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Report Highlights:

This report provides an overview of the biofuel use mandates in EU-27 member states, including national implementation of the revised RED II in some Member States. It supplements the EU Biofuels Annual Report for 2025. Mandates from 2024 to 2025 did not change in Belgium, Croatia, Estonia, France, Greece, Romania and Sweden.

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Abbreviations and Definitions Used in this Report

% Cal =	percent energy content
% Vol =	percent volume
% Biodiesel =	minimum percentage of biodiesel in total diesel use
% Bioethanol =	minimum percentage of bioethanol in total gasoline use
% Overall =	minimum percentage of biofuels in total fuel use
% GHG Emission Reduction =	Percentage of GHG reductions of total fuel use (fossil and renewable) compared to the hypothetical GHG emissions that would have occurred with the exclusive use of fossil fuels

All of the above refer to fuel use in the transport sector.

Biodiesel =	Fatty acid methyl ester produced from agricultural or waste feedstock (vegetable oils, animal fat, recycled cooking oils) used as transport fuel to substitute for petroleum diesel
Bioethanol =	Ethanol produced from agricultural feedstock used as transport fuel
Cat. 1, 2, and 3 =	Risk categories for animal-by-products as defined in EU Regulation (EC) 1069/2009, with cat. 1 having the highest and cat. 3 the lowest risk.
Double counting =	Certain biofuels are counted twice against mandates. This was introduced to support the use of certain biofuels and/or feedstocks. As a result of double counting, less physical volumes of a certain biofuel are needed to fill a mandate, which makes the respective biofuel more attractive than a comparable single-counting biofuel. Definition and eligible feedstocks vary by member state (MS).
EC =	European Community or European Commission - depending on the context
ETBE =	Ethyl tert-butyl ether, an oxygenate gasoline additive containing 47% vol ethanol
EU =	European Union
FQD =	EU Fuel Quality Directive 98/70/EC amended by directives 2009/30/EC and (EU) 2015/1513
GHG =	Greenhouse gas
GJ =	Gigajoule = 1,000,000,000 Joule or 1 million KJ
ILUC =	Indirect land use change
Ktoe =	1000 MT of oil equivalent = 41,868 GJ = 11.63 GWh
MJ =	Megajoule
MS =	Member State(s) of the EU
MWh =	Mega Watt hours = 1,000 Kilo Watt hours (KWh)
N/A =	Not applicable
PFAD =	Palm fatty acid distillate
POME =	Palm oil mill effluent
RED =	EU Renewable Energy Directive 2009/28/EC
RED II =	EU Renewable Energy Directive 2018/2001/EC
RES =	Renewable energy sources
RES-T =	Renewable energy share in transport
RFNBO =	Renewable fuels of non-biological origin
SAF =	Sustainable aviation fuel
SBE =	Spent bleached earth

Tall oil =	A by-product of the wood manufacturing industry; qualifies as advanced biofuels feedstock
Tall-oil pitch =	The residue from the distillation of tall oil; qualifies as advanced biofuels feedstock
TME =	Tallow Methyl Ester, biodiesel made from animal fat
Toe =	Tons of oil equivalent = 41,868 MJ = 11.63 MWh
UCO =	Used cooking oil/ recycled vegetable oil
UCOME =	UCO based methyl ester biodiesel
UER =	Upstream emission reduction

Introduction

The European Union (EU) adopted the second iteration of the Renewable Energy Directive (REDII) for the period 2021-2030 in 2018. Most of the provisions of this Directive 2018/2001 entered into force on January 1, 2021. The Directive was amended in October 2023 by Directive 2023/2413 to align REDII with the EU's Green Deal ambitions of a reduction of greenhouse gas emissions to 55 percent by 2030 (compared to 1990) and carbon neutrality by 2050. The revised REDII entered into force on November 20, 2023, with an 18-month period to transpose most of the Directive's provisions into national law in the Member States. So far, most Member States are in the process of transposing the revised RED II into national law.

Many member states have adopted minimum biofuel use mandates in order to achieve the goals of RED and RED II. This report provides an overview of the current and future mandates from the various member states. For information on mandates referring to years prior to 2022 please check our report from 2022[1]. Note that Cyprus, Luxemburg, and Malta are not included in this report. The tables represent the status quo as of June 2025. Changes, especially pertaining to the revised RED II, that have not officially been adopted into national law by Member States yet are mentioned in the text.

EU Renewable Energy Targets

The revised RED II sets out a target for overall renewable energy share of at least 42.5 percent binding at the EU level by 2030. For transport, Member States can choose between a target of reducing greenhouse gas (GHG) intensity by 14.5 percent up to 2030 or ensuring a share of at least 29 percent of renewables in final energy consumption by 2030. The Directive also sets out a binding target on non-crop based biofuels of one percent in 2025 and 5.5 percent in 2030, of which a share of at least one percentage point is from renewable fuels of non-biological origin in 2030. The EU capped crop-based biofuels at the level consumed in each Member State in 2020, with an additional one percent allowed over present consumption up to an overall maximum cap of seven percent. Member States can also set a lower limit for conventional biofuels than prescribed in RED II. For advanced biofuels, RED II introduces two different sets of targets for feedstock listed in Part A of Annex IX and feedstock listed in Part B. Feedstock listed in Part A must be supplied at a minimum one percent in 2025 and 5.5 percent in 2030, of which a share of at least one percent is from renewable fuels of non-biological origin (RFNBO) in 2030. Biofuels produced from feedstock listed in Part B will be capped at 1.7 percent in 2030 except in Cyprus and Malta. Advanced biofuels can be double counted.

[1] Biofuel Mandates in the EU by Member State - 2022_Berlin_European Union_E42022-0044

Advanced Biofuel Sources, Part A and Part B of Annex IX	
Part A	**Part B**
• Algae if cultivated on land in ponds or photobioreactors • Biomass fraction of mixed municipal waste • Biowaste from private households subject to separate collection • Biomass fraction of industrial waste not fit for use in the food or feed chain • Straw • Animal manure and sewage sludge • Palm oil mill effluent and empty palm fruit bunches • Crude glycerin • Bagasse • Grape marcs and wine lees • Nut shells • Husks • Cobs cleaned of kernels of corn • Biomass fraction of wastes and residues from forestry and forest-based industries • Other non-food cellulosic material • Other ligno-cellulosic material except saw logs and veneer logs • Fusel oils from alcoholic distillation • Raw methanol from kraft pulping stemming from the production of wood pulp • Intermediate crops, such as catch crops and cover crops that are grown in areas where due to a short vegetation period the production of food and feed crops is limited to one harvest and provided their use does not trigger demand for additional land, and provided the soil organic matter content is maintained, where used for the production of biofuel for the aviation sector • Crops grown on severely degraded land, except food and feed crops, where used for the production of biofuel for the aviation sector • Cyanobacteria	• Used cooking oil (UCO) • Some categories of animal fats • Damaged crops that are not fit for use in the food or feed chain, excluding substances that have been intentionally modified or contaminated in order to meet this definition • Municipal wastewater and derivatives other than sewage sludge • Crops grown on severely degraded land excluding food and feed crops and feedstocks listed in Part A of this Annex, where not used for the production of biofuel for the aviation sector • Intermediate crops, such as catch crops and cover crops, and excluding feedstocks listed in Part A of this Annex, that are grown in areas where due to a short vegetation period the production of food and feed crops is limited to one harvest and provided their use does not trigger demand for additional land and provided the soil organic matter content is maintained, where not used for the production of biofuel for the aviation sector

A non-exhaustive list of waste and residues covered by Annex IX of RED II can be found in Annex IV of Implementing Regulation 2022/996 on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria. The substances listed in that annex shall be

considered as falling under a category of raw material set out in Annex IX without being explicitly mentioned.

