Final Report
April 2025

Assessment of the cost of regulatory compliance of European Airlines

Airlines for Europe
Our ref: 2485001

steer

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Executive Summary

Introduction

The liberalisation of the EU air transport sector through the implementation of the Single Aviation Market has led to significant benefits for passengers and freight transport customers. Air travel has become more accessible, has offered cheaper prices, better connectivity, and improved services.

Over the past decade, numerous legislative actions at both European and Member State levels have imposed significant requirements on airlines. Furthermore, challenges remain particularly in the next generational leap towards decarbonising Europe.

Objective of the study

The objective of the study is to present the historic, current, and future situation (to 2030) of A4E Member airlines in terms of compliance costs and taxes levied on aviation. The study also considers the additional costs generated by the inadequate implementation of European legislation in specific cases.

Methodological approach

The methodological approach taken in this study has involved a literature review of existing reports, papers and other relevant documents, engagement with stakeholders mainly through a detailed questionnaire that was distributed to A4E Members, analysis of the confidential material sent, and views expressed by stakeholders during the consultation exercise and modelling of projections.

Legislative requirements for airlines in Europe

Airlines operating in Europe must comply with various regulatory requirements for operating in Europe. They stem from legislation, either at European level because a significant part of air transport or environmental law is regulated at this level, or at national level set by Member States.

Compliance and tax requirements

The requirements considered in this study are described below. Those are either existing or forthcoming, each with significant cost implications for airlines.

Table 1: Compliance and tax requirements considered in this study

Requirement	Description
Environmental compliance	
Emission Trading System (ETS)	Existing cap-and-trade system for CO_2 emissions, with increasing costs due to rising allowance prices and the phasing out of free allowances by 2026.
Monitoring and reporting of greenhouse gas emissions	Existing reporting obligation for companies that participate in the EU ETS.
Non-CO_2 Monitoring Reporting Verification (MRV)	Future requirement from 2025, expanding to all EEA flights by 2027, with costs for data collection and verification.

Requirement	Description
Sustainable Aviation Fuel (SAF) Mandate	EU Mandate from 2025, with higher costs for SAF and e-fuels compared to conventional jet fuel.
Environmental Labelling Scheme	Future voluntary scheme expected to become mandatory after 2027. Only reported in this study qualitatively owing to lack of information on the mandatory scheme requirements.
Taxes	
Ticket taxes	Existing taxes imposed by Member States to raise general state revenues which are charged on departing passenger tickets. Tax scope dependent on destination or journey characteristics.
Value Added Tax (VAT)	Potential future application to international intra-EU flights, increasing ticket costs. Discussed in this report but not included in the results of this study as there are no clear plans to introduce this measure.
Operational compliance	
Air Passenger Rights	Existing Regulation 261/2004 providing air passengers with care, assistance and compensation in case of travel disruptions.
Rights for Passenger with Reduced Mobility (PRM)	Existing Regulation providing rights for PRMs travelling by air.
Corporate disclosure	
Corporate Sustainability Reporting Directive (CSRD)	Requirement from 2025, with costs linked to complex information collection and reporting for airlines and their value chain.
Corporate Sustainability Due Diligence Directive (CS3D)	Future requirement from July 2027, with costs for updating policies and complex reporting of chains of activities.
Border control and security	
Passenger data (API and PNR)	Existing requirement, with minor costs per passenger per transmission. Not modelled as legislation has been in place for a while.
ETIAS and EES	Future systems requiring additional IT and operational costs.

Cost of Non-Europe

European legislation has contributed to the successful development of the single aviation market. However, in some areas, issues remain despite legislation in place. As a result, where there should be a true single European market, there is a gap in the European market, which we call “non-Europe”, and which generate costs for airlines.

According to A4E Members, this is mainly the case where:

- There is lack of a fully integrated Single European Sky (SES);
- There is a lack of a fully adequate regulatory framework on airport charges; and
- There are temporary reintroductions of border controls within the Schengen Area.

Note that only the first two were addressed in this study as costs for airlines due to temporary reintroduction of border controls are minor.

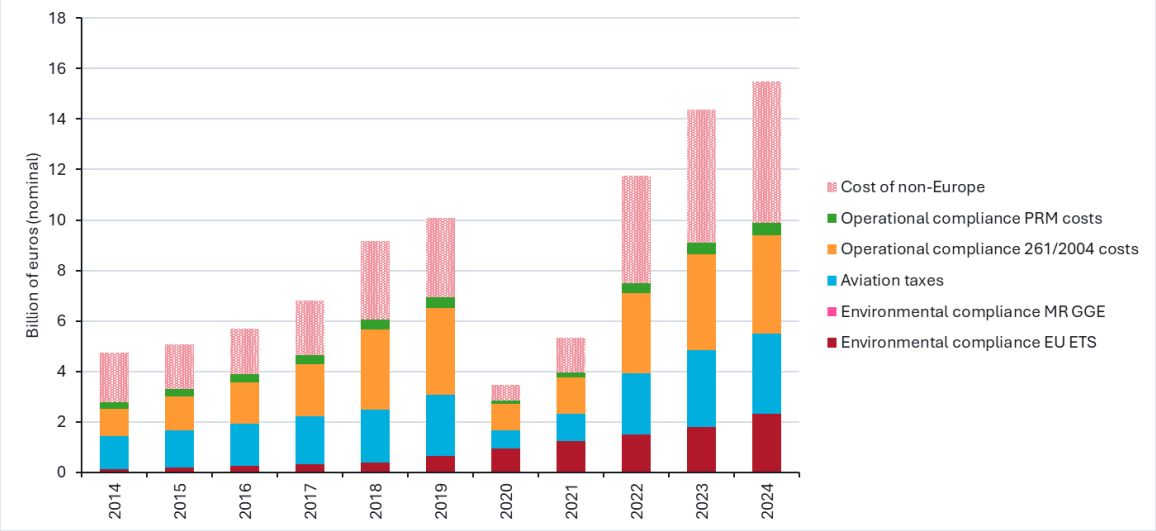
Resulting costs

Overall, A4E airlines spent approximately €9.9 billion in 2024 to fulfil existing European and national legislation on environmental compliance, corporate disclosure, taxation, operational compliance and border and security requirements. The main drivers are compliance with Regulation 261/2004, national aviation taxes and the EU ETS.

If we add to this the inefficiency costs of existing European legislation mainly generated by the Single European Sky, the total costs for A4E Members in 2024 rose to more than €15.5 billion. For A4E Member airlines, this represented in 2024 an average cost of €30 per passenger.

Since 2014, these costs have increased at an annual rate of 11% (without the cost of non-Europe) and 10% (including the cost of non-Europe) in real terms compared with the annual increase of departing EEA passenger traffic for A4E Members of 4.0% in the same period.

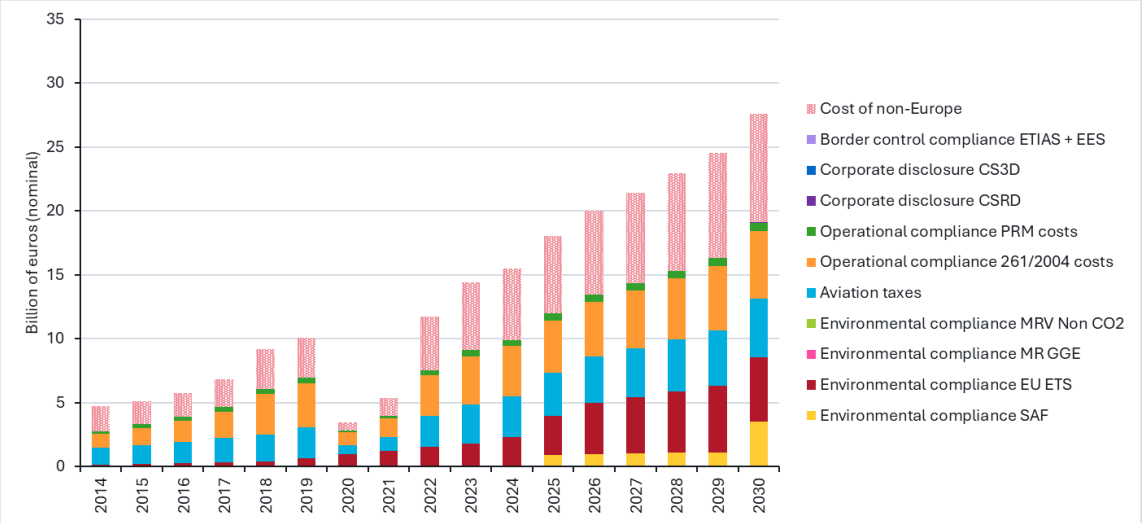
Figure 1: Current situation for A4E Members



Source: Steer analysis

Looking forward, under the assumptions used in this analysis, compliance and taxation costs are expected to double in nominal terms in just 6 years to reach €19.1 billion in 2030 (excluding costs of non-Europe). The costs of non-Europe inefficiencies in 2030 reach €8.5 billion mainly because of the cost of Air Traffic Management (ATM) delays, followed by inefficient trajectories, and to a lesser extent because of inadequacies in the Airport Charges Directive.

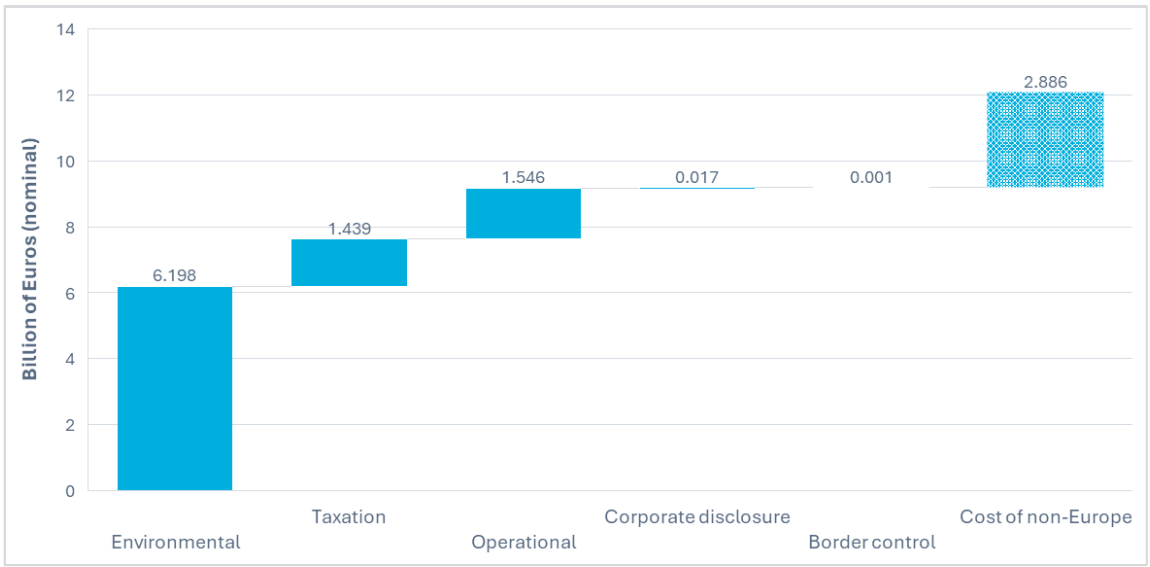
Figure 2: Likely future evolution to 2030 for A4E Members



Source: Steer analysis

In contrast to the situation up to now, there is a change in the cost drivers up to 2030: the introduction of the CSRD and CS3D leads to a strong increase in corporate disclosure costs, but these are relatively low in value compared to the very large impact of the environmental legislation which in 6 years adds €6.2 billion of annual costs to A4E Members. This is due to the combined effect of the start of the EU SAF Mandate implementation, as well as the sharp increase in ETS costs. Following this, the cost of Non-Europe adds a further €2.9 billion annually under the SES inefficiency scenario 2[1].

Figure 3: Evolution of A4E Members annual costs of compliance and of non-Europe, 2030 vs 2024

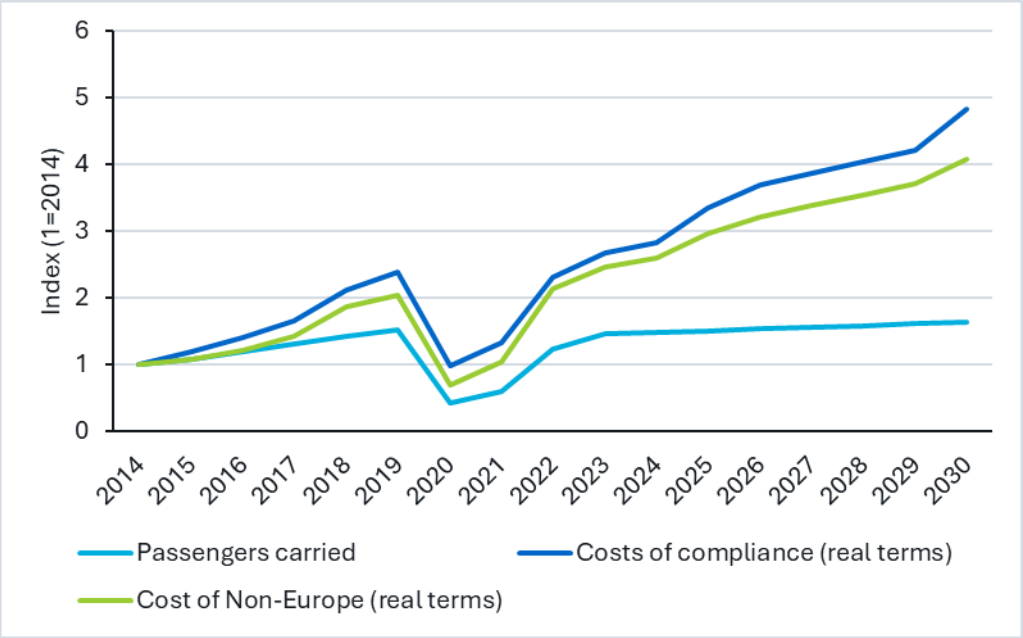


Source: Steer analysis

[1] Scenario 2: all delays increase with the same growth rate as ATFM en-route delays, increasing between 2024 and 2030 to reach 2.8 minutes/flight by 2030. This is the equivalent to an increase of 33% over the 2024-2030 period, or an annual increase of 4.9%;

During the period 2024-2030, these costs are expected to increase at an annual rate of 9.3% (without the cost of non-Europe) and at an annual rate of 7.9% (including the cost of non-Europe) in real terms compared with an annual increase of departing EEA passenger traffic for A4E Members of 2.3% in the same period.

