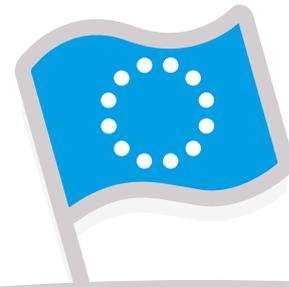


Ethanol: Fuelling Europe's future

A vision for how
renewable ethanol
can help drive
the EU Green Deal



The EU's transition to climate-neutrality will require every sustainable emissions-reduction tool we have.

Renewable ethanol – produced sustainably from crops and agricultural wastes and residues – is a decarbonisation solution that is already making a positive impact in the climate fight.

Its production opens new markets for Europe's farmers and boosts rural economies, and its use offers consumers a convenient way to reduce harmful emissions. But it has the potential to do even more in the crucial coming decades.



Why ethanol?

The EU's transition to climate-neutrality will require every sustainable emissions-reduction tool we have.

The EU's new "Green Deal" demands a greater role for sustainable, low-carbon liquid fuels such as renewable European ethanol to meet ambitious new decarbonisation and air quality goals. Moving the EU toward climate-neutrality will require solutions that deliver results now as well as in the future.

Renewable ethanol – produced from European agricultural crops, wastes and residues – **already plays an important role in reducing greenhouse gas emissions and other pollutants** from today's cars and light-duty vehicles, without the need for expensive new infrastructure. That's why a growing number of EU Member States are turning to E10 petrol blend to make an immediate decarbonisation impact.

But ethanol could do even more to help reduce emissions: with high-octane petrol, or higher ethanol blends such as E20, E85 and ED95. With the right policies in place, the EU could leverage its significant agricultural resources and bioeconomy to bring climate-neutrality closer.

European ethanol is...

1. ...more than just a fuel

- Innovative biorefineries process European agricultural feedstock (crops, wastes, residues) into **renewable fuel that reduces greenhouse gas emissions** from road transport; **high-protein, GMO-free animal feed** that reduces the need for imported soybean meal; and **captured CO₂** for use in beverage and food applications.
- These refineries are part of a **circular economy** that makes the most effective use of land and waste materials and reduces reliance on fossil fuel.

2. ...a European solution

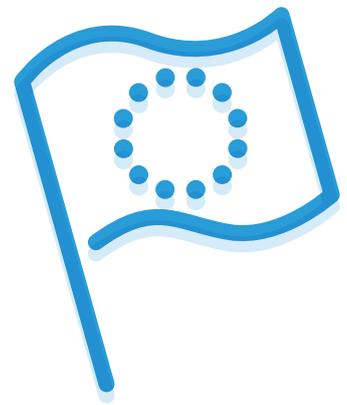
- Ethanol production is **an important source of income for Europe's farmers**, and it boosts rural economies.
- Promoting its production and use **offsets need for imports of crude oil and animal feed** and conforms to EU sustainability ideals.
- Renewable ethanol is a **vital part of Europe's growing bio-based economy**, reducing our dependence on fossil fuels.

3. ...today's best CO₂ abatement option... and tomorrow's too

- ePURE members' ethanol **reduces GHG emissions from today's vehicles** – more than 72% on average compared to fossil petrol. E10 works in nearly all petrol cars currently on the road.
- A wider uptake of E10 **requires no changes to existing transport infrastructure** and is a convenient, user-friendly way that consumers can make an immediate impact in the fight against climate change.
- But **ethanol can make an even bigger impact in the future**, as its greenhouse gas reduction ability keeps improving. With more countries adopting E10 ethanol blend as a standard petrol grade, and with some countries looking at even higher blends of ethanol, we can achieve even greater emissions-reduction results.
- Even as the market share of electric vehicles increases, **petrol cars and hybrids will remain predominant on Europe's roads for decades**. Low-carbon liquid fuels such as renewable ethanol are a proven, cost-effective way to decarbonise them.

The road to climate neutrality

To achieve its Green Deal goals, the EU can't afford to wait for new technologies to develop. Making progress in the race to decarbonise transport means taking advantage of **solutions that work in the short-, medium- and long-term.**



2020

EU Member States are struggling to meet their 2020 targets under the Renewable Energy Directive (RED) and the Fuel Quality Directive (FQD). As the year 2020 began, some EU countries adopted the E10 petrol standard, increasing the amount of renewable ethanol in petrol. Currently **13 countries use E10 and others could make the switch** in order to maximise their use of emissions-reducing biofuels.



