



Renewable Fuel Statistics 2019

Fifth Provisional Report

About this release

This quarterly release covers the supply of renewable fuel in 2019, based on data available on 18th June 2020, which has been reported under the Renewable Transport Fuel Obligation (RTFO). Data can be supplied up to five months after the end of the year. Therefore, this report contains an incomplete dataset for the year so far and should be read as provisional. The final report for 2019 is scheduled for release in November 2020.

In this publication

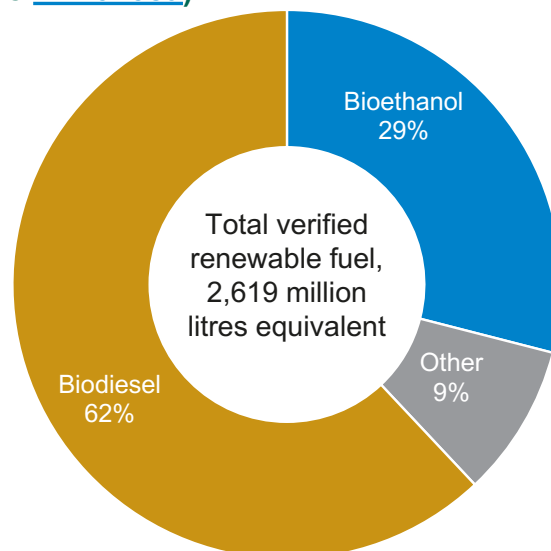
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Renewable fuels are fuel produced from biomass or some other renewable energy source. They are often blended with conventional fuels such as petrol or diesel, but they produce lower greenhouse gas emissions as their energy is from renewable sources.

In 2019:

- ▶ **2,680 million litres equivalent (eq.) of renewable fuel** has been supplied, which constitutes 5.1% of total road and non-road mobile machinery fuel for the year.
- ▶ **2,619 million litres eq. (98%) has been verified** so far under the Renewable Transport Fuel Obligation (see Background Information).
- ▶ Of this 2,619 million litres eq., an average **greenhouse gas (GHG) saving of 83%** was achieved when compared to fossil fuel use. This drops to 77% when indirect land-use change is accounted for (see note on page 3).
- ▶ **11%** of all verified renewable fuel supplied to the UK in this period was produced from UK origin feedstocks.

Figure 1: Volume of verified renewable fuel by fuel type
(table [RF_0105a](#))



