

# BIOFUELS AND TRANSPORTATION

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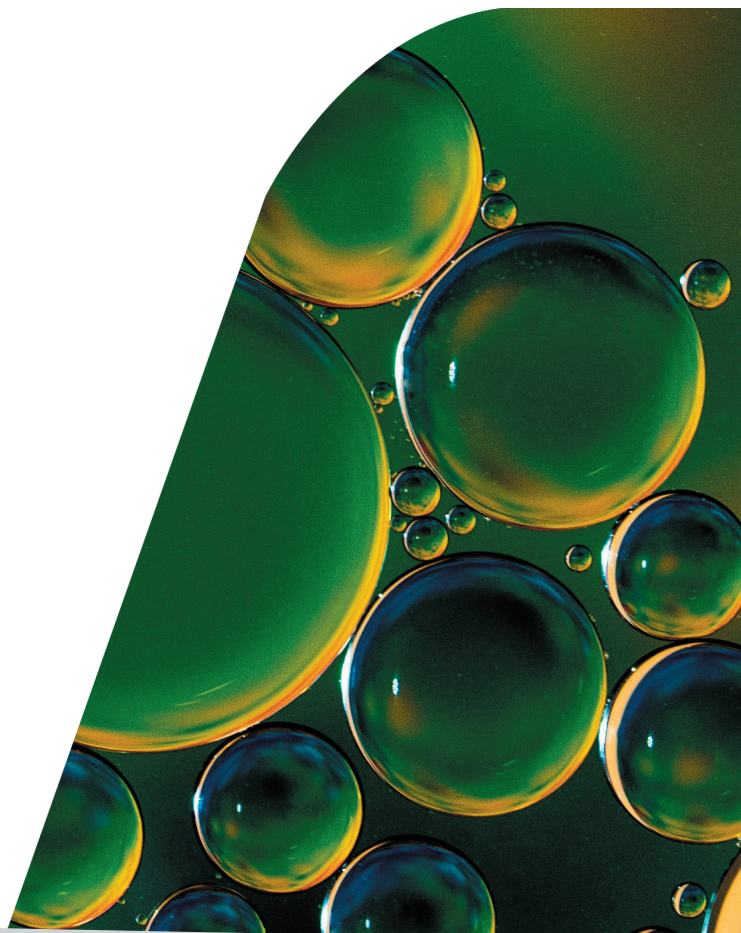
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## What are the biofuels?

Biofuels are a type of renewable fuel that comes from organic matter: first generation (1G) biofuels are made from agricultural crops and second generation (2G) biofuels are made from waste, such as used cooking oils or agricultural waste.



## What are the advantages of using 2G biofuels?



### They reduce emissions

Their organic origin makes it possible to reduce CO<sub>2</sub> emissions by up to 90% during their entire life cycle, compared to fossil fuels, which they can fully or partially replace in any means of transport.



### They're accelerating the energy transition

They're a sustainable and proven solution that can be implemented immediately, without the need for modifications to vehicle, ship and aircraft engines, distribution or logistics systems.



