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Biofuels and e-fuels

OVERVIEW AND CHALLENGES

In France, in 2019, the transport sector emitted 132 million metric tons of CO₂, i.e. **30% of the country's total emissions**. Renewable and low-carbon fuels are mature and available solutions and, alongside electrification and energy efficiency, represent **crucial decarbonization levers**. In order to ensure the continued reduction of emissions through to 2030, the latest version of the European Renewable Energies Directive, RED III, offers Member States the choice between:

- a target of a **14.5% reduction of carbon intensity** for the energy consumed in the transport sector;
- or a target of at least **29% renewable energy in final energy consumption** in the transport sector by 2030.

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The regulations also introduce a **5.5% incorporation target** for advanced biofuels and renewable fuels of non-biological origin (primarily low-carbon hydrogen and e-fuels).

Lastly, European legislation is particularly aimed at **increasing the use of renewable and low-carbon fuels in the aviation and maritime sectors**, while avoiding recourse to biomass that competes with food uses:

- the “ReFuelEU Aviation” initiative thus targets an increase in the incorporation of sustainable aviation fuels (SAF) from **2% in 2025 to 70% by 2050**. The European ReFuelEU Aviation initiative introduced a sub-target of 5% for the incorporation of electro-fuels by 2035.
- The “FuelEU Maritime“ regulations impose gradual greenhouse gas emission reduction targets in the maritime sector of **2% in 2025 up to 80% by 2050**.

In response to the growing international awareness of the sector's current environmental impact, and in tandem with these growth perspectives, the Member States of the International Civil Aviation Organization (ICAO) have also announced a **goal of net-zero carbon emissions by 2050**.

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In order to achieve these objectives, the use of sustainable alternative fuels is seen as **the principal lever for reducing emissions**, along with carbon offsetting schemes.

As well as addressing environmental requirements, the creation of an industrial sector for renewable fuels is a key lever for **reinforcing energy sovereignty and independence** by producing low-carbon liquid fuels from local resources on a national level.

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Contact



Jean-Philippe Héraud

- Program manager

jean-philippe.heraud@ifpen.fr



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