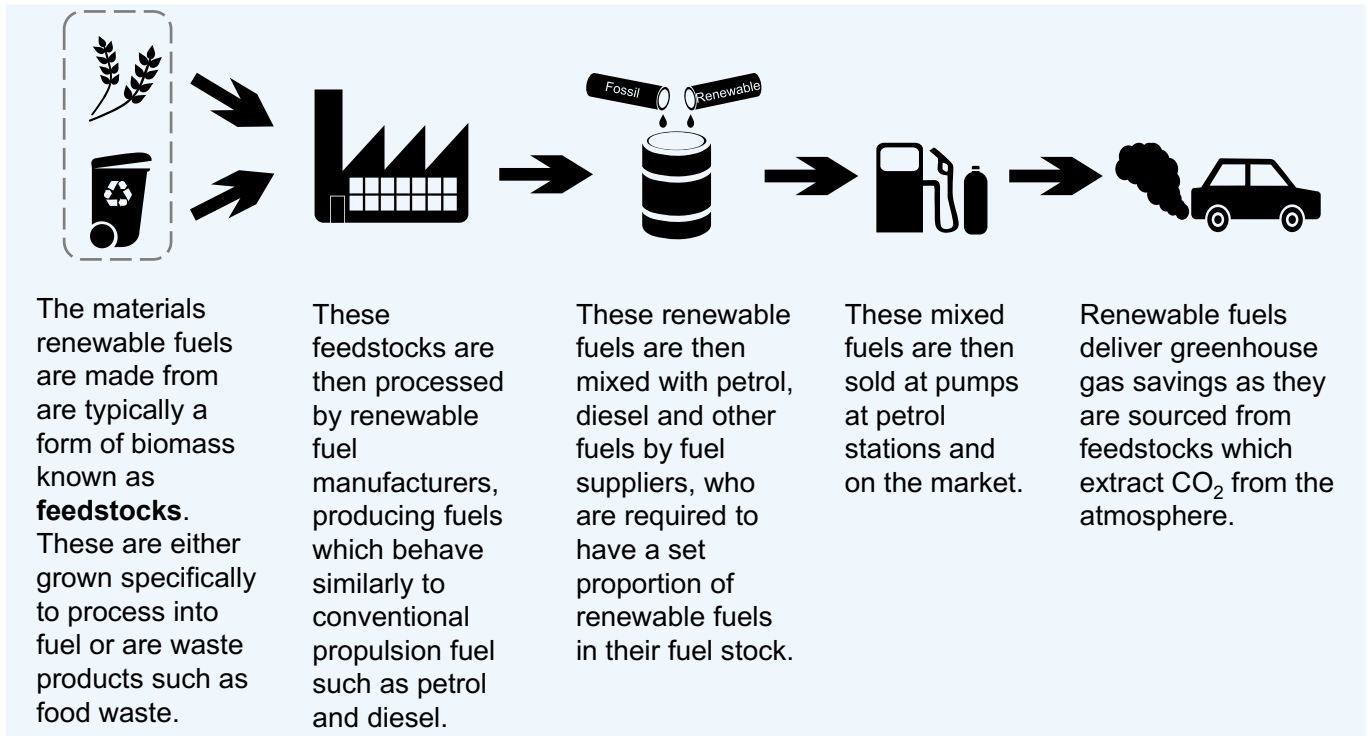
Of the 2,619 million litres eq. of renewable fuel verified so far in 2019, biodiesel comprised 62% of supply, and bioethanol 29%. There were also small amounts of other renewable fuels including biomethanol, biomethane, off-road biodiesel and biopropane.

* Biogases (such as biomethane and biopropane) are reported in kg but are converted to equivalent litres using standard multiplication factors (as laid-out in the RTFO).
** Figures may not sum due to rounding.



