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## EU-28

**Post:** Berlin

### **Biofuel Mandates in the EU by Member State in 2019**

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Biofuels

Trade Policy Monitoring

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**Report Highlights:**

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.

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### **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 by 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 June 21, 2019. 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 Renewable Energy Directive II (RED II)

In June 2018, after two years of debate, the European Union adopted the new RED for the period 2021-2030 (RED II); 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%	-	-
After October 2015	60%	-	-
After January 2021	65%	70%	70%
After January 2026	65%	70%	80%

**Mandates by Member State:**

In order to provide context, current, expired, and future mandates are listed.

**\*For easy reference, mandates applicable in 2019 are bolded. \***

**Austria**

	<b>Overall Percentage</b> (energy content, % cal)	<b>Biodiesel</b> (% cal)	<b>Bioethanol</b> (% cal)	<b>Double counting*</b>
<b>Since 2012</b>	<b>5.75</b>	<b>6.3</b>	<b>3.4</b>	<b>Yes</b>
2020	8.75			

Source: Fuels Order 2012

\*Double counting: Waste materials and residual products from agricultural and forestry production including fisheries and aquaculture, residues from processing, cellulosic non-food materials or lingo-cellulosic materials

**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>
<b>From January 1, 2017</b>		<b>6.0</b>	<b>8.5</b>	
From January 1, 2020		8.5	8.5	

Source: [Law of July 7, 2013](#); [Law of July 21, 2017](#)

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:

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

\* Since September 1, 2018, the mandate is split into five percent conventional first generation biodiesel and one percent second generation biodiesel.

## Croatia

	Overall Percentage (% cal)	Biodiesel	Bioethanol	Double counting
2014	3.18	2.83	0.35	Second generation and waste based biofuels
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	
<b>2019</b>	<b>7.85</b>	<b>6.61</b>	<b>0.98</b>	
2020	8.81	7.49	1.00	

Source: Act on Biofuels for Transport (Official Gazette 65/09, 145/10, 26/11 and 144/12)

[http://narodne-novine.nn.hr/clanci/sluzbeni/2010\\_04\\_42\\_1066.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2010_04_42_1066.html)

[http://narodne-novine.nn.hr/clanci/sluzbeni/2010\\_11\\_125\\_3243.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2010_11_125_3243.html)

## Czech Republic

Amendment to the Act on Air Protection introduced double counting as of 2019 and allowed the use of LPG (liquefied petroleum gas), CNG (compressed natural gas), liquefied natural gas (LNG), high-percentage and pure biofuels, electricity, and hydrogen, when meeting the GHG emissions reduction goal.

	<b>Shares of biofuels and renewable electricity in transportation on total consumption (% cal)</b>	<b>Obligation to reduce total GHG emissions by <sup>1), 5)</sup> (%)</b>	<b>Biodiesel <sup>1), 6)</sup> (% vol)</b>	<b>Bioethanol <sup>1), 6)</sup> (% vol)</b>	<b>Double counting <sup>1)</sup></b>
2014 – 2016		2	<b>6</b>	<b>4.1</b>	No
2017		3.5			
2018		3.5			
<b>2019</b>		<b>3.5</b> <sup>3), 4)</sup>			Yes <sup>2)</sup>
2020	10	<b>6</b> <sup>3), 4)</sup>			

<sup>1)</sup> According to act No. 201/2012 coll., on air protection, as amended by act No. 172/2018 coll.

<sup>2)</sup> 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).

<sup>3)</sup> Double counting possible for: liquefied petroleum gas (LPG), compressed natural gas (CNG), liquefied natural gas (LNG), high-percentage blends of bio- and fossil fuels and pure biofuels, electricity, and hydrogen.

<sup>4)</sup> To take into account upstream emission reduction (UER) of greenhouse gases claimed by a supplier – max. 1 %.

