REPORT

CORSIA First Phase Scenario Modeling

Analysing future prices, supply and demand under 6 different scenarios for CORSIA

Sylvera

Contents

Foreword

‘A watershed moment for compliance markets’

Since co-founding Sylvera in 2020, I've watched voluntary carbon markets start to price in the climate integrity of the underlying projects. However, until recently, compelling and predictable drivers of demand have been conspicuously absent. National emission trading scheme inclusion of project-based credits has started to change the game, and CORSIA looks to take this one step further.

Our recent data simulations and conversations with market experts - analysed in this report - reveal fascinating market tensions that airlines and stakeholders should understand: while airlines might be purchasing up to 144 million eligible emissions units by January 2028, the authorization process under Article 6 of the Paris Agreement is creating unique supply dynamics that will define this nascent market.

What makes this particularly challenging is the chain of uncertainty it creates. Many regulators haven't yet defined enforcement rules, airlines are hesitant to commit without supply certainty, and host countries see no urgency to accelerate the authorization of credits without clear demand signals.

This report represents Sylvera's first comprehensive exercise to quantify these dynamics through our state-of-the-art agent-based market simulation, to delve deeper into the issues at play and project potential scenarios.

The opportunity here lies with the organizations that understand and navigate this supply challenge, who will not only secure their compliance obligations but gain significant economic advantage in a potential supply crunch.

Allister Furey
CEO
Sylvera

Executive summary pt.1

Under CORSIA, airlines with compliance obligations in the First Phase (2024-2026) are expected to purchase and cancel eligible emissions units (EEUs) by 31 January 2028. However, the supply of EEUs require host country authorization and corresponding adjustments under Article 6 of the Paris Agreement.

Currently, it appears that very few host countries are prepared to authorize the corresponding adjustments — posing a significant risk to CORSIA implementation.

The risk of inadequate supply for full compliance of the First Phase is by far the most important concern amongst the 40+ external policy and market experts that participated in roundtable discussions hosted by Sylvera recently.

A shortage of EEUs could have cascading effects on how governments and airlines respond. This is exacerbated by the fact that many regulators have not yet defined the rules around how CORSIA compliance will be enforced in their jurisdictions.

Reflecting this concern, a survey amongst the experts identified that the most likely outcome for CORSIA's First Phase might feature partial compliance (not all airlines cancel credits as expected) in conjunction with limited EEU supply (risk of shortage relative to the full offsetting requirements).

This report summarizes these findings and Sylvera's first-ever set of scenarios for CORSIA, drawing on agent-based market simulations.

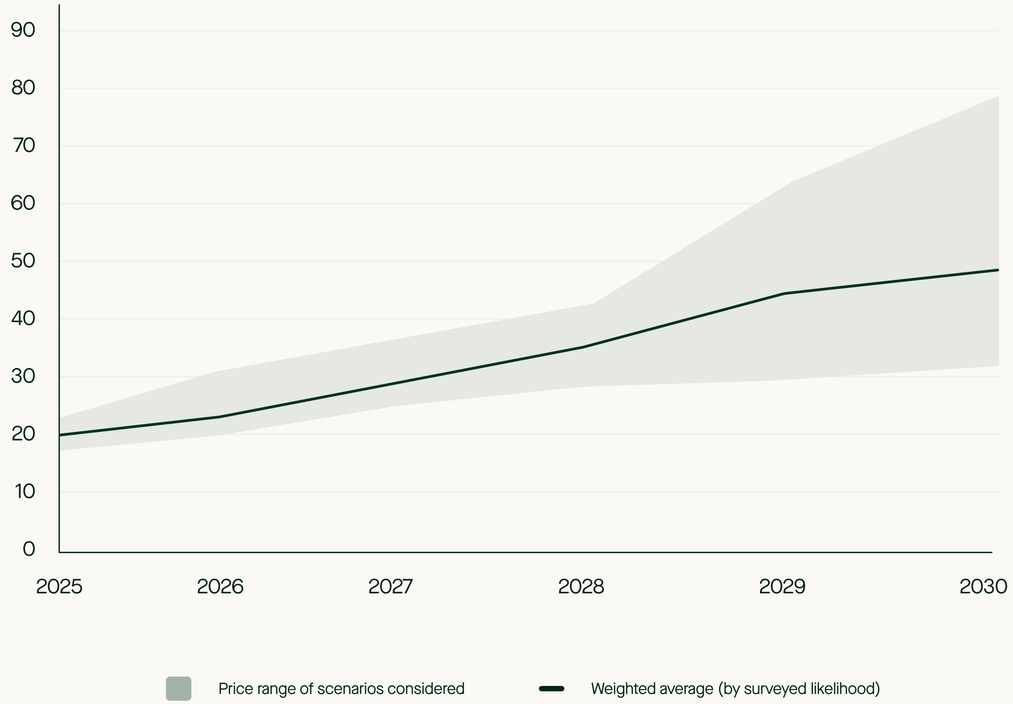
Executive summary pt.2

The analysis suggests that EEU prices may reach **$25–36 by 2027**, depending heavily on demand and supply conditions. The estimated demand for First Phase EEUs ranges from 74 to 144 million units, tied to varying scenarios of airline compliance.

On the supply side, scenarios diverge sharply: a **maximum supply of 274 million EEUs** could materialize with broad host country authorizations and large influx of JREDD+ and PACM credits. Conversely, if few countries are ready to authorize credits, First Phase supply could be constrained to **just 136 million EEUs**.

The primary market value of First Phase EEU demand is hence estimated to range from **$1.8 billion to $5.2 billion**, comparable to the entire value of the voluntary carbon credit retirements on an annualized basis.

Modeled CORSIA EEU prices (nominal USD)



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Background pt.1

A brief introduction to CORSIA

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is a global market-based program adopted in 2016 by the International Civil Aviation Organization (ICAO), a UN agency. Its goal is to achieve carbon-neutral growth in international aviation from 2020 onward.

Under CORSIA, airlines must purchase approved carbon credits, known as Eligible Emissions Units (EEUs), to offset any annual emissions that exceed 85% of their 2019 baseline.*

CORSIA is structured in three phases: the Pilot Phase (2021–2023), the First Phase (2024–2026), and the Second Phase (2027–2035). For the current First Phase, airlines have until January 31, 2028, to retire EEUs covering excess emissions from 2024 to 2026.

Although the compliance deadline in January 2028 is fast approaching, there remains critical uncertainties that will influence on the scheme's trajectory.

For further information about CORSIA, please refer to our blog: Decoding CORSIA Phase 1.

* For CORSIA's Pilot and First Phases, the baseline only accounts for international emissions in 2019 between countries that are voluntarily participating in CORSIA. The mandatory Second Phase would see a higher baseline that accounts for international emissions between countries, subject to certain exemptions for Least Developed Countries (LDCs), Small Island Developing States, Landlocked Developing Countries and countries contributing to a negligible share international aviation emissions

Background pt.2

Why this report is important - and why now?

As a platform helping stakeholders navigate carbon markets, Sylvera has developed an **in-house agent-based market simulation model** to understand future prices, supply and demand under different scenarios for CORSIA.

In June 2025, Sylvera convened a series of roundtables that brought together 40+ experts across policy (including CORSIA TAB members), carbon crediting standards, and the private sector to discuss the initial analysis.

The discussions highlighted key concerns amongst the participants, which could be summarized as the classic "chicken-and-egg" challenge for a nascent market like CORSIA: **project developers and host countries need clear demand signals to act and unlock supply.**

But **demand signals are muted today because airlines are still waiting for clarity over supply conditions and regulatory guidance** on how CORSIA will be enforced in their jurisdictions.

This report aims to raise awareness to this challenge, and describe possible outcomes for the CORSIA market. The modeling analysis showcases why this matters – the market depends crucially on how this challenge will be resolved in the next few years.

CORSIA Market Drivers

The CORSIA market remains nascent, and hinges on the growth of available supply.

The market for CORSIA EEUs Pt.1

A nascent market

Although CORSIA had a Pilot Phase in 2021-2023, there was effectively no market for CORSIA EEUs because the COVID-19 pandemic caused a dramatic decline in international aviation emissions, leading to zero offsetting requirements for the Pilot Phase.

As CORSIA has now entered its First Phase (2024-2026), it faces the challenge of building up a liquid market in a matter of a few years, in time for the compliance deadline in January 2028.

As of June 2025, **only a single supply source has issued credits that are eligible under CORSIA First Phase** (15.84 million ART TREES credits from a Guyana jurisdictional REDD+ program). In an auction in late 2024, Guyana's EEUs were offered at $21.70, but only 11 airlines bought fewer than 400,000 of them.*

As a result, there is negligible liquidity in the market, impeding price discovery.

* There are quality concerns over the Guyana JREDD+ program, as highlighted by an Article 6.2 Technical Expert Review in May 2025, questioning the environmental integrity of its HFLD (high-forest, low-deforestation) baseline and CA accounting within its Nationally Determined Contribution (NDC).

The market for CORSIA EEUs Pt.2

Eligibility criteria on EEU supply

The ICAO's CORSIA Emissions Unit Eligibility Criteria establish the framework for assessing carbon crediting programs and their methodologies for CORSIA eligibility.

So far, the ICAO has approved six carbon crediting programmes to provide EEUs for the First Phase of CORSIA: American Carbon Registry (ACR), ART TREES, Climate Action Reserve (CAR), Global Carbon Council (GCC), Gold Standard (GS), and Verra's Verified Carbon Standard (VCS).

Under each standard, EEU supply is subject to exclusions based on methodology, carbon credit type, vintage, and project start date.

Furthermore, only projects that secure a Letter of Authorization (LOA) from the host country, along with corresponding adjustments (CAs) or insurance if CAs are not obtained, can supply EEUs.

