OPPORTUNITY GREEN

Closing Ireland's aviation climate gap

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Closing Ireland's aviation climate gap

How Ireland can tax aviation to cut emissions and fund climate action

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Executive summary

Closing aviation's climate gap

Climate change is a major threat to Ireland's prosperity and growth. Unlocking new and reliable streams of revenue for climate policies is therefore not only an environmental necessity but also a fiscal imperative. One sector that offers scope for generating new revenues while driving climate and social action is aviation.

The aviation industry is a significant contributor to climate change, yet the sector enjoys a range of privileges exempting it from the climate regulation that other industries are subject to. Furthermore, it has long avoided making even standard fiscal contributions to the state. CO_2 emissions from flights departing or arriving in Ireland from the European Economic Area (EEA) or the UK are priced by the EU or UK Emissions Trading System (ETS), but flights to non-EEA airports pay nothing for their pollution.

Jet fuel remains entirely untaxed, and airline tickets are exempt from VAT, while Irish households pay 23% VAT on everyday goods and duty on fuel. This deep imbalance in the tax system makes one of the most carbon-intensive activities artificially cheap, while placing a higher relative burden on household domestic consumption.

Despite these waivers and aviation contributing around 10% of Ireland's greenhouse gas (GHG) emissions, the Irish government is not only neglecting to reduce the sector's emissions, but is actively allowing them to rise. Plans to facilitate airport expansion and remove the passenger cap at Dublin Airport have received government support, and the implications are dire. Environmental impact assessments have found that lifting the passenger cap could increase emissions by up to 22% by 2031.[1] The government's recent announcement of financial support, in Budget 2026,[2] of airport expansion between Derry and Dublin further reinforces this trajectory.

In spite of these failings, the Irish government can play a critical leadership role in cutting aviation emissions and raising finance for global and national climate action via two means: an aviation passenger taxation, and greenhouse gas (GHG) emissions pricing. Many other EU Member States and the UK have introduced air travel levies. Ireland's modest aviation passenger tax was introduced in 2009,

[1] Business Post, Dublin Airport emissions could rise by 22% if passenger cap lifted, DAA document says https://www.businesspost.ie/news/dublin-airport-emissions-will-rise-by-22-if-passenger-cap-is-lifted-daa-said-in-planning-submissio/

[2] BBC, Irish Government Announce Derry to Dublin flights, accessed at https://www.bbc.com/news/articles/c4g7vgwlzlvo

however, it was scrapped in 2014 following industry pressure. Its removal marked a step backwards for Ireland's climate efforts.

Fair taxes for flying

Since 2014 though, the adoption of Ireland's landmark Climate Act in 2021 has begun to shift the country's reputation from a climate laggard to a climate leader. To build on this progress we propose that Ireland introduces a modernised air travel tax mirroring the UK's Air Passenger Duty (APD) or the French Solidarity Tax. Our new analysis shows that reintroducing an aviation tax could deliver real climate benefits while generating billions in revenue. In our research, we modelled three options over a five-year period, from 2026 until 2030:

1. Reinstating Ireland's Air Travel Tax (ATT)
2. A French-style Solidarity Levy
3. A UK-style APD

The results are striking. Reinstating the ATT could raise almost €795m over five years, the French-style Solidarity Levy could raise €2.3bn and the APD model could raise €6.3bn over the same period. Alongside generating revenue, we also observed reductions in GHG emissions of 0.3% of the 2025 national total with the French-style Solidarity Levy, and 0.6% with the APD. These reductions are primarily driven by changes in passenger behaviour, for example in 2030 the APD model is projected to result in over two million fewer passengers for that year.[3] If the Irish government introduced a fair air travel levy modelled on the UK's Air Passenger Duty (APD), it could generate €6.3bn over five years while cutting 1.8m tonnes of greenhouse gas emissions, equivalent to the annual emissions of approximately 230,000 average Irish households.

Putting climate at the heart of Ireland's EU presidency

Implementing such a policy would not only advance Ireland's climate and equity goals at home, but also strengthen its credibility to demonstrate climate leadership abroad, principally during its Presidency of the Council of the EU starting in July 2026. The Irish presidency will oversee a review of the EU ETS and the possibility for its expansion to flights between EU and non-EU countries that are currently exempt from emission pricing

There is a lot at stake in this decision. Between 2012-2023 the exemption of these flights lost Europe €26bn in revenues, and let 1.1bn tCO_2 unregulated, the

[3] Modelling is based on the unfortunately limited data available on the Irish aviation sector. Where Irish data was not accessible we used available UK data which we evaluated to be the closest proxy.

equivalent of the total emissions of Greece over the same period. Flights departing EEA airports are expected to emit around 1.3bn tCO_2 between 2027 and 2035, which could raise €130bn if priced. The 2026 review, and Ireland's presidency, constitutes a unique opportunity to drive meaningful action.

While Ireland alone cannot shift the trajectory of global aviation emissions, it can play an outsized role at the EU: expanding the ETS to flights departing the EU would correct an undue waiver enjoyed by the industry to the detriment of European climate action.

Rethinking air travel economics

The waivers aviation has been consistently permitted have often been justified on the basis of the sector's contributions to growth and tourism. Because airlines will likely pass on the additional costs from any form of levy or GHG emissions pricing to passengers by increasing ticket prices, demand for flying would be expected to fall. In turn, this could have knock-on effects for tourism and GDP.

These impacts often end up overstated when removed from the broader fiscal picture. Too often overlooked are the significant revenues such measures could generate, the fiscal impact of large numbers of people holidaying abroad (and the corresponding loss to domestic tourism), and the escalating costs of climate change to the exchequer. These factors warrant closer scrutiny.

Despite the flaws in the assumption of aviation's net economic benefits, governments have not just refrained from regulating the sector but allowed it to expand. Successive Irish governments, for example, have justified expanding, rather than regulating, aviation with its assumed contribution to national GDP through tourism. Yet Ireland runs a substantial travel and tourism deficit that is a drain on GDP. In 2023, while Ireland welcomed 6.6 million visitors who spent €6.9bn, in the same year Irish citizens who travelled abroad spent a record €12bn overseas.[4] In 2023, the €5.1bn difference between the two is a "travel deficit" equivalent to just over 1% of GDP. This imbalance between visitors' money coming in, and Irish money going out exposes a flaw in the assumption that continued expansion of air travel and resisting passenger levies automatically benefits the Irish economy.

[4] We have used the CSO's main Balance of Payments series as this removes the expenditure on travel to and from Ireland that is included in the CSO's "Tourism and Travel" release. This allows us to see the expenditure by travellers to and from Ireland on the wider economy, rather than assessing what individual travellers may have to actually spend to travel, and it means the series here is compatible with international standards for national accounting. For a full explanation of the differences and other methodological points, see CSO, "Explaining overseas tourism expenditure across CSO publications", 20 July 2020, accessed at https://www.cso.ie/en/releasesandpublications/in/evote/explainingoverseastourismexpenditureacrosscsopublications/

Aviation revenues for a just energy transition

A major factor in the economics of levying flights is how, if strategically reinvested, the revenues could create multiplier economic gains. Revenues generated from both an air passenger levy and expanded ETS could further drive Ireland's climate and equity agenda.

Firstly, a portion of proceeds should be channelled to support Irish households to ensure that climate measures are socially just, particularly those experiencing energy poverty.

Secondly, revenues generated should be invested in driving innovation in the most sustainable alternatives to polluting air travel.

Finally, a fair share of revenues should go towards international climate finance to address the profound injustice faced by climate vulnerable countries that bear the brunt of a crisis they did not cause, and support their sustainable development agendas.

Recommendations

We recommend that the Irish government should:

- Introduce an Irish aviation passenger tax based on the UK's Air Passenger Duty.
- Advocate for the EU to expand the scope of EU ETS to include international aviation, particularly during its presidency of the Council of the EU.
- Earmark revenues generated from an expanded ETS and Irish aviation passenger tax for:
  - Driving innovation in fossil free alternatives to polluting air travel.
  - Providing general budgetary support in Ireland to reduce emissions and energy poverty.
  - Contributing to climate finance in climate vulnerable third countries, in line with Ireland's international commitments.

Introduction

International aviation's regulatory and climate gap

Flying is among the most carbon-intensive activities. Global aviation currently accounts for approximately 2.4% of annual global CO_2 emissions.[5] When non-CO_2 impacts (including nitrogen oxides, water vapour, soot, and contrail-induced cloud formation) are considered, global aviation accounts for approximately 4% of all observed anthropogenic global warming up to 2021 (the majority of which has occurred since 1990).

