

# Renewable Transport Fuel Obligation statistics, obligation period 5, 2012/13, report 1

## Statistical Release

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This publication presents statistics on the Renewable Transport Fuel Obligation (RTFO) for the obligation year 15 April 2012 to 14 April 2013 (Year 5)<sup>1</sup>.

It includes information on:

- the amount of UK road transport fuel from renewable and fossil fuel;
- the number of Renewable Transport Fuel Certificates (RTFCs) which have been issued to sustainable renewable fuel;
- the balance of RTFCs by obligation period;
- trades of RTFCs between suppliers and/or traders; and,
- carbon and sustainability (C&S) characteristics of the renewable fuel supplied.

Data is published quarterly and C&S data on biofuel supplied by fuel supplier is published annually. Previously published reports can be found on the DfT website:

<http://www.dft.gov.uk/statistics/series/biofuels/>.

The publication timetable can be found at Annex A.

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<sup>1</sup> This report contains data covering fuel supplied in the first quarter of Year 5.

## Executive summary

This report covers the supply of renewable fuels under the Renewable Transport Fuel Obligation from 15 April 2012 to 14 July 2012. The headline figures are:

- 6.3 billion litres of renewable transport fuel have been supplied in the 51 months since the RTFO began.

In the first quarter of Year 5 of the RTFO (15 April 2012 to 15 July 2012):

- 321 million litres of renewable fuel have been supplied, which is 2.9% of total road transport fuel reported to the RTFO Administrator against an annual obligation of 4.5%.
- More bioethanol (60%) has been supplied than biodiesel (36%). There were also small volumes of biogas, biomethanol, methyl tertiary butyl ether (MTBE) and pure vegetable oil.
- 154 million RTFCs have been issued of which 69 million were for double counting feedstocks.

C&S characteristics of the biofuels to which RTFCs have been issued (37% of the total biofuel)<sup>2</sup>:

- The largest proportion of renewable fuel was derived from non-European Community corn (66 million litres, 55% of total biofuel to which RTFCs have been issued). The most widely reported source (by feedstock and country of origin) for biodiesel was used cooking oil from the USA (8 million litres, 31% of biodiesel to which RTFCs have been issued). The most widely sourced bioethanol was corn from the United States of America (65 million litres, 76% of bioethanol to which RTFCs have been issued).
- 11% of renewable fuel was sourced from UK feedstocks.
- An aggregate greenhouse gas saving of 59% compared to fossil fuels was achieved. This figure excludes emissions from indirect land-use change.

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<sup>2</sup> The final deadline for applying for RTFCs is 12 August following the obligation period.

## Notes on data

### The Renewable Transport Fuel Obligation

The Renewable Transport Fuel Obligation (RTFO) is one of the Government's main policies for reducing greenhouse gas (GHG) emissions from road transport in the UK. The RTFO commenced on 15 April 2008 and is intended to deliver reductions in carbon dioxide emissions from the road transport sector by encouraging the supply of renewable fuels. The RTFO has been amended to implement the transport elements of the EU Renewable Energy Directive (RED), which include mandatory sustainability criteria for biofuels, from 15 December 2011.

Suppliers of sustainable biofuel can apply for Renewable Transport Fuel Certificates (RTFCs) under the RTFO. From 15 December 2011, biofuel must meet specified sustainability criteria in order to be entitled to the benefit of RTFCs. One RTFC is issued per litre/kg of liquid/gaseous biofuel derived from crop based feedstocks. Biofuels produced from wastes, non-agricultural residues, non-food cellulosic material, and ligno-cellulosic material are issued two RTFCs per litre/kg.<sup>3</sup>

