



Department for Transport

# Renewable Fuel Statistics 2019

## First Provisional Report

### About

This quarterly release covers the supply of renewable fuel for all of 2019, based on data available on 17th June 2019, which has been reported under the Renewable Transport Fuel Obligation (RTFO).

Data can be supplied up to seven 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.

This series was previously entitled "Renewable Transport Fuel Obligation Statistics: period x, report x."

### In this publication

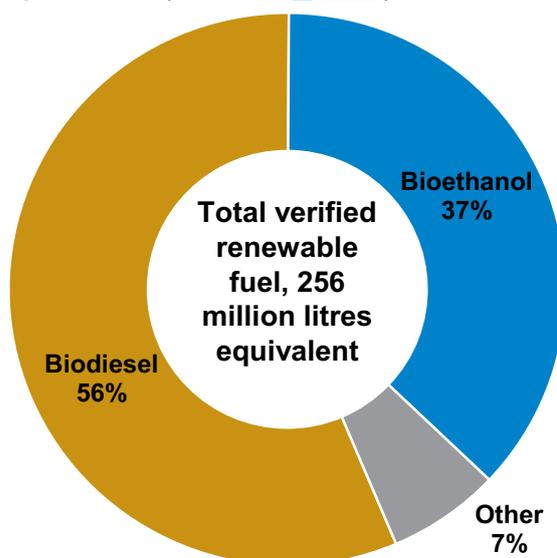
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**Renewable fuels**, often referred to as biofuels, are fuels produced from biomass (organic material from plants and animals), and other renewable energy sources. They are often blended with conventional fuels such as petrol or diesel, but they produce lower greenhouse gas emissions as their energy comes from renewable sources.

### In 2019:

- **804 million litres equivalent (eq.) of renewable fuel** has been supplied, which constitutes 4% of total road and non-road mobile machinery fuel for the year.
- **256 million litres eq. (32%) has been verified** so far under the Renewable Transport Fuel Obligation (see background information).
- Of this 256 million litres eq., an aggregate **greenhouse gas (GHG) saving of 81%** was achieved when compared to fossil fuel use.
- **19%** 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 in million litres equivalent (table [RF\\_0105](#))**