Advanced Biofuel Sources, Part A and Part B of Annex IX, Mandates and Cap		
	Part A Mandates (% cal)	**Part B Cap** (% cal)
2022	**0.2**	
2025	1	
2030	3.5	1.7

In the revised RED II, advanced biofuels from feedstock listed in Annex IX and renewable fuels of non-biological origin can still be double counted towards the targets.

EU-wide Greenhouse Gas (GHG) Emission Reductions

The Renewable Energy Directive (RED) stipulated that biofuels can only be counted against EU and/or member state targets if they fulfill the following minimum greenhouse gas (GHG) reduction requirements:

	RED Minimum % GHG Emission Reductions of Each Biofuel Compared to the Respective Fossil Fuel
2009-2017	35%
2018 and onwards	50% for biofuels produced in operations that started production on or before Oct 5, 2015. 60% for biofuels produced in operations that started production after Oct 5, 2015.

Source: Art. 7 b of EU Directive 98/70/EC as revised by Directive (EU) 2015/1513

The **Fuel Quality Directive** (**FQD)** (Directive 2009/30/EC) complemented RED and mirrored some of RED's content such as sustainability criteria. The FQD limits ethanol blends to 10 percent or less when ethanol is used as an oxygenate, and places limits on palm oil and soy oil content of biodiesel. The Commission did not increase the GHG reduction target in the FQD for the time beyond 2020. Instead, the Commission addressed the issue of decarbonization of transport fuels after 2020 in RED II.

In October 2023, the EU adopted Regulation 2023/2405 on Sustainable Aviation Fuels. The Regulation requires aviation fuel suppliers to ensure all aviation fuel made available to aircraft operators at each EU airport contains a progressively increasing minimum share of SAF, including a minimum share of synthetic aviation fuels (renewable fuels of non-biological origin), in accordance with the values and dates of application set below:

Targets in the proposed SAF Regulation (volume based)

Date of application	Minimum share of SAF	Minimum share of synthetic fuels
January 1, 2025	2%	N/A
January 1, 2030	6%	1.2%
January 1, 2035	20%	5%
January 1, 2040	34%	10%
January 1, 2045	42%	15%
January 1, 2050	70%	35%

The EC defines SAF as aviation fuels that are either synthetic aviation fuels, recycled carbon aviation fuel, advanced biofuels as listed from feedstock listed in part A and B of Annex IX or biofuels produced from feedstock other than food and feed crops which comply with sustainability and GHG emissions criteria from RED II. Therefore, crop-based biofuels cannot count towards the targets set for SAF.

RED II introduced new GHG emission criteria that biofuels used in transport must comply with to be counted towards the overall 14 percent target. The European Commission is allowed to revise and update the default values of GHG emissions when technological developments make it necessary. Economic operators have the option to either use default GHG intensity values provided in RED II or to calculate actual values for their pathway.

Greenhouse Gas Saving Thresholds in RED II			
Plants started/start operations	Transport biofuels	Transport renewable fuels of non-biological origin	Electricity, heating, and cooling
Before October 2015	50%	-	-
After October 2015	60%	-	-
After January 2021	65%	70%	70%
After January 2026	65%	70%	80%

Mandates by Member State:

To provide context, current, expired, and future mandates are listed below, by member state in alphabetical order. Mandates based on energy content are expressed in % cal, volume-based mandates in % vol, and GHG-saving mandates in % GHG emission reduction (compared to the hypothetical GHG emissions that would have occurred with the exclusive use of fossil fuels). **For easy reference, mandates applicable in 2025 are bold.** Mandates from 2024 to 2025 did not change in Belgium, Croatia, Estonia, France, Greece, Romania and Sweden.

Austria

	Overall Percentage (energy content, % cal)	**Biodiesel** (% cal)	**Bioethanol** (% cal)	**Advanced Biofuels** (% cal)	**GHG Emission Reduction** (%) [1)]	**Cap on crop-based biofuels** (% cal)	**Multiple Counting**
2024				0.2	7		
2025				**1**	**7.5**		
2026	**None**	**6.3**	**3.4**	1	8	**7[2)]**	**No**
2027				1	9		
2028				1	10		
2029				1	11		
2030				3.5	13		

Source: FAS Vienna based on Austrian Fuels Order 2012, (with its 2014, 2017, 2018, 2020, 2022, and 2024 amendments)

1) To reach the GHG reduction target, the following may be taken into account:
   Electric power from renewable energy sources used for electrically powered motor vehicles may also be taken into account (multiple counting x4 for renewable electricity in road transport).
2) Palm oil-based biofuels are excluded since July 1, 2021.

Penalties

Failing to meet the mandates can result in the following penalties:

Mandate	**Penalty**
Energy	43 Euro per GJ under supplied
GHG reduction 2024 and onwards	600 Euro per MT CO_2 eq of unmet GHG reduction target

Tax incentive

In addition to penalties for non-compliance, there is a tax incentive for biofuels. For gasoline with a minimum content of biogenic substances of 46 per 1,000 liters, the reduced mineral oil tax is EUR 482 per 1,000 liters (regular tax rate = EUR 515). For diesel with a minimum content of biogenic substances of 66 liters per 1,000 liters, the reduced mineral oil tax is EUR 397 per 1,000 liters (regular tax rate = EUR 425). Pure biofuels in transportation are fully exempt from the mineral oil tax.

Belgium

	Overall Percentage (% cal)	**Biodiesel** (% cal)	**Bioethanol** (% cal)	**Double Counting**
2022	10.2	6.5	6.5	Max 0.95 %
Since January 1, 2023	**10.5**	**5.7**	**5.7**	**Max 0.95%**

Source: FAS USEU based on Law of July 7, 2013; Law of July 21, 2017; *Law of May 4, 2018*; *Law of December 27, 2021*

Since the increase of the bioethanol mandate at the beginning of 2017, the majority of Belgian gasoline is E10, with the exception of a remnant market for bioethanol-free gasoline for older cars and small engines like lawnmowers.

Penalties

Failing to meet the mandates can result in the following penalties:

Mandate	**Penalty**
Energy	€1400 per 34 GJ undersupplied.