In fact, non-CO_2 effects from aviation are estimated to contribute around two times the immediate warming effect of CO_2 emissions alone.[6] The sector's climate impact is expected to increase as demand grows, and, with other sectors of the economy successfully decarbonising, its share of global CO_2 emissions could rise to an estimated 22% by 2050.[7] Indeed, CO_2 emissions from aircraft need to peak between 2025–2030 in order to align with the Paris Agreement,[8] and international aviation must be completely decarbonised by around 2050 for 1.5°C alignment.[9] In

[5] Hannah Ritchie, What share of global CO_2 emissions come from aviation?, Our World in Data, 2024, accessed at https://ourworldindata.org/global-aviation-emissions

[6] Carlos Lopez de la Osa, Non-CO2 effects of aviation: Time to finally address aviation's full climate impact Accessed at https://www.transportenvironment.org/articles/non-co2-effects-of-aviation-time-to-finally-address-aviations-full-climate-impact

[7] Emission Reduction Targets for International Aviation and Shipping Study for the ENVI Committee https://www.europarl.europa.eu/RegData/etudes/STUD/2015/569964/IPOL_STU(2015)569964_EN.pdf

[8] Brandon Graver and others, Vision 2050: Aligning Aviation with the Paris Agreement (International Council on Clean Transportation (ICCT) 2022) 27 accessed at https://theicct.org/wp-content/uploads/2025/09/ID-445-%E2%80%93-Aviation-Vision-2050_report_final-2.pdf

[9] UNEP, Emissions Gap Report 2020 (n 32) 55, accessed at https://www.unep.org/emissions-gap-report-2020

reality, however, the current trajectory for international aviation is consistent with a 4°C+ pathway.[10]

This is due to three principal factors. First, the sector is constantly expanding (except during the Covid-19 pandemic). Global aviation has increased from 310 million passenger journeys in 1970 to 4.4 billion passengers in 2023. This is estimated to rise to 5 billion passengers in 2024.[11]

Between 1940 and 2018 the cumulative emissions of global aviation were 32.6bn tCO_2, of which approximately 50% were emitted in the last 20 years.[12] Considering the estimated mitigation potential within aviation and the predicted growth of the sector, it is estimated that without strong action, emissions from international aviation will double or even triple between 2019 and 2050[13]. Unchecked traffic growth means that European aviation will deplete its Paris agreement compatible carbon budget as soon as 2026.[14] In this context, the need to limit aviation demand is unavoidable if the sector is to be set on track with Paris goals.

Secondly, aviation is difficult to decarbonise and efforts are proceeding significantly more slowly than in other sectors. To date, CO_2 reductions from aviation have relied principally on technological efficiency gains in engine design, yet such gains have always been outweighed by the growth in demand referred to above and are limited by inherently long technology development times and asset lifetimes. Projections indicate that the growth in air travel demand will far outpace the expected emissions reductions from technological improvements in fossil fuel–powered aircraft. The difficulty to abate aviation emissions points to the dire need for new, stable and additional funding in innovation, research and development and policy support for new technologies

And thirdly, aviation has long operated under rules that underplay its climate impact and exempt it from paying its fair share. Decades of tax breaks, weak regulation, and ineffective international schemes have enabled the sector to expand unchecked, giving the sector no incentive to invest in sustainable technologies and making flying artificially cheap to bump up demand. We will now take a deeper look into the regulatory landscape for aviation and climate, examining how weak oversight, transparency, and ineffective international

[10] International Aviation' (Climate Action Tracker, 22 September 2022) accessed at https://climateactiontracker.org/sectors/aviation/2022-09-22/
[11] Air Transport Action Group, Facts and Figures, accessed at https://atag.org/facts-figures
[12] D.S. Lee, D.W. Fahey, A. Skowron, M.R. Allen, U. Burkhardt, Q. Chen, S.J. Doherty, S. Freeman, P.M. Forster, J. Fuglestvedt, A. Gettelman, R.R. De León, L.L. Lim, M.T. Lund, R.J. Millar, B. Owen, J.E. Penner, G. Pitari, M.J. Prather, R. Sausen, L.J. Wilcox, The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018, Atmospheric Environment, Volume 244, 2021
[13] Climate Action Tracker, International aviation, accessed at https://climateactiontracker.org/sectors/aviation/
[14] Down to Earth: Why European aviation needs to urgently address its growth problem, Transport & Environment (2025), accessed at https://www.transportenvironment.org/uploads/files/TE_Down_to_Earth_report.pdf

schemes have allowed the sector to expand while underplaying its true climate impact and avoiding its fair share of costs.

International aviation emission regulation: the story to date

Since the 1997 Kyoto Protocol designated the International Civil Aviation Organization (ICAO) as the body responsible for reducing greenhouse gas emissions from the aviation sector, governance of international aviation emissions has fallen under ICAO rather than the UNFCCC, which oversees the Paris Agreement. The Paris Agreement, adopted on 12 December 2015 and in force since November 2016, commits Parties to keeping global warming well below 2°C above pre-industrial levels, while pursuing efforts to limit it to 1.5°C.

In their Nationally Determined Contributions (NDCs), states have generally excluded emissions from international aviation, while including domestic aviation, on the basis that international flights are regulated by ICAO. However, ICAO's regulatory framework suffers from significant shortcomings, making its efforts fundamentally insufficient to achieve the emission reductions needed in the sector.

The ICAO's 2022 long-term global aspirational goal (LTAG) for net-zero carbon emissions by 2050 carries no binding obligations, sets no interim targets, and excludes aviation's significant non-CO_2 climate impacts, as does its inadequate aircraft CO_2 standard[15]. ICAO's flagship emissions reduction policy, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), was adopted in 2016, but is only mandatory from 2027.

Most importantly, CORSIA requires airlines to merely purchase offsets for CO_2 emissions, ignoring non-CO_2 impacts, and only above a set baseline rather than reducing overall emissions. This baseline was originally set as the 2019–2020 average, but after COVID-19 depressed traffic in 2020, ICAO raised the baseline to 85% of 2019 CO_2 emissions,[16] and is not set to lower it over time to incentivise incremental reductions. ICAO offsets remain cheap in comparison to EU ETS allowances, providing little incentive to cut emissions, and revenues flow entirely to credit sellers, generating no funds to address aviation's climate impact. No offsets have yet been submitted, meaning that to date the scheme has achieved no mitigation. Recent analysis even suggests that aviation emissions have

[15] ICAO, Long term global aspirational goal (LTAG) for international aviation accessed at http://bit.ly/3WaZuBX
[16] International Air Transport Association (IATA), 2025. CORSIA Fact sheet, accessed at https://www.iata.org/en/iatarepository/pressroom/fact-sheets/fact-sheet-corsia/

continued to rise in participating economies.[17] CORSIA is scheduled to end in 2035, with no successor framework agreed.

Institutionally the ICAO lacks transparency and accountability, essential features of decision-making processes to minimise the risk of policy capture. The Committee on Aviation Environmental Protection (CAEP) is the primary decision-making body at ICAO on climate and is a technical committee that develops global aviation climate rules, with plenary meetings occurring once every three years. Yet, in stark contrast to the principle of transparency, CAEP meetings remain closed to the media, delegates are required to sign non-disclosure agreements, and submissions from participating organisations are withheld from the public. The lack of transparency removes opportunities for external scrutiny and accountability for corporate interests and exacerbates the risk of policy capture. Reporting by InfluenceMap reveals a long-standing trend of disproportionate industry presence at CAEP meetings compared to NGOs since the Paris Agreement. At a recent CAEP meeting industry delegates outnumbered climate experts by 14 to one. The development of policies disproportionately reflect industry interests, indicating a strong case of corporate "policy capture".[18]

These shortcomings across ICAO's processes and goals, and inherent to CORSIA's scope and approach to implementation, leave the agency falling far short of aligning international aviation with legally binding climate targets and the Paris Agreement's objectives.

European Union Emissions Trading System

In 2003 the EU set a historic precedent for climate action, establishing the world's first emissions trading system (ETS), which came into force in 2005. The ETS is a 'cap and trade' system: an EU-wide limit is set on the total amount of emissions from activities within the scope of the system, and a corresponding number of emission 'allowances' are auctioned off or allocated to companies. Allowances can be traded between companies, rewarding those quick to cut emissions. At the end of each year, companies must surrender allowances equivalent to their actual emissions for the previous year, and are penalised for any extra emissions over that year's cap. The number of available allowances is reduced year by year, progressively strengthening the incentive to decarbonise. By 2045 the allowances will reduce to zero, subjecting all residing emissions to penalties.

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[17] Yan, Z., Zhang, J., Wang, Z., Du, Z., 2025. Does international coordinated industrial policy stimulate regional low-carbon aviation development?. Energy Economics 143, 108220. https://doi.org/10.1016/j.eneco.2025.108220

[18] Corporate Capture and the UN International Civil Aviation Organization Continued Corporate Influence at the United Nations' Aviation Agency: An Update of InfluenceMap's 2022 Report September 2025, accessed at https://influencemap.org/report/ICAO-Corporate-Capture-2025

Aviation was brought into the ETS with the 2008 Aviation ETS Directive (Directive 2008/101/EC). The Directive provided that from 1 January 2012, emissions from all flights arriving at or departing from an EU airport (with some exceptions, for example military aircraft) would be priced.

However, in 2012 the European Commission temporarily exempted flights departing the European Economic Area (EEA) for non-EEA airports from the ETS, nominally to give the ICAO space to develop global emissions reductions measures. This was known as the aviation 'stop the clock', which has since been repeatedly extended.

