



Climate Change

Fact Sheet

Despite the devastating impact of COVID-19 we have not lost sight of our environmental commitments. In fact, 2020 saw a significant increase in climate action announced by airlines and the broader industry.

What steps are we taking to build back better?

- We remain committed to our target of cutting CO2 emissions from 915 million tonnes in 2019 to 325 million tonnes in 2050 (half of 2005 levels).
- Specific regions and airlines announce they are able to move more quickly towards achieving net zero emissions. ([Destination 2050](#), [Oneworld](#), [United](#))
- Cross-industry report [Waypoint 2050](#) identifies potential pathways to net zero emissions for the entire industry.
- Major new carbon-offset and sustainability pledges ([JetBlue](#), [Delta](#), [Qatar](#))
- Take-up of Sustainable Aviation Fuel (SAF) increases by from 40 million litres in 2019 to 70 million litres in 2020 and is forecast to increase to 100 million litres in 2021.
- IATA/Xpansive CBL launch Aviation Carbon Exchange ([ACE](#)) to trade carbon offsets.
- Large-scale early retirement of older, less fuel-efficient aircraft including B747 and B767s, A380s and A340s, despite sharply lower oil prices. (new generation aircraft are about 20% more fuel efficient)
- New developments in hydrogen-powered flight ([ZeroAvia](#), [Airbus](#))
- KLM and several Dutch organisation committing to Power-to-Liquid SAF solutions and Japan Airlines flew the first domestically-produced SAF flight.

Can aviation meet its climate goal in 2050?

Yes. But it is a major challenge which will take enormous effort by the industry, governments, the finance sector and the research community. It will mean a rapid and massive transformation of aviation's 'drop-in' liquid energy supply using sustainable aviation fuel — from both traditional sources and new sources such as power-to-liquid — over the course of just 30 years. It will also require an acceleration in aircraft and engine technology development, including faster progress towards new types of propulsion: electric, hybrid and hydrogen powered aircraft.

Is net-zero emissions possible in aviation?

Yes. Based on scenarios developed for [Waypoint 2050](#), published by the cross-industry Air Transport Action Group, net-zero emissions from aviation will likely be possible worldwide sometime in the decade or so after 2050 (with some regions able to move faster towards this point). But in order to meet this goal, considerable collaborative action across the ecosystem (governments, research, finance, energy sector and aviation itself) will be needed.

Does our climate target of halving emissions by 2050 align with the Paris Agreement?

Yes. While it is difficult to know the exact level of emissions the airline industry would need to eliminate to align with the Paris declaration, we are confident our current target would support and possibly exceed the aim of limiting global warming to less than two degrees. The International Energy Agency (IEA), Energy Technology Perspectives (ETP, 2017) suggest that the current aviation industry 2050 goal is more ambitious than requirements under a 2°C Scenario.

How can governments support aviation's climate goals?



In recent decades governments in many countries have strongly supported nascent solar and wind energy industries through their development and early commercial stages via subsidies and financial support. We want to see the same treatment for alternative energy sources like SAF and electric and hydrogen powered flight. Support could include direct investment, favourable tax treatment, credits for alternative energy use, and de-risking private sector investments. Mandating SAF production over bio-fuel for ground transport could have a significant impact on production.

Is there enough feedstock to meet the demands for SAF going forward?

Yes. A number of international studies have determined that under strict sustainability constraints, there is enough available feedstock to meet the total jet fuel demand for aviation in the year 2050. Interestingly, this analysis did not include synthetic fuel (which uses renewable power such as wind and solar) which is theoretically available in unlimited quantities.

How 'sustainable' is SAF?

Sustainability is something that can be continually and repeatedly used while preserving an ecological balance by avoiding the depletion of nature. The raw material (feedstock) used to produce SAF can come from waste cooking oil, plant oils, municipal waste, waste gases, and agricultural residues, to name a few. Our SAF sustainability criteria means feedstock cannot compete with food crops or water resources, and cannot degrade the environment.

Will aviation rely on offsets to meet its goals?

We expect carbon offsets will play a role but it is likely to be short- to medium-term as alternative energy sources (SAF, power-to-liquid, hydrogen, electric) are developed to commercial scale. We currently expect SAF production to achieve price parity with fossil fuels in the mid 2030s, and that electric or hydrogen powered flight on short and medium-haul routes could be in use around the same time.

Should there be a 'green tax' on aviation?

Airlines/passengers paid almost \$136 billion in taxes worldwide in 2019. No direct link exists between the revenues raised from such a tax and actual measures aimed at mitigating the impact of aviation on the environment. IATA strongly opposes any form of national or regional environmental scheme that would result in double and extra-territorial taxation of aviation's emissions.

Are airlines major contributors to climate change?

The aviation industry emitted 915 million tonnes of CO₂ in 2019, roughly 2% of total global CO₂ emissions. The percentage of aviation's contribution to global emissions has been relatively stable since 1992. Under our 2050 emissions reduction targets, the sector will meet the Paris Agreement goals of reducing global warming to less than 2 degrees.