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Follow-up Legal Feasibility Assessment of Selected Carbon-Leakage Prevention Measures in EU Aviation

Route-Based Carbon Pricing Variants *(Airport Pairs and Destination-Based Approaches) and* ***the "SAF-BAM" Proposal***

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This report was prepared by **Niall Buissing, Managing Director** of **Lexavia Aviation Consultants**

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Further information on this study can be obtained via: t.n.buissing@lexavia.aero

About Lexavia

Lexavia is a legal and policy consultancy specialising in aviation regulation, policy and international aviation diplomacy. The firm advises public bodies, (inter)national organisations, and industry stakeholders on complex legal and governance questions across the aviation sector. Areas of focus include international and EU aviation law, air transport agreements, airline governance, environmental issues, institutional analysis, and regulatory design. Lexavia combines legal research with strategic insight, offering support on issues ranging from market access and competition to evolving sustainability frameworks and new technologies.

Disclaimer

This report provides an independent legal feasibility assessment. It is intended to inform policy discussions on carbon leakage prevention in EU aviation and does not constitute legal advice. It is based on applicable EU and international law provisions, and publicly available information as of August 2025.

This report is intentionally concise and policy-oriented, with hyperlinks in the text and footnotes. It does not replace a full legal implementation study, which may be warranted in a next phase. Any views expressed are those of the author and do not reflect the official position of T&E or any EU institution. While care has been taken to ensure accuracy, no liability is accepted for actions taken based on this report.

Executive Summary

This follow-up assessment examines the legal feasibility of three proposed instruments to address carbon leakage in aviation. Two of these – airport-pair pricing and final-destination pricing – are route-based carbon pricing variants already identified in the July 2025 Lexavia study, which receive here a more targeted evaluation as the most relevant approaches for further exploration. In addition, the assessment considers the SAF – Benchmark Adjustment Mechanism (SAF-BAM), a new measure proposed by A4E/Deloitte, which was not covered in the previous report.

(1) Airport-Pair Pricing

Airport-pair pricing is legally feasible in principle if embedded in the EU ETS. Differentiated treatment of designated high-risk routes could be justified where it is transparently based on objective evidence of carbon leakage risk and coupled with safeguards such as a cost-correction mechanism to avoid double charging. Operational integration appears achievable given that emissions are already reported at the level of individual routes, though adjustments to current reporting and registry systems are required. Internationally, the measure could attract challenges but may be defensible if framed as a proportionate internal adjustment to address regulatory asymmetry.

(2) Final-Destination Pricing

This variant presents more significant legal and operational hurdles. By linking obligations to a passenger's ultimate destination, it would require fundamental amendments to the EU ETS framework or the creation of a new fiscal instrument, both politically demanding. The broad application to all extra-EU journeys raises proportionality concerns, as the burden would exceed the scale of identified leakage risks. Its reliance on itinerary-level data also engages privacy and data-protection constraints. International defensibility is weaker, as the measure is more easily characterised as extraterritorial and disproportionate.

(3) The SAF-BAM Proposal

The SAF-BAM is conceived as a stand-alone mechanism linked to ReFuelEU, rather than as an extension of the ETS. It targets the regulatory asymmetry that arises when journeys are routed via non-EU hubs, where carriers are not subject to the EU's SAF blending obligations. The measure would require a new EU-level registry and certificate system comparable to CBAM, raising questions of complexity and proportionality given the limited extent of carbon leakage. Its principal international exposure lies with claims of extraterritorial application, even if framed as a neutral cost-equalisation measure. Since this measure would affect non-EU carriers the most, their respective countries could contest the measure under Air Services Agreements, which may in turn lead to retaliatory measures.

In comparative terms, the three measures present different strengths and vulnerabilities. Airport-pair pricing is more readily anchored in the EU ETS framework and can be targeted in proportion to identified leakage risks. Final-destination pricing raises greater proportionality and data-protection concerns and is more easily characterised as extraterritorial. The SAF-BAM provides a more specific regulatory rationale but entails significant administrative complexity and exposure to claims of extraterritorial application and of lacking cost-relatedness to services rendered.

While the assessment shows that all three instruments are legally conceivable to varying degrees, their eventual feasibility will also depend on political and policy considerations, which remain uncertain in light of shifting EU priorities, likely resistance from third countries and a changing geopolitical climate that appears less receptive to environmental measures.

1. INTRODUCTION

1.1. Purpose and Context

This report presents a follow-up legal feasibility assessment of selected carbon-leakage prevention measures in EU aviation. It builds on, and should be read in conjunction with, the *Legal Feasibility Study of Selected Carbon-Leakage Prevention Measures in EU Aviation* delivered in July 2025,[1] which assessed, at a scoping level, the legal viability of targeted Sustainable Aviation Fuel (SAF) allowances and three conceptual variants of route-based carbon pricing.

Following that initial study, Transport & Environment (T&E) invited Lexavia to undertake a targeted, variant-specific legal deep dive into two of the route-based carbon pricing approaches identified as most relevant for future policy design, namely, **airport-pair pricing** and **destination-based pricing**, as well as an independent legal feasibility assessment of the **SAF Border Adjustment Mechanism (SAF-BAM)** proposed in the May 2025 Airlines4Europe/Deloitte report.[2]

These measures respond to the policy challenge of carbon leakage in the aviation sector, where uneven environmental obligations between EU/EEA-based and third-country operators under the EU ETS Directive 2003/87/EC (as amended, herafter ETS Directive") and the ReFuelEU Aviation Regulation (EU) 2023/2405 ("RefuelEU") risk distorting competition and undermining the effectiveness of the EU's aviation decarbonisation framework. The analysis aims to inform policy development by identifying the legal pathways, constraints, and safeguards that would be necessary to enable these measures within the EU legal order and in compliance with relevant international obligations.

