ePURE European renewable ethanol – key figures 2024

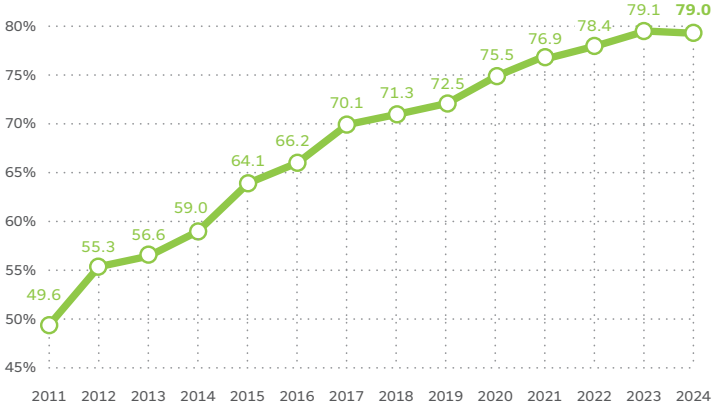
european renewable ethanol

In 2024, ePURE members and other European producers of renewable ethanol produced **5.41 million tonnes (6.8 billion litres) of ethanol** and **6.9 million tonnes of food and feed co-products, including high-protein animal feed** – in other words, **more food than fuel.** All of the crops used were **grown by European farmers.** 86.5% of the ethanol produced was for fuel use, with an average of **79% GHG savings compared to fossil fuels.**

EMISSIONS REDUCTION

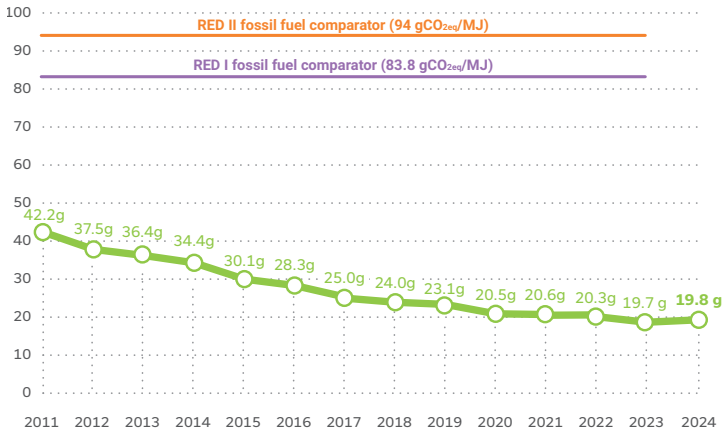
Average certified GHG emission savings in %

The average certified greenhouse gas emission savings of renewable ethanol against fossil fuels have increased from 49.6% in 2011 to 79% in 2024.



Source: Aggregated and audited data of ePURE members and other European producers for volumes certified under RED I or RED II methodology

Average certified GHG emissions from the production and use of fuel ethanol in gCO_2eq/MJ

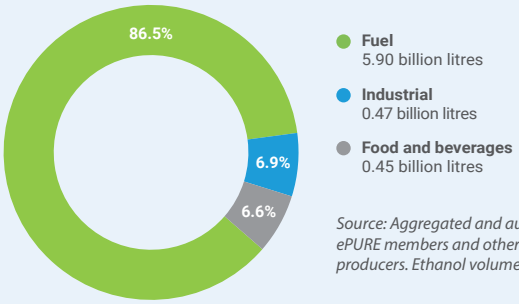


Source: Aggregated and audited data of ePURE members and other European producers for volumes certified under RED I or RED II methodology