Source: ePure

Bulgaria

Biodiesel (% vol)		**Bioethanol** (% vol)		**Advanced Biofuels** (min. % energy content)	**Cap on crop-based biofuels** (% vol)	**Multiple Counting**
April 1, 2019 – August 31, 2024	6 Incl.1% advanced biodiesel	March 1, 2019 - February 28, 2025	9	April 2019 - December 2021 0.05%	**7**	**No**
				2022 - 2024 0.2%		
From September 1, 2024 onwards	**6 Incl. 2% advanced biodiesel**	**From March 1, 2025 onwards**	**9[1)] Incl. 1% advanced bioethanol**	**2025 - 2029 1.0%**		
				As of 2030 3.5%		

Source: FAS Sofia

1) From March 1, 2025, the mandate for bioethanol was raised to nine percent, with at least one percent of the volume of the bioethanol composed of advanced bioethanol (Art.47/7)

Note: In the period between December 31, 2023, to December 31, 2030, the share of biofuels produced from feedstocks with high risk of indirect land use for which there is a considerable expansion of the production region in area with high carbon stocks, is reduced to zero. Calculation of energy consumption of biofuels in transport produced from feedstocks of type B, is limited to 1.7% of the energy content of fuels in transportation.

In 2018, Bulgaria's Parliament amended the nation's *Renewable Energy Law* to transpose Directive 2015/1513/EU into national law. The legislation introduced sustainability criteria (traceability) for advanced biofuels. Adopted changes are in Article 47 of the *Bulgarian Renewable Energy Law* that entered into force on April 1, 2019. The institution supervising the quality of fuel, biofuel mandates, and advanced biofuels on the market is the Agency for Metrological and Technical Surveillance under the Ministry of Economy. Per the current legislation, the maximum blend with conventional fuel cannot exceed seven percent for biodiesel, and ten percent for bioethanol, to be in line with the EU's FQD. The crop-based biofuels cap is at seven percent, excluding biofuels made from raw materials which are compliant with sustainability criteria and are grown on degraded or fallow land. Biofuels should make up a nine percent share in petrol and a six percent share in diesel, in volume.

The minimum targets for advanced biofuels in transport (Annex IX-A in RED II) are described in Art. 13 and are set at 0.2 percent in 2022 (and in 2023 and 2024), 1.0 percent in 2025 and 3.5 percent in 2030. For the period 2019 – 2021, the target was at 0.05 percent, which was fulfilled mainly by advanced biodiesel due to lack of local production of advanced bioethanol. These targets must be achieved by mandates for the market players described in Art. 47 of the current Renewable Energy Law (see table). From September 2024, two percent of the volume of biodiesel should be advanced biodiesel and as of March 2025, one percent of the volume of bioethanol should be advanced bioethanol.

According to a local source, complete transposition of the revised RED II is ongoing with some parts of the regulation requiring earlier adoption already transposed into the national law. Public comments and industry discussions have been ongoing since January 2025. Reportedly, the authorities plan to finalize the transposition before the end of the calendar year.

Penalties

Fuel suppliers failing to comply with blending obligations are fined BGN 200,000 (€102,000). Fuel distributors selling fuels in violation of the blending obligations may be sanctioned by a financial penalty of BGN 50,000 (€25,500) or a pecuniary sanction of BGN 100,000 (€51,000) in the first month of the infraction.

Croatia

	Overall Percentage (% cal)	**Biofuels, 1st generation** (% cal)	**Biofuels from UCO** (% cal)	**Advanced biofuels** (% cal)	**Electricity from RES** (% cal)	**Double Counting**
2020-2029[1)]	**20.1**	**2.5%**	**3%**	**9.5%**	**6.6%**	**Advanced and waste-based biofuels**
2030[2)]	24.6	-	3.4%	6.2%	5.8%	

Source: FAS Zagreb based on

1) *Act on Biofuels for Transport* (Official Gazette 65/09, 145/10, 26/11, 144/12, 14/14, 94/18, 52/21), https://www.zakon.hr/z/189/Zakon-o-biogorivima-za-prijevoz
2) *The Integrated National Energy and Climate Plan (NECP)* for the Republic of Croatia, Final Updated (2021-2030), https://commission.europa.eu/publications/croatia-final-updated-necp-2021-2030-submitted-2025_en, (Figure 2-8., p83), see Table on National Targets for Renewable Energy in Transport (2021–2030).

National Targets for Renewable Energy in Transport (2021–2030)	National Goal	Realized	Public Sector Share	Share of the Obliged (Total)	Electricity from RES	Renewable fuels of non-biological origin (RFNBO)	Advanced Biofuels	Biofuels from UCO	1st Gen Biofuels
2021	7.1%	7.1%	1.2%	5.9%	0.0%	0.0%	0.0%	3.4%	2.5%
2022	8.1%	2.4%	1.5%	6.6%	0.2%	0.0%	0.4%	3.5%	2.6%
2023	8.8%		1.8%	7.1%	0.2%	0.0%	0.8%	3.5%	2.6%
2024	9.5%		1.9%	7.6%	0.4%	0.0%	1.1%	3.4%	2.7%
2025	10.5%		2.0%	8.5%	0.8%	0.1%	1.5%	3.4%	2.7%
2026	12.0%		2.3%	9.7%	1.3%	0.4%	1.9%	3.4%	2.7%
2027	16.1%		2.6%	13.5%	2.1%	0.8%	4.6%	3.4%	2.7%
2028	18.5%		2.9%	15.6%	3.1%	1.3%	5.1%	3.4%	2.7%
2029	21.2%		3.3%	17.9%	4.3%	1.9%	5.6%	3.4%	2.7%
2030	24.6%		3.8%	20.8%	5.8%	2.7%	6.2%	3.4%	2.7%

Source: *The Integrated National Energy and Climate Plan (NECP) for the Republic of Croatia, Final Updated (2021-2030*).

The *Law on the Act on Biofuels for Transport* entered into force in 2009 and was last amended on May 22, 2021. This Croatian law regulates biofuels and renewable energy sources in transportation. It is

designed to transpose EU directives into Croatian national legislation. According to the *Integrated National Energy and Climate Plan for the Republic of Croatia, Final Updated* (2021-2030) (NECP), Croatia aims to have a share of renewable energy sources (RES) in gross final energy consumption at 42.5 percent and the share of RES in final energy consumption in transport at 24.6 percent by 2030. From July 1, 2025, penalties are defined by the *Amendment to the Government Decree on Penalties for the Environment for not Placing Biofuels on the Market and for not Reducing Greenhouse Gas Emissions.*

Penalties (January 1, 2025 – June 30, 2025)
Failing to meet the mandates is sanctioned with the following penalties:

Mandate	**Penalty**
Energy % from Biofuels (0%-3%,3.01%-5%, >5%)	0.001327 €/MJ under supplied
GHG reduction (0%-2%, 2.01%-6%)	0.001327 €/kgCO_2 under allocated

Czechia

Czechia seems to be one of the first MS to transpose the revised RED II into national legislation. The process of incorporating Directive (EU) 2023/2413 of the European Parliament and of the Council (revised RED II) into national legislation was completed by the adoption of Act 42/2025 Coll. of January 22, 2025, and Act 87/2025 Coll. of March 4, 2025. Act 42/2025 amends Act No. 201/2012 Coll., on air protection, as amended (hereinafter the amended Act on air protection). Act 87/2025 Coll. amends Act No. 458/2028 Coll. on the conditions of doing business and on the performance of state administration in the energy sector and on the amendment of certain acts (Energy Act), as amended, and other related acts, including the amendment to the Act on Supported Sources (hereinafter the amendment to the Act on Supported Energy Sources). Both laws take into account the extension of the scope of the Act to all fuel suppliers. The Ministry of the Environment is responsible for the Air Protection Act. Its amendment partially transposes the revised RED II Directive and will be completed by issuing related accompanying legal regulations.

