

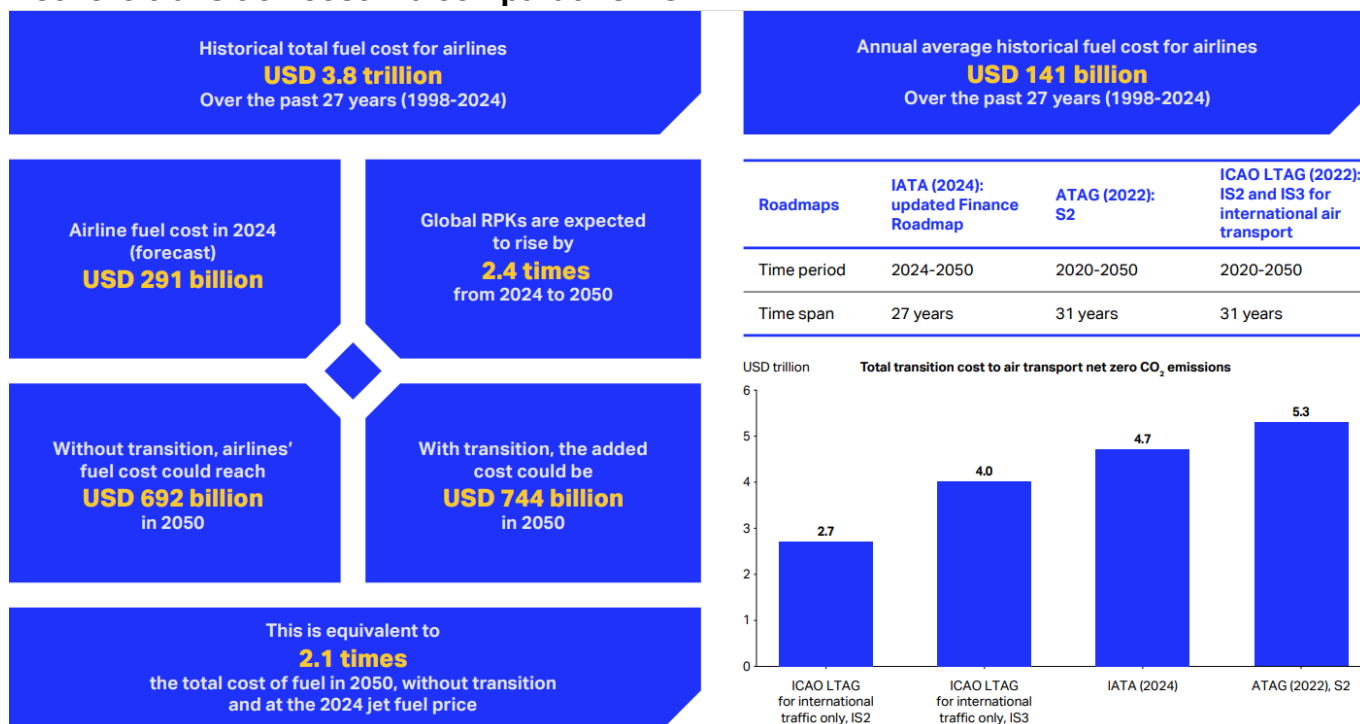


Chart of the Week

1 November 2024

Transition costs and relative magnitudes

Net zero transition cost in a comparative view



Source: IATA Sustainability and Economics, ATAG Waypoint 2050 (2021), ICAO CAEP LTAG-TG reports (2022).

- IATA estimates total transition cost, defined as the additional costs for the transition levers that airlines could face over and above the traditional fuel bill, at about USD 4.7 trillion over 2024-2050 ([Net Zero CO₂ Transition Finance Roadmap](#)). Annually, the transition cost is expected to rise from USD 1 billion in 2025 to a rather eye-watering USD 744 billion in 2050. This transition cost, spanning the next 27 years, is not too different from the total amount spent by airlines on fuel over the past 27 years, at USD 3.8 trillion, or USD 141 billion per year on average.
- Moreover, our estimated total transition cost is in line with other published roadmaps that make similar assumptions about the adoption of the different transition levers. In the Long-Term Aspirational Goal (LTAG) reports, ICAO's two scenarios IS2 and IS3 put the total transition cost at USD 2.7 trillion and USD 4.0 trillion, respectively, between 2020 and 2050. The lower numbers are explained by the fact that the ICAO LTAG scenarios only consider CO₂ emissions from international air transport, which accounted for about 60% of the global total RPK (revenue passenger kilometers) in 2023. ATAG (Air Transport Action Group) estimates a higher number of USD 5.3 trillion in its S2 scenario in the Waypoint 2050 report.
- At IATA's expected growth in global RPK of 2.4 times the 2024 level in 2050, the total fuel cost could reach USD 692 billion in 2050 without the transition (the fuel cost in 2024 multiplied by the growth in RPK, using the 2024 average jet fuel price, and all else being equal). Adding the annual USD 744 billion transition cost on top of the fuel cost in 2050 would more than double the total fuel bill for airlines globally in 2050. These relative magnitudes still show that meaningful policy support in favor of SAF (and other transition solutions) production is urgently needed to ensure that sufficient quantities can be produced, and to ensure that economies of scale can drive the costs down, this side of 2050.

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