1.2. Scope and Structure of the Report

This report assesses the legal feasibility of the proposed measures under EU primary and secondary law, including the general principles of equal treatment, non-discrimination, proportionality and transparency, the *Treaty on the Functioning of the European Union* (TFEU), the EU ETS Directive, and relevant case law of the Court of Justice of the European Union (CJEU), as well as applicable international obligations. It does not address the full technical integration of these measures into Monitoring, Reporting and Verification (MRV) systems or the Union Registry.

The report is organised into four chapters:

- **Chapter 2** provides a **variant-specific legal assessment of route-based carbon pricing**, focusing on airport-pair pricing and destination-based pricing.
- **Chapter 3** presents the **legal feasibility assessment of the SAF-BAM proposal.**

Each substantive chapter applies a consistent analytical framework covering: (i) policy concept and targeting approach; (ii) EU law considerations; (iii) operational and administrative feasibility; (iv) international law compatibility; and (v) concluding measure-specific feasibility findings.

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[1] Lexavia, *Legal Feasibility Study of Selected Carbon-Leakage Prevention Measures in EU Aviation – Legal and Policy Assessment of Targeted SAF Allowances and Carbon Pricing: EU and International Considerations*, July 2025, unpublished report prepared for Transport & Environment (T&E). Hereafter referred to as the July 2025 Lexavia report.

[2] Deloitte, *Creating a level playing field for decarbonisation in aviation - The role of Border Adjustment Mechanisms and alternative policies to prevent carbon leakage and maintain EU airlines competitiveness*, May 2025, report prepared for Airlines for Europe (A4E). Hereafter referred to as the A4E/Deloitte report.

2. ROUTE-BASED CARBON PRICING: SPECIFIC VARIANTS

2.1. Airport-Pair Pricing

2.1.1. Policy Concept and Targeting Approach

The airport-pair pricing variant applies a differentiated carbon price to flights between specifically designated airport pairs, typically linking an EU/EEA airport with a non-EEA airport identified as posing a heightened risk of carbon leakage. The designation of such "high-risk" airport pairs would be based on objective, verifiable criteria, including, for instance, though not limited to, the share of traffic carried by non-EU/EEA competitors on the route, observed or anticipated re-routing via nearby third-country hubs, pricing pressures in the relevant markets, and the limited capacity of operators to pass through additional compliance costs.

The policy rationale mirrors the overarching aim of route-based carbon pricing: to counteract competitive distortions arising from uneven environmental obligations, where it concerns flights departing from the EU/EEA. By targeting routes most vulnerable to carbon leakage, airport-pair pricing seeks to disincentivise evasive routing (e.g. connecting via Istanbul, Doha, or other nearby hubs), promote direct long-haul services from EU hubs, and thereby safeguard both environmental effectiveness and the competitive position of EU operators.

2.1.2. EU Law Considerations

(a) Legal basis and instrument type

The legal feasibility of airport-pair pricing depends on whether the measure is embedded within the existing EU ETS framework or established as a standalone pricing instrument.[3]

Integrating a *plain* airport-pair pricing mechanism into the EU ETS would require an amendment to the ETS Directive, as the current framework does not provide for variable obligations linked to flight routing and a delegated act would not suffice. Such an amendment would introduce a legal basis for differentiated compliance obligations by route, departing from the principle of route-neutrality –under which all ETS-covered flights are treated uniformly– and going further than the limited differentiation foreseen for SAF allowances.[4] Legislative changes would therefore need to:

- define the concept of a "designated high-risk airport pair";
- establish the authority and criteria for designating such pairs; and
- provide for corresponding differentiated surrender or levy obligations.

As an alternative to integration in the EU ETS Directive, airport-pair pricing could be established as a separate EU-level charge or levy. Such a measure could, in principle, be adopted as an environmental policy under Articles 191–192(1) TFEU. However, if deemed "primarily of a fiscal nature", it would require unanimity in the Council under Article 192(2) TFEU.[5] The Airport Charges

[3] See section 3.2.1 of the July 2025 Lexavia report.

[4] The measure would also go beyond the limited functional departure from uniform treatment introduced through the SAF allowance reserve under Article 3c(6) of the revised EU ETS Directive (as variously amended). While eligibility for these allowances differentiates based on fuel use, it preserves formal operator-neutrality as access is open on equal terms to all operators, as discussed in the July 2025 report.

[5] This report does not examine in detail the potential design of a fiscal instrument (e.g. tax versus charge, collection and enforcement mechanisms), which would raise additional questions of competence and subsidiarity. The assessment here is limited to the feasibility of adopting such a measure under the TFEU.

Directive 2009/12/EC may also become relevant in this context, although a detailed assessment and its implications under international law lie outside the scope of this study.

While legally possible, this fiscal route would face significant political hurdles, particularly if the airport-pair variant's scope is narrow. The administrative and political costs of creating an EU-wide fiscal instrument to apply to a small number of designated routes may be disproportionate and could raise sensitivities about targeting specific airlines or regions, even if designation criteria are neutral. For these reasons, integration into the ETS framework is likely the more coherent and defensible pathway, aligning with the EU's established carbon pricing architecture, ensuring policy consistency, and avoiding the unanimity requirement associated with fiscal measures.

(b) General principles of EU law

Under Article 18 TFEU and general principles of EU law,[6] measures within the scope of the Treaties must not discriminate on grounds of nationality, either directly or indirectly. This principle is also embedded in the ETS Directive, which assumes uniform treatment of operators.[7]

An airport-pair pricing mechanism that applies **only to non-EU operators**, even if intended to correct a competitive disadvantage for EU carriers, would constitute direct discrimination by nationality and would be incompatible with EU primary law, the ETS Directive, and most bilateral Air Services Agreements. Even if the measure were formally route-based and applied to "all operators" on a designated airport pair, but in practice affected almost exclusively non-EU carriers, it would carry a high risk of being found to entail indirect discrimination.

