A number of airlines already offer voluntary carbon offsetting for passengers, how do they work?

Each flight produces carbon dioxide (CO\textsubscript{2}) emissions and whilst there are a lot of things being done by airlines to reduce the fuel use and CO\textsubscript{2} emissions, often passengers would like to know how they can help lower the CO\textsubscript{2} footprint of their travel. Voluntary carbon offsetting is one option available to passengers, either through an airline programme directly, or a third-party offset provider.

**What are offsets?**

The name ‘offset’ can cover a variety of sources of CO\textsubscript{2} reduction. It is a way to compensate for CO\textsubscript{2} being produced in one area, by helping to fund a project which reduces CO\textsubscript{2} in another area.

*For example, if a passenger’s flight produces 2 tonnes of CO\textsubscript{2}, they can choose to help fund a project which provides renewable energy to replace 2 tonnes of fossil fuel-related CO\textsubscript{2} production.*

This is an offset, or a ‘carbon credit’. Most credits / offsets are in units of one tonne of CO\textsubscript{2} and they can be generated by a range of different programmes around the world, in renewable energy, forestry and eventually they may be available in carbon capture, using technology to literally draw CO\textsubscript{2} out of the atmosphere. Many of these projects are in developing countries and also bring additional economic and social benefits in support of sustainable development.

**Voluntary / mandatory**

Some offsetting systems or market-based measures are mandatory. In aviation, nearly all the growth in international aviation CO\textsubscript{2} after 2020 will be offset through the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), developed by the specialized United Nations agency ICAO. This will be mandatory for all airlines flying between certain States. In addition, there are other mandatory market mechanisms which include aviation.

**Voluntary offsetting**

However, some passengers (and companies) wish to go a step further and can chose to offset their own emissions by paying extra for their flight to provide funding for projects to reduce CO\textsubscript{2} emissions. It is estimated that over 30% of passengers fly with an airline that offers some kind of carbon offsetting programme. However, uptake by passengers is generally very low: regular programmes see 1-3% of passengers purchasing offsets for their flights, with some airlines seeing higher levels of uptake, typically linked to improved visibility of the offset functionality and ease of use within the airline booking process, perceived project quality, cultural environmental consciousness and other factors that attract passengers to make that investment.

**44 airlines offer voluntary carbon offsetting programmes to passengers.** Half of the world’s 20 largest airlines offer offsetting.

A large number of corporate travellers and individual passengers will offset through third-party providers: we have no visibility on the uptake of offsets through these sources.

1-3% typical current take-up of voluntary offsetting by passengers, some airlines report higher take-up.

**Voluntary passenger offset programmes are offered by the following airlines** *(correct as at time of publication, this is not an exhaustive list):*

- Air Canada
- Air France
- Air New Zealand
- Alaska Airlines
- Austrian
- BRA (Braathens Regional)
- British Airways
- Brussels Airlines
- Caribbean Airlines
- Cathay Dragon
- Cathay Pacific
- China Airlines
- Delta Air Lines
- Easyjet
- Eurowings
- Finnair
- flybe (Virgin Connect)
- Icelandair
- Japan Airlines
- JetBlue
- Jetstar
- Kenya Airways
- KLM
- LATAM Airlines Group
- Lufthansa
- Malaysia Airlines
- Mango
- Norwegian
- Qantas
- Qatar Airways
- Ryanair
- SAS
- South African Airways
- SriLankan Airlines
- Swiss International Air Lines
- TAP - Air Portugal
- Thai Airways
- TuiFly
- United Airlines
- Virgin Atlantic
- Virgin Australia
- WestJet Airlines
- Wideroe
- Wizz Air
There are also some airlines which go beyond voluntary programmes:

- **BRA Airlines** in Sweden offsets 100% of all its passenger’s journeys and has launched a ‘Green Class’ ticket which also adds sustainable aviation fuel to the journey.
- **Scandinavian Airlines** already offsets all ‘youth’ tickets (for under-25 year old passengers) and the flights of all their EuroBonus members (about 40% of the CO₂ emissions of the entire airline). In addition, the airline offers passengers the chance to upgrade to sustainable aviation fuel.
- **Delta Airlines** has been offsetting the growth in its emissions since 2012.
- **British Airways** and Air France have announced that 100% of their domestic flights in the UK and France respectively will be fully offset from the start of 2020. JetBlue will offset 100% of its US domestic flights from July 2020.
- As of November 2019, 100% of easyJet flights are offset.

In 2012, the International Air Transport Association (IATA), developed a set of industry best practices for airlines offering offset programmes in collaboration with the independent Quality Assurance Service organisation. In addition, IATA launched a system that could be easily implemented by airlines and works with them build the IATA Carbon Offset Program into their booking processes.

There are also ‘third party’ offset providers available. These provide a service to individual travelers who wish to offset the emissions caused by their flying and daily activities such as electricity use, buildings, car use and so forth. Many companies also offset their entire business CO₂ footprint (including travel-related emissions) through these services rather than through their airline directly. Therefore, it is hard to estimate what the total offsetting of aviation currently is.

**Not just in the air**

Whilst a number of airlines offer voluntary offsets to their passengers, airports are also working towards carbon neutrality through the Airport Carbon Accreditation programme run by the Airports Council International. This helps airports measure and reduce the CO₂ from their own operations, with a number of airports taking the final step of offsetting the rest of their CO₂ through approved programmes. More information can be found at [www.airportCO2.org](http://www.airportCO2.org)

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**Sustainability of offsets**

Of core importance when looking at this topic is the quality and sustainability of the offsets used and generated in these projects. In addition to UN- or government-backed programmes, such as the American Carbon Registry or the British Columbia Offset Program, there are several non-governmental verifiers of projects and programmes: for example Verra and Gold Standard. Often, these offsets do not just reduce CO₂ emissions, but also bring with them co-benefits including improving the livelihoods and health of communities, better access to education or clean water.

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* CO₂ emissions includes CO₂ from forestry and other land-use change. GHG: including CO₂-eq from other greenhouse has emissions covered by the UNFCCC / Kyoto Protocol
1 University of Hawai’i study published in Nature Climate Change Bitcoin emissions alone could push global warming above 2°C, 2018
2 Boston Consulting Group study, November 2017
3 Science Magazine, Net-zero emissions energy systems, June 2018
4 IPCC Special Report on Aviation and the Global Atmosphere, 1999