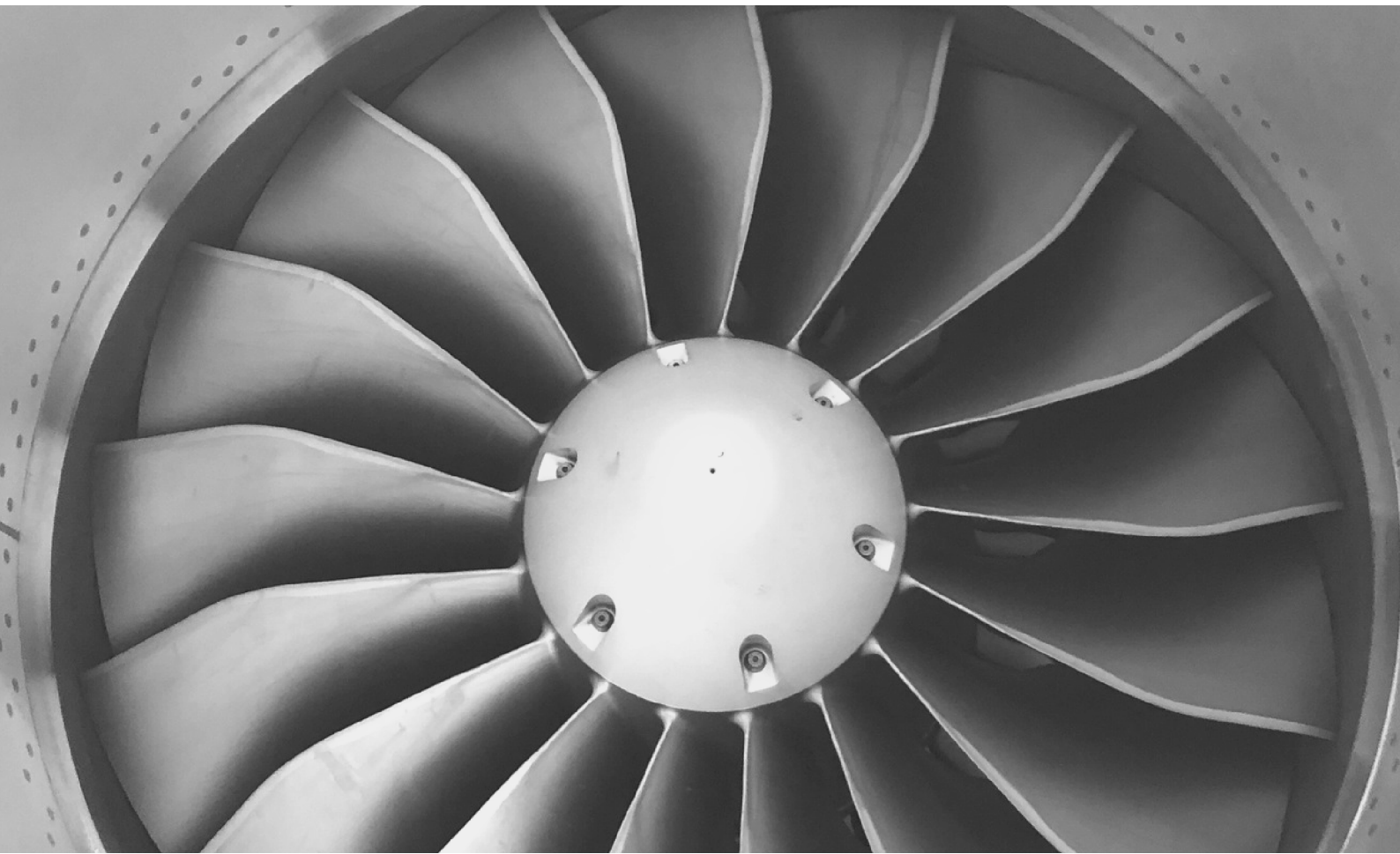


# **VOLUNTARY CARBON OFFSET PROGRAM**

FOR  
FLIGHT DEPARTMENTS



AVIATION AND  
SUSTAINABILITY  
COEXISTING TOGETHER

# WHAT IS A CARBON OFFSET?

Carbon offsets are investments in projects that either reduce or capture greenhouse gases. When you are unable to reduce your own carbon emissions, offsets may be purchased to fund projects that reduce greenhouse gases in other sectors.

## CALCULATING CARBON FOOTPRINT

One metric ton of jet fuel produces approximately 3.15 tons of carbon dioxide. The European Union Emissions Trading Scheme (EU ETS) and ICAO Carbon Offsetting Reduction Scheme for International Aviation (CORSIA) regulatory programs offer carbon calculators to estimate CO<sub>2</sub> emissions. The calculators estimate fuel burns using aircraft profiles and great circle distance. The calculators simplify regulatory compliance, negating the need for robust and time consuming fuel density



calculations. Voluntary offsetting affords you the ability to use actual fuel burn data from each flight (if available) to calculate your carbon footprint in lieu of overly generous estimates.