The market for CORSIA EEUs Pt.3

Growth of eligible supply sources

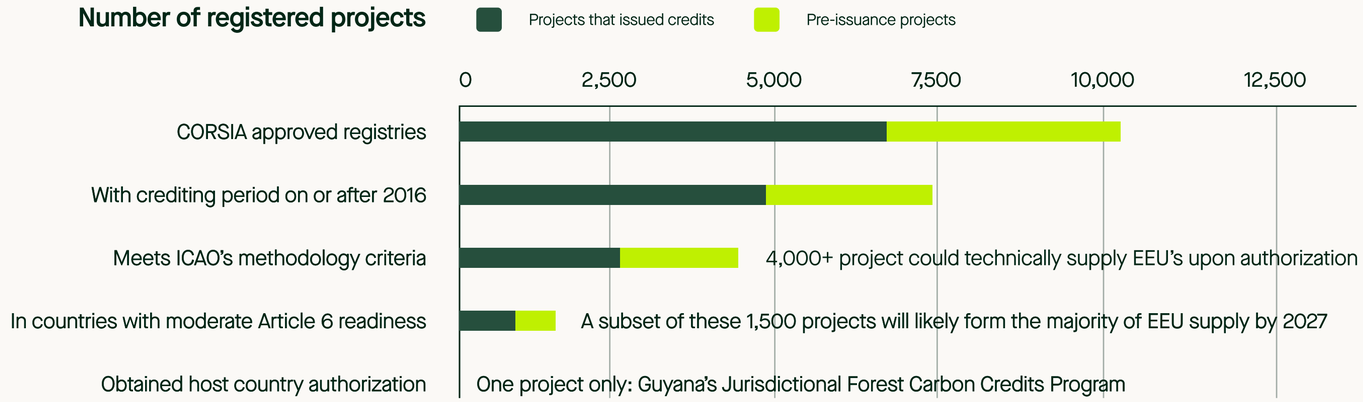
Five more standards are conditionally approved for CORSIA's First Phase. These include the BioCarbon Fund Initiative for Sustainable Forest Landscapes, Cercarbono, the Forest Carbon Partnership Facility (FCPF) Carbon Fund Methodological Framework, Premium Thailand Voluntary Emission Reduction Program (T-VER) and Isometric.

The full approval of these standards, subject to meeting specific conditions stipulated by ICAO, may bring further supply in the future. However, these standards contain far fewer projects and credit issuances than the ones that are already approved.

Further growth may come from the Paris Agreement Crediting Mechanism (PACM), established under Article 6.4 of the Paris Agreement. Although it is not yet operational, there are expectations that it will be approved by ICAO after it becomes operational. This is potentially significant due to the large number of CDM projects that could transition to PACM methodologies.

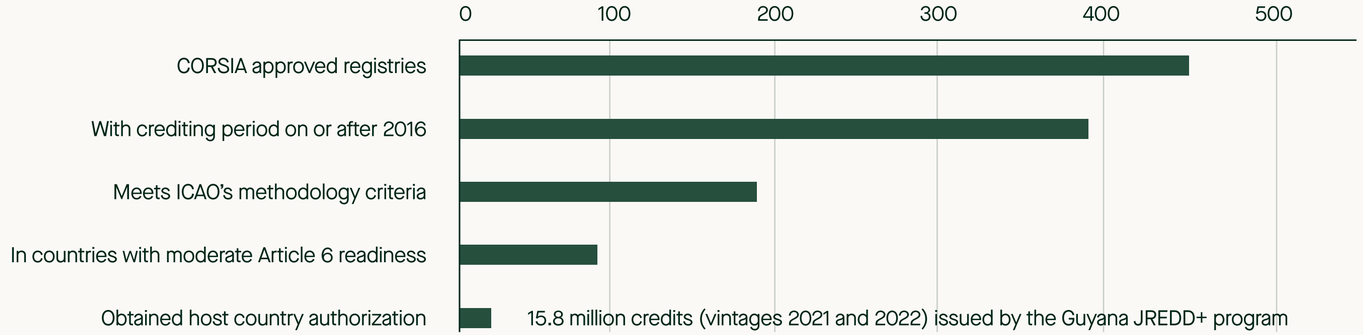
Host country authorizations

Number of registered projects



Current inventory of vintage 2021-2026 credits (Millions)

Credits already issued and not yet cancelled or retired



These currently represent a major constraint to the potential supply of EEUs

Given the requirement for host country authorizations to grant corresponding adjustments, the actual scope of EEU supply is more limited.

Of the 4,000+ projects that meet ICAO's eligibility criteria (i.e. registries, crediting period, methodology), **only around 1,500 of those are located in the 16 countries that are at least moderately ready for Article 6 authorizations** (see annex). They have an estimated inventory of ~80 million credits that have been issued and not yet cancelled or retired.

CORSIA EEU supply in the First Phase depends crucially on the willingness and ability for those governments to provide authorizations to the credits, including those in the inventory and those to be issued or to be issued by 2027.

Source: registry data as of June 2025; Sylvera assessment of project-level eligibility based on ICAO criteria and country-level readiness for Article 6 authorizations

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The demand side Pt.1

Participation of CORSIA

Participation of CORSIA is defined at a country level, which then translates the rules to national regulations to be followed by individual aeroplane operators.

The ICAO's Standards and Recommended Practices (SARPs) guide participating countries in implementing CORSIA through national regulations. These regulations cover the monitoring, reporting, and verification (MRV) of international aviation emissions and the enforcement of offsetting obligations.

Each aeroplane operator is attributed to a specific CORSIA member country to which they must report their MRV and offsetting obligations. Currently, 129 countries are voluntarily participating in CORSIA's First Phase. However, the mandatory Second Phase, commencing in 2028, will encompass all countries with minor exceptions.*

The emissions coverage and offsetting requirements of CORSIA will then be evaluated based on international aviation emissions between states that take part in CORSIA.

* These exceptions include Small Island Developing States, Least Developed Countries (LDCs), Landlocked Developing Countries, and nations contributing a negligible share of international aviation emissions.

The demand side Pt.2

Uncertainty in compliance demand for CORSIA EEUs

Although the emissions coverage of CORSIA is clearly defined, the level of compliance, in practice, could be lower.

Few countries have taken steps to enforce CORSIA through national regulation. **Out of 36 countries responsible for 90% of international aviation emissions, fewer than 15 have indicated willingness or proposed regulations to implement CORSIA.** Notably, the top two emitters, China and the USA, have not confirmed their intention to enforce the scheme.

Nonetheless, there is speculation amongst market participants that some airlines will comply with CORSIA offsetting requirements irrespective of legal enforcement by their country of attribution.

There has also been speculation that if the European Union (EU) deem CORSIA as unsatisfactory upon its review scheduled in 2026, it could extend the EU Emissions Trading System to cover international aviation, further complicating the demand of EEUs. Although members of the EU indicated that they are committed to CORSIA's success, the policy decision remains to be seen.

Additional factors that influence compliance demand for EEUs include the level of international aviation traffic and the uptake of sustainable aviation fuels (SAF), but there is unlikely to be a material impact on Phase 1 offsetting requirements.

The key uncertainties

The risk of inadequate credits with LOAs and CA's was voted as the primary concern

TYPE	UNCERTAINTY	VOTED AS MOST IMPORTANT	VOTED AS 2ND MOST IMPORTANT
Supply	**Volume of credits with LOA's and CA's** do not materialize at scale	27%	32%
Supply	**Integrity concerns** over CORSIA EEU supply	24%	18%
Demand	**Lack of CORSIA enforcement in the US**, leading to inaction by some airlines	19%	9%
Supply	**Insurance** (required by some standards) not yet readily available to cover volumes for Phase 1	16%	12%
Demand	**EU** may opt to cover international emissions in the EU ETS instead	8%	12%
Demand	Lack of CORSIA enforcement in **other jurisdictions outside of the EU and US**	5%	18%

The 40+ experts who participated in the roundtables were asked to rank the list of six uncertainties in order of their importance to determine the success or failure of CORSIA.

Concerns around the scaling up of LOAs and CAs received the highest rank from most participants, reflecting a consensus view that host country authorizations act as a critical bottleneck for CORSIA.

Concerns around the integrity of EEUs came second, but the response diverged around the roundtables: ranking high amongst participants in the APAC session, and ranking lower amongst those from Europe, Africa, and the Americas.

Issues concerning insurance and the EU's endorsement of CORSIA ranked lower, with some roundtable participants eager to dispel them as significant obstacles to CORSIA.

See Annex II for detailed survey results.

CORSIA Scenarios

The 6 distinct scenarios

These scenarios, A-F, span a range of demand and supply outcomes for CORSIA

Scenario matrix

Demand	Supply: Maximum supply* Assumes 30+ host countries are ready to authorize and adjust credits as of 2026; supply is also boosted by large JREDD+ and PACM issuances.	Supply: Moderate supply* Assumes 15+ host countries are ready to authorize and adjust credits as of 2026.	Supply: Limited supply* Assumes existing constraints remain in near-term, with few countries ready to authorize large volumes.
Full compliance First Phase offsetting compliance materializes by 31 January 2028.	**SCENARIO A**	**SCENARIO B**	Unlikely, due to inadequate supply^
Delayed compliance First Phase compliance deadline delayed to January 2030.	Plausible alternative, not presented	**SCENARIO C**	**SCENARIO D**
Partial compliance First Phase compliance observed by airlines in the EU, Switzerland, UK, Japan, Canada, and key Gulf States such as UAE and Qatar.	Plausible alternative, not presented	Plausible alternative, not presented	**SCENARIO E**
No compliance CORSIA collapses ~2027 due to inadequate supply and/or lack of compliance.	**SCENARIO F**		

* Also assumes that insurance options (or alternative safeguards) are readily available for for authorized credits, so that credits can be used for compliance.
^ Technically, regulators could still enforce CORSIA fully – with airlines paying penalties in the event that they could not cancel sufficient credits in time.

Assumed conditions

The modeling analysis further assumes a specific set of conditions for each scenario

Scenario		Assumed conditions
A	Full compliance with maximum EEU supply	+ All major jurisdictions in CORSIA Phase 1 will see compliance due to either regulatory requirements or voluntary participation + By 2027, over 30+ host countries will have the policy and capacity to issue authorizations (with readily available insurance) and implement CAs + Significant EEU supply coming from JREDD+ and PACM volumes, combined to exceed 100 million by end of 2027
B	Full compliance with moderate EEU supply	+ Similar demand conditions as in Scenario A, but under more restrictive supply conditions + A smaller set of host countries having developed the policy and capacity for authorization and CAs by 2027, and + Slower issuances from JREDD+ programs and delays in bringing PACM credits to the market
C	Delayed compliance with moderate EEU supply*	+ Similar supply conditions as in Scenario B + ICAO delays the First Phase compliance deadline by two years due to a lack of EEU supply (to 31 January 2030) + The delay allows for more time during which EEU supply ramps up. By then, more host countries should have assessed their progress towards the 2030 climate targets outlined in their Paris Agreement Nationally Determined Contributions (NDC), thereby will have enhanced clarity and capacity to authorize the export of carbon credits as EEUs
D	Delayed compliance with limited EEU supply*	+ Similar demand conditions as in Scenario C, but projects a limited supply + Host countries' readiness to authorize and implement CAs remains relatively constrained in the near-term, with just 7 countries being able to provide some authorizations between 2025-2026
E	Partial compliance with limited EEU supply	+ Similar supply conditions to Scenario D + Partial compliance whereby only a few major air traffic jurisdictions, namely EU, the UK, Switzerland, Japan, Canada, the UAE, and Qatar, enforce CORSIA through regulation, and airlines in other jurisdictions do not pursue voluntary participation. This effectively halves the demand for CORSIA EEUs in Phase 1
F	No compliance	+ Assumes that due to ongoing challenges in supply conditions, the CORSIA program fails to generate any compliance either through regulation or voluntary participation + The underlying supply carbon credits may continue to find buyers in the voluntary or other compliance markets

* Any delay in CORSIA First Phase compliance would require clear and timely communication to provide confidence to the market. Otherwise, a delay could further suppress supply signals and provoke further questions about whether CORSIA will be implemented. The modeling assumes the former, positive case materializes.