Figure 4: Comparison of the projected evolution of costs and traffic for A4E members



Source: Steer analysis

Furthermore, what is of significant concern to A4E Members is the evolution post 2030 of the EU SAF Mandate as it becomes much more stringent. Based on the recent Destination 2050 report, costs of the SAF Mandate implementation for A4E Members (and their customers) have been estimated to be €33 billion in 2050, i.e. nearly 10 times higher than costs for the same legislation in 2030 – which will need to be added to all the other costs of compliance, taxation and non-Europe inefficiency costs which are expected to keep growing as well. Moreover, the inclusion of other new costs on airlines in Europe cannot be ruled out either.

1 Introduction

Background

1.1 The liberalisation of the EU air transport sector through the implementation of the single aviation market over the last decades has achieved some impressive outcomes for the transport of passengers and freight. Air transport has vastly democratised and allowed its users to benefit from much cheaper prices as well as much enhanced connectivity and services. Air transport in Europe has effectively evolved into a commodity product.

1.2 This has resulted in unprecedented economic opportunities for the aviation sector as well as the other economic sectors which rely on air connectivity (such as tourism but also trade, business, etc).

1.3 The growth and improvement of connectivity has clearly contributed to the development of the European project and today constitutes the fundamental backbone of the transport system which allows the EU to remain connected with its peripheries and with the rest of the world.

1.4 Legislation was implemented with the objective of ensuring that there is a market level playing field for all aviation stakeholders in Europe, and that passenger rights are upheld to a high level.

1.5 As these changes took place, European airlines rose to the challenge, managed to keep lowering ticket prices – whilst maintaining an excellent safety record - and invested in newer, quieter and significantly more fuel-efficient aircraft. However, challenges remain for the next generational jump needed towards decarbonising Europe. The Draghi report estimates that decarbonising aviation will require more than €60 billion of investments every year from 2031 to 2050.

1.6 In parallel, over the last 10 years, a number of legislative actions, in Europe or at Member State level have kept imposing hefty requirements on airlines. Even more importantly, few of these legislative actions have considered the worldwide eco-system that international aviation operates within and the risk that a lowering of European aviation competitiveness brings, not just to the sector but to Europe plc itself.

About the study

1.7 The objective of the study is to present the historic, current and future situation for A4E Member airlines in terms of costs of compliance, and taxes levied on aviation. The study also considers the additional costs generated by the lack of adequate implementation of European legislation in some specific cases.

1.8 The list of A4E airlines members is presented below. These airlines carried 67% of EEA departing passengers in 2024.

Figure 1.1: A4E member airlines

Source: A4E

Approach used by the study

1.9 The methodological approach taken in this study has involved the following inputs:

- A literature review of existing reports, papers and other relevant documents;
- Engagement with stakeholders, mainly through a detailed questionnaire that was distributed to A4E Members;
- Analysis and assessment of the confidential material received and views expressed by stakeholders during the consultation exercise; and
- Modelling and development of projections.

Desk-research and literature review

1.10 The literature review including reviews of existing reports, papers and other relevant documents is presented in the table below:

Table 1.1: Bibliography

Topic	Source	Document
CSRD	IATA	Beginner's guide to airline sustainability reporting
	EC	Frequently Asked Questions on the Corporate Sustainability Reporting Directive (CSRD)
CS3D	EC	Frequently Asked Questions on the Corporate Sustainability Due Diligence Directive (CS3D)
MRV	DLR	A step-by-step guide for airlines, 2024
SAF and ETS	EASA	European aviation environmental report 2024, 2025 2024 Aviation Fuels Reference Prices for ReFuelEU Aviation, 25/02/2025
	EIA	Annual Energy Outlook

	Destination 2050	A Route to Net Zero European Aviation (Destination 2050), February 2025
Passenger rights (261)	Steer	Fact-finding study on air passenger rights
Passenger rights (PRM)	Steer	Ex-post evaluation of Regulation 1107/2006
Single European Sky	EUROCONTROL	European aviation overview 2023
	EUROCONTROL	Standard Inputs for Economic Analysis
	PRB	Annual Monitoring Report 2023
	PRU	Data dashboard
	EC and FAA	Comparison of Air Traffic Management related operational and economic performance US – Europe, 2024
Airport charges	EC	SWD (2019) 289 final
Aviation taxes	A4E	Overview of national ticket taxes
VAT	Group on the future of VAT	Review of VAT rules - Travel and Tourism, 2022

1.11 We also used industry data (airline annual and sustainability reports, OAG data to which we maintain a subscription) as well as European and industry data sources (Eurostat, ECB for their macroeconomic projections, Airbus GMF 2024, etc).

1.12 Lastly, a key input to this study has been the qualitative and quantitative data provided by A4E Member airlines who have reported on the costs they incur as well as drivers of these costs.

Stakeholder engagement

1.13 In order to obtain detailed views and data, we engaged in stakeholder consultation with the A4E members airlines, through discussions and exchange of data.

Table 1.2: List of airlines consulted

Method	Audience	Status
Questionnaire	A4E Members	11 individual questionnaires received from airlines, including cargo, leisure, low-cost and network airlines.
Bilateral interviews	A4E Members	4 interviews conducted

Methodology

1.14 The methodology used varied according to the topics covered in this study. It is therefore detailed in each of the relevant sections of the report. Where projections into future years have been made, air traffic projections are based on:

- For intra-EU: on the "REG" scenario[2] published by the European Commission in the context of policy scenarios for delivering the European Green Deal.

[2] Policy pathway within the context of the European Green Deal, focused on achieving significant greenhouse gas emissions reductions through stricter regulations and standards across key

- For Extra-EU: on the 2024 Global Market Forecast published by Airbus.

Organisation of this report

1.15 The remainder of this report is structured as follows:

- Chapter 2 details what the compliance requirements for airlines in Europe are;
- Chapter 3 addresses the issue of “non-Europe”;
- Chapter 4 provide estimates of compliance costs; and
- Chapter 5 presents the situation outside Europe.

sectors like energy efficiency, renewable energy, and land transport (essentially pushing for a rapid transition to a low-carbon economy)

2 Compliance and tax requirements for airlines in Europe

Introduction

2.1 Any organisation faces compliance and tax requirements. In aviation, for example compliance with safety standards and rules is paramount and ensures that airlines and aircraft manufacturers deliver the safest mode of transport. As there is total agreement by A4E and its Members of the benefits of safety compliance, this is therefore not addressed by this study.

2.2 What is covered in this study are other compliance requirements, emanating from:

- Environmental compliance requirements;
- Taxes and possible future European VAT imposed upon air transport activities;
- Operational compliance requirements;
- Corporate disclosure requirements; and
- Border control and security requirements.

2.3 In this chapter, we present the compliance requirements faced by airlines in Europe. They originate from various legislative acts, many of which are at EU level because a significant portion of air transport and environmental law is regulated at this level, while others are established at the national level by Member States.

Environmental compliance requirements

EU Emissions Trading System (ETS)

2.4 The EU Emissions Trading System (EU ETS) is central to the EU's strategy for addressing climate change. This cap-and-trade system encompasses various economic sectors, encouraging CO_2 reduction either within each sector or through trading allowances with other sectors where emission reduction costs are lower.

2.5 In 2008, the EU decided to incorporate aviation activities into the EU ETS, with the system being applied to aviation since 2012. Initially, the EU ETS covered all flights arriving at or departing from airports within the European Economic Area (EEA). However, flights to and from non-EEA countries or outermost regions were later excluded through a temporary derogation to facilitate negotiations for the global market-based measure for international aviation emissions of the International Civil Aviation Organisation (ICAO).

2.6 The initial total aviation allowance cap within the EU ETS in 2012 was 95% of the average annual flight emissions between 2004 and 2006. Over the years, this cap has decreased. In the period 2021-2024, the cap decreased by 2.2% year on year and it is decreasing by 4.3% year on year on the period 2024-2027.

Compliance costs for European airlines

2.7 Airlines have a number of free allowances allocated to them each year. The rest of the allowances are auctioned by Member States or purchased by airlines from other sectors on the carbon market. The cost of purchasing allowances for airlines is increasing rapidly over the years driven by:

- The increase of the price of allowances; and
- The fact that the free allowances are being phased out by 2026 while they represented 85% of the allowance cap until 2023.

Figure 2.1: Evolution of EU ETS allowance prices

Source: EASA

2.8 To estimate the costs of ETS, projections of aviation allowances have been carried out according to the current regulation. The cost has been calculated by considering the volume of CO_2 emissions less the number of free allowances and the cost of carbon. Emissions avoided by the use of SAF, as well as the SAF free allowances, which compensate for the cost difference between SAF and kerosene, have also been taken into account.

2.9 Overall, we have estimated that 25.1m allowances were purchased by A4E members in 2024 at an average price of €92.30. This represents a total cost of €2,319 million in 2024.

Monitoring and reporting of greenhouse gas emissions

2.10 Regulation (EU) 601/2012 established rules for the monitoring and reporting of greenhouse gas emissions from aviation in relation to the activities listed in Annex I to Directive 2003/87/EC (the ETS Directive) in the European Union. It aimed to ensure accurate and consistent reporting from 2013 for the companies that participate in the EU emissions trading scheme so that they can surrender the correct CO_2 allowances.

2.11 The threshold for an aircraft operator to be considered a small emitter was raised from 10,000 to 25,000 tonnes of CO_2 emissions per year. In Europe, this only includes very small regional airlines.

Impact of non-CO_2 Monitoring Reporting Verification (MRV)

2.12 Directive 2003/87/EC (the ETS Directive) was amended by Directive (EU) 2023/9582 to include the reporting of non-CO_2 aviation effects occurring from 1 January 2025 (Article 14(5) of the ETS Directive).

2.13 The Commission published the draft implementing act in July 2024 for consultation, which establishes a two-year period during which the monitoring and reporting of non-CO_2 effects from aviation only applies on a mandatory basis to a reduced scope of flights, i.e., intra-EEA flights and flights from an EEA airport to Switzerland or to the United Kingdom. From 2027, the monitoring and reporting of non-CO_2 effects from aviation shall cover all flights which involve an airport located in the EEA. There is also an obligation on Member States to ensure compliance by carriers.

2.14 Small emitters (emitting less than 25 000 tonnes of CO_2 per year) have access to a simplified procedure. In Europe, this only includes very small regional airlines.

2.15 A new IT tool (non-CO_2 aviation effects tracking system, NEATS) is being developed by the European Commission and it is understood that it will only be available in Q4 2025. This tool has been designed to rely on data automatically collected from sources including EUROCONTROL and national weather services, as well as from proprietary data from carriers such as individual aircraft properties, fuel properties per flight and aircraft performance during each flight. NEATS is supposed to be able to run using conservative default values established by the MRR Regulation, something which is important as an airline stakeholder mentioned that they do not have access to all the data required for MRV purposes, having to contract this data supply to third parties.

2.16 Implementing the MRV means the following for carriers (although note that as the NEATS tool has not been disclosed yet, airlines were unclear on IT and process changes and costs):

- Internal costs:
  - One-off: perform data availability assessments and alter internal IT tools to collect the required data. For the first years of implementation, while airlines define and implement new procedures to report the data required and the process gets consolidated, there will be additional staff costs.
  - Annually recurring: human resources (with specific skills) to collect data (especially the fuel data which require manual collection for a number of airlines), IT staff costs if use of internal IT tools versus use of third-party IT tool.
- External costs:
  - On a one-off basis: potentially there could be some one-off IT costs.
  - On an annual basis: incur accredited verifiers audit fees. Cloud or digital storage systems for all flight information (there is a 10-year storage requirement).

2.17 Overall, based on the information submitted by A4E Members on their costs to implement, we have estimated that this represents a total cost for A4E airlines of €13.4 million in 2025.

2.18 In addition, if a non-CO_2 emissions price is included in the EU ETS as of 2028, costs could become extremely significant for airlines (not quantified here).

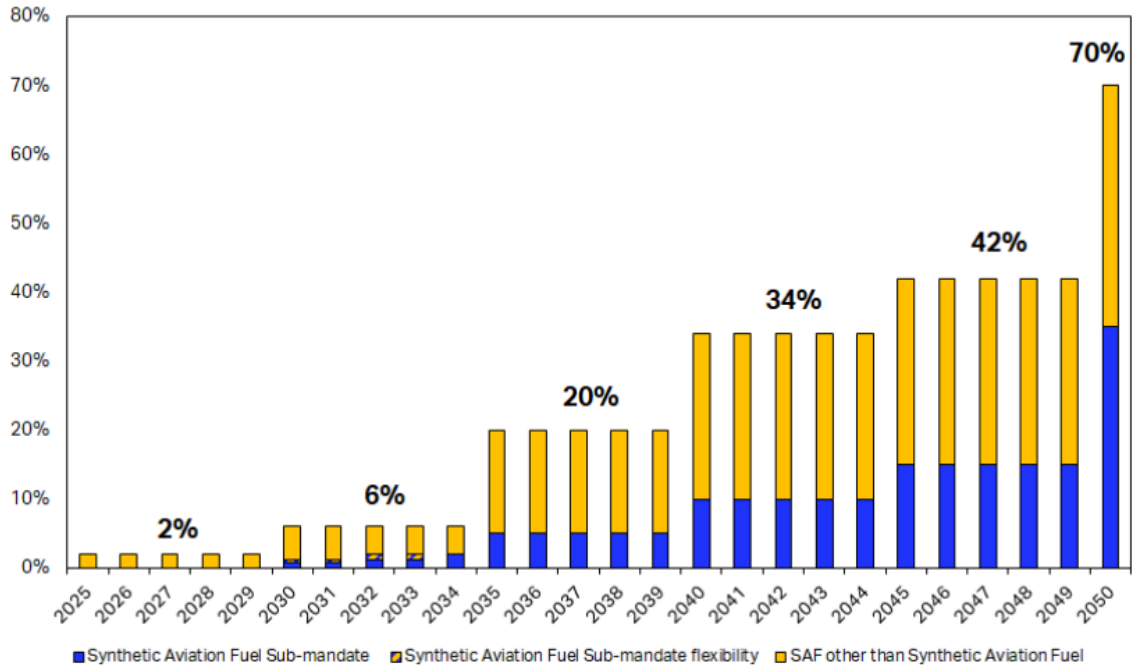
SAF Mandate – ReFuelEU Aviation

2.19 Regulation (EU) 2023/2405 or "ReFuelEU" lays down rules on the supply of sustainable aviation fuels (SAF) to Union airports. It mandates that aviation fuel suppliers gradually increase the share of SAF (with a sub-minimum share of synthetic fuels) blended into conventional aviation fuel at EU airports. This concerns both intra-EU and extra-EU flights by both EU and non-EU aircraft operators.