Refiners, importers and any others who supply more than 450,000 litres of road transport fuel (liquid fossil or liquid or gaseous renewable) per year to the UK market are obligated under the RTFO. These obligated fuel suppliers are required to redeem a number of RTFCs in proportion to the volume of fossil fuel and unsustainable biofuel<sup>4</sup> they supply (own at HMRC's duty point). RTFCs may be bought or sold on the open market. Obligated suppliers also have the option to 'buy out' of their obligation, paying 30 pence per litre of biofuel that would otherwise have to have been supplied to meet their obligation. Suppliers may meet up to 25% of their obligation using RTFCs from the previous obligation period provided the sustainability criteria of the current period are met. This means that whilst individual suppliers obligations may be met the overall supply of biofuel may be less than the volume target where the supply of biofuel has been greater than the volume target in the preceding year. In addition, the impact of double counting feedstocks will be to reduce the overall volume of biofuel needed to meet RTFO obligations.

### EU Renewable Energy Directive and Fuel Quality Directive

The RED is closely linked to the Fuel Quality Directive (FQD) and both directives include mandatory carbon and sustainability requirements that must be met if biofuel is to count towards European targets. When the FQD is implemented, it is expected that obligated parties will supply the same sustainable biofuel to meet their obligation under both directives. The sustainability criteria are that:

- Biofuels must achieve at least a **35% GHG emissions saving** (this threshold will rise over time)<sup>5</sup>;

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<sup>3</sup> Biofuels produced from wastes, non-agricultural residues, non-food cellulosic material, and ligno-cellulosic material are considered to 'count twice' for Member States in meeting the ten percent transport target and for economic operators in meeting their obligation in national schemes. However, they do not count twice for the purposes of meeting the UK's overall renewable energy target under the RED.

<sup>4</sup> Unsustainable biofuel supplied from 15 December 2011 is counted towards a supplier's obligation.

<sup>5</sup> Under the 'grandfathering clause' biofuels produced in installations that were already operational on 23 January 2008 do not have to meet the 35% threshold until 1 April 2013.

- Biofuels may not be made from raw material obtained from land with **high biodiversity value** in or after January 2008.
- Biofuels may not be made from raw material obtained from land with **high carbon stock** such as forests or land that was undrained peatland in January 2008 unless strict criteria are met.

## Reporting carbon and sustainability information

The RTFO Administrator requires biofuel suppliers to submit data on both the carbon intensity and the sustainability of the biofuels they supply, in order to receive RTFCs. From 15 December 2011 this data must be independently verified and that verification submitted as part of the supplier's application for RTFCs. While voluntary carbon and sustainability targets have existed for biofuels in the UK since 2008, implementation of the RED introduced mandatory criteria. Fuel suppliers may no longer report 'unknown' on certain aspects of the sustainability of their biofuels.

## Sources of data in this report

Data on volumes of fuel, RTFCs (issues, redemptions, surrenders, transfers) and C&S data is held by the Administrator on the RTFO Operating System (ROS).

Volume data is submitted on a monthly basis by fuel suppliers to the RTFO Administrator and validated against HMRC duty payment data.

C&S data is submitted as part of a supplier's RTFC application. As suppliers may choose when to apply for RTFCs, and if the application is not approved the renewable fuel is not regarded as sustainable, C&S data is only reported on once RTFCs have been issued. There will therefore be a difference between the volume of biofuel supplied and the number of RTFCs issued/C&S data available. This difference will decrease over time until the final deadline for issuing RTFCs has passed (15 November following the obligation period). The final report for an obligation period will show the final position.

Data on RTFCs (issues, redemptions, surrenders, transfers) are recorded in ROS as all are issued, traded and tracked electronically.

## Strengths and weaknesses of the data

The Administrator validates volume data submitted by fuel suppliers against that held by HMRC regarding fuel duty liabilities. This data may change over time even after validation against HMRC data as suppliers make amendments to the volumes of fuel they have supplied (and duty liabilities).

C&S data are verified by independent verifiers and are also checked against the RTFO Guidance by the Administrator.