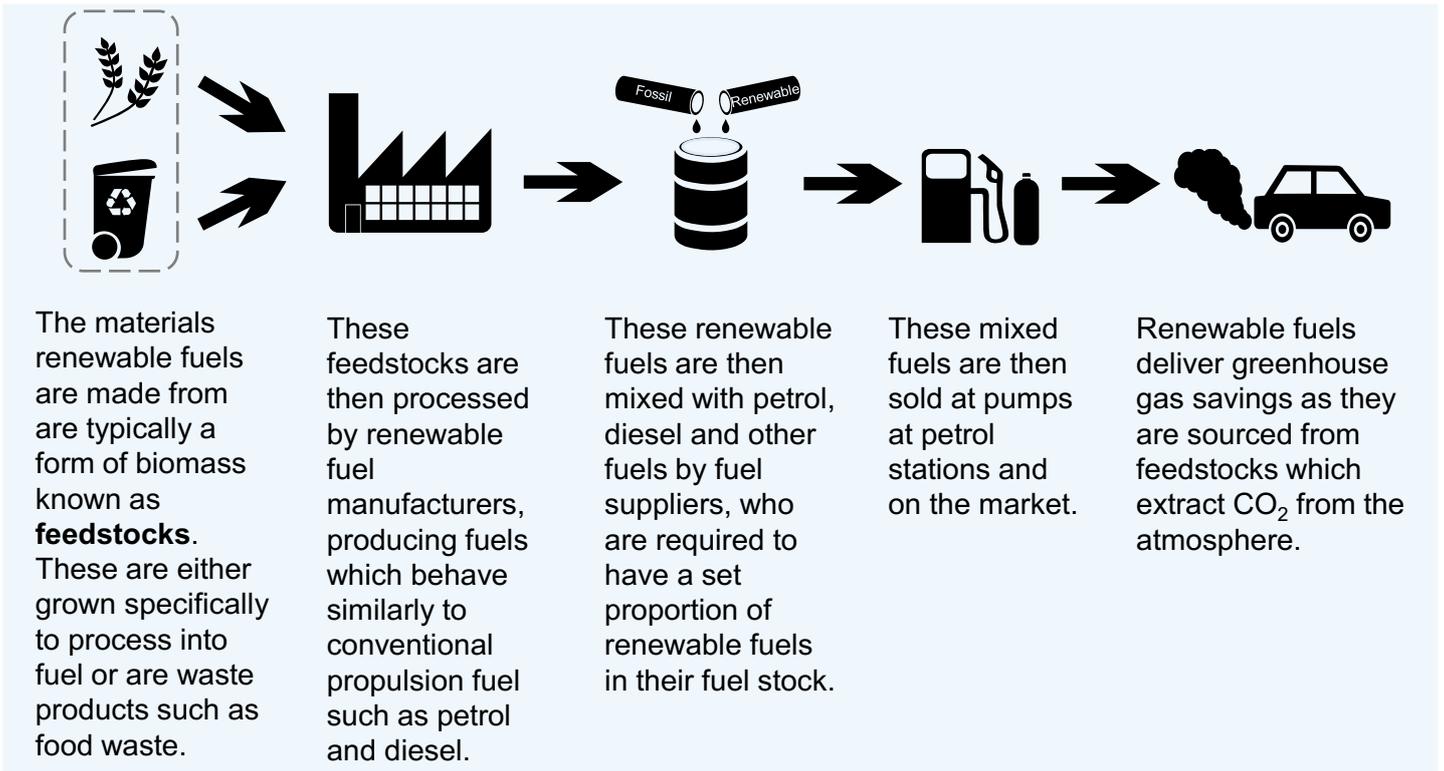


Of the 256 million litres eq. of renewable fuel verified so far in 2019, biodiesel comprised 56% of supply, and bioethanol 37%. There were also small amounts of other renewable fuels including biomethanol, biomethane, and off-road biodiesel.

*\*Biogases (such as biomethane) 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.*