2.20 Minimum shares of SAF are as follows:

- 2025: minimum 2% of SAF;
- 2030: minimum 6% of SAF with a minimum of 1.2% of synthetic fuels;
- 2035: minimum 20% of SAF with a minimum of 5% of synthetic fuels;
- 2040: minimum 34% of SAF with a minimum of 10% of synthetic fuels;
- 2045: minimum 42% of SAF with a minimum of 15% of synthetic fuels;
- From 2050: minimum 70% of SAF with a minimum of 35% of synthetic fuels.

Figure 2.2: Obligations on fuel suppliers under ReFuelEU



Source: IATA

2.21 The regulation also obligates aircraft operators to ensure that the yearly quantity of fuel uplifted at a given Union airport is at least 90% of their yearly aviation fuel required, as a measure to curb tankering[3].

[3] "Tankering is a where an aircraft uplifts excess fuel in one airport to cover its return trip fuel needs in addition to its outward journey. Airlines may use tankering where fuel is significantly cheaper at certain airports.

2.22 There are some limited exemptions for new or existing routes shorter than 850 km or for routes connecting with airports on islands without rail or road connections and departing from a Union airport and of distance of less than 1,200 km.

2.23 In addition, the regulation imposes reporting requirements on aircraft operators and fuel suppliers each year. Aircraft operators' reports must be submitted to the carrier's competent authority and EASA, but reports must also be verified by an independent verifier in accordance with the requirements set out in the EU Emissions Trading System (EU ETS). Aircraft operators must also have procedures to monitor all eligible aviation fuels, which are certified according to the criteria established by RED III (Renewable Energy Directive) and shall report the amounts of SAF claimed as a separate memo item in their annual emission report.

2.24 Obligations related to SAF have been placed only on the fuel suppliers, but the aircraft operators cannot claim the same batch of SAF under more than one greenhouse gas scheme, for example, under both EU ETS and CORSIA.

Compliance costs for European airlines

2.25 The main cost for airlines related to the SAF mandate is, by far, the cost of purchasing SAF, which is more expensive than conventional jet fuel (kerosene). It was circa 3 times more expensive than kerosene in 2024 based on a recent EASA publication[4].

2.26 Other impacts include the need to change internal processes, as well as changes to routes and networks, decrease in international competitiveness or fleet changes. In terms of the direct impacts, new processes have to be put in place in relation to fuel procurement skills and approaches. IT tools are needed for the reporting which many airlines find to be particularly complex and not aligned with the CSRD reporting timelines and requirements. Finally, the introduction of changes to accounting systems is necessary.

2.27 The additional costs brought by the SAF mandate for the airlines were estimated by considering the projected fuel consumption and the differential in average price between kerosene and SAF. Current SAF prices are based on the recent EASA publication[2]. As the future price of SAF is a key input, this data was obtained from the 2025 update of the Destination 2050 report[5] and was crossed-checked against other sources. It was assumed that fuel suppliers will strictly comply with the mandate and that adequate quantities of SAF would be available as required. In terms of the future consumption of kerosene by airlines, numbers were adjusted according to the recent EASA "fleet renewal scenario"[6].

2.28 Since the entry into force of the mandate in January this year (2025), aircraft operators in Europe have reported that prices of SAF have been higher than the anticipated market prices. According to an IATA publication of January 2025[7], this surcharge is due to a

[4] **2024 Aviation Fuels Reference Prices for ReFuelEU Aviation**, EASA, 25/02/2025 (accessed 04/03/2025)

[5] **Destination 2050 - A Route to Net Zero European Aviation**, February 2025 (accessed 26/02/2025)

[6] Figure 1.10(b) of **European Aviation Environmental Report 2025**, EASA (accessed 13/03/2025)

[7] **Access to SAF in Europe, IATA**, 30/01/2025 (accessed 04/03/2025)

variety of reasons, including the difficulty for fuel suppliers to comply with the mandate and limited competition among fuel suppliers. According to IATA this may lead to additional costs which are passed onto airlines as a 'green premium'. As A4E Members did not have an opportunity to confirm this result, we have not included its quantification into the future SAF prices used for the study.

2.29 Overall, the annual cost for A4E members of uplifting SAF is estimated to reach €3,53 million in 2030 with increasing costs going forward as the blending mandate increases. By 2050, the annual cost for A4E members is estimated to significantly rise to €33 billion.

Further considerations

2.30 To ensure a consistent supply of sustainable aviation fuel (SAF) across the EU and prevent shortages at specific airports, ReFuelEU has introduced a flexibility mechanism for the period 2025-2034. This mechanism allows fuel suppliers to meet the required minimum SAF share by averaging it across all EU airports they serve. In practice, this means that suppliers can provide higher SAF percentages at some airports to offset lower or zero SAF percentages at other airports. This mechanism aims to reduce compliance costs for fuel suppliers while avoiding unnecessary logistics and emissions implications in deploying SAF at every EU airport. However, there are still some issues in its implementation which creates a lack of transparency and traceability of the supplied SAF. As a result, aircraft operators have limited view on the volumes of SAF they are supplied with which makes it complicated for them to claim the associated environmental benefits of their SAF usage. This is acknowledged and further detailed in the recent flexibility mechanism report from the Commission[8].

2.31 Union airport managing bodies and aviation fuel suppliers are subject to fines if they fail to comply with the minimum volumes of SAF that they need to supply to aircraft operators. The fines will be equal to the quantity of SAF that was not supplied in a given year multiplied by the price of SAF. In addition, the non-supplied quantity in a given year n will have to be supplied in year n+1. All revenues generated through fines are to be allocated to supporting research and innovation projects in the field of SAF. Therefore, this system is not only punitive but also it serves as a financial incentive mechanism to support SAF production and bridge the price gap with fossil jet fuel. There is still a risk that the costs of penalties will be passed to aircraft operators in the short-term, but, if funding from penalties is used wisely, aircraft operators are likely to incur lower prices of SAF in the future.

2.32 Regarding the indirect impacts of the mandate on airline networks, because of the mandate geographic scope, for flights within the EU (such as the majority of those for regional and low-cost airlines), it will create a market-playing field, albeit one with very high costs. Despite all airlines facing similar increases in costs within the EU, it is likely that airlines operating routes with a high demand elasticity (i.e. low-cost airlines) will be impacted more strongly and will therefore carefully assess their network competitiveness.

2.33 The other significant issue concerns the boundaries of the EU mandate on fuel suppliers:

[8] **The ReFuelEU Aviation SAF flexibility mechanism**, European Commission, 27/02/2025 (accessed 14/03/2025)

- Full-service airlines with an EU-based hub will be losing in cost competitiveness versus their competitors without an EU-based hub as these will not have to incur EU SAF costs on their long-haul routes. There is little or no evidence that these airlines will be able to absorb the cost increase and not pass it to their customers.
- Low-cost, regional and leisure airlines may consider other short haul destinations outside of the EU more seriously as a result of these changes, and may be further attracted to nearby tourism destinations such as Morocco, Tunisia, Turkey, or Egypt, to the detriment of EU destinations (Greece, Italy, Spain, etc), or business destinations (UK, Switzerland, Norway).

2.34 In relation to fleet management and renewal, ReFuelEU does not directly trigger changes in fleet per se, however as newer generation aircraft are always more fuel efficient, the SAF Mandate may incentivise carriers to accelerate the renewal of older fleets to newer fleet types. It may further disincentivise them from using older but cheaper assets, which can be complicated to manage for airlines.

2.35 Furthermore, there are some significant – and real – concerns by European airlines on the potential lack of SAF supply and in particular e-SAF (the sub-mandate for which commences in 2030) available on time in Europe. We do not discuss this issue here as it is covered in the A4E study on SAF Industrial Policy Roadmap[9].

2.36 Overall, airline costs in relation to the SAF Mandate will be recurring. The increasing SAF requirements over time means that the recurring nature of these will become more intense and will also have a wider impact on strategies in relation to network, routes and fleet.

Environmental labelling scheme

2.37 Whilst the Flight Emissions Label (FEL) Environmental labelling scheme is part of the ReFuelEU legislation, we are treating it separately here as its Implementing act laying down the detailed provisions, was recently adopted by the European Commission. By February 2025, airlines that operate flights within the EU or which depart from the EU can opt-in to participate in the Flight Emissions Label. To do so, they will need to submit the required data to EASA. The first flight labels will then be assigned by EASA by July 2025 and will apply to flights scheduled during the 2025 winter season.

2.38 The purpose of this labelling scheme is to have a transparent way for passengers to compare the environmental performance of flights on the same routes in terms of carbon footprint per passenger and CO_2 efficiency per km. The environmental performance assessments will be carried out by each airline on specific routes based on the previous corresponding scheduling period.

2.39 The scheme will be voluntary for now, but there is an expectation in legislation that the Commission will make it compulsory after its 2027 report on the functioning of the voluntary scheme (and recommended improvements).

2.40 There are some perceived issues by the European airlines on the known aspects of the voluntary scheme:

- Labels issued under this scheme would be valid only for a limited period, not exceeding one year;

[9] **European SAF Industrial Policy**, January 2025 (accessed 26/02/2025)

- Requests made to EASA for the FEL cannot be made for selected routes, but rather for all flights of a given carrier departing (or arriving) at EU airports.

2.41 We note that the "Count Emissions EU" initiative is in the process of being adopted, with the negotiations expected to continue into 2025. This will introduce new requirements for airlines on the methodology to follow when reporting their greenhouse gas emissions as well as mandating large companies to have their calculations and results verified by independent bodies. These requirements will be additional to the ones of the FEL scheme but have not been quantified in this study as the legislation has not been agreed yet.

Compliance costs for European airlines

2.42 Given the recent adoption of the implementation act on the FEL and its voluntary nature until 2027, so far airlines have a limited understanding of the magnitude of the costs they will incur until then. We have assumed that, given the other compliance demands from legislation, airlines will wait for the mandatory nature of FEL to kick-in before starting to incur costs.

2.43 As there is no detailed information on the precise provisions that airlines will have to carry out under the mandatory scheme, A4E members have not been able to provide a quantitative estimate. However, in qualitative terms, they expect at minimum the following costs to start with:

- Modifying airline websites; and
- Obliging their multiple points of sale to display the labels. This will impact on conditions of contracts with sales and distribution intermediaries (including global distribution systems, travel agents, travel websites, etc).

Taxes on air transport activities

2.44 Taxation is a prerogative of the Member States, with the EU having only limited competences: the power to introduce, remove or adjust taxes remains in the hands of the Member States. Each Member State is free to choose the tax system it deems most appropriate, including for so-called “indirect taxation”, i.e. value-added tax (VAT), excise duties, import levies, energy and other environmental taxes.

2.45 At national level, there are no uniform taxation regimes across the EU Member States. Therefore, taxes vary significantly across Member States, in terms of scope, value and processes. For an industry operating so readily across borders, this creates complicated requirements and costs.

Ticket taxes

2.46 Ticket taxes are usually applied to passenger tickets departing from airports and exclude transfer passengers, with their scope dependent on the country of destination or journey characteristics. Some of these taxes are earmarked for paying for State activities related to air transport, for example for airport security costs. In other cases, they are non-earmarked, i.e. raised for general public revenue purposes rather than to fund aviation related activities.

2.47 In this section, we have only considered those that are not earmarked for aviation (as they could be considered as a “charge” or a “fee”), because they increase the cost of provision of aviation services without providing direct benefits to the industry or its customers.

Table 2.1: Current taxes in scope of the study

Country	Tax name	Applicable rate
Austria	Air transport levy (Flugabgabe)	<350 km: €30 ≥ 350 km: €12
Belgium	Belgium embarkation tax	<500 km (from Brussels airport): €10 ≥ 500km (from Brussels airport): €2 (within EEA) / €4 (outside EEA)
Denmark	Ticket tax	30 - 300 DKK the first year (= 4 - 40 EUR depending on length of the route.
France	Air Passenger Solidarity Tax	From March 2025 € 7.40 (within EEA; economy class) € 30.00 (within EEA; business/first class) € 15.00 (outside EEA < 5500 km; economy class) € 80.00 (outside EEA < 5500 km; business/first class) € 40.00 (outside EEA > 5500 km; economy class) € 120.00 (outside EEA > 5500 km; business/first class) Until March 2025 € 2.63 (within EEA incl. domestic; economy class) € 20.27 (within EEA incl. domestic; business/first class) € 7.51 (outside EEA; economy class) € 63.07 (outside EEA; business/first class)
France	Fiscal tax (Corsica)	€ 4.57 (for all passengers to/from Corsica)
Germany	German aviation tax (Luftverkehrsteuergesetz)	€ 15,53 departures from May 2024 (short haul) € 39,34 departures from May 2024 (medium haul/selection of destinations) € 70,83 departures from May 2024 (other long haul)
Hungary	Hungary airport departure tax	€ 25.30
Italy	Council city tax (addizionale comunale sui diritti di imbarco)	€ 6,5, (Venezia) € 8.50 (Naples) € 7.50 (Rome airports) € 0,00 (Trieste airport and Calabrian) € 6.50 (all other airports)
Lithuania	Lithuania airport tax	€ 6.37
Netherlands	Dutch aviation tax	The air passenger tax rate for 2023 is € 29.05 per passenger per flight
Portugal	Portuguese carbon tax	€ 2
Sweden	Swedish aviation tax	An aviation tax has been levied on passenger departures since 1 April 2018, depending on final destination from 76 SEK up to 504 SEK per pax. This tax will be abolished from July 2025
Norway	Norway Passenger fees	As of July 2022 To EEA: 82 NOK = €7.4 To others: 320 NOK = €19.8

Source: A4E, Steer analysis

Compliance costs for European airlines

2.48 To estimate the cost of aviation taxes for A4E members, passenger numbers have been built for each Member State across the relevant segments (short-haul, domestic, intra-EU/EEA, etc) based on a detailed analysis of OAG data. Steer's estimates for taxes were then cross-checked against those provided by the airlines for each Member State.

2.49 For future projections of the costs, we have assumed a conservative scenario where the current rates listed in Table 2.1 do not increase in nominal terms going forward. The number of passengers grows accordingly to our traffic projections.

2.50 Overall, in 2024, the impact of ticket taxes for A4E members has been estimated to be €3,176 million.

Value added tax

2.51 Currently, only domestic (i.e. intra-country) flights are subject to Value Added Tax (VAT). The rates depend on each Member State, and range from 0% to 27%.

