



CORSIA COMPLIANCE – THE UNEQUAL CHOICES THAT AIRLINES FACE IN THE FIRST PHASE

At a glance: We look at the challenges which an aircraft operator faces in complying with its obligations under the First Phase of CORSIA. To CEF or not to CEF? That is the question. In our view, this question revolves around the price of CEF and CEEUs and, in turn, supply and demand drivers for which presently there is a clear lack of information, data and price risk management tools.

Introduction

The International Civil Aviation Organization (ICAO) introduced the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) with the intention that aircraft operators monitor their emissions and offset excess emissions arising from covered aviation activity. The first phase of CORSIA (2024 to 2026) (the **First Phase**) has started. The First Phase remains voluntary but once an ICAO State commits to participate in the First Phase, compliance becomes compulsory for the aircraft operators¹ for which that State is the responsible authority. 126 States have voluntarily committed to the First Phase of CORSIA. Notable non-participating States in the First Phase include China, Russia, India and Brazil. Broadly, only flights between participating States are caught by CORSIA. Participation in CORSIA becomes mandatory for all States in the second phase (2027 to 2035).

Aircraft operators with First Phase compliance obligations are actively looking at how they achieve this. CORSIA allows aircraft operators to meet their compliance obligations

using either or both CORSIA eligible fuels (CEFs) and CORSIA Eligible Emissions Units (CEEUs). As things stand today, there are a number of supply, demand, pricing and regulatory challenges with respect to both CEFs and CEEUs that make the choices for aircraft operators particularly difficult. We consider the factors impacting those choices and looks towards market solutions that are in the pipeline to support the needs of the industry.

Please note that this paper recognises that more than one type of entity can be an 'aircraft operator' but is written on a neutral basis as to the type of entity (e.g. the ICAO Designator, AOC holder² or aircraft owner³) that carries the compliance obligation. That said, we note that the risk management solutions adopted by the aircraft operator might differ depending on who they are.

Quick Summary of Key Concepts⁴

CORSIA Eligible Fuels

In essence CEFs are either (i) a CORSIA sustainable aviation fuel or (ii) a CORSIA lower carbon aviation fuel, which an aircraft operator may use to reduce their offsetting requirements. It should be noted that under

Sustainability Criteria 1.1, in order for a fuel to be considered CEF, it needs to have net greenhouse gas emissions reductions of at least 10% compared to a baseline for an aviation fuel (the **CEF Threshold**).

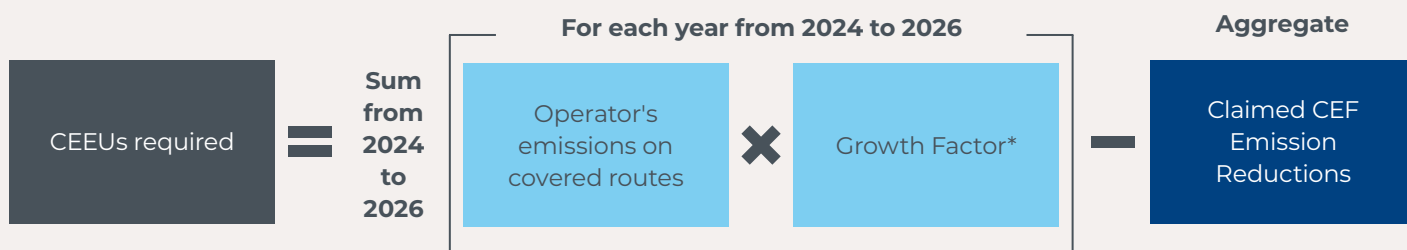
CORSIA Eligible Emissions Units

CEEUs are those units described in the ICAO document entitled "CORSIA Eligible Emissions Units", which meet the CORSIA Emissions Unit Eligibility Criteria contained in the ICAO document entitled "CORSIA Emissions Unit Eligibility Criteria".⁵

Offsetting with CEEUs and CEF Reduction Claims

Broadly, an aircraft operator is required to cancel CEEUs at the end of the First Phase to offset its covered emissions. Where an aircraft operator also uses CEFs during the First Phase, CORSIA allows that aircraft operator to reduce its final total offsetting requirements at the end of the First Phase. Since CEFs are, to some extent, a substitute for CEEUs, their price should logically bear some relation to the price of CEEUs in terms of how an aircraft operator therefore manages its CORSIA compliance obligations.

