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**Report Highlights:**

This report provides an overview on the biofuel use mandates in the various EU-27 member states + the UK. It supplements the EU Biofuel Annual Report 2020.

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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
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 <a href="#">Regulation (EC) 1069/2009</a> , with cat 1 having the highest and cat 3 the lowest risk.
CNG =	Compressed natural gas
Double counting =	Certain biofuels are counted twice against the mandates. Definition and eligible feedstocks vary by 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
HVO =	Hydrotreated Vegetable Oil
Ktoe =	1000 MT of oil equivalent = 41,868 GJ = 11.63 GWh
LPG =	Liquefied petroleum gas
MJ =	Megajoule
MS =	Member State(s) of the EU
MWh =	Mega Watt hours = 1,000 Kilo Watt hours (KWh)
N/A =	Not applicable
POME =	Palm Oil Mill Effluent
RED =	EU Renewable Energy Directive 2009/28/EC
SBE =	Spent Bleached Earth
TME =	Biodiesel based on animal fats
Toe =	Tons of oil equivalent = 41,868 MJ = 11.63 MWh
UCO =	Used cooking oil/ recycled vegetable oil
UCOME =	UCO based methyl ester biodiesel
UK =	United Kingdom

**Unless otherwise noted, ‘EU’ in this report refers to EU27+UK, the current EU Customs Union**

## Introduction:

The 2009 [EU Energy and Climate Change Package](#) set out a 10 percent minimum target for renewable energy consumed by the transport sector to be achieved by all EU member states (MS) in their countries in 2020. Many MS have adopted minimum biofuel use mandates in order to achieve this goal. This report provides an overview of the current and future mandates from the various MS. The tables represent the status quo as of May 15, 2020. If changes are being discussed but have not yet been adopted, they are mentioned in the text below the tables.

In addition, the [Renewable Energy Directive \(RED\)](#) stipulates that biofuels can only be counted against EU and/or member state targets if they fulfill the following minimum greenhouse gas (GHG) reduction requirements:

	<b>Minimum % GHG savings of each biofuel compared to the respective fossil fuel</b>
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  
<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1502451943595&uri=CELEX:01998L0070-20151005>

## The Fuel Quality Directive (FQD)

The FQD ([directive 2009/30/EC](#)) complements the RED and mirrors some of the RED's content such as the sustainability criteria. A key requirement in article 7a of the FQD is that all **fuel suppliers must meet a 6 percent reduction in GHG emissions by 2020 across all fuel categories supplied to the market**. This is designed to be consistent with the 10 percent minimum use target for biofuels and shift demand towards biofuels with higher GHG savings. In addition, 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 does not plan to extend the GHG reduction target beyond 2020. Instead, the Commission addressed the issue of the decarbonization of transport fuels after 2020 in RED II.

### The Renewable Energy Directive II (RED II)

The European Union adopted the new RED for the period 2021-2030 (RED II) after two years of debate in June 2018, and the full text was published in the Official Journal in December 2018. [Directive 2018/2001](#) will enter into force on January 1, 2021.

- *RED II Renewables Targets*

The RED II sets an overall binding renewable energy target of at least 32 percent by 2030 with a 14 percent target for the transport sector, with a clause for a possible upwards revision by 2023. Within the 14 percent transport sector target, food-based biofuels are capped at MS 2020 levels up to one percent higher, but with a maximum cap of 7 percent for each MS. If the cap on first generation biofuels in a MS is less than 7 percent, the country may reduce the transport target by the same amount (for example, a country with a food and feed crop cap of 6 percent could set a transport target at 13 percent). MSs 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 of 0.2 percent of transport energy in 2022, one percent in 2025, and at least 3.5 percent by 2030. Biofuels produced from feedstock listed in Part B will be capped at 1.7 percent in 2030. Advanced biofuels will be double-counted towards both the 3.5 percent target and towards the 14 percent target.