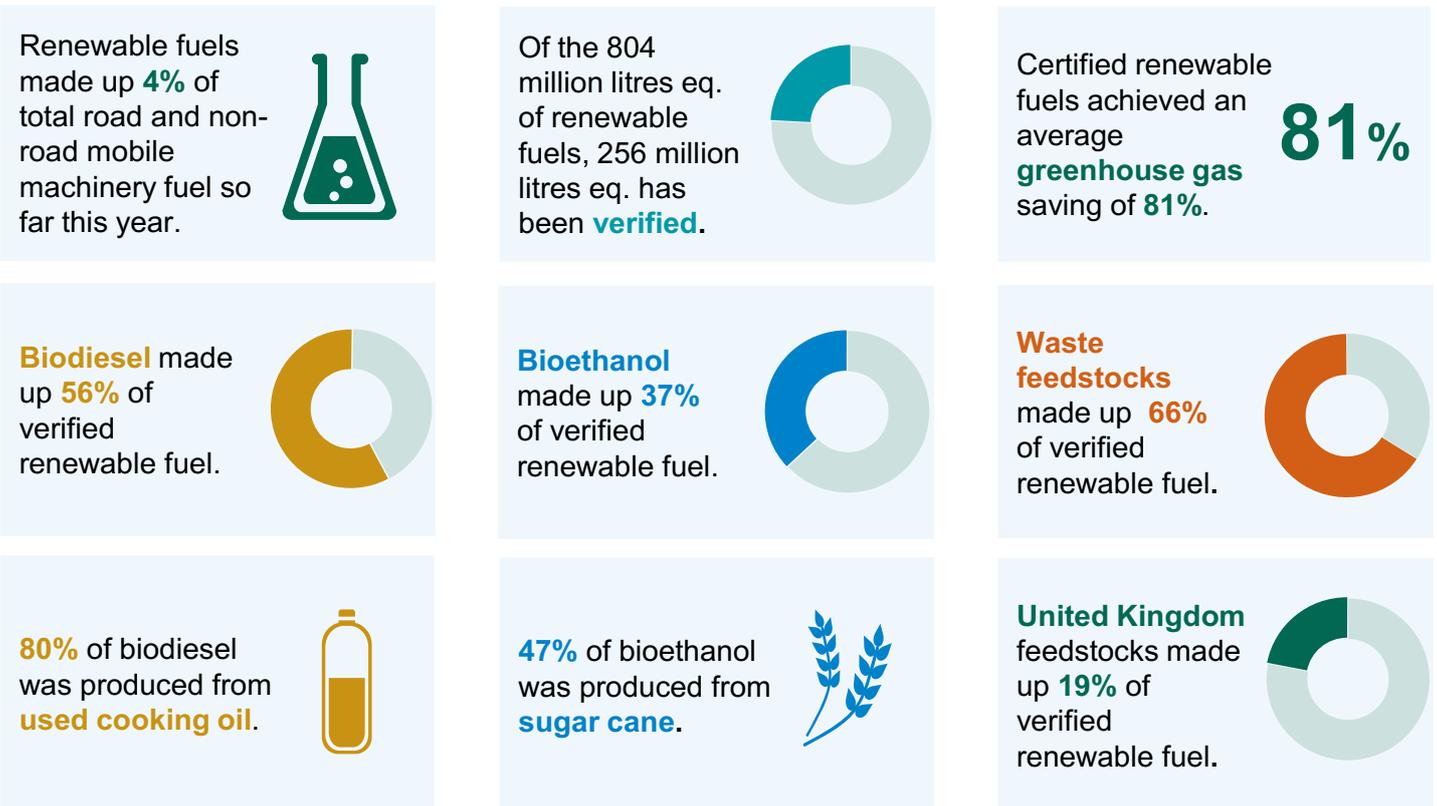
# Overview

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



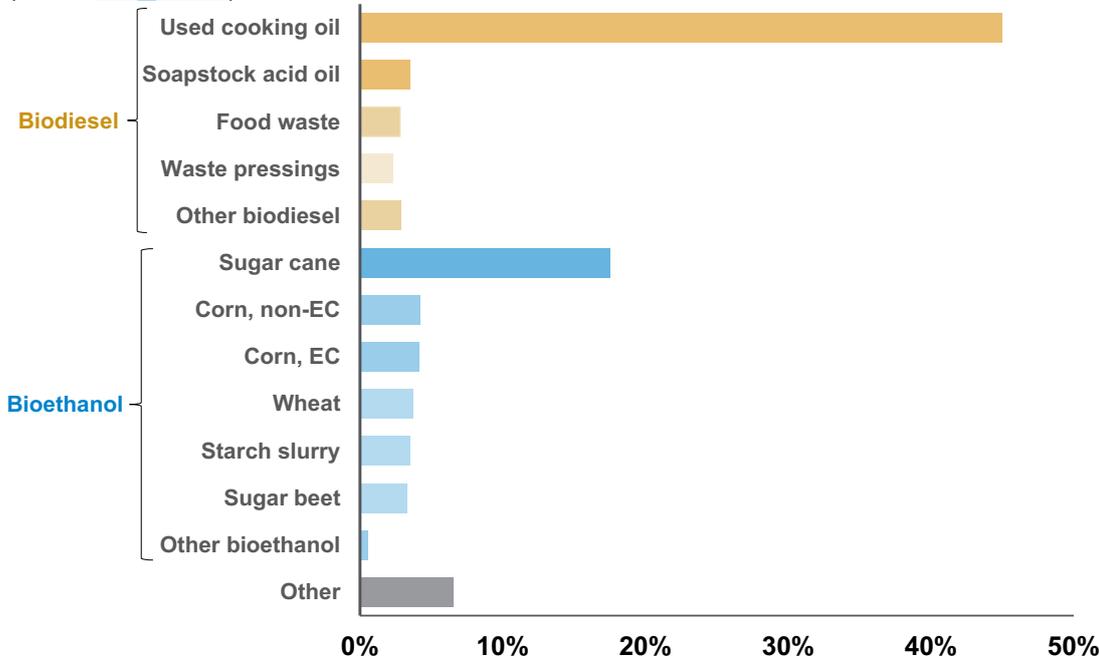
# Greenhouse Gas Savings and Feedstock

## GHG Savings

An aggregated GHG saving of 81% was achieved when compared to fossil fuels. Accounting for emissions from **indirect land-use change (ILUC)** reduces this GHG saving to 76%.