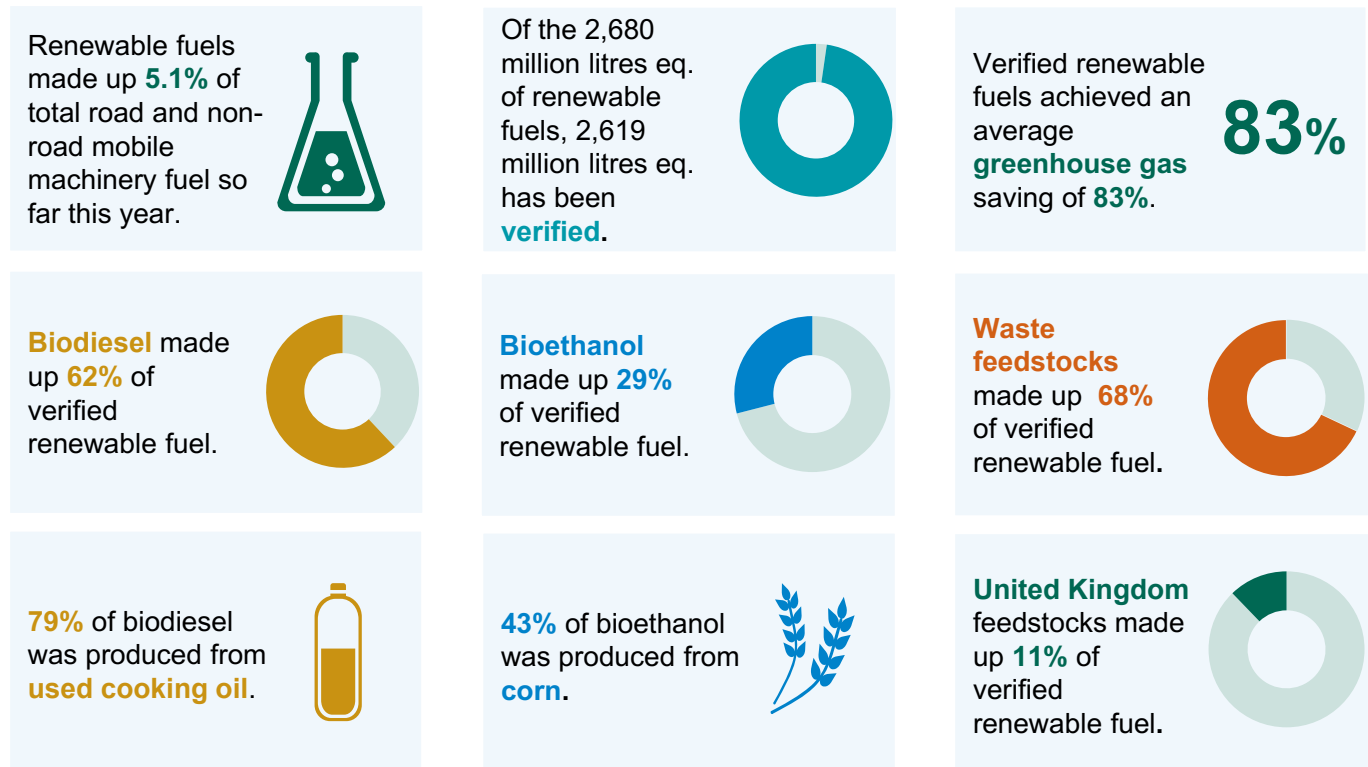
Overview

Figure 2: What is a renewable fuel?



Some renewable fuels have a significantly different production process, in particular Renewable Fuels of Non-Biological Origin (RFNBOs). For more information see the Notes and Definitions.

Figure 3: Highlights - 2019



Greenhouse Gas Savings

GHG savings represent the difference in GHG emissions between using renewable fuel as opposed to the conventional fuel which they replace.

Indirect Land Use Change (ILUC)

Relates to the unintended consequences of changing land use for renewable fuel production. For example the expansion of crop land for feedstocks driving deforestation elsewhere. This reduces the GHG savings from the renewable fuel produced.

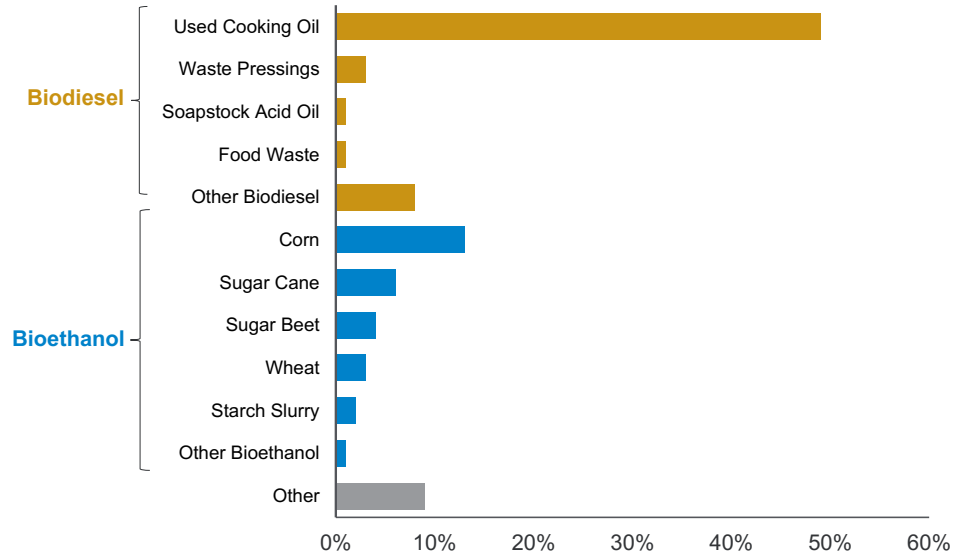
Feedstocks

Any renewable resource that can be used directly as an energy source, or converted to a transport fuel or other energy product.