<sup>5)</sup> Penalty – failing to meet the obligations (reduce total GHG emissions) is sanctioned 10 CZK per kg CO<sub>2</sub>eq of the reduction amount that was not achieved

<sup>6)</sup> Penalty – 40 CZK per liter of non-delivered certified biofuel

## Denmark

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

Source: Stratas

\* 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			
<b>2019</b>	<b>18</b>			
2020 and onwards	20			

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 of which up to 0.25% double-counted bioethanol	7.7 of which up to 0.35% double-counted biodiesel	<b>Cellulosic biofuels and waste biofuels up to the maximum values stated on the left</b>
<b>Since 2017</b>	<b>7.5</b> <b>of which up to 0.3%</b> <b>double-counted</b> <b>bioethanol</b>	<b>7.7</b> <b>of which up to 0.35%</b> <b>double-counted</b> <b>biodiesel</b>	

Since 2014, advanced biofuels have been double counted. The quantity of advanced biofuels that can be double counted is limited in order to favor biofuels produced in France. (If it was not limited, this measure could lead to an increase in imports of advanced biofuels at the expense of domestic “conventional” biofuels.)



## Germany

	Overall Percentage (% cal) <sup>1)</sup>	% GHG savings* (BImSchG) <sup>1)</sup>	Cap on crop based biofuel <sup>3)</sup> (% cal)	2 <sup>nd</sup> Generation (% cal) <sup>3)</sup>	Double counting <sup>2)</sup>
2009	5.25 overall 4.4 biodiesel 2.8 bioethanol	-			-
2010	6.25 overall 4.4 biodiesel 2.8 bioethanol				-
2011-2014					
2015-2016		3.5			No
2017		4.0			
2018-2019					
2020		6.0	6.5	0.05 a)	
2021				0.1 b)	
2022-2023				0.2 c)	
2025 and onwards				0.5	

Sources:

1) § 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)2) § 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)3) § 13 + 14 of the 38<sup>th</sup> 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)

\*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

a) Companies that put on the market 20 PJ or less of biofuels in the previous year are exempted

b) Companies that put on the market 10 PJ or less of biofuels in the previous year are exempted

c) 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 <sup>1</sup> :	Biodiesel: 19 Euro per GJ underallocated Bioethanol: 43 Euro per GJ underallocated
2015 <sup>2</sup>	0.47 Euro per kg CO2 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	7	-	
<b>2019</b>		<b>7</b>	<b>1</b>	
2020		7	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 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 2018 and 2019. The quota for 2020 will be published by April 2020 and is currently forecast to increase from 7 to 10 percent.

## Hungary

Hungary is committed to reaching 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.

According to [Hungary's National Renewable Energy Action Plan](#), by 2020, 56.8 percent (304 ktoe) of renewable energy used in transport should derive from bioethanol and 37.8 percent (202 ktoe) from biodiesel.

	Biodiesel (% cal)	Bioethanol (% cal)	Double counting

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	No
<b>1/1/2019-12/31/2020</b>	<b>6.4</b>	<b>6.4</b>	<b>No</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
- Double counting: §2 (4) of CXVII/2010 Act on promoting the use of renewable energy and the reduction of greenhouse gas emission of energy used in transport
- Hungary's National Renewable Energy Action Plan

**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	UCO, Cat 1 Tallow, Spent Bleached Earth (SBE), Palm Oil Mill Effluent (POME), Whey Permeate
<b>2019 and onwards</b>	<b>11.11</b>	<b>10</b>	<b>UCO, Cat 1 Tallow, Spent Bleached Earth (SBE), Palm Oil Mill Effluent (POME), Whey Permeate</b>

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

<http://www.nora.ie/biofuels-obligation-scheme.141.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
<b>2019</b>	<b>8</b>	<b>0.2</b>	<b>0.60</b>	<b>0.20</b>
2020	9	1.0	0.68	0.23
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			
2017	7.75			
2018	8.5	0.6	3	
<b>2019</b>	<b>12.5</b>	<b>0.8</b>	<b>4</b>	
2020	16.4	1.0	5	

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).