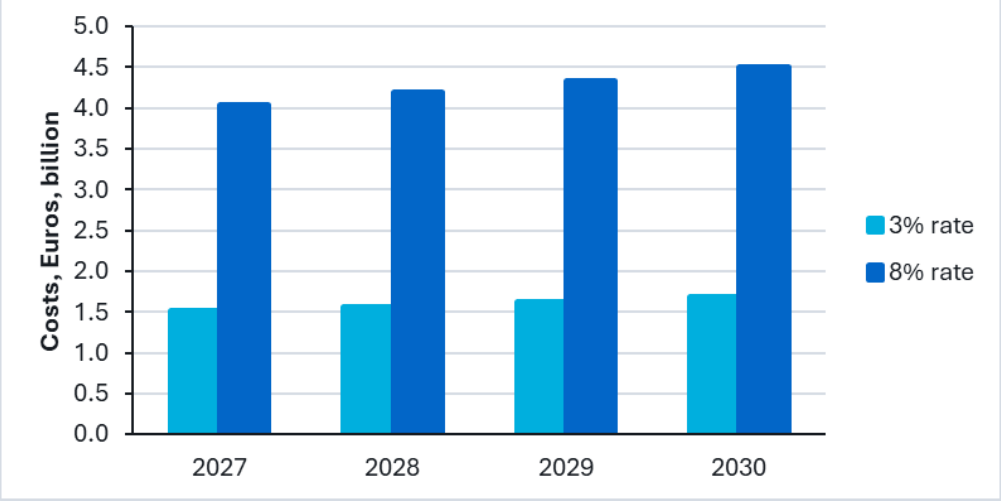
2.52 However, in the last few years, there have been some discussions between the European Commission and various stakeholders to consider the possible application of VAT rates to international intra-EU flights. Various options have been discussed including one where the VAT rate applied to tickets would be the one of each departure country, and another one where there would be a minimum VAT rate of 3% or 8%.

Compliance costs for European airlines

2.53 To understand what the potential cost impact of this measure on A4E Members could be, we have extracted intra-EU 2024 fares from the OAG database and have taken the assumption that fares will grow in line with inflation going forward. This is likely not to be the case as the increase in costs of compliance for airlines will have to be passed onto customers and therefore likely cause an increase in fares in real terms.

2.54 We have also assumed here that intra-EU VAT would be introduced in 2027 and that a VAT rate of 3% would be applied on these fares in a first option or a rate of 8% VAT in a second option. The estimated impacts on A4E Members for the two options are presented in the figure below.

Figure 2.3: Impact of the potential introduction of intra-EU VAT on flights on A4E Members



Source: OAG, Steer analysis

2.55 The option where the VAT rate of each departure country would be applied has been considered. However, it appears complex to make assumptions on which VAT rates Member States would apply. There is no evidence that the same domestic rates would be applied to international flights.

Operational compliance requirements

Air passenger rights

2.56 In Europe, Regulation (EC) 261/2004, which was introduced two decades ago, established rules on compensation and assistance in the event of denied boarding, cancellations, long delays and involuntary downgrading of passengers.

2.57 Costs incurred by airlines through the implementation of Regulation 261/2004 have grown significantly since 2011. A Steer study for DG MOVE[10] found that the average direct cost per passenger was estimated to have increased at a compound annual growth rate (CAGR) of +13.6% from €1.8 in 2011 to €4.4 in 2018, driven by a combination of increased levels of disruption and increased claim rates for compensation.

2.58 Although Regulation 261/2004 is not the largest part of airlines' cost base, the overall cost of this Regulation has increased and so has its relative share as cost, and in the case of LCCs, compliance with Regulation 261/2004 has overtaken the cost of marketing and distribution activities.

2.59 The average 261 cost per passenger affected by disruption has increased from €89 in 2011 to €138 in 2018, with a CAGR of +5.5%, (driven by increasing passenger claims and airline compliance). In combination with falling yields, this means that in 2018 the average 261 cost for every passenger affected by disruption was 90% of the yield they generated. Since these costs are additional to the underlying airline operating costs per passenger, passengers affected by disruption are on average loss-making for airlines, but passengers affected by disruption represented just a little over 3% of total passengers in 2018.

2.60 The Regulation was designed for the cost per passenger affected to be high to discourage airlines from taking commercial actions that would inconvenience passengers (e.g. overbooking), however, as more operational disruptions are also covered (e.g. technical defects inherent in the normal exercise of the activity of the air carrier), the cost per passenger affected by disruption may generate disincentives for airlines to actually operate severely delayed flights and incur operating costs in addition to the disruption costs.

2.61 A key issue with Regulation 261/2004 for airlines is that the right to redress defined in the Regulation is not guaranteed/effective and as a result there are many instances where airlines are not able to recover costs incurred in providing assistance and compensation to passengers for disruption generated by third parties (such as ANSPs, ground handlers or airports).

2.62 Since 2018, airlines who participated in the study have noted that:

- The average 261 costs per passenger have kept rising.

[10] https://op.europa.eu/en/publication-detail/-/publication/f03df002-335c-11ea-ba6e-01aa75ed71a1

- Accommodation and subsistence costs had increased since the pandemic.
- Passengers' awareness of their rights had increased, leading to an increased likelihood of claiming (especially for delays): one airline observed that claims had doubled since 2018, others were more measured.
- More professionalisation of claim agencies which results in passengers being incentivised to claim.
- European Court of Justice rulings were getting even narrower on what circumstances were accepted as "extraordinary" and renewed concerns on how local courts in some countries such as Germany or the Nordics interpret "reasonable measures" in relation to rebooking.
- In terms of operational performance, there were some differences between airlines who responded: some noted a decrease in the punctuality they delivered, whereas others reported improvements. However, all noted the impact of the under-performing SES in terms of capacity delivery compounded by ATC strikes.

Future evolution of air passenger rights costs

2.63 The drivers of costs associated with passenger rights are presented in the table below. We see that most will likely increase, or remain stable for a few of them, assuming the European Union does not make changes to the Regulation.

Table 2.2: Likely evolution of cost drivers associated with Regulation 261/2004

Cost driver	Description	Likely evolution of 261 costs going forward	
Airline self-driven disruption	Airline decisions on levels of operational delays, cancellations, overbooking, etc	Airline dependent. Strategic decision on 261 costs vs level of operational resilience through mitigation measures such as building additional time into schedules and turnarounds or availability of spare aircraft and crew	-
Level of ATM disruption	The ATM system is becoming more crowded and suffers unresolved capacity constraints	Unlikely that ATM performance will significantly improve in RP4 compared to the historic one	↗
Court decisions	Increased compensation/damages, administrative and legal costs for airlines as a result of a larger number of disputed cases ending up in the courts	Airlines' interaction with various courts across Europe has been problematic and is likely to remain so without further action by the Commission. Court cases generate a lot of uncertainty, complexity, inconsistencies in rulings and costs for airlines.	↗
Out of scope circumstances	Narrower definition of extraordinary circumstances emerging from CJEU rulings, coupled with increasingly wider interpretation of the Regulation's scope	After 20 years of implementation of Regulation 261/2004, there probably remain few areas to further expand the circumstances in scope of the Regulation.	-

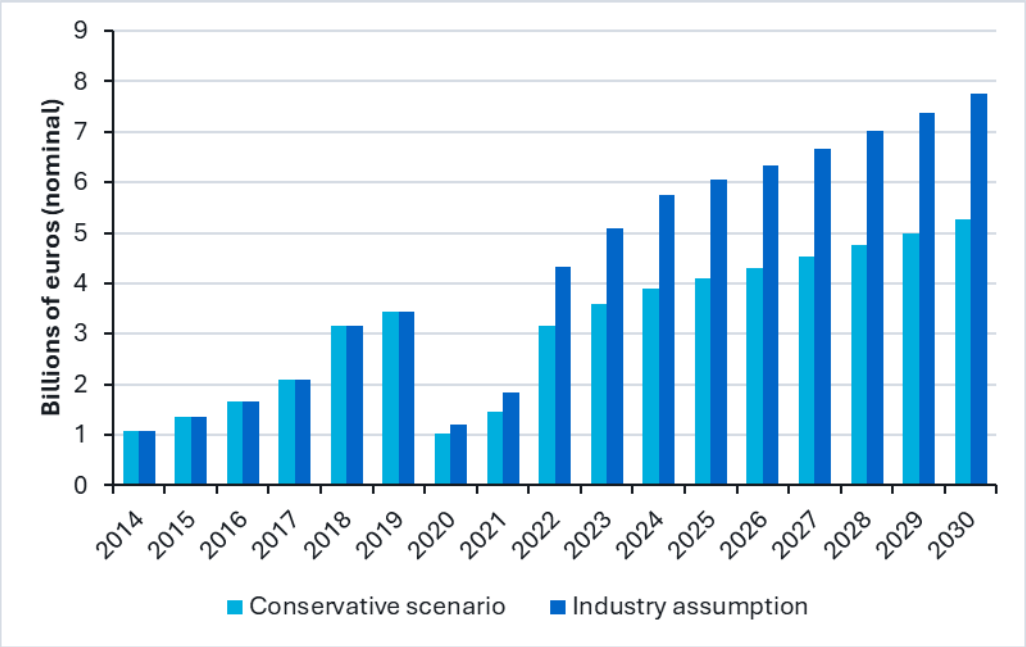
Source: Steer analysis

2.64 In March 2013, the Commission proposed a revision of Regulation 261/2004, but the proposal has been on hold for over 10 years, whilst it has recently been looking into imposing further requirements on airlines (and other transport operators) in its Omnibus proposal[11].

2.65 Making estimates for the evaluation of the costs of Regulation 261/2004 is not easy as costs are driven to an extent by passengers themselves and court decisions. We are therefore presenting the results here with a range.

2.66 We see that under a very conservative estimate, 261 costs represent a total cost for A4E members of €3.9 billion in 2024 vs €3.2 billion in 2018, whilst under a less conservative estimate 261 costs represent a total cost for A4E members of €5.8 million in 2024. The latter is based on a recent impact assessment[12] undertaken for the European Commission on proposals on enforcement of passenger rights and multimodal journeys and had an upper estimate of €8.1 billion for all airlines in 2025.

Figure 2.4: Current and future cost of Regulation 261/2004 for A4E members (under two scenarios)



Source: Steer analysis. Conservative scenario means that the same assumptions in terms of average cost per passenger have been used than under the retained scenario of the Fact-finding study on Air passenger rights of 2019 referenced above; Industry assumption means that the same assumptions in terms of average cost per passenger have been used than under the retained scenario of the Impact Assessment on proposals on enforcement of passenger rights and multimodal journeys.

2.67 For the rest of the study, the most conservative estimate has been used.

Rights of Passengers with Reduced Mobility (PRM)

2.68 Regulation (EC) 1107/2006 on the rights of PRM (persons with disabilities and persons with reduced mobility) seeks to ensure non-discrimination and mandatory assistance in air transport in the EU, EEA and Switzerland.

[11] https://eur-lex.europa.eu/procedure/EN/2023_437

[12] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023SC0386

2.69 Assistance is free for PRMs, but the cost of assistance is shared across all passengers through the PRM fee which amounted on average to €0.55 per passenger in 2018. Per PRM assisted, the costs were much higher at €75 per PRM assisted in 2018.

2.70 Since 2018, airlines who participated in the study have noted that:

- PRM assistance requests have grown very significantly in comparison to the total number of air passengers, driven mostly by older air passengers.
- Delivery of PRM assistance has been impacted by high inflation and increase in post-covid staff costs. Airlines are also concerned that as the PRM service charge is a cost-pass through there is no incentive for PRM assistance providers to be cost-efficient.

2.71 On average (based on the responses received), we have estimated that PRM costs per passenger have increased between 2018 and 2024 by a CAGR of 3.8%, pushing average costs per passenger from €0.55 in 2018 to €0.69 in 2024. Overall, this represents a total cost for A4E members of €492 million in 2024.

2.72 The main cost drivers of PRM assistance for airlines under the current Regulation are the number of PRMs requesting assistance and the cost of assistance provided by airports on a pass-through basis. Many airlines report that they observe an increase in the number of PRMs requesting assistance (due to better awareness of the service and an ageing population travelling by air as well as other minor factors) as well as concerns at the increases in PRM assistance fee charged at airports.

2.73 We expect the trend in PRM service charge costs to continue to 2030 as they were experienced between 2018 and 2024.

Methodology for operational compliance requirements

2.74 A4E members provided detailed information on their current average costs per passenger for Regulation 1107/2006, Regulation EU261/2004 as well as information on the average cost per disrupted passenger. Based on this data, weighted average costs of compliance per A4E airline were computed and projected taking into consideration the evolution of the drivers of costs as reported by airlines and traffic projections.

Corporate disclosure requirements

Corporate Sustainability Reporting Directive (CSRD)

2.75 The Corporate Sustainability Reporting Directive (CSRD or Directive (EU) 2022/2464) has introduced new sustainability reporting requirements for certain undertakings by way of amendments of previous European legislation.

2.76 Overall, the CSRD requires organisations to publish sustainability information such as environmental information (climate change and pollution of own activities and value-chain, including disclosing "scope 3 emissions", energy consumption, waste management and specific plans to reduce climate change emissions and pollution), social information (on own workforce, workers in value chain and affected communities) and governance information (on business conduct, risk, corporate culture, procurement and payment of suppliers, etc).

2.77 Companies that report under the CSRD have to undertake a ‘double materiality assessment’ to identify which sustainability matters are most material to the organisation

and its stakeholders. The information must be prepared in accordance with specific sustainability reporting standards and, where applicable, comply with a digital format. This sustainability information is subject to an assurance requirement and must be published together with the related assurance report.

2.78 Under the CSRD, the EU has published a set of twelve European Sustainability Reporting Standards (ESRSs) with which reporting entities must comply, from January 2024 for large European listed and public-interest companies (reporting in 2025) and from January 2025 for all other large companies (reporting in 2026).

2.79 Overall, these sustainability reporting requirements apply to undertakings governed by EU national laws that are:

- Large undertakings (defined as more than 500 employees);
- SMEs (excluding micro-undertakings) with transferable securities admitted to trading on an EU regulated market; and
- Parent undertakings of large groups.
- In addition, the CSRD also applies to undertakings from third countries with business in the EU above certain threshold and/or trading on an EU regulated market.

2.80 The CSRD replaces and builds upon the Non-Financial Reporting Directive (NFRD), which applied to large public-interest companies over 500 employees and which included banks, insurance companies, and publicly listed companies. It did not include airlines unless designated as public interest entities by their national authorities.

2.81 Based on our analysis of European airlines, nearly all have more than 500 staff currently and are therefore considered as "large undertakings" with sustainability reporting requirements starting from January 2024, or they would report through their parent undertaking.

2.82 In February 2025, the Commission proposed to simplify the business environment and set out its vision to make the EU's economy more prosperous and competitive. It issued an "Omnibus" proposal[13] where it suggested a number of amendments to CSRD:

- Increasing the ceiling of staff to 1000 vs 500;
- An opt-in approach linked to a turnover threshold of EUR 450 million;
- Postponing by 2 years of the reporting requirements for the second wave for entities that are not listed in the EU and have more than 500 employees;

2.83 We have considered the impact that this proposal would have an A4E Members which we have assessed to be minimal as the vast majority of A4E Members would remain in scope of the original CSRD legislation. In addition, it is unclear whether the Omnibus proposal would be adopted as is or would go through amendments as a result of the trialogue. Therefore only the current CSRD is modelled in this study.