Whilst the Administrator validates volume data against HMRC data at a company level, there is not an exact match between the volume of fuel reported in this report and the volume of fuel reported in HMRC's Hydrocarbon Oils bulletin. Reasons for this include:

- Road duty is paid on fuel that is later proven to be for non-road use;
- Differences between how fuel is categorised under the RTFO and by HMRC, in particular, the RTFO requires recording of fuels on the basis of their renewability but this is different

than the categories HMRC use for duty coding (e.g. petrol used as denaturant in ethanol is recorded as ethanol by HMRC and petrol under the RTFO);

- Accidental recording of fuel against the incorrect duty codes by suppliers;
- Calendar month and quarterly duty payments being recorded against different supply periods under the RTFO and by HMRC (these are typically a month different);
- Differences in when adjustments in duty payments are recorded. HMRC record these in the month the adjustment occurs: whilst this practice is usually followed under the RTFO there are exceptions around the change in obligation period.

## Reporting frequency

Reports are published quarterly. Six reports are published for each annual obligation period as RTFCs can be issued up seven months following the close of an obligation period. Each report will replace the previous report for that obligation period with the latest data covering the whole obligation period.

The last report for the obligation period (number six) will report on the carbon and sustainability performance of individual suppliers. These reports are available on our website at:

<http://www.dft.gov.uk/statistics/series/biofuels/>

## Further information

Further information on the RTFO can be found on [DfT's website](#) and in the [RTFO Guidance](#).

## Glossary

### Biofuel

Fuel made from recently-living biological material.

### Biofuel volume targets

Obligated suppliers must supply a certain percentage of their road transport fuel as biofuel, or purchase RTFCs or pay in to the buy-out fund for the shortfall. The table below sets out the targets over time.

Obligation period	Year	Percentage biofuel
2008/09	1	2.5
2009/10	2	3.25
2010/11	3	3.5
2011/12	4	4.0
2012/13	5	4.5
2013/14 onwards	6 onwards	5.0 <sup>#</sup>

<sup>#</sup> The Government has proposed to amend the obligation target for biofuel (by volume) in fuel supplied from 5% to around 4.7%, for 2013/2014 and subsequent years, with the aim of keeping the absolute volume of biofuel supplied at

the level currently provided for under the RTFO. This is part of the proposed expansion of the RTFO scheme to include fuels used in Non-Road Mobile Machinery (as defined in the Fuel Quality Directive). These legislative changes are subject to the introduction of legislation and the parliamentary process.

## **Biofuel production process**

For some feedstocks (EC-corn, palm, wheat) there are carbon defaults in the Renewable Energy Directive which relate to the biofuel production process, that is the processing fuel (e.g. natural gas) and/or the technology (e.g. CHP or whether methane was captured). Data is only collected for these feedstocks and it is an optional reporting field.

## **C&S data**

Carbon and sustainability data – information on the characteristics of the biofuel related to its sustainability and GHG emissions. This includes feedstock, biofuel production process, country of origin, previous land use, whether a voluntary scheme was met and carbon intensity.

## **Carbon intensity, carbon defaults, greenhouse gas saving**

Carbon intensity is a measure of the greenhouse gas (GHG) emissions of the fuel chain from 'field to wheel'. Some GHGs 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). The carbon intensity of biofuels is expressed relative to the energy in that fuel, that is, in grams of carbon dioxide equivalent per megajoule.

Greenhouse gas 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 emissions from the feedstock, cultivation, processing, transport, and any direct land-use change. The European Commission has included default carbon intensities for a number of feedstocks in the Renewable Energy Directive. For some feedstocks (EC-corn, palm, wheat) there are additional carbon defaults which relate to the biofuel production process.

Emissions from indirect land use change (iLUC) which may occur as a result of increased global demand for biofuels are not currently included in the default values.

GHG saving refers to the reduction in GHG emissions due to replacing fossil fuels with biofuels.