We surveyed 40+ experts

The survey of roundtable participants indicated that partial compliance with limited supply is relatively likely

To help inform this report, we have conducted roundtable discussions with leading market experts, including individuals from CORSIA's Technical Advisory Body, carbon crediting standards, government bodies, and market participants from the private sector.

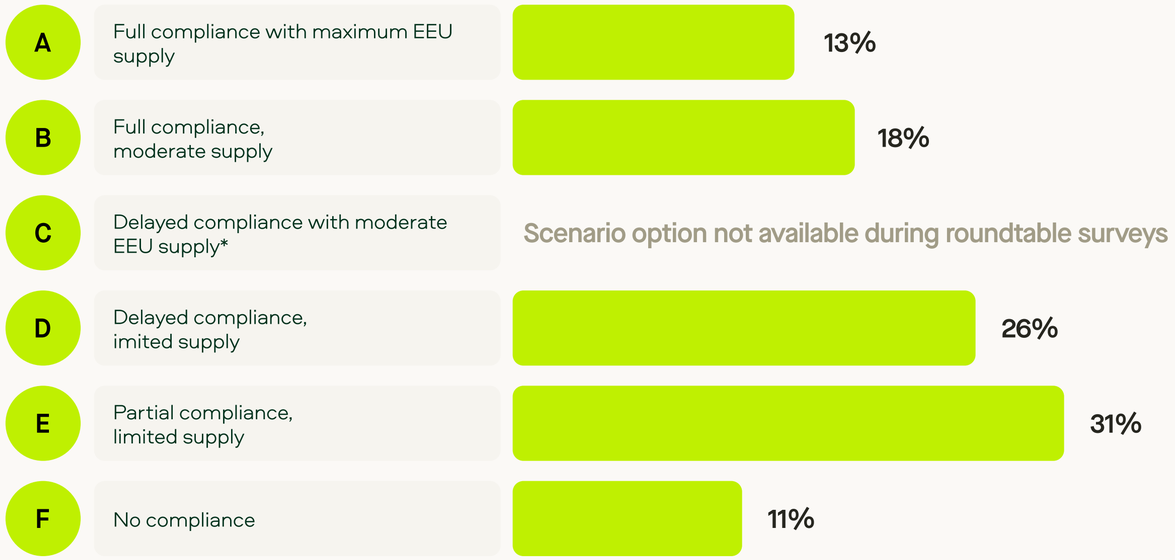
The participants were given the following:

- Qualitative description of the five scenarios*
  (they were unaware of Sylvera's modeling results)

- 100 points to allocate based on their evaluation of each scenario's likelihood.

* Given the refinements in scenario options and terminologies after the roundtable discussions, and the fact that individuals will inherently have slightly different interpretations of each scenario description, these survey results should be interpreted with caution

Survey result: likelihood of various CORSIA scenarios



In the initial version of the scenario matrix, Scenario C did not exist and was only created after feedback from the roundtable discussions. As a result, the participants casted votes for five scenario only (excluding Scenario C). Additionally, the initial scenarios presented applied the terminology "enforcement" to describe demand conditions. We have later modified it as “compliance” to be clarify that demand may originate from voluntary compliance by airlines even if their regulators do not enforce CORSIA.

Based on the aggregated survey responses, the extreme scenarios (A, F) were deemed the least likely.

Meanwhile, **scenario E with partial compliance and limited supply received the most votes**. Importantly, “limited supply” seemed to be the prevailing sentiment as scenarios D and E combined received over half of the votes.

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CORSIA Modeling Results

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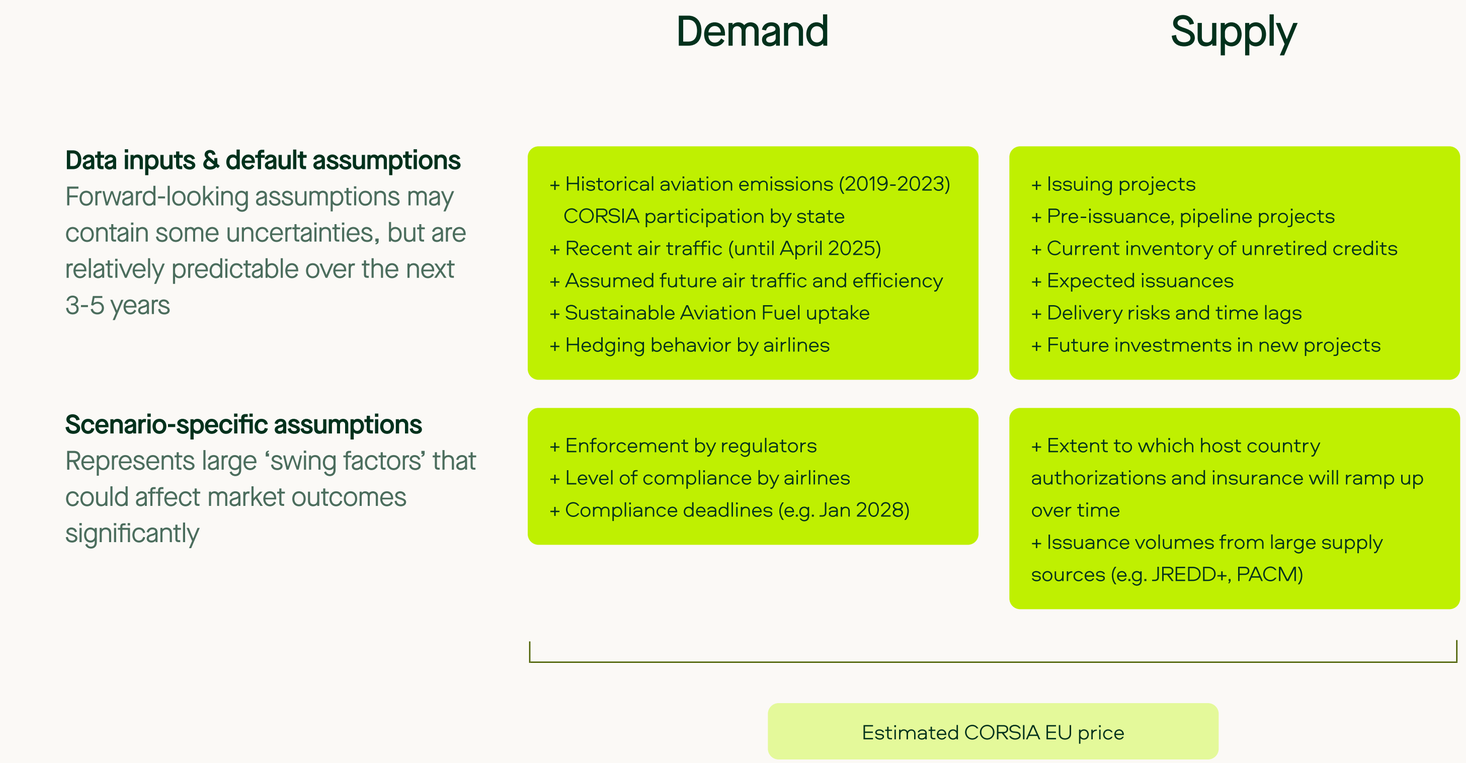
Our modeling approach

Drawing on the best available data and assumptions to simulate the CORSIA EEU market

The model considers all relevant supply and demand components of the CORSIA EEU market. In particular, it has a bottom-up representation of all individual host countries that will provide the Article 6 authorizations, as well as emissions from airlines facing compliance obligations.

The following diagram identifies the key input data and assumptions that influence the CORSIA modeling results.



Note: please refer to the annex for further information on the modeling approach and detailed assumptions