The failure to regulate these emissions has had huge climate and fiscal impacts. Including extra-EEA flights would have seen an extra 1.1bn tCO_2 regulated between 2012 and 2023, the equivalent of the total emissions of Greece over the same period. In fiscal terms, this regulatory gap represents the loss of approximately €26bn in revenue that could have been used for climate action.[19] As well as having its pollution largely unaccounted for, EU aviation also enjoyed free ETS allowances, meaning the industry did not even pay a price on all its intra-EEA CO_2 emissions. Between 2013-2020, 82% of aviation's ETS allowances were free. These allowances are set to be fully phased out in 2026, yet between 2012-2023 alone, their worth totalled an estimated €8bn.[20]

Including the revenues actually collected in this period, the ETS for aviation would have generated around €41bn without these undue waivers. This amount exceeds the €33bn total revenue collected by EU Member States from the entire ETS in 2023.[21]

Looking ahead, the fiscal implications become even clearer. Projections suggest that flights departing the EEA are expected to emit around 1.3bn tCO_2 between 2027 and 2035. Assuming a representative carbon price of €100/tCO_2, pricing these emissions could raise €130bn (see Annex 1 for methods). By contrast, continuing to cover only intra-EEA flights over the same period would generate just €50bn. This stark difference underscores the importance of extending the ETS scope to ensure the aviation industry pays for the full climate costs it creates.

Extend the ETS to include international aviation

[19] Opportunity Green, Policy guide to the EU ETS for aviation, (2025) available at https://www.opportunitygreen.org/publication-policy-guide-eu-ets-aviation
[20] Opportunity Green, Policy guide to the EU ETS for aviation, (2025) available at https://www.opportunitygreen.org/publication-policy-guide-eu-ets-aviation
[21] European Environment Agency, Use of auctioning revenues generated under the EU Emissions Trading System, (2024), accessed at https://www.eea.europa.eu/en/analysis/indicators/use-of-auctioning-revenues-generated

With ICAO's CORSIA failing to reduce international aviation emissions, the EU must act. The European Commission is due to submit a report by July 2026 assessing the environmental integrity of CORSIA. This is set to evaluate CORSIA's "general ambition in relation to targets under the Paris Agreement and the level of participation in offsetting under CORSIA." Following on from such a finding the Commission must then produce a legislative proposal "to amend the ETS Directive in a way consistent with the Paris Agreement temperature goal, the EU's 2030 GHG emission reduction commitment, and the objective of climate neutrality by 2050 at the latest, and with the aim of preserving the environmental integrity and effectiveness of the Union's climate action."

The Irish experience under the EU ETS illustrates both the scale of aviation's carbon costs and the potential fiscal significance of pricing this pollution. The primary factor in determining each Member State's share of aviation ETS revenue is its share of total aviation emissions covered under the system[22]. Between 2012 and 2023, the total CO_2 emissions attributed to Irish airline operators were 112m tCO_2.[23] Based on the average price of EU (Aviation) Allowances (EUA/EUAAs) for each year, auctioning these allowances generated an estimated €1.6bn in revenues for Ireland between 2012 and 2023, equivalent to around 20% of total estimated revenues from aviation in the EU ETS.[24] These funds have been incorporated into national budgets, and since mid-2023, all Member States are legally required to allocate ETS revenues to climate and energy-related purposes. As discussed above, extending the EU ETS to cover international aviation between 2027 and 2035 could generate an additional €130bn in revenue across Member States, including Ireland, to support the climate transition.

Ireland takes over the Presidency of the Council of the EU in July 2026 at a key moment when the Commission's report assessing CORSIA's environmental integrity is due. Ireland therefore has a crucial role to play in ensuring that there is meaningful progress on the EU ETS. Ireland must ensure that the findings of the Commission's report on CORSIA are acted upon as a matter of priority over the course of its presidency. If the Commission also publishes the draft legislative proposal on ending the exemption of extra-EEA aviation from the ETS, Ireland's presidency must prioritise any such legislation across its Presidency calendar.

Ireland's aviation emissions: a growing policy blind spot

[22] Note, this is not the same as emissions from flights departing Ireland, because the EU ETS counts revenues by where operators are registered.
[23] European Environment Agency, EU Emissions Trading System (ETS) data viewer, (2025) available at https://www.eea.europa.eu/en/analysis/maps-and-charts/emissions-trading-viewer-1-dashboards
[24] Total revenues based on calculations in: Opportunity Green, Policy guide to the EU ETS for aviation, (2025) available at https://www.opportunitygreen.org/publication-policy-guide-eu-ets-aviation

Ireland is a key aviation hub. Ryanair, Europe's largest and most polluting airline is domiciled there, and Ireland dominates the global aircraft leasing market. Just less than 41.0 million people used Irish airports in 2024, the highest number of passengers recorded since the series began in 2013.[25] This has caused Ireland's consumption of jet kerosene to soar by 15% compared to 2022[26] and in the first half of 2025 Ireland's deliveries of jet kerosene were up 5.0% on the same period in 2024.[27]Since 1990, Ireland's population has grown by 44% but emissions from aviation increased by 500%.[28]

In 2021, Ireland enacted the Climate Action and Low Carbon Development Act, which places a legal obligation to reduce GHG emissions by 51% by 2030 compared with 2018 levels, while also committing to a 42% reduction by 2030 from 2005 levels under the EU's Effort Sharing Regulation. However, despite emissions falling by 6.8% in 2023,[29] and by 2% in 2024.[30] Ireland is projected to achieve only a 23% reduction by 2030[31] less than half the national target.

As a signatory to the Paris Agreement, Ireland must commit to economy-wide emission reductions in its nationally determined contribution (NDC). Like many other states, international aviation emissions are excluded from Ireland's national carbon budgets and from Ireland's NDC and therefore are not counted towards the country's climate targets. This omission means that one of the fastest-growing and most carbon-intensive sectors faces no binding limits under Ireland's climate law, weakening the integrity of national commitments. This exclusion effectively shifts a disproportionate mitigation burden onto other sectors.

This is not just a failure of climate action but of legal responsibility. States, Ireland included, are obliged under international law[32] to take all necessary action to reduce emissions across their whole economies. This responsibility extends to

[25]Central Statistics Office, Aviation Statistics Quarter 4, year 2024, accessed at https://www.cso.ie/en/releasesandpublications/ep/p-as/aviationstatisticsquarter4andyear2024/
[26] Hannah Daly, Carbon emissions from aviation can't be swept under the carpet, 2024, accessed at https://hannahdaly.ie/2024-06-03-aviation
[27] Sustainable Energy Agency Ireland, First Look, Mid year review of Ireland's Energy and Related Emissions in 2025, accessed at https://www.seai.ie/sites/default/files/data-and-insights/seai-statistics/key-publications/energy-half-year-review/Half-Year-Review-of-Irelands-Energy-and-Related-Emissions.pdf
[28] Hannah Daly, Carbon emissions from aviation can't be swept under the carpet, 2024, accessed at https://hannahdaly.ie/2024-06-03-aviation
[29] Environmental Protection Agency, Ireland's greenhouse gas emissions in 2023 lowest in three decades, 2024, accessed at https://www.epa.ie/news-releases/news-releases-2024/irelands-greenhouse-gas-emissions-in-2023-lowest-in-three-decades-.php
[30] Environmental Protection Agency, Ireland's Greenhouse Gas Emissions decrease by 2 per cent in 2024,2025, accessed at https://www.epa.ie/news-releases/news-releases-2025/irelands-greenhouse-gas-emissions-decrease-by-2-per-cent-in-2024.php
[31] Environmental Protection Agency, EPA Projections Show Ireland off Track for 2030 Climate Targets, 2025,accessed at https://www.epa.ie/news-releases/news-releases-2025/epa-projections-show-ireland-off-track-for-2030-climate-targets.php
[32] Opportunity Green, written statement to the International Court of Justice, 2004 accessed at https://static1.squarespace.com/static/64871f9937497e658cf744f5/t/65fad5f6d0d8d90d2ec980a7/1710937591892/Opportunity+Green+-+Written+Statement+-+ICJ+Advisory+Proceedings+on+Climate+Change.pdf

international aviation and the ICAO's remit over the sector does not relieve the State of its obligations.

Without a comprehensive carbon budget that incorporates Ireland's share of international aviation, Ireland is effectively front-loading emissions today and borrowing against tomorrow's carbon budget. This approach not only distorts sectoral effort-sharing but also underestimates the scale of economy wide decarbonisation required. Given international aviation's projected emissions trajectory, its inclusion is essential if Ireland is to align with its fair share of the Paris Agreement and maintain a credible pathway to limiting warming to 1.5°C.

Ireland's National Aviation Policy for Ireland (2015)[33] has a sole emphasis on expanding connectivity and airport capacity and prioritises growth over sustainability. Such a trajectory is inconsistent with decarbonisation goals, as higher traffic volumes inevitably drive-up aviation emissions. While the Irish government has committed to reviewing this policy during its current term, it must be replaced with a robust aviation strategy that incorporates stricter regulatory oversight and demand management.