National obligations and mandates of fuel suppliers and measures for the use of renewable energy sources in the transport sector in the Czech Republic until 2030 and onwards are below.

Year	Advanced liquid and gaseous renewable fuels from feedstocks IX.A including renewable fuels of non-biological origin (RFNBOs)	Reducing greenhouse gas emissions from fuels	Limit for renewable liquid and gaseous fuels from food and feed crops	Limit for mature liquid and gaseous fuels from feedstocks IX.B	Multiple Counting
	(% cal)	(%)	(% cal)	(% cal)	(-)
2025	**1.07**	**6 of which UER*) 1**	**7**		x 2 for advanced renewable fuels incl. $RFNBO_s$ x 2 for mature renewable fuels x 4 for renewable electricity in road transport x 1.5 for renewable electricity in rail transport x 1.2 for renewable aviation and maritime fuels
2026	1.25	6.25	5.6	**1.7**	
2027	1.5	6.75			
2028	2.5	7.5			
2029	3.75	8.75			
2030 and onwards	5.5 $RFNBO_s$ min 1	11			

Sources: FAS Prague, Association for Biodiesel Production based on the

- *Act No. 42/2025 Coll., amending Act No. 201/2012 Coll., on air protection, as amended, and other related acts. The Act specifies the obligations of suppliers of liquid fuels.*
- *Act No. 87/2025 Coll., amending Act No. 458/2000 Coll., "Energy Act", as amended, and other related acts, including Act No. 165/2012 Coll., on supported energy sources. The act specifies the obligations of gaseous fuels.*

SANCTIONS:

- *CZK 2 for each MJ of undelivered advanced liquid or gaseous renewable fuel, including fuels of non-biological origin RFNBO.*
- *CZK 10 for each kg of unreduced greenhouse gas emissions from fuels.*

****) UER:** Upstream emission reduction*

Denmark

	Overall Percentage (% cal)	**GHG emission reduction** (%)	**Cap on crop-based biofuels (% vol)**	**Advanced Biofuels[2)] (Annex IX-A)** (% cal)	**Multiple Counting**
2022-2024		3.4	Biofuels based on palm oil and soy phased out by 2022[1)]	With the introduction of the CO_2 reduction requirement from 2022, there is no longer an obligation on fuel suppliers to ensure a minimum share of Annex IX-A biofuels.	**x 2 for advanced biofuels; x 4 for renewable electricity in road, x 1.5 in train; x 1.2 for aviation and maritime fuels**
2025-2027		**5.2**	**All High-ILUC-risk biofuels phased out by 2025**	1	
2028-2029		6		1	
2030		7		3.5	

Source: FAS The Hague based on ePure

1) Unless certified low-ILUC-risk.
2) The use of biofuels produced from Annex IX-B feedstock is capped at 1.7 percent.

Denmark established a blending obligation requiring a minimum of 7.6 percent biofuels in 2010. Recently it was changed to a requirement to reduce emissions rising to seven percent by 2030. The mandate also covers clean electricity used in transport (Source: Policy Briefing Nordic Council of Ministers).

Crop-based biofuels:
All high-ILUC-risk biofuels should be phased out no later than 2025. Biofuels based on palm oil (and its by-products, incl. PFAD) and soy are excluded from 2022, unless certified low-ILUC-risk.

Annex IX biofuels:
With the introduction of the CO_2 reduction requirement from 2022, there is no longer an obligation on fuel suppliers to ensure a minimum share of Annex IX-A biofuels. Denmark must still meet the minimum RED II mandates for Annex IX-A biofuels.

Penalties
Fuel suppliers failing to fulfil the GHG reduction quotas may be fined and subject to criminal liability.

Estonia

	Overall Percentage (% cal)	**Advanced Biofuels** (% cal)	**Cap on crop-based biofuels** (% cal)	**Double Counting**
2022	**7.5**	0.5	4.5	**Yes**
2023		0.5	2.5	
2024 - 2027		**0.5**	**0.5**	
2028	8.5			

Source: FAS Warsaw based on the Estonian *Liquid Fuel Act* passed on January 29, 2003, last amended in 2024

Penalties

Failing to meet the mandates can result in the following penalties:

Committed by	**Penalty**
Natural person	Up to 300 fine units[2]
Legal entity	€125 for each gigajoule by which the legal entity falls short of fulfilling the obligation

Failure to comply with the obligation concerning the proportional blending can be fined with:

Committed by	**Penalty**
Natural person	Up to 300 fine units
Legal entity	Up to €100,000

Source: § 33[1] and § 332 of Liquid Fuel Act of 2003 as amended in 2024.

[2] One fine unit currently is equal to €8. This rate is subject to change by the Estonian Penal Code.

Finland

	Overall Percentage (% cal)	**Advanced biofuel**	**Cap on crop-based biofuel[1)]** (% cal)	**Multiple Counting**
2022	12	2	**2.6 High ILUC: 0**	**No**
2023	12	2		
2024	13.5	4		
2025	**16.5**	**4**		
2026	19.5	6		
2027	22.5	6		
2028	-	8		
2029	-	9		
from 2030	-	10		

Source: FAS The Hague based on ePure

1) Applicable since July 1, 2021. Biofuels produced from Annex IX- B feedstock are not capped.

In response to high fuel prices, Finland temporarily reduced its 2022 and 2023 biofuel blending obligations by 7.5 percentage points to 12 percent. This was announced by the Finnish Finance Ministry in a statement on April 7, 2022.

Under the blending obligation in Finland, the share of biofuels was required to rise from 18 percent to 30 percent by 2030. Due to policy changes, the rates have been reduced to 13.5 percent in 2024, 16.5 percent in 2025, 19.5 percent in 2026 and 22.5 percent in 2027 (Source: Policy Briefing Nordic Council of Ministers).

Penalties

Failing to meet the mandates can result in the following penalties:

Mandate	**Penalty**
Biofuel	€0.04 per MJ (≈€1,675/toe) of missing biofuel
Advanced biofuels	€0.03/MJ (≈1,260/toe) of missing advanced biofuel

Source: ePure

France

	Bioethanol (% cal)		Biodiesel (% cal)		Double Counting
	Total	**Advanced** (% cal)	**Total**	**Advanced** (% cal)	**Yes[1)]**
2023-2027	**8.6**	**1.2**	**8**	**0.4**	
2028 and onwards		3.8		2.8	

Source: FAS Paris

1) Double counting for cellulosic biofuels and waste biofuels produced from the feedstocks listed in Annex IX of Directive 2009/28/EC except tall oil and tall oil pitch.

Cap on certain feedstocks

Since 2019 the share of energy that can be taken into account towards France's mandate is limited to a maximum of:

- Seven percent for conventional biofuels including biofuels produced from palm oil fatty acid distillates.
- 0.9 percent for used cooking oil and animal fats.
- 0.6 percent for tall oil and tall oil pitch.
- 0.2 percent for sugar plant residues and starch residues extracted from starch-rich plants (0.4 percent from 2020).
- Palm oil is excluded since January 1, 2020.
- Soybean oil is excluded since January 1, 2022.