(Simplified form of aircraft operator's compliance requirements for the First Phase)⁶



*Growth factors are calculated by dividing the aggregated increase in total CO₂ emissions above the baseline from all operators for the given year by the total CO₂ emissions from international civil aviation in the given year. The baseline for 2030 will be 85% of 2019 emissions on the same state-pairs as those applicable in 2030.

1 Defined as 'aeroplane operator' in Annex 16, Environmental Protection, Volume IV, Appendix 1 [CORSIA SARP]

2 Each capitalised term as defined in Part I of CORSIA SARP.

3 Defined as 'aeroplane owner' in CORSIA SARP.

4 For the avoidance of doubt, we only discuss the position under CORSIA SARP, and not how it may have been implemented under national law.

5 See CORSIA SARP, Part II, para 4.2.1

6 Some notes: (i) the split between the individual component and sectoral component applies from 2033 to 2035 and thus does not apply for First Phase, and (ii) there are various factors to covered routes, e.g., state-pairs subject to offsetting requirements

“With time, these factors will no doubt shift and therefore their influence in the decision matrix of the aircraft operator will also shift.

Challenges to CORSIA compliance – as things stand today and what could change?

In weighing up how to comply with their CORSIA obligations, aircraft operators can choose between just using CEFs or just using CEEUs but, in reality, we expect aircraft operators to use a mix of both. The question

of whether both solutions are progressed simultaneously or whether aircraft operators prioritise CEFs ahead of CEEUs, turns on a number of factors that reflect the state of play today in the market for CEFs and CEEUs. We discuss some of the factors, first in the context of CEFs and then in the context of CEEUs, below.

With time, these factors will no doubt shift and therefore their influence in the decision matrix of the aircraft operator will also shift.

In relation to CEFs, the aircraft operator’s decisions today and in the future may be influenced by the following:

Decision points	Factors influencing an aircraft operator’s decision on CEFs
Competing demand	<p>Situation today:</p> <ul style="list-style-type: none">It has been reported that demand for sustainable aviation fuel (SAF) is not the issue as every drop of SAF produced has been bought and used.⁷ However, there is an issue of competing demand. CEFs, as a form of fuel, may be used under other regulatory schemes, e.g., those which make the use of SAF mandatory or for the other mandatory or voluntary uses of such fuels for maritime or aviation transportation. For instance, aviation fuels which are eligible as ‘sustainable aviation fuels’ under EU RED II (EU Eligible SAF) would be eligible for use under CORSIA or for use under the EU Emissions Trading System (EU ETS). Similarly, such fuels may also be eligible for use towards a shipping company’s FuelEU Maritime⁸ obligations and EU ETS obligations. Competing demand for fuels that are eligible as CEFs, will drive up prices. <p>In the future:</p> <ul style="list-style-type: none">It is unlikely that competition in demand of CEFs will materially decrease. IATA has noted that SAF could contribute about 65% of the reduction in emissions needed by aviation to reach net-zero in 2050 but this will “require a massive increase in production in order to meet demand”. The expected demand is 449 billion litres of SAF.⁹ Demand is expected to further increase as countries impose SAF mandates¹⁰ and the requirements under such regimes increase over time.¹¹ Airlines and airline groups have made commitments on SAF uptake levels by certain milestone dates, with uptake levels ramping up over time. For instance, the Association of Asia Pacific Airlines (which includes airlines such as All Nippon Airways and Singapore Airlines) have made a collective ambition to strive for SAF utilisation of 5% by 2030,¹² while Delta Airlines has targeted a SAF uptake level of 10% by 2030, 35% by 2035, and at least 95% by 2050.¹³

7 See <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/oil/120623-saf-production-to-triple-to-15-mil-mt-in-2024-but-progress-slow-iata>

8 Regulation (EU) 2023/1805 of the European Parliament and of the Council of 13 September 2023 on the use of renewable and low-carbon fuels in maritime transport, and amending Directive 2009/16/EC [FuelEU Maritime].

9 IATA Net Zero 2050 - SAF Factsheet: see <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet---alternative-fuels> [IATA Factsheet].

