

EU Renewable Ethanol Making 'Fit for 55' fit for purpose



The EU has set important new goals for emissions reduction in transport, but the legislative proposals in its 'Fit for 55' package do not always give enough of a role to a **proven decarbonisation solution**: renewable liquid fuels such as European ethanol.

Fully enabling sustainable biofuels in the drive to carbon-neutrality is just common sense. Even under a scenario in which electric vehicles make rapid gains in market share and the sale of internal combustion engines is phased out, the EU car fleet will consist predominantly of vehicles that run fully or partly on liquid fuel in 2030 and beyond.

For these petrol and hybrid cars, the EU has a ready-made, homegrown solution: **renewable ethanol is the most immediate, cost-effective, sustainable and socially inclusive way to reduce emissions.** Europe cannot afford to ignore this important part of the 'Fit for 55' equation.



Making 'Fit for 55' fit for purpose **Renewable ethanol should play a bigger role**

International organisations agree¹ that achieving carbon-neutrality by 2050 will require an increased uptake of sustainable biofuels. To that end, the EU should fully maximise the tools it has on hand to move beyond imported fossil fuel – starting with the Renewable Energy Directive but also including other key 'Fit for 55' legislative priorities.

As one of the best such tools, European renewable ethanol must be considered more than just a 'transition fuel' or 'stopgap solution' in the EU's planning. It is a proven solution that is already delivering results for decarbonisation but could do a lot more even in the years to come.



Ethanol is...



Immediate

Europe cannot afford to wait for new technologies to mature. Renewable ethanol reduces emissions from today's vehicles – about 77% on average, compared to fossil petrol² – and from the vehicles that Europeans keep buying and driving.³



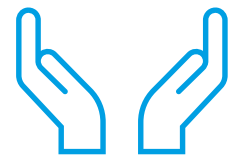
Cost-effective

The increased use of ethanol to decarbonise transport requires neither expensive new infrastructure nor for citizens to purchase a newer car; it can be scaled up easily in a way that also benefits the EU economy and food security.



Sustainable

The European Commission regularly confirms the sustainability of EU biofuel production, finding no correlation between food prices and biofuel demand and low environmental impact of feedstock production.⁴



Socially inclusive

By embracing all sustainable solutions to decarbonisation, the EU would empower more people at all income levels to contribute positively to carbon-neutrality and avoid a potential backlash from mandating new technologies before they are economically viable.

¹ Policymakers urged to support biofuels to meet transport's green goals, EURACTIV, 17 Nov. 2020