## **Country of origin**

The country in which the biofuel feedstock originated. For crop-based feedstocks this is where the crop was cultivated and for wastes/residues this is where the material was formed e.g. the restaurant for used cooking oil.

It is only permitted to report 'unknown' where other C&S data demonstrates compliance with the sustainability criteria of the RED, for example, if an EC-recognised voluntary scheme is reported and where the material is a waste/non-agricultural residue and therefore land criteria and cultivation emissions do not apply.

## **FAME**

Fatty acid methyl ester

## HO10s

HO10 is a road fuel duty return form used by HMRC. Suppliers in this category are fossil fuel suppliers and biofuel suppliers or who report fuel volumes to both HMRC and the Administrator on a 15<sup>th</sup>-14<sup>th</sup> monthly basis. This designation is used by the Administrator in categorising RTFO account holders on ROS

## HO930s

HO930 is a road fuel duty return form used by HMRC. Suppliers who use this form are biofuel only suppliers who report fuel volumes to both HMRC and the Administrator on a calendar month or a quarterly basis. This designation is used by the Administrator in categorising RTFO account holders on ROS.

## HVO / CHVO

Hydrogenated vegetable oil / co-processed HVO

### Obligated supplier

An obligated supplier is one that supplies over 450,000 litres per year of relevant hydrocarbon oil road transport fuel. Obligated companies supply greater than 95% of the biofuels in the UK market. Obligated suppliers must meet their obligations by:

- supplying a certain percentage of sustainable renewable transport fuel; or
- purchase certificates from other companies supplying renewable fuel; or
- pay into a buy-out fund; or
- a combination of any of the above.

Suppliers may meet up to 25% of their obligation using RTFCs from the preceding obligation period provided the sustainability criteria of the current period are met.

### Obligation period

Obligation periods run from 15 April to 14 April of the following year. Suppliers can apply for RTFCs up to 12 August after the end of the obligation period.

### Non-obligated supplier

Non-obligated suppliers are those that supply less than 450,000 litres per year of relevant hydrocarbon oil road transport fuel. Non-obligated companies are not required to register under the RTFO, but can choose to do so to earn RTFCs.

### Previous land-use

This is the use of the land in January 2008 on which the biofuel feedstock crop was grown. 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.

There are thirteen categories:

1. cropland – non-protected
2. cropland – protected – no interference with nature protection purposes
3. cropland – protected/protection status unknown
4. grassland (and other wooded land not classified as forest)

5. highly biodiverse grassland – no change in status
6. forest >30% – no change in status
7. forest 10-30%
8. wetland – no change in status
9. undrained peatland – no change in status
10. degraded land
11. settlement
12. voluntary scheme – met land criteria
13. waste/non-agricultural residue

Most of the voluntary schemes recognised by the European Commission as demonstrating compliance with the land criteria do not pass information down the chain of custody on the previous land use of the biofuel, only that the land criteria were met. In these cases it is permitted to report 'voluntary scheme – met land criteria' (category 12).

Wastes and non-agricultural residues (e.g. used cooking oil) do not require any land and therefore the previous land use is not relevant to meeting the sustainability criteria of the RED (category 13).

## RED

Renewable Energy Directive. This is a European Directive which sets out sustainability criteria which biofuels must meet in order to count towards Member State's targets. These criteria cover protection of land (carbon stocks and biodiversity) and set minimum greenhouse gas savings that increase over time.

### Renewable fuel

A fuel from a source that is either inexhaustible or can be indefinitely replenished at the rate at which it is used. For the purposes of this document, it generally means biofuels (see above).

## RTFCs

Renewable Transport Fuel Certificates. One RTFC is issued per litre/kg of liquid/gaseous biofuel except for biofuels derived from wastes/non-agricultural residues, non-food cellulosic material, and ligno-cellulosic material which receive two RTFCs per litre/kg. RTFCs are redeemed by obligated suppliers to the RTFO Administrator to meet their obligations and may also be surrendered by suppliers to obtain a share of the buy-out fund. The Administrator may revoke RTFCs where the Administrator is satisfied that they should not have been issued e.g. the information in the application was found to be inaccurate or fraudulent.