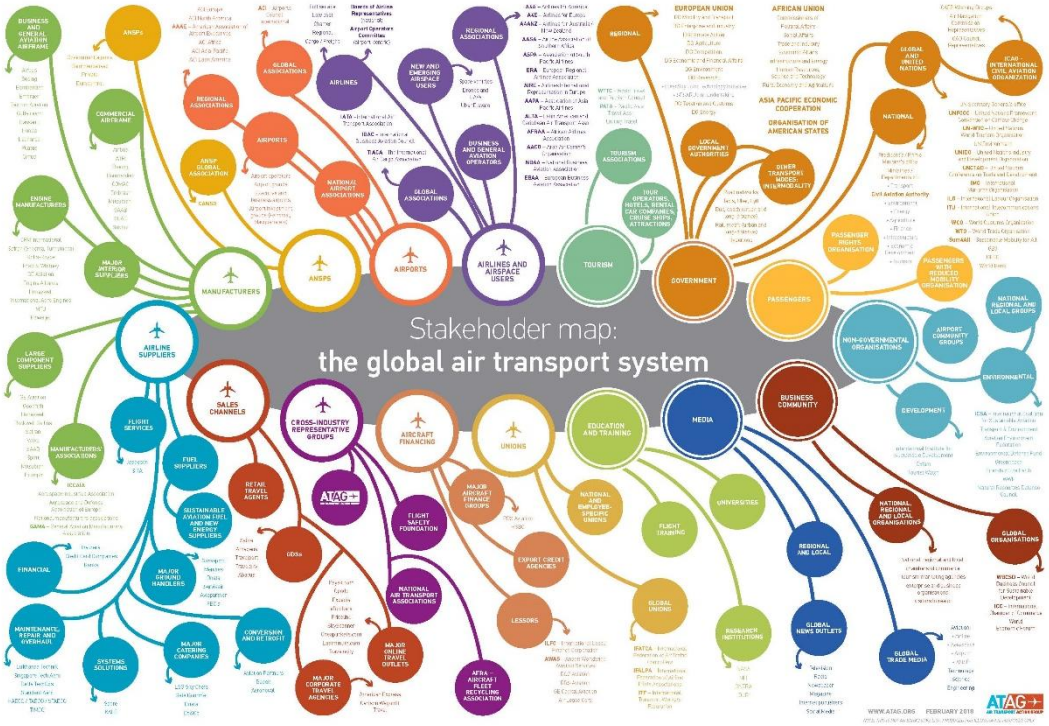
Compliance costs for European airlines

2.84 The new Directive increases significantly the amount of data and information to be reported by airlines about themselves but also about their value chain. The graphic below

[13] https://commission.europa.eu/document/download/892fa84e-d027-439b-8527-72669cc42844_en?filename=COM_2025_81_EN.pdf

illustrates well the complexity of the airline value chain, which spans multiple jurisdictions.

Figure 2.5: Global air transport stakeholder map



Source: ATAG

2.85 Costs that airlines are to incur to fulfil CSRD requirements are as follows. Note that staff costs and external support costs are likely to be incurred every year as reporting is annual, whilst some process and process changes to be implemented by carriers to address CSRD would mostly be one-off costs.

- Internal costs:
  - One-off: implementation of double materiality assessments and gap analysis, implementation of activities such as complete review of performance metrics definition, complete overhaul of IT systems (in groups and subsidiaries) to collect the necessary data, significant updates of the narratives to describe the policies and actions in place, organisational changes to fit these purposes.
  - Annually recurring: more frequent reporting on performance metrics to monitor progress of the actions in place and adjust where needed the policies, annual performing of the double materiality assessments and update of transition plans for climate change (and biodiversity). In large airlines, it is estimated that hundreds of senior staff may be involved in CSRD implementation. Additional FTEs are needed for employees managing the data and reporting process internally.
- External costs:
  - On a one-off basis: purchase of ESG software to manage all the data to be reported for the level of certainty required; purchase of external compliance support.
  - On an annual basis: audit fees.

2.86 At least one airline commented that CSRD costs were 10 times more compared to that incurred under the previous NFRD framework.

2.87 Overall, we have estimated that this represents a total cost for A4E airlines of €12.2 million in 2025.

Corporate Sustainability Due Diligence Directive (CS3D)

2.88 The primary objective of the Directive on Corporate Sustainability Due Diligence ("CS3D" or Directive (EU) 2024/1760) is to elevate transparency and accountability in sustainability reporting practices across industries, including the aviation sector.

2.89 As CS3D requires some mandatory reporting, it holds companies accountable for their Environmental, Social, and Governance (ESG) actions and policies within their own operations, those of their subsidiaries, and their "chains of activities".

2.90 CS3D applies to different categories of companies (non-exhaustive list but relevant to the aviation sector):

- EU-based companies:
  - Limited liability companies and partnerships with more than 1,000 employees and a net worldwide turnover of more than EUR 450 million;
  - Ultimate parent companies of a corporate group that meets the thresholds on a consolidated basis;
- Non-EU-based companies:
  - Companies of a legal form comparable to LLCs/partnerships with a net turnover of more than EUR 450 million generated in the European Union (in any sector);
  - Ultimate parent companies of a corporate group that meets the thresholds on a consolidated basis;

2.91 EU Member States have until 25 July 2026 to transpose the Directive into national law. One year later, by July 2027, the rules will start to apply to companies, with a gradual phase-in:

- July 2027:
  - EU companies with more than 5,000 employees and €1500 million worldwide turnover; and
  - non-EU companies with more than €1,500 million turnover generated in the EU.
- July 2028:
  - EU companies with more than 3,000 employees and €900 million worldwide turnover; and
  - non-EU companies with more than €900 million turnover generated in the EU.
- July 2029: All other companies in scope:
  - EU companies with more than 1,000 employees and €450 million worldwide turnover; and
  - non-EU companies with more than €450 million turnover generated in the EU.

2.92 Amendments to CS3D were also suggested by the Commission in its February 2025 Omnibus proposal. These amendments postponed by a year the transposition deadline and removed the first wave for the entry into application with other minor amendments (as far as A4E Members are concerned related to tailoring of obligations, reducing the frequency and stakeholder engagement, etc).

2.93 We have used the same approach on CS3D than on CSRD, that is to use the current legislation in place rather than the proposed changes considering that the impact on A4E Members of potential Omnibus changes would remain very limited.

Compliance costs for European airlines

2.94 The Directive covers the concept of "chain of activities" ,including both upstream and downstream activities. Airlines typically have extremely wide geographical international footprints of activities with complex and diverse upstream supply chains, along with a very high number of global suppliers providing aircraft and parts, catering supplies, fuel and ground handling, uniforms and electronic supplies, etc., as well as complex downstream supply chains too (with multiple distribution channels involving B2B and B2C clients).

2.95 Furthermore, airlines operate within, across and between many different jurisdictions with varying regulatory and legal standards. For carriers operating all over the globe, this is clearly an issue, especially with procurement and management functions often located at some distance and in different time zones from the supplier of the service or the activity.

2.96 Even for airlines operating mostly within the Single European Sky, most of the procurement and reporting processes follow national rules. Perhaps more frustrating for pan-European businesses such as airlines is that the CS3D is a Directive, meaning different local requirements across 27 EU jurisdictions on which entities fall in scope or even further mandated requirements (on reporting, on sanctions, etc) rather than a unified "single market" approach. Not all Member States have transposed the CS3D legislation yet, but of those that have, Denmark, Finland, France, Ireland, Latvia, Romania and Sweden have expanded the scope of entities in scope.

2.97 For the purpose of this study, in terms of addressing airlines in scope, we have relied on consultation responses. Where no specific response was received, we have used the CS3D definition presented above.

2.98 Costs that airlines are to incur to fulfil CS3D requirements are as follows. Note that staff costs and external support costs are likely to be incurred every year as reporting is annual, whilst some process and policy changes to be implemented by carriers to address CS3D would mostly be one-off costs.

- Internal costs:
  - One-off: updating of existing policies (such as supplier code of conduct), new procurement processes, new IT tools to support new processes.
  - Annually recurring additional costs for centrally based staff in sustainability or compliance teams (and for large international full-service airlines addition of locally based staff too) to report and ensure procurement follows new rules.
- External costs:
  - On a one-off basis: new IT tools to support new processes.
  - On an annual basis: third-party sustainability suppliers to map out and target salient risks, investigate and report on issues and put in place remedial steps. Third-party suppliers may need tools and products to provide this service.

2.99 In terms of airlines in scope, we have assessed that all EU/EEA-based carriers will be in scope of CS3D by 2030 at the latest, meaning the likes of small carriers that are also considered as SMEs according to European legislation such as Binter Canarias, SATA,

TAROM, Norse Atlantic Airways or Sunclass Airlines will be in scope by then. Larger carriers including SAS, Cargolux, TUI, TAP Air Portugal, Finnair will already be in scope from the first year (2027).

2.100 Overall, we have estimated that this represents a total cost for A4E airlines of €9.5 million in 2027.

Compliance costs for European airlines

2.101 Airlines reported that fulfilling this carbon reporting obligation required setting up fuel management systems to allow the decodification of multiple aircraft messages and manual input of certain fuel figures such us fuel uplifts. This involves daily tasks (to obtain data on a flight-by-flight basis, followed by monthly consolidation and data monitoring (in relation to SAF usage in particular). On a yearly basis, internal audits take place (ETS processes and control activities), followed by external verification and engagement with the competent authorities.

2.102 Costs are well established for the monitoring and reporting of greenhouse gas emissions and are limited in comparison to other compliance costs to be incurred such as CSRD or CS3D, but many airlines consulted commented that since 2013 they had noticed significant increases in costs “by 100%” for one and “costs multiplied by 7” for another over a decade.

2.103 Overall, we have estimated that this represents a total cost for A4E airlines of €1.9 million in 2025.

Methodology for corporate disclosure requirements

2.104 The drivers of corporate disclosure costs and applicability thresholds were identified through a joint analysis of the legislation and qualitative information provided by A4E members. Based on A4E members’ quantitative data, weighted average costs of compliance per A4E airline were computed based on the type and size of airline operations. Average staff costs per airline were found through analysis of individual airline financial reports.

2.105 An implementation factor was applied for the first year of CS3D, CSRD, MRV recognising that costs would be larger at first. Projections of costs were linked with traffic projections with the use of an elasticity of costs versus traffic based on the 2009-2019 period.

Border control and security requirements

Passenger data compliance requirements

2.106 There are various legislative requirements on airlines in terms of sharing of passenger data stemming from Directive 2004/82/EC on the obligation of carriers to communicate passenger data (the API Directive) and Directive 2016/681 on Passenger Name Record (PNR) data alongside other European requirements on common protocols, data formats and interoperability.

2.107 Specifically on API, airlines incur some one-off software and internal IT costs (when a new destination country starts requiring API data) and some recurring costs (per destination country per month). The costs depend on the type of the API transmission method used (interactive API vs batch) and on which provider is used by the authority in question.

2.108 In relation to PNR, the cost to transmit PNR data depends on the total volume of passengers the data is sent for per year. To some countries PNR data is transmitted twice for each flight whereas to some countries, it can reach 4 times. An airline remarked that a decade ago, the number of countries requiring API data and PNR data was significantly lower than it is today: in 2013 this airline only sent PNR data to one country compared to more than 20 today.

2.109 API and PNR costs have been estimated by airlines who took part to range from €0.012 per passenger to €0.0073 per passenger per transmission (considering that airlines often have to transmit the data more than once in advance of each flight). They also noted that these costs had significantly increased in the last years, and had been multiplied by 3 compared to what they were a decade ago.

2.110 Airlines also noted that there have also been some last-minute additional requirements for temporary implementations of API/PNR, for instance during the G5 held in Italy. In these cases, the costs remain the same, but the urgency required greater flexibility from the airline.

ETIAS and EES

2.111 The European Union is preparing for the launch of two new border management initiatives that will affect travel to Europe: the European Travel Information and Authorisation System (ETIAS) and the Entry/Exit Systems (EES).

2.112 Under ETIAS, non-exempt passengers will be required to obtain a valid travel authorisation. This will be required for passengers who are not EU/EEA nationals, do not have residence right, or who do not require a visa for short-term stay in EAA. The cost for passengers is €7, valid for 3 years. Whilst ETIAS was supposed to be operational by mid-2015, no start date has been confirmed yet for the programme (we have assumed Jan 2026 in this study).

2.113 The EES is an automated IT system for registering travellers from third countries, both short-stay visa holders and visa exempt travellers, each time they cross an EU external border. EES was designed to replace the current system of manual stamping of passports and involves the collection of passenger biometrics at border crossing time. EES entry into force was originally scheduled to launch in November 2024. However, due to delays from EU member states, it has been postponed with no confirmed new start date (we have assumed Jan 2026 in this study).

2.114 Both systems rely on automated IT systems with interactions with airlines' IT and booking systems. From the consultation with A4E Members, it appears that some of the IT costs for ETIAS and EES will be borne by their booking and service providers, with some costs associated with implementation of the EU-LISA system (an EU central system for carriers and Member States to do applicable checks).

2.115 For the airlines, in terms of costs it means:

- One-off costs: IT costs, costs of the launch to train staff and run information campaigns for passengers.
- Recurring costs - operational costs:
  - Adding the ETIAS verification step will extend processing times, as well as the check-in processes (as handling non-compliant passengers incurs administrative and operational costs); IT systems maintenance costs.

- Regarding EES, transfer passengers from non-Schengen to Schengen flights will be likely to suffer from operational challenges with longer border control processes (with the collecting of biometrics) that may create an issue for flight connections for network airlines.

2.116 Overall, this represents a total cost for A4E members of €4.1 million in 2026.

2.117 Note that the UK Government is also introducing a similar system for non-UK travellers to the UK, the Electronic Travel Authorisation, which will add some further costs to all A4E Members operating flights there, but these have not been included in our calculations.

Methodology used for the quantification of border control and security requirements

2.118 Since the implementation of the API and PNR legislation took place a decade ago, and hence related implementation costs have long been incurred, and considering that annual costs remain limited overall, even with the future implementation of Regulations 2025/12 and 2015/13, no modelling of API and PNR costs was performed.

2.119 For ETIAS and EES costs, A4E members provided information on the costs they had started to incur as well as future costs. Even though they were quite small, these were quantified as they are new costs. Inputs on drivers came from A4E survey responses.