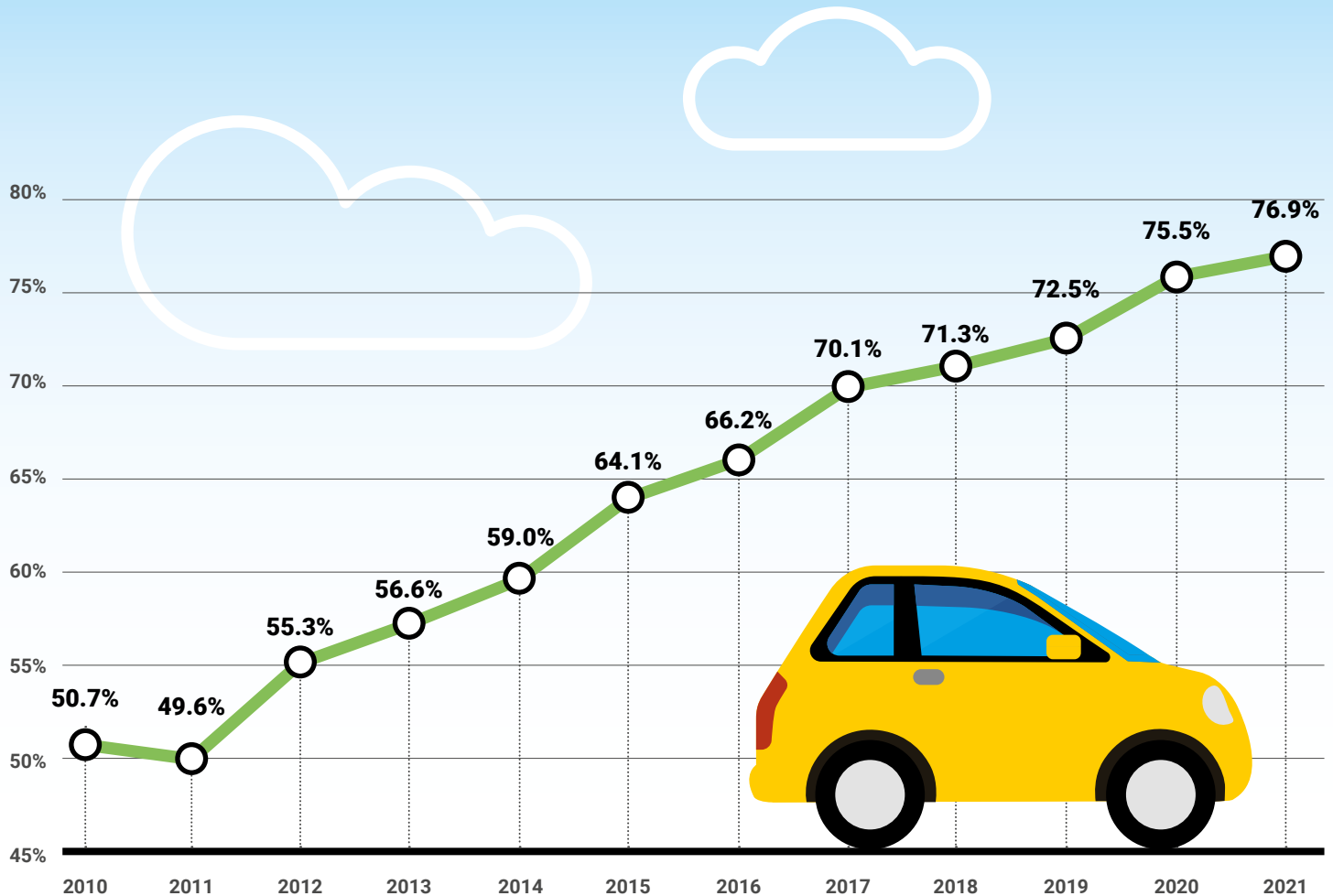
² Audited average GHG reduction from ethanol produced by ePURE members, 2020; <https://www.epure.org/press-release/eu-ethanol-sets-new-record-for-greenhouse-gas-reduction-increasing-its-importance-to-europes-green-deal-goals/>

³ Fuel types of new cars, ACEA, July 2021

⁴ Renewable Energy Progress Report, European Commission, October 2020

ePURE ethanol: Average certified GHG emission savings in %

Since 2011 the average certified greenhouse gas emission savings of renewable ethanol against fossil fuel have increased continuously, reaching 76.9% in 2021.



Source: Aggregated and audited data of ePURE members under RED I methodology, compared to a fossil fuel comparator of 83.8 CO_{2eq}

Reducing transport emissions: Europe can't afford to wait

The EU urgently needs to reduce emissions from transport. But **unless it speeds up transport decarbonisation by deploying effective existing solutions such as renewable ethanol, the EU will not be able to achieve its ambitious Fit for 55 targets.**

Crop-based biofuels are an immediate solution and the most cost-effective tool to reduce emissions of existing and future cars.

The main questions about the sustainability of biofuels were settled after RED II was adopted in 2018 by phasing out high ILUC-risk biofuels, namely palm-based biofuels.

It is now firmly established that deforestation and outdated 'food vs. fuel' arguments do not apply to EU renewable ethanol produced from European crops. Despite this, the European Commission keeps finding ways to hamstring the ability of Member States to further decarbonise transport at national level.

Instead of promoting a flexible approach which would make it easier, cheaper and more effective for Member States to decarbonise transport, the Commission pushes a single technology: electric cars, which are misleadingly considered as "zero emission vehicles" under a methodology that ignores all upstream emissions.

Now that sustainability issues have been settled, the EU should unleash the potential of truly sustainable crop-based biofuels and encourage the wider deployment of advanced biofuels. In fact, in a circular economy, a viable crop-based biofuels industry will contribute to the growth of advanced biofuels.

