

# BIOFUELS MATRIX

JUNE 2016



| COUNTRY        | TAX ADVANTAGE   |   | MANDATORY BLENDING  | MANDATORY BLENDING PLAN   | ADVANCED BIOFUELS   |   | COMMENTS  | LEGISLATION  |
|----------------|---|---|---|---|---|---|---|--|
|                | Biodiesel   | Bioethanol  |   |   | Limitations of bio components   | Bio components multiplication factor  |   |  |
| BELGIUM        | No more tax incentives  | No more tax incentives  | Mandatory blending is regulated by the formula: "max specification in standard - 1%". Diesel: 7%-1%= 6% E5: 5%-1% = 4% E10: 10%-1% = 9%<br><br>E10 will probably enter the market on 1.1.2017. All biofuels must be proven sustainable and entered into a Belgian database which will determine its sustainability. | Will be evaluated according to the evolution of the standards (EN590 and EN228). Furthermore, the blending obligation for gasoline will be 8.5% from 1.1.2017 which will force the entry of E10 on the market.  | Legislation permits the limited use of advanced biofuels with an agreement by the government on a case by case basis. Legislation permits the limited use of multiple counting of biofuels with an agreement by the government on a case by case basis.   | Second generation or other biofuels with multiplication factors also have to be approved by the government on a case by case basis. Again, limited quantities will be approved and the blending is also limited to 1.5% (nominal!) This means for example with double counting, that only 0.75% will be allowed physically.   | Belgian legislation is very complex and involves (worst-case scenario) 3 administrations: economic affairs, environment and finance. Furthermore, the legislation is very focussed on physical blending and allows very few administrative transfers. This leads to a significant limitation of business with other EU countries. This is why the Belgian operators' advocacy is a "mandatory CO2 emission reduction on transport fuels, not regulated by the Member States but by the EU". Due to legislative uncertainty, legislation has changed in Q4 2015, permitting automatically all biofuels mentioned in Annex III of the RED (on case by case basis). This will lead to more flexibility in physical blending as well as in administrative transfers.<br><br><b>Legislation on advanced biofuels:</b> There is no specific legislation for advanced biofuels but current legislation allows it under certain conditions. |  |
| CROATIA        | No tax incentives. Pure biodiesel, B100, has 100% tax incentive (excise duty = 0).  | No tax incentives   | Max. 7% vol FAME in diesel; Max 10% vol ethanol in gasoline, according to the Biofuels quality bylaw.   | The National action plan stipulates the national targets for biofuels (for distributors) until 2020.<br><br>Percentage of biofuels (energy share)<br>2013: 1.45%<br>2015: 3.31%<br>2017: 5.99%<br>2019: 8.23%<br>2020: 9.18%  | Advanced biofuels are not currently regulated by the Croatian legislation. A new Law on renewable energy and highly effective cogeneration was adopted in 2015 (entered into force from 2016), it was originally meant to include amendments on advanced biofuels. Due to the complexity of the issue and some Ministry's priorities, it was decided that advanced biofuels and transmission of ILUC will be done through the revision of the Act on Biofuels for Transport.  | By 31 January of each year, the supplier must report to the Ministry of Economy the fulfillment of its obligation for the previous year. If the supplier has not fulfilled the obligation, he is obliged to put on the market the obligatory amount for the current year plus the amount which had not been put in the previous year.<br>If the obligation is not fulfilled for two consecutive years, distributors will pay an environmental fee of 0.088 HRK (0,012 €/MJ), and an administration fine of 10,000 - 150,000 HRK (1,300-20,000€).