10 For instance, Japan is planning a SAF mandate of 10% by 2030 (<https://asia.nikkei.com/Business/Transportation/Japan-to-require-overseas-flights-use-10-sustainable-fuel>) which has been estimated to mean demand for “approximately 1.7 million kiloliters of SAF annually” (<https://www.resourcewise.com/environmental-blog/driving-change-in-aviation-japan-announces-10-saf-mandate>).

11 For instance, Singapore has a 1% SAF target from 2026, ramping up to 3-5% by 2030 (subject to global developments and the wider availability and adoption of SAF): <https://www.caas.gov.sg/docs/default-source/docs---so/singapore-sustainable-air-hub-blueprint.pdf>.

12 See https://www.aapairlines.org/wp-content/uploads/2023/11/AAPA_PR_Issue14_AP67_Resolutions_10Nov23.pdf

13 See <https://news.delta.com/business-imperative-delta-outlines-roadmap-more-sustainable-travel>.

Decision points	Factors influencing an aircraft operator's decision on CEFs												
Lack of supply	<p>Situation today:</p> <ul style="list-style-type: none"> Airlines have publicly noted the lack of supply of sustainable aviation fuels generally¹⁴. This is largely due to the lack of available land (to produce crop) and availability of feedstock. A study published by the MSCI Sustainability Institute noted that <i>"given the constraints on cost-effective and readily available feedstock supply, we believe the volumes of SAF available to airlines using [HEFA and cellulosic sourced SAF] is likely overestimated."</i>¹⁵ SAF represented around 0.2% of global jet fuel consumption in 2023 though in 2023, SAF production doubled to 600 million litres from 300 million litres in 2022.¹⁶ It has also been suggested that in the US context, it may presently be difficult for producers to make a commercial decision to produce SAF rather than another type of fuel, e.g., renewable diesel can be made from the same feedstocks as SAF. Additional processing is required for the biofuel needed for SAF (thus increasing project costs) and the supply of feedstocks such as cooking oil are tight.¹⁷ Even then, SAFs are not all the same. Not only is the way in which GHG emissions associated with the lifecycle of SAF are calculated differently between different regulatory regimes, this also extends to the GHG savings thresholds necessary before a fuel is considered eligible under a regime (the GHG Savings Threshold). As an example: <table> <tr> <th>Type of Fuel</th><th>GHG Savings Threshold¹⁸</th></tr> <tr> <td>CEF</td><td>10%</td></tr> <tr> <td>For the purposes of the UK's SAF mandate (where obligations are placed on suppliers)¹⁹</td><td>40%</td></tr> <tr> <td>UK Renewable Transport Fuel Obligation (where obligations are placed on suppliers)²⁰</td><td>65%</td></tr> <tr> <td>For the purposes of the UK ETS²¹</td><td>65%</td></tr> <tr> <td>EU Eligible SAF</td><td> <ul style="list-style-type: none"> 65% (transport biofuels) 70% (transport renewable fuels of non-biological origin) </td></tr> </table> <p>Therefore, producers and refiners are likely to concentrate supply on the grade of SAF that has greatest market demand or generates the greatest profits. This could further constrain supply of 10% CEF.</p> <ul style="list-style-type: none"> There is no doubt that the CEF industry is still at an early stage of development. Therefore, the development in the market is very hard to assess. Some airlines have stated that the uncertainty in market development for eligible fuels is a risk towards their business.²² 	Type of Fuel	GHG Savings Threshold ¹⁸	CEF	10%	For the purposes of the UK's SAF mandate (where obligations are placed on suppliers) ¹⁹	40%	UK Renewable Transport Fuel Obligation (where obligations are placed on suppliers) ²⁰	65%	For the purposes of the UK ETS ²¹	65%	EU Eligible SAF	<ul style="list-style-type: none"> 65% (transport biofuels) 70% (transport renewable fuels of non-biological origin)
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14 See e.g., Ben Elgin, *Bloomberg* (1 February 2024) "Sustainable Jet Fuel Supply Crunch Endangers Airlines' Climate Targets"; "... the supply of SAF is likely to be 30% to 40% below the demand from airlines by the end of the decade, said Van Passel [head of procurement operations and development at Cathay Pacific]. "And we expect that gap to widen," he added." (<https://www.bloomberg.com/news/articles/2024-01-31/cathay-pacific-sustainable-aviation-fuel-supply-crunch-endangers-climate-plan>) [Bloomberg Article].