**Table 2. Advanced Biofuel Sources,  
Part A and Part B of Annex IX in RED II**

Part A	Part B
<ul style="list-style-type: none"> <li>• Algae if cultivated on land in ponds or photobioreactors</li> <li>• Biomass fraction of mixed municipal waste</li> <li>• Biowaste from private households subject to separate collection</li> <li>• Biomass fraction of industrial waste not fit for use in the food or feed chain</li> <li>• Straw</li> <li>• Animal manure and sewage sludge</li> <li>• Palm oil mill effluent and empty palm fruit bunches</li> <li>• Crude glycerin</li> <li>• Bagasse</li> <li>• Grape marcs and wine lees</li> <li>• Nut shells</li> <li>• Husks</li> <li>• Cobs cleaned of kernels of corn</li> <li>• Biomass fraction of wastes and residues from forestry and forest-based industries</li> <li>• Other non-food cellulosic material</li> <li>• Other ligno-cellulosic material except saw logs and veneer logs</li> </ul>	<ul style="list-style-type: none"> <li>• Used cooking oil</li> <li>• Some categories of animal fats</li> </ul>

- *RED II GHG Savings*

The RED II introduces new GHG emission criteria that biofuels used in transport must comply with to be counted towards the overall 14 percent target. The EC 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 the RED II or to calculate actual values for their pathway.

**Table 3. Greenhouse gas savings thresholds in RED II**

Plant operation start date	Transport biofuels	Transport renewable fuels of non-biological origin	Electricity, heating and cooling
Before October 2015	50%	-	-
<b>After October 2015</b>	<b>60%</b>	-	-
After January 2021	65%	70%	70%
After January 2026	65%	70%	80%

**Mandates by Member State (MS):**

In order to provide context, current, expired, and future mandates are listed below, by MS. Mandates based on energy content are expressed in % cal, volume based mandates in % vol, and GHG saving mandates in % GHG reduction (compared to the hypothetical GHG emissions that would have occurred with the exclusive use of fossil fuels). **For easy reference, mandates applicable in 2020 are bolded.**

**Austria**

	<b>Overall Percentage</b> (energy content, % cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b> <sup>1)</sup>
Since 2012	5.75	6.3	3.4	Yes
<b>2020</b>	<b>5.75 plus 0.5 advanced biofuels</b>	<b>6.3</b>	<b>3.4</b>	<b>No</b>

Source: Fuels Order 2018

<sup>1)</sup> Double counting: Advanced biofuels according to Annex 13 of the [Austrian Fuels Order 2012](#).

According to the Amendment of the Austrian Fuels Order in 2018, a further substitution target is added from 2020 on: 0.5 percent of the total fossil fuels have to be substituted by advanced biofuels in addition to the overall substitution target of 5.75 percent. This amendment also excludes double counting which was allowed until 2018.

**Belgium**

	<b>Overall Percentage</b>	<b>Biodiesel</b> (% energy content)	<b>Bioethanol</b> (% energy content)	<b>Double counting</b>
Until Dec 31, 2016		6.0	4.0	<b>Possible upon approval</b>
2017 - 2019		6.0	8.5	
From January 1, 2020 to March 31, 2020		8.5	8.5	
<b>From April 1, 2020 to December 31, 2020</b>		<b>9.9</b>	<b>9.9</b>	
January 1, 2021, and onwards		9.55	9.55	Max 0.6 %

Sources: [Law of July 7, 2013](#); [Law of July 21, 2017](#); Law of May 4, 2018

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

## Bulgaria

On May 30, 2018, the Cabinet approved an amendment to the Renewable Energy Law to transpose directive 2015/1513/EU into national law including introduction of sustainability criteria (traceability) for second generation biofuels.

Adopted changes to Article 47 of the Bulgarian Renewable Energy Law as of September 1, 2018:

<b>Biodiesel</b> (% vol)		<b>Bioethanol</b> (% vol)		<b>Cap on crop based biofuels</b> (% vol)	<b>2<sup>nd</sup> Generation</b> (% cal)	<b>Double counting</b>
<b>Since June 1, 2012</b>	<b>6</b>	September 1, 2014	6	-	-	<b>No</b>
		March 1, 2015	7			
	<b>5/1<sup>1)</sup></b>	September 1, 2018	8			
		March 1, 2019	9			
		<b>January 1, 2020</b>	<b>10</b>	<b>7</b>	<b>0.05</b>	

<sup>1)</sup> Since September 1, 2018, the mandate is split into five percent conventional first generation biodiesel and one percent second generation biodiesel.