Greenhouse Gas Savings and Feedstock

An aggregated GHG saving of 83% was achieved when compared to fossil fuels. Accounting for emissions from indirect land-use change (iLUC) reduces this GHG saving to 77%.

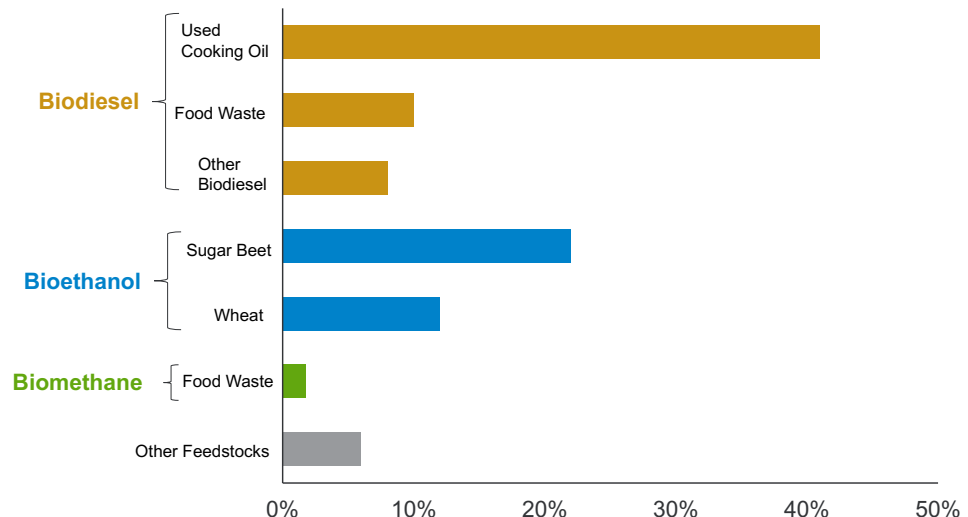
Figure 4: Supply of verified renewable fuel to the UK by feedstock and fuel type (table RF_0105a)



The majority (53%) of all verified renewable fuel was produced from used cooking oil (UCO). UCO comprised 79% of biodiesel. For bioethanol, the largest feedstock was corn (43%). Corn-based bioethanol comprised 12% of total renewable fuel.

Of the 289 million litres eq. of verified renewable fuel produced from UK origin feedstock, the most common feedstock and fuel type was biodiesel from used cooking oil (118 million litres, 41% of renewable fuel from UK origin feedstock). The most common source of bioethanol from UK origin feedstock was sugar beet (64 million litres, 22% of renewable fuel from UK origin feedstock).

Figure 5: UK origin verified renewable fuel by feedstock (table RF_0105a)