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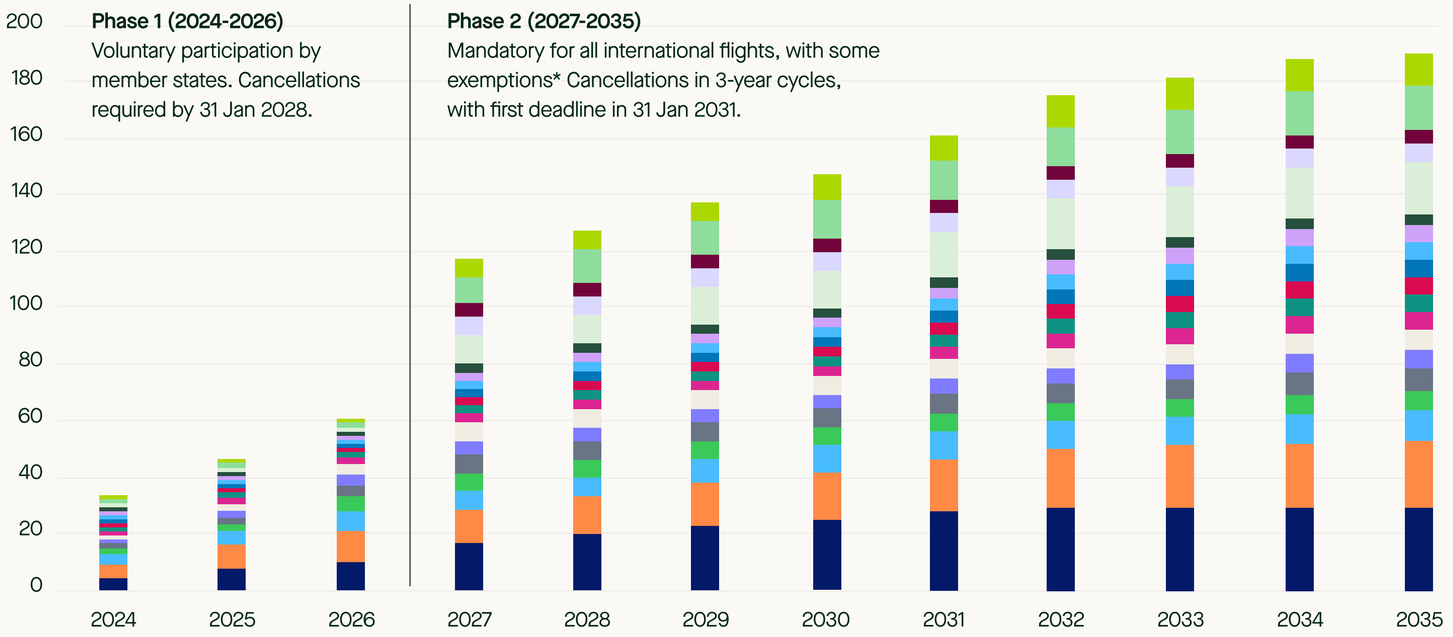
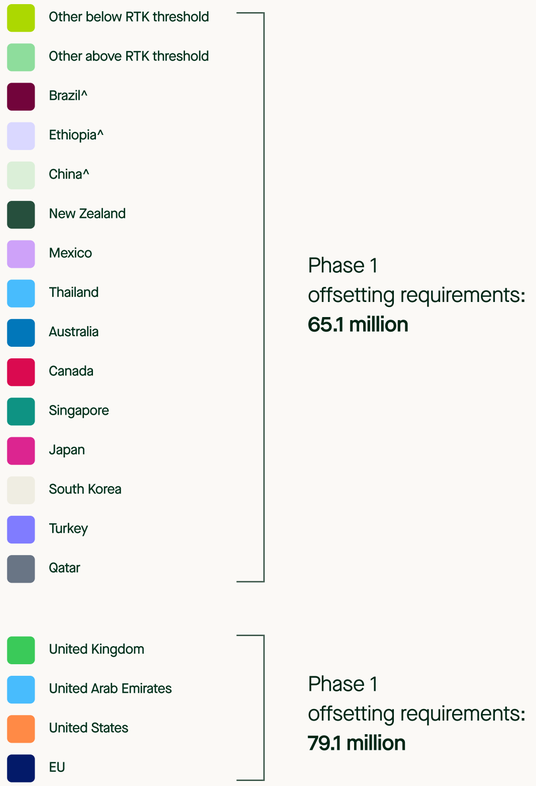
Estimated offsetting requirements

Airlines regulated in the EU, US, UAE and the UK alone could represent half of Phase 1 offsetting requirements

Estimated offsetting requirements under CORSIA (MtCO2e)

Actual demand for CORSIA EEUs may be lower, depending on the level of compliance and uptake of sustainable aviation fuels (SAF)





Phase 1 offsetting requirements: **65.1 million**

Phase 1 offsetting requirements: **79.1 million**

* Notably, states that represented less than 0.5% of global international revenue-ton-kilometer (RTK) in 2018 do not need to meet offsetting requirements.
^ Jurisdictions which do not volunteer for CORSIA Phase 1, and may participate from Phase 2 onwards. However, Ethiopia could be exempted as an LDC.
Source: Sylvera analysis as of June 2025, using aviation emissions data from ICAO (2024, 2025) and the European Commission (2024). Some countries (e.g. India) are not identified and placed in the 'others' category because of missing data on airline-level emissions.

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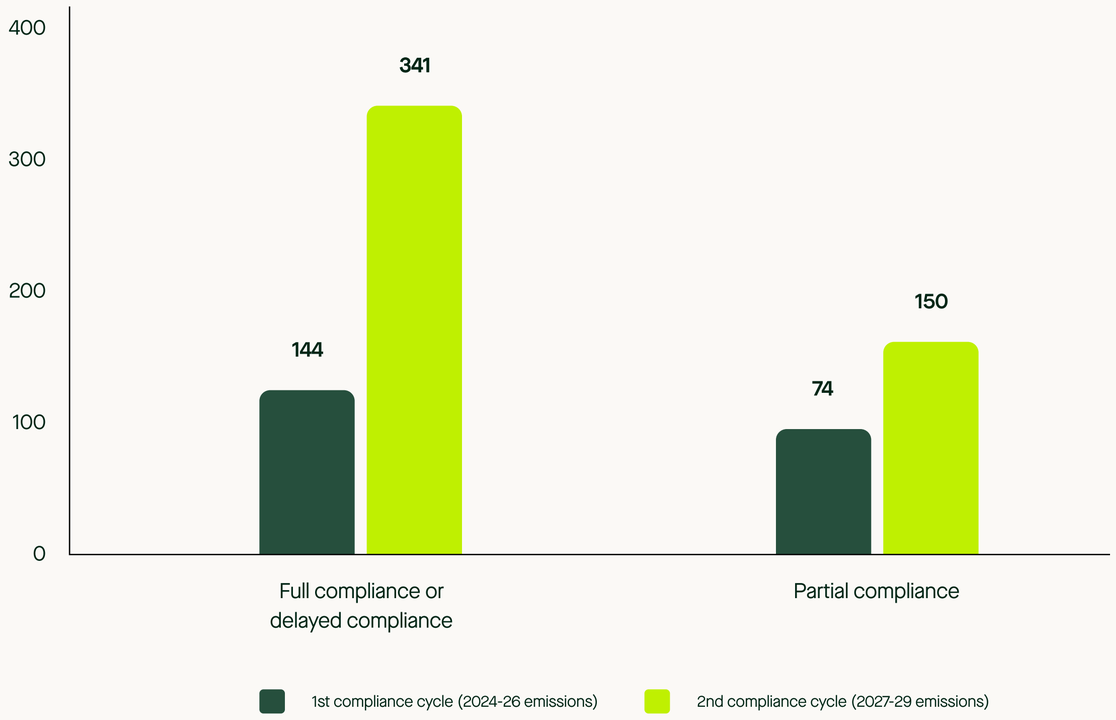
Estimated CORSIA demand

CORSIA EEU demand could reach 144M for Phase 1 if most airlines in participating jurisdictions comply

Estimated CORSIA EEU demand by aeroplane operators (millions)



In a **full compliance** scenario, where all major air traffic hubs enforce CORSIA offsetting or witness voluntary offsetting by airlines, First Phase demand for EEUs is projected to be 144 million.

This is the same under a **delayed compliance** scenario, which merely shifts the cancellation deadline by two years, rather than affecting the absolute volume.

A **partial compliance** scenario would roughly halve the First Phase demand at 74 million EEUs, as it assumes that only aeroplane operators in the EU, UK, Switzerland, Japan, Canada, UAE, and Qatar will be cancelling credits for compliance.

The estimated CORSIA EEU demand increases significantly after First Phase due to an increase in coverage (e.g. China, India).

Source: CORSIA market modeling analysis performed by Sylvera, results as of 27 June 2025

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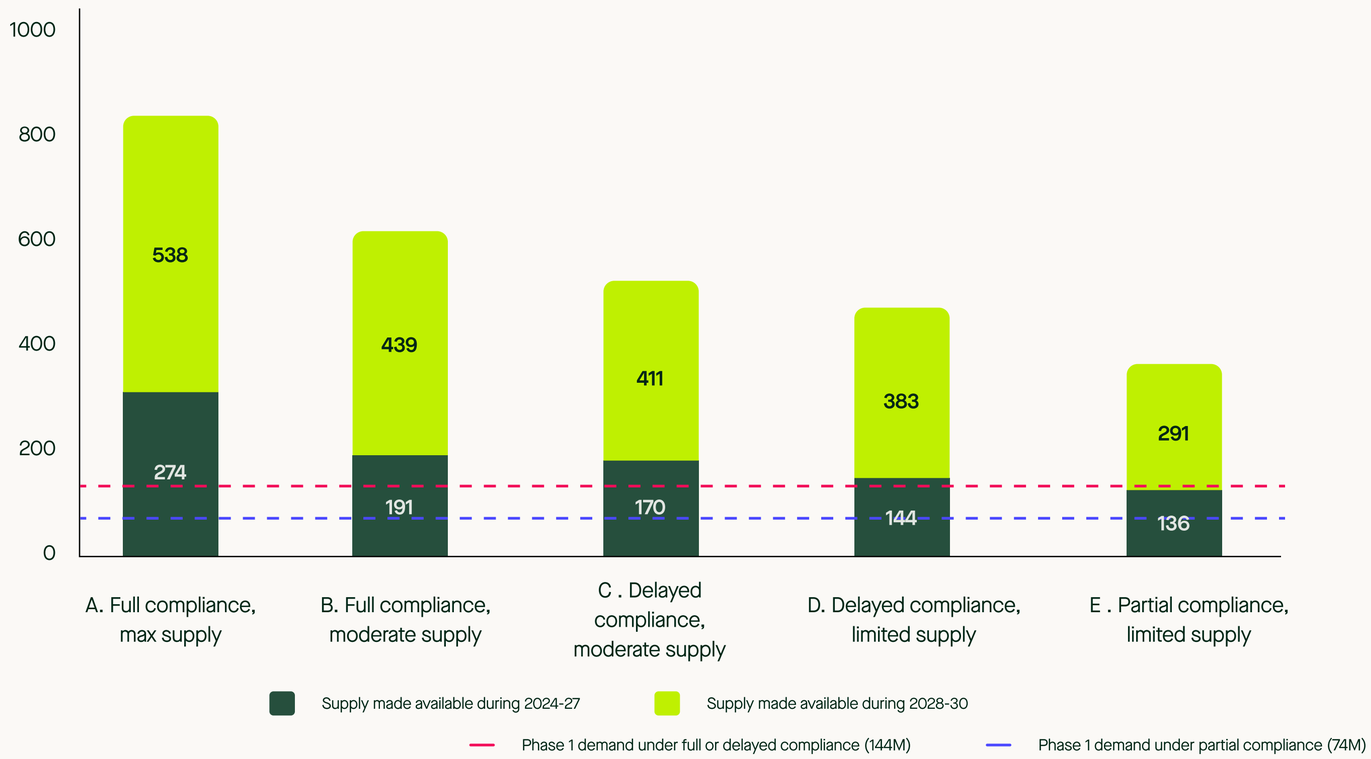
Estimated CORSIA supply

CORSIA EEU supply estimated between 136-274M by the end of 2027, depending on host country authorizations

CORSIA EEU supply with host country authorizations (millions)



The supply of CORSIA EEUs vary widely across the scenarios, reflecting significant uncertainty over host country authorizations and future volumes from JREDD+ and PACM credits.