**Croatia**

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b>	<b>Bioethanol</b>	<b>Double counting</b>
2014	3.18	2.83	0.35	<b>Second generation and waste based biofuels</b>
2015	3.88	3.04	0.84	
2016	4.89	3.94	0.90	
2017	5.89	4.83	0.94	
2018	6.92	5.75	0.97	
2019	7.85	6.61	0.98	
<b>2020</b>	<b>8.81</b>	<b>7.49</b>	<b>1.00</b>	

Sources:

- National Action Plan for Renewable Energy Sources to 2020  
[https://mzoe.gov.hr/UserDocsImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/National\\_Action\\_Plan%20for%20Renewable%20Energy%20Sources%20to%202020.pdf](https://mzoe.gov.hr/UserDocsImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/National_Action_Plan%20for%20Renewable%20Energy%20Sources%20to%202020.pdf)
- Act on Biofuels for Transport (Official Gazette 65/09, 145/10, 26/11, 144/12, 14/14, 94/18)  
<https://www.zakon.hr/z/189/Zakon-o-biogorivima-za-prijevoz>

**Czech Republic**

Amendment to the Act on Air Protection introduced double counting as of 2019. Obligations for 2021 - 2030 are being prepared as part of the transposition of RED II into national legislation.

	<b>Shares of biofuels and renewable electricity in transportation on total consumption</b> (% cal)	<b>Obligation to reduce total GHG emissions by</b> <sup>1), 5)</sup> (%)	<b>Biodiesel</b> <sup>1)</sup> (% vol)	<b>Bioethanol</b> <sup>1)</sup> (% vol)	<b>Double counting</b> <sup>1)</sup>
2014 – 2016	-	2	<b>6</b>	<b>4.1</b>	No
2017		3.5			
2018		3.5			
2019		3.5 <sup>3), 4)</sup>			
<b>2020 and onwards</b>	-	<b>6</b> <sup>3), 4)</sup>			<b>Yes</b> <sup>2)</sup>

- 1) According to act No. 201/2012 coll., on air protection, as amended by act No. 172/2018 coll.
- 2) Double counting for: biofuels from used cooking oil, animal fats classified as categories 1 and 2 in accordance with Regulation (EC) No. 1069/2009 of the EP and of the Council, and low indirect land-use change-risk biofuels (advanced biofuels).
- 3) It is possible to take into account CNG/LNG, LPG, clean and high-percentage biofuels, electricity and hydrogen in the mandatory reduction of GHG emissions from fuel pursuant to the Air Protection Act
- 4) Upstream emission reduction (UER) of greenhouse gases can be taken into account up to a maximum of 1 % per supplier.
- 5) **Penalty** – failing to meet the obligations (reduce total GHG emissions) is sanctioned with 10 CZK (≈USD 0.40) per kg CO<sub>2eq</sub> of the reduction amount that was not achieved.

## Denmark

	<b>Overall Percentage</b> (% cal)	<b>Advanced Biofuels</b> (% cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b>
Since 2012	5.75				
<b>2020</b>	<b>5.75</b>	<b>0.9</b> <sup>1)</sup>			

Source: Stratas

<sup>1)</sup> The advanced mandate excludes UCO and animal fats.

Since January 2012, fuel companies are obligated to ensure biofuels make up at least 5.75 percent of total annual sales of fuel. The companies are obligated to report meeting the 5.75 percent obligation to the Danish Energy Agency (DEA) annually. The DEA encourages them to use the voluntary certification schemes.

**Finland**

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b>	<b>Bioethanol</b>	<b>Double counting</b>
2014	6			
2015	8			
2016	10			
2017	12			
2018	15			
2019	18			
<b>2020 and onwards</b>	<b>20</b>			

Source: Stratas

The Finnish Parliament approved a law that sets a gradually increasing biofuel target until it reaches 30 percent in 2029. In addition, Finland approved a law that mandates an advanced biofuel share of 2 percent in 2023, increasing to 10 percent in 2030. (Source: IEA Country Report).

**France**

	<b>Bioethanol</b> (objective, % cal)	<b>Biodiesel</b> (objective, % cal)	<b>Double counting</b>
2010 to 2013	7	7	No
2014 to 2016	7	7.7	Yes <sup>1)</sup>
2017 to 2018	7.5	7.7	
2019	7.9	7.9	Yes <sup>2)</sup>
<b>2020</b>	<b>8.2</b>	<b>8</b>	

<sup>1)</sup> Double counting for cellulosic biofuels and waste biofuels up to:

- 0.5% double-counted bioethanol and 0.7% double-counted biodiesel in 2014-2016
- 0.6% double-counted bioethanol and 0.7% double-counted biodiesel in 2017-2018

<sup>2)</sup> 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.