Rather than reducing aviation emissions, however, the Irish government has embarked on action to do quite the opposite. This year it outlined[34] that it intends to work with stakeholders with the objective of lifting the passenger cap at Dublin airport, thus facilitating growth in passenger numbers. Dublin Airport has been subject to a statutory cap limiting annual passenger arrivals to 32 million, imposed by An Bord Pleanála in 2007 as a condition of approving the airport's second terminal. This cap was originally intended to manage road congestion around the airport. The current government is currently drafting legislation to remove the cap[35] despite environmental impact assessments outlining that this will increase emissions by 22% by 2030.[36]

These developments underline the urgent need for robust aviation policy, including pricing mechanisms such as an expanded EU ETS and air passenger levies, but also with stricter regulatory oversight and demand management, to ensure that aviation contributes its fair share to Ireland's climate obligations.

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[33] A National Aviation Policy for Ireland, Department of Transport, Tourism and Sport, 2015, accessed at https://assets.gov.ie/static/documents/national-aviation-policy.pdf

[34] Programme for Government, Securing Ireland's future, accessed at https://assets.gov.ie/static/documents/programme-for-government-securing-irelands-future.pdf

[35] The Irish Times, Dublin Airport cap row: Minister for Transport hopes legislation can resolve dispute over passenger numbers, https://www.irishtimes.com/business/2025/05/14/minister-for-transport-hopes-legislation-can-resolve-row-over-cap-on-passenger-numbers-at-dublin-airport,

[36] Business Post, Dublin Airport emissions could rise by 22% if passenger cap lifted, DAA document says https://www.businesspost.ie/news/dublin-airport-emissions-will-rise-by-22-if-passenger-cap-is-lifted-daa-said-in-planning-submissio/

Ireland's aviation revenue gap

Despite Ireland's high level of aviation activity, the country captures only a fraction of the revenue that could be generated by fully pricing the sector's carbon emissions. For instance, between 2012 and 2023, Irish airlines covered by the EU ETS emitted an estimated 112m tCO_2, yet most of these emissions went untaxed due to allocated free emissions allowances. In fact, of this total only 47m tCO_2 were priced under the EU ETS, generating €1.6bn in revenue, while the remaining emissions (65m tCO_2, equivalent to 58% of the total) were not priced under the ETS, representing around €1.4bn in lost revenue. Although the phase-out of free ETS allowances is already under way, aviation's historical exemptions illustrate the broader principle of how such policies have led to significant lost revenues across the sector. In Ireland's case, free ETS allowances meant the state failed to capture the full value of emissions linked to its aviation activity, foregoing substantial potential revenue and leaving much of the sector's pollution effectively unpriced.

To address this gap, Ireland must pursue a two-pronged policy approach by advocating for the expansion of the EU ETS to include all international flights and introducing a national aviation passenger levy.

Though Ireland currently does not impose a passenger tax, between March 2009 and April 2014 the Irish Air Travel Tax (ATT) was applied to flights leaving Irish airports with more than 50,000 annual departures, as part of a broader effort to raise revenue during the fallout from the 2008 global financial crisis. The government faced a widening budget deficit and sought new income sources, with a levy on outbound air passengers viewed as a straightforward way to generate funds. The measure was also presented as a green tax, designed to reflect aviation's contribution to carbon emissions and to send a price signal that might discourage unnecessary short-haul flights in favour of more sustainable transport options. The ATT was heavily criticised by airlines such as Ryanair, which argued it suppressed tourism and passenger numbers.[37] In response to these concerns and to boost air travel, the government abolished the tax in April 2014, as the economy began to recover and tourism promotion took priority.

Determining the impact of aviation taxes

The impact of aviation taxes depends on "price elasticity of demand", i.e. how sensitive consumers are to price changes. Geography is also a key factor

[37] Reuters Daily, Irish air travel tax a blow to tourism, 2008, accessed at industry https://www.reuters.com/article/world/irish-air-travel-tax-a-blow-to-tourism-industry-idUSLE496495/

impacting elasticity. Evidence[38] shows that in island nations like Ireland, demand for air travel does not respond much to price changes due to limited alternative transport options, meaning taxes raise revenue but have little effect on passenger numbers or emissions.[39] By contrast, countries with nearby alternative airports can see passengers avoid taxes, undermining environmental goals since there is neither revenue generated nor a reduction in flights taken.[40]

Another factor affecting elasticity is the type of travel. Leisure trips are found to be relatively elastic (demand is more sensitive to price), while business trips are relatively inelastic (demand is less sensitive to price).[41]

The evidence shows that passengers respond more to changes in ticket prices introduced by airlines than to tax increases, with 'dynamic pricing' becoming a feature of the market in recent years.[42] Overall, aviation taxes have significant revenue potential because demand for air travel is generally inelastic.

Irish demand and passenger number estimates

The majority of Ireland's air passengers travel to or from the EU (48%) and the UK (35%). The Dublin-London route is amongst the busiest in Europe. Domestic departures and arrivals account for only 0.4% of all Irish flights.[43]

Below we show the total departures each year from Ireland's main airports (excluding private airfields). The slow decline after 2008 reflects the recession, followed by a rapid recovery from 2016 through to the pandemic, which causes the sharp dip. Departure numbers have increased beyond their pre-pandemic peak by 7%, from 19m in 2019 to 20.5m in 2024. In the first half of 2025, 20.3 million

[38] Forsyth, P., Dwyer, L, Spurr, R., Pham, T., "The impacts of Australia's departure tax: tourism versus economy?", Tourism Management 104, 2014. Gonzalez, R., Hosoda, E.B., "Environmental impact of aircraft emissions and aviation fuel tax in Japan", Journal of Air Transport Management 57, 2016, Mayor, K. and Tol, R., "The impact of the UK aviation tax on carbon dioxide emissions and visitor numbers", Transport Policy 14:6, 2009, Pentelow, L., Scott, D.J., "Aviation's inclusion in international climate policy regimes: Implications for the Caribbean tourism industry", Journal of Air Transport Management 17:3, 2011, Seetaram, N., Song, H., & Page, S. J. "Air passenger duty and outbound tourism demand from the United Kingdom", Journal of Travel Research 53:4, 2014, Smith, I.J, and Rodger, C.J., "Carbon emission offsets for aviation-generated emissions due to international travel to and from New Zealand", Energy Policy 37:9, 2009

[39] Kelly de Bruin, Aykut Mert Yakut, "The impacts of aviation taxation in Ireland", Case Studies on Transport Policy 10:4, December 2022.

[40] For example, a Dutch passenger tax in July 2008 saw the number of passengers flying from Schiphol airport fall by about 2m in the 12 months the tax was implemented for, but due largely because of passengers flying instead from nearby airports in Germany and Belgium (see Fouquet, R., and Tanya O'Garra, 'In pursuit of progressive and effective climate policies: Comparing an air travel carbon tax and a frequent flyer levy', Energy Policy, Volume 171, 2022). A similar response was found from the introduction of a German passenger tax in 2011 (see Borbely, D., "A case study on Germany's aviation tax using a synthetic control approach", Transportation Research Part A: policy and practice 377 (2019)). See also Falk, M., & Hagsten, E., "Short-run impact of the flight departure tax on air travel", International Journal of Tourism Research 21:1 (2019).

[41] Brons, M., Pels, E., Nijkamp, P., Rietveld, P., "Price elasticities of demand for passenger air travel: a meta-analysis", Journal of Air Transport Management 8:3. (2002)

[42] Roger Fouquet, Tanya O'Garra, In pursuit of progressive and effective climate policies: Comparing an air travel carbon tax and a frequent flyer levy,Energy Policy, Volume 171, 2022

[43] De Bruin, K., Yakut, A.M., The impact of aviation taxes in Ireland", *Case Studies on Transport Policy* 10:4, (2021)

passengers passed through the main Irish airports, which was almost 800,000 more people than in the first six months of 2024.[44]

Reintroducing a tax in Ireland should not cause major disruption. In fact, as shown in figure 4: Airline passenger taxes in European countries, plus prior Irish tax, in the Appendix several EU countries have successfully implemented similar measures. France introduced its 'solidarity tax' on airline tickets in 2006, which has been progressively increased, with the most recent hike taking effect in March 2025. Germany implemented its air passenger tax in January 2011, and the UK introduced Air Passenger Duty in 1994. These countries have maintained or adjusted their taxes over time, demonstrating that such measures can be both feasible and effective. Indeed, the UK levy is the highest in the world, yet the government considers it, "an appropriate tax that ensures airlines make a fair contribution to the public finances, particularly given that tickets are VAT free and aviation fuel incurs no duty."[45]

A more detailed divide of these flights is shown for 2023, see figure 1 below. For the rest of this document, we apply a basic divide of "European" flights, including the UK, and "long-haul" flights for the rest of the world, following the Central Statistical Office's usage.

Source: Central Statistics Office, Aviation Statistics, 2024

[44] Central Statistics Office, Aviation Statistics Quarter 2 2025, accessed at https://www.cso.ie/en/releasesandpublications/ep/p-as/aviationstatisticsquarter22025/

Figure 1: Departures and arrivals from all Irish airports by destination, 2023

	Arrivals	Departures	Total
Europe (ex UK)	10,483,777	10,460,586	20,944,363
UK	6,322,717	6,297,911	12,620,628
North America	2,064,965	2,142,481	4,207,446
Asia (inc. ME)	504,262	490,074	994,336
Africa	61,363	60,831	122,194
Other	14,373	12,867	27,240
Total	**19,451,457**	**19,464,750**	**38,916,207**

Revenue and demand forecasts from tax changes

Here we project the likely revenue impact of different aviation taxes for Ireland out to 2030, based on modelling of Irish air travel demand and ticket prices (see methodology).