### They contribute to energy security and independence

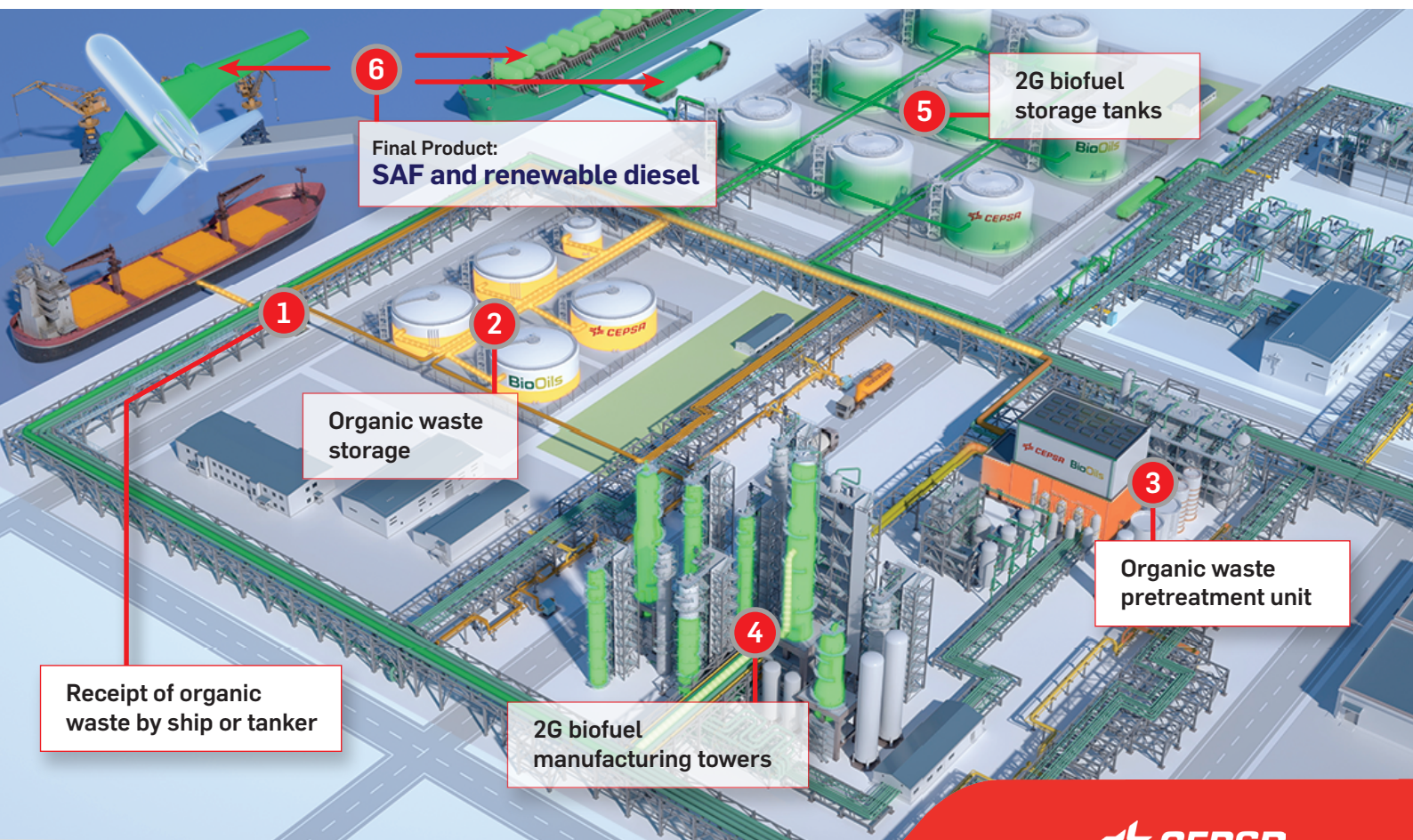
Biofuels are an alternative to oil and gas and help to diversify our energy sources, thereby contributing to increasing security of supply and energy independence in Spain and Europe.



### Boosting the circular economy

Thanks to the production of second-generation biofuels, waste is transformed into a sustainable energy solution, giving it a second life and preventing it from ending up in landfills.

## 2G biofuel production process



## Where can biofuels be used?



### Aviation

**Sustainable aviation fuel (SAF)** is a biofuel that can be used to replace traditional kerosene used in aircraft and reduce the carbon footprint of the aviation sector, which currently accounts for 3.5% of all pollutant gas emissions released into the atmosphere, according to a study published in the journal *Atmospheric Environment*.

The most common SAF is HEFA (Hydroprocessed Esters and Fatty Acids), which is obtained from vegetable oil or fat. Currently, the maximum percentage of SAF approved by technical standards and regulatory agencies is 50%.





## Land and sea transportation



**Renewable diesel** can replace all or part of the traditional diesel used for road and sea transport. Depending on the production process, there are two types of renewable diesel: HVO (Hydrotreated Vegetable Oils) or FAME (Fatty Acid Methyl Ester).

It's obtained by fermenting plant-derived sugars, such as sugar cane or sugar beet. It's used, mixed with gasoline in different percentages, as a component of biofuels for road transport.

**Bioautogas**, a gaseous biofuel, can be used to replace traditional autogas or LPG (Liquefied Petroleum Gas) in vehicles that use this type of fuel.

In Spain, biofuels have been used for years in road transport, in diesel and gasoline engines, mixed with conventional fuels. Currently, the legal obligation to incorporate biofuels in road transport is 10.5%.

