emissions with about **80%** from a life cycle perspective.

SAF blend-in mandates are being implemented. By 2025 SAS anticipate that **40.000** tonnes SAF will be required. This is eq. to 3,5 % of SAS total fuel need.

LOW- or ZERO EMISSION AIRCRAFT

- There are several development initiatives ongoing in order to develop low- or zero emission aircraft and SAS support multiple of these initiatives.
- Most of the electric concepts initially targets aircraft with 15-20 seats and a flight range of 1-2 hours. All concepts includes stretched versions of aircraft that could fit SAS needs of a 50 to 100 seater.
- Airbus aims at 100-200 seats and flight ranges equivalent to todays short range aircraft . Primary energy source is hydrogen in the concept studies.
- Besides the aircraft and engine development a new energy infrastructure has to be developed at airports. SAS supports multiple initiatives within this area with knowledge and defining prerequisites for potential future commercial operation.

SAS and Airbus have signed a joint Memorandum of Understanding for hybrid, hydrogen and electric aircraft eco-system and infrastructure requirements research.
This is a unique cooperation to establish the requirements for the next generation of sustainable aircraft. The project aims to gain an understanding of the introduction of low- or zero emission aircraft for large-scale commercial use.
Airbus have the ambition to bring low- or zero emission technology to aircraft with up to 200 seats in the 2030s.


SAS