15 Future availability of SAF via HEFA 'likely overestimated': MSCI (qcintel.com).

16 See IATA Factsheet.

17 <https://www.reuters.com/sustainability/us-sustainable-aviation-fuel-production-target-faces-cost-margin-challenges-2023-11-01/>

18 Some of these thresholds will ramp up

19 <https://www.gov.uk/government/news/aviation-fuel-plan-supports-growth-of-british-aviation-sector>

20 See para 4 of The Renewable Transport Fuel Obligations Order 2007 (2007 No. 3072) (as amended).

21 See Article 4(2A) of The Greenhouse Gas Emissions Trading Scheme Order 2020 (2020 No. 1265) (as amended) read with Art 54 of the Monitoring and Reporting Regulation 2018.

22 See e.g., American Airlines 2023 Annual Report at page 19.

Decision points	Factors influencing an aircraft operator's decision on CEFs
	<p>In the future:</p> <ul style="list-style-type: none"> Supply of SAF (including CEF) is expected to increase. IATA's estimate is that the largest acceleration in SAF production is expected in the 2030s as policy support comes global.²³ In 2024, SAF production is expected to triple to 1.875 billion litres (1.5Mt), accounting for 0.53% of aviation's fuel need, and 6% of renewable fuel capacity.²⁴ It has been further suggested that SAF production could go up to 6,206 million gallons per annum in 2030, with the US having the highest global SAF production capacity of 2,032 million gallons per annum from upcoming projects by 2030.²⁵ By contrast, the UK could have an estimated capacity of 445 million gallons per annum from upcoming renewable standalone refineries by 2030. IATA has also urged governments to enact policies to help diversify feedstocks and SAF production beyond hydrotreatment production technology,²⁶ and therefore increase SAF supply.
<p>Price of CEFs</p>	<p>Situation today:</p> <ul style="list-style-type: none"> CEFs are constantly assessed to be approximately 3 to 5 times more expensive than traditional jet fuel.²⁷ This is largely due to the lack of supply (see above) coupled with guaranteed demand from mandated policy support (see above). As aircraft operators look to pass on the costs of CEFs onto passengers, the increase cannot be so high that it would impact the airline's competitiveness. This is especially the case where not all countries or airlines are participating in the First Phase. Some aircraft operators have been quoted as stating that CEFs must not be burdensome to passengers.²⁸ Given that CEF reduction claims are used to reduce the number of CEEUs that have to be surrendered, CEF prices should logically bear some relation to the price of CEEUs. However, this is presently not the case for a number of reasons: <ul style="list-style-type: none"> CEFs are significantly more expensive than conventional fuel.²⁹ As at 28 May 2024, Quantum Commodity Intelligence's spot SAF premium to adjusted low sulphur gasoil was US\$1,040/cbm.³⁰ The type of SAF (including CEFs) may also command different prices due to the GHG Savings Threshold required under the relevant regulatory regime. Without clarity as to supply of CEEUs, it may be difficult to provide certainty as to prices (see also the discussion immediately below). The relatively immature state of the CEF market has made pricing stability difficult and a number of aircraft operators have criticised the lack of a "standardisation in pricing". Arguably, airlines would want some stability in the pricing of CEFs but producers are unwilling to commit to a price due to the uncertainty in pricing feedstocks.³¹ This could be made worse should there be supply chain disruptions (e.g., wars) or adverse weather patterns.

23 See IATA Factsheet.

24 See <https://www.iata.org/en/pressroom/2023-releases/2023-12-06-02>. The small percentage of SAF output as a proportion of overall renewable fuel is primarily due to the new capacity coming online in 2023 being allocated to other renewable fuels (linked to the demand discussion we had above).