In the context of the EU ETS framework, the EU Court of Justice has recognised that differential treatment can be lawful where it: (i) pursues a legitimate public interest objective; (ii) is based on objective and transparent criteria; and (iii) is proportionate to that objective.[8] For this measure, the legitimate aim would be the prevention of carbon leakage, grounded in the EU's environmental objectives under Article 191 TFEU. The proportionality test would require demonstrating that, i.a.:

- The designation of airport pairs is based on a robust, evidence-based methodology.
- Less restrictive, route-neutral measures would be insufficient to achieve the objective.
- The scope is narrowly targeted to routes with demonstrably high leakage risk.

Sectoral legislation in other sectors shows that differentiation can be compatible with equal treatment where justified by environmental objectives, proportionate to that aim, and applied through transparent, objective indicators — for example, differentiated road tolls by vehicle emission classes under the Eurovignette Directive or differentiated port charges permitted under the EU Port Services Regulation, provided the conditions are open to all operators.[9] These analogies illustrate the permissibility of proportionate, criteria-based differentiation, but they do not support unequal treatment by nationality, which would remain incompatible with EU law.

To avoid covert discrimination while addressing cost asymmetries, an alternative approach would be to apply the **same nominal carbon price to all operators** on the designated airport pairs,

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[6] Including but not limited to the principles of equal treatment, non-discrimination and proportionality, see also section 2.2.2. of the July 2025 Lexavia report.

[7] See, for instance, Article 3c(6) of the revised EU ETS Directive, "[...] in respect of commercial aircraft operators, on a *transparent, equal-treatment and non-discriminatory basis*" (emphasis added).

[8] See Case C-127/07, *Arcelor Atlantique et Lorraine and Others*, paras 23 and 47, and case law cited.

[9] See, for instance, Directive 1999/62/EC on the charging of vehicles for the use of road infrastructures, as amended (Eurovignette Directive), Art. 7(g), and Regulation (EU) 2017/352 establishing a framework for the provision of port services and common rules on the financial transparency of ports, as amended, Art. 13.

while allowing those already subject to EU environmental obligations, such as EU ETS surrender requirements or SAF blending mandates, or equivalent obligations, **to deduct the verified cost of those obligations** from the airport-pair charge. By preserving formal neutrality and offsetting existing compliance costs, this design would frame the measure as an internal adjustment to restore competitive balance, while addressing the substantive distortion caused by uneven environmental obligations. Such a **cost-correction mechanism** would also strengthen proportionality by ensuring that the measure is suitable to achieve its objective, and is not excessive in the sense that it does not impose cumulative or additional charges on operators already bearing equivalent climate costs,[10] while at the same time supporting compatibility with international obligations, as further discussed in section 2.1.4.

2.1.3. Operational and Administrative Feasibility

From an implementation perspective, the main advantage of airport-pair targeting is that it benefits from existing data availability within the EU ETS Monitoring, Reporting and Verification (MRV) framework. Airlines currently report aggregated annual emissions per route ("aerodrome pair"),[11] and this dataset could form the basis for applying differentiated surrender obligations to designated high-risk pairs without introducing entirely new data collection requirements.

Nonetheless, practical integration would require changes to how MRV data is processed and linked to compliance obligations. The current ETS compliance process applies obligations uniformly across all routes, without distinguishing between specific airport pairs. A functional airport-pair MRV mechanism would require, amongst other things:

- Adaptations to the MRV reporting mechanisms and verification guidance to ensure route classifications are accurate, consistent, and auditable; and
- Union Registry modifications to record and apply differentiated obligations per designated route, ensuring transparent tracking and enforcement.

Additional considerations arise if the measure is implemented **in combination with a cost-correction mechanism**, as described in the previous section. In this design, carriers claiming deductions would need to provide verifiable documentation of their compliance costs, increasing administrative overhead. Competent authorities would need a clear legal mandate and a robust verification process for such claims, with access to reliable cost data for both EU and non-EU carriers. For non-EU carriers specifically, additional evidence requirements or cooperation agreements with third-country authorities might be necessary to validate equivalent obligations.

The designation of airport pairs would also require periodic review to reflect market and network changes, such as the opening or closure of routes or shifts in competitive dynamics. This should be done through a transparent and predictable process, ensuring legal certainty for operators.

If implemented outside the EU ETS as a standalone levy, operational demands would shift towards billing, revenue collection, and enforcement, potentially involving different administrative bodies at the EU or national level. In case the measure is highly selective, covering relatively few airport pairs, the fixed costs of establishing and running such a parallel system could

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[10] Under Article 5(4) of the Treaty on the European Union (TEU), the principle of proportionality requires that EU action is suitable to achieve its objective, necessary in the sense that no less restrictive means are available, and not excessive in relation to the aim pursued.

[11] See Monitoring and Reporting Regulation (EU) 2018/2066, Chapter IV *Monitoring of emissions and tonne-kilometre data from aviation*, and Annex I, specifying the contents of the monitoring plans, including the determination and recording of the distance per *aerodrome pair* for flights covered by the EU ETS.

outweigh efficiency gains compared to ETS integration. Such a scheme would also require clear rules on the liability of operators for payment, robust enforcement provisions, and safeguards to ensure consistent application across Member States with different tax and enforcement systems.

