8 January 2026

POSITION PAPER

EBB position - How first-generation biodiesel contributes to EU climate objectives and strategic independence

Executive summary

First-generation (1G) biodiesel (FAME and HVO) currently serves critical sectors - such as transport, energy, and agriculture – and supports their competitiveness. Limiting its role would mean hampering progress in meeting EU climate objectives and weakening its strategic independence.

In order to defossilise the road transport sector, 1G biodiesel is one of the most cost-effective and readily available solutions. Today, the road transport is still largely dominated by vehicles running on fossil diesel, whereas 1G biodiesel delivers on average 65.2% greenhouse gas savings at EU level, compared with fossil diesel on a Well-to-Wheel basis (with a peak of 75% in Germany) and is produced almost entirely within the EU.

Biodiesel from crops also plays a crucial role in EU protein and food security by ensuring demand for EU-based oilseed production and reducing EU reliance on third countries. It also complements food production, rather than compete with it, by generating high-value co-products such as protein-rich animal feed and creating a *de facto* vegetable oil reserve that can be redirected to food uses in times of crisis.

This paper aims to provide a clear understanding of the main environmental and economic benefits of 1G biofuels, with a particular focus on their role in decarbonising the transport sector. As transport remains the only sector in the EU where greenhouse gas (GHG) emissions are still rising, it is essential that all sustainable energy sources — including 1G biodiesel — continue to be part of the EU's decarbonisation strategy.

The paper also offers policy recommendations to ensure that this important solution receives the recognition and support it deserves. **We call on the Commission to:**

- *Guarantee that future legislation creates new opportunities for 1G biofuels in achieving transport decarbonisation targets, by revisiting the current limitations applied to 1G biofuels and by harmonising the application of such limits across Member States to ensure a level playing field and avoid market fragmentation.*

- *Recognise the role 1G biodiesel has in providing protein supplies at EU level in the "EU protein strategy" and to clarify the process and timeline of adoption of this strategy.*

- *Recognise biofuels as one of the main components of EU bioeconomy and avoid any rigid prioritization of biomass uses.*

- *Recognise the decarbonisation potential of 1G biofuels in EU legislation, such as FuelEU Maritime and ReFuelEU Aviation Regulations, the ETD, and the Taxonomy Technical Screening Criteria to identify "Taxonomy-compliant" economic activities.*

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1. Introduction

Transport is the only EU sector where GHG emissions continue to increase[1] and *all* **sustainable energy sources** – including 1st generation biodiesel[2] – should continue to be included in the EU's approach to decarbonise it.

In particular, 1st generation biodiesel[3] continues to make a proven contribution to:

- The decarbonisation of the EU transport sector;
- The EU's strategic energy independence;
- The EU's strategic food and feed independence;
- The competitiveness of the EU's agricultural sector and rural economies.

2. Decarbonising EU transport sector and ensuring EU energy security

A few facts showing the current status of the EU transport sector and explaining the reason why first-generation biofuels should play a key role:

- EU transport remains responsible for **26% of total GHG emissions – up from 15% in 1990**[4] - and is the only sector where GHG emissions continue to increase as demand for fuels increases.

- Over **89% of the energy** used in the EU transport remains non-renewable.[5]

- The EU remains **import dependent** for fossil fuels, with its dependency imported crude oil and petroleum products reaching a record high of 97.7% in 2022.[6] Supply shocks and fluctuating prices driven by the global geopolitical environment make greater energy independence even more critical for the EU.

- **Diesel-type vehicles remain dominant** in EU transport[7] and will remain on our roads for decades to come.

[1] Eurostat: "The only economic activity with more emissions [than in 2013] was transportation and storage, with a 14% increase in 2023 compared with 2013.
[2] Alongside other sustainable energy sources including waste-based biodiesel, other biofuels and biogases, eFuels, hydrogen or electrification.
[3] Biofuels commonly known as "1st generation" are officially defined as "food and feed crop biofuels" in art. 2(40) of the Renewable Energy Directive
[4] Source : Eurostat - Shedding light on energy in Europe – 2025 edition
[5] Source: Eurostat - Share of renewables in transport rose in 2023
[6] Source: Oil import dependency at its highest in 2022 - News articles - Eurostat
[7] Source : ACEA – New commercial vehicle registrations – April 2025: In Q1 2025, the following percentage of new sales were diesel engines: 93.4% for trucks, 82.5% for vans, 65.9% for buses.