Article 43 of the *Energy Transition Law for Green Growth* states that priority should be given to the development of advanced biofuels while preserving investments made in conventional biofuel production.

Penalties

Article 32 of the *2005 Finance Act* introduced a tax (renamed *Taxe Incitative relative à l'Incorporation de Biocarburants* (Biofuel Incorporation Incentive Tax) in the 2019 Finance Act) penalizing operators who release a proportion of biofuels below blending targets. The operator is taxed on the difference between the national target percentage of renewable energy incorporation and the proportion of renewable energy contained in their products.

In France, the General Directorate of Customs and Indirect Taxes (DGDDI) oversees fuel suppliers, while the General Directorate of Civil Aviation (DGAC) oversees aircraft operators and airport managers. Regulation (EU) 2023/2045, known as ReFuel EU Aviation[3] also applies to aircraft operators who conduct at least 500 annual commercial passenger flights or 52 annual all-cargo flights from Union airports. These operators must refuel at EU airports to prevent competitive distortions and avoidance

[3] https://www.ecologie.gouv.fr/politiques-publiques/carburants-daviation-durables-cad-sustainable-aviation-fuels-saf.

strategies. The regulation ensures clear communication of data, especially about the SAF characteristics sold by fuel suppliers.

The ReFuel EU Aviation regulation took effect on January 1, 2024, with reporting obligations for fuel suppliers and aircraft operators beginning in 2025. Reports cover SAF incorporations made in 2024, with deadlines on February 14 for fuel suppliers and March 31, 2025 for aircraft operators. The regulation includes a timeline for the minimum SAF incorporation in aviation fuel at Union airports, starting January 1, 2025.

Suppliers who do not meet these targets in France, will face a fine at least equal to double the average price difference between SAF and traditional fuel, multiplied by the amount of fuel sold in excess of these thresholds. If the targets are not met, the supplier will have to not only meet the targets set for the following year but also compensate for previously accumulated deficits[4].

Germany

Germany transposed the RED II directive into national law with the *Law for the Further Development of the Greenhouse Gas Reduction Mandate* of September 24, 2021. This law amends existing mandates and feedstock caps; introduces additional mandates for advanced biofuels and sustainable aviation fuel; and allows for additional compliance options. A draft bill for the national implementation of the revised RED II has been circulated for comment to national stakeholders and associations by the German Federal Ministry for Economic Affairs and Energy. According to local sources, the draft bill will most likely be presented to the German parliament in October 2025. The bill will probably be implemented by January 2026.

Due to an amendment of the 38th Implementation Ordinance on the Federal Act on Protection against Air Pollution, the carryover of GHG reduction tickets from one year into the next is paused for 2025 and 2026. The surpluses may be carried over to 2027.

[4] Carburants d'aviation durables (CAD) ou Sustainable aviation fuels (SAF) | Ministères Aménagement du territoire Transition écologique.

	GHG Emission Reduction[1)] (%)	Advanced Biofuels[2)] (% cal)	Cap on crop-based biofuel [2)] (% cal)	Cap on UCO- and animal fat-based biofuels[2)] (% cal)	Cap on feedstocks with high ILUC risk[2), 5)] (% cal)	Multiple counting	Sustainable Aviation Fuel [1), 6)] (% cal)
2022	7	0.2[3)]	**4.4**	**1.9**	0.9	**See table below**	-
2023	8	0.3[4)]			**0**		
2024	9.25	0.4[4)]					
2025	**10.5**	**0.7**					
2026	12	1					0.5
2027	14.5	1					0.5
2028	17.5	1.7					1
2029	21	1.7					1
2030	25	2.6					2

Sources: FAS Berlin based on Federal Act on Protection against Air Pollution , 38th Implementation Ordinance on the Federal Act on Protection against Air Pollution and Upstream Emission Reduction Ordinance (all in German language)

1) *Federal Act on Protection against Air Pollution*
Through the end of mandate year 2024 (under certain conditions until September 1, 2025), emission credits from upstream emission reduction (UER) projects may be taken into account to comply with the GHG reduction mandate.
2) *38th Implementation Ordinance on the Federal Act on Protection against Air Pollution.*
3) Companies that put on the market 10 PJ or less of biofuels in the previous year are exempted.
4) Companies that put on the market 2 PJ or less of biofuels in the previous year are exempted.
5) Effectively, this means that since 2023, biofuels based on palm oil feedstock no longer count against the mandates, unless certified low ILUC-risk.
6) Only non-biomass-derived sustainable aviation fuel (SAF) is eligible for counting against this mandate.

Multiple counting

Compliance Option	Conditions	Factor
Advanced biofuels[1)] - Except when produced from POME or empty palm fruit bunches	Volumes that exceed the mandate	2
Hydrogen and PtX fuels[2)]	If not derived from biomass	2
Electricity	For road e-vehicles	3

Sources: FAS Berlin based on

1) *38th Implementation Ordinance on the Federal Act on Protection against Air Pollution*
2) *Federal Act on Protection against Air Pollution*

Penalties

Failing to meet the mandates can result in the following penalties:

Mandate	Year	Penalty
GHG reduction	Since 2022	€0.60 per kg CO_2 eq under allocated reduction
SAF	Since 2022	€70 per GJ under allocated

Source: FAS Berlin based on *Federal Act on Protection against Air Pollution*

Greece

	Overall Percentage (% cal)	**Biodiesel** (% cal)	**Bioethanol** (% cal)	**Multiple Counting**
Since 2020	**10.0**	**7.0**	**3.3**	No

Source: FAS Rome

In 2012, *Decision 4062 (FEK 70/A/30.3.2012*) harmonized Greek legislation with European Commission *Directive 2009/28/EC*. As a result, the increased mandate of 10 percent in 2020 can be met either by domestic production or imports. The previous lower mandate was only allowed to be filled through domestic production.

Law 3054/2002 and its amendments mandates that producers and distributors of petrol and diesel must blend their fuels with a quota of biofuels. The quota is specified in the "distribution scheme," reviewed every year, and set at seven percent for 2022 and 2023. This translates into 140 million liters for both 2022 and 2023. The distribution scheme for 2024 and 2025 has not been published.

	Biodiesel (% cal)*	**Bioethanol** (% cal) **	**Advanced Biofuels** (% cal)	**Double counting**
2022 - 2023	8.4	Min. 6.1	0.2	Biofuels derived from feedstock listed in Annex 2 of the Government Decree No. 821/2021 (in Hungarian)
2024	8.4	Min. 6.1	0.5	
2025	**8.9**	**Min. 6.1**	**1**	

* In the case of diesel fuels, the share of hydrogenated vegetable oils must be at least 0.2 percent;
** The 6.1 percent share of renewables is applied to 95 octane gasoline of which maximum one percent can be substituted with biomethanol or biomethyl-tert-butyl ether.
Source: FAS Budapest

Hungary has set a target minimum 25 percent share of renewable energy in transport by 2030. This obligation entered into force with the CXVII/2010 Act (in Hungarian) on promoting the use of renewable energy and the reduction of GHG emissions of energy used in transport. To reach this target, the overall share of advanced biofuels and renewable fuels of non-biological origin in final energy consumption will be increased to 5.5 percent in the sector by 2030, according to the updated National Energy and Climate Plan. The plan is anticipated to increase the use of renewables to 15.3 percent in transport by 2030. Additionally, a significant share of this target is planned to be achieved through an increase in electric energy utilization as GHG emissions should be reduced in transportation to 0.9 million MT CO_2 equivalent by 2050.