2.1.4. Compatibility with International Obligations

The July 2025 report outlined the main international legal instruments relevant to carbon pricing in aviation.[12] In the case of airport-pair pricing, the key considerations are as follows:

- **ICAO/Chicago Convention (Art. 15)** – A route-based surcharge could potentially be compatible if applied on a non-discriminatory basis and framed as a proportionate, route-specific cost correction. Incorporating a deduction mechanism for all operators already subject to equivalent environmental obligations would further support operator neutrality.
- **CORSIA scheme –** No direct legal conflict is anticipated, as the measure does not alter CORSIA obligations. It could be framed as an EU internal adjustment to restore competitive balance and support continued compliance with CORSIA obligations.
- **Air Services Agreements (ASAs)** – There is a risk of disputes under fair competition and equal opportunity clauses if non-EU carriers predominantly serve designated airport pairs. This risk can be minimised if (i) the designation of airport pairs is based on transparent, evidence-based route-level criteria, (ii) the measure applies uniformly to all operators serving those pairs, and (iii) a deduction mechanism recognises equivalent environmental obligations to ensure substantive equality of treatment.
- **World Trade Organisation (WTO)** – Minimal relevance, given the limited application of the WTO regime to aviation services. However, the perception of protectionism could be reduced by framing the measure as a climate-related cost adjustment and by applying equivalent deductions to all operators meeting similar climate-cost burdens.

Overall, route-specific airport-pair pricing may still prompt pushback from States whose carriers are affected. A deduction mechanism for equivalent environmental obligations can help ease political concerns by signalling that the measure addresses regulatory asymmetries rather than penalising foreign carriers, and may even prompt other States to adopt similar approaches.

2.1.5. Sub conclusions on Airport Pair Pricing

Airport-pair pricing is legally feasible in principle, provided it is embedded in the EU ETS framework and based on transparent, evidence-based designation criteria, applied uniformly to all operators on designated pairs. Under the EU's principles of equal treatment and non-discrimination, differentiation could be legitimate where it pursues a recognised public interest objective, such as preventing carbon leakage in support of the EU's climate objectives, and is proportionate to that aim. Proportionality can be supported through a cost-correction mechanism recognising equivalent environmental obligations, which would also help frame the measure as a neutral adjustment to restore competitive balance. The key condition for defensibility is whether sufficient evidence of carbon leakage on specific routes can be demonstrated, as the absence of such evidence would weaken the justification for imposing differentiated obligations.

From an operational perspective, this variant benefits from existing reporting of emissions at route level, although adaptations to registry systems would be required. A cost-correction design would

[12] See sections 2.4 and 3.4 of the July 2025 Lexavia report.

introduce additional administrative complexity, requiring robust verification processes and access to reliable compliance cost data, particularly for non-EU carriers.

Internationally, compliance risks appear manageable if the measure is framed as non-discriminatory and proportionate, though questions under Air Services Agreements cannot be excluded where non-EU carriers are most affected. Some political resistance from third countries can be expected, but a cost-correction element could mitigate this risk and potentially encourage reciprocal approaches from non-EU/EEA States.

2.2. Passengers' Final Destination-Based Pricing

2.2.1. Policy Concept and Targeting Approach

The final-destination pricing variant would apply a differentiated carbon price based on the passenger's ultimate destination outside the EU/EEA. Its purpose is to address incentives for carriers and passengers to avoid EU environmental obligations by re-routing through nearby non-EU hubs (e.g. Istanbul, Doha, Dubai), where only the initial intra-EU leg falls within the EU ETS. By targeting the end-to-end itinerary, this approach seeks to neutralise the competitive distortion between EU/EEA carriers subject to full ETS obligations and non-EU carriers whose passengers may bypass these obligations by connecting flights at airports outside the EU/EEA.

Unlike airport-pair pricing, which applies only to a limited set of designated high leakage-sensitive routes and builds on route-level emissions data already monitored under the EU ETS MRV framework, final-destination pricing would extend **to all passengers departing the EU/EEA**. Implementing such an instrument would require access to itinerary-level or ticketing data, which lies outside current ETS compliance systems and is held in booking and reservation databases.[13] This reliance on passenger data introduces legal and operational challenges, pointing to the need for a broader legal basis and substantial adjustments to administrative processes. [14]

This broader scope also blurs the measure's connection to its underlying policy rationale. Whereas the aim is **to address cost asymmetries between EU/EEA and non-EU/EEA operators**, yet EU operators would themselves also be subject to the charge despite already carrying more extensive obligations under the EU ETS and ReFuelEU (SAF blending mandate). Reconciling this tension would require a deduction or cost-correction mechanism, allowing operators already subject to equivalent obligations to offset those verified costs against the final-destination charge. Such a mechanism could align the measure with its purpose, though whether it would satisfy the proportionality test and be justifiable under EU law is addressed in Section 2.2.2.

2.2.2. EU Law Considerations

(a) Legal basis and instrument type

The legal feasibility of final-destination pricing depends on whether it is integrated into the EU ETS framework or created as a separate EU-level levy. The same basic legal options identified in Section 2.1.2 are relevant here, but with important distinctions. The EU ETS Directive and MRV framework are designed around aerodrome pairs, not passenger itineraries. Establishing

[13] The concept of "final destination" is commonly used in airline reservation systems and Passenger Name Records (PNR), but it is not used in the EU ETS Monitoring, Reporting and Verification (MRV) framework.

[14] In particular, reliance on PNR or other booking data would engage the General Data Protection Regulation (GDPR) and require a specific legal basis beyond the existing ETS framework. See Section 2.2.2. (Data protection and privacy considerations).

compliance obligations by reference to a passenger's "final destination" would therefore require a fundamental amendment of the ETS Directive to authorise itinerary-based pricing and provide a legal basis for incorporating ticketing or booking data, including compliance with EU data protection rules such as the GDPR. A delegated act would not suffice for such a paradigm shift.

By contrast, airport-pair pricing can build more naturally on existing MRV data and target a narrow set of routes, making ETS integration more coherent. Final-destination pricing, however, is comprehensive in scope and would likely be conceptually more straightforward to establish as a separate EU-level charge or levy. This fiscal route, however, would face the unanimity requirement in the Council under Article 192(2) TFEU if the measure were deemed primarily of a fiscal nature, and would raise significant political sensitivities given its broad coverage.