Scenario A, which is most optimistic regarding future supply, sees over 270 million EEUs made available to the market by the end of 2027, which is 130M larger than the expected total demand in Phase 1.

Scenarios B and C assume moderate supply, resulting in 170-191 million supply by end of 2027. The difference between the scenarios are explained by the increase in supply (and authorizations) in response to higher prices in Scenario B.

Scenarios D and E assumes constraints in host country authorizations that lead to only 136-144 million supply by the end of 2027.

Source: CORSIA market modeling analysis performed by Sylvera, results as of 27 June 2025

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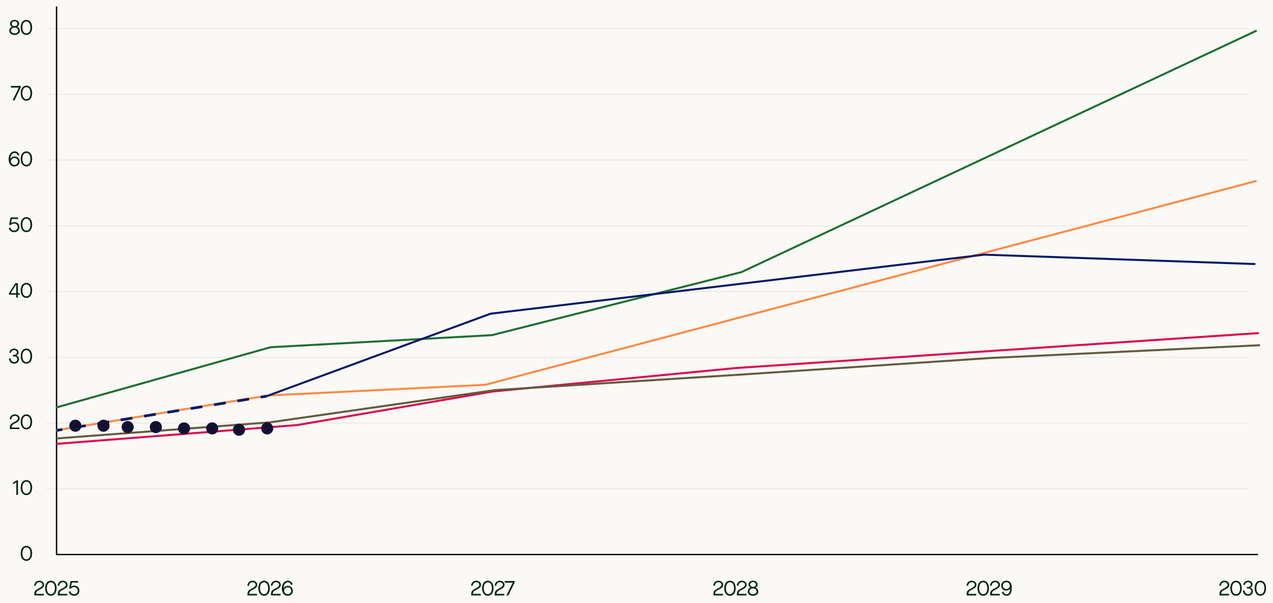
Estimated CORSIA prices

CORSIA EEU price could reach $25-36 in 2027, depending on supply availability and compliance levels

Estimated price of CORSIA EEUs (nominal US$)



Scenario A (full compliance, maximum supply)
Prices reflect relatively abundant EEU supply volumes made available to the market for compliance, with a surplus of ~130M after cancellations in Jan 2028.

Scenario B (full compliance, moderate supply)
Prices approximately $10-15 higher than Scenario A as compliance deadline approaches, due to fewer countries authorizing credits and far less volumes from JREDD+ and PACM.

Scenario C (delayed compliance, moderate supply)
Prices in 2027-2028 diverge lower relative to from Scenario B as the market reacts to an unanticipated two-year delay in the Phase 1 compliance deadline.* However, the offsetting requirements are merely shifted back, resulting in higher price pressure as the (delayed) Phase 1 compliance deadline approaches in Jan 2030.

Scenario D (delayed compliance, limited supply)
Rapid increase in prices in the near term due to constrained supply and an expectation of shortage for Phase 1 compliance in Jan 2028. An unanticipated two-year delay in Phase 1 compliance, announced in 2027, slows down the price increase in 2027-2028. Limited eligible supply ultimately pushes EEU prices above $60 for Phase 1 compliance.

Scenario E (partial compliance, limited supply)
Estimated price trajectory much lower than Scenario D, due to partial compliance on offsetting requirements.

Scenario F (partial compliance, limited supply)
The market grapples with significant uncertainty until it becomes clear by 2027 that demand for CORSIA EEUs will not materialize. The CORSIA EEU market dissolves in 2027 and the underlying credits might find other voluntary and compliance buyers.

*The delayed compliance scenarios considered in the model assumes that the market remains confident in the eventual implementation of CORSIA. Some roundtable participants noted that the opposite could happen, i.e. weakening the commitment to CORSIA and leading to further doubts about the program.

Source: CORSIA market modeling analysis performed by Sylvera, results as of 27 June 2025

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Additional factors to monitor

While the analysis seeks to best capture the impact of core market drivers for CORSIA EEUs, there are inherent uncertainties in the model calibration. Sylvera will be monitoring the following factors and update the modeling analysis as relevant in the future.

CORSIA EEU demand beyond airlines

While CORSIA EEUs can be used by airlines to comply with CORSIA, the same credits could also be retired or cancelled by other entities.

This is notable as some voluntary market buyers prefer ICAO-approved credits, viewing them as a benchmark for quality.

While the modeling has considered this dynamic, the calibration assumes that VCM buyers gravitate towards the ICAO-approved credits but without the corresponding adjustments, due to the price premium of authorized credits.

If voluntary buyers end up purchasing authorized credits at scale, this could push the CORSIA EEU market to even greater scarcity.

Additional factors to monitor

Host country willingness and ability to authorize carbon credits

Host country capacity to provide the necessary authorizations is slowly developing through relevant institutions and infrastructure.

Meanwhile, their willingness to grant authorizations depends on whether they are on track to meet their NDC targets, as countries will want to avoid overselling and falling short of their own climate goals.

This is a rapidly evolving landscape as more countries announce their intentions around corresponding adjustments against their NDCs.

Our modeling analysis applied high-level assumptions (see annex) that will require updates over time.

Expansion of supply from nascent sources with large potential supply

CORSIA supply will be influenced by three types of nascent sources. The modeling analysis currently includes (1) and (2), but excludes (3).

(1) Jurisdictional REDD+ credits, particularly those under ART TREES and Verra, are already eligible for CORSIA First Phase.

(2) PACM credits are likely to gain approval by ICAO. However, the PACM methodologies are yet to be announced, making it difficult to account for the potential volumes.

(3) Energy transition credits from coal plant retirements, with relevant methodologies being developed. These sources are excluded from the modeling because it is unclear if they will be eligible for CORSIA.

Additional factors to monitor

Market bifurcation due to EU-specific requirements

Although the ICAO approves carbon standards and methodologies for EEU supply, it allows individual countries to further build on these requirements.

The EU is expected to introduce additional requirements that would limit the set of EEUs that EU-based airlines are allowed to use for CORSIA compliance.

Depending on these rules, the CORSIA EEUs might act as a price floor to the EU-eligible CORSIA EEUs, and the price premium will reflect the relative scarcity of the EU-specific market.

However, since the rules are not yet finalized, this is not accounted for in the modeling analysis.

CORSIA
Looking ahead

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Looking ahead

The analysis in this report highlights a wide range of potential outcomes for CORSIA

Excluding the “no compliance” scenario, the EEU prices in the scenarios considered may reach $25-36 by 2027. Depending on the compliance outcomes, the scenarios imply a primary market value for CORSIA First Phase EEUs of $1.8 billion to $5.2 billion. The upper estimates are comparable to the current voluntary carbon market on an annualized basis.

In other words, if CORSIA is fully implemented as hoped, it will transform the landscape for carbon credit markets globally.

However, this report also underscores looming challenges to the program. A potential shortage of credits and incomplete compliance globally could significantly erode confidence in this nascent market. Integrity also needs to be upheld if this market were to achieve lasting impact.

At Sylvera, we will closely monitor developments in the CORSIA market both in terms of future supply unlocked by host country authorizations and indicators for future enforcement or compliance. We hope this report helps provide clarity to market participants, and we will continually review and update our analysis in the coming months.

To find out more about the different ways Sylvera can help you navigate CORSIA, check the back page of this report.

Annex I:
Sylvera modeling approach

1. Sylvera’s market simulation model

An agent-based market simulation that considers the full range of uncertainties in carbon credit markets.

To identify how different sources of uncertainty could affect market outcomes, **Sylvera has developed an in-house market simulation model to evaluate different possible scenarios.**

The scenarios represent a wide range of future policy choices, demand pathways, and economic conditions.

For each scenario, the modeling tool simulates **demand**, **supply** and **price** by project type on an annual basis in the medium term.