25 See <https://www.offshore-technology.com/analyst-comment/saf-production-capacity-2030-predictions/>

26 which relies on inedible animal fats (tallow), used cooking oil and industrial grease as feedstock. There are limited quantities of these and thus a need to diversify SAF production by increasing production through pathways already certified, in particular the Alcohol-to-Jet (AtJ) and Fischer-Tropsch (FT) which use bio/agricultural wastes and residue, promote investments in, and the fast-tracking of certification for, new SAF production pathways currently in the developmental phase and identify more potential feedstocks to leverage all SAF technologies to provide diversification and regional options, including those with side-benefits such as environmental restoration: <https://www.iata.org/en/pressroom/2023-releases/2023-12-06-02/>

27 When will Sustainable Aviation Fuel Get Cheaper? | AvBuyer; 1.5 to 6 times: <https://www.easa.europa.eu/eco/eaer/topics/sustainable-aviation-fuels/current-landscape-future-saf-industry#production-capacity-and-demand-beyond-2030-to-2050>

28 See e.g., <https://www.qcintel.com/carbon/article/airasia-eyes-offsets-from-new-fare-levy-over-burdensome-saf-24135.html>

29 See the Bloomberg Article where it was suggested that SAF is two or three times more expensive than conventional jet fuel.

30 <https://www.qcintel.com/biofuels/article/saf-hvo-saf-premium-steady-in-quiet-market-hvo-at-2-month-lows-25036.html>.

31 Immaturity of SAF market makes pricing stability difficult: Airlines (qcintel.com).

Decision points	Factors influencing an aircraft operator's decision on CEFs
	<p>In the future:</p> <ul style="list-style-type: none"> One study has suggested that until 2040, the authors do not expect a major cost decrease for SAF, as feedstock is limited for certain SAF types.³² Another study has suggested that in relation to a specific type of SAF – Power-to-Liquids-SAF, costs in Europe could be as low as 1510 EUR per tonne by 2030 and decrease to 880 EUR per tonne by 2050.³³ This is compared to prices for fossil-based jet fuel of approximately EUR 600 per tonne.³⁴
Availability of deliverable CEF hedging contracts	<p>Situation today:</p> <ul style="list-style-type: none"> As at 2 July 2024, there are no physically settled futures contract specifically addressing CEF. There are however cash-settled futures contracts available more generally for sustainable fuel or sustainable aviation fuel.³⁵ Again, it may therefore be difficult for an aircraft operator to effectively hedge its obligations to the extent that it requires physical CEF. <p>In the future:</p> <ul style="list-style-type: none"> Physically settled CEF futures contracts could be developed in the future. This will also depend on the extent to which book and claim systems (which allow for the decoupling of the GHG emission reduction attributes associated with CEF and the CEF itself as a fuel) would be recognised and accepted under various regimes. If this is not accepted, then there may be a greater need for physically-settled CEF futures contracts (and vice versa).

In relation to CEEUs, the aircraft operator's decisions today and in the future may be influenced by the following:

Decision points	Factors influencing an aircraft operator's decision on CEEUs
Competing demand	<p>Situation today:</p> <ul style="list-style-type: none"> The emission units forming CEEUs may also be eligible under other schemes and thus for other uses. For instance, if CEEUs are also authorised for use under Article 6 of the Paris Agreement for use towards an acquiring country's Nationally Determined Contributions (NDCs), then aircraft operators will be competing for such CEEUs with other buyers (i.e. on top of other aircraft operators). This squeezes already limited supply. <p>In the future:</p> <ul style="list-style-type: none"> It is unlikely that competition for CEEUs will decrease. For instance, as country NDCs become more ambitious over time, the need to potentially rely on emission units may increase.

³² See <https://www.strategyand.pwc.com/de/en/industries/aerospace-defense/real-cost-of-green-aviation.html>

³³ <https://pubs.rsc.org/en/content/articlelanding/2024/se/d3se00978e>

³⁴ <https://www.easa.europa.eu/eco/eaer/topics/sustainable-aviation-fuels/current-landscape-future-saf-industry#production-capacity-and-demand-beyond-2030-to-2050>

³⁵ See e.g., the CME listed FAME O Biodiesel FOB Rotterdam (Argus) (RED Compliant) Future and the ICE Futures US listed Biodiesel Outright – Los Angeles Sustainable Aviation Fuel (OPIS) Future.