Ireland

	Overall Percentage (% vol)	**Annex IX biofuels** (% cal**)**	**Multiple Counting**
2022	15		**x2 for Annex IX biofuels; x4 for renewable electricity in road, x1.5 in train; x1.2 for aviation and maritime fuels**
2023	17	0.3	
2024	21	0.3	
2025	**25**	**1**	
2026	29	1	
2027	34	1	
2028	39	1	
2029	44	1	
2030	49	3.5	

Source: FAS London and ePure

Bioethanol

Ireland's *Climate Action Plan* sets out an ambition to reach a blend level of 10 percent by 2025. Ireland began its E10 roll-out in April 2023 as one of several measures introduced to achieve a government target of 51 percent reduction in transport emissions by 2030.

Ireland's Consultation Draft Renewable Transport Fuel Policy of March 2023 includes a discussion on the future use of a minimum percentage of ethanol in gasoline as a policy instrument to assist it in reaching climate targets.

Advanced Biofuels

To meet EU targets, Ireland is proposing to increase the advanced biofuel obligation to 1.5 percent in 2025, subject to consultation on draft regulations.

Penalties

Failing to meet the mandates can result in the following penalties:

Mandate	**Penalty**
Energetic	Overall Biofuel mandate: Buy-out price 0.05 €/MJ Advanced Biofuel mandate: Buy-out price 0.08 €/MJ

Source: ePure

Tax incentives

The Mineral Oil Tax (MOT) applies to fuels and is composed of a fuel excise and carbon tax (the MOTCC). The latter do not apply to biofuels.

Italy

Year	Overall Percentage, incl. Advanced Biofuels (% cal)	Advanced Biofuels (% cal)	
		% of advanced biomethane	% of other advanced biofuels
2022	**10**	**2.5**	**0.6**

Source: FAS Rome

Year	Overall Obligation (%)	Traditional Obligation (%)	Advanced Biofuels Obligation (%)	Bioethanol Obligation (%)	Advanced Biomethane Quota (%)	Advanced Biofuels Other Than Biomethane Quota (%)
2023	10	6.6	3.4	0.5	2.3	0.05
2024	10.8	6.6	4.2	1	2.9	0.05
2025	**11.7**	**6.8**	**4.9**	**3**	**3.5**	**0.05**
2026	12.6	7.1	5.5	3.4	3.9	0.05
2027	13.4	7.3	6.1	3.8	4.3	0.05
2028	14.3	7.6	6.7	4.2	4.8	0.05
2029	15.2	7.8	7.4	4.6	5.2	0.05
2030	16	8	8	5	5.7	0.00

Source: FAS Rome, based on a decree dated March 16, 2023, amended by a decree dated October 20, 2023, issued by Italy's Ministry of Environment and Energy Security

Penalties

As of 2020, fuel suppliers not complying with at least 95 percent of the renewable mandates have to pay a penalty of €750 per missing certificate. A certificate is equivalent to 10 Gcal ≈ 1 toe or 5 Gcal ≈ 0.5 toe for advanced biofuels. The penalty for advanced biofuels can be reduced if insufficient market availability is demonstrated.

Latvia

In accordance with *Cabinet Regulation No. 332* of 2000 on the conformity assessment of petrol and diesel fuel, last amended in 2024, a fuel supplier in Latvia may only sell diesel with a biodiesel content of 6.5 percent by volume of the total amount of end product and petrol with five percent (for 98-octane gasoline) or 9.5 percent (95-octane gasoline) of bioethanol content by volume of the total amount of petrol.

The requirement on the mandatory admixture of 6.5 percent biodiesel does not apply to Class 0, 1, 2, 3, and 4 diesel for use in arctic or severe winter conditions during the time period from November 1 to March 31.

A new *Transport Energy Law* was adopted by the Government of Latvia in June 2024 and is now proceeded in the Latvian parliament. The aim of the draft law is to promote the "greening" of the transport sector – the use of energy that is safe for the environment and people in transport, the improvement of air quality and the reduction of GHG emissions from transport. It is expected that fuel suppliers will have to increase the share of renewable energy in their portfolio, for example, using biofuels, biogas (biomethane), and electricity. A significant role is also provided for the gradual change of the vehicle fleet to a more environmentally friendly one – especially in densely populated areas.

Tax incentives

The Latvian tax law supports the blending of biofuels by reducing the rate of excise duties. The following rates apply in 2024-2026.

Product	01.01.2024	01.01.2025	01.01.2026
Unleaded petrol per 1000 liters	509	532	555
Leaded petrol, per 1000 liters	594	617	640
Diesel, per 1000 liters	414	440.5	467
Petrol with a high bioethanol content (from 70-85 percent by volume) (fuel E85), per 1000 liters	360	360	360
Diesel blended with biodiesel derived from biomass, per 1000 liters	414	440.5	467
Biodiesel (derived from biomass or paraffined diesel fuel derived from biomass) used as motor fuel, per 1000 liters	330	330	330
Biodiesel (derived from biomass or paraffined diesel fuel derived from biomass) used as heating fuel, per 1000 liters	21	21	21

Source: Latvian Ministry of Finance

Lithuania

	Overall Percentage (% cal)	**Advanced Biofuels** (% cal)	**Cap on crop-based biofuel** (% cal)	**Cap on UCO- and cat I and II animal fat-based biofuels** (% cal)	**Double counting**
2022	6.8	0.2	**No more than 1.0% higher than the total share in 2020**	**1.7**	**Yes**
2023	7.2	0.4			
2024	7.8	0.7			
2025	**8.6**	**1.0**			
2026	9.8	1.4			
2027	11.3	1.8			
2028	12.9	2.2			
2029	14.7	2.7			
2030	16.8	3.5			

Source: FAS Warsaw based on the Lithuanian *Law on Alternative Fuels* of 2021

Mandatory blending of biofuels into fossil fuels.

Fuel sales points must sell the following fuels meeting the Lithuanian or European standards:

- petrol containing a minimum of 10 percent by volume of bioethanol (blending into 98-octane petrol is optional)
- diesel containing at least seven percent by volume of biofuel

On March 23, 2021, the Lithuanian parliament approved the *Law on Alternative Fuels* (LAF). Under the law, the transport sector is encouraged to shift to electricity, biomethane, and hydrogen, increasing the requirements for blending biofuels. The LAF established clear directions for the development of alternative fuel vehicles and the infrastructure required for them.

The LAF introduced progressively increasing obligations for fuel suppliers regarding the use of biofuels, which will be possible to implement more flexibly. In order to encourage the use of biomethane and other advanced biofuels and hydrogen, their blending is offset by twice the energy value. In order to comply with the obligation provided for in LAF, fuel suppliers must ensure that each liter of petrol supplied to the internal market contains at least 6.6 percent biofuel and that each liter of diesel supplied to the Lithuanian market contains at least 6.2 percent biofuel, calculated on the basis of the total energy value of the mixture of fuel and biofuel.