<br>If the obligation is not fulfilled for two consecutive years, distributors will pay an environmental fee of 0.088 HRK (0,012 €/MJ), and an administration fine of 10,000 - 150,000 HRK (1,300-20,000€). | The law on Biofuels for Transportation was adopted in June 2009, and has since been amended several times. The National Action Plan (2011-2020) adopted in 2011 stipulates the national targets of Biofuels on the Croatian market for the next 10 years. Distributors are obliged to put on the market quantities according to the National Action Plan. As of 1 July 2013 biofuels placed on the Croatian market have to comply with Sustainability requirements according to the Renewable Energy Directive 2009/28/EC. Biofuels production was subsidised according to the Decision of State Aid Agency Program until 1 January 2015, after that biofuels prices are left to the market conditions.   |  |
| CZECH REPUBLIC | No tax incentives for mandatory blended products. B30 and B100 has a tax advantage. The tax advantage was decreased since 1.1.2016. The result is that B30 and B100 have disappeared from the market (too expensive). | No tax incentives for obligatory blending, light tax advantage for E85. Tax advantage was decreased since 1.1.2016. The result is that E85 has disappeared from the market (too expensive). | Yes (in % of total volume placed on the market). However, "high" blends (B30, B100, E85) do not count towards bio obligation. Therefore, in practice, there is an informal blending obligation per litre.   | Diesel: 6.5%<br><br>Gasoline: 4.1%  | Not regulated   | Not regulated   | Changes in Air pollution law and excise duty law dated 1.1.2016 caused big changes on the market. There are no more high bio blends (B30, B100, E85) on sale because of their price.  | All obligations are set by "Air pollution" law no. 86/2002.  |
| ESTONIA        | No tax advantage  | No tax advantage  | Yes   | Proposed bio obligation based on energy content:<br>1.5.2017: 3.3% (in each litre)<br>2018: 6.5% (in each litre)<br>2019: 8% (6.5% in each litre, rest of the volume 1.5% can be traded)<br>2020: 10% (6.5% in each litre, rest of the volume 3.5% can be traded)   | No limitations.   | Yes, in case of biofuels made from waste, residues, non-food cellulosic material, ligno-cellulosic material, the multiplication factor is 2.  | Currently not regulated. Draft version of the law is ready and will be sent to the Parliament before summer 2016. First obligation will apply to gasoline 95 and diesel since 1.5.2017. Gasoline 98 will be biofree.  | <b>Legislation on advanced biofuels:</b> The law is in draft version.  |
| FRANCE         | 2013: 8 €/hl<br>2014: 4.5 €/hl<br>2015: 3 €/hl<br>2016: 0 €/hl to be confirmed  | 2013: 14 €/hl<br>2014: 8.25 €/hl<br>2015: 7 €/hl<br>2016: 0 €/hl to be confirmed  | Yes   | Diesel:<br>2013: 7% (incl. max 0.7% waste biodiesel)<br>2014: 7.7%<br>2015: 7.7% energy content (including 0.35% (mandatory) of double counted products as TME 1&2 and UCOME)<br>Gasoline:<br>2013: 7.0%<br>2014: 7.0% (incl. max 0.5% waste bioethanol (in process of approval by a law))<br>2015: 7.0% energy content (incl. max 0.25% waste bioethanol double counted as an option). |   |   | From 2014 on:<br>Diesel must contain a minimum of 7.70% bio component: > 7.00% of biodiesel/HVO produced from vegetable oils, > 0.70% of biodiesel produced from double-counted feedstocks like UCOME and TME cat 1&2.<br>Gasoline: Obligation of 7.00% split as flows: > 6.50% mandate for food-crop based ethanol, > 0.25% for double-counted ethanol (cellulosic, wine residues).<br>2014 Energy Tax:<br>Diesel: 80.27 €/m³<br>Gasoline: 81.49 €/m³<br>2015 Energy Tax:<br>Diesel: 68 €/m³<br>Gasoline: 70 €/m³  | <b>Legislation on advanced biofuels:</b> none  |
