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# Biofuel Statistics



## Notes and Definitions Biofuel Statistics

This section provides notes and definitions for Biofuel Statistics and includes:

- Information on sources
- Information on “accuracy”.
- Definitions.
- General information on the tables including links to background information.

### FURTHER INFORMATION

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## 1 Sources

Most of the statistics are derived from data held by Renewable Transport Fuels Obligation team, which administers the Renewable Transport Fuels Obligation in the United Kingdom.

The Renewable Transport Fuels Obligation (RTFO) requires suppliers of fossil fuels to ensure that a specified percentage of the road fuels they supply in the UK is made up of renewable fuels. As well as obliging fuel suppliers to meet targets for the volumes of biofuels supplied, the RTFO requires companies to submit reports on the carbon and sustainability of the biofuels.

## 2. Content of RTFO reports and tables

RTFO quarterly reports include information on:

- volumes of fuel by fuel type (e.g. biodiesel, bioethanol);
- volumes of fuel by feedstock (e.g. used cooking oil, soy);
- volumes of fuel by country of origin (e.g. UK, Brazil);
- volumes of fuel meeting sustainability standards;
- lifecycle greenhouse gas savings of fuels.

Table 1 compares overall performance against the three Carbon and Sustainability reporting targets set by the Government in 2007

Tables 2 to 8 provide summaries of all the road transport biofuel supplied to the UK for each fuel type, feedstock, country of origin, and previous land-use.

Table 9 and 10 look into the data capture and accuracy of data collected

Table 11 presents data on RTFO performance over time against the three target set by the Government in 2007.

Table 12 provides more detailed data broken down by fuel type, feedstock, country of origin and previous land-use. So, for example, data is provided on the volumes of fuel and the C&S information of bioethanol from Brazilian sugar cane, or biodiesel obtained from oilseed rape grown in the UK on cropland, and also meeting a Qualifying Standard.

Quarterly reports also include additional information on:

- trades of renewable transport fuel certificates (RTFCs) between companies.
- company performance against the Government's carbon and sustainability (C&S) reporting targets;

Company data

Table 13 provides data on company carbon and sustainability performance. Table 14 specifies how many of the carbon and sustainability reporting targets each of the obligated companies are meeting.

RTFCs

Contains data on trades of certificates between companies over time.

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## Carbon and Sustainability reporting targets

The Government set C&S targets for three key aspects of the reporting scheme. The targets are not mandatory and there is no penalty for failing to meet them. The RTFO targets recognise the need for, continuous improvement so that by obligation period 3 (2010/11) comprehensive sustainability data are provided for almost all biofuels supplied to the UK.

Annual Supplier Target	Percentage		
	2008/09	2009/10	2010/11
Percentage of feedstock meeting a Qualifying Environmental Standard	30	50	80
Annual Greenhouse Gas saving of fuel supplied	40	45	50
Data reporting of renewable fuel characteristics	50	70	90

## 3. Notes on Data

### Introduction

To encourage the sourcing of sustainable biofuels, the RTFO Administrator requires fuel suppliers claiming Renewable Transport Fuel Certificates to submit monthly reports on the lifecycle greenhouse gas (GHG) saving and the sustainability of the biofuels they supply.

Reporting is also seen by the Government as an essential 'stepping stone' towards a mandatory assurance scheme. The EU's Renewable Energy Directive includes mandatory sustainability requirements. The Department for Transport expects to transpose the directive into UK law in 2011.

The biofuels report provides information on the carbon and sustainability performance of renewable fuels supplied under the RTFO. The data are derived from the monthly reports on biofuels provided by individual fuel suppliers. At the end of the reporting year fuel suppliers are required to provide an independent verifier's opinion on their information, and this verified information will be published in the January following each obligation year.

The carbon and sustainability data covers the *direct* impacts arising from biofuel cultivation. The RTFO Administrator separately monitors the potential *indirect* impacts of biofuel production such as indirect land-use change or changes to food and other commodity prices (e.g. *The Gallagher Review of the indirect effects of biofuels production* which was published on 8 July 2008).

### Sustainability and the RTFO Meta-Standard

The RTFO is built around seven sustainability principles; five environmental and two social. These seven principles have been used to define the RTFO Sustainability Meta-Standard. A meta-standard approach enables existing schemes, such as the UK's Assured Combinable Crops Scheme (ACCS), to be assessed against the RTFO principles.

No schemes currently meet all of the environmental and social principles; although two schemes meet both of the social principles. Suppliers are also permitted to set up their own auditing procedures to demonstrate that feedstocks meet the RTFO Meta-Standard: two suppliers have developed interpretations of the RTFO Meta-Standard which cover Brazilian sugar cane and cereal crops.

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Any scheme that meets an adequate number of the RTFO Meta-Standard criteria is considered a 'qualifying standard', and fuel companies can report these to the RTFO Administrator. Fuels from wastes (e.g. used cooking oil and tallow) are automatically considered to meet the qualifying level.

Other standards can also be reported to the RTFO Administrator and count towards the data capture target; these include standards that have not yet been benchmarked against the RTFO Meta-Standard, or standards that have been benchmarked, but do not meet sufficient criteria to be awarded the qualifying level status.

While there are currently several qualifying standards for the RTFO, these are mostly either under development or only newly established; the ACCS is the only well established certification scheme, and is only applicable to UK crops. This currently limits the ability of fuel suppliers to source certifiably sustainable feedstocks. The market is developing, and suppliers have been putting in place procedures to track information about sustainability through their supply chains and others have been performing their own audits against the Meta-Standard. It is intended that by creating a market for sustainable crops, the RTFO will support the development and expansion of these certification schemes, and that suppliers will be able to source their feedstocks increasingly sustainably.