OUTPUT AND END-USE

Renewable ethanol production by end-use

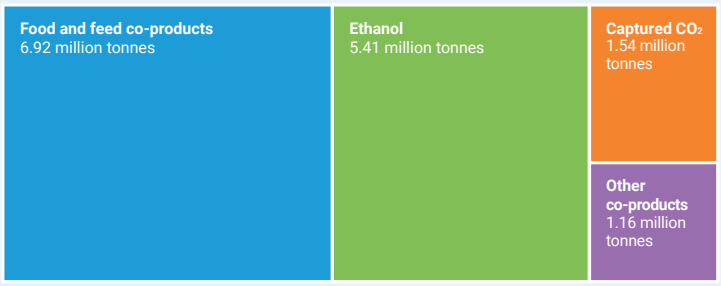
In 2024, ePURE members and other European producers of renewable ethanol produced 6.82 billion litres of ethanol, operating at 83% of their 8.18 billion litres of installed capacity. Fuel accounted for 86.5% of the use; other markets, such as industrial applications and beverages and food, represented 6.9% and 6.6% respectively.



Source: Aggregated and audited data of ePURE members and other European producers. Ethanol volumes in pure alcohol

Main output of European renewable ethanol plants

In 2024, ePURE members and other European producers of renewable ethanol produced more food and feed co-products than ethanol: of the 9.62 million tonnes of co-products produced by biorefineries, 6.92 million tonnes were food and feed co-products.

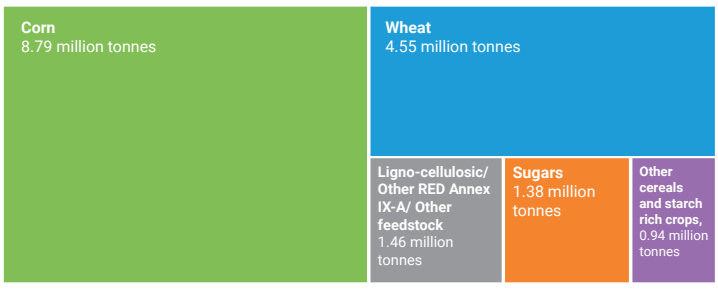


Source: Aggregated and audited data of ePURE members and other European producers. Ethanol – pure alcohol; Food and feed co-products – commercial product equivalent; Other co-products – commercial equivalent

PRODUCTION

Feedstock used to produce renewable ethanol

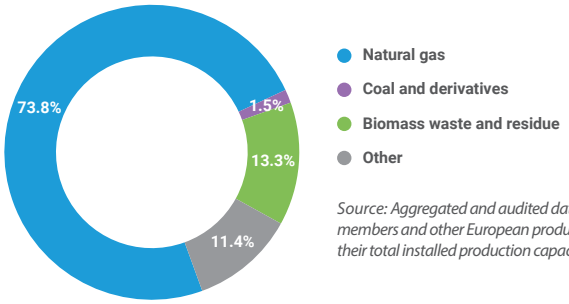
All the feedstock used to produce renewable ethanol by ePURE members and other European producers was grown in Europe. Of the 6.82 billion litres of ethanol produced in 2024, 49.6% was from corn, 23.4% from wheat, 11.9% from sugars, 5.1% from other cereals and starch-rich crops, and 10% from ligno-cellulosic, other RED Annex IX-A and other feedstocks.



Source: Aggregated and audited data of ePURE members and other European producers. Sugars – sugar equivalent; Ligno-cellulosic/Other RED Annex IX-A/Others – dry matter equivalent

Share of installed production capacity per type of process fuels

ePURE members and other European producers are improving production processes for renewable ethanol. In 2024, more than 50.3% of the installed production capacity of the European bioethanol industry was equipped with a CO_2 capture system, and more than 60% had integrated cogeneration of heat and power (CHP) to reduce their energy demand.