| GERMANY        | From 2013: 2.14 ct/l / no tax advantage on blend  | E 85: 100% for ethanol part / no tax advantage on blend   | Yes   | From 2015, a greenhousegas-saving quota:<br>2015-2016: 3.5%<br>2017-2019: 4.0%<br>From 2020: 6%.<br>From beginning of 2010 sustainability criteria have to be fulfilled.  | The use of animal fats is not allowed.  | There is no multiple counting since introduction of the decarbonisation system  | Energy Tax:<br>Diesel: 47.04 ct/l<br>Gasoline: 65.45 ct/l.<br>A German regulation for sustainability of biofuels came into force from 1.1.2011.<br><br>For detailed information:<br><a href="http://www.ble.de/EN/02_Control/05_SustainableBiomassProduction/SustainableBiomassProduction.html">http://www.ble.de/EN/02_Control/05_SustainableBiomassProduction/SustainableBiomassProduction.html</a><br><br>Since 2012 biofuels which are made from animal fats or animal oil (total or partly) are not counted towards the bio quota.   | Obligation of yearly turnover. It is possible to assign surplus in the following year. If there is a shortage, it is allowed to buy "surplus" of another party, if not a penalty is payable.<br><br><b>Legislation on advanced biofuels:</b> There is currently no legislation in Germany. The new EU directives will be implemented by 1.1.2017, but there is no draft available yet.   |
| HUNGARY        | Diesel must contain minimum 4.9% energy content bio additive (FAME), no tax advantage on bio part.  | Gasolines must contain minimum 4.9% energy content (ethanol), no tax advantage on bio part. E85 is freely available in Hungary, there is no tax on the Ethanol part.                        | Possible, but just for tax warehouses, if a special licence has been granted.   | The energy content (4.9%) will remain until 1.1.2018.   | Not regulated   | For biofuel components made from waste the multiplication factor is 2.  | The bio ratio case of diesel and gasolines is calculated on a yearly average basis (sold quantity). If a distributor cannot reach the minimum energy content level, the penalty for the missing MJ would be 35 HUF/MJ (ca. 12 ct/MJ), according to the current regulation.  | <b>Legislation on advanced biofuels:</b> none  |
| IRELAND        | No tax incentives   | No tax incentives   | Yes   | 2010: 5.75%<br>2020: 10%  | Not regulated   |   | From 1.7.2010, required 4.1666% (by volume) of the motor fuels placed on the market in Ireland must be produced from renewable sources (Ethanol and Biodiesel). This was increased to 6.383% (by volume) as of 1.1.2013.<br>Also from 1.7.2010 there was a Biofuel levy of 2.00 cent per litre payable on all sales of biofuel into same market.  | The Biofuel Obligation Scheme (BOS) was given effect in law by the Energy (Biofuel) Obligation and Miscellaneous Provisions Act 2010 (2). The National Oil Reserves Agency (NORA) is the body charged with administering the BOS. Under the terms of the National Oil Reserves Agency Act 2007 (Returns and Biofuel Levy) Regulations 2010 a Biofuel Levy is payable on the sales of all Biofuels into the market.   |
| ITALY          | No tax incentives   | No tax incentives   | Biodiesel: blending up to 7% in retail market. Blending with 25% for the wholesale market.<br><br>Bioethanol: blending up to 10% in retail market. Blending with 25% for the wholesale market   | 2015: 5%<br>2016: 5.5%<br>2017: 6.5%<br>2018: 7.5% of which at least 1.2% of advanced biofuels<br>2019: 9% of which at least 1.2% of advanced biofuels<br>2020/2021: 10% of which at least 1.6% of advanced biofuels<br>from 2022: 10% of which at least 2% of advanced biofuels  | Biofuels produced from UCO and animal fats are not considered as advanced biofuels.   |   |   | Mandatory blending legislation reference is Decree 10.10.2014  |
| LATVIA         | No tax incentive up to 100% RME content. 100% bio - 100% tax incentive.   | No tax incentive up to 70% Bioethanol content. Bioethanol content 70-85% - tax incentive approximately 70% from original excise.  | Yes   | 2010: 5.75% (energy basis)<br>2020: 10% renewables (not only biofuels) in transportation.<br><br>Mandatory blending: gasoline with RON 95 or more but less than 98 - 4.5-5.0%, gasoline with RON 98 and more - no bio blending, diesel - 4.5-5.0% with rapeseed methyl ester (RME)(excluding Arctic diesel with 0,1,2,3,4 classes - without bio).                                       | Not regulated   |   | Currently not allowed as biofuel for mandatory blending.  | It is planned that legislation on advanced biofuels will be adopted in 2016 and come into force as of 2017-2018.   |