From 2019, the share of energy that can be taken into account is limited to a maximum of:

- 7 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)

## Germany

	Overall Percentage % Cal <sup>1)</sup>	% GHG savings <sup>4)</sup> (BImSchG) <sup>1)</sup>	Cap on crop based biofuel <sup>3)</sup> (% cal)	2nd Generation (% cal) <sup>3)</sup>	Double counting <sup>2)</sup>
2009	5.25 overall 4.4 biodiesel 2.8 bioethanol				-
2010					
2011-2014	6.25 overall 4.4 biodiesel 2.8 bioethanol	-	-	-	2011-2014 UCO- and waste fatty acids based HVO, UCOME only; TME excluded
2015-2016		3.5			No
2017					
2018-2019		4.0			
<b>2020</b>			<b>6.5</b>	<b>0.05</b> <sup>5)</sup>	
2021				0.1 <sup>6)</sup>	
2022-2023		<b>6.0</b>		0.2 <sup>7)</sup>	
2025 and onwards				0.5	

Notes and sources:

<sup>1)</sup> § 37a Federal Act on Protection against Air Pollution

(Bundes-Immissionsschutzgesetz) [http://www.gesetze-im-internet.de/bimschg/\\_37a.html](http://www.gesetze-im-internet.de/bimschg/_37a.html)

<sup>2)</sup> § 37b Federal Act on Protection against Air Pollution [http://www.gesetze-im-internet.de/bimschg/\\_37b.html](http://www.gesetze-im-internet.de/bimschg/_37b.html)

<sup>3)</sup> §13 +14 of the 38th Implementation Ordinance on the Federal Act on Protection against Air Pollution

[http://www.gesetze-im-internet.de/bimschv\\_38\\_2017/\\_13.html](http://www.gesetze-im-internet.de/bimschv_38_2017/_13.html)

[http://www.gesetze-im-internet.de/bimschv\\_38\\_2017/\\_14.html](http://www.gesetze-im-internet.de/bimschv_38_2017/_14.html)

<sup>4)</sup> Percentage of GHG savings of total fuel use (fossil and renewable) compared to the hypothetical GHG emissions had all the fuel been of fossil origin

<sup>5)</sup> Companies that put on the market 20 PJ or less of biofuels in the previous year are exempted

<sup>6)</sup> Companies that put on the market 10 PJ or less of biofuels in the previous year are exempted

<sup>7)</sup> Companies that put on the market 2 PJ or less of biofuels in the previous year are exempted

Double counting expired at the end of 2014 with the transition to a GHG reduction mandate. Since then, HVO and UCO based biodiesel enjoy competitive advantages based only on their higher GHG reduction compared to first generation biofuels.

Failing to meet the mandates is sanctioned with the following penalties:

Year	Penalty
2009-2014:	Biodiesel: 19 Euro ( $\approx$ USD 20) per GJ underallocated Bioethanol: 43 Euro ( $\approx$ USD 47) per GJ underallocated
2015 and onwards	0.47 Euro ( $\approx$ USD 0.51) per kg CO <sub>2</sub> eq underallocated

Source:

§ 37c (2) Federal Act on Protection against Air Pollution

(Bundes-Immissionsschutzgesetz) [http://www.gesetze-im-internet.de/bimschg/\\_37c.html](http://www.gesetze-im-internet.de/bimschg/_37c.html)

## Greece

	Overall Percentage (% cal)	Biodiesel	Bioethanol	Double counting
2014-2016	5.75	5.75	-	No
2017-2018	7.0	7.0	-	
2019		7.0	1.0	
<b>2020</b>		<b>7.0</b>	<b>3.3</b>	
2021		7.0	3.3	

In 2012, decision 4062 (FEK 70/A/30.3.2012) harmonized the Greek legislation with Directive 2009/28/EC. As a result, the increased mandate of 10.0 percent in 2020 can be met either by domestic production or imports. (The lower mandate was only allowed to be filled with domestic production.)

Law 3054/2002 and its amendments mandate producers and distributors of petrol and diesel to blend their fuels with a certain amount ("quota") of biofuels. The quota is specified in the "distribution scheme," reviewed every year, and set at 7 percent for 2019 and 2020. The quota for 2021 will be published by April 2021 and is currently forecast to remain flat.