Source: Aggregated and audited data of ePURE members and other European producers; based on their total installed production capacity

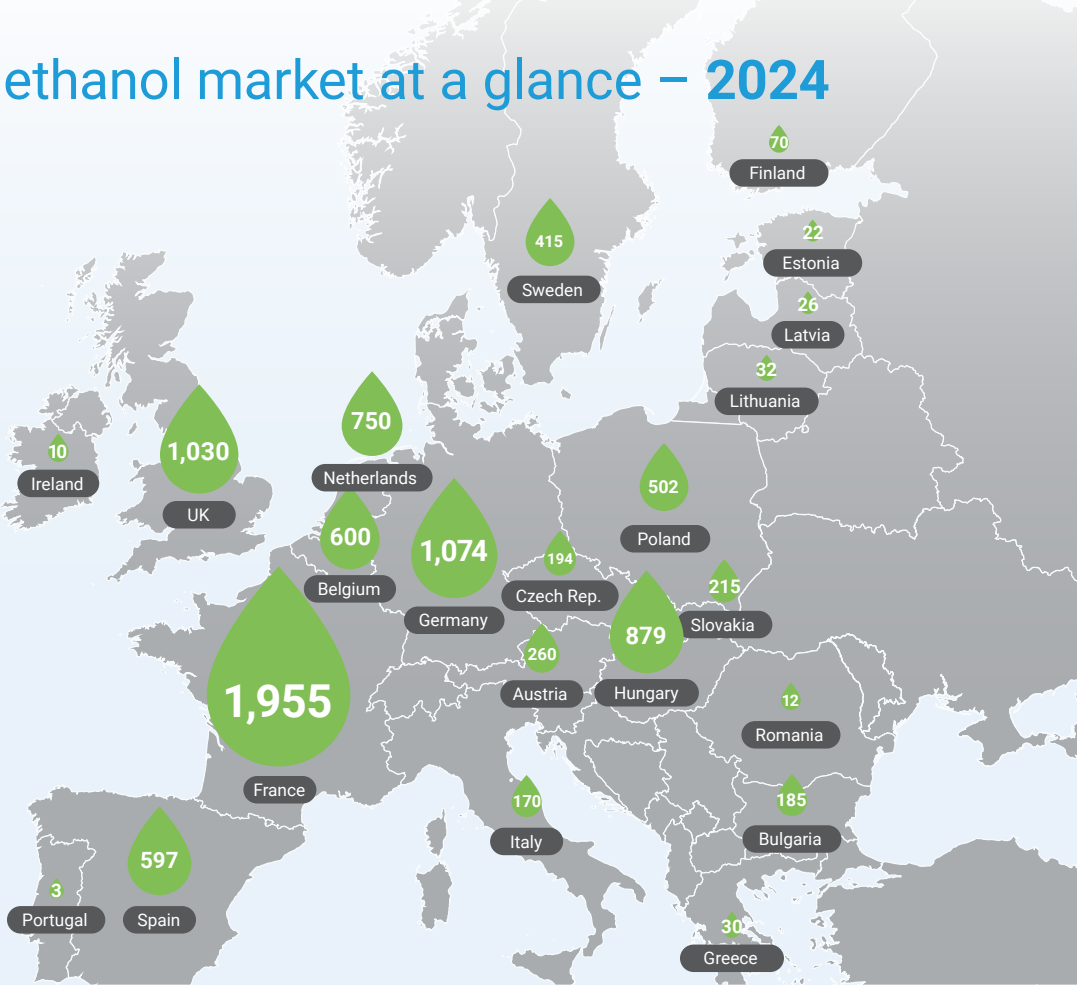
Renewable ethanol market at a glance – 2024

EU27 + UK renewable ethanol installed production capacity (Million litres)

TOTAL 9,031*

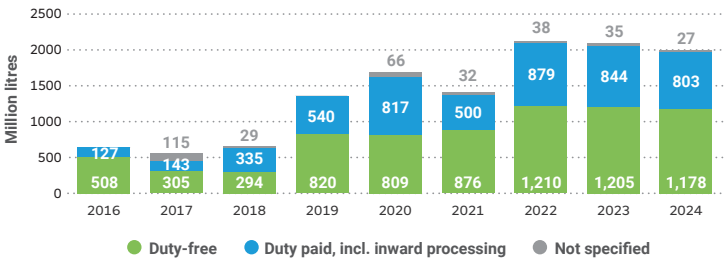
*Includes non-ePURE members.

