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## ENERGY

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## Biofuels

### [Sustainability criteria \(/energy/en/topics/renewable-energy/biofuels/sustainability-criteria\)](/energy/en/topics/renewable-energy/biofuels/sustainability-criteria)

EU sustainability criteria for biofuels and bioliquids help guarantee real carbon savings and protect biodiversity.

### [Land use change \(/energy/en/topics/renewable-energy/biofuels/land-use-change\)](/energy/en/topics/renewable-energy/biofuels/land-use-change)

New rules to prevent that cultivation of biofuels on agricultural land can displace food production to previously non-agricultural land such as grasslands.

### [Voluntary schemes \(/energy/en/topics/renewable-energy/biofuels/voluntary-schemes\)](/energy/en/topics/renewable-energy/biofuels/voluntary-schemes)

Voluntary schemes certify whether biofuels comply with the EU's sustainability criteria.

### [Biofuels for aviation \(/energy/en/topics/biofuels/biofuels-aviation\)](/energy/en/topics/biofuels/biofuels-aviation)

The use of biofuels as a renewable alternative in airliners can help reduce the EU's carbon footprint.



## Overview

Biofuels are liquid or gaseous transport fuels such as biodiesel and bioethanol which are made from biomass. They serve as a renewable alternative to fossil fuels in the EU's transport sector, helping to reduce greenhouse gas emissions and improve the EU's security of supply. By 2020, the EU aims to have 10% of the transport fuel of every EU country come from renewable sources such as biofuels. Fuel suppliers are also required to reduce the greenhouse gas intensity of the EU fuel mix by 6% by 2020 in comparison to 2010.

## Biofuels and sustainability

For biofuels to reduce greenhouse gas emissions without adversely affecting the environment or social sustainability, they must be produced in a sustainable way. The EU therefore sets rigorous sustainability criteria for biofuels and bioliquids (</energy/node/73>).

Companies who want the biofuels they grow or use to be eligible for government support or count towards mandatory national renewable energy targets, must comply with these sustainability criteria. They can prove their compliance through national systems or so-called voluntary schemes (</energy/node/74>) recognised by the European Commission.

## Land use change

Growing biofuels on existing agricultural land can displace food production to previously non-agricultural land such as forests. Because trees absorb CO<sub>2</sub> from the atmosphere, removing them for biofuel production may result in an increase in net greenhouse gases instead of a decrease.

To combat indirect land use change (/energy/node/75), the European Commission has proposed amending biofuels legislation, specifically the Renewable Energy Directive (<http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0028>) and the Fuel Quality Directive (<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0030>).


## Emissions from biofuels cultivation – national reports

Emissions resulting from biofuels cultivation vary greatly depending on the soil and climate of different areas. To determine which areas are best suited for biofuel production, EU countries conducted assessments of all their agricultural land.

The European Commission also examined the feasibility of drawing up such reports for countries outside the EU. It found that while such reports were desirable, they were currently not feasible due to the inability to confirm the accuracy of non-EU countries' emissions calculations.

EU country reports assessed by the Commission (/energy/sites/ener/files/documents/2009\_0028\_19\_2\_emissions.zip) 

EU country reports still being analysed by the Commission

(/energy/sites/ener/files/documents/2009\_0028\_19\_2\_emissions\_being\_analysed.zip) 

Report on the feasibility of drawing up lists of areas in third countries with low greenhouse gas emissions from cultivation [COM(2010) 427] (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0427:EN:NOT>)

## Biofuels for aviation

Biofuels can serve as a renewable alternative to jet fuel in airliners but are currently not produced on a large commercial scale for this purpose. To help spur the commercial development of biofuels for aviation, the European Commission and its partners have launched the European Advanced Biofuels Flightpath (/energy/node/76).

## Quality standards for biofuels

Working together with the European Committee for Standardisation (CEN), the EU aims to develop and improve the technical quality standards of biofuels and biofuel blends for vehicle engines. The practical work is carried out by CEN Technical Committee 19, consisting of experts from the automotive and fuel industries, biofuels producers, and other stakeholders.

European Committee for Standardisation (CEN) Technical Committee 19 ([http://standards.cen.eu/dyn/www/f?p=204:7:0::::FSP\\_ORG\\_ID:6003&cs=1FAF2D8F6A6FE92BF5C85E6AAFDDBDD16D](http://standards.cen.eu/dyn/www/f?p=204:7:0::::FSP_ORG_ID:6003&cs=1FAF2D8F6A6FE92BF5C85E6AAFDDBDD16D))

## Related legislation

Renewable Energy Directive (2009/28/EC) (<http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009L0028>)

Fuel Quality Directive (2009/30/EC) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0030>)

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