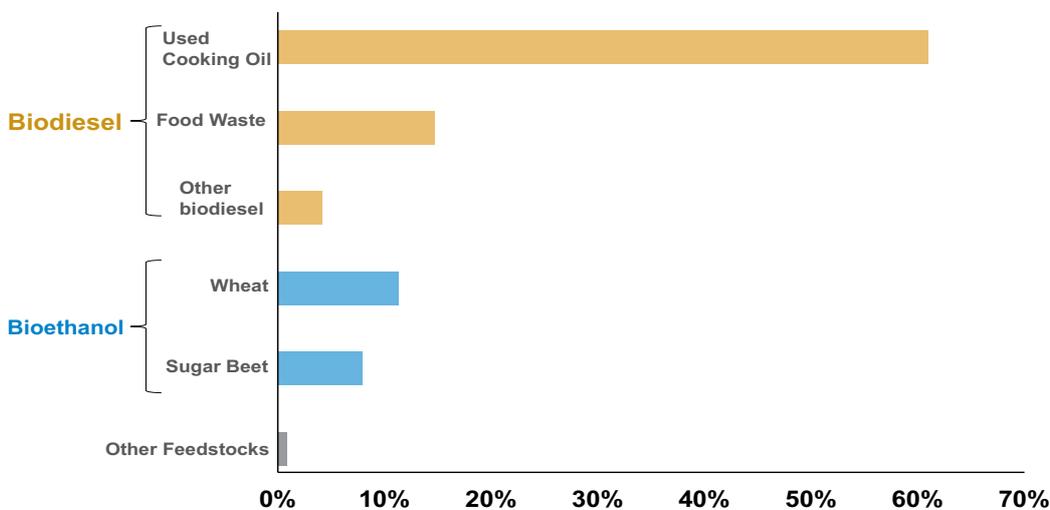
## Feedstock

**Figure 4: Supply of renewable fuel to the UK by feedstock and fuel type** (table [RF\\_0105](#))



Used cooking oil made-up the largest proportion of feedstock, accounting for 46% of total verified renewable fuel, and 80% of total biodiesel. Sugar cane constituted the largest proportion of bioethanol feedstock, making-up 18% of total verified renewable fuel, and 47% of total bioethanol.

**Figure 5: UK origin renewable fuel by feedstock** (table [RF\\_0105](#))



Of the 48 million litres eq. of verified renewable fuel produced from UK origin feedstock, the most common renewable fuel by feedstock and fuel-type was biodiesel from used cooking oil (29 million litres, 61% of renewable fuel from UK origin feedstock). The most common source of bioethanol from UK origin feedstock was wheat (5 million litres, 11% of renewable fuel from UK origin feedstock).

### Greenhouse gas savings

GHG savings represent the difference in greenhouse gas 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 biological material that can be used directly as an energy source, or converted to a transport fuel or other energy product.

# Waste Feedstock and Origin

## Waste Feedstocks

Waste feedstocks made up two thirds of all renewable fuel verified so far this year. 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.