- Almost 100% of the 1G biofuels[8] used in the EU are **produced in the EU**. They constitute one of the cheapest solutions we have to achieve EU climate targets in the transport sector.

- The decarbonisation performance of 1st generation biodiesel continues to bring significant GHG savings and continues to improve. A recent assessment made by FEDIOL estimates that, on average, FEDIOL members' biodiesel reached 65.2% greenhouse gas emissions savings (on a Well-to-Wheel basis) compared to fossil fuels[9]. In a previous version (2016) of the same report the same estimation was of about 60%. In some EU countries, notably Germany, the GHG performance of 1G biodiesel – especially rapeseed-based – exceeds the EU average. Over 2021-2023, rapeseed biodiesel achieved more than 75% GHG savings, as shown by the German Federal Office for Agriculture and Food[10] and Annex II of this paper.

First-generation biodiesel should continue to be included in the EU's approach to decarbonise the transport sector and achieve strategic energy independence.

- In order for the EU to reach its 2030 and 2050 climate targets for the transport sector and achieve greater strategic energy independence, *all* sustainable[11] energy sources – including 1st generation biodiesel – should continue to be included in the EU's approach to decarbonise the sector.

- Considering that most of biofuels used in the EU are also produced in the EU, keeping a role for 1G biofuels in the EU decarbonisation framework would also have the effect of improving the EU's strategic energy independence.

[8] In particular, in 2023 and 2024, around 97% of the 1G biodiesel used in the EU had also been produced in the EU (our calculation based on the 2024 USDA Biofuels report)

[9] The sample of FEDIOL members used to calculate the average GHG emissions reduction compared to the fossil diesel equivalent represents 58% of EU-27 biodiesel production (excluding HVO). The average 2024 GHG emission savings for FEDIOL members was 65.2% relative to the fossil fuel comparator of 94g CO_2 Eq/MJ, which is equivalent to reducing GHG emissions in EU transport by 12 million tons of CO_2 per year due to replacing fossil diesel.

[10] Source: Bundesanstalt für Landwirtschaft und Ernährung – Evaluations und Erfahrungsbericht für das Jahr 2023, p.67

[11] Compliant with the sustainability criteria and GHG savings criteria in the Renewable Energy Directive

3. Contribution to EU food security

A few facts about 1G biodiesel's contribution to food and feed independence:

- The EU **only produces 27% of the oilseed meals it needs** to feed its livestock sector[12] and must import the rest. The remaining deficit is mainly covered by the soymeal imports corresponding to nearly 17 million hectares of agricultural land in third countries[13] used for EU needs, but without similar environmental standards.

- The European Commission (DG AGRI) has recognised biofuel production for its role in **increasing the EU's protein meal self-sufficiency**, noting even an opportunity to expand its contribution. [14]

- The supply of 13.5 million tons of rapeseed meal in the EU[15] **directly depends on biodiesel production** as this industry creates most of demand for the rapeseed oil. Thus, the availability of EU-origin rapeseed meal has tripled in the last 20 years, in conjunction with domestic biodiesel production.

- In fact, the European Commission has recently addressed[16] **two of the main arguments often used against EU-produced 1st generation biofuels**: 1) pressure on land; and 2) impact on food and feed markets, stating that the *"total amount of cropland dedicated to biofuel production in the EU was [only] 3%"*, and that *"in recent years, no correlation has been observed between food prices and biofuel demand*".

- EU policy supportive of 1st generation biodiesel creates a *de facto* **vegetable oil reserve** in the EU, by granting the oilseeds processing sector the flexibility to respond to and mitigate any potential food crises. This was demonstrated during the vegetable oil market disruption[17] following Russia's invasion of Ukraine. Market operators diverted vegetable oils originally destined for 1st generation biodiesel towards food uses instead, stabilising prices. Additionally, vegetable oil was among the first products that returned to their pre-war price levels after this market disruption. In other words, 1G biofuels maintained the availability of crops *beyond* what was needed to meet the demand for food, which was then redirected to the food sector when a food crisis occurred. Without 1st generation biofuels, total crop production would have been lower overall.