In doing so, we bring together Sylvera’s core strengths:

- **Data:** Extensive data on projects and supply pipeline
- **Policy:** Deep knowledge across domestic and international carbon markets
- **Analytics:** Advanced market modeling capabilities

Distinctive model features

Agent-based: explicit representation of different market participants which make independent decisions given the price signals and beliefs, including behavior such as airline hedging

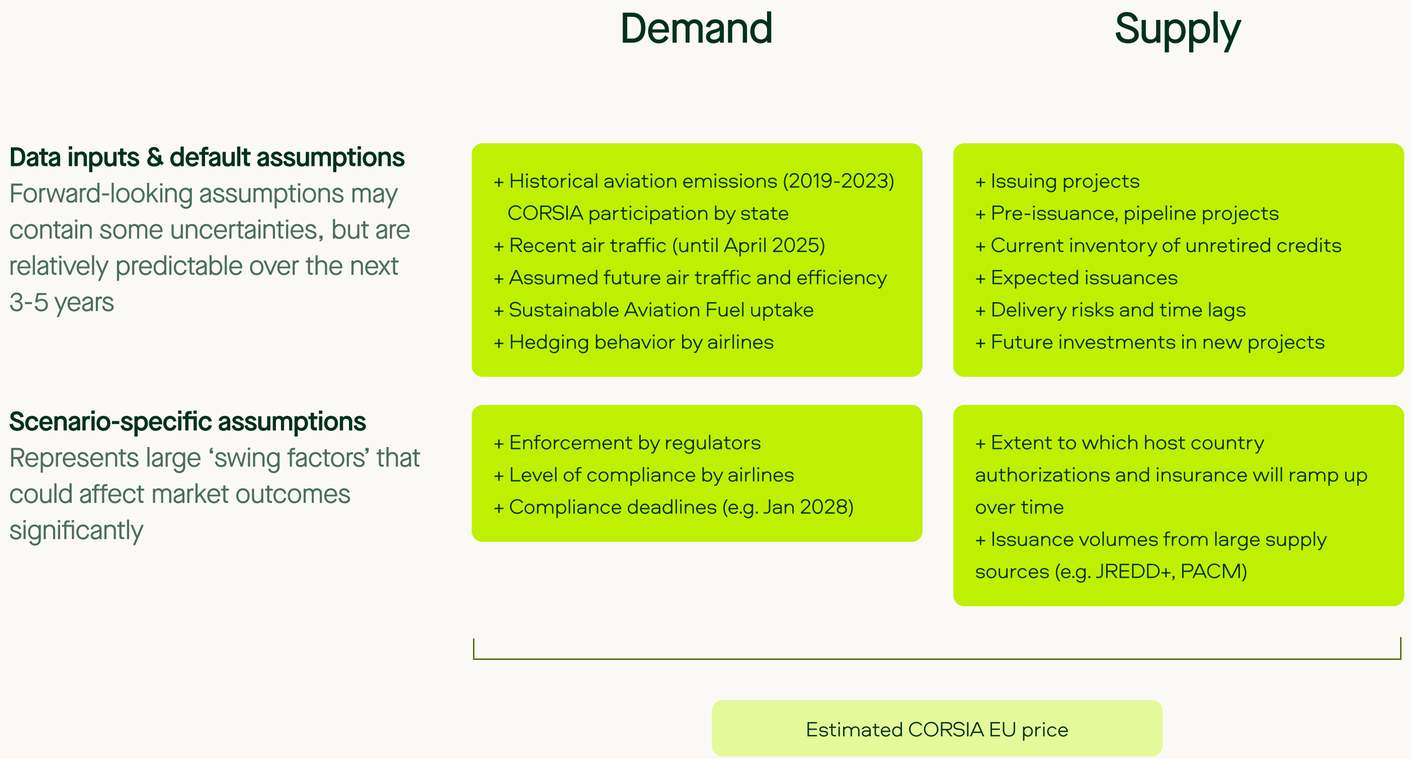
Interlinked markets: considers all distinct supply sources that combine to meet demand across voluntary and compliance markets, with buyers trading off credit price and compliance eligibility

Granular data inputs: it considers the potential issuance volumes and delivery time lags of over 20,000 individual projects, and the likelihood of those becoming eligible for CORSIA compliance

2. The scenario modeling approach to CORSIA

Overview of key data inputs and assumptions

The model considers all available supply sources, host countries, and airlines that might face offsetting requirements under CORSIA. The following diagram identifies the key input data and assumptions that influence the CORSIA modeling results.



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3. Estimating CORSIA EEU demand

Overall modeling approach to estimating offsetting requirements

Estimated emissions and offsetting requirements under CORSIA (MtCO2e)
(under coverage as planned)

Three high-level steps to estimate the offsetting requirements:

A Determine the benchmark as 85% of **2019** emissions (as published by ICAO, and assuming participation of member states as planned)

B Use ICAO monthly aviation traffic statistics (until April 2025) to extrapolate 2023 emissions data into estimated emissions for **2024-2025**

C Apply top-down assumption on the growth of gross emissions through to **2035.** The assumption is equivalent to international aviation emissions peaking in 2040.

Source: preliminary Sylvera analysis as of June 2025, based on aviation emissions data from ICAO (2024, 2025) and the European Commission (2024)

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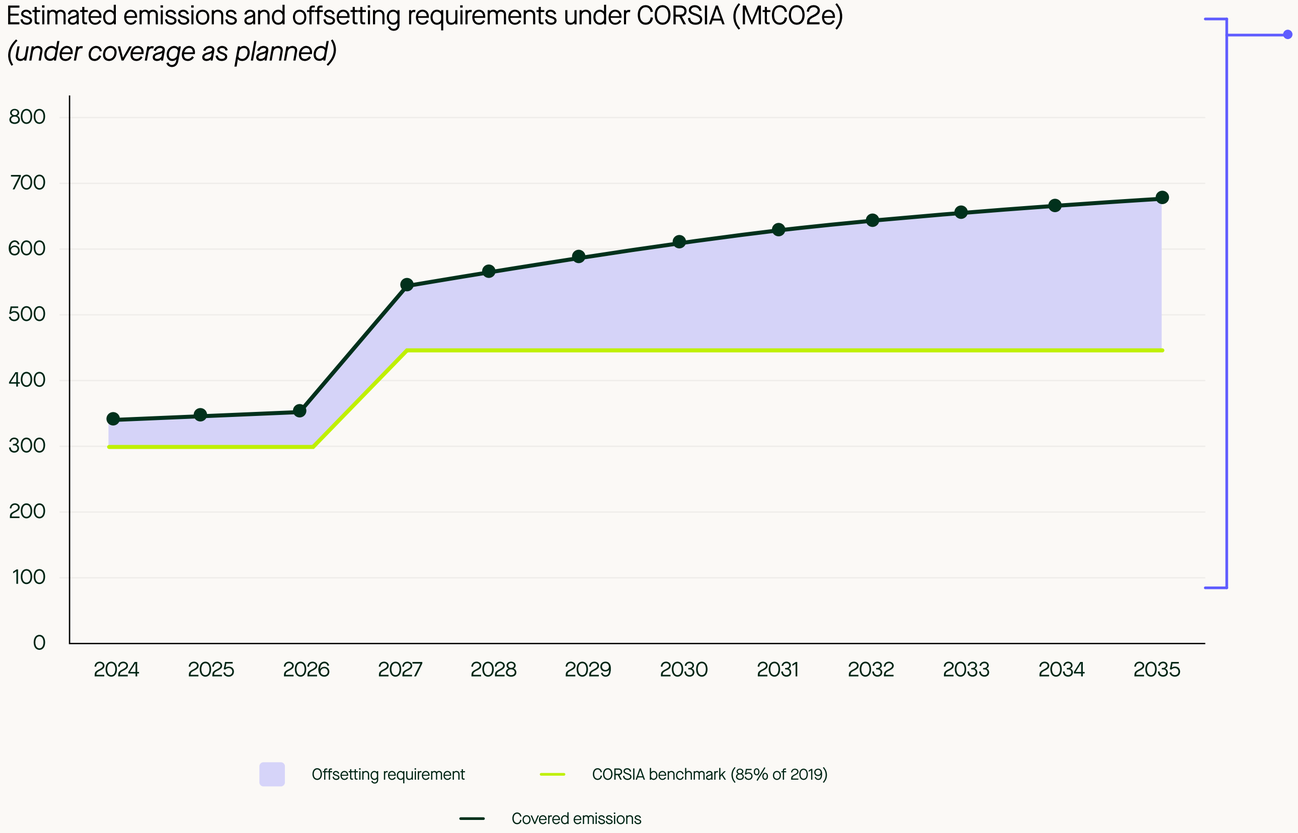
3. Estimating CORSIA EEU demand

Adjustments for EU ETS coverage of intra-EEA flights and participation for smaller states

Estimated emissions and offsetting requirements under CORSIA (MtCO2e)
(under coverage as planned)



Then, adjust the estimated offsetting requirements downwards due to:

- Emissions already covered by the EU ETS (intra-EEA flight emissions), which may not create demand for CORSIA EEUs
- Countries that are not obliged to participate CORSIA because they represent under 0.5% of total international revenue tonne kilometers (RTK)

	Before adjustment	After adjustment
2024	43.6	37.4
2025	57.1	48.9
2026	67.1	58.0
Phase total	168.3	144.2

Source: preliminary Sylvera analysis as of June 2025, based on aviation emissions data from ICAO (2024, 2025) and the European Commission (2024)

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4. Estimating CORSIA EEU supply

Overall approach to estimating supply of CORSIA EEUs

We evaluate potential supply of CORSIA EEUs in a **two-step framework:**

Step 1.
Estimating the volume of credits that would be eligible for CORSIA conditional on receiving an insured LoA or CA

Identify eligible projects

Identify projects (including early stage projects that are in development, as well as JREDD programs) that meet ICAO's eligibility criteria.

This filters based on the approved **registries**, **crediting periods** (starting after 2016), and **methodologies**.

We also simulate investments that will create new projects (though this remains minor by Jan 2028).

→

Estimate potential credit supply

This consists of both the **current inventory** (i.e. credits issued but not yet retired or cancelled), as well as **future issuances** of eligible vintages.

Current inventory can be determined based on historical registry data (see next page).

Future issuances can be estimated based on known scale and crediting period of each project, adjusted for delivery risks and time lags.