We model three different scenarios: a return to the older Airline Travel Tax, scaled for ticket price inflation since 2011; an introduction of the UK Air Passenger Duty, at equivalent rates; and a "Solidarity Levy" scenario between these two relatively high and low tax settings, based on the revised French aviation tax schedule.

In each case, we model separate impacts on short and long haul flights, assuming that the level of the tax in 2025 is maintained as a share of the forecast ticket price,that is, we do not assume a flat rate tax, but assume each year will see the tax uprated by the rise in ticket prices (see table below for the yearly tax rate used). We also project GHG emission savings per-passenger, based on the changes to passenger demand in each scenario.

In each scenario flight numbers, and therefore absolute emissions, continue to rise. Nevertheless, the taxes do reduce emissions compared to a business as usual scenario in which there is no tax. This table summarises the implied levels of the ticket tax.

Figure 2: Levels of ticket tax by ticket type, 2026-30 (€, not adjusted for inflation)

Scenario	Scope	2026	2027	2028	2029	2030
Air Travel Tax	European	4.69	4.91	5.14	5.38	5.63
	Long-haul	23.45	24.55	25.70	26.91	28.18
Solidarity Levy	European	15.71	16.44	17.22	18.03	18.87
	Long-haul	41.88	43.85	45.91	48.07	50.33
APD	European	33.72	35.31	36.96	38.70	40.52
	Long-haul	269.76	282.44	295.72	309.62	324.17

Figure 3: Impacts of different tax policies on Irish aviation demand, GHGs, and revenues

Scenario	Impact	2026	2027	2028	2029	2030	Total
Air Travel Tax	Departures	21,048,361	21,511,425	21,984,676	22,468,339	22,962,643	109,975,444
	GHG saving (tCO_2e)[46]	-44,912	-45,900	-46,910	-47,942	-48,997	-234,662
	Tax revenues (€m)	143.17	150.68	158.57	166.89	175.65	794.97
Solidarity Levy	Departures	20,422,233	20,871,522	21,330,696	21,799,971	22,279,571	106,703,994
	GHG saving (tCO_2e)	-93,301	-95,354	-97,452	-99,596	-101,787	-487,489
	Tax revenues (€m)	396.91	424.71	454.45	486.28	520.34	2,282.69
UK APD	Departures	18,943,947	19,360,714	19,786,650	20,221,956	20,666,839	98,980,105
	GHG saving (tCO_2e)	-345,098	-352,690	-360,450	-368,380	-376,484	-1,803,102
	Tax revenues (€m)	1,140.69	1,199.40	1,261.16	1,326.12	1,394.45	6,321.82

[46] Compared to a no tax scenario. Absolute emissions continue to rise in all tax scenarios.

The original Air Travel Tax, as might be expected, has a minimal impact on reducing emissions and minimal revenues raised in line with the reported revenues from the tax previously, which peaked at €116m in 2011. Here, the minimal tax schedule raises to just under €1bn over the full fiveyears.
The Solidarity Levy scenario generates a little over €2.2bn over the full five years, but it is the Air Passenger Duty-equivalent that produces significant, in-year revenues of over €1bn in its first year, rising to almost €1.4bn by 2030 and a total of €6.3bn over the whole five years.

For comparison, the economy-wide carbon tax Ireland introduced in 2010 is forecast to only generate €950m by 2030[47]. On these projections, revenues from the APD-style tax alone would be over 70% more than current carbon taxation. This indicates that with a little more ambition, only matching the UK's, an aviation tax could make a significant contribution. Given the scale of the problem for Ireland's climate aviation policy, set to get worse with the expected passenger cap lifted at Dublin airport, coupled with the fact that a tax will incur only a relatively small decrease in passengers, we recommend an APD-style tax of the three.

Ireland's "travel deficit"

To understand the economic impact of aviation and tourism in Ireland, and the potential role of aviation taxation, it is important to consider not just inbound spending, but also outbound travel and the resulting net balance, or Ireland's travel deficit. Ireland is well-known as a tourist destination, and the Irish tourist board and the industry's representative body promote the positive economic impact of the sector for the broader economy. For 2023, Irish Tourism data shows that 6.6 million visitors spent €5.6bn euros on their visits to Ireland.[48] The Irish Tourism Industry Confederation, claims 248,000 jobs are directly involved in the industry, accounting for 4.4% of Ireland's economic output.[49] Ryanair itself reported that spending by the airline "and its guests" brings over €1.5bn a year into the Irish economy.[50]

But this is only half the story, since air travel sees people leaving as well as arriving. In 2024, well over 20m flight seats were booked out of Ireland. So as well as arrivals

[47] The Irish Times, Carbon tax yield expected to double to €950 million by 2030 accessed at https://www.irishtimes.com/news/politics/carbon-tax-yield-expected-to-double-to-950-million-by-2030-1.4691089

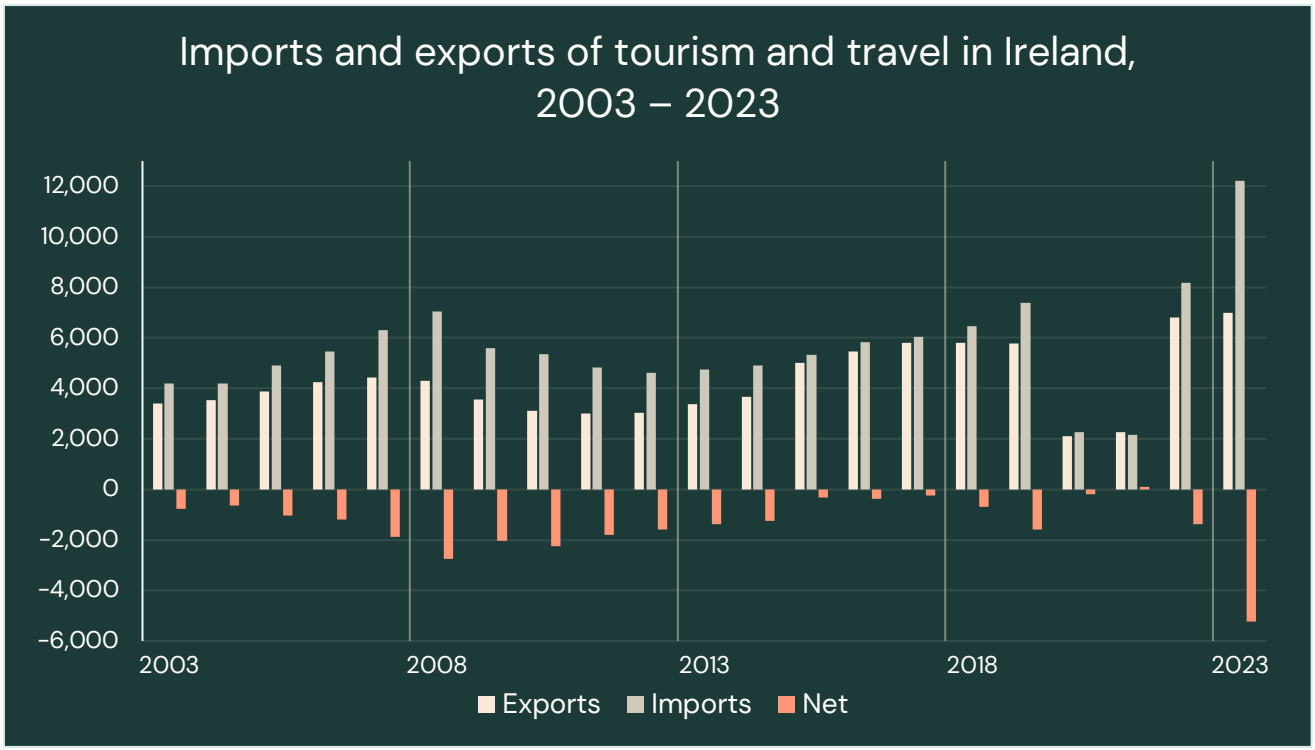
[48] Tourism Ireland, "Island of Ireland: overseas tourism performance facts and figures 2023". facts-figures-2, Excluding the Northern Ireland figures, accessed at https://assets.tourismireland.com/data/docs/default-source/visitor-facts-and-figures/visitor-facts-and-figures-20234b30dfab-2651-4dcc-b325-2f2dcb31ebc3.pdf?sfvrsn=32429854_1#:~:text=In%202023%2C%20the%20island%20of,Tourists*

[49] Irish Tourism Industry Confederation, "Irish tourism industry earned €5.3bn from overseas visitors in 2023", press release, 23 December 2023, accessed at https://www.itic.ie/itic-pub-docs/ITIC_Year_End_Review_2023_and_Outlook_2024_Press_Release_271223.pdf

[50] Ryanair, "PwC Report Confirms Ryanair's Unmatched Investment In Irish Economy Over Past 35 Years", press release, 28 September 2022. PwC Report Confirms Ryanair's Unmatched Investment In Irish Economy Over Past 35 Years – Ryanair's Corporate Website

coming into the country, and spending money earned abroad here, Irish residents left the country to spend money elsewhere. A euro spent by an Irish resident on holiday in (for example) Spain is a contribution to Spain's tourism industry and wider economy, but is a euro now not spent in Ireland's economy. To understand the true economic impact of the travel industry, it is essential to consider both inbound and outbound flows.[51]

Ireland has run a consistent deficit in travel spending for as long as a continuous record is available in official figures. In every year since 2003, Irish residents have spent more abroad than foreign visitors spent in Ireland, with the exception of 2021 when Ireland ran a small travel surplus during the pandemic. In 2023, the last year for which figures are available, this deficit rose to an all-time high of €5.2bn, or a little over 1% of Ireland's GDP.