The Netherlands

	Overall Percentage (% cal)	**Of which advanced Annex IX-A biofuels** (% cal)	**Cap on conventional crop-based biofuel** (% cal)	**Multiple counting**
2022	17.9	1.8	**1.4** **0 for Biofuels made from palm and soy, except for certified low-ILUC-risk feedstock**	**Annex IX A and B: x 1.6 Electricity: x 4 Gaseous fuels: x 2 Maritime: x 0.8 Aviation: x 1.2**
2023	18.9	2.4		
2024	28.4	2.9		
2025	**29.4**	**3.6**		
2026	22.3	4.2		
2027	23.6	4.9		
2028	25.0	5.6		
2029	26.5	6.3		
2030	28	7		

Source: FAS The Hague based on ePure and government website: https://www.emissieautoriteit.nl/onderwerpen/algemeen-hernieuwbare-energie-voor-vervoer

The Dutch government increased the share of renewable energy in the transport sector to 28.4% cal. for 2024 from the original target of 19.9 percent. The 2023 target was 18.9 percent. The adjustment is expected to fast-track the transport sector's target of reaching Brussel's reformed RED target, with a provisional agreement setting a binding obligation on member states to reach 29 percent by 2030 (Source: Vantage 12/20/23).

As from January 1, 2026, with the implementation of the revised RED II, the Netherlands will change from the current system based on energy content to a system based on greenhouse gas-based performance (Source: Dutch government website).

Annex IX-B biofuels
A cap is fixed at 10 percent on the use of biofuels from used oils and fats (double counted).

Penalties
A fuel supplier failing to fulfil the quota obligation can be brought to court.

Poland

The amendment of the *Law on Biocomponents and Liquid Biofuels* was published on March 12, 2025. In the new provisions the National Indicative Target (NIT) for use of RES in transport was established for 2026 and beyond: NIT will increase to 10 percent in 2026-2029, and to 14.9 percent in 2030 and subsequent years. The higher shares of RES in transport will be achieved primarily by using biocomponents derived from food or feed raw materials, advanced biocomponents produced from waste raw materials or residues, and renewable electricity used in the transport sector. Additionally, solid and

gas fuels from biomass used in energy sectors outside transport will also be able to count for NIT. The new regulations will allow for the development of alternative fuels, such as biomethane, as well as, among others, electricity from renewable energy sources used in the transport sector. Moreover, capping of agricultural inputs at 6.1 percent for production of biofuels was introduced.
The general amendment entered into force on April 1, 2025; implementation of the NIT will enter force on January 1, 2026.

	Overall Percentage (% cal)	**Biodiesel** (% cal)	**Bioethanol** (% cal)	**Cap on conventional crop-based biofuel** (% cal)
2022	8.8	5.2	3.2	-
2023	8.9	5.2	3.2	-
2024	9.1	5.2	3.2	-
2025	**9.2**	**5.2**	**4.59**	-
2026	10	6.2	4.59	6.1
2027	10	6.2	4.59	6.1
2028	10	6.2	4.59	6.1
2029	10	6.2	4.59	6.1
2030	14.9	6.2	4.59	6.1

Source: FAS Warsaw based on the Polish *Act on Bio-components and Liquid Biofuels* as amended in March 2025.

For advanced biofuels, Polish legislation was aligned with RED II feedstock listed in Part A and Part B of Annex IX. This included minimal use of advanced biofuels produced from feedstock listed in Part A of Annex IX and a cap on use of advanced biofuels produced from feedstock listed in Part B of Annex IX.

Advanced Biofuel Sources, Part A and Part B of Annex IX, Mandates and Cap		
	Part A Mandates (% cal)	**Part B Cap** (% cal)
2026	1	3.4
2027	1	3.4
2028	1	3.4
2029	1	3.4
2030	3.5	3.4

Source: FAS Warsaw based on the Polish *Act on Bio-components and Liquid Biofuels* as amended in March 2025.

Additionally, effective January 1, 2026, multiple counting for implementation of the NIT was introduced, as below:

1) electricity from renewable energy sources shall be deemed to be equal to 4 times its energy value – if supplied by charging;
2) electricity from renewable energy sources shall be deemed to be equal to 1.5 times its energy value – if supplied to rail vehicles;
3) advanced biofuels produced from feedstock specified in Annex IX of REDII shall be deemed to be equal to 2 times their energy value;
4) biofuels, other renewable fuels, liquid carbon fuels from recycling and gaseous carbon fuels from recycling contained in aviation fuels and marine fuels shall be deemed to be equal to 1.2 times their energy value.

Effective January 1, 2024, an amendment to the *Law on Biocomponents and Liquid Biofuels* introduced a requirement that 95-octane motor gasoline shall be sold in Poland in the format of E10, while 98-octane gasolines will remain in the E5 format. For this, mandatory blending for 95-octane motor gasoline at 5.3 percent (and detailing that 4.59 percent should be realized with bioethanol) was set, while for 98-octane gasoline, the level of mandatory blending remained unchanged at 3.2 percent.

Portugal

Portugal has introduced multiple counting. In addition to the country's biofuel consumption mandate and double counting for biofuels produced out of Annex IX feedstock, the country has put in place an x2 for fuels of non-biological origin, an x5 multiplier for electricity in road transport, and an x2.5 percent for renewable energy in train transportation.

	Overall Percentage (% cal)	**Annex IX** (% cal)	**Cap on conventional crop-based biofuel** (% cal)	**Double counting**
2022	11	0.2	7[1)]	Yes
2023	11.5	0.7		
2024	11.5	0.7		
2025-2026	**13**	**2**		
2027-2028	14	4		
2029	16	7		
2030	16	10		

Sources: FAS Madrid based on consumption mandates: Decree-Law 117/2010, Decree-Law 69/2016, Law 42/2016, *Budget Law* for 2018 and 2019 and Decree-Law 8/2021 as amended by Rectification Declaration 9-A/2021, Decree-Law 84/2022, and Decree-Law 23/2023. Double counting: Decree-Law 117/2010 and Annex III in Implementing Order 8/2012.

1) Food-based biofuels are capped at 2020 levels up to one percent higher, but with a maximum cap of seven percent for each MS.

Penalties

Failing to meet the mandates can result in the following penalties:

Year	Penalty
2011 and onwards	€2,000 per TdB (Biofuel Entitlement, equals a Ktoe) that the obliged party fails to meet.

Source: FAS Madrid based on Implementing Regulation 301/2011.

For additional information about Portugal's biofuel sector, see the GAIN Report: *Portugal Biofuels Policy and Market* available through the FAS report database at https://gain.fas.usda.gov/#/search.

Romania

	Overall Percentage (% vol)	Biodiesel (% vol)	Bioethanol (% vol)	Double counting
2021 and onwards	**10**	**6.5**	**8.0**	**Yes**

Sources: FAS Bucharest based on *Government Decisions 1121/2013* and *931/2017*

Romania transposed RED II into Romanian national legislation through the *Emergency Ordinance 163/2022*. The process of transposing EU directive 2023/2413 is underway. Public debate closed in April 2025 with a draft text which amends the emergency ordinance 163/2022 to incorporate the directive. In 2023, *Law 237/2023* regarding the integration of hydrogen obtained from renewable sources and with low carbon emissions in industry and transportation was approved. The law sets up rules for fuel retailers regarding the introduction of hydrogen in the transport sector and reporting on the energy content of all fuels starting with 2025. Fuel suppliers must ensure that the energy value from the volume of fuels from renewable sources of non-biological origin placed on the Romanian market and used in transport sector must equal at least five percent of the energy content of all fuels until 2030. The percentage is set to grow gradually from 2025 (0.5 percent) to 2030 (five percent).