## Hungary

With the amendment of the Government Decree No. 279/2017 on sustainability requirements and certification of biofuels, Hungary aimed at achieving 10 percent renewable energy content in transport fuels by 2020. This obligation came into force by the CXVII/2010 Act on promoting the use of renewable energy and the reduction of greenhouse gas emission of energy used in transport.

The biofuel blending ratio has been set at 8.2 percent (from 6.4 percent) between January 1, and December 31, 2020. In addition, a double counting system encourages the use of waste-based biofuels produced from used cooking oil or animal fat derived from Category 1 and Category 2 materials (based on the EC regulation No 1069/2009, not intended for consumption).

As of January 1, 2020, fuel retailers are obliged to offer E10 fuel at gas stations, and the mandatory bioethanol share of 95-octane petrol must be at least 6.1 percent beside other bio-components like ETBE. Lower blends are also available but only as super 100-octane fuels.

	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b>
2014-8/31/2017	4.9	4.9	Waste materials and residual products from agricultural and forestry production including biofuels from non-food cellulosic and ligno-cellulosic materials.
9/1/2017-12/31/2018	4.9	4.9	<b>Waste-based biofuels produced from used cooking oil or animal fat derived from Category 1 and Category 2 materials.</b>
1/1/2019-12/31/2019	6.4	6.4	
<b>1/1/2020-12/31/2020</b>	<b>8.2</b>	<b>6.1</b>	

Sources:

- Government Decree No. 343/2010 on requirements and certification of sustainable biofuel production (overruled in 2017)
- Government Decree No. 279/2017 on sustainability requirements and certification of biofuels
- CXVII/2010 Act on promoting the use of renewable energy and the reduction of greenhouse gas emission of energy used in transport

**Ireland**

	<b>Overall Percentage (% vol of fossil fuel to be added)</b>	<b>Equals % vol of total fuel used</b>	<b>Double counting</b>
2010	4.166 (equal to 4 liters of biofuel for 96 liters of fossil fuel)	4	UCO
2011 - 2013	4.166	4	UCO & Cat 1 Tallow
2014 - 2016	6.383	6	UCO, Cat 1 Tallow, Spent Bleached Earth (SBE), Palm Oil Mill Effluent (POME)
2017 - 2018	8.695	8	<b>UCO, Cat 1 Tallow, Spent Bleached Earth (SBE), Palm Oil Mill Effluent (POME), Whey Permeate</b>
2019	11.11	10	
<b>2020 and onwards</b>	<b>12.359</b>	<b>11</b>	

Further information on Ireland's Biofuels Obligation Scheme can be found at:

- <http://www.nora.ie/biofuels-obligation-scheme.141.html> and <https://www.nora.ie/biofuels-obligation-scheme/administration.142.html>
- Section 44C(3)(b) of the NATIONAL OIL RESERVES AGENCY ACT 2007  
<http://revisedacts.lawreform.ie/eli/2007/act/7/revised/en/html#SEC44C>

**Italy**

Year	Overall biofuels (% by energy content)	Of which advanced biofuels (% by energy content, double counted)	Advanced biofuels necessary for fulfilling the targets (% by energy content)	
			% of advanced biomethane	% of other advanced biofuels
2015	5	-		
2016	5.5	-		
2017	6.5	-		
2018	7	0.1	0.45	0.15
2019	8	0.2	0.60	0.20
<b>2020</b>	<b>9</b>	<b>1.0</b>	<b>0.68</b>	<b>0.23</b>
2021	9	1.6	1.13	0.38
2022 and onwards	9	2	1.39	0.46

Italy was the first EU Member State to mandate the use of advanced biofuels. Ministerial Decree of October 10, 2014 originally required gasoline and diesel to contain at least 1.2 percent of advanced biofuel made of waste and non-food feedstocks as of January 2018 and 2019, rising to 1.6 percent in 2020 and 2021, and 2 percent by 2022. On December 13, 2017, the Italian Ministry of Economic Development published a Decree lowering the biofuels mandate from 2018 to 2020 to the levels shown in the table above.