Step 2.
Estimating the share of which that will receive authorization (and eventually CA)

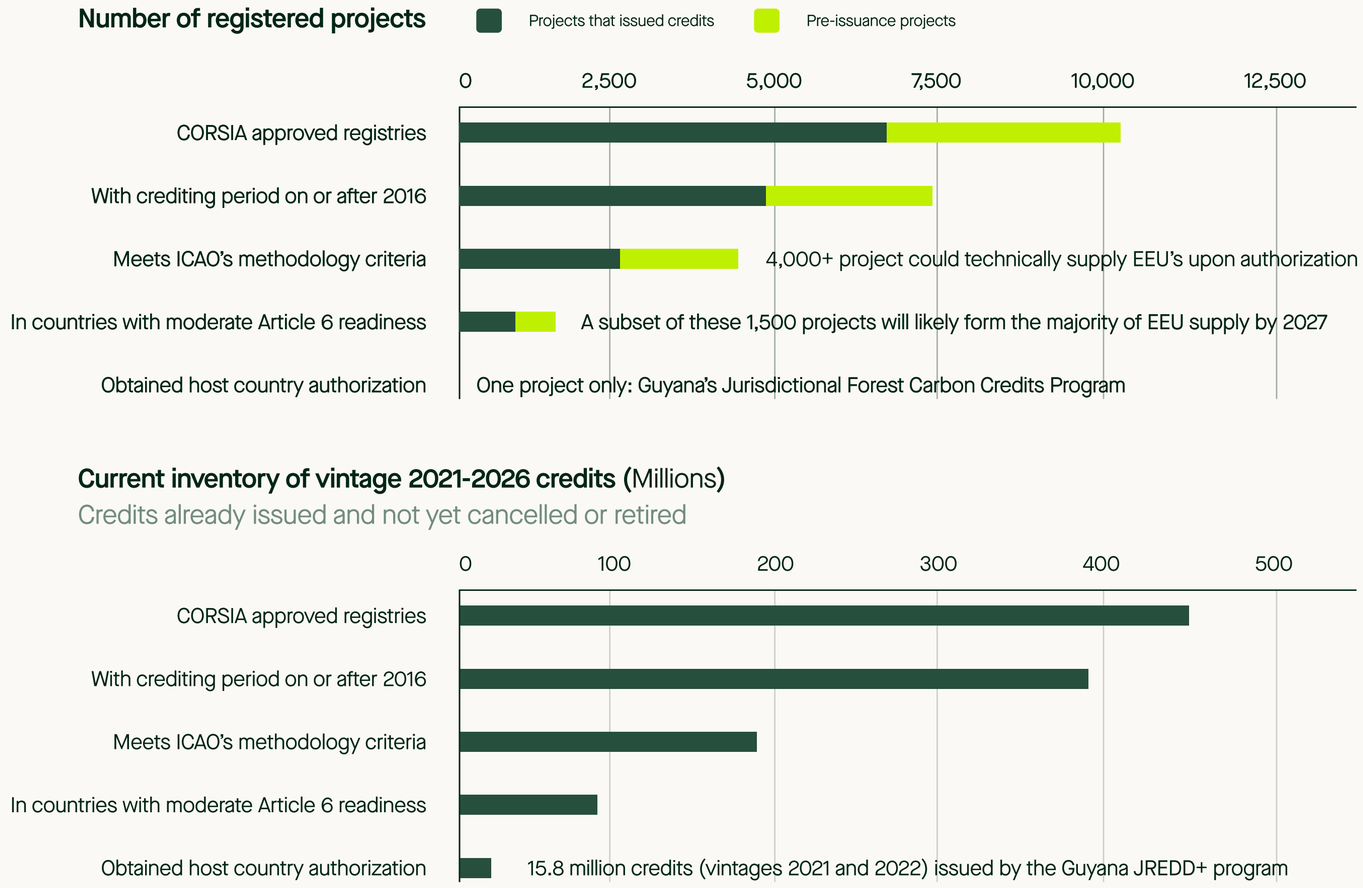
Simulate the share of supply that will be authorized by host countries

Host country governments have exhibited various approaches to deciding if and how to grant authorizations for credits to receive corresponding adjustments. We expect such decisions to also depend on CORSIA prices.

Although it is not possible to predict the decisions by individual governments, we apply scenario-specific assumptions based on (a) which countries have advanced preparations for Article 6 authorizations, and

(b) the opportunity cost they might face in terms of meeting their NDCs.

4. Estimating CORSIA EEU supply



Currently represent a major constraint to the potential supply of EEUs

The list of **CORSIA-approved registries** as of June 2025 include American Carbon Registry (ACR), ART TREES, Climate Action Reserve (CAR), Global Carbon Council (GCC), Gold Standard (GS), and Verra's Verified Carbon Standard (VCS).

ICAO further requires that the projects must have their first **crediting period** beginning on or after 2016, and that they meet **methodology criteria** that is specific to each standard – this effectively rules out a majority of renewables and REDD+ projects.

Sylvera has evaluated the **Article 6 readiness** of a large number of potential host countries (see next page), which influence the likelihood of those projects receiving authorizations in the near term.

Source: registry data as of June 2025 from CORSIA approved registries; Sylvera assessment on Article 6 (A6) readiness for individual countries

4. Estimating CORSIA EEU supply

Assumed timing for host countries ready to provide Article 6 authorizations

Article 6 readiness by host countries, as evaluated based on publicly disclosed evidence, is used as a proxy for the timing at which the country is ready to provide authorizations.

The assumed timing as shown does not serve as a prediction, and is meant only to serve as a yardstick to clearly differentiate the scenarios.

This assumption determines model behavior as to which projects might be allowed to receive host country authorization.

Beyond this, the model also considers the opportunity costs for the host country (in forgoing the mitigation outcomes). Countries with a high opportunity cost may withhold authorizations even if they are technically ready to provide them.

Article 6 readiness	Country	Inventory*	Maximum supply (A)	Moderate supply (B)	Limited supply (C,D)
Very high	Ghana	600K	2025	2025	2025
High	Zambia	2.5M	2025	2025	2025
High	Rwanda	1.0M	2025	2025	2025
High	Cambodia	200K	2025	2025	2025
High	Peru	0	2025	2025	2025
Moderate	Bangladesh	22.2M	2025	2025	2025
Moderate	Kenya	18.5M	2025	2025	2025
Moderate	India	11.9M	2026	2026	2027
Moderate	Uganda	4.0M	2026	2026	2027
Moderate	Malawi	2.7M	2026	2026	2027
Moderate	Zimbabwe	1.0M	2026	2026	2027
Moderate	Thailand	500K	2026	2026	2027
Moderate	Nepal	500K	2026	2026	2027
Moderate	Tanzania	300K	2026	2026	2027
Moderate	Senegal	100K	2026	2026	2027
Moderate	Chile	0	2026	2026	2027

Article 6 readiness	Country	Inventory*	Maximum supply (A)	Moderate supply (B)	Limited supply (C,D)
Low	Mexico	9.7M	2026	2027	2028
Low	Brazil	5.0M	2026	2027	2028
Low	Nigeria	4.1M	2026	2027	2028
Low	Mozambique	900K	2026	2028	2029
Low	Namibia	100K	2026	2028	2029
Low	Ivory Coast	0	2026	2028	2029
Low	Indonesia	0	2026	2028	2029
Low	Philippines	0	2026	2028	2029
Low	Paraguay	0	2026	2028	2029
Low	Colombia	0	2026	2028	2029
Low	Argentina	0	2026	2028	2029
Very low	Vietnam	3.5M	2026	Post 2030	Post 2030
Very low	Ethiopia	300K	2026	Post 2030	Post 2030
Very low	Sierra Leone	200K	2026	Post 2030	Post 2030
Very low	South Africa	100K	2026	Post 2030	Post 2030
Very low	Panama	100K	2026	Post 2030	Post 2030
Very low	Nicaragua	0	2026	Post 2030	Post 2030
Very low	Malaysia	0	2026	Post 2030	Post 2030
Very low	Bolivia	0	2026	Post 2030	Post 2030
Not assessed	Other	91.5M	N/A	N/A	N/A

* Inventory refers to estimated volume of (V2021-26) credits that were issued and not yet retired or cancelled, eligible for CORSIA Phase 1 subject to authorization

5. Estimating CORSIA EEU prices

The model simulates real-world market behavior to determine the CORSIA prices

CORSIA PRICE ESTIMATE = **FAIR VALUE** + **TECHNICAL PREMIUM**

The estimated spot price of a CORSIA EEU in any given year (with corresponding adjustment).

This is based on the **marginal cost of supply** that is required to meet both:

- **'physical demand'**: credits to be retired this year
- **'hedging demand'**: associated with the needs to hedge against offsetting requirements in future years. Typically 18-24 months in advance for airlines.

The marginal cost is derived from a supply curve that consists of 'blocks' from each project type by region.

Each 'block' is associated with an assumed **average breakeven cost** (all-in cost per credit issued), as well as a **CA fee** (which some host countries may charge).

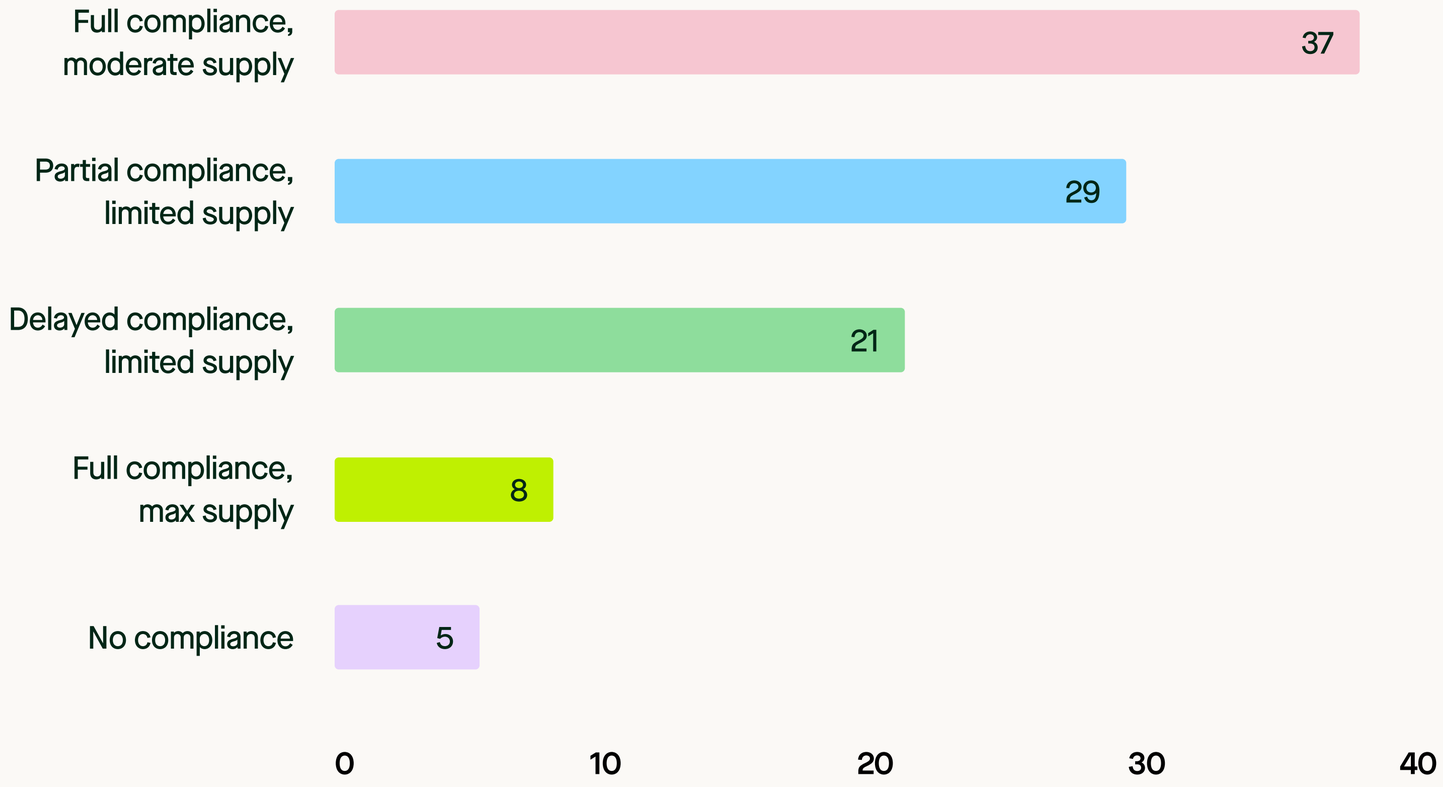
The **technical premium** captures market dynamics that are not properly accounted for in the fair value.