# Biofuels: one of the levers of Cepsa's strategy, ***Positive Motion***

With the 2030 strategy, Positive Motion, we'll produce 2.5 million tons of biofuels annually (including 800,000 tons of biofuels sustainable for aviation, SAF), making us the leader in Spain and Portugal. An amount sustainable fuel aviation enough to fly over the planet 2000 times.

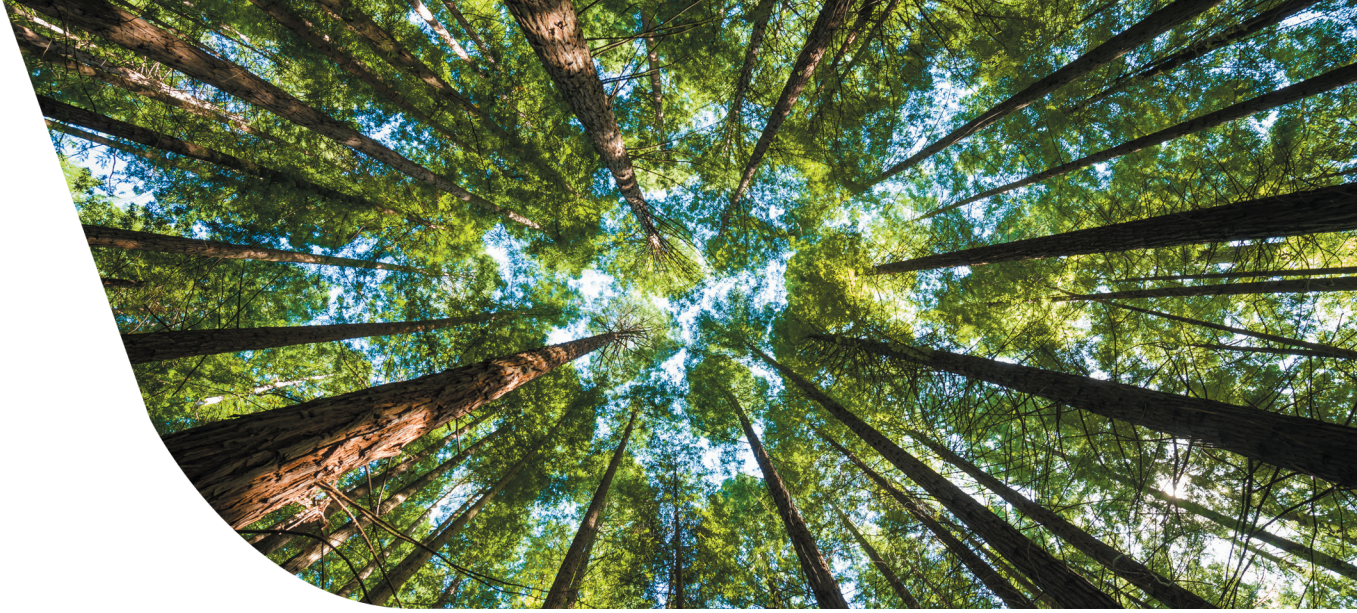
In 2022, we'll start producing second-generation (2G) biofuels at our La Rábida Energy Park in Palos de la Frontera (Huelva), an important milestone in our company's transformation towards a more sustainable energy model.

Our company has already been able to test 2G biofuels in both sea transport and aviation. In November 2022, more than 200 flights departed from Seville with

SAF produced by Cepsa.

In March 2023, we announced the construction in Huelva of the largest second-generation biofuels plant in southern Europe. This plant, which we'll build together with Bio-Oils, will produce 500,000 tons of SAF and renewable diesel per year, involve an investment of up to 1,000 million euros and create 1,600 jobs.





## Committed to the energy transition



The development and use of biofuels contributes to several of the 2030 Agenda's Sustainable Development Goals: SDG 7 (Affordable and clean energy), SDG 8 (Decent work and economic growth), SDG 12 (Responsible consumption and production), and SDG 13 (Climate action).

Its production is aligned with the set of measurements Fit for 55 of the European Commission, which includes a legislative initiative called 'RefuelEU Aviation', that intends to boost the supply and demand for biofuels aviation in the European Union, reaching a use of 2% in 2025, 5% in 2030 and 63% in 2050.



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