Leaving nobody behind in the fight against climate change

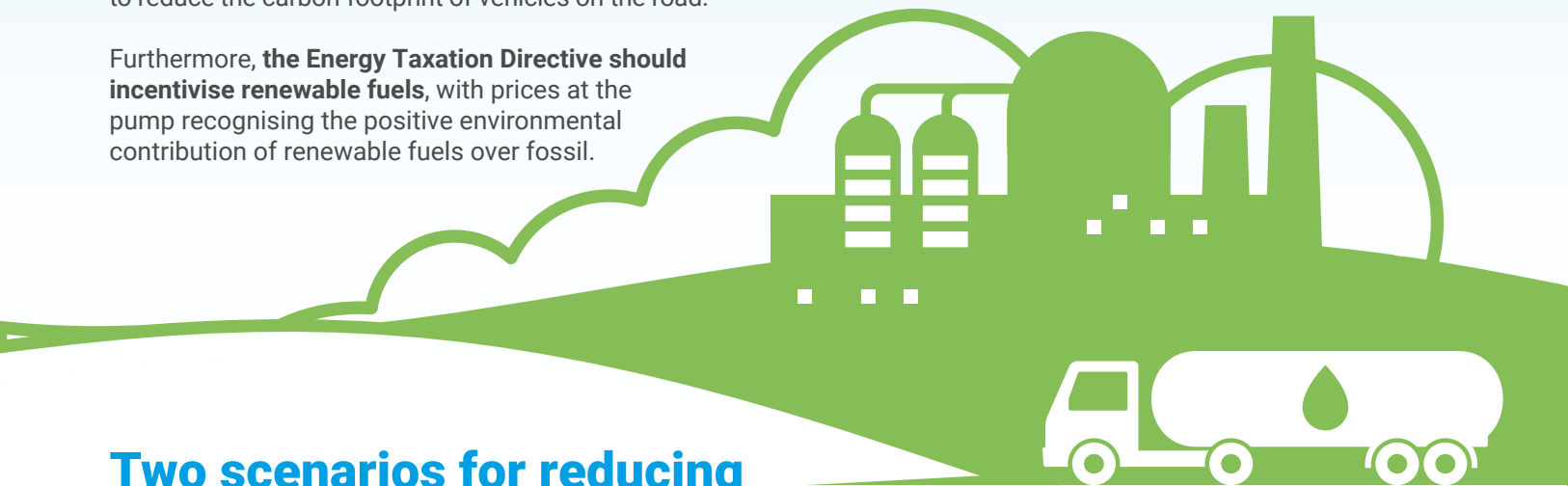
All Europeans should be able to actively participate in the drive to carbon-neutrality without seeing their purchasing power shrink. That means empowering them to take advantage of a variety of technological solutions that can deliver results today and tomorrow – not just one particular technology that shows promise for the future.

Furthermore, the EU should assess these varying technologies on a level-playing field. For example, the CO₂ standards for cars and vans Regulation should assess car emissions on the full life-cycle basis to ensure that all efficient alternatives be recognised and encouraged – including those using renewable fuels such as ethanol to reduce the carbon-footprint of vehicles on the road.