3 Cost of non-Europe

3.1 As detailed in the Introduction chapter, many pieces of legislation have already opened the European aviation market and contributed to the successful development of the single aviation market. However, in some areas, significant issues remain. As a result, where there should be a true single European market, there is a gap in the European market, which we call “non-Europe”.

3.2 The most obvious of these gaps is in the area of air traffic management with the Single European Sky. Other areas are also covered here.

Single European Sky

3.3 Member States, which in many cases are either sole or majority owners of air navigation service providers have been fairly reluctant to endorse fundamental change towards a more integrated airspace. As a result, inefficiencies in Europe's fragmented airspace generate extra costs for airlines and their customers. This is not a new issue, even if the COVID-19 crisis put further pressure on a system that way already stretched.

3.4 The negative impacts created by fragmented European air traffic management (ATM) result in inefficient trajectories. In turn:

- Inefficient trajectories result in additional fuel burn; and
- Additional fuel burn results in additional CO_2 emissions being generated and in additional costs under the EU ETS being incurred for these emissions.

3.5 Moreover, the current operational situation in Europe creates significant delays in the air (en-route air traffic flow management (ATFM) delays and as well as airport arrival ATFM delay) and on the ground which impact airlines and their passengers.

Trajectory inefficiencies

3.6 With the implementation of initiatives such as Free Route Airspace, flight inefficiencies in Europe have reduced. However, in 2023, the Performance Review Commission (PRC) estimated that 57% of the measured inefficiencies were attributable to interconnectivity issues which required a wider (cross-border) approach (disconnect between local service provision and airspace user requirements to optimize the entire flight trajectory). However, it is important to stress that trajectory inefficiencies cannot be reduced to zero.

Additional fuel burn

3.7 Despite a considerable number of analyses addressing emissions from aviation, it is still difficult to get a good gate-to-gate perspective of the level of operational inefficiencies and the “benefit pool” that can realistically be addressed by ATM improvements.

3.8 Together with stakeholders, the PRC has developed a methodology to track CO_2 emissions from a gate-to-gate perspective and to identify ATM-related environmental

inefficiencies. The results suggest an ATM-related benefit pool of 9.3% for the EUROCONTROL area in 2023 (9.4% in 2022), with estimated inefficiencies for network airlines of 10.7%, 6.8% for LCC, 9.4% for cargo carriers and 6.8% for non-scheduled airlines.

3.9 For 2024, we estimated that the cost of additional fuel burn generated by inefficient trajectories amounted to €1,522 million for A4E members.

Delays

3.10 Delays are created by ATFM regulations as well as by additional taxiing time and arrival holding and sequencing.

3.11 ATFM delays mainly comprise en-route delays and airport arrival ATFM delays. The delay situation in Europe is deteriorating: en-route ATFM delays in 2024 were at their highest level for the past 20 years: 24% higher than in 2019, despite traffic levels still being 3.9% below 2019 (SES). Arrival ATFM delays were also at their highest ever level in 2024 (6.0% higher than in 2019). In terms of additional taxiing time and arrival, holding and sequencing (ASMA), again, the situation is not on an improving trend either.

3.12 For 2024, we estimated that the cost of delays amounted to €3,201 million for A4E members, whilst the cost of additional fuel burn cost A4E Members an additional €1,522 million, therefore totalling a total SES cost of non-Europe of €4,723 million.

Capacity

3.13 Union-wide capacity performance has been below its targets for a considerable amount of time. Since the pandemic, this trend has continued with the Performance Review Board (PRB) reporting in its latest 2023 Monitoring Report that Union-wide capacity performance had deteriorated as a result of some Member States not having implemented sufficient capacity measures to meet neither traffic STATFOR forecast demand nor actual traffic. As a result, airspace users are incurring the costs of both increased delays and higher unit rates for capacity that has not been provided by some Air Navigation Service Providers (ANSPs).

Airport charges

3.14 The Airport Charges Directive (ACD), in place since 2009 establishes a common approach for regulating certain features of how airport charges are set at the largest EU/EEA airports. It sets out a framework for regulating the essential features of airport charges to address the disparities identified between the policies of individual Member States. In its 2019 evaluation[14], the Commission concluded that the Directive suffered from a number of issues and announced its intention to propose a revision of the Directive. These issues included:

- A framework that is mostly focused on process rather than on outcomes;
- Issues related to consultation activities;
- Wide differences in interpretation and implementation by EU Member States;
- Ineffective oversight from authorities in some Member States;

[14] SWD(2019) 291 final

3.15 Airport charges constitute a significant part of both airlines' operating costs and airports' incomes. The 2019 evaluation provided that airport charges share in airlines' total operating costs vary from 4 to 8% and on short haul services up to 20%. Whilst airport charges would have been higher without the ACD, any implementation issues can have strong impacts on airlines' operating results.

3.16 In the context of this study, A4E Members noted that additional costs are incurred today due to deficiencies in the regulation of airport charges stemming from:

- Operational inefficiencies: lack of oversight, limited transparency and engagement with airlines can lead to issues of cost control mechanisms, minimal or no incentives for staff productivity improvements, possible inadequate procurement processes as well as a lack of performance targets and accountability
- Regulatory framework issues: Limited or no oversight by Independent Supervisory Authorities (ISAs) of the traffic forecast used in setting airport charges (with a risk of regulatory gaming). Airlines also stated that the choice of regulatory till (single, dual or hybrid) remains an issue.
- Planning and investment issues: there is a risk of expensive investment projects without proper cost-benefit analysis, issues in terms of prioritisation of investments, weak oversight of capital expenditure programmes, etc.
- Airlines' perceived risk of abuse of market power at airports with dominant positions which result in charges that would be unsustainable in a competitive environment.

3.17 Estimating the impact that an adequate ACD could have is complicated because there is no established consensus in Europe on what an enhanced legislation (a Directive or possibly a Regulation) that would address transposition shortcomings would look like. Nonetheless, A4E Members who took part in this study estimated through survey answers that a 17% cost saving could be made on airport charges with more adequate legislation compared to today's situation. In 2024, across all A4E members, this "extra 17%" represented €905 million of airport charges paid for lack of a fit-for-purpose regulatory framework.

Border controls

3.18 Despite significant progress made in the regulatory integration of EU transport and the continuous development of resilient and sustainable infrastructure, cross-border connectivity is not always frictionless regarding freight and passenger transport.

3.19 Moreover, recent events have shown the vulnerability of the free flow of goods and people within the Union and beyond. For instance, the migration and COVID-19 crises have led to the partial reintroduction of border controls between Schengen Member States. The Russian war of aggression towards Ukraine has also reduced the overall connectivity of EU Member States, particularly to destinations in the middle and far East. Moreover, these events did not only impact cross-border flows of passenger and freight, but also especially affected the socio-economic activity of cross-border regions.

3.20 In May 2017, the Commission acknowledged that new security challenges, such as repeated terrorist attacks in the EU, required a revision of the Schengen legal rules on the temporary reintroduction of border controls at internal borders.

3.21 Based on existing rules, border controls at internal borders can be prolonged for more than six months in case of serious deficiencies in the external border management of a

Member State, although reintroducing border control at the internal borders should only be used as a measure of last resort. Since then, several Schengen countries have temporarily reintroduced border controls due to concerns like migration flows, terrorism threats, or the COVID-19 pandemic.

3.22 For the airlines however, the costs of these reintroductions of border controls remain limited. This is because:

- The reintroduction of border control means higher costs for Member State immigration authorities who have to staff immigration checks at airports, but these costs are not passed to airlines.
- As airlines already fall in scope of the API and PNR legislation for all cross-border flights within the EU/EEA, there are no further costs in this area.
- Immigration controls typically take place after check-in and before boarding, i.e. in passengers' "downtime" at airports, therefore the most frequent possible costs for airlines regarding the reintroduction of border controls is passengers delayed at immigration controls resulting in operational issues for airlines such as:
  - A need to wait for delayed passengers, resulting in delayed departure/loss of ATFM slots/potential delayed arrival/passenger rights costs, coupled with reputational damages.
  - If passengers are not being waited for, costs of removing luggage off aircraft.

3.23 However, because the reintroduction of border controls is temporary and normally limited in geographic scope, we suggest that these are best included in the general costs of Regulation 261/2004. Reintroduction of border control costs have therefore not been estimated separately.

Methodology for the cost of non-Europe

3.24 For the quantification of the fuel burn inefficiency caused by deficiencies in the implementation of the SES, we obtained from EUROCONTROL the average route extension per flight (segmented between different type of airlines), which was applied to the average fuel consumption per flight (EUROCONTROL data with checks against A4E member data and FATHOM data) multiplied by the average cost of fuel.

3.25 In order to estimate delays, we collected information on the total ATFM minutes of delays en-route and on arrival, taxi-out minutes of delay and ASMA minutes of delay. We used the cost of delay elaborated by the University of Westminster.

3.26 In order to project the evolution of delay in the SES area, all delays have been estimated to increase with the same growth rate as ATFM en-route delays, reaching 2.4 minutes/flight in 2030. This is the equivalent of an increase of 33% over the 2024-2030 period, or an annual increase of 4.9%; other assumptions for these projections were tested and are presented below.

3.27 For airport charges, A4E members provided information on the savings that they believe would be generated by an "adequate" EU legislation (based on their own interpretation of efficiency gains of what they see as an "adequate" EU legislation). They also provided some information on the average airport charges paid over a number of years. Different weighted averages were calculated for low cost and network airlines per passenger (or per flight for cargo airlines) and projected based on traffic projections, average charges cost increases and no assumed efficiency improvement of airport charges. The numbers

displayed in this study on relation to airport charges only show the "inefficient" part of airport charges according to A4E Members.

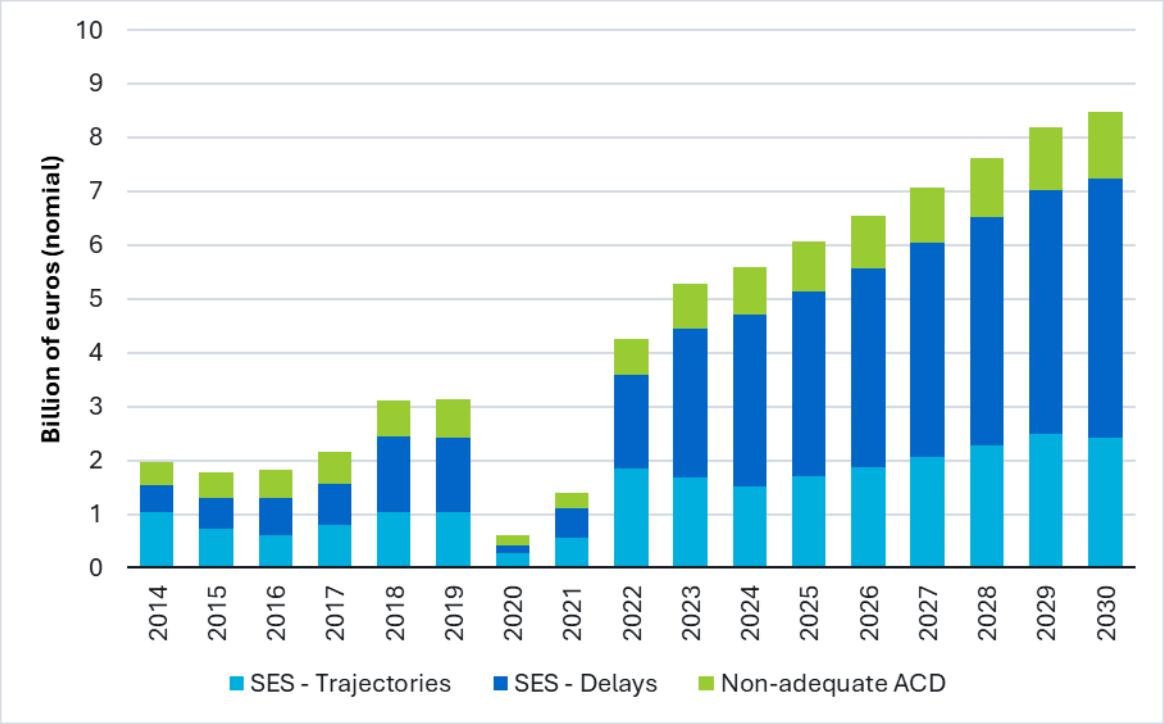
Costs of non-Europe results

3.28 We have quantified the SES inefficiencies linked to trajectories and delays as well as the costs linked to the "non-adequate" regulation of airport charges. We see in the graphic below that these costs are largely dominated by the inefficiencies related to the Single European Sky.

3.29 In 2024 these SES inefficiencies amount to €4.7 billion versus €873 million for the non-adequate ACD. Going forward, the increase in costs of the SES is mainly driven by the cost of delays. For airlines, airports and customers (passengers and freight customers), increased delays in the SES have negative consequences.

3.30 For airlines, this means increased negative impacts on their operations, on their reliability, on the need to spend in spare aircraft and crew, as well as on the costs of compensation for affected passengers.

Figure 3.1: Current and future cost of non-Europe for A4E members (under Scenario 2)



Source: Steer

3.31 The assumptions behind the evolution of delays in the SES area are key. We have therefore run additional scenarios to illustrate potential different outcomes:

- Scenario 1 (light blue below): all delays (ATFM en-route and airport, ASMA and taxiing) stay stable between 2025-2030, at the 2024 levels. For en-route ATFM delays, this means a delay of 2.1 minutes/flight;
- Scenario 2 (dark blue): all delays increase with the same growth rate as ATFM en-route delays, increasing between 2024 and 2030 to reach 2.8 minutes/flight by 2030.