(b) General principles of EU law

The general principles outlined and analysed in Section 2.1.2 apply equally here. However, final-destination pricing could only be legally defensible if applied to all passengers departing the EU/EEA; limiting the charge to non-EU/EEA operators would amount to discrimination on the basis of nationality of the operator of the targeted aircraft.

Another significant question is whether the measure meets the principle of proportionality under Article 5(4) of the Treaty on the European Union (TEU). EU action must be **suitable** to achieve the desired end, **necessary** in the sense that no less restrictive means are available, and must not impose an **excessive burden** in relation to the objective sought. In addition, unlike airport-pair pricing, which is grounded in objective and verifiable operational data (emissions per aerodrome pair), itinerary-based pricing relies on passenger booking information that is less transparent, harder to verify, and more intrusive to collect (see also the following subsection).

To pass the proportionality test, it would need to be demonstrated convincingly that:

- Itinerary-based pricing is suitable to prevent carbon leakage by addressing re-routing through non-EU hubs;
- No less restrictive, route-based measures (such as airport-pair pricing) would be sufficient to achieve this objective; and
- The measure is not excessive in relation to the climate objective pursued.

In practice, this test will be challenging to be satisfied, particularly the last limb, because final-destination pricing would apply indiscriminately to all passengers leaving the EU/EEA. This approach risks imposing burdens that are disproportionate to the problem of carbon leakage, which evidence suggests is concentrated on specific routes rather than being an EU-wide problem.[15] This weakens the defensibility of the measure under EU proportionality standards.

(c) Data protection and privacy considerations

Furthermore, and uniquely, final-destination pricing depends on itinerary-level or booking data, which qualifies as personal data under the General Data Protection Regulation (GDPR).[16] Hence, processing such data for environmental charging purposes would require a specific legislative

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[15] See, CE Delft, *Full Scope EU ETS for Aviation – Instruments to Prevent Carbon Leakage*, March 2025. The study concludes that while carbon leakage is a relevant concern, its scale is limited and concentrated on certain route types, rather than systemic across all extra-EU/EEA operations

[16] Itinerary-level or booking records include passenger name, contact details, ticket number, travel history, and payment information, all of which fall within the GDPR definition of personal data. Even if it were possible to extract only the "final destination" for pricing purposes, its use would still constitute processing of personal data and therefore require a valid legal basis and compliance with the GDPR.

basis. The existing framework for Passenger Name Record (PNR) data, established for counterterrorism and border control under the PNR Directive (EU) 2016/681, cannot be repurposed for carbon pricing without a new legal mandate.

A comprehensive assessment of the GDPR and PNR regimes, as well as how final-destination pricing might comply with them, is outside the scope of this study. Even with a dedicated legal basis, however, the use of passenger booking data for environmental charging would raise difficult questions about whether such an interference with privacy could be justified and proportionate to the limited objective of preventing carbon leakage. These concerns are not only legal but also political and societal, and they significantly heighten the hurdles for adopting this variant.

2.2.3. Operational and Administrative Feasibility

Most of the considerations on monitoring, reporting, and enforcement described in Section 2.1.3 apply equally here, whether the measure is integrated into the EU ETS or, and especially so, if designed as a standalone levy. The distinctive challenges of final-destination pricing arise from its reliance on itinerary-level data rather than route-based emissions reporting, and include, i.a:

- **Data integration:** Airlines and competent authorities would need new interfaces with global distribution systems (GDS) or airline reservation systems to extract final-destination information. This goes beyond the ETS's existing MRV framework.
- **Verification:** Authorities would need to ensure the accuracy of declared final destinations and prevent manipulation (e.g. false booking segments or ticket splitting). Cross-checking across multiple systems and carriers could be resource-intensive.
- **Administrative burden:** Unlike airport-pair pricing, which can be applied to a limited set of routes, final-destination pricing would likely cover all extra-EU departures, multiplying the volume of data and claims to be reported and verified.
- **Cost-correction mechanism:** If final-destination pricing is combined with deductions for equivalent environmental obligations, authorities would need to reconcile itinerary-based data with compliance cost data — a seemingly complex integration.

In short, final-destination pricing would impose significantly higher administrative demands on both airlines and regulators due to its reliance on booking data and its comprehensive scope. These burdens also weigh on the proportionality test under EU law, as they raise the question of whether less administratively intrusive measures could achieve the same aim.

2.2.4. Compatibility with International Obligations

In addition to the general considerations set out in the July 2025 report and in Section 2.1.4 of this report, final-destination pricing raises additional sensitivities:

- **ICAO/Chicago Convention (Art. 15)** – Linking charges to passengers' final destination, rather than to operations between airports, risks being seen as disproportionate and not cost-related to services rendered,[17] because the level of charge would no longer reflect only the emissions of the EU departure leg itself, but also the passenger's onward itinerary from a third-country hub, which could lead to claims of extra-territorial overreach.
- **CORSIA –** No direct legal conflict arises, but itinerary-based pricing departs more clearly from ICAO's emissions-based logic and could be criticised as unilateral overreach.

[17] Article 15 of the Chicago Convention: "no fees, dues or other charges shall be imposed… except as may be reasonable, cost-related and non-discriminatory *in relation to the services rendered*." (*emphasis added*)

- **Air Services Agreements (ASAs) –** The risk of frictions is higher as final-destination pricing would apply across all extra-EU departures. This broader scope means that more third-country carriers and states would be affected, increasing the likelihood of challenges under fair competition or equal opportunity clauses.
- **WTO –** As with airport-pair pricing, limited relevance, though the broad scope could sharpen perceptions of a disguised restriction or protectionist measure.

Overall, given its broader scope, reliance on passenger data, and looser link to emissions the international defensibility of final-destination pricing is weaker than that of airport-pair pricing.