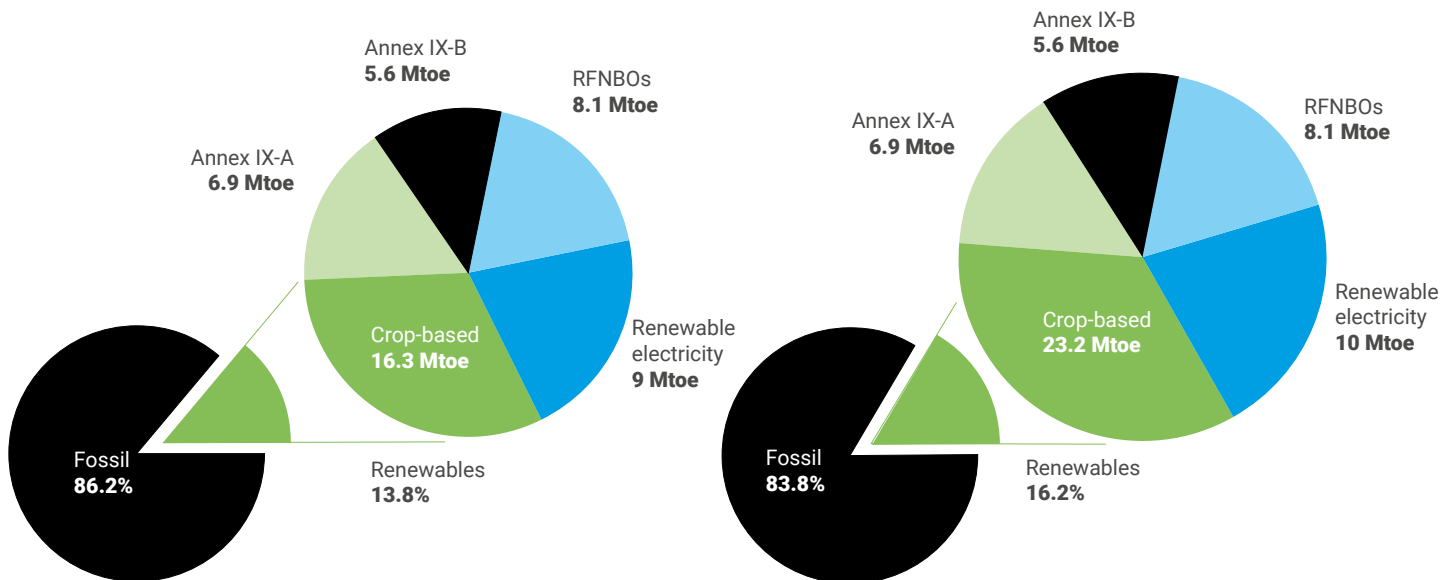
Furthermore, the Energy Taxation Directive should incentivise renewable fuels, with prices at the pump recognising the positive environmental contribution of renewable fuels over fossil.

Boosting renewable ethanol use generally would also maximise the contribution of EU agriculture and industry to achieving strategic climate and energy objectives by:

- **Ensuring a socially just decarbonisation of transport energy**, by maximising renewable ethanol GHG savings and improving urban air quality;
- **Bolstering energy security** by replacing imported fossil petrol with EU domestic ethanol;
- **Supporting agricultural production and rural development** by sustaining more than 50,000 EU jobs, most of which are in rural areas; diversifying farmer incomes; supporting the EU's food independence;
- **Reducing the EU's protein deficit** thanks to the production of GMO-free protein-rich feed co-products; and
- **Supporting innovation and the transition towards the circular bioeconomy** with biorefineries in Europe.



Two scenarios for reducing EU fossil fuel dependence



Renewables in transport in 2030 – Fit for 55 proposal

Renewables in transport in 2030 – ePURE proposal

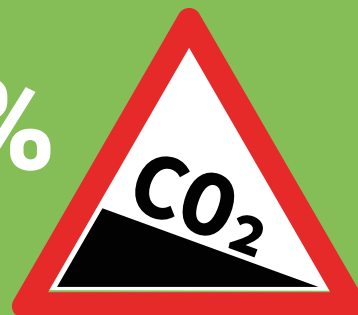
By the numbers

82 million



Equivalent number of cars taken off the road from CO₂ emissions savings if all petrol cars in the EU ran on E10 fuel⁵

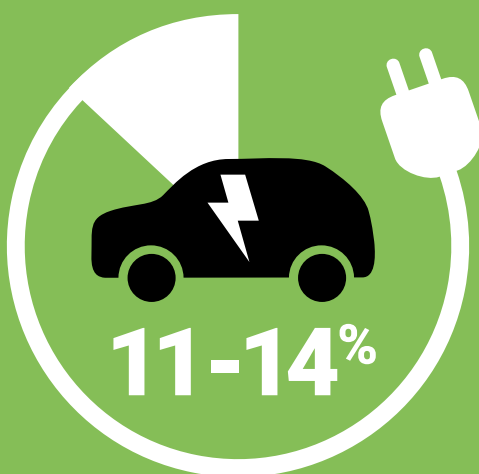
75%



Average GHG emissions savings from ethanol produced by ePURE members compared to fossil fuel⁶