## OFFSET STANDARDS

Project quality is important when electing to balance your carbon emissions. The American Carbon Registry, Verified Carbon Standard, Gold Standard, Climate Action Reserve, and Canadian Standards Association, are examples of the standards used to ensure quality carbon offsets are offered to you.

These standards ensure the legitimacy of the offsets and makes certain that the offsets could not have been generated without investment in the offset project.

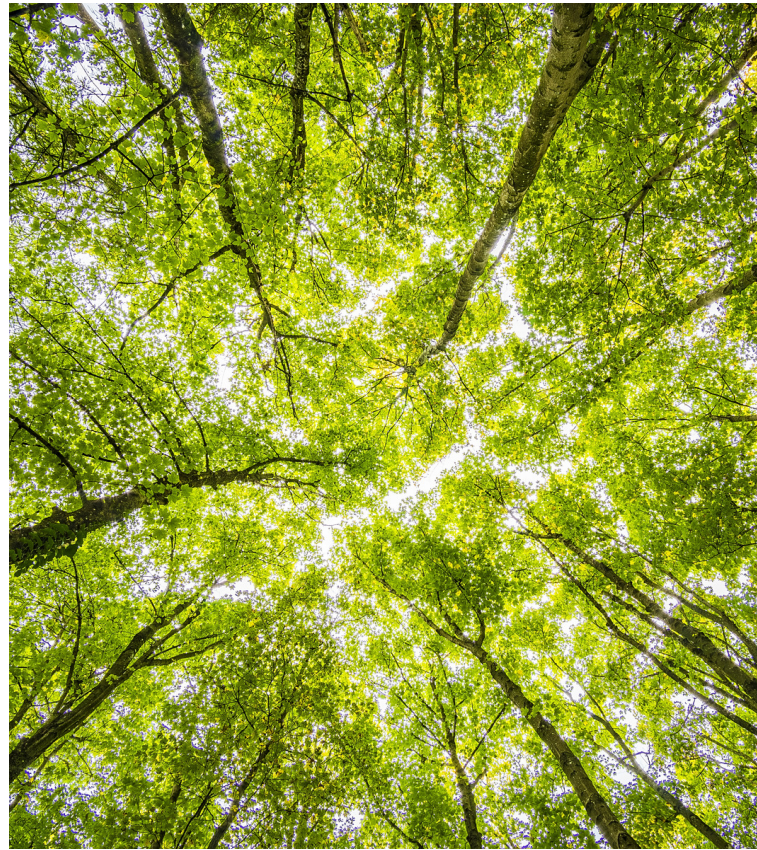
Shockwave Aviation sources the offsets directly from project developers and retailers, offering the highest of quality

## OFFSET PROJECTS

Offset projects come in a variety of forms. Common projects focus on preventing the release of carbon dioxide and methane gas.

Carbon dioxide is mainly produced from the burning of fossil fuels and represents 80% of the greenhouse gases released in the atmosphere. Methane represents 10% of the greenhouse gases but traps 84 times more solar energy than CO<sub>2</sub> in the initial 20 years following its release. Many projects that capture methane will repurpose it to create clean electricity.

Examples of projects that generate



carbon offsets are listed below.

**Landfills** - landfill projects capture methane gas from sealed landfills.

**Coal Mines** - abandoned coal mine projects capture methane gas that naturally escapes mine shafts.

**Farms** - anaerobic digesters capture methane gas from animal waste and the material is also converted into fertilizers and other products.

**Wind** - wind projects produce clean electricity in lieu of burning fossil fuels or coal. Electricity produced by wind reduces the need for CO<sub>2</sub> producing generators.

**Forest Protection** - forests in areas of intensive harvesting are protected, allowing the trees and soil to continue to store CO2.

## WHY VOLUNTARILY OFFSET?

Global climate change is the most obvious reason to voluntarily balance your carbon footprint. Corporations are modifying the way they do business and proactively contributing to projects to effect positive change well in advance of slow moving regulatory initiatives. These concerned corporations are motivated by a strong obligation to their customers and shareholders.

Private aviation has come under public scrutiny with the aircraft viewed as ostentatious luxuries. The aircraft are rarely seen for their true purpose: necessary, modern tools to facilitate efficient and effective business. Corporations are halting the criticism through participation in voluntary carbon offset programs.

With only real-time aircraft location data blocked, aircraft movement and



historical flight activity are easily accessible by the public.

As privacy erodes and information is at everyone's fingertips, carbon offsetting is rapidly increasing in popularity by corporations to forestall public outcries against their aviation practices.

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