2.2.5. Sub conclusions on Passengers' Final Destination-based Pricing

Final-destination pricing raises more significant legal and practical hurdles. While formally applicable to all operators, its reliance on itinerary-level passenger data heightens proportionality concerns under EU law and creates distinct GDPR and data-processing challenges.

Unlike airport-pair pricing, it cannot be implemented using existing emissions reporting structures, making both EU ETS integration and a standalone fiscal route legally and politically demanding. These concerns are compounded by the fact that current evidence suggests carbon leakage risks are concentrated on a limited number of routes, which weakens the justification for a mechanism of such broad scope. In addition, international defensibility is weaker given the broader reach, looser link to emissions, and greater exposure to disputes under Air Services Agreements, where third countries could claim disproportionate disadvantage to their carriers and trigger consultations or retaliatory measures.

Overall, this variant appears less feasible than airport-pair pricing, particularly when weighed against its administrative burden, legal defensibility, and political sensitivity.

2.3. Comparative Reflections on the Two Carbon Pricing Variants

Both variants aim to counter carbon leakage by addressing uneven environmental obligations, but they differ significantly in scope, design, and legal defensibility.

- **Airport-pair pricing** is narrower and more targeted, focusing only on routes with demonstrable leakage risk. It builds on emissions data already collected under the EU ETS MRV framework, which enhances administrative feasibility. It is easier to justify under EU law and more proportionate, particularly if combined with a cost-correction mechanism, which neutralises existing compliance costs for EU carriers or carriers bearing equivalent costs. While it carries some exposure under international obligations, it can be framed as a proportionate internal adjustment to restore competitive balance.
- **Final-destination pricing** is broader in scope, applying across all extra-EU departures, even though carbon leakage is a selective issue concentrated on specific routes. This breadth undermines the proportionality of the measure, as its application would go well beyond the particular problem it seeks to address. Legally, it is more fragile, as it would require a fundamental amendment of the EU ETS Directive or the establishment of a new fiscal instrument. Its reliance on itinerary-level booking data introduces complex GDPR and privacy issues, while its broad scope heightens the risk of disputes under international agreements.

In comparative terms, airport-pair pricing offers a more coherent and defensible pathway within the EU's existing carbon-pricing architecture. Final-destination pricing faces higher legal, operational, and diplomatic barriers, making it considerably more complex to implement.

3. A SAF BORDER ADJUSTMENT MECHANISM (SAF-BAM) PROPOSAL

3.1. Policy Concept and Rationale

The **Sustainable Aviation Fuel – Benchmark Adjustment Mechanism (SAF-BAM)** concept originates in industry analysis commissioned by Airlines for Europe (A4E).[18] The mechanism is designed as an analogue to the **Carbon Border Adjustment Mechanism (CBAM)** in the goods sector but adapted to the specificities of the aviation sector.[19] Its underlying rationale is to neutralise the competitive disadvantage faced by EU/EEA carriers subject to the progressively increasing SAF blending obligations under the ReFuelEU Aviation Regulation ("ReFuelEU"), thereby addressing risks of carbon leakage, safeguarding competitiveness, and ensuring that environmental effectiveness is not undermined by rerouting via non-EU hubs.

In its design, the SAF-BAM would apply when a journey originating in the EU is routed via a non-EU hub, such that subsequent flight segments fall outside the scope of ReFuelEU. To address this asymmetry, the mechanism would require the responsible airline, typically the carrier operating the EU-to-non-EU leg, to purchase certificates corresponding to the SAF share that would have been applicable had the entire journey been subject to ReFuelEU.[20] The price of such certificates would be benchmarked against established SAF price indices, with possible adjustments for compliance and logistics costs. Compliance can be based on either actual passenger and cargo data or default values (such as average load factors per route).

The A4E/Deloitte report makes clear that the SAF-BAM is not conceived as an extension of the EU ETS, but as a separate mechanism "tailored to manage the complexities of integrating SAF mandates into a piece of legislation directly linked to ReFuelEU".[21] Whereas the ETS imposes obligations based on reported CO_2 emissions, and in the goods sector can be complemented by a CBAM, the SAF-BAM would function as a corrective measure targeting avoided SAF obligations on journeys routed via non-EU hubs. Hence, while CBAM principles inspire the SAF-BAM's logic, the proposal suggests a separate legal basis rather than integration into the ETS framework.

This report provides an initial, concise assessment of the legal feasibility of such a SAF-BAM instrument within the EU legal order and under applicable international law.

3.2. EU Law Considerations

(a) Legal basis and instrument type

The A4E/Deloitte report explicitly states that a SAF-BAM cannot be incorporated into the EU ETS framework and would need to be established as a separate mechanism linked to ReFuelEU. This is because the ETS is designed to regulate CO_2 emissions through allowance trading. In contrast, the SAF-BAM targets the cost differential created by avoided SAF blending obligations on extra-EU flight segments, a logic and application that falls outside the ETS structure.[22]

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[18] A4E/Deloitte report (2025). For a full reference, see footnote 2.

[19] This report does not repeat the assessment of why the CBAM for goods cannot be transposed to air services. See Box 1 in the July 2025 Lexavia report and the article referenced therein by the present author.

[20] For an illustration of the policy coverage, see A4E/Deloitte report, Figure 1.

[21] See, A4E/Deloitte report, p. 29.

[22] While the EU ETS Directive does contain a limited incentive for SAF use (the Article 3c(6) allowance reserve) and thus can recognize SAF in its architecture, this mechanism for SAF allowances does not provide a relevant precedent or legal basis for a border adjustment measure of the type envisaged here.

From a competence perspective, the Union's powers under Articles 191–192 TFEU (environmental protection) and Article 100(2) TFEU (air transport) provide a sufficient legal foundation. The measure's objective is primarily environmental, aimed at safeguarding the effectiveness of the ReFuelEU blending mandate, with a complementary transport-policy rationale. While it also seeks to neutralise competitive distortions between EU and non-EU carriers, this competition dimension reinforces rather than replaces the environmental and transport bases.