**Figure 6: Proportion of waste and non-waste feedstock amongst verified renewable fuel** (table [RF\\_0105](#)).

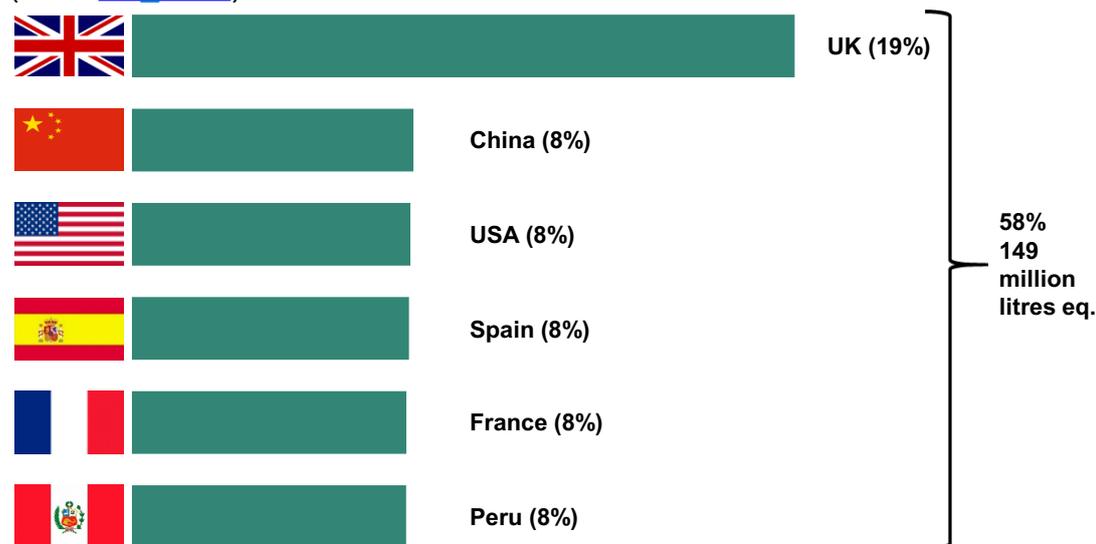


### Waste Feedstocks

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. For this reason, they are encouraged under the RTFO and are typically awarded double counting certificates.

## Country of Origin

**Figure 7: Top 6 countries supplying verified renewable fuel to the UK** (table [RF\\_0105](#)).



### 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.

UK origin feedstocks made up 19% of verified renewable fuel supplied to the UK so far this year. The top 6 feedstock origin countries together accounted for 58% of verified renewable fuel so far this year.

Of the 256 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 the UK (29 million litres, 11% of verified renewable fuel, 20% of total biodiesel).

The most widely reported source for bioethanol supplied to the UK (by feedstock and country of origin) was sugar cane from Peru (20 million litres, 8% of verified renewable fuel, 21% of total bioethanol).

## 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, **426 million RTFCs** have so far been issued to 256 million litres eq. of renewable fuel. This is out of a total 804 million litres eq. supplied in this period.

### Double Counting Feedstock

- Of the 426 million RTFCs awarded to renewable fuel that met the sustainability criteria, **340 million** were issued to fuel from a waste/residue or “Double Counting” feedstock.

**Figure 8: Renewable fuel to which Renewable Transport Fuel Certificates have been issued** (table [RF\\_0102](#)).



### 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 for 8.5% of their share of total fuel. This will increase to 12.4% by 2032.

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 RFNBOs are incentivised by awarding double the RTFCs per litre or kilogram supplied.

Companies have up to 7 months after the end of the year before they must apply for RTFCs. As a result of this delay, 68% of renewable fuel so far supplied this year is not yet certified. Each provisional report typically has a higher proportion of renewable fuel which has been certified, and the final report describes all renewable fuel supplied in the year.

### Sustainability Criteria

To receive Renewable Transport 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 at least a 50% GHG saving and must not originate from land with high biodiversity value or carbon stock.

### 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.

### Statistical Tables

Tables for this release are available on [GOV.UK](#).

## 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 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 renewable fuel 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 (7 months following the obligation period). The final report for an obligation period will show the final position.

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

### 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

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 is verified by independent verifiers and is also checked against the RTFO Guidance by the Administrator.

### Further Details

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

### Next Update

The next publication, which will be based on data up to 15th September, is scheduled for release in November 2019. This publication will be the second provisional report for this year.

Data is published quarterly.

Carbon and Sustainability data on renewable fuel supplied by fuel suppliers are published annually.

### Related Information

Previously published reports can be found on the DfT website:

<https://www.gov.uk/government/organisations/department-for-transport/series/renewable-fuel-statistics>.

The publication timetable can be found at Annex B.

## Background Information (continued)

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.

## Official Statistics

Official Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. However, these statistics have not yet 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 individual 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_0105	RTFO_05	RTFO wide carbon and sustainability data	Yes	Yes
RF_0106	RTFO_06	RTFO wide voluntary scheme data	Yes	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_0201	-	GHG savings and fuel volume by fuel type	Yes	Yes
RF_0202	-	GHG savings by fuel type, carbon intensity and credits issued	Yes	Yes
RF_0203	-	Transactions of GHG credits	Yes	Yes

## Annex B: Renewable Fuel Statistics Reporting Timescale

Table 2 – Publication dates and contents of each report

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

*Highlighted reports indicate summary report for the period.*