[12] Source : Study on feeding strategies to diversify protein sources used in different livestock production systems in the EU (in particular page 95)
[13] Source : European Parliament resolution of 17 April 2018 on a European strategy for the promotion of protein crops – encouraging the production of protein and leguminous plants in the European agriculture sector (in particular point 29)
[14] Source : Study on feeding strategies to diversify protein sources used in different livestock production systems in the EU (in particular page 95)
[15] Source : DG Agriculture and Rural Development, Analysis and Outlook Unit, "EU Agricultural Outlook 2023-2025", ISBN 978-92-68-08934-7
[16] 2020 Renewable Energy Progress Report.
[17] Retail supply issues that occurred in the EU as a result of the war in Ukraine were not linked to actual shortages but rather to over-stocking by consumers.

Failing to properly recognise the role of 1G biofuels will constitute a lost opportunity to enhance industrial competitiveness and boost EU circular economy, and will lead to an increased dependency on external countries for food and feed.

- A widespread misconception about first-generation biodiesel is that it creates competition between food, feed, and fuel production. In reality, it is not a zero-sum game.

- Instead, the system is complementary: processing agricultural commodities for biodiesel also generates high-value, non-competing co-products — such as protein-rich animal feed — that are essential to the EU's agri-food chain. The absence of EU policy supporting 1st generation biodiesel will exacerbate an expected decline in EU production of protein meals.

4. Supporting the competitiveness of the EU agricultural sector

A few facts about the role 1G biodiesel plays in the life of farmers and how these fuels contribute to the resilience of the agricultural sector at large.

- Rapeseed is the EU's primary feedstock for 1st generation biodiesel, and in fact the most-used feedstock for EU biodiesel production altogether (34% of EU production[18]). It is not only the **most productive oilseed** in terms of vegetable oil yield per hectare (over 1.5 tonnes/ha vs. 1.25 tonnes/ha for sunflower) but also a valuable source of protein-rich meal for livestock feed.

- Agronomically, rapeseed enhances soil structure, supports effective crop rotation — particularly with cereals — and reduces the need for nitrogen fertilisation in subsequent crops, thereby lowering GHG emissions from agriculture. Importantly, improvements in rapeseed production have largely come from **increased efficiency rather than land expansion**, and its use for food purposes has remained stable for over two decades.

- First generation biodiesel also enables the development of biorefineries, which sustainably convert agricultural raw materials into a wide range of co-products across multiple EU industries — including food, feed, chemicals, cosmetics, and energy. For example, glycerol, an essential ingredient in the food and cosmetics sectors, is a co-product of 1st generation biodiesel production. Undermining 1st generation biodiesel production would risk shifting back to fossil-based glycerol, **reversing gains in sustainability and security of supply.**

[18] EBB Statistical Report 2024-2025, page 13

First generation biodiesel plays a vital role in maintaining the competitiveness and resilience of the EU's agricultural sector, delivering tangible benefits to farmers, rural economies, and the wider bioeconomy.

- A reduction in EU demand for oilseeds due to a weakened 1st generation biodiesel market would have direct negative consequences for EU farmers, leading to a decrease in cultivated acreage, undermining crop diversity and the economic viability of rural areas.

- Policies that restrict 1G biofuels risk enforcing an overly rigid and artificial hierarchy of biomass uses, dictated by regulation rather than market dynamics. Instead, EU policymaking should embrace the strong interdependence of food, feed, and fuel systems. This holistic view acknowledges the full value of sustainable 1G biofuels and ensures that farmers retain the flexibility to respond to market needs, maximise the value of their crops, and secure fair revenues.

5. Policy recommendations

Despite the role 1st generation biofuels play in addressing the EU's climate objectives, supporting strategic energy independence, food security and competitiveness of the EU's agricultural sector, it is being discriminated against in EU regulations. We urge the Commission to correct this during its current term.