In practice, a SAF-BAM would likely need to be introduced by a stand-alone regulation. Whether amending the ReFuelEU Regulation directly is conceivable would require further research, but this would complicate its architecture and risk conflating the blending mandate itself with the corrective mechanism. Accordingly, the legal design of SAF-BAM could mirror that of CBAM in goods: a dedicated regulation defining scope, responsible parties, calculation methods and compliance and enforcement procedures.[23] However, questions of enforceability, proportionality and feasibility will be addressed in the following sections.

(b) General principles of EU law

As stated previously, any EU-level corrective mechanism must comply with the general principles of Union law, notably equal treatment, non-discrimination, proportionality and transparency.

Equal treatment and non-discrimination. These principles would require that the SAF-BAM applies without distinction to EU and non-EU carriers operating journeys that originate in the Union. The A4E/Deloitte design envisages obligations based on the routing of the journey rather than the nationality of the operator. Risks of indirect discrimination could arise if the mechanism in practice disadvantages carriers whose business models rely structurally on non-EU hubs. However, this assumption can be questioned, as the existing SAF blending mandate places EU carriers at a relative disadvantage compared with non-EU competitors. Whether such differentiation can be considered objectively justified and proportionate has already been analysed in detail for the carbon-pricing variants in Chapter 2 (see sections 2.1.2 and 2.2.2).

Proportionality. The SAF-BAM proposal is designed as a general mechanism applying to all journeys originating in the Union that are routed via a non-EU hub. The proportionality assessment hinges on whether the broad imposition of certificate obligations is necessary and justified to address carbon leakage risks. The Union legislator would need to demonstrate that the environmental and competitiveness benefits balance the administrative and financial burdens imposed on operators, and that the mechanism does not extend beyond what is required to achieve these objectives. Excessive complexity in calculation methods or high compliance costs disproportionate to the actual leakage risk could call the measure's proportionality into question.

Transparency. The calculation of SAF-BAM obligations must be transparent, verifiable and operator-neutral. The proposal allows for two approaches: (i) reliance on actual operational data, which uses information already collected for operational and safety purposes, or (ii) reliance on default values such as average load factors per route, which may reduce administrative burden but at the cost of accuracy, potentially raising proportionality concerns. In both cases, clear rules and accredited verification would be necessary to safeguard neutrality and ensure that obligations are applied consistently and predictably.

In addition, while SAF-BAM itself does not entail direct transfers of State resources, questions may arise if certificate revenues are earmarked for EU aviation decarbonisation projects. Whether

[23] See, Regulation (EU) 2023/956 establishing a Carbon Border Adjustment Mechanism (CBAM).

such spending constitutes State aid under Article 107 TFEU would depend on the design of the downstream measures and may warrant further assessment.

Overall, applying these principles to a SAF-BAM shows parallels with those discussed for final-destination pricing (see section 2.2.2). In both cases, careful design is necessary to prevent de facto discrimination against non-EU carriers. The distinction is that whereas a cost-correction mechanism would need to be added as a safeguard to final-destination pricing, SAF-BAM is conceived from the outset as a cost-equalisation measure: it imposes obligations on operators that avoid SAF mandates, thereby addressing a regulatory asymmetry under ReFuelEU obligations. Final-destination pricing does not inherently contain such a targeted corrective logic.

3.3. Operational and Administrative Feasibility

A SAF-BAM would require a dedicated compliance and registry framework, distinct from the EU ETS, since obligations are based not on reported emissions but on avoided SAF blending on extra-EU segments. This raises several operational considerations:

- **Registry and reporting framework:** The ETS MRV infrastructure cannot be reused directly, as it tracks emissions rather than avoided SAF use on non-EU flight segments. A new EU-level reporting framework and registry, comparable to the CBAM Registry,[24] would be needed to calculate, record and enforce obligations uniformly.
- **Benchmarking methodology:** Obligations would be benchmarked against SAF price indices and the mandated blending shares under ReFuelEU. Actual operational data (passenger numbers, cargo loads, etc.) ensures accuracy but requires robust verification; default values simplify reporting but reduce precision and may affect proportionality.
- **Verification and enforcement**: Clear verification rules are necessary to prevent the manipulation of operational data and ensure comparability across operators. Accredited verifiers, building on ETS and CBAM practice, would require new guidance to validate SAF-BAM data. National authorities, under Commission oversight, would likely manage enforcement, as is the case with CBAM and ETS.
- **Complexity and cost:** the SAF-BAM avoids reliance on itinerary-level passenger data but requires new compliance infrastructure. Its cost-effectiveness would depend on the scale of application and on whether default or actual data are used.

As with the CBAM for goods, a transitional phase-in with simplified reporting could be considered, both to test data flows and to ease administrative burden before full implementation.[25]

In conclusion, the operational feasibility of SAF-BAM is not insurmountable, but hinges on the creation of a new compliance system, comparable in scope to CBAM. This raises questions of proportionality, as the administrative burden may be considerable relative to the limited evidence of carbon leakage risk. Compared with final-destination pricing (section 2.2.3), SAF-BAM avoids reliance on itinerary-level passenger data and is therefore more practicable. However, it shifts complexity towards establishing and operating a dedicated certificate and registry framework.

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[24] See, CBAM Regulation, Article 14.

[25] The CBAM Transitional Registry, established for the period October 2023–December 2025, serves as a central electronic database for importers to report embedded emissions in covered goods. During this phase only reporting is required; from 2026 a permanent CBAM Registry will also handle the purchase and surrender of certificates. See the CBAM Regulation, Articles 14–20.

3.4. Compatibility with International Obligations

This assessment builds on the A4E/Deloitte report, which identified the Chicago Convention, ICAO/CORSIA, Air Services Agreements and the WTO framework as the relevant international regimes. While the scope of this report does not allow for an exhaustive analysis, it provides a more detailed discussion of their implications for SAF-BAM, including case law, lessons from the EU ETS, and a comparative perspective with final-destination pricing.