Penalties

Failing to meet these mandates can result in the following penalties:

Year	Penalty
2019 and onwards	RON 70,000-100,000 (approx. USD 15,000-22,000)

Source: FAS Bucharest based on provisions of *Emergency Ordinance 80/2018*

Slovakia

	Overall Percentage (% cal)	**Bioethanol** (% vol)	**Biodiesel** (% vol)	**Advanced Biofuels** (% cal)	**Double Counting**
2021	8.0	**Minimum E9[1)]**	**Minimum B6.9[1)]**	0.3	**Yes**
2022	8.2				
2023	8.6			0.5	
2024	8.8			0.65	
2025	**9.2**			**1.05**	
2026	9.5				
2027	10.0			1.4	
2028	10.4				
2029	10.8			1.75	
2030	11.4			2.1	

Source: FAS Prague based on

- *Act on the Support of Renewable Energy Sources* and Highly Efficient Cogeneration, and on *Amendments to Certain Acts No. 309/2009 Coll*. and
- *Act No. 362/2019 Coll.* amending *Act No. 609/2007 Coll*., on excise duty on electricity, coal and natural gas, and amending *Act No. 98/2004 Coll*., on excise duty on mineral oil

1) *Act No. 362/2019 Coll*. stipulates that motor gasoline sold on the Slovak market must contain at least nine percent of a bioethanol component (ETBE/bioethanol) in one liter, and diesel must contain at least 6.9 percent of a biodiesel component, as of January 1, 2020.

An extensive amendment (no. 363/2022) to the *Act on Support of Renewable Energy Sources and Highly Efficient Cogeneration*, and on *Amendments to Certain Acts No. 309/2009 Coll*. that transposes RED II to Slovakian national legislation entered into force on January 1, 2023. It updated the overall mandates for bioethanol and biodiesel and for advanced biofuels. The amendment also introduced mandates for Compressed Natural Gas (CNG) and Liquid Natural Gas (LNG).

Slovenia

	Overall Percentage (% cal)	**Biodiesel/ Bioethanol**	**Advanced Biofuels** (% cal)	**GHG Emission Reduction** (%)	**Cap on crop-based biofuels** (% cal)	**Multiple Counting**
2023	10.3	**No specific target**	**0.2**	**6**	**7**	Yes (wastes, residues, non-food cellulosic material, lingo-cellulosic material – Annex IX-A biofuels
2024	10.6					**Annex IX-A biofuels (x2), Renewable electricity in road (x4)**
2025	**11.2**					
2026	13.8					
2027	15.8					
2028	18.3					
2029/30	20.8					

Source: FAS Vienna based on ePure and the *Regulation on Renewable Energy Sources in Transport 2021* (Uredba o obnovljivih virih energije v prometu) and its amendments in 2021, 2022, and 2024 lays down Slovenian requirements for biofuels in the transport sector.

Fuel retailers not reaching the target will be allowed to offset the shortfall with any surpluses in the preceding or following three years.

Tax incentives

The excise duty rate is set at zero percent for ethanol, bio-ETBE, biodiesel, biogas, bio-dimethyl ether, and bio-methanol.

Spain

Spain has established a 28 percent target of renewable energy in transport for 2030, with an intermediate goal in 2025 for 15 percent. In addition to biofuel consumption mandates and double counting for those biofuels produced out of Annex IX feedstock, the country has put in place an x4 multiplier for electricity in road transport, an x1.5 multiplier for renewable energy in trains and, as of 2024, an x1.2 multiplier for renewable marine and aviation transport, provided the feedstocks are of non-crop origin. Similarly, from 2025 onward, fuels of non-biological origin may be counted towards the mandate and be subject to double counting.

	Overall Percentage (% cal)	**Annex IX-Part A** (% cal)	**Annex IX-Part B** (% cal)	**High ILUC Risk Biofuels** (% cal)	**Cap on crop-based biofuels** (% cal)	**Double counting**
2022	10	0.2	1.7	3.1	7	**Yes**
2023	10.5	0.3	1.7	3.1	3.5	
2024	11	0.5	1.7	3.1	3.1	
2025	**11.5**	**1**	**1.7**	**0**	**2.6**	
2026	12	1.25	1.7	0	2.6	
2030	12	3.5	1.7	0	2.6	

Source: FAS Madrid based on Royal Decree-Law 4/2013 , , Royal Decree 376/2022, Ministerial Order TED 1342/2022,Resolution of 29 of September 2021 , **Error! Hyperlink reference not valid.**, and Ministerial Order TED 728/2024.

Penalties

Those failing to meet the mandates may face the following penalties:

Year	**Penalty**
Since 2022	€1,623 per missing certificate (each certificate equals one Ktoe.)

Source: FAS Madrid based on Resolution of 17 of December of 2021 and Ministerial Order TED 728/2024 by the Ministry for Ecological Transition and Demographic Challenge.by the Ministry for Ecological Transition and Demographic Challenge.

Royal Legislative Decree 6/2022 established the obligation to reduce by six percent GHG emissions by fossil fuels as of 2022 compared to 94.1 g CO2 equivalent/MJ in 2010. The GHG emissions calculation methodology is laid out by Royal Decree 235/2018.

Additional details regarding mandates are available in the draft Royal Decree on renewable fuels promotion (Spanish language only), submitted to public comment between July 3, 2025 and September 8, 2025.

For additional information about Spain's biofuels sector, see GAIN Report *Spain Biofuels Policy and Market* available through the FAS report database at https://gain.fas.usda.gov/#/search .

Sweden

	GHG Reduction Target	
	Gasoline (%)	**Diesel (%)**
2022	7.8	30.5
2023	7.8	30.5
2024 - 2026	**Frozen at 6**	**Frozen at 6**
2027 onwards	-	-

Source: FAS The Hague based on ePure and Policy Briefing Nordic Council of Ministers

Following a change in government, mandate obligation rates were lowered significantly. The Swedish Parliament approved a government proposal for a sharp reduction in the greenhouse quota in road transport from January 1, 2024, and an abolishment of the quota from 2027.

Crop-based biofuels

- No explicit targets or active measures are in place to limit crop-based biofuels.
- High-ILUC-risk biofuels cannot be counted towards the GHG-reduction quota except if certified as low-ILUC-risk, but they may be used in high-blend biofuels not included in the reduction quota for petrol and diesel.

Annex IX

No specific targets.

Penalties

Fuel suppliers failing to fulfil their GHG obligations must pay a penalty per kgCO2eq of up to SEK 7 (Source: ePure).

Tax incentives

High blends, such as E85, ED95, HVO100, and FAME100, do not count towards the achievement of the obligations and are incentivized through a tax reduction.

Related reports: Please check the FAS report database for related reports at https://gain.fas.usda.gov/#/search .

Attachments:

No Attachments.