## 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			
<b>2019</b>	<b>8</b>			
2020	8.5			

FAS Warsaw

In April 2019, the Polish Ministry of Energy presented a draft amendment to the act on bio-components and liquid biofuels, which will set the National Indicative Target (NIT) for 2020-2022. If adopted, the NIT for 2020, '21, and '22 will be 8.5, 8.6, and 8.7 percent, respectively. However, the minimum level of compliance to this obligation amounts to 80 percent only, while a substitution fee can settle the remaining part. The Ministry explained that these solutions are forced by the market situation as legal fuel consumption has increased in recent years to an extent that there is not enough infrastructure for mixing fuels with bio-components.

## 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. For the moment, the 2020 mandate remains unchanged.

	<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	-	-	
<b>2019</b>	<b>7</b>	-	-	
2020	10			

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 [SP1722](#).

## 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	
<b>2019</b>		<b>6.5</b>	<b>8.0</b>	
2020	10	6.5	8.0	

Sources: Government Decisions 1121/2013 and 931/2017

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>
<b>2019</b>	<b>6.9</b>	<b>0.1</b>	
2020	7.6	0.5	
2021	8		
2022-2024	8.2		
2025-2030		0.75	

Source: Act no. 309/2009 amended by Act no. 309/2018 on Support of Renewable Energy Resources

Slovakia amended its Act no. 309/2009 on Support of Renewable Energy Sources. The amendment no. 181/2017 came into force as of August 1, 2017 and 309/2018 came into force as of January 2019. The 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: Stratas

## 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	N/A
2016	4.3	-	-	
2017	5	-	-	
2018	6	-	-	
<b>2019</b>	<b>7</b>	-	-	<b>Yes</b>
2020	8.5	-	-	

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 consumption target proposed for 2019 will be 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 lignocellulosic 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).

For additional information about Spain's biofuel sector, see GAIN Report [SP1723](#) (Biodiesel) and [SP1724](#) (Bioethanol).



## 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).

## United Kingdom

Historic information:

	<b>Overall Percentage</b> (% vol)		<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		

Current and future blend mandates:

	<b>Overall Percentage</b> (% cal)	<b>Development fuel target</b> (% cal)	<b>Double counting</b>
<b>2019</b>	<b>9.180</b>	<b>0.109</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>
2020	10.637	0.166	
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](#)

## 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
FAME =	Fatty acid methyl ester
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

**Related reports:****EU Biofuels Annual 2019**

This report will be released in July 2019 and can then be accessed through:

<https://gain.fas.usda.gov/Pages/Default.aspx>

**EU Reaches a Political Agreement on Renewable Energy|Biofuels Trade Policy Monitoring Agriculture in the News|Brussels USEU|Belgium EU-28|6/22/2018**

On June 14, 2018, negotiators from the Council, the European Parliament and the Commission found a political agreement on the next iteration of the Renewable Energy Directive (RED II). The directive is part of the Clean Energy for All Europeans package, proposed by the European Commission on November 30, 2016. The deal will now have to be formally approved by the European Parliament and the EU Council before being published in the EU Official Journal and entering into force. Although the text i...

[EU Reaches a Political Agreement on Renewable Energy\\_Brussels USEU\\_Belgium EU-28\\_6-19-2018](#)

**EU Biofuels Annual 2018|Biofuels|The Hague|EU-28|7/10/2018**

On June 14, 2018, an agreement on the successor to the Renewable Energy Directive (RED) was reached for the period of 2021-2030. The RED II sets a limit of 7 percent on the blending of conventional (food based) biofuels, well above the blended 4.1 percent forecast for this year. This is good news for the domestic biofuels sector, but current imports of biodiesel and potentially bioethanol are still a threat for the domestic producers. Based on the readiness of the technology and the double c...

[Biofuels Annual\\_The Hague\\_EU-28\\_7-3-2018](#)

**Biofuel Mandates in the EU by Member State in 2018|Biofuels Trade Policy Monitoring|Berlin|EU-28|6/22/2018**

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.

[Biofuel Mandates in the EU by Member State in 2018\\_Berlin\\_EU-28\\_6-19-2018](#)