On March 19, 2018, the Italian Ministry of Economic Development published a Decree lowering the biofuels mandate from 2021 to 2022 and onwards to the levels shown in the table above. Moreover, the Decree requires gasoline and diesel to contain at least 0.6 percent of advanced biofuels as of January 2018, rising to 1.85 percent in 2022. The mandatory quota for advanced biofuels is split into 75 percent reserved for biomethane and 25 percent for other advanced biofuels (agricultural and industrial wastes, residues, ligno-cellulosic materials, cellulosic materials, and algae; excluding UCOs and animal fats). The respective shares will be reviewed every two years.



## The Netherlands

	<b>Overall Percentage</b> (% cal)	<b>Of which advanced biofuels</b> (% cal)	<b>Cap on conventional crop based biofuel</b> (% cal)	<b>Double counting</b>
2014	5.5			<b>Yes</b>
2015	6.25			
2016	7.0			
2017	7.75			
2018	8.5	0.6	5	
2019	12.5	0.8	4	
<b>2020</b>	<b>16.4</b>	<b>1.0</b>	<b>3</b>	

Dutch Emission Authority

In 2018, the Dutch Government decided to increase the mandate for biofuel blending in transport fuels, in order to achieve the overall 14 percent renewable energy consumption target in 2020. In order to qualify, the advanced biofuels must be produced from waste, excluding used cooking oil and animal fats. The physical volume of biofuels blended is lower than the mandate, as a large percentage of the volume blended is double counting biodiesel. (Source: Dutch Government).

Since October 1, 2019, Dutch distributors are obliged to offer E10 at their gas/petrol stations. At least half of the offered blends must be E10 (Source: Dutch Government).

## Poland

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b>
2014 - 2017	7.1			<b>Yes</b>
2018	7.5			
2019	8.0			
<b>2020</b>	<b>8.5</b>			
2021	8.7			
2022	8.8			
2023	8.9			
2024	9.1			

FAS Warsaw based on the Polish *act on bio-components and liquid biofuels*

In July 2019, Polish Parliament passed an amendment to the *act on bio-components and liquid biofuels*, which set the National Indicative Target (NIT) for 2021-2024. From 2021 to 2024, the NIT will be 8.7, 8.8, 8.9, and 9.1 percent, respectively.

## Portugal

Initially, in 2017 the overall mandate was 9.0 percent, with a bioethanol specific target of 2.5 percent in terms of energy. Decree- Law 69/2016 retroactively eliminated the bioethanol specific target since 2016. In addition, according to Law 42/2016, the overall consumption mandate for 2017 has been revised down, keeping it at 7.5 percent. Portugal’s Budget Laws for 2018 and 2019 revised down consumption mandates to 7.5 and 7 percent, respectively. [Dispatch 4736/2020](#) reintroduced the 6.75 percent minimum volumetric blending clause for the period from April 9, 2020, until 30 days after the end of the COVID-19 related state of emergency<sup>1</sup>; i.e. until June 1, 2020. This clause secures a 6.75 percent biodiesel requirement for physical biodiesel as opposed to double-counting biodiesel.

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol/ ETBE</b> (% cal)	<b>Double counting</b>
2014	5.5	-	-	<b>Yes</b>
2015	7.5	-	2.5	
2016-2017	7.5	-	-	
2018	7.5	-	-	
2019	7	-	-	
<b>2020</b>	<b>10</b>			

Sources: Consumption targets: [Decree-Law 117/2010](#), [Decree-Law 69/2016](#), and [Law 42/2016](#) and Budget Law for 2018 and 2019. Double counting: [Decree-Law 117/2010](#) and Annex III in [Implementing Order 8/2012](#).

Domestic non-food raw materials used to receive 1.3 TdB (Biofuel Entitlements) per Toe produced. Each Toe of biofuel produced out of domestic agricultural raw materials was granted with 1.1 TdB. However, this additional value for domestic raw materials is just valid at the domestic level and could not be reported to the EC as part of the mandate compliance. TdBs were issued for the first and last time in 2016 to biofuels produced out of domestic raw materials, as this special treatment was revoked by [Decree-Law 69/2016](#).

For additional information about Portugal’s biofuel sector, see GAIN Report PO2020-0001 *Portugal Biofuels Policy and Market* available through the FAS report database at <https://gain.fas.usda.gov/#/search>.

<sup>1</sup> Portugal’s State of Emergency ended on May 2, 2020.