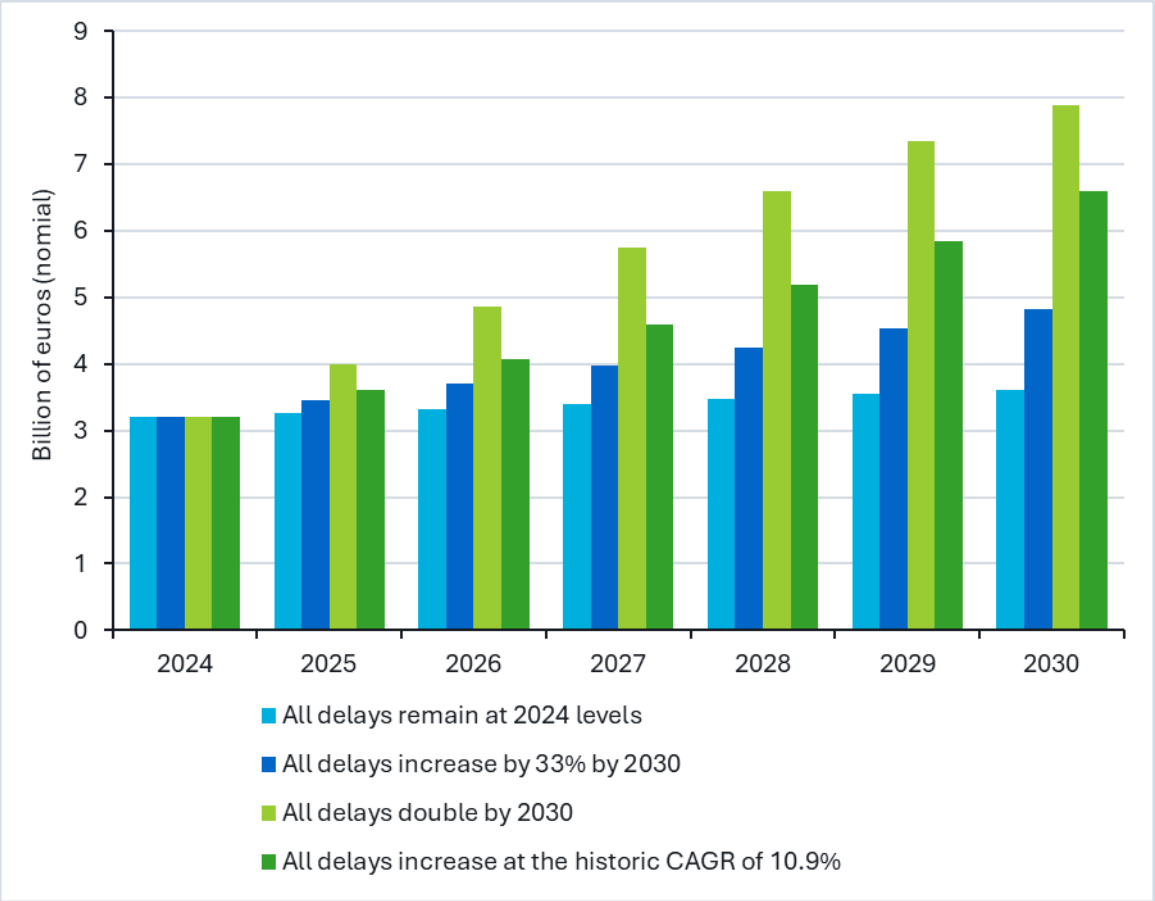
This is the equivalent to an increase of 33% over the 2024-2030 period, or an annual increase of 4.9%;

- Scenario 3 (light green): this is based on the elasticity of the ATFM en-route minutes of delay between 2015 and 2024 to growth in IFR flights over the same period. This gave a very high elasticity, which we gradually reduced to 1 by 2030. We then applied this growth rate to all other delays (airport ATFM, ASMA, taxiing). This is the equivalent of assuming a doubling (x2.2) of minutes of delay between 2024 and 2030 to reach 4.6 minutes/flights in the case of en-route ATFM delays.
- Scenario 4 (dark green): all delays increase between 2024 and 2030 by an annual growth rate of 11%, or an increase of 133% over the period to reach 4.0 mins/flight. This CAGR is the historic increase of en-route ATFM delays between 2015 and 2024.

3.32 We see that depending on the assumptions, the total cost of SES delay varies significantly, from €3.6 billion in 2030 under scenario 1 to €7.9 billion in scenario 3.

3.33 We have used scenario 2 in this study as an illustration only. This does not represent Steer's view on the potential evolution of SES performance.

Figure 3.2: Future cost of SES delay for A4E Members under 4 scenarios



Source: Steer

4 Resulting costs

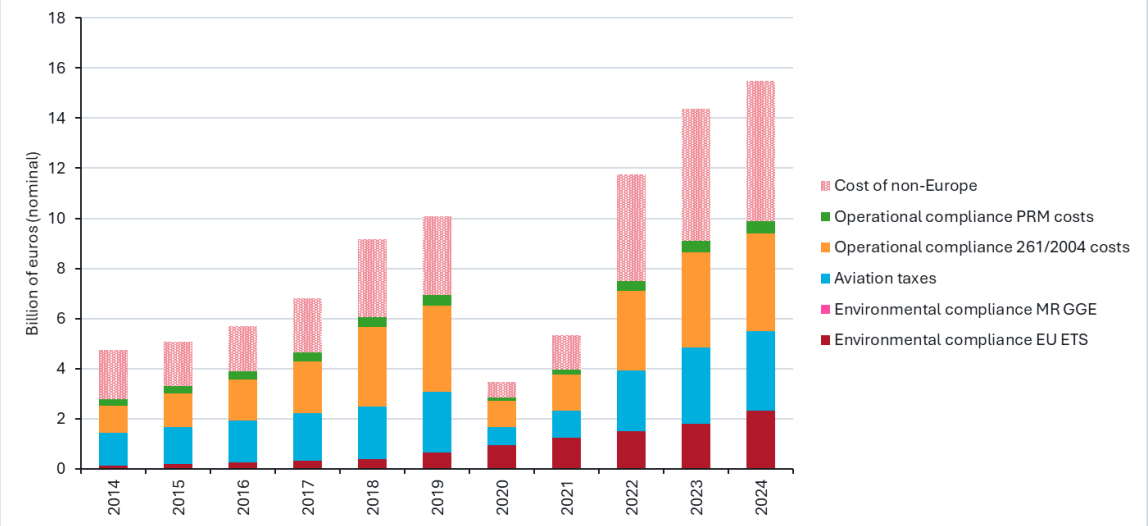
4.1 In this Chapter we provide an illustration of the total compliance costs faced by A4E members.

Current situation

4.2 We see that, overall, A4E airlines spent approximately €9.9 billion in 2024 to fulfil existing EU legislation on environmental compliance, corporate disclosure, taxation, operational compliance and border and security requirements. The main drivers of this cost are compliance with Regulation 261/2004, national aviation taxes and the EU ETS.

4.3 If we add to this the inefficiencies of key existing European legislation, mainly generated by the Single European Sky, the total costs in 2024 rose to more than €15.5 billion.

Figure 4.1: Current situation for A4E Members



Source: Steer analysis

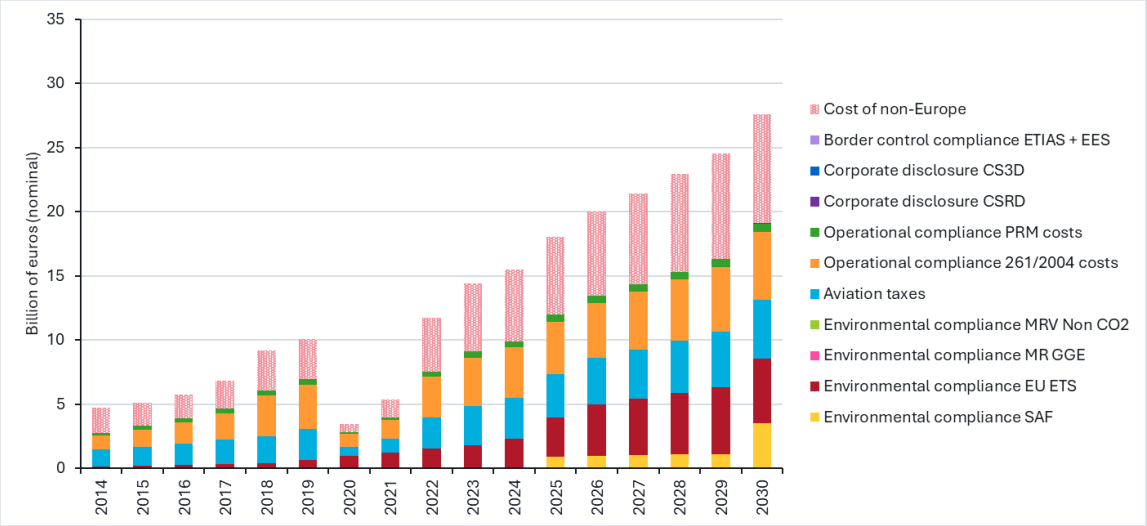
4.4 Since 2014, these costs have increased at a CAGR of 11% (without the cost of non-Europe) and 10% (including the cost of non-Europe) in real terms respectively, compared with the CAGR increase of departing EEA passenger traffic for A4E Members of 4.0% in the same period.

4.5 Specifically, the main drivers of these increases are the compliance costs linked to environmental legislation (ETS) which were very limited in 2014, as well as costs associated with passenger rights which have kept rising at a much faster rate than traffic.

Future evolution

4.6 We have modelled here the costs of legislation already adopted. Looking forward, under the assumptions used in this analysis, compliance costs are expected to double in 6 years to reach €19.1 billion in 2030 (excluding costs on non-Europe) and €27.6 billion including the cost of non-Europe inefficiencies (under scenario 2).

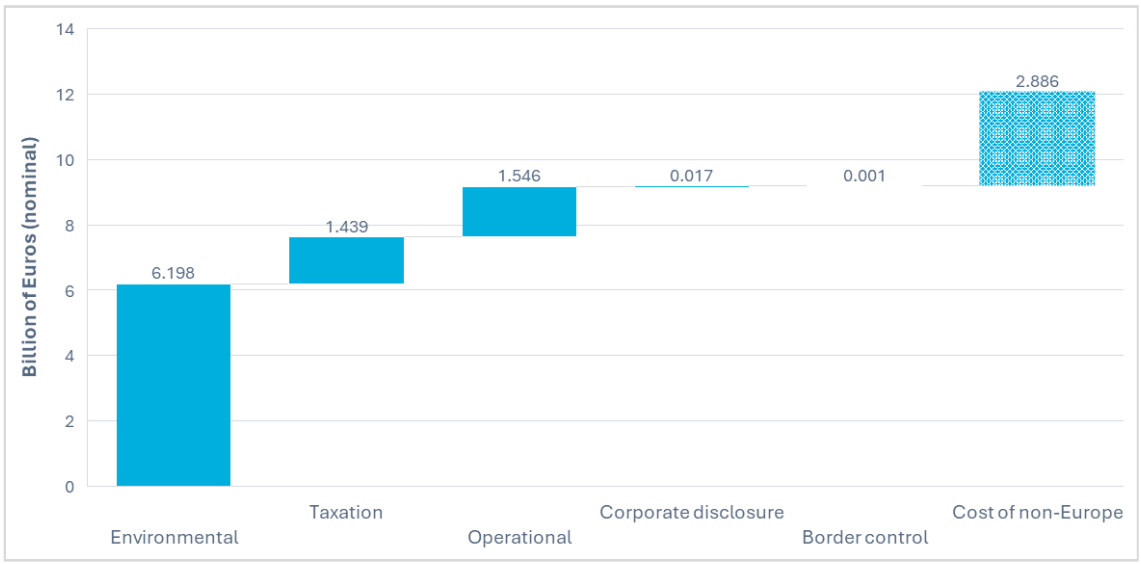
Figure 4.2: Likely future evolution to 2030 for A4E Members



Source: Steer analysis

4.7 In contrast to the situation up to now, there is a change in cost drivers: the introduction of CSRD and CS3D leads to a strong increase in corporate disclosure costs, but these are relatively low in value compared to the very large impact of the environmental legislation which in 6 years adds €6.2 billion of annual costs to A4E Members. This is due to the combined effect of the start of the EU SAF Mandate implementation, as well as sharp increase in ETS costs. Following this, SSES inefficiency costs also add a further €2.8 billion annually under scenario 2.

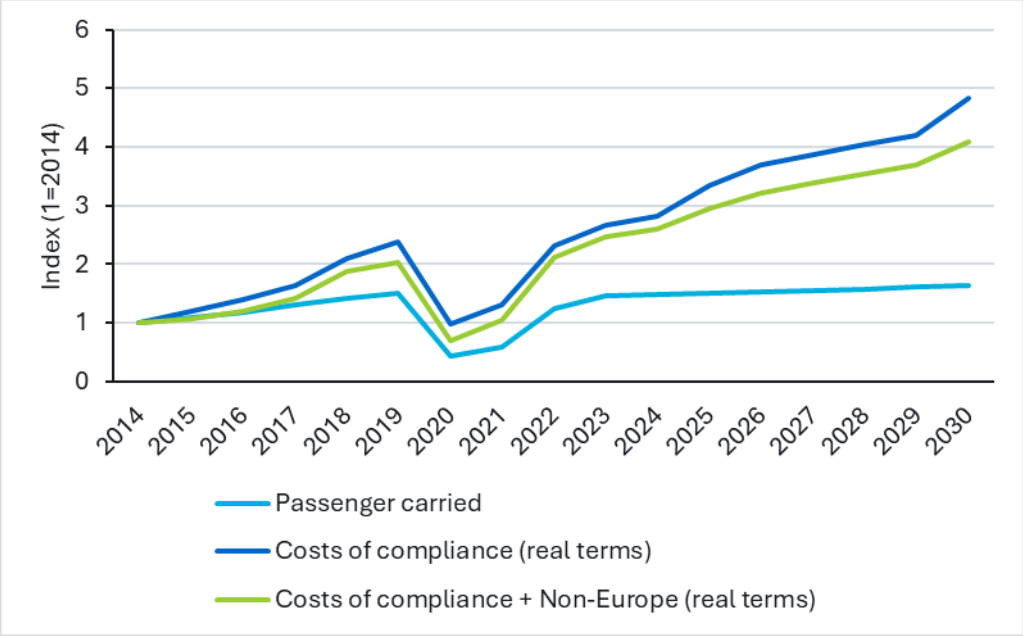
Figure 4.3: Evolution of A4E Members annual costs of compliance and of non-Europe, 2030 vs 2024



Source: Steer

4.8 During the period 2024-2030, these costs are expected to increase at a CAGR of 9.3% (without the cost of non-Europe) and at 7.9% (including the cost of non-Europe) in real terms compared with the CAGR increase of departing EEA passenger traffic for A4E Members of 2.3% projected for the same period.

Figure 4.4: Comparison of the evolution of costs and traffic for A4E members



4.9 In addition, what is of significant concern for A4E Members is the evolution post 2030 of certain costs. This study only projected costs until 2030, but beyond this timeframe, as presented in Chapter 2, the EU SAF mandate requirements will become more stringent as the mandated proportion of SAF and e-fuels will increase significantly.