### **Provisional nature of the data**

These data are based on information submitted monthly to the RTFO Administrator by fuel suppliers. If the Administrator has reason to believe that a piece of data may have been misreported it will challenge companies to check and if necessary revise their data. Where this process is ongoing, our reports are based on the data exactly as reported to us. The final verification of these data occurs annually. Suppliers applying for less than 450,000 renewable transport fuel certificates are not required to submit a verifier's opinion.

Each Quarterly Report released by the RTFO Administrator will contain data from the reporting year to date on biofuels entering the UK market from those companies that are registered with the RTFO Administrator. The exact timing of the months that the data covers is different for major and minor fuel suppliers, due to the way they report data on volumes of fuel to HM Revenue and Customs (HMRC):

- Large fuel companies (typically fossil fuel suppliers) report to HMRC on a 15th to 14th of the month basis.
- Smaller fuel companies (typically biofuel suppliers) report by calendar month or quarter.

## **4. Glossary**

### **Obligated company**

- An obligated company is one that supplies more than 450,000 litres/year of relevant hydrocarbon oil road transport fuel
- Obligated companies supply more than 95% of the biofuels in the UK market.
- Obligated suppliers must:
  - supply biofuels; or
  - purchase certificates from other companies supplying biofuels; or
  - pay into a buy-out fund; or

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- combination of any of the above.

### **Non-obligated company**

- Non-obligated companies are those that either supply less than 450,000 litres/year of relevant hydrocarbon oil road transport fuel, or only supply biofuels.
- Non-obligated companies are not required to register with us, but can choose to do so and earn one Renewable Transport Fuel Certificate (RTFC) for every litre of biofuel supplied

### **Sustainability standards**

- Sustainability assurance schemes are divided into Environmental and Social Standards and these are split into three levels:

Level 1. RTFO Meta-Standard (RTFO) - this is a higher standard than most existing sustainability standards and covers seven key environmental and social principles.

Level 2. Qualifying Standards (QS) - meet the majority of the environmental and/or social criteria defined under the RTFO Meta-Standard.

Level 3. Other Standards - these have either not yet been benchmarked, or have been benchmarked against the RTFO Meta-Standard, but do not meet sufficient criteria to be awarded QS status.

- None/unknown should be reported where the feedstock was not certified against a standard, or the data are unavailable.
- Suppliers can report a Benchmarked or Qualifying Standard and conduct supplementary audits to meet a QS or the RTFO Meta-Standard, respectively.
- Suppliers producing biofuels from by-products have little or no control over how the source feedstocks were produced. Biofuels from by-products are automatically credited to the Qualifying Standard.

### **Previous land-use**

- This is the use of the land on which the feedstock crop was grown prior to 1 Jan 2008. There are sixteen categories:

1. by-products;
2. cropland - protection status unknown;
3. cropland - non protected;
4. cropland - protected;
5. degraded land;
6. forest >30%;
7. forest >30% no change in status;
8. forest 10-30%;
9. forest 10-30% no change in status;
10. grassland (and other wooded land not classified as forest) with agricultural land;
11. grassland (and other wooded land not classified as forest) without agricultural land;
12. undrained peatland;
13. undrained peatland - no change in status;
14. wetland;
15. wetland - no change in status;

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16. unknown

- By-products (e.g. used cooking oil and tallow) do not require any additional land.
- The previous land-use affects greenhouse gas emissions due to release of carbon stored in the soil and plants when the land is cleared and ploughed up for biofuel crops.

### **Carbon intensity**

- Carbon intensity is a measure of the greenhouse gas (GHG) emissions of the fuel chain from 'field-to-wheel'
- Different GHGs have different potencies (some make a greater contribution to global warming than others)
- To account for this, all GHGs are expressed in terms of their strength relative to carbon dioxide, called carbon dioxide equivalent (CO<sub>2</sub>e).

### **Greenhouse gas emissions**

- -Greenhouse gas (GHG) emissions of different biofuels can vary significantly depending on the system of cultivation, processing, and transportation of feedstock.
- The data collected takes into account GHG emissions of the fuel chain from 'field to wheel' incorporating data on feedstock, country of origin and land-use change.
- GHG saving refers to the reduction in GHG emissions due to replacing fossil fuels with biofuels. A negative value means that more GHGs have been emitted by using the biofuel than if the fossil fuel was used.

### **Accuracy level**

In these statistics the accuracy level is a measure of the amount of data provided by the supplier on a particular batch of biofuels. These data are used for calculation of the greenhouse gas emissions of the fuel chain. The range used is from 0 to 6 where 6 is the highest accuracy. These levels are defined below:

- 0 - Fuel default
- 1 - Feedstock default
- 2 - Process default
- 3 - Selected default - RTFO Administrator defined
- 4 - Selected default - Industry defined or NUTS2 data
- 5 - Actual data
- 6 - Cultivation actual data

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## Carbon and Sustainability reporting targets

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- Whilst 'unknown' reporting is permitted, suppliers are encouraged to identify and report accurate information about the feedstocks used. Where 'unknown' or 'none' is reported this does not count towards the data capture target.
- Where a by-product has been used as the feedstock, reporting 'by-product' for the sustainability information fields is counted as a completed report.
- Reporting a non-Qualifying Standard is also counted as a completed data field for the 'standard' field

These notes and definitions relate to the statistics on “biofuel statistics”.
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