**Romania**

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b>
2014 - 2015	<b>N/A</b>	5.0	4.5	<b>Yes</b>
2016 - 2018		6.5	4.5	
2019		6.5	8.0	
<b>2020<sup>1)</sup></b>		<b>6.5</b>	<b>8.0</b>	

Sources: Government Decisions 1121/2013 and 931/2017

<sup>1)</sup> During the COVID related state of emergency fuel supplier were able to apply for a temporary exemption (4/16/2020 to 5/14/2020) from the blending mandates. For details please see report: *RO2020-0012 Romania Approves New Biofuels Blending Exemptions* available through the FAS report database at <https://gain.fas.usda.gov/#/search>

For additional information about Romania's biofuels sector, please see the [country report](#).

**Slovak Republic**

	<b>Overall Percentage</b> (% cal)	<b>2<sup>nd</sup> Generation Biofuels</b> (% cal)	<b>Double Counting</b>
2018	5.8		<b>Yes</b>
2019	6.9	0.1	
<b>2020</b>	<b>7.6</b>	<b>0.5</b>	
2021	8.0		
2022-2024	8.2	0.75	
2025-2030			

Source: Act no. 309/2009 on Support of Renewable Energy Resources

The latest amendment (no. 362/2019) came into force as of December 1, 2019, and in some parts as of January 2020. The 2017 amendments updated the overall blending percentages and introduced mandates for second generation biofuels, as well as targets for 2020 – 2030. Annex 1 of the Act no. 309/2009 was removed as of January 1, 2018 (by Act no. 268/2017). This eliminated specific blending mandates for individual kinds of biofuels. For mandates applicable prior to 2018, please consult page 11 of our [2017 report](#).

**Slovenia**

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b>
2010	5			<b>Yes</b>
2011	5.5			
2012	6			
2013	6.5			
2014	7			
<b>Since 2015</b>	<b>7.5</b>			

Source: ePure

Since 2015, Slovenia has an overall target of 7.5 percent biofuels in energy content.

**Spain**

	<b>Overall Percentage</b> (% cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting</b>
2013-2015	4.1	4.1	3.9	<b>Yes</b>
2016	4.3	-	-	
2017	5	-	-	
2018	6	-	-	
2019	7	-	-	
<b>2020</b>	<b>8.5</b>	-	-	

Consumption mandates followed a steady upward trend until 2013, when the downward revision of mandates introduced by Royal Decree-Law 4/2013 reduced Spain's biofuels market size.

Royal Decree 1085/2015 removed specific targets and only tepidly increased the consumption targets for the 2016-2020 period. Interestingly, only the 2019 consumption target was set higher than the original mandate established back in 2012, prior to the downward revision of targets carried out in 2013.

The [Royal Decree 235/2018 amending Royal Decree 1597/2011](#) (Spanish language only) classifies raw materials in two groups for double counting purposes:

**Group A** (qualify as advanced): Algae, bacteria, Organic Fraction of Municipal Waste (OFMSW), industrial residues not fit for food or feed use, forest residues and other cellulosic or lingo-cellulosic material, sewage sludge, straw, cobs cleaned of kernels of corn, husks, animal manure, glycerin, tall oil

pitch, palm oil mill effluent and empty palm fruit bunches, bagasse, grape marcs, wine lees, nut shells, and renewable liquid and gaseous fuels of non-biological origin.

**Group B** (do not qualify as advanced): Used Cooking Oils and Animal Fats (Categories I and II according to [Regulation \(EC\) 1069/2009](#)).

This same Royal Decree set January 1, 2019, as the beginning of double counting implementation in Spain. Nevertheless, the double counting was only fully enforced in the second quarter of 2019, once detailed guidelines were issued by a CNMC release (Spanish language only):

[https://www.cnmc.es/sites/default/files/2743975\\_29.pdf](https://www.cnmc.es/sites/default/files/2743975_29.pdf)

For additional information about Spain's biofuel sector, see GAIN Report [SP1723](#) (Biodiesel) and [SP1724](#) (Bioethanol) available through the FAS report database at <https://gain.fas.usda.gov/#/search>.

## Sweden

The Swedish government launched a proposal in 2017 that was implemented on July 1, 2018. In brief, the structure of the system builds on a gradual increase in reduction of greenhouse gas emissions by addition of biofuels in gasoline and diesel. The system shall reduce emissions from diesel with 19.2 percent and 2.6 percent in gasoline from July 1, 2018. The decrease shall then increase over time with the goal of reaching a 40 percent decrease in greenhouse gas emissions by 2030. The system aims at creating more stable long-term rules for producers and distributors. (Source: IEA Country Report).

