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Abstract #

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Title

Sustainable Aviation Fuels in the European Union: a critical analysis of the ReFuelEU Aviation Initiative

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Abstract

The proliferation of air transport activities in the past couple of decades has birthed a highly profitable and highly important sector in the European internal market. At the same time, however, it has rendered air transportation the second largest polluter of the transportation sector, after road transport, with a total sector-wide emissions share of 13,9%¹. In that context, the European Union decided to include aviation in the scope of the EU Emissions Trading System aiming to establish a cap on sector emissions. A similar approach has been taken in an international level with ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). However, market based systems offer short term solutions to the proliferation of carbon emissions and as such do not substitute the need for concrete long term solutions.

Against this backdrop, Sustainable Aviation Fuels (SAF) may in fact offer one such solution with ICAO estimates placing them as the more prevalent in a basket of various measures for a carbon neutral aviation sector². Nonetheless, SAF are not as of yet utilised to their fullest potential, with only a mere 0,05% of total jet fuel consumed consisting of SAF³. This shortcoming may be attributed to their limited availability and the considerable costs associated with their production⁴. On this backdrop, the EU has introduced a new legislative proposal under the name ReFuelEU which aims to increase the percentage of SAF refueling on EU airport from 2% on 2025, to 5% on 2030 up to 63% by 2050⁵, making SAF one of the staples of the "Fit for 55" strategy of the EU.

On the other hand, taking into consideration the aforementioned considerable costs as well as the scope of the proposal which is limited to the EU, some eyebrows may be raised. More specifically, there are concerns voiced about the competition implications associated with the extra costs imposed on community carriers, which in turn is estimated to increase ticket prices. This is not only a concern for consumers, but also for airlines who may see market shares decreased in favour of extra-EU competitors not adhering to such a system. However, this is not only a competition concern either as there is the possibility of carbon leakage rendering the initiative under question meaningless. The latter refers to a situation where passengers prefer to fly with non-EU carriers who can offer lower prices due to the inapplicability of carbon neutral legislation on them, thus transposing the carbon emissions issue outside of the EU jurisdiction without any real solution.

The future implementation of SAF in international air transport is bound to rely on two facets of the same coin, the technological capacity for emissions' reduction as well as on the legal framework that will facilitate this implementation. The proposed paper will analyse the legislative proposal of ReFuelEU as well as touch upon the aforementioned corollary concerns.

¹ ReFuelEU Aviation initiative: Sustainable aviation fuels and the fit for 55 package [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)698900] [accessed 16/02/2022]

² <https://www.icao.int/environmental-protection/pages/SAF.aspx> [accessed 15/02/2023]

³ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12303-Sustainable-aviation-fuels-ReFuelEU-Aviation_en [accessed 16/02/2023]

⁴ Abid H. Tanzil, Kristin Brandt, Michael Wolcott, Xiao Zhang, Manuel Garcia-Perez, Strategic assessment of sustainable aviation fuel production technologies: Yield improvement and cost reduction opportunities, Biomass and Bioenergy, Volume 145, 2021

⁵ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on ensuring a level playing field for sustainable air transport (Text with EEA relevance) {SEC(2021) 561 final} - {SWD(2021) 633 final} - {SWD(2021) 634 final}, pg.3