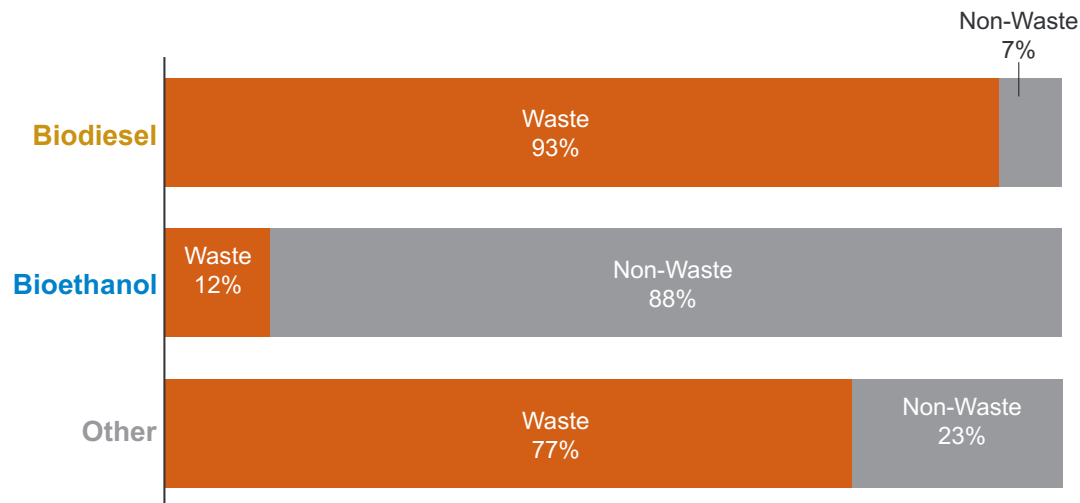
Waste Feedstocks

Renewable fuel produced from waste feedstocks typically delivers greater greenhouse gas savings than fuel derived from feedstocks produced specifically to be made into renewable fuel. Therefore they are encouraged under the RTFO and are typically awarded double counting certificates. Waste feedstocks include large quantities of used cooking oil, as well as brown grease, municipal organic waste, waste agricultural products such as corn husks, and sewage sludge.

Waste Feedstock

Waste feedstocks made up two thirds (68%) of all verified renewable fuel so far this year. Waste feedstocks have been used more in biodiesel production (93%), than in bioethanol production (12%).

Figure 6: Proportion of waste and non-waste feedstock amongst



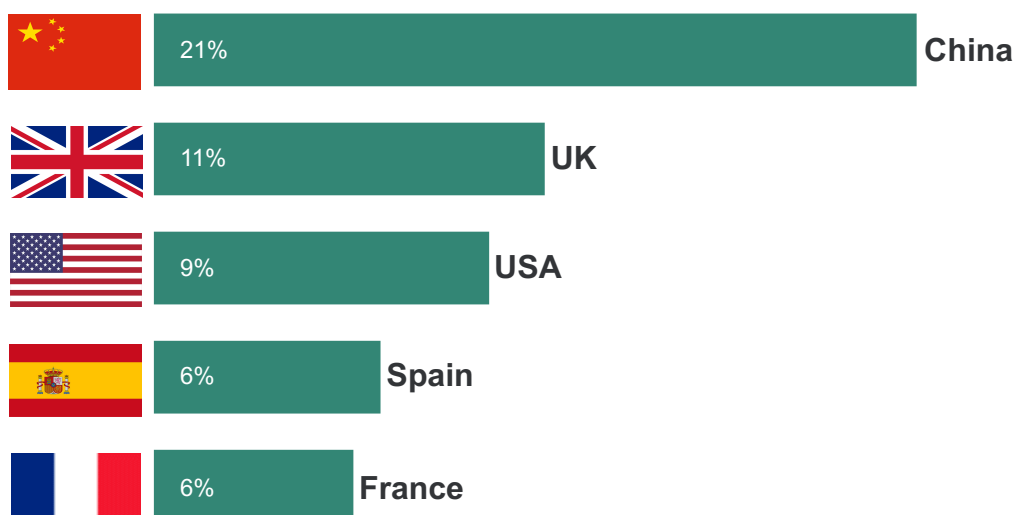
Country of Origin

UK origin feedstocks made up 11% of verified renewable fuel supplied to the UK so far this year. The top 5 feedstock origin countries together account for 54% of renewable fuel.

Of the 2,619 million litres eq. of verified renewable fuel supplied so far in 2019, the most widely reported source for biodiesel supplied to the UK (by feedstock and country of origin) was used cooking oil from China (516 million litres, 19% of renewable fuel, 32% total biodiesel).

The most widely reported source for bioethanol supplied to the UK (by feedstock and country of origin) was corn from Ukraine (138 million litres, 5% of renewable fuel, 18% of total bioethanol).

Figure 7: Top 5 countries supplying verified renewable fuel to the UK (table [RF_0105a](#))



Development Fuel

Specific fuels made from sustainable wastes or residues, (excluding segregated oils and fats such as used cooking oils and tallow). These fuels are awarded development fuel certificates, which are double counted.

Development Fuel

A specific target for 'development fuels' was introduced from 1 January 2019. This target takes into account the fuel type, production pathway and the feedstock. These fuels include aviation fuel, drop-in fuels, substitute natural gas and hydrogen (see notes and definitions).

The RTFO Administrator has verified a small amount of development fuel. However, this has been removed from the data and totals for this publication as the information is commercially sensitive due to there being a small number of companies reporting development fuel so far.