Imported barrels of oil avoided if all petrol cars in EU ran on E10 fuel



Share of electric cars on EU roads in 2030, under even the most ambitious European Commission scenario – with the remaining 86-89% of cars running on internal combustion engines⁷



Level of support⁸ among EU public for policies that promote biofuels

Turn to the back page for policy recommendations designed to make 'Fit for 55' fit for purpose →

⁵ CO₂ calculator <https://co2-calculator.epure.org/>

⁶ Audited data from ePURE members, 2020, <https://www.epure.org/press-release/eu-ethanol-sets-new-record-for-greenhouse-gas-reduction-increasing-its-importance-to-europes-green-deal-goals/>

⁷ European Commission, Sustainable and Smart Mobility Strategy, December 2020, https://ec.europa.eu/transport/themes/mobilitystrategy_en

⁸ EuroPulse survey, January 2017, <https://epure.org/news-and-media/press-releases/poll-europeans-want-eu-policy-to-promote-crop-based-biofuels/>

Making 'Fit for 55' fit for purpose **Policy priorities**

A Renewable Energy Directive that promotes real renewables

The current RED II target for renewable energy in transport was insufficient to achieve the EU's decarbonisation objectives as set out in the European Green Deal and the 2030 Climate Law. By removing the use of multipliers that only hide the EU's continued reliance on fossil fuel, the new RED proposal is an improvement.

But more can be done. To fully unlock the potential of the RED, the EU should:

- **Set higher targets for renewable energy in transport:** Gradually increasing the obligation to reduce the GHG intensity of fuels from 6% in 2021, at least 11% in 2025 and at least 16% by 2030 would ensure Member States' continuous decarbonisation efforts.
- **Promote sustainable crop-based biofuels:** Each Member State should be allowed to set its own contribution of crop-based biofuels towards the GHG intensity reduction targets provided the combined share of crop-based biofuels at EU level does not exceed 7% of the final consumption of energy in the transport sector.
- **Continue the deployment of advanced:** The deployment of advanced biofuels should build on existing legislation and industry, to secure investor confidence. The proposed increased targets must be based on the current Annex IX-A feedstock list and come with associated penalties for non-compliance.
- **Ease the deployment of ethanol blends:** To harness the emissions reduction and air quality benefits of ethanol blends in petrol, E10 should become the standard grade and higher blends be incentivised (E20, E85, ED95).

A reality check on 'zero-emissions' vehicles

The Commission's decision to set a 100% CO₂ emissions-reduction target by 2035 is a de facto ban on sales of new cars with internal combustion engines. It is based on an unrealistic accounting of vehicle emissions: by focusing solely on tailpipe emissions, the proposal misleadingly labels battery electric and fuel cell vehicles as 'zero emission'. This distorts competition between powertrain technologies, contradicts the principle of technology neutrality and ignores the emissions-reduction contribution of renewable fuels.

Instead, the EU should:

- **Incentivise better fuels:** The EU should consider an approach that accounts for the nature of the energy powering vehicles (Well-to-Wheel emissions), distinguishes between fossil and biogenic CO₂ -> CO₂ and accounts for the production and end-of-life emissions of different vehicles.
- **Make better use of sustainable renewable fuels:** the EU should introduce incentives for the uptake of renewable fuels such as European ethanol to make a real emissions-reduction impact.

A taxation policy that works for the environment

With its lower energy content compared to petrol, renewable ethanol is the most heavily taxed fuel in the existing taxation regime. The proposal to move away from volume-based taxation should help sustainable biofuels to compete with fossil fuels. But by excluding 'sustainable food and feed crop biofuels' from the category of 'sustainable biofuels' and increasing their minimum taxation level over time to reach the same as fossil fuels, the Commission's proposal for a new ETD is inconsistent with RED II.

For a fairer, more sustainable Energy Taxation Directive, the EU should:

- **Be consistent:** Ensure there is no discrimination among sustainable biofuels as long as they meet RED II sustainability criteria.
- **Promote renewables over fossil:** Set minimum taxation rates of different renewable fuels that reflect their GHG savings potential compared to fossil fuel.