In particular, we believe that future legislations should create new opportunities for 1G biofuels in achieving transport decarbonisation targets. For this reason, we call on the European Commission to take action across the following priority areas:

- **Future legislation on renewable energy should create new opportunities for 1G biofuels in achieving transport decarbonisation targets**
  - Revisiting the current limitations applied to 1G biofuels, with a view to increasing their contribution where sustainability criteria are met.
  - In particular, promoting a harmonised EU approach to crop-based biofuels that reflects the diverse agricultural capacities of Member States, thus enabling a balanced and flexible contribution to transport decarbonisation across the EU. To achieve this, the **crop-based biofuels cap[19] of at least 7% should be established at EU level.**

- **Align energy policy with the Bioeconomy and Protein Strategies** to create a coherent and robust framework for the sustainable use of agricultural biomass, supporting circularity and competitiveness in the EU. In particular, all regulatory follow-ups to the revised Bioeconomy Strategy should recognise the strong interdependence between different biomass uses and avoid any rigid prioritisation

[19] On the contribution of such biofuels to the Renewable Energy Directive targets.

of such uses, while the future Protein Strategy (to be adopted as soon as possible) should explicitly highlight the benefits of 1st generation biofuels in increasing EU independence in protein meal production.

- **Resolving legislation conflicts**. The Commission should solve the following regulatory inconsistencies to recognise the further decarbonisation potential of first-generation biofuels:
    - FuelEU Maritime and ReFuelEU Aviation Regulations**: 1st generation biofuels should be counted towards the respective targets.**
    - Taxonomy Technical Screening Criteria to identify "Taxonomy-compliant" economic activities: **Production of sustainable 1G biofuels should be considered compliant.**
    - Energy Taxation Directive*:* **1st generation biofuels should not face the same (high) minimum taxation rates that are[20] applied to fossil fuels.**

We remain at your disposal, should you have any questions on the points raised in this paper.

About EBB:

The European Biodiesel Board (EBB) is a non-profit organisation established in January 1997. Today, the EBB gathers 34 members across 21 Member-States, which represents around 75% of the European output. Biodiesel is the main European solution to reduce emissions from transport and dependence on imported oil. EBB aims to promote the use of biodiesel (FAME and HVO) and bio-based aviation fuel (HEFA) in the European Union and is committed to fulfil international standards for sustainability in GHG emissions and sustainable feedstock. The EBB is constantly working towards the development of improved and greener technologies.