| NETHERLANDS    | Above 10% blending on energy basis  | Above 10% blending on energy basis  | Until 2014 with minimum 3.5%  | 1.1.11: 4.25% (energy basis)<br>1.1.12: 4.5%<br>1.1.13: 5.0%<br>1.1.14: 5.5%<br>1.1.15: 6.25%<br>1.1.16: 7.0%<br>1.1.17: 7.75%<br>1.1.18: 8.5%<br>1.1.19: 9.25%<br>1.1.20: 10% (conventional: 5.0%, advanced: 5.0%) to be revised in April 2016; blending accounts for all energy forms for transport (RED) including electricity   | The double counting applies only for those biofuels that are produced from feedstocks that are mentioned in the Dutch Regulation Renewable Energy in Transport in table 1, 2 or 3 of Annex 2 of the Regulation ( <a href="http://wetten.overheid.nl/BWBR0035829/2016-01-01#Bijlage2">http://wetten.overheid.nl/BWBR0035829/2016-01-01#Bijlage2</a> ):<br>• Table 1: process waste or process residues, e.g. animal fats cat. 1 and 2, used cooking oil, raw glycerin, waste wood;<br>• Table 2: wastes or residues from agriculture, aquaculture, fishery or forestry, eg. straw, peelings, husks, pits and kernels;<br>• Table 3: non-food cellulosic material and ligno-cellulosic material, such as virgin wood and short rotation coppice.<br><br>Article 3.8 of the Regulation describes which biofuels can be double counted: <a href="http://wetten.overheid.nl/BWBR0035829/2016-01-01#Paragraaf3_Artikel3.8">http://wetten.overheid.nl/BWBR0035829/2016-01-01#Paragraaf3_Artikel3.8</a> |   | Fame is blended at terminals.   | Obligation of yearly turnover (Dutch volume sold including excise duty). System of Renewable Energy Units (HBE) <a href="https://www.emissionsauthority.nl/topics/renewable-energy-units-hbe">https://www.emissionsauthority.nl/topics/renewable-energy-units-hbe</a><br><br>Trading system: parties can trade shortage or surplus to fulfil own obligation.   |
| SLOVAKIA       | 100% until 5 vol-% blend  | 100% until 7.05 vol-% blend of ETBE   | Yes   | Selling every litre with Vol-5% (accumulated)<br>2006: 2% (energy basis)<br>2007/2008: 2%<br>2009: 3.4%<br>since 2010: 5.75%  | Not regulated   |   | There is no ethanol in Slovakia but ETBE.   | Up to 5 % vol for Biodiesel and 7.05 % volume for ETBE blending is without tax, above this percentage tax is payable. The excise duty reduction for biofuels is granted only to companies that operate as tax warehouses.<br><br>Mandatory blending is calculated on the basis of the energy content of the total quantity of petrol and diesel fuels placed on the market.  |
| SLOVENIA       | Biofuels for transport fuels in their pure form are exempt from excise duty. No tax incentives for blends.  | Biofuels for transport fuels in their pure form are exempt from excise duty. No tax incentives for blends.  | No for each litre / yes for year quantity   | 2008: 3.0% (energy basis)<br>2009: 4.0%<br>2010: 5.0%<br>2011: 5.5%<br>2012: 6.0%<br>2013: 6.5%<br>2014: 7.0%<br>since 2015: 7.5%   | Not regulated   |   | The proportion of the annual quantity of biofuel may be reduced if the price of one or more of the highest daily biofuel prices on the stock exchange exceeds the amount of the daily stock exchange price of the mineral fuel with which the biofuel is mixed and the excise duty for that mineral fuel.   | Since 1.9.2012 biofuels placed on the Slovenian market have to comply with Sustainability requirement according to the Renewables Directive 28/2009/EC.  |