### RTFC categories

RTFCs are assigned to GHG saving categories in order to identify which are eligible for carry over into the following obligation period. This is needed because the minimum GHG savings requirement increases over time. These categories are:

- pre-RED
- Less than 35% (grandfathered)
- Equal to or more than 35%, but less than 50%
- Equal to or more than 50%, but less than 60%
- Equal to or more than 60%



## RTFO

Renewable Transport Fuel Obligation. The sustainability criteria of the RED have been implemented in the RTFO.

## Trader

Traders may register with the RTFO Administrator to transfer RTFCs. They may not surrender RTFCs to gain apportion of the buy-out fund. This designation is used by the Administrator in categorising RTFO account holders on ROS

## Voluntary scheme

These are sustainability assurance schemes recognised by the European Commission and/or the RTFO Administrator as demonstrating compliance with one or more of the sustainability criteria of the RED.

## Annex A: RTFO statistics reporting timescales and contents

Reports are published quarterly. Six reports are published for each annual obligation period as RTFCs can be issued up seven months following the close of an obligation period. Each report will replace the previous report for that obligation period with the latest data.

The last report for the obligation period (number six) will report on the carbon and sustainability performance of individual suppliers. These reports are available online at:

<http://www.dft.gov.uk/statistics/series/biofuels/>

Table 1 – content of RTFO reports

Table	Description	Report					
		One	Two	Three	Four	Five	Six
RTFO 01	Volume of fuel supplied	Yes	Yes	Yes	Yes	Yes	Yes
RTFO 02	Volume of fuel to which RTFCs issued and number of RTFCs issued	Yes	Yes	Yes	Yes	Yes	Yes
RTFO 03	RTFCs issued, revoked, redeemed and surrendered by obligation period	Yes	Yes	Yes	Yes	Yes	Yes
RTFO 04	RTFC trades to date by company type	Yes	Yes	Yes	Yes	Yes	Yes
RTFO 05	RTFO wide carbon and sustainability data	Yes	Yes	Yes	Yes	Yes	Yes
RTFO 06*	C&S data of biofuels supplied by company	No	No	No	No	No	Yes
RTFO 07*	How companies met their RTFO obligations	No	No	No	No	No	Yes

\*provisional tables and titles

Table 2 – Publication dates and contents of each report

		Publication date									
		01-Nov-12	07-Feb-13	02-May-13	01-Aug-13	07-Nov-13	06-Feb-14	01-May-14	07-Aug-14	06-Nov-14	05-Feb-15
<b>Obligation period 4, 2011/12 - pre RED</b>			Verified (pre-RED) Year Four report								
<b>Obligation period 4, 2011/12 – post-RED</b>		Report five	Report six								
<b>Obligation period 5 2012/13</b>	<b>Quarter 1</b>	Report one	Report two	Report three Report three Report three	Report four	Report five	Report six				
	<b>Quarter 2</b>		Report two	Report three Report three Report three	Report four	Report five	Report six				
	<b>Quarter 3</b>			Report three	Report four	Report five	Report six				
	<b>Quarter 4</b>				Report four	Report five	Report six				
<b>Obligation period 6 2013/14</b>	<b>Quarter 1</b>					Report one	Report two	Report three Report three Report three	Report four	Report five	Report six
	<b>Quarter 2</b>						Report two	Report three Report three Report three	Report four	Report five	Report six
	<b>Quarter 3</b>							Report three	Report four	Report five	Report six
	<b>Quarter 4</b>							Report four	Report four	Report five	Report six
<b>Obligation period 7 2014/15</b>	<b>Quarter 1</b>									Report one	Report two Report two
	<b>Quarter 2</b>										
	<b>Quarter 3</b>										
	<b>Quarter 4</b>										