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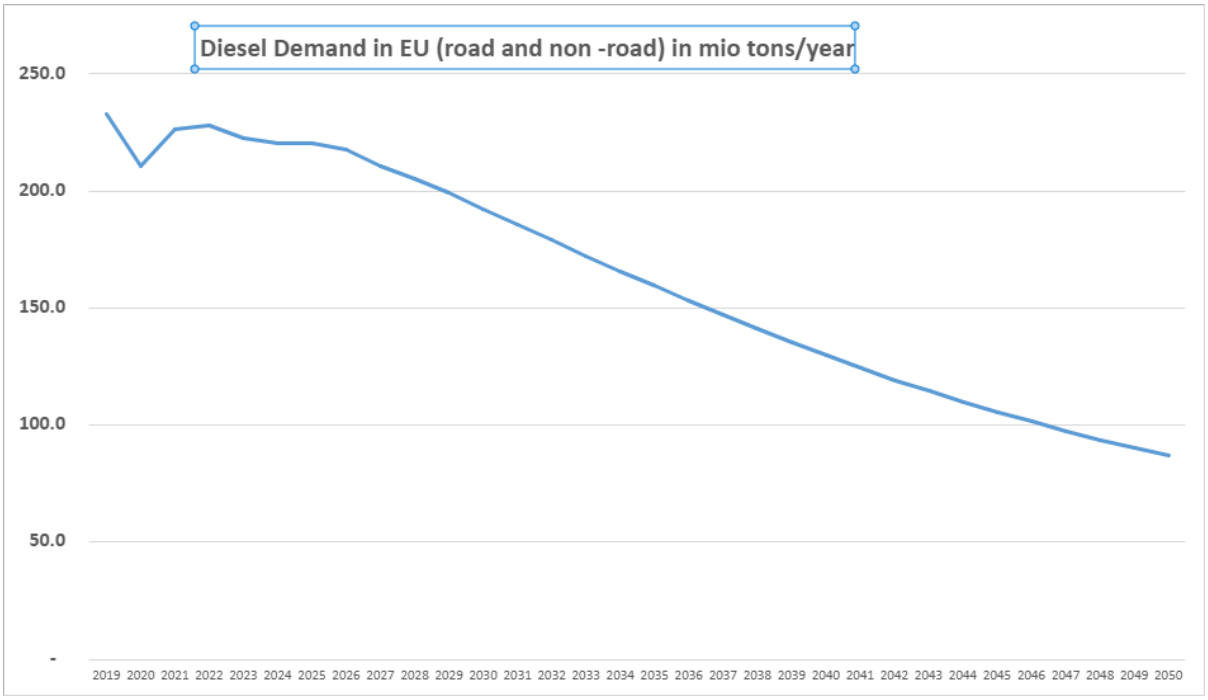
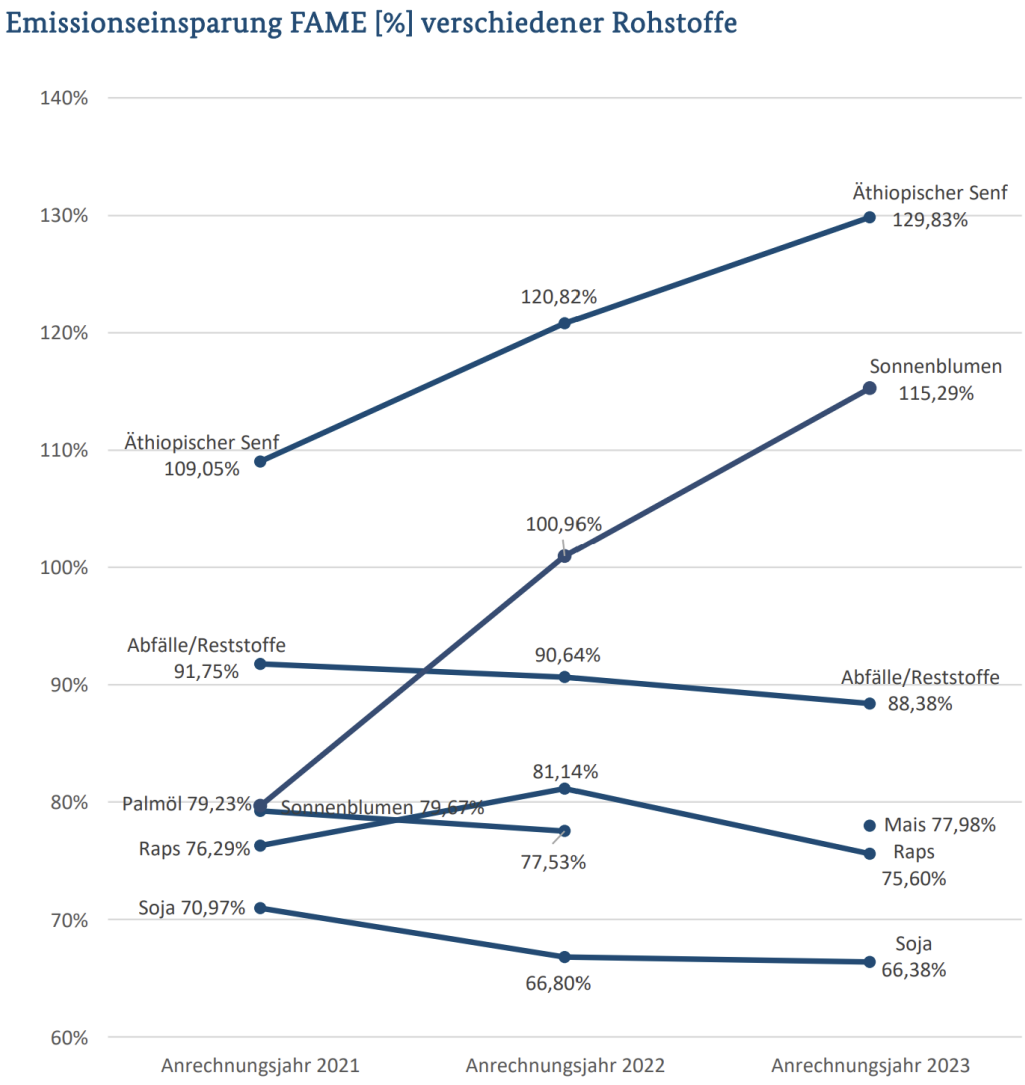
[20] To be noted: the text is still being negotiated.

Annex I – Diesel demand in the EU



Source: Eurostat until 2024 and Platts 2025-2050

Annex II – Average GHG emission savings of biodiesel (FAME) produced in Germany



Source: Federal Office for Agriculture and Food, page 67