

CARBON OFFSETTING 101

A basic guide to offsetting for aircraft operators
and application to CORSIA obligations



Offsets general (1)



Offsets are a **market-based mechanism** used to reduce the environmental impact of an individual, business or operation to mitigate the output of CO₂.



Carbon offsets seek to achieve a reduction in carbon dioxide and other greenhouse gases, to compensate for emissions made elsewhere.

The project that an offset represents will typically be to support projects in, and to stimulate, a low-carbon economy and will have a lower CO₂ output than that of the purchaser – the difference is the overall reduction in CO₂.

Offsets general (2)



By investing in offsets, the **purchaser is providing funds for projects** such as: tree planting, low energy solutions, updating old technologies, providing services in emerging countries and can be contributing to improvements in education, communities and human wellbeing and access to fresh water.



Offsetting shouldn't be considered as a license to pollute. Offsetting should only be purchased once all other environmental improvements have been made, or as a short-term measure while improvements take hold.

How many offsets do I need?



Remaining carbon impacts can be offset once **other all environmental improvements** available to the purchaser **have been exhausted**. Examples could be; reducing unnecessary aircraft weight, the use of sustainable aviation fuel (SAF), tankering fuel, single engine taxi, electrical ground power use where available, etc.



Through appropriate **fuel monitoring**, a highly recommended practice to all operators by EBAA (EBAA can help with this), it will be a very straightforward process to calculate how many offsets might be required:

- For each unit of aviation fuel used, 3.16 units of CO₂ are created. Therefore if 10 metric tons of fuel are used, 31.6 metric tons of offsets will be required.



It is entirely up to the purchaser how much of their CO₂ output they would like to **voluntarily offset**.

Where can I buy offsets? (1)



Offsets are **available from a variety of providers** across the world.



It is always advisable to purchase offsets through **reputable sources**, so that you are satisfied that projects are genuine and delivering meaningful contributions to greenhouse gas reduction and supporting prosperity within participating communities.



Ensure that you do your **due diligence** on the offsets you wish to buy and you're happy that any project reflects what you want to achieve.

Where can I buy offsets? (2)



Check whether the offsets offered conform to **international standards** – the Gold Standard, Verified Carbon Standard (VCS) etc.



Projects offered should not just have an offsetting capability, but also align themselves with the **UN Sustainable Development Goals (SDG's)**, that benefit the communities they are based in. This could include education, environmental training, access to fresh water, land area protection, etc.



Do the offsets being offered reflect the **values of your organisation** and projects you would normally support?

Where can I buy offsets? (3)



It may seem odd that offsets vary in price – this is because there are **differing levels in the overall quality of projects**, the overall reduction in CO₂ that the project delivers and the availability of offsets for each project.



You can also purchase offsets via an **existing stock** of offsets, invest directly into projects including new ones and also provide equity or loans to projects.

Offsets vs. sustainable aviation fuel use



Sustainable aviation fuel will deliver significant reductions in overall CO₂ output. However, this will depend on the blend of the fuel used and would remove the need for offsets to be purchased.



At present, it is only possible to have a maximum of a **50/50 blend** of kerosene and SAF under current fuel certification rules. So a combination of SAF use and offsets could be utilized.



The general blend available at present is **generally lower than the certified maximum**. A simple calculation will be needed to determine what level of SAF has been included in the fuel mix, this can be provided by your fuel supplier, leaving an opportunity to offset the remaining kerosene used.

CORSIA Emission Units & Obligations



CORSIA Eligible Emission Units (1)



Eligible emissions units are central to the ongoing success of the CORSIA offsetting program and are made available through **approved registries**.



The **ICAO Technical Advisory Body (TAB)** has evaluated these programs to establish that they fulfil ICAO CORSIA requirements and has recommended them for immediate availability to airlines and operators.



These **eligible emission units** will be made available through offset registries that have been evaluated and approved by the TAB (see following slide).

CORSIA Eligible Emission Units (2)



The offset registries are the following;

- American Carbon Registry.
- China GHG Voluntary Emission Reduction Program.
- Clean Development Mechanism.
- Climate Action Reserve
- The Gold Standard.
- Verified Carbon Standard Program.



These approved emissions units are only available for the period that covers the **CORSIA Pilot Phase compliance cycle**, which runs from 1st January 2021 until 31st December 2023. Further guidance will be issued by ICAO and the TAB for the subsequent phases once it become available.

CORSIA obligations (1)



The CORSIA program is currently going through its **baseline phase**, this baseline will help ICAO establish the growth factor within the civil aviation industry that is the amount that would need emission units applied to them.



This is what enables the industry to **achieve its goal** of carbon-neutral growth (CNG).



Once the baseline period is completed, CORSIA will enter its **first compliance phase**, which is also known as the Pilot Phase.

CORSIA obligations (2)



The **compliance phase will run from 01/01/21 to 31/12/2023** and will be where the baseline measurements will be measured against reported emissions for that period and the sectoral growth factor (SGF) will be applied to determine an operators' emission obligations for the period.



Operators will be **advised individually** by their Administering Authority on their obligations for offsetting.

Summary

- ✓ Offsetting can help you and your organisation **reduce your overall carbon footprint**
- ✓ Ensure that you have exhausted all other environmental improvements **before offsetting**
- ✓ Make sure you have an appropriate **fuel monitoring** tool
- ✓ **Decide** how many offsets you want to purchase
- ✓ If your operations are impacted by CORSIA, **understand your obligations** under the scheme
- ✓ Do your **due diligence**
- ✓ If you are using SAF, you will need to factor that into your calculations

Other resources

This explanatory note should be used in conjunction with the EBAA guidance paper on Eligible Emission Units which gives more information regarding the use of eligible emission units to be used against CORSIA obligations by airlines and operators. This document is available on the EBAA website [here](#).

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