In particular, the model considers situations where a market is 'squeezed' because the **inventory of credits** is low (relative to anticipated demand).

This is common practice in the technical analysis of commodity markets, where prices may deviate from the fair value.

Annex II:
Expert poll results

CORSIA scenarios likelihood - APAC votes



Note: Some attendees did not cast votes for 100% of the outcomes, hence the totals may not equal 100% for every scenario.

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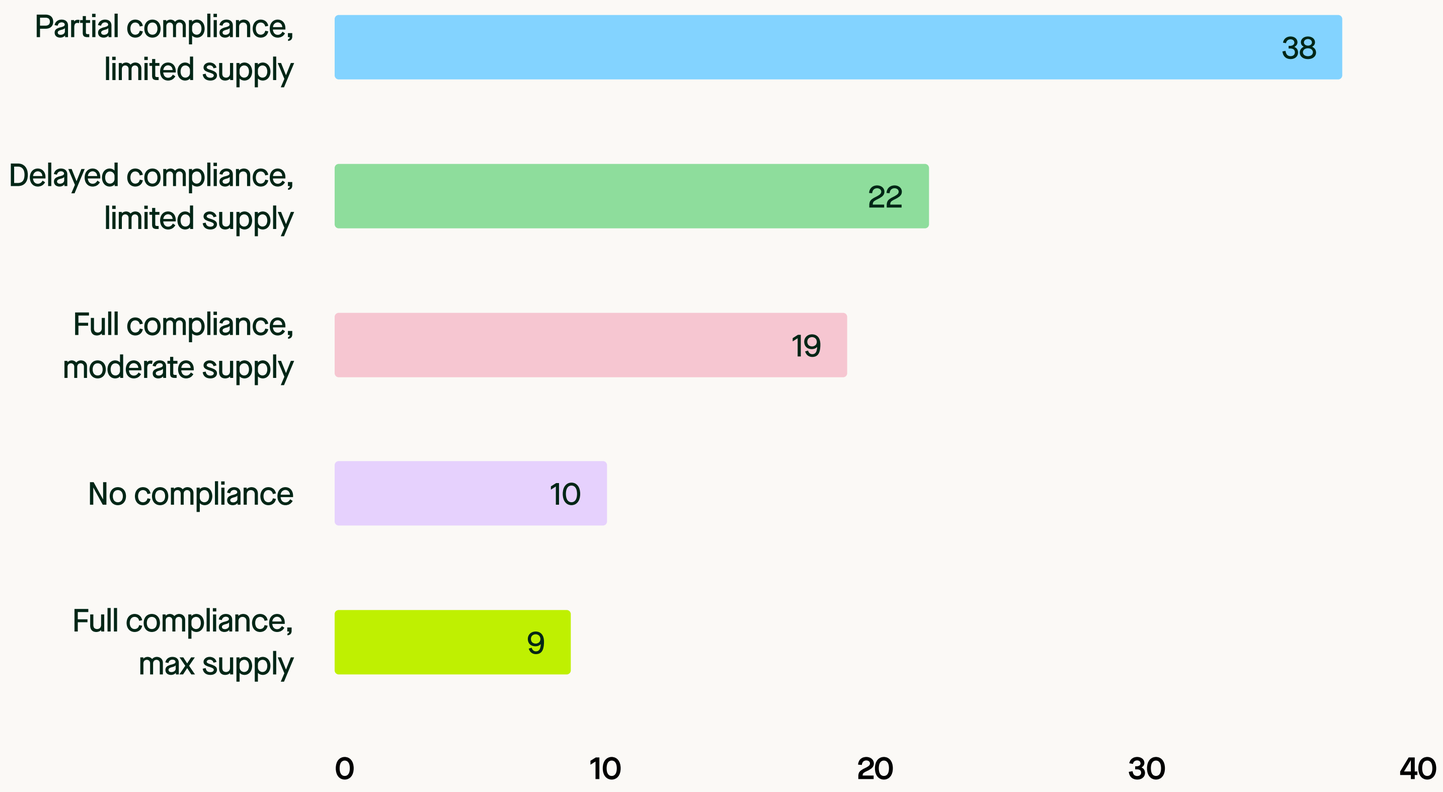
CORSIA scenarios likelihood - EMEA votes



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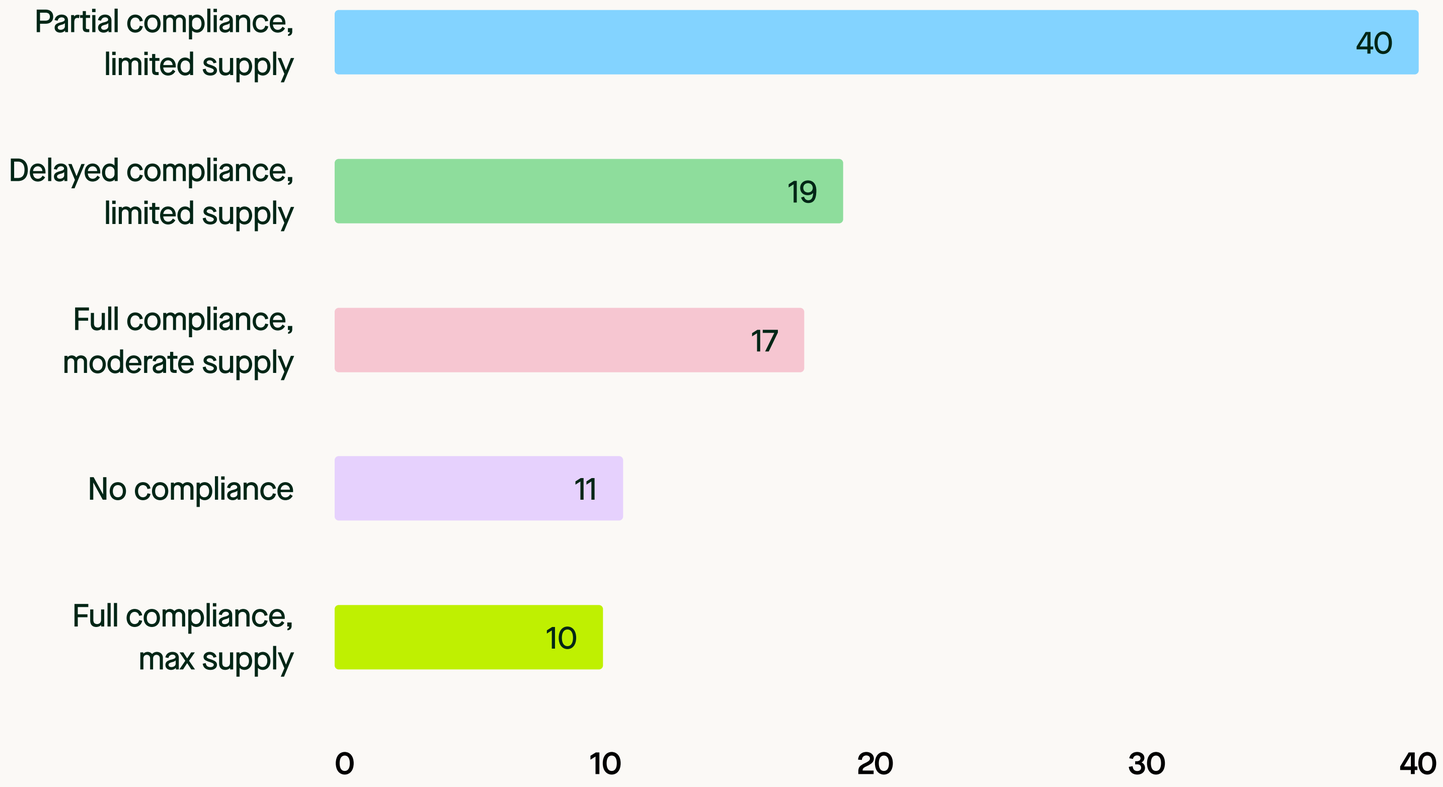
CORSIA scenarios likelihood - Americas votes



Note: Some attendees did not cast votes for 100% of the outcomes, hence the totals may not equal 100% for every scenario.

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We would like to express our sincere gratitude for their time and input.

It should be noted that the participants do not necessarily endorse the findings or conclusions of this report.

Sylvera: Your Partner in Navigating CORSIA

Founded in January 2020, Sylvera is the global leader in bringing trust, transparency, and rigor to carbon market data. Our platform empowers governments, investors, and corporates to make high-integrity climate decisions at scale.

With deep expertise in both carbon markets and policy, we provide the critical intelligence and tools needed to succeed in the evolving CORSIA landscape.

Strategic CORSIA Compliance & Market Intelligence

Our policy experts help airlines, investors, and carbon market participants develop robust CORSIA compliance strategies by providing realistic assessments of market scenarios and regulatory developments. We help you navigate uncertainty and position for action before prices rise, ensuring your strategies remain resilient across multiple scenarios.

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From initial discovery through rigorous due diligence to ongoing monitoring, Sylvera supports your complete journey with CORSIA-eligible credits. Our trusted ratings provide deep project-level analysis to assess true quality and risk. With limited supply and intensifying demand for CORSIA-eligible credits, we help you identify high-quality opportunities in this nascent market.

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