Source: Central Statistical Office, series BPA03, "Tourism and Travel"[52]

Overall, given the expected impact of any tax on passenger numbers, we would not anticipate it having a great impact on the "travel deficit".

Modelling the total effect on the travel deficit is beyond the scope of this paper. However, we note here that earlier research by the Economic and Social Research Institute found a 0.52% revenue loss in the tourism sector compared to the

[51] Alex Chapman, *Losing Altitude: the economics of air transport in Great Britain,* London: New Economics Foundation, July 2023.
[52] We have used the CSO's main Balance of Payments series as this removes the expenditure on travel to and from Ireland that is included in the CSO's "Tourism and Travel" release. This allows us to see the expenditure by travellers to and from Ireland on the wider economy, rather than assessing what individual travellers may have to actually spend to travel, and it means the series here is compatible with international standards for national accounting. For a full explanation of the differences and other methodological points, see CSO, "Explaining overseas tourism expenditure across CSO publications", 20 July 2020.

baseline scenario four years after the imposition of an equivalent to our "Solidarity Levy" above. This was even without allowing for (as the authors say) the likely increase in domestic tourism spending by Irish residents not now flying abroad. While some smaller tourism businesses, such as rural B&Bs or regional hospitality providers, may experience short-term declines in visitors, the overall fiscal gains would far outweigh these losses. The implication is that tax revenues raised would be substantially larger than tourism revenues foregone, giving government scope to dedicate portions of revenues to easing negative social impacts.[53]

Fair and effective use of aviation tax revenues

How Ireland chooses to use the revenues from both an air travel tax and an expanded EU ETS will determine its contribution to climate action and social equity as well as its public legitimacy. The revenues generated should be earmarked for:

- Driving innovation in fossil free alternatives to polluting air travel.
- Providing general budgetary support in Ireland distributing funds to support initiatives to reduce emissions and energy poverty.
- Contributing to climate finance in climate vulnerable third countries, in line with the EU's international commitments.

Driving innovation in fossil free alternatives to polluting air travel

The great merit of a levy or taxation scheme is precisely that it allows the scaling and focused funding of alternative technologies and means of connectivity.

Development of sustainable alternatives to fossil fuels in flight has been slow. Within the broad category of so-called "Sustainable Aviation Fuel", the aviation industry generally favours biofuels over synthetic fuels since they are relatively cheaper but reduce fewer emissions compared to fossil kerosene and face significant availability issues.

E-kerosene, whose primary feedstocks are hydrogen produced with renewable electricity and captured carbon, is the alternative fuel that reduces the most emissions and presents the pathway most compatible with existing biodiversity targets due to their lower pressures on land compared to biofuels. However, a significant portion of the necessary infrastructure, such as electrolysers and renewable electricity generation, is currently lacking, and the costs of scaling up are high. Delaying investment in e-fuel infrastructure risks increasing future costs

[53] Using the PT_16 scenario to approximate this. See Kelly de Bruin, Aykut Mert Yakut, *The Impacts of Aviation Taxation in Ireland*, Economic and Social Research Institute, Research Series No. 131, December 2021, Table 7.2.

significantly. Conversely, developing a domestic e-kerosene (and maritime e-fuel) industry in Ireland capitalising on its high potential for renewable electricity generation, offers substantial economic and societal benefits.[54] Revenues dedicated to e-kerosene development would therefore have an economy-wide multiplier effect.

To seize this opportunity, policymakers should ensure that a percentage of new revenue are earmarked to accelerate investment in e-kerosene, de-risk production for example with financial support mechanisms, and guarantee that support flows only to the alternatives with the greatest emissions reduction potential and lowest biodiversity impacts.

While e-kerosene is the most sustainable alternative for long-haul journeys, zero carbon emission flight propulsion systems using battery electricity and renewable hydrogen are the least carbon intensive solution for medium- and short-haul routes. Agreements have already been made between leading developer in this field, ZeroAvia, and airlines operating or based in Ireland, Avooma[55] and ASL Aviation Holdings.[56] The government should dedicate revenues to supporting this technology path that may be able to replace fossil kerosene for routes between the Ireland and the UK.

A final area where revenues can support connectivity decoupled from fossil kerosene consumption is Sail & Rail. The Sail & Rail system has become less accessible in recent years, with tickets released only five weeks ahead of departures.[57] Policy should focus on correcting these failures and generally strengthening this means of low-emission transit between Ireland and the UK, opening new alternatives as airfare prices increase to reflect their environmental cost. Alongside improving the sail and rail system, revenues could be used to build up all-Island rail connectivity. Ireland has the lowest level of electrified railway in the European Union.[58]

[54] Hydrogen Mobility Ireland, The role of hydrogen derived e-fuels in aviation and maritime and the opportunities for Ireland. 2023, accessed at https://h2mi.ie/wp-content/uploads/2023/05/HMI-eFuels-Report-May-2023.pdf; Department of Transport,Ireland's Sustainable Aviation Fuel Policy Roadmap August 2025, accessed at https://assets.gov.ie/static/documents/Irelands_Sustainable_Aviation_Fuel_Policy_Roadmap.pdf

[55] Fresh aviation, accessed at https://www.freshaviation.co.uk/avooma-tac-zero-carbon-agreement/

[56] Simple Flying, ASL Aviation Agrees To Buy Up To 20 ZeroAvia Hydrogen-Electric Engines accessed at https://simpleflying.com/asl-aviation-order-20-zeroavia-hydrogen-electric-engines/

[57] Opportunity Green, Delay in issuing London to Dublin Sail & Rail tickets is causing extra costs to consumers and climate accessed at https://www.opportunitygreen.org/press-release-train-and-ferry-companies-must-restore-sail-and-rail-service

[58] Department of Transport and Department of Infrastructure, All-Island Strategic Rail Review, Final Report, 2024, https://assets.gov.ie/static/documents/final-report-of-the-all-island-strategic-rail-review.pdf

In 2023, France[59] passed legislation banning short-haul flights where a train journey of 2.5 hours or less is available, and Spain[60] is now set to follow suit, prioritising rail over air travel for domestic routes. Rather than continuing to invest in aviation connectivity such as the support for flights between Dublin and Derry announced in Budget 2026 Ireland should focus on implementing the recommendations of the All-Island Strategic Rail Review[61] to strengthen sustainable, efficient rail alternatives.

Providing general budgetary support in Ireland

Alongside driving innovation, revenues raised should be used to address social inequities that may be caused or exacerbated by the energy transition, especially for communities that are locked out from sustainable activities due to affordability. Ireland's approach to carbon tax rising where revenue is fully earmarked for low-carbon initiatives demonstrates how revenues can be effectively directed to advance climate and social goals. Embedding equity considerations into climate policy like levies by funnelling revenues to addressing potential regressive impacts associated with climate pricing is also critical to securing public support.

In Ireland, energy poverty is driven primarily by high energy expenditure in proportion to household budget, low levels on income, and low energy performance of buildings and appliances. Lower-income households tend to spend a larger share of their income on energy costs.[62] Households with higher energy needs, which include families with children, persons with disabilities and older persons, are also more susceptible to energy poverty and its effects. In 2023, 10.8% of the Irish population went without home heating due to a lack of money.[63]

In 2024, the state invested €420m to financially support 54,000 homes, including fully funding upgrades for more than 7,700 households in energy poverty.[64] These upgrades by SEAI (Sustainable Energy Authority of Ireland) refers to projects that improve a home's energy efficiency, with grants available for homeowners to help cover the costs. This can range from fully funded upgrades for low-income households under the Warmer Homes Scheme to a variety of grant-aided

[59]Euronews, Short-haul ban: These European countries could soon see the end of domestic flights, accessed at https://www.euronews.com/green/2023/06/01/short-haul-ban-these-european-countries-could-soon-see-the-end-of-domestic-flights

[60] Euronews, Spain's plan to ban domestic flights where you can take a train in under two and half hours accessed at https://www.euronews.com/green/2024/02/23/spains-plan-to-ban-domestic-flights-where-you-can-take-a-train-in-under-two-and-half-hours

[61] Department of Transport and Department of Infrastructure, All-Island Strategic Rail Review, Final Report, 2024, https://assets.gov.ie/static/documents/final-report-of-the-all-island-strategic-rail-review.pdf

[62] Fremstad, Anders and Mark Paul, The Impact of a Carbon Tax on Inequality, 2019, EconPaper, vol. 163, issue C, 88-97, accessed at https://econpapers.repec.org/article/eeeecolec/v_3a163_3ay_3a2019_3ai_3ac_3ap_3a88-97.htm

[63] Central Statistics Office, Survey on Income and Living Conditions, 2024, accessed at https://www.cso.ie/en/releasesandpublications/ep/p-silc/surveyonincomeandlivingconditionssilc2024/

[64] Sustainable Energy Agency Ireland, accessed at https://www.seai.ie/news-and-events/news/record-year-of-progress

individual upgrades under the National Home Energy Upgrade Scheme. Revenue generated from aviation taxation could fund the scaling up of this initiative, directly supporting energy efficiency improvements, reducing emissions, and tackling fuel poverty.

