

## Analysis of the "Fit for 55" Impact on European Aviation

**Objective and Methodology:** The European Union's "Fit for 55" legislation is designed to reduce greenhouse gas emissions by 55 % by 2030, with significant implications for the aviation industry. This analysis evaluates the impact on European aviation, specifically in terms of carbon leakage and competitiveness. The study is designed to provide answers to the questions of how the costs related to the "Fit for 55" measures develop over the years and whether this creates conditions that lead to carbon leakage and distort competition.

The Analysis utilizes a combination of real production data, industry forecasts, and regulatory impact simulations across various typical airline routes. The study does not attempt to forecast expected developments, but rather illustrates scenarios that were created with the support of experts. Costs were determined on the basis of current and future market prices and extrapolated into the long-term projection. Due to the long-term outlook up to 2050 and the related challenges of estimating price trends, two scenarios were used in the study. An upper and lower boundary of market price development is assumed, in which future prices are very likely to remain. This range was only defined for Sustainable Aviation Fuels (biogenic SAF and PtL), as an excessive number of variables would lead to inconsistent results in the study. Moreover, the influence of Sustainable Aviation Fuels on cost development is the most significant. Technological developments and fleet replacements were considered as annual increase of efficiency and thus a reduced fuel consumption.

### Key Regulations Analyzed:

1. **ReFuelEU Aviation:** Mandates an increasing share of Sustainable Aviation Fuels (SAF) in aviation fuel.
2. **EU Emissions Trading System (EU-ETS):** Requires airlines to purchase emission certificates, with an increasing share being auctioned.
3. **Energy Taxation:** Proposes including aviation in the EU energy tax directive, imposing a tax on kerosene starting in 2028. Temporarily on hold.
4. **CORSIA:** Focuses on offsetting CO<sub>2</sub> emissions from international flights but does not apply to flights within Europe.

**Regulatory Impact on Selected Routes:** The report details the financial impact of these regulations on several representative routes, emphasizing cost developments due to the SAF blending mandate and emission trading costs:

- **Intra-European Routes:** Significant cost increases are projected, such as on the Hamburg-Munich and Dusseldorf-Palma routes, with SAF blending mandate being a major cost driver.
- **Long-Haul Routes:** Routes like Stockholm-Bangkok and Paris-Hong Kong with a transfer at a European hub show severe competitive disadvantages compared to transfers via non-EU hubs due to higher regulatory costs.

**Competition and Carbon Leakage:** Unilaterally increased costs for European airlines would most likely lead to carbon leakage, a shift of market shares to non-EU carriers that do not face the same regulatory costs, potentially leading to an overall increase in global emissions rather than a decrease. This is particularly noted on long-haul routes where European airlines could lose a substantial market share to competitors with hubs in Turkey, Dubai, or other regions outside the stringent EU regulatory environment. As the cost increases caused by the "Fit for 55"

measures for airlines using European hubs are driven primarily by the high prices for SAF and the blending mandate starting as early as 2025, the significant disadvantages for these carriers will be visible in the near future. The increase in the blending mandate in the following years will increase the negative effects accordingly.

**Economic Impact:** European airlines are projected to face significant revenue losses as the regulatory costs render them less competitive. Long-haul passenger and cargo services are particularly affected, with potential shifts in demand to non-EU carriers ranging between 5-25 % by 2050. This shift represents a substantial financial risk for European aviation stakeholders.

**Conclusions:** The "Fit for 55" measures, while aligned with environmental goals, pose serious economic threats to the competitiveness of European airlines. Adjustments to the regulatory approach may be needed to balance environmental objectives with economic realities.

**Final Thoughts:** The analysis underscores the need for a careful review of the "Fit for 55" policies, illustrating that without adjustments, the European aviation sector could face severe competitive disadvantages, leading to economic challenges and even unintended environmental consequences.