Double Counting

Renewable fuel produced from waste feedstocks, crop residues and dedicated energy crops are incentivised by awarding double the RTFCs per litre or kilogram supplied.

Certificates Awarded Under the RTFO

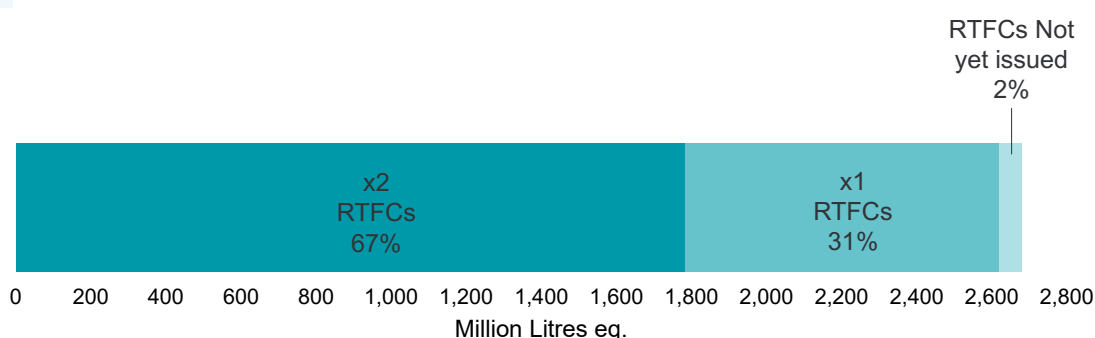
Renewable Transport Fuel Certificates (RTFCs)

RTFCs are awarded to transport fuel suppliers whose renewable fuel meets the sustainability criteria. In 2019, 4,402 million RTFCs have so far been issued to 2,619 million litres eq. of renewable fuel. This is out of a total of 2,680 million litres eq. supplied so far this year.

Double Counting Feedstock

Of the 4,402 million RTFCs awarded to renewable fuel that met the sustainability criteria, 3,567 million were issued to fuel from a waste/residue or "Double Counting" feedstock.

Figure 8: Renewable fuel to which RTFCs have been issued



Verified Renewable Fuel

Verified renewable fuel refers to fuel that has received RTFCs for having met the Sustainability Criteria. For more, see the Notes and Definitions.

Obligations Under the RTFO

Suppliers of fuel for road and non-road mobile machinery (e.g. tractors) that supply 450,000 litres or more per year have an obligation under the RTFO Order. Obligated suppliers may meet their obligation by redeeming Renewable Transport Fuel Certificates (RTFCs) or by paying a fixed sum for each litre of fuel for which they wish to 'buy-out' of their obligation. RTFCs are gained by supplying sustainable renewable fuels. In 2019, such suppliers must redeem RTFCs and development fuel RTFCs (dRTFCs) for 8.4% and 0.1% of their share of total fuel, respectively. This will increase to 9.6% for RTFCs and 2.8% for dRTFCs by 2032.

Sustainability Criteria

To receive Renewable Fuel Certificates, fuels supplied must meet the sustainability criteria set out in the amended [Renewable Transport Fuel Obligations Order 2007](#) and the [RTFO Carbon and Sustainability guidance](#).

Renewable fuel must deliver minimum GHG savings and must not originate from land with high biodiversity value or carbon stock.

One certificate may be claimed for every litre or kilogram of sustainable renewable fuel supplied. Fuel from certain wastes or residues, fuel from dedicated energy crops, and renewable fuels from non-biological origin (RFNBOs) are incentivised by awarding double the RTFCs per litre or kilogram supplied.

Companies have up to five months after the end of the year before they must apply for RTFCs. Partly as a result of this delay, 2% of renewable fuel so far supplied this year is not yet verified. Each provisional report typically has a higher proportion of renewable fuel which has been verified, and the final report describes all verified renewable fuel supplied in the year.

Further Details

Further information on the data can be found in the [Notes and Definitions](#).