Decision points	Factors influencing an aircraft operator's decision on CEEUs
<p>Lack of supply</p>	<p>Situation today:</p> <ul style="list-style-type: none"> Presently there are only two programmes which have been approved for the First Phase of CORSIA – American Carbon Registry (ACR) and the Architecture for REDD+ Transactions (ART), and consequently “<i>the market for CORSIA-eligible offsets is severely constrained</i>”.³⁶ <p>In the future:</p> <ul style="list-style-type: none"> There are programmes that have received conditional approval (Verified Carbon Standard, Gold Standard and Climate Action Reserve)³⁷ and they have made submissions to receive full approval. The Verified Carbon Standard and Gold Standard are in particular the largest suppliers of emission units in the voluntary carbon market. If they are given full approval at the October 2024 ICAO council meeting, this will mean greater available supply of CEEUs.
<p>Price of CEEUs</p>	<p>Situation today:</p> <ul style="list-style-type: none"> Given that CEF reduction claims are used to reduce the number of CEEUs that have to be surrendered, as we mentioned above, CEF prices should logically bear some relation to the price of CEEUs. This is however, not presently the case because: <ul style="list-style-type: none"> ICAO need for corresponding adjustment: As we discuss also in a separate paper, to ensure that CEEUs were appropriately accounted for by the host country when claiming achievement of its target(s) and in the absence of any other available tools to ensure conformity with international provisions to avoid double claiming, the Technical Advisory Board (TAB) adopted the tool used under Article 6 of the Paris Agreement for double counting (i.e. corresponding adjustment). In other words, it sought to ensure that CEEUs that were issued by eligible crediting programmes, would be issued together with a commitment by the host country to carry out an adjustment to its emissions balance at the time of reporting for the purposes of its NDC. As applied by the Article 6 guidelines, a corresponding adjustment is a penalty on the host country even when there is no double claiming (e.g. because the activity is not part of the host country's NDC). This is because the host country has to increase its NDC burden by the volume transferred, and the associated cost of which can be modelled based on the marginal cost and the associated opportunity cost of the host country meeting its NDC.³⁸ Some countries³⁹ have official material stating how much they would charge for them to grant a corresponding adjustment Lack of suitable price references: There may be a lack of suitable price references for over-the-counter CEEU transactions (see the discussion on hedging contracts below). <p>In the future:</p> <ul style="list-style-type: none"> For the avoidance of doubt, it is unlikely that any CEEU prices will decrease in the future as cheaper abatement opportunities are exhausted with more expensive abatement activities remaining.

³⁶ See United Airlines 2023 Annual Report at page 15.

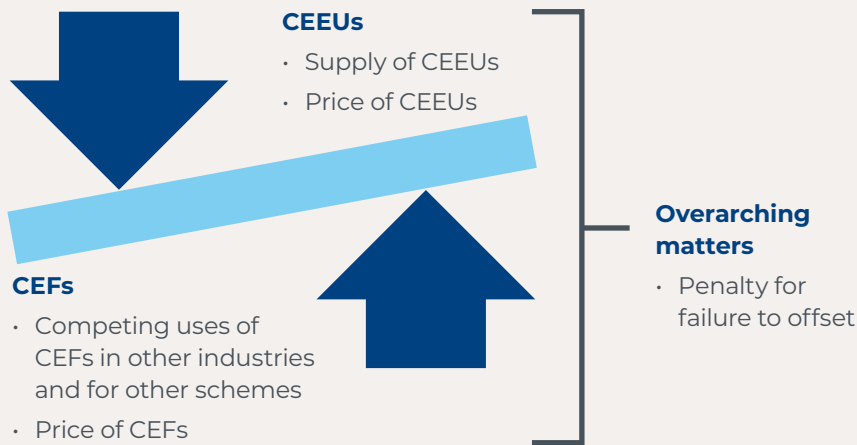
³⁷ We discuss the reasons for this in a separate paper.

³⁸ For the pricing based on opportunity cost pricing for adjusted emission reduction credits (i.e. those that come with a corresponding adjustment), see: <https://ppp.worldbank.org/public-private-partnership/library/corresponding-adjustment-and-pricing-mitigation-outcomes>

³⁹ See e.g., Ghana:

Decision points	Factors influencing an aircraft operator's decision on CEEUs
<p>Availability of deliverable CEEU hedging contracts</p>	<p>Situation today:</p> <ul style="list-style-type: none"> As at 2 July 2024, there are two deliverable futures contract for CEEUs for the First Phase. One's the ICE Futures Europe CORSIA Eligible Emissions Units (2024-2026). As discussed above and in a separate paper, CEEUs are required to benefit from a host country attestation authorising the use of the CEEU for international mitigation purposes, and be subject to corresponding adjustments. As the ICE futures contract provides that the ACR is the only eligible registry, it is not clear (i) whether any existing emission units are presently deliverable under the futures contract, and (ii) whether any of the countries that form a bulk of ACR's registered projects would provide such an attestation/authorisation. It may therefore be difficult for an aircraft operator to effectively hedge its obligations. For example, the bulk of ACR's projects are in the United States. A future Trump administration could pull the United States out of the Paris Agreement leading to the situation where the above-mentioned attestation/authorisation could not be offered by the United States. Abaxx Exchange has also recently launched its CORSIA-labelled futures contract.⁴⁰ This contract offers the market an alternative hedging solution to the ICE contract. Presently Abaxx's contract allows for delivery of ART and ACR units. Guyana's authorisation and issuance of CEEUs for the First Phase has been touted as the <i>"world's first carbon credits that are eligible for use by airlines"</i> for the First Phase.⁴¹ As at 2 July 2024, there does not appear to be any other issued units in either ART or ACR which are eligible for the First Phase. <p>In the future:</p> <ul style="list-style-type: none"> Other deliverable future products may be launched in the market including for other phases or for specific types of standards, noting that, e.g., the ICE futures contract is limited to ACR as the only eligible registry. Both ICE's futures contract and Abaxx's futures contract also permits each of them to designate additional eligible carbon registries/standards in the future (e.g., the Verified Carbon Standard administered by Verra or Gold Standard once they are approved by the ICAO Council for the purposes of the First Phase). This development could provide further hedging solutions for aircraft operators depending on their needs.

Factors considered by an aircraft operator for First Phase offsetting obligations



The commercial dynamics and conundrum for aircraft operators

With the aforementioned in mind, there are four potential paths for an aircraft operator to take in respect of its compliance requirements for the First Phase:

- Approach 1:** Claim CEF emission reductions only
- Approach 2:** Surrender CEEUs only
- Approach 3:** Do a mix of 1. and 2., i.e. claim some CEF emission reductions and surrender CEEUs for the remaining emissions that the aircraft operator is liable for
- Approach 4:** Do nothing – i.e. pay the penalty

⁴⁰ HFW acted for Abaxx in the structuring of this product.
⁴¹ See <https://lcds.gov.gy/guyana-announces-worlds-first-carbon-credits-for-use-in-un-airline-compliance-programme-corsia/>. See also the March 2024 news announcement from ICAO: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-News.aspx> "ICAO welcomes the announcement by Guyana for its authorization and issuance of CORSIA eligible emissions units for use by aeroplane operators in Phase 1 of CORSIA (2024-2026 compliance period)."

The approach to be taken will likely be driven by commercial drivers.

Approach 4 is unlikely to be tenable once jurisdictions clarify the penalty regime for not offsetting emissions under CORSIA. To the extent that there are sufficiently robust penalties associated with this, e.g., a fine on top of the aircraft operator still having offset, as well as effective enforcement regimes (e.g., a fleet lien that allows the State to detain a defaulting aircraft operator's fleet of aircrafts).

Approaches 1 to 3 will depend on the issues and drivers that we have already identified above, but ultimately it is invariably tied to the price of CEFs and CEEUs.

It has already been seen that some airlines have already opted to go with Approach 2 due to the current viability of CEFs. For instance, AirAsia CEO Tony Fernandes said in a shareholder letter that he intends to introduce a "sustainability levy" on airfares to purchase carbon offsets (i.e. CEEUs). He added that "while we support SAF, it must be economically viable and not burdensome to our passengers. The reality is that SAF is not yet a viable reality", citing the costs and significant logistical challenges of SAF production.⁴²

Nonetheless, as we discuss above, future developments could change the present position (e.g., those relating to future supply for CEF and CEEUs) and this can impact both

present and future decision-making for an aircraft operator. For instance, managing supply constrains in the near term by locking in supply of CEF through offtake contracts.

Conclusion

The commercial dynamics at play here are both a challenge and an opportunity for aircraft operators. With the right preparation, CORSIA compliance costs can be managed in different stages (near term and future). Understanding how CORSIA fits in with other current, future and embryonic regulatory regimes enables aircraft operators to better understand how to maximise limited resources (CEFs and CEEUs) and manage price and supply risk.

⁴² AirAsia eyes offsets from new fare levy over 'burdensome' SAF (qcintel.com)

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