

Sustainable aviation fuels in the EU

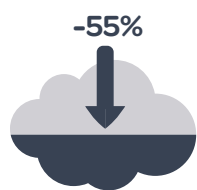
EU context

The aviation transport is one of the most carbon-intensive sectors and accounts for **14.4% of EU transport emissions**. To reduce these emissions and make the EU climate-neutral by 2050, the **Fit for 55 package** has suggested a set of proposals, such as the increase of greener aviation fuels. So far, many efforts have been carried out to reduce CO₂ emissions in the transport sector, including electric vehicles as a potential solution. However, replacing fossil kerosene, in terms of large passenger transport and long-haul flights, is still in the distant future. Thus, the air transport sector requires greater innovation and higher deployment of sustainable fuel alternatives.

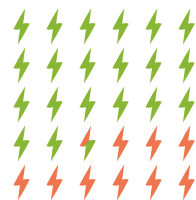
The Fit for 55 package aims to increase the use of sustainable aviation fuels by aircraft and targets to ensure relevant pricing of aviation emissions. In particular, the RefuelEU aviation regulation will oblige aviation fuel suppliers to ensure that a minimum of 2% of SAF (Sustainable Aviation Fuels) is available to EU airports in 2025, reaching 70% in 2050. Part of this SAF will be satisfied with green hydrogen and the production of advanced biofuels, which are more sustainable than crop-based biofuels and are produced by forestry waste and agricultural residues.



Facts



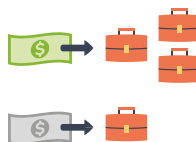
The European Commission has adopted a set of proposals to make the EU's climate and energy policies fit for reducing greenhouse gas emissions by at least 55% by 2030.



70% of jet fuels at EU airports will have to be green by 2050



Europe to be the first climate-neutral continent by 2050



Every dollar of investment in renewables creates three times more jobs than in the fossil fuel industry.

Resources

- [A European Green Deal \(europa.eu\)](https://european-council.europa.eu/media/en/press-areas/pages/press-release-2022-06-23-01)
- [Renewable energy directive \(europa.eu\)](https://eur-lex.europa.eu/eli/dir/2018/2001/oj)
- [IRENA – International Renewable Energy Agency](https://www.irena.org/)
- [EUR-Lex - 52022DC0547 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/eli/dir/2022/2001/oj)
- [Global Electricity Review 2022 | Ember \(ember-climate.org\)](https://www.ember-climate.org/)

Project Overview

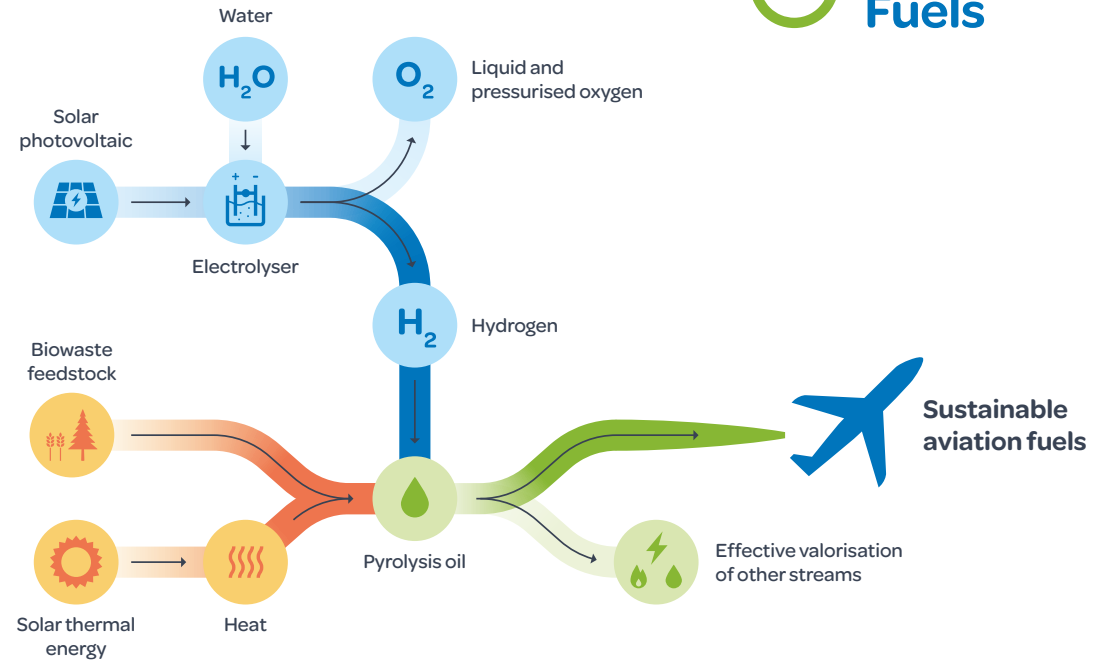


About

The Circular Fuels project aims to produce sustainable aviation fuels through advancements in renewable energy and technological innovation. By enhancing the speed of transfer from fossil fuels to renewable energy, Circular Fuels will address the environmental externalities associated with unsustainable aviation fuels. Circular Fuels will analyse the sustainability aspects of the technology, and it will give policy recommendations for successful implementation by introducing commercially viable and cost-effective solutions.

The Circular Fuels project is fostering positive impacts for stakeholders in the energy industry, biomass producers, solar and aviation companies, circular economists, EU Green New Deal policymakers, farmers and municipalities, and aviation passengers.

✕ in



Partners



Keywords

- SAF
- Solar energy
- Fuels
- Bio-petroleum
- Engineering
- Technology
- Aviation
- Biofuels
- Biomaterials
- Transportation
- Renewable energy
- Sustainability

CORDIS

Production of sustainable aviation fuels from waste biomass by coupling of fast pyrolysis with solar energy | Circular Fuels

Proposal ID: 101118239



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