Related Information

Previously published reports can be found on the DfT website:

<https://www.gov.uk/government/collections/renewable-fuel-statistics>.

The publication timetable can be found at Annex B.

Background Information

Sources of data in this report

Data on volumes of fuel, Renewable Transport Fuel Certificates (RTFCs) (issues, redemptions, surrenders, transfers) and Carbon & Sustainability (C&S) are held by the Renewable Transport Fuel Obligation (RTFO) Administrator on the RTFO Operating System (ROS). Fuel 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 only reported once RTFCs have been issued. There will therefore be a difference between the volume of renewable fuel supplied and the number of RTFCs issued/ C&S data available. The final report for an obligation period will show the final position.

Renewable fuel mix reporting

The data reported by fuel suppliers under the RTFO is in line with EU rules on mass balance. A mass balance system requires suppliers throughout the supply chain to account for their product on a units in - units out basis, but does not require physical separation of certified feedstock or fuel from uncertified material. It ensures that for every unit of sustainable renewable

fuel sold, the corresponding sustainable feedstock has been produced. This can mean the actual feedstock mix might differ from that reported. Nonetheless, the feedstocks and renewable fuels reported in this document represent those that are incentivised and rewarded under the RTFO.

Strengths and Weaknesses of the data

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

The Administrator validates volume data submitted by fuel suppliers against that held by the HMRC regarding fuel duty liabilities. 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 HMRCs Hydrocarbon Oils bulletin. For further information see the notes and definitions.

Official Statistics

Official Statistics are produced to high professional standards set out in the Code of Practice for Statistics. However, these statistics have not been assessed by the Office for Statistics Regulation. Details of ministers and officials who received pre-release access to these statistics up to 24 hours before release can be found in the pre-release access list.



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Annex A: Renewable Fuel Statistics Content of Tables

Reports are published quarterly.

The final report for this reporting period (scheduled for publication in November 2020) will report on the carbon and sustainability performance of individuals suppliers. These reports are available online at:

<https://www.gov.uk/government/collections/renewable-fuel-statistics>

Table 1 - Typical content of renewable fuel statistics tables

Table	Previously reported as	Description	Provisional Report	Final Report
RF_0101	RTFO_01	Volume of fuel supplied	Yes	Yes
RF_0102	RTFO_02	Fuels issued with RTFCs and number of RTFCs issued	Yes	Yes
RF_0103	RTFO_03	RTFC balance by obligation period	Yes	Yes
RF_0104	RTFO_04	RTFC trades to date by company type	Yes	Yes
RF_0105a	RTFO_05	RTFO wide carbon and sustainability data	Yes	Yes
RF_0106	RTFO_06	RTFO wide voluntary scheme data	Yes	Yes
RF_0105b	-	Feedstock and country of origin over time	No	Yes
RF_0107	RTFO_07	Performance against obligation by supplier	No	Yes
RF_0108a	RTFO_08a	Feedstock by supplier as a % of their supply	No	Yes
RF_0108b	RTFO_08b	Country of origin by supplier as a % of their supply	No	Yes
RF_0109	RTFO_09	% of renewable fuel that was sustainable by supplier	No	Yes
RF_0110	RTFO_10	Carbon and sustainability data by supplier	No	Yes
RF_0111	RTFO_11	RTFO wide fuel supply by volume and energy	No	Yes
RF_0112	RTFO_12	Civil penalties and other non-compliance	No	Yes
RF_0113	RTFO_13	Performance against GHG reporting requirements	No	Yes
RF_0114	-	Total greenhouse gas savings over time	No	Yes

Annex B: Renewable Fuel Statistics Reporting Timescales

Table 2 - Publication dates and contents of each report

	2018 (April to December) statistics	2019 statistics	2020 statistics
August 2019	Fourth Provisional Report	First Provisional Report	
November 2019	Final Report	Second Provisional Report	
February 2020		Third Provisional Report	
May 2020		Fourth Provisional Report	
August 2020		Fifth Provisional Report	First Provisional Report
November 2020		Final Report	Second Provisional Report

Highlighted reports indicate summary report for the period.