Distributing revenue in this way would turn the environmental costs of air travel into tangible benefits for Irish households and have wider fiscal and environmental benefits. Reducing energy costs would increase disposable household income and increase general economic activity. In terms of climate goals, upgrading homes would help reduce residential emissions that account for 15% of Ireland's total.[65]

Contributing to climate finance in climate vulnerable third countries

Revenues should also fairly contribute to Ireland's international climate finance obligations and support its justice-oriented foreign policy agenda. There is a deep injustice underpinning the climate crisis. Global South countries and marginalised communities are disproportionally affected by extreme weather events like floods, storms, and droughts, despite having contributed least to global heating. These are also the actors least responsibility for the climate crisis and who have the least resources to cope. The poorest half of the global population, nearly 4 billion people, are responsible for just 12% of all greenhouse gas emissions.[66] In 2019, the UN Special Rapporteur on Extreme Poverty and Human Rights warned that developing countries were estimated to bear 75% to 80% of the cost of the climate crisis.[67]

This dynamic is particularly acute for aviation: 80% of the global population has never stepped foot on a plane and just 1% is responsible for over 50% of all passenger emissions.[68]

Under the Paris Agreement wealthy countries initially pledged to provide $100bn per year in financial support to developing countries for climate action. However, more than a decade later, this target has still not been met, with just $83bn provided in 2020.[69]

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[65] Sustainable Enery Authority Ireland, Energy-related greenhouse gas (GHG) emissions, accessed at https://www.seai.ie/data-and-insights/seai-statistics/co2

[66] Chancel, L., Bothe, P., Voituriez, T. (2023). Climate Inequality Report 2023, World Inequality Lab Study 2023/1, p. CBV2023-ClimateInequalityReport-2.pdf (wid.world)

[67] Alston, P. (2019) 'Report of the Special Rapporteur on extreme poverty and human rights': accessed at https://www.ohchr.org/en/press-releases/2019/06/un-expert-condemns-failure-address-impact-climate-change-poverty

[68] Alex Chapman, Flying fair Modernising the air transport tax system,2025, accessed at https://neweconomics.org/2025/05/flying-fair

[69] OECD (2022). Climate Finance Provided and Mobilised by Developed Countries in 2016-2020: Insights from Disaggregated Analysis, Climate Finance and the USD 100 Billion Goal, OECD Publishing, Paris, accessed at https://www.oecd.org/en/publications/2022/09/climate-finance-provided-and-mobilised-by-developed-countries-in-2016-2020_7b466264.html

In 2021, the Irish government committed to providing at least €225m in climate finance to developing countries annually by 2025.[70] While claiming to be on track for this target, Ireland spent just €120.8m on international climate finance in 2022, just 54% of the annual goal.[71]

Ireland is one of the developed countries committed by Article 4.3 of the UNFCCC, to providing "new and additional financial resources" sufficient to meet "the full incremental costs" incurred by developing country parties, according to those countries' "common but differentiated responsibilities and respective capabilities". The UN Special Rapporteur on Human Rights and the Environment in his 2021 policy briefing advocated for aviation and shipping passenger taxation and levies as target sectors for creating innovative sources of finance.[72]

Channelling revenues generated from an air travel levy and expanded ETS into climate finance for vulnerable countries, would help Ireland meet its international commitments and uphold the polluter pays principle.

Ireland's choice: business as usual or fair climate action

Aviation has long evaded meaningful regulation and taxation, despite being one of the most carbon-intensive industries and a growing driver of global emissions. The evidence is clear that neither ICAO's CORSIA scheme nor the current scope of the EU ETS has delivered the level of decarbonisation required. Decades of exemptions have allowed aviation to expand while avoiding its fair contribution to climate action.

Ireland now faces a choice. Continuing with business as usual will lock the country into rising emissions. Alternatively, by reintroducing an air passenger levy designed along the lines of the UK's APD and expanding the EU ETS to cover all outbound flights Ireland can secure billions in revenue, deliver real emissions reductions, and ensure that polluters, rather than the public, shoulder the costs of climate damage.

The revenues generated from these measures should not simply close fiscal gaps, but be strategically directed to accelerate the development of truly sustainable aviation fuels, support climate-vulnerable countries in line with international commitments, and strengthen domestic resilience by funding initiatives to cut emissions and alleviate energy poverty.

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[70] https://www.ireland.ie/en/irish-aid/news-and-publications/publications/publication-index/irelands-climate-and-environmental-finance-report-2022/

[71] Irish Aid, Ireland provided €120.8 million in climate finance in 2022 accessed at https://www.ireland.ie/en/irish-aid/news-and-publications/latest-news/news-archive/ireland-provided-1208-million-in-climate-finance-to-developing-countries-in-2022/

[72] Boyd and Keene (2021), Policy Brief from the UN Special Rapporteur on Human Rights and the Environment, accessed at https://www.ohchr.org/sites/default/files/2021-11/BiodiversityPolicyBrief2_1.pdf

If Ireland is serious about meeting its climate targets aviation taxation must be part of the solution. Properly regulated, the sector can both reduce its climate footprint and play its part in financing the just transition that Ireland urgently needs.

Recommendations

We recommend that the Irish government should:

- Introduce an Irish aviation passenger tax based on the UK's Air Passenger Duty.
- Advocate for the EU to expand the scope of EU ETS to include international aviation, particularly during its presidency of the Council of the EU.
- Earmark revenues generated from an expanded ETS and Irish aviation passenger tax for:
  - Driving innovation in fossil free alternatives to polluting air travel.
  - Providing general budgetary support in Ireland to reduce emissions and energy poverty.
  - Contributing to climate finance in climate vulnerable third countries, in line with Ireland's international commitments.

Annex 1: methodology

This appendix details the method used to generate the estimates for future passenger numbers and the impact of different taxes out to 2030. We have used the significant existing literature on the economics of aviation to help overcome what are otherwise some deficiencies in the data publicly available for the Irish industry.

To model the impact of air passenger levies on passenger numbers, emissions saved, and revenues generated, we needed to calculate (1) current average Irish airfare prices, (2) Irish air travel demand, and (3) how much passengers typically change their demand in response to price changes, i.e. price elasticity of demand.

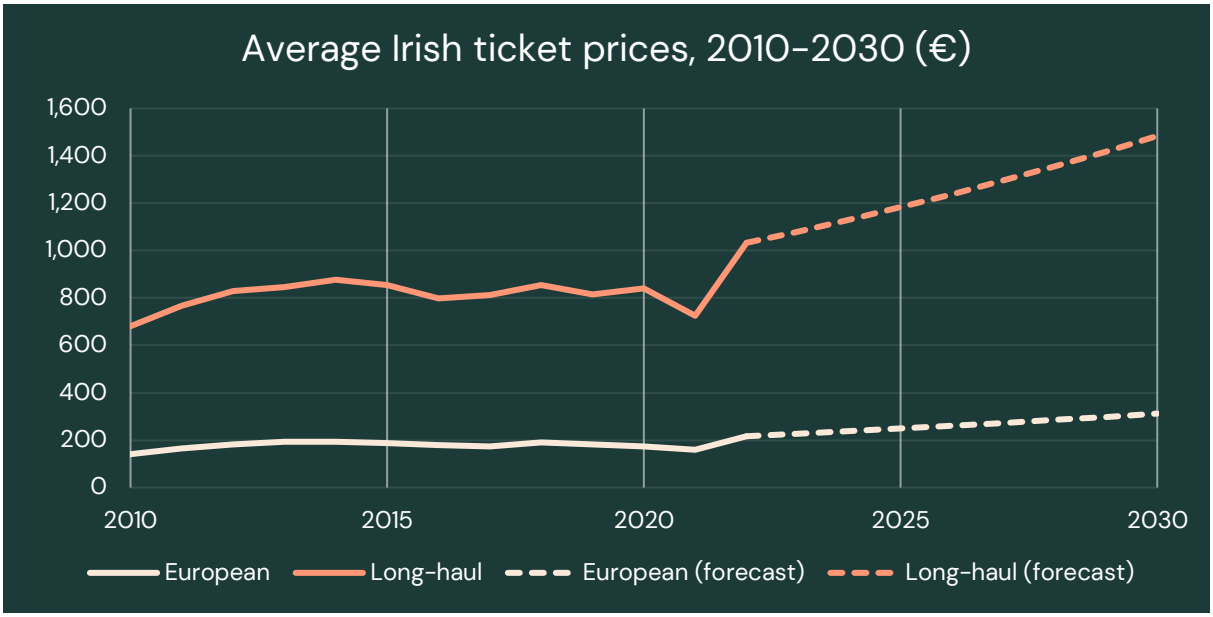
Irish air travel ticket prices

Since data for yearly average airfare ticket prices for flights from Ireland is not available we used average UK flight prices from the Office for National Statistics (ONS) as a proxy for Irish prices, an approach used elsewhere by CE Delft.[73] We evaluated the UK to be an apt proxy based on the two countries' geographic and economic similarities. We standardised the UK prices against the purchasing power parity ratio of the two countries and converted figures into euros from pound sterling at the prevailing exchange rate. The ONS data includes average UK flight prices for domestic, European (short-haul) and long-haul flights from 2010 to 2022.