Source: ePURE estimates for ethanol fermentation capacity based on ePURE members and F.O. Licht



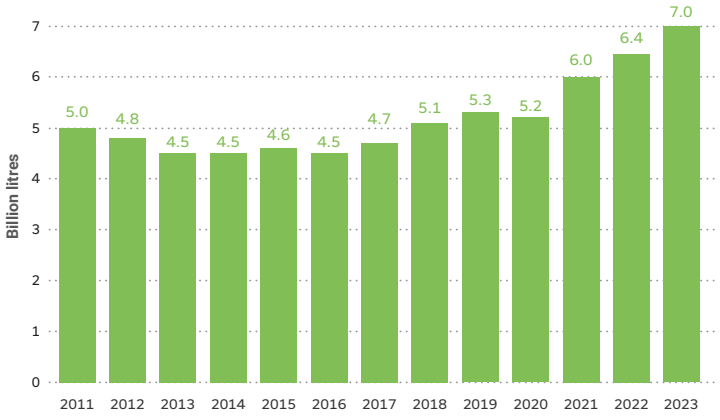
Imports of ethanol into the EU27

EU ethanol imports remained high at 2,008 million litres in 2024, registering only a mild decrease of 4% compared to 2023, noting that in 2022 imports registered an increase by 51% as compared to 2021. Imports from countries enjoying duty free access to the EU form majority of imports grew to 59%, these include notably imports from the UK representing 282 Ml and Pakistan representing 276 Ml in 2024. Imports subject to duties incl. inward processing, represented 40% of total imports, these include imports from the US which surged by 44% in 2024 as compared to 2023 reaching 566 Ml, marking the US top EU importer in 2024. Imports from Brazil decreased by 65% as compared to 2023 reaching 131 million litres in 2024.



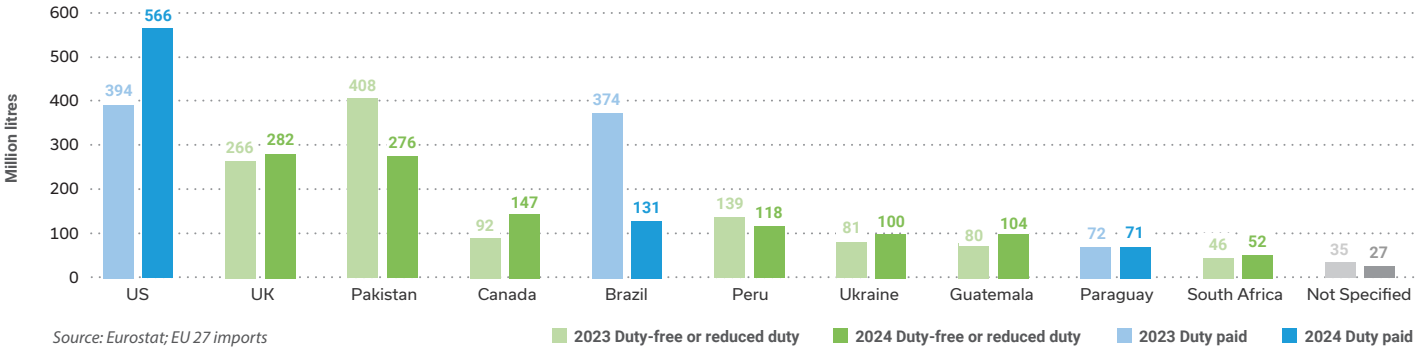
Source: Eurostat EU28 imports until 2019, EU27 imports without the UK as of 2020

EU27 biogasoline consumption



Source: Eurostat
Biogasoline: liquid biofuels suitable to be blended with or to replace motor gasoline from fossil origin e.g. ethanol, methanol and the share of ETBE and MTBE from biomass

Top 10 origins of EU ethanol imports



Source: Eurostat; EU 27 imports

ePURE european renewable ethanol

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