The most significant legal sensitivity for the SAF-BAM proposal lies under the Chicago Convention (1944), particularly Article 15, which prohibits discriminatory charges and requires that any fees imposed on international aviation be cost-related to the services rendered.[26] A SAF-BAM obligation would not be tied to the actual use of air navigation or airport services, but rather to the avoidance of compliance with an EU regulatory mandate on extra-EU flight segments. This raises a clear risk of the measure being characterised as **an extraterritorial application of EU law**, since it effectively imposes costs on operations outside EU jurisdiction.[27]

The Court of Justice of the EU has previously upheld the legality of extending EU ETS obligations to extra-EEA flight segments, holding that the Union may regulate emissions from flights departing from EU airports. Yet, the political backlash from third countries led the EU to adopt the "stop the clock" decision, limiting ETS obligations to intra-EEA flights.[28] The SAF-BAM, by design, introduces extraterritorial elements by benchmarking obligations on flight segments operated via non-EU hubs to points in third countries. Its legal defensibility would therefore hinge on presenting it not as an assertion of regulatory control over foreign operations, but as a proportionate and non-discriminatory internal adjustment to equalise compliance costs arising from the EU's own SAF mandate. Whether such framing would withstand the political backlash that accompanied the EU ETS, particularly in the current geopolitical climate, is far less certain.

With regards to the other international regimes, many of the considerations identified for final-destination pricing (see section 2.2.4) apply equally to the SAF-BAM proposal:

- **CORSIA:** The SAF-BAM would not alter CORSIA obligations but could be criticised as a unilateral EU measure that undermines ICAO consensus on market-based instruments.
- **Air Services Agreements (ASAs):** Many ASAs contain clauses on fair and equal opportunity of competition and the prohibition of discriminatory treatment. If the SAF-BAM disproportionately affects carriers operating through non-EU hubs, it could be contested under such provisions. This presents the most immediate legal risk, as third countries could trigger consultations or adopt retaliatory measures against EU carriers.
- **WTO:** Limited WTO/GATS exposure; however, WTO principles may be invoked rhetorically, especially if SAF-BAM is perceived as a disguised restriction on trade in air services. The political rather than legal dimension is therefore most relevant here.

In international terms, the SAF-BAM shares several sensitivities with final-destination pricing, particularly the risk of being characterised as extraterritorial and of triggering disputes under

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[26] See, footnote16 in section 2.2.4.

[27] On the international law duty of good neighbourliness and its application in EU law, see Elena Basheska, The Good Neighbourliness Principle in EU Law (PhD thesis, University of Groningen, 2014). The principle has been particularly developed in international environmental law, requiring states to avoid causing significant cross-border harm. A full analysis of its relevance lies outside the scope of this report.

[28] See July 2025 Lexavia report, section 4.2, for a discussion of Case C-366/10, the "stop the clock" decision adopted in response to political backlash from third countries.

ASAs. However, its narrower focus on equalising obligations under ReFuelEU provides a more specific regulatory justification. This arguably renders SAF-BAM somewhat more defensible than final-destination pricing, though exposure to political backlash remains significant.

3.5. Concluding Remarks on the SAF-BAM Proposal

The SAF-BAM is legally feasible in principle if established as a stand-alone regulation linked to ReFuelEU. Unlike final-destination pricing, it does not require itinerary-level passenger data and is grounded in a more specific regulatory asymmetry, which strengthens its proportionality and operator-neutrality rationale. Its feasibility under EU law would depend on transparent benchmarks, a harmonised EU framework, and safeguards ensuring consistent application across operators and Member States.

Operationally, SAF-BAM avoids some of the privacy and data-access challenges associated with final-destination pricing but introduces complexity by requiring a new registry and certificate system comparable to CBAM. Its cost-effectiveness will hinge on whether default or actual operational data is used and on the robustness of verification processes. However, the necessity of establishing such a dedicated instrument must be weighed against the relatively limited empirical evidence of carbon leakage in aviation to date, which raises proportionality concerns.[29]

Internationally, the measure shares many sensitivities with final-destination pricing, particularly exposure to claims of extraterritorial application. Air Services Agreements may present the most immediate legal and policy risk, as they provide a direct channel for third countries to contest the measure and potentially impose retaliatory action. While a cost-equalisation framing offers stronger justification than in the case of final-destination pricing, political backlash comparable to the EU ETS "stop the clock" episode cannot be excluded.

Overall, the SAF-BAM offers a more coherent and defensible pathway than final-destination pricing, but its proportionality remains more questionable than airport-pair pricing. It would continue to entail significant legal and policy exposure even under a carefully designed framework.

More broadly, this assessment focuses on legal feasibility, which can only partially determine the prospects of SAF-BAM and the carbon-pricing variants examined in Chapter 2. Policy feasibility remains uncertain—both within the EU, where other priorities such as defence and market resilience may dominate the agenda, and among third countries, which may have little incentive to accommodate additional EU climate measures. The backlash to the extension of the ETS to extra-EEA flights in 2010 and the subsequent "stop the clock" decision illustrates how international opposition can override legal defensibility. In the current geopolitical climate, with shifting global power balances, comparable or stronger resistance can be anticipated, making caution and further research essential before pursuing such measures.

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[29] See J. Montero, M. Finger and E. Petrozziello, "Carbon Leakage and Mitigating Measures," European Transport Regulation Observer, Issue 2025/18 (EUI Florence School of Regulation, June 2025). The policy brief highlights that while hub-switching and destination changes illustrate carbon leakage risks, overall evidence of leakage remains limited, raising questions about whether complex instruments such as CBAM-type mechanisms like the SAF-BAM proposal or SAF levies are proportionate.