We conducted a simple model of average Irish ticket prices out to 2030 based on the following assumptions that:

- Past growth is a reasonable guide to future ticket price inflation.
- Ticket price inflation continues at the same rate as the period 2010-2023 at approximately 5% per year for each class of ticket (with significant annual variation).
- Purchasing power parity, and the exchange rate, remain constant in relation to each other over the next seven years.

[73] Grebe, S., Meijer, C., Rzeplinksa, L., *European Frequent Flying: impact study*, Delft: CE Delft, 2023, accessed at https://ce.nl/wp-content/uploads/2024/10/CE_Delft_230304_European_Frequent_Flying_Levy_Def.pdf



Irish air travel demand

After 2024, we use the ICAO "mid-range forecast" for passengers numbers. This gives a global growth rate for passengers in the decade after the pandemic of 2.2% per year, keeping growth approximately in line immediately prior to the pandemic.[74]

Air travel price elasticity in Ireland

Price elasticity describes the change in demand for a product when there is a change in price. If demand is "elastic", it changes by proportionately more than the change in price. If it is "inelastic", it changes by proportionally less than the change in price. Elasticity values greater than 1 are elastic, and values between 1 and 0 are inelastic. For most goods this measure will be negative, meaning that as price goes up, demand falls, or vice versa.

There are no readily-available direct estimates for Irish price elasticity of demand for flight tickets, with studies of the impact of Irish aviation taxes tending to use either generic price elasticities[75] or, in the case of a recent study,[76] a general equilibrium model of the total effect of airline tax changes across the whole economy.

[74] ICAO, Long Term Traffic Forecasts, 2024: PowerPoint Presentation, accessed at https://www2023.icao.int/MID/Documents/2024/Aviation%20Data%20Analysis%20Seminar-SA/PPT%203.3-LTF_Presentation.pdf

[75] Velduis, J., Zuidberg, J., The implications of the Irish Air Travel Tax, Amsterdam: SEO Economisch Onderzoek. (2009)

[76] De Bruin, K., Yakut, A.M., The impact of aviation taxes in Ireland", Case Studies on Transport Policy 10:4, (2021)

For the purposes of this study a simple model is sufficient. For this reason, variables such as general economic growth or household income that may cause non-linear demand responses to price changes do not factor into elasticity calculations. The fact of Ireland being an island with few travel alternatives besides flying is considered to be the most significant factor determining demand elasticity to air travel ticket prices.[77]

We assume that the passenger elasticities in the three large, developed, north-western European islands of Ireland, Great Britain, and Iceland all have similar elasticities of demand arising from their similar geographies and economies.[78] We use the standard price elasticities calculated by the International Air Transport Association (IATA) with their adjustments for different international markets, which are[79] widely used across the literature. This gives us a price elasticity of demand for European flights from Ireland of -0.82, and to the rest of the world of -0.72.

When considering the economic implications of a levy, our modelling is strictly partial equilibrium only, i.e. we do not account for how a levy would impact other sectors and the decisions of actors within them, most notably the airline industry itself.

Impact of tax on GHG emissions

We further also make use of representative flights to generate the GHG emissions figures, although we are confident the result is not substantially different from the true figure for the equivalent GHG emissions.

EU ETS revenues and emissions, 2012-2023 and 2027-2035

The full methodology for these calculations can be found in Opportunity Green's *Policy guide to the EU ETS for aviation.*[80] To estimate the CO_2 emissions not included in the EU ETS between 2012 and 2023 from flights departing for non-EEA airports using reported civil domestic and international aviation CO_2 emissions recorded in national GHG inventories and country submissions to the UNFCCC.[81]

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[77] The findings here are also in line with similar recent studies. See, for example, Egal, J., Mauroschat, R., Dardenne, J., *Aviation Tax Gap: How much revenues are governments losing out on due to poor aviation taxation?*, Brussels: Transport and the Environment, 2023.

[78] This is the approach taken by CE Delft's study on European Frequent Flyer Levies. See Grebe, S., Meijer, C., Rzeplinksa, L., *European Frequent Flying: impact study*, Delft: CE Delft, 2023.

[79] InterVISTAS Inc, Estimating Air Travel Elasticities: final report for IATA, December 2007, accessed at https://www.iata.org/en/iata-repository/publications/economic-reports/estimating-air-travel-demand-elasticities---by-intervistas/

[80] Opportunity Green, Policy guide to the EU ETS for aviation, (2025) available at https://www.opportunitygreen.org/publication-policy-guide-eu-ets-aviation

[81] Greece emissions data are net domestic greenhouse gas emissions reported to UNFCCC (all GHGs). Total does not include contributions from international aviation or shipping. Data sourced from: European Environment Agency, 2025. National emissions reported to the UNFCCC and to the EU under the Governance Regulation, 2025 ver. 3.0. Retrieved 10 June, 2025 from https://www.eea.europa.eu/en/datahub/datahubitem-view/3b7fe76c-524a-439a-bfd2-a6e4046302a2?activeAccordion=)

Data were obtained for the EU27, Iceland, Norway and Liechtenstein from 2012-2023, while data for the UK were included for the period 2012-2020.

To calculate the revenues that would have been generated if these emissions had been in scope between 2012-2023, we multiplied the figures for non-priced CO_2 emissions by the average price of EU ETS allowances and aviation allowances (EUAs and EUAAs) for each year.[82] We assumed no use of offsetting and that emissions for each year are covered by allowances traded in that year (i.e., emissions for the year 2014 are assumed to be covered by allowances purchased at the average EUA/EUAA price for 2014). For the year 2012, allowances originally allocated for free were adjusted to account for the free allowances returned by airlines following the stop the clock decision.[83]

For CO_2 emissions and potential revenues from flights departing the EEA between 2027 and 2035, we used EEA Member States' own projections of CO_2 emissions. These are based on a "with additional measures" (WAM) policy scenario, meaning they include the effects of both existing and planned policies and regulations. Emissions from intra- and extra-EEA flights were estimated based on the contribution of intra- and extra-EEA flights to total emissions in 2023 (39 and 61%, respectively). Projected revenues were then calculated based on a representative carbon price of €100 per tonne of CO_2. Projections of future EUA/EUAA prices vary significantly, with one recent projection suggesting prices may surge to almost €150 per tonne of CO_2 in 2030.

[82] European Energy Exchange (EEX), 2025. History Emission Spot Primary Market Auction Report 2012 – 2024. Retrieved 7 April, 2025 from https://www.eex.com/en/markets/environmental-markets/eu-ets-auctions. Average annual prices calculated as the mean of all auction prices for a given year.

[83] European Environment Agency, 2025. EU Emissions Trading System (ETS) data viewer. Retrieved 10 June, 2025 from https://www.eea.europa.eu/en/analysis/maps-and-charts/emissions-trading-viewer-1-dashboards

Figure 4: airline passenger taxes in European countries, plus prior Irish tax

Country	Tax	Scope	Charge (€)
Austria	Air Transport Levy	short haul	3.50
		medium haul	7.50
		long haul	17.50
France	Civil Aviation Tax	inside EEA	4.48
		Extra-EEA	8.06
		freight tax per tonne	1.33
	Air Passenger Solidarity Tax	within EEA, economy	1.13
		within EEA, business	11.27
		outside EEA, economy	4.51
		outside EEA, business	45.07
Germany	Air Transport Tax	short haul	7.47
		medium haul	23.32
		long haul	41.99
Italy	Embarkation Tax	domestic	6.57
		EU & EEA	12.69
		non-EEA	18.14
	City Council Tax	passenger tax with varying rates across airports	7.07
	Luxury Tax	distance <100 km	10.00
	(executive charter flights)	distance 100-1,500 km	100.00
		distance >1,500 km	200.00
Sweden	Air Travel Tax	domestic/EU	6.26
		international commercial <6000 km	26.06
		all other	41.70
UK	Air Passenger Duty	<2000 miles, economy	14.42
		<2000 miles, all other classes	28.85
		private jet: >20 tonne, <19 passengers, <2000 miles	86.54
		private jet: >20 tonne, <19 passengers, <2000 miles	86.54
		all other classes >2,000 miles	173.10
		private jet: craft >20 ton, <19 passengers, >2000 miles	499.24
Ireland	Air Travel Tax, 2009-2014	less than 300km	2.54
		more than 300km	12.68
		Flat rate from June 2011	3.69

Source: derived from Kelly de Bruin, Aykut Mert Yakut, *The Impacts of Aviation Taxation in Ireland*, Economic and Social Research Institute, Research Series No. 131, December 2021, Table 3.1.

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