

# THE FUTURE OF THE DEVELOPMENT AND USE OF ALTERNATIVE JET FUELS FROM THE ASPECT OF AIR SPACE DECARBONIZATION

Božidarka Arsenović<sup>1\*</sup>

<sup>1</sup>"ORAO" A.D. Šabačkih đaka bb, Bijeljina, Republic of Srpska, Bosnia and Herzegovina,  
bokijevmejl@gmail.com\*

## Abstract

*In the last decades of the twentieth century, the development and use of sustainable alternative jet fuels emerged as a key factor in reducing the decarbonization of the airspace (reducing aviation-related CO<sub>2</sub> emissions). "Refuel Aviation" initiative promotes the development and use of sustainable aviation fuels, of SAFs (sustainable aviation fuels) for the decarbonization of air traffic, highlighting the obligation of suppliers to increasingly sell sustainable fuels at all airports within the EU. Compared to the CO<sub>2</sub> emission produced during the flight of an airplane with conventional hydrocarbon fuel (kerosene), using alternative jet fuels, it is possible to reduce this emission by up to 80%, depending on the type of raw material used and the method of sustainable fuel production. The International Aviation Transport Association has updated the strategy developed in four stages, the main goal of which is that aircraft have 0% greenhouse gas emissions by 2050. The use of hydrogen as an alternative jet fuel with "zero CO<sub>2</sub> emissions" is considered very interesting, because it can be produced without the generation of CO<sub>2</sub>, and in addition, it is present in water in large quantities. On the other hand, for the application of H<sub>2</sub> required is a special airport and transport infrastructure. In addition, today there are a number of challenges and concerns related to the production and implementation of H<sub>2</sub> in the aerospace industry.*

*The paper gives a brief overview of the future of development and the obligation to use alternative jet fuels from the aspect of airspace decarbonization. In addition, progress and further predictions in aviation were highlighted.*

**Keywords:** *alternative jet fuels, decarbonization, future, development.*