| SPAIN          | No tax incentives since 1.1.2013.   | No tax incentives since 1.1.2013.   | Compulsory annual targets since 2009.   | Since 1.1.2016, there are no individual targets for gasolines and diesel. Compulsory annual targets are:<br>2016: 4.3%<br>2017: 5%<br>2018: 6%<br>2019: 7%<br>2020: 8.5%<br><br>7% cap on consumption for transport purposes in 2020 of biofuels produced from certain food crops and crops on agricultural land (implementation of Directive (EU)2015/1513)                            | Before 6.4.2017, an indicative target shall be fixed for advanced biofuels as well as the list of such biofuels and the multiplying factor of the energy contents of each of them as for the compulsory target.   |   | Since 1.1.2016, sustainability requirements are fully applicable. A mass balance system is being applied to reported biofuels volumes, allowing traceability of sustainability characteristics. The introduction of the mass balance system has substantially complicated the reporting scheme and increased the number of cross-check errors, requiring yet more time and effort from companies. The Spanish certification system has become a questionable costly bureaucracy. The biodiesel quotas that are being applied since May 2014 have led to supply difficulties and higher prices. There is uncertainty about its extension beyond April 2016. Double counting is still on the way to being approved.   | Real Decreto 1085/2015 & Orden Ministerial 2877/2008; Real Decreto 1597/2011<br><br>The obligation involves those that are required to maintain security stocks, that is, basically wholesale oil companies (sales between them excluded).<br><br>Fulfillment of the obligation is guaranteed by means of a certification system (one certificate per ton). The possibility exists to buy and sell certificates as well as a limited possibility to transfer certificates to the following year. Biofuels must be blended within the EU in order to qualify for certificates. High penalties are imposed in case legal percentages are not reached. Involved companies are the only entities subject to penalties even if they have acted properly and are not responsible for the non-fulfilment of requirements. |
| SWITZERLAND    | 0%  | 0%  | n.s.  | n.s.  | Not regulated   |   | In the foreseeable future there will be no marketable production sites for biodiesel and bioethanol in Switzerland. Only by special permission pilot production sites with capacities of up to 5,000 MT/a are allowed, total capacity for those sites limited to 15,000 MT/a. There already are two pilot production plants but as yet there is no production going on for lack of investors.   | From 01.07.2008 Biofuels according to EC-Directive 2003/30/EC are exempt from mineral oil tax if they comply with certain sustainability criteria and non-competitiveness with (agricultural) foodstuff production. Biofuels from rape seed or sugar cane have to provide evidence of a positive ecological balance. There will be no tax exemption for Biofuels from palm oil, soy or crops.  |
| UNITED KINGDOM | 20p /litre duty derogation on UCOME expired 31.3.2012   | no tax incentives   | Blenders are in a position to determine themselves how to meet the obligation % using varying quantities of biodiesel / bioethanol by choice.   | 2009/10: 3.25%<br>2010/11: 3.5%<br>2011/12: 4.0%<br>2012/13: 4.50%<br>Since 2013/14: 4.7501%  | Not regulated   |   | 30 ppy buy out price (penalty).<br><br>UCOME and category 1 TME qualify for double counting.<br><br>Biofuels must be independently audited as complying with acceptable sustainability standards (eg ISCC) before certificates are awarded.<br><br>Non-sustainable biofuels do not receive certificates AND are classed as mineral fuel for the purposes of calculating obligation. Gas Oil for use in non-road mobile machinery and inland waterway vessels is now also obligated at the same rate as petrol and diesel (4.7501%).   | The renewable element of any partly renewable fuel (eg ETBE) is rewarded with certificates at the defined percentage (for instance, 37% of ETBE is classed as renewable and rewarded accordingly).   |

n.s. = not specified  
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