2030

EU decarbonisation ambitions for the next decade have been set in the recast Renewable Energy Directive (RED II). But **the potential contribution of ethanol is hampered by a cap on crop-based biofuels.** While the law justifiably seeks to avoid promoting biofuels that cause deforestation, it should give countries more freedom to use sustainable solutions such as European ethanol – both first- and second-generation. **Tweaking the RED II to raise the cap** on crop-based biofuels will speed up the pace of road transport decarbonisation.



2050

International organisations have sounded the alarm: **meeting global climate change ambitions requires a massive uptake of bioenergy** in the coming decades. Even as new technologies develop over the long term, **road transport will still require liquid fuels** – not just petrol passenger cars and hybrids but heavy-duty trucks and buses will need to be decarbonised. Renewable ethanol is among the best options for reducing their GHG emissions.



From vision to reality: policy priorities

The European Green Deal sets ambitious goals for achieving climate neutrality in the EU by 2050 and requires a significant re-thinking of existing and planned legislation on energy, environment and transport.

To unleash the potential of European renewable ethanol, legislation should:

HIT THE TARGETS: Ensuring policy continuity in the short and long term is key to the Green Deal. This requires **making sure that the agreed minimum 2020 and 2030 targets are met, including the dedicated sub-target for advanced biofuels.** To provide investor certainty, this sub-target should not be undermined by future revisions.

RAISE THE BAR: The EU should **increase ambitions for transport fuels GHG savings and renewable energy use.** The requirement to decrease carbon-intensity set by the FQD should be raised to at least 16% by 2030. The RED should do more to empower Member States to increase the uptake of real renewable sources – ideally, by at least 20% in transport by 2030 – and **stop relying on artificial “multiple counting”** of some renewables that only perpetuates fossil-fuel dependence.

EMPOWER THE RED: The **crop cap set by the ILUC Directive and amended under RED II should be revised upwards** to give Member States more flexibility to use immediate and cost-effective tools to decarbonise the fuels of the cars Europeans are still buying today and will be driving for years to come. **European crops do not drive deforestation and only high-ILUC risk biofuels must be limited and phased out.**

FOSTER INNOVATION: The EU should **continue the progressive deployment of advanced biofuels** by building on existing legislation and industry – supported through a dedicated ramping-up sub-target leading to at least 3.5% by 2030 without multipliers, based on the current feedstock list. That would promote the investor confidence needed to fund innovative new renewable fuel production.

STRENGTHEN SUSTAINABILITY: All sustainable renewable low-carbon fuels should be able to contribute towards EU climate and renewable objectives under **stronger sustainability criteria, including European standards for agricultural production, GMO policy, waste prevention and management standards, and strict traceability requirements.** Consistent with its climate agenda, **the EU must require that feedstock for renewables eligible to count towards the targets originates in countries that are parties to the Paris agreement.**

BOOST BETTER FUELS: Deploying higher blends of ethanol will have immediate GHG reduction and air quality benefits. As a first step, **E10 should urgently be rolled out across the EU.** Beyond that, the EU should find ways to promote higher ethanol blends (i.e. E10+, E85, ED95) and **incentivise better fuels such as high-octane petrol with higher oxygen/ethanol content.** Member States should foster access to infrastructure for high ethanol blends such as E85 for compatible engines (dedicated flex-fuel and adapted vehicles), and ED95 for buses and trucks.

LEVEL THE PLAYING FIELD: The current CO₂ standards for vehicles only consider tailpipe emissions (Tank-To-Wheel). This restrictive approach distorts competition between powertrain technologies and fails to incentivise better fuels with higher renewable or low-carbon content. **The EU should consider an approach that accounts for the footprint of the energy powering vehicles (Well-to-Wheel),** distinguishing between fossil and biogenic CO₂, as well as the production and end-of-life emissions.

TAX FAIRLY: The current method of taxing energy works against EU environmental goals. **The EU needs an Energy Taxation Directive that focuses on carbon intensity instead of volume.** **CO₂ pricing of transport fuels should be separate from the existing EU ETS** to take into account the specificities of the transport sector. Consistent with IPCC guidelines, CO₂ pricing should not apply to biofuels and biomass.