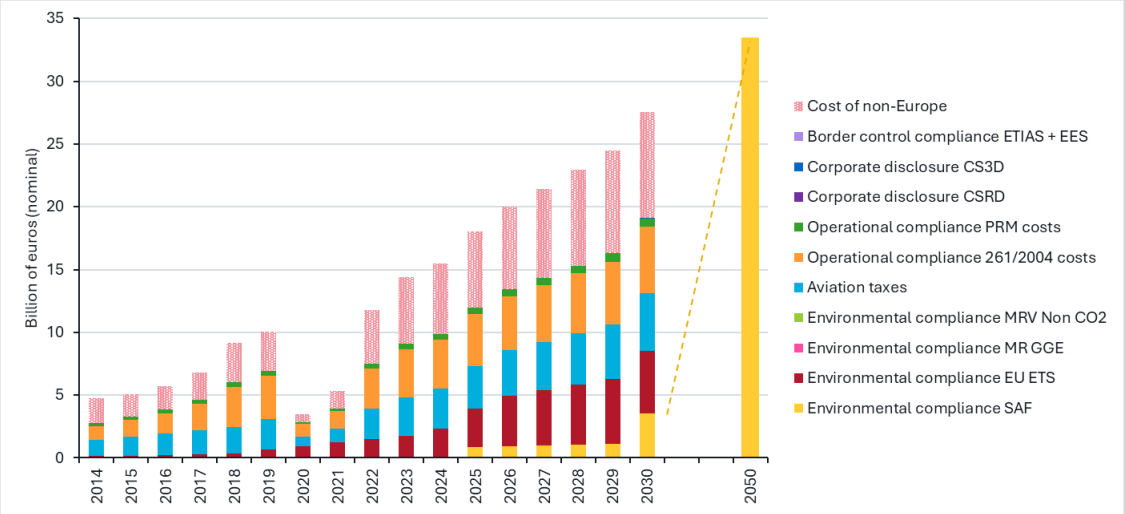
4.10 The recent Destination 2050 study[15] has estimated this cost to be €48 billion in 2050 for all airlines flying from EU airports. We have prorated this number to the current number of flights operated by A4E Member airlines and have estimated that this could mean a cost for these airlines (and their customers) of €33 billion in 2050: in 20 years, SAF mandate costs are nearly multiplied by ten (x9.5).

4.11 When illustrated below, we observe that the cost of the SAF Mandate in 2050 would already be higher than the 2030 total of all compliance and non-Europe inefficiencies costs. All these costs are likely to remain in 2050 and would be added to the estimated SAF mandate cost.

4.12 Furthermore, the inclusion of other costs cannot be ruled out either, such as possible revisions to passenger rights legislation, requirement for free air transport of PRM accompanying helpers, inclusion of non-CO2 emissions to the ETS scheme, intra-EU VAT schemes, etc.

[15] **Destination 2050 - A Route to Net Zero European Aviation**, February 2025 (accessed 26/02/2025)

Figure 4.5: Modelled future situation for A4E members



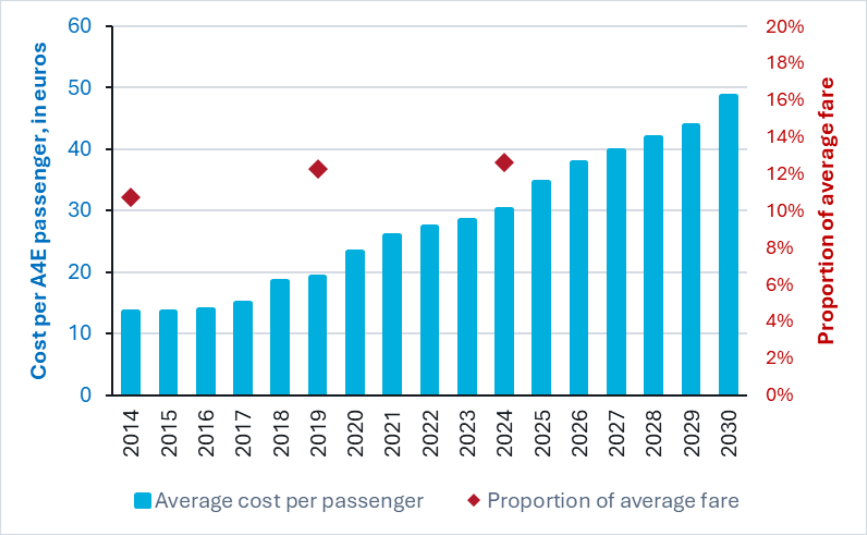
Source: Steer analysis

Impact of these changes on passengers in Europe

4.13 A significant concern for airlines is the need to remain as price competitive as possible despite an increase in the average costs of compliance per passenger. During the decade between 2014 and 2024, costs of compliance and of non-Europe inefficiencies per passenger of A4E members have more than doubled in nominal terms from an average of €13.6 in 2014 to €30.3 (i.e. an annual increase of 8.3%) in 2024.

4.14 In contrast, an analysis of A4E Members' fares from OAG data shows that fares have increased in the same period by an annual increase of 6.6%, meaning that A4E Members have managed to absorb some of these cost increases (through cost cutting programmes, acquisition of more cost-efficient aircraft, etc). As a result, over the period, A4E Members have managed to keep the proportion of these costs per ticket relatively constant, representing 11%, 12% and 13% respectively of an average fare in 2014, 2019 and 2024.

Figure 4.6: Costs of compliance and non-Europe per A4E Member passenger



Source: Steer analysis

4.15 Going forward, we have estimated that the cost for A4E airlines because of compliance, taxation and non-Europe could reach close to €50 per passenger (€48.6), an increase of 61% between 2024 and 2030.

4.16 There is no guarantee that A4E airlines will be able to continue absorbing costs through internal efficiency improvements with limited pass-through to the customer, especially with cost increases of such a magnitude.

Conclusions

4.17 These numbers provide a stark picture for A4E airline members when looking into future years. They reflect the high customer service and social standards in place in the EU and to a significant and growing part, they also reflect the high environmental ambitions of the European Union in order to decarbonise air transport and to lead the international transition to offer all air passengers a much greener mode of transport.

4.18 Regulatory certainty and a level playing field are key for any business to grow and thrive. However, many questions remain unaddressed both in the EU and outside it for A4E Members to do so with confidence. In the EU, A4E Members are concerned with implementation gaps that remain and the rising costs they generate, particularly the Single European Sky where delay targets have been missed for many years now and where investments to bring more capacity lag.

4.19 Aviation is inherently a hard-to-decarbonise sector and the potential of SAF to reduce aviation CO_2 emissions is entirely acknowledged by A4E Members. However, the financial consequences of the price gap of SAF (and even more for e-fuels), combined with concerns over the potential to lower SAF prices, and on the pace of research and funding of industrial development of aviation decarbonisation technologies, means that airlines are particularly wary of the burden of regulatory compliance they have to address in addition to environmental compliance costs.

4.20 Outside the EU and especially so in a changing world, there is also a real risk of competition distortion which would bring a negative outlook for European airlines.

5 The situation outside Europe

5.1 In this section, we have reviewed compliance requirements for airlines across selected jurisdictions. This review has been done qualitatively with no estimate of costs being modelled, but in any case, it provides some important findings:

- Overall, there is a strong imbalance of costly compliance requirements in the disfavour of European airlines versus their non-EU counterparts. It is hardly ever the case that European airlines have better terms than their non-European competitors, expect in one very precise instance (that of accompanying assistants for PRMs travelling by air);
- In terms of environmental compliance, no jurisdiction has more or equally stringent legislation than the EU. The gap in requirements (or lack of requirements) in this area is particularly acute.
- This is also the case for corporate disclosure requirements which are very demanding on European airlines, whereas this is less the case in other jurisdictions where a more voluntary approach remains in place.
- In relation to operational compliance on passenger rights, not all jurisdictions have mandatory requirements, sometimes third-countries rely on voluntary approaches by air carriers;
- Often, there are border control requirements, but security requirements can be less demanding in some jurisdictions.

5.2 This analysis raises questions on the future competitiveness of European airlines that operate outside the EU.

5.3 The legend of the table next page is as follows:

	Significantly higher level of costs in Europe than in this jurisdiction **OR** no comparable requirement at all		Higher level of costs in Europe than in this jurisdiction		Similar level of costs to its European equivalent		Lower level of costs in Europe than in this jurisdiction		Significantly lower level of costs in Europe than in this jurisdiction
	Not possible to provide a comparison to its European equivalent								

Compliance requirements in selected non-EU jurisdictions

Table 5.1: Assessment of the compliance and tax requirements of non-EU jurisdictions vs European requirements

Topic	Canada	vs. EU	China	vs. EU	USA	vs. EU
Environment						
CORSIA	Voluntary participation pre-2027 (like the EU). We have assessed that this has similar costs for European airlines.		Voluntary participation pre-2027 (like the EU). We have assessed that this has similar costs for European airlines.		Voluntary participation pre-2027 (like the EU). We have assessed that this has similar costs for European airlines.	
ETS	There is no equivalent scheme for aviation emissions generated by domestic flights in Canada.		China's ETS does not yet include domestic aviation, but should start shortly according to its 14th Five-Year Plan. It should involve carbon credits, but their price is unclear.		Currently, none of the existing emissions trading systems in the US specifically apply to air transport (domestic or international).	
MRV (non-CO_2)	We could not find evidence that there is a MRV system in place in Canda for non-CO_2 emissions.		We could not find evidence that there is a MRV system in place in China for non-CO_2 emissions.		We could not find evidence that there is a MRV system in place in the US for non-CO_2 emissions.	
SAF mandate	Canada has only declared an aspirational SAF target of 10% by 2030. We have assessed that this has significantly lower costs for airlines operating there compared to its European equivalent, especially going forward.		No mandatory SAF target by 2030 (or beyond) announced by China. We have assessed that this has significantly lower costs for airlines operating there compared to its European equivalent, especially going forward.		No SAF mandate but various incentivisation schemes, including public funding to stimulate SAF production. We assess that it is likely to have significantly lower costs for airlines operating there compared to its European equivalent.	

Topic	Canada	vs. EU	China	vs. EU	USA	vs. EU
Other	Canada does not have a specific environmental labelling scheme like the EU's FEL. Therefore, it does not contribute to higher costs for airlines operating there.		China does not have a specific environmental labelling scheme for aviation like the EU's FEL. Therefore, it does not contribute to higher costs for airlines operating there.		The USA do not have a specific environmental labelling scheme for aviation like the EU's FEL. Therefore, it does not contribute to higher costs for airlines operating there.	
Taxation						
Ticket taxes	For all flights with transportation commencing in the province of Quebec, a sales tax of 9.975% is applied to base fare and other service charges. It is not possible to provide a detailed assessment of these costs compared to European airlines without a more detailed analysis of the Canadian air market.		An airport fee is charged to all passengers leaving by air. Its stated purpose is “airport development fee” so it is questionable whether it is a tax or an aviation charge. International passengers: CN¥ 90 (€11.5), domestic passengers CN¥ 60 (€7.6). It is not possible to provide a detailed assessment of these costs compared to European airlines without a more detailed analysis of the Chinese air market.		Domestic tickets include ticket tax of 7.5%. International passengers pay a $22.90 tax on departure and arrival. However, we understand that the associated revenues support Federal Aviation Administration and other aviation infrastructure projects. We have assessed that this has significantly lower costs for airlines operating there compared to its European equivalent.	
VAT (on domestic flights)	All Canadian domestic flights apply a “Harmonized Sales Tax”(HST) (5% to 15% - province dependent) or “Goods and Service Tax” (GST) (5% in Quebec) to the base fare and other service charges. It is not possible to provide a detailed assessment of these costs compared to European airlines without a more detailed analysis of the Canadian air market.		Domestic air travel within China is subject to VAT at 9%. It is not possible to provide a detailed assessment of these costs compared to European airlines without a more detailed analysis of the Chinese air market.		The United States does not have a Value-Added Tax (VAT) on domestic flights. We have assessed that this implies significantly lower costs for airlines operating there compared to its European equivalent.	

Topic	Canada	vs. EU	China	vs. EU	USA	vs. EU
Operational compliance						
Passenger rights	The Air Passenger Protection Regulations (APPR) provides passengers with similar rights (albeit with some limited differences) to the European legislation. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.		The Chinese legislation sets out airlines' obligations on maintaining flight regularity and providing services in case of delay and cancellation. The Regulation does not include information on denied boarding, nor does it offer compensation in addition to reimbursement. We have assessed that this has lower costs for airlines operating there compared to its European equivalent.		There are rules implementing passenger rights codified in title 14 of the Code of Federal Regulations. Rights are different than in Europe, but overall, we have assessed that this has similar costs for airlines operating there compared to its European equivalent.	
PRM rights	The Air Passenger Protection Regulations (APPR) provides PRMs with similar rights to the European legislation. It also regulates on the provision of a safety assistant for PRM passengers (which has to be either provided for by the airline directly, or they can travel free of charge if the airlines require a passenger to be accompanied). We have assessed that this has higher costs for airlines operating there than its European equivalent.		The Chinese legislation states that airlines must guarantee the right of PRM to travel. Carriers, airports and ground handling service agents should provide mobile assistance services free of charge to PRMs. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.		The Air Passenger Protection Regulations (APPR) provides PRMs with similar rights to the European legislation. It also regulates on the provision of a safety assistant for PRM passengers (which has to be either provided for by the airline directly, or they can travel free of charge if the airlines require a passenger to be accompanied). We have assessed that this has higher costs for airlines operating there than its European equivalent.	

Topic	Canada	vs. EU	China	vs. EU	USA	vs. EU
Corporate disclosure						
Reporting of detailed corporate information	There are some corporate disclosure requirements in Canada. However, ESG reporting is not yet mandatory for all companies but is increasingly in demand by investors and stakeholders. We have assessed that this has lower costs for airlines operating there than its European equivalent.		China's three stock exchanges issued ESG reporting guidelines in 2024, mandating listed companies to disclose their ESG data in 2026. They also encouraged other companies to publish ESG reports on a voluntary basis.		The first government-mandated ESG reporting requirements were recently adopted in California: the Climate Corporate Data Accountability Act (SB 253) and the Climate-related Financial Risk bill (SB 261). We have assessed that this has lower costs for airlines operating there than its European equivalent.	
Reporting of CO_2 emissions	There is an MRV system in place for CO_2 emissions in Canada that requires submission of data and approval by an accredited third-party. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.		There is an MRV system in place for CO_2 emissions in China that requires submission of data and approval by an accredited third-party. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.		There is an MRV system in place for CO_2 emissions in the US that requires submission of data and approval by an accredited third-party. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.	
Border control and security requirements						
Authorisation and entry/exit systems	Canada has an electronic travel authorization (ETA) in place to fly to, or transit through, a Canadian airport for visa-free passengers. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.		China does not have an electronic travel authorization in place for visa-free passengers. We have assessed that this does not create costs for airlines operating there compared to its European equivalent.		The United States has an electronic travel authorization system known as the Electronic System for Travel Authorization (ESTA). It allows visa-free passengers to travel to the US for tourism, business, or transit. We have assessed that this has similar costs for airlines operating there compared to its European equivalent.	

Source: Steer analysis

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Steer project/proposal number

2485001

Client contract/project number

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Distribution

Client:

Steer:

Version control/issue number

Final v2

Date

01/04/2025

steergroup.com

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