In June 2017, the Swedish Parliament decided that Sweden should have a fossil-independent vehicle fleet. The goal is to reduce emissions from transport by 70 percent by 2030 and then completely switch to fossil-free traffic. This is aspired by a combination of efficiency increases, electrification, and changing from fossil fuels to biofuels (Source: Svebio).

## United Kingdom

Historic information:

	<b>Overall Percentage</b> (% vol)	<b>Development fuel target</b> (% cal)	<b>Double Counting</b>
2008-2009	2.50		
2009-2010	3.25		
2010-2011	3.50		
2011-2012	4.00		Approved waste and residue feedstocks
2012-2013	4.50		
2013-2017	4.75		
04/15/17 – 04/14/18	4.75		Certain waste or residue feedstocks determined by scheme Administrator; plus energy crops and renewable fuels of non-biological origin; also development fuels
04/15/18 – 12/31/18	7.25		
2019	9.180	0.109	

Current and future blend mandates:

	<b>Overall Percentage</b> (% cal)	<b>Development fuel target</b> (% cal)	<b>Double counting</b>
<b>2020</b>	<b>10.637</b>	<b>0.166</b>	<b>Certain waste or residue feedstocks determined by scheme Administrator; plus energy crops and renewable fuels of non-biological origin; also development fuels</b>
2021	10.679	0.556	
2022	10.714	0.893	
2023-2031	Increasing each year in 0.025 percent increments by volume until:	Increasing each year in 0.23 percent increments by volume until:	
2032	10.959	3.196	

New blend mandate legislation and accompanying policy came into force in the UK on April 15, 2018. This aims to double the use of renewable fuels in the transport sector in the next 15 years. A new requirement for blending “development fuel” from 2019 is outlined in the table above. This refers to fuel made from certain sustainable wastes or residues, excluding segregated oils and fats such as UCO and tallow or a renewable fuel of non-biological origin (RFNBO). A development fuel must also be one of the following fuel types: hydrogen, aviation fuel, substitute natural gas (i.e. renewable methane) or a fuel that can be blended to give 25 percent or more renewable fraction in the final blend while still

meeting fuel technical and quality standards. The UK has capped the maximum amount of renewable transport fuel that can be derived from relevant (food) crops. This will be a maximum of 4 percent by volume in the period 2018 to 2020, and then must reduce incrementally to reach 2 percent in 2032.

As part of the new landscape for biofuels in transport, the UK government will work with industry on the potential rollout of the E10 blend. No time line has been given as of yet.

More information: [Renewable Transport Fuel Obligation Guidance: year 11](#) and [Renewable Transport Fuel Obligation Guidance -2020](#)

#### **Related reports:**

The following related report can be accessed through the FAS report database at <https://gain.fas.usda.gov/#/search>

#### **Biofuels Annual | Biofuels | The Hague | European Union | July 16, 2019 | E42019-2001**

The EU set a ten percent target for renewable energy use in transport for 2020, and raised the target to 14 percent in 2030, with advanced biofuels counting double to the target. Taking double-counting into account, biofuels accounted for 7.1 percent of energy use in transport in 2018 and are forecast to increase to 7.3 percent in 2019, mainly supported by elevated imports. Further increase for 2019 is hampered by lagging domestic production of biodiesel in particular. The EU agreed to a seven percent cap for food-based biofuels, which is forecast at 4.6 percent in 2019. For advanced, non-food based biofuels, the EU set a climbing target of 0.2 percent in 2022 reaching 3.5 percent in 2030. Use of such advanced biofuels, made mostly from agricultural, forestry and municipal waste, is estimated at currently 0.2 percent and forecast to rise mainly based on tall oil. The EU set a limit of 1.7 percent by 2030 for advanced biofuels produced with waste fats and oils...

#### **Biofuel Mandates in the EU by Member State in 2019 | Biofuels | Berlin | European Union | June 27, 2019 | E42019-2005**

This report provides an overview on the biofuel use mandates in the various EU-28 member states. It supplements the EU-28 Biofuel Annual Report 2019.

#### **Attachments:**

No Attachments.