

# CORSIA & Low Carbon Aviation Markets

## Fact Sheet: Clean Fuel Markets

### What CORSIA does?

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is ICAO’s global framework to cap net CO<sub>2</sub> emissions from international aviation. Airlines must monitor and report emissions and meet their annual mitigation obligation through a combination of:

- Sustainable Aviation Fuel (SAF) and Lower-Carbon Aviation Fuels
- Eligible Emission Units (EEUs)
- Technology and operational improvements

CORSIA Phase 1 (2024–2026) includes 129 participating states and leverages the voluntary carbon market infrastructure with additional guardrails such as corresponding adjustments and program-specific eligibility filters.

### How compliance is achieved?

#### Sustainable Aviation Fuels (SAF)

SAF is a central decarbonization pathway for CORSIA and increasingly the primary mechanism under EU ETS and REfuelEU Aviation.

Key Facts:

- Global SAF production: 1M tonnes in 2024, expected 2.1M tonnes in 2025
- SAF is 2–5× more expensive than fossil jet fuel
- ICAO-estimated abatement costs per tonne CO<sub>2</sub>: HEFA: USD 130–640; FT: USD 210–520; ATJ: USD 420–3,220 FT + DAC: USD 1,390–2,190

With credit stacking (US 48Z+ LCFS/ RFS-RINS), SAF producers can reduce the effective abatement cost significantly in some cases as low as CORSIA EEUs.

#### CORSIA Eligible Emission Units (Offsets)

Offsets under CORSIA act as a compliance backstop for airlines. ICAO sets strict rules to ensure only high-integrity, host-country-authorized credits can be used. To qualify, credits must:

- Come from an ICAO-approved program (ACR, ART, CAR, GCC, Gold Standard, Verra)
- Have a first crediting period ≥ 1 Jan 2016
- Fall within vintages 2021–2026
- Carry a host-country Letter of Authorization (LoA) confirming a corresponding adjustment
- Meet program-specific exclusions for methodology and activity type

Actual eligible supply is extremely limited after these filters.

## The Opportunity

CORSIA is entering a structurally short phase as aviation emissions grow and eligible low-carbon supply remains limited. ICAO projects **980–1,500 million tonnes of cumulative offset demand** through 2035, including **100–150 MtCO<sub>2</sub>e in the 2024–2026 phase**, while SAF production remains below 1% of global jet fuel and CORSIA-eligible offsets are restricted to a narrow pool dominated by a single jurisdictional source. This creates a significant and rising compliance liability for airlines, driving strong demand for both SAF volumes and high-integrity offsets. **For SAF producers programs such as LCFS, RFS-RINS, 48Z among others materially reduce net abatement costs, making North American SAF highly competitive for long-term offtake.** For offset developers, constrained supply and multi-hundred-million-tonne demand support durable pricing for CORSIA-qualified credits. Together, these dynamics create a robust multi-year monetization opportunity across SAF, offsets, and integrated aviation decarbonization solutions.

## How Climate Decode can support?

### SAF Monetization & Economics

- Assess eligibility, stack ability and quantify value from CORSIA, CFR, LCFS, RFS-RINS, 48Z, EU REfuel, EU ETS and provincial incentives
- Model net abatement cost vs CORSIA offsets & EU ETS exposure
- CI/LCA optimization and credit maximization
- CFR & LCFS market outlooks and price forecasting

### CORSIA Eligibility Assessment

- Assess SAF and offset eligibility for CORSIA Phase 1
- LoA and Corresponding Adjustment coordination
- Insurance-backed double-claiming assurance (Verra/GS)
- Registry tagging, documentation and cancellation reporting

### Credit Sales & Commercialization:

- Origination/ sales support for SAF, low-carbon fuels and CORSIA credits, with pricing, offtake structuring and market intelligence to advance commercial opportunities.

### SAF LCFS Credits & Certificates

- LCFS account setup, registration and reporting
- CI modelling, OpenLCA / GREET & Application
- Verification oversight
- Audit-ready evidence management
- Reporting & MRV management

### Airline Compliance Management

- Optimize SAF + offset procurement blends for airlines
- Long-term compliance cost modelling
- Support for IATA ACE procurement participation

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