



Department
for Transport

Renewable Transport Fuel Obligation Annual Report 2019



Renewable Transport Fuel Obligation Annual Report 2019

Presented to Parliament
by the Secretary of State for Transport
by Command of Her Majesty

May 2021



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Executive summary

Introduction

1. This report has been produced to ensure transparency in the financial reporting of the Renewable Transport Fuel Obligation (RTFO). It is not reported within the Department for Transport's Annual Report and Accounts as its inclusion would not be compliant with the Government's Financial Reporting Manual.
2. The RTFO is one of the Government's main policies for reducing greenhouse gas (GHG) emissions from road transport in the UK. It requires that a certain percentage of road transport fuel supplied is renewable and that it meets the minimum GHG sustainability criteria.
3. Previously, the RTFO operated on a financial year basis starting each year on the 15 April. However, on 1 January 2019 the RTFO moved to a calendar year basis.

Outturn for 2019

4. The total value of the RTFO for 2019 is £998.7 million. This is calculated as the difference between the cost of renewable fuels supplied and the fossil fuels they have replaced.

Forecasts

5. The forecast total value of the RTFO for 2020 is £1,712.3 million. The RTFO outturn for 2021 is forecast at £1,745.7 million. This increase is in part due to an increase in the RTFO obligation. (see paragraphs 1.5 and 5.1).

Scheme outcomes

6. In 2019, the average GHG saving from the renewable fuels supplied under the RTFO was 77% compared to fossil fuels, representing a total saving of 4.89 million tonnes of CO₂ equivalent (eq.). This is equivalent to taking approximately 2.3 million cars off the road¹.
7. The RTFO is meeting its objective of reducing GHG emissions from road transport. All the renewable fuels rewarded under the RTFO meet the mandatory sustainability criteria. The RTFO is designed and managed to ensure a high level of compliance with its requirements.

Signature and audit

8. This report is signed by the Permanent Secretary, Department for Transport. The outturn figure for 2019 has been audited by the National Audit Office (NAO) on behalf of the Comptroller and Auditor General.

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932933/renewable-fuel-statistics-2019-final-report.pdf

1. Introduction

Purpose of this report

- 1.1 This report has been produced to ensure transparency in the financial reporting of the Renewable Transport Fuel Obligation (RTFO). The transactions generated by the RTFO are not income or expenditure attributable to the Department for Transport and the RTFO is not reported within the Department's Annual Report and Accounts as its inclusion would not be compliant with the Government's Financial Reporting Manual.
- 1.2 This report gives an outturn figure for the value of the RTFO for the 2019 Obligation year (January to December) alongside the outcomes for the scheme. Forecasts are also given for the 2020 and 2021 RTFO years. The National Audit Office (NAO) on behalf of the Comptroller and Auditor General has audited the 2019 outturn data within this report: the audit opinion is included on page 9.
- 1.3 This report also provides an estimate for the value of the GHG Reporting Regulations for 2019, and a forecast for 2020, when the scheme ends.

The RTFO

- 1.4 The RTFO is one of the Government's main policies for reducing greenhouse gas (GHG) emissions from road transport in the UK. The RTFO requires that a certain percentage of fuel is renewable and provides a valuable incentive for the renewable transport fuel industry which contributes towards meeting this obligation. The scheme started in 2008 and was amended in 2011 to implement mandatory sustainability criteria for the renewable fuels supplied.
- 1.5 The RTFO operates with tradable certificates. These are called Renewable Transport Fuel Certificates (RTFCs) and are awarded to suppliers of renewable transport fuel that meet the sustainability requirements. To be awarded, suppliers must provide evidence to the RTFO Administrator which demonstrates that their fuel is sustainable. This information must be independently verified.
- 1.6 Obligated fuel suppliers to the UK market² are required to demonstrate that renewable transport fuel has been supplied for a set proportion of their total obligated fuel supply. For the 2019 year, this proportion was 8.4%. Suppliers can meet this obligation by redeeming certificates that they have received for their own renewable transport fuel supply, or by redeeming certificates that they have bought from other suppliers of renewable transport fuel.
- 1.7 Suppliers also have the option to buy out of their obligation, paying 30 pence per litre of renewable transport fuel for which they have not redeemed an RTFC. This was increased to 50 pence per litre. This policy change was introduced on 1st January 2021. This protects consumers from excessive increases in fuel prices by setting a

² Those supplying 450,000 litres per year or more.

maximum value for RTFCs. The Treasury receives any revenue from suppliers that buy out.

- 1.8 Fuel suppliers can meet up to 25% of their obligation with certificates issued in the previous year. This reduces the impact of unexpected events and provides some protection against year to year volatility of fuel prices. An exception to this is in 2020, when there can be no carry over from 2019 to 2020. This is because the renewable energy target for 2020 must be met by fuel that is provided in 2020. Any RTFCs issued in 2019 may be carried over into the year 2021.
- 1.9 The RTFO guidance³ sets out information on complying, reporting and verifying with the RTFO process for fuel suppliers, independent verifiers and those supplying road transport biofuels.
- 1.10 The RTFO scheme process also undergoes an internal advisory report. The last report was completed in December 2020 and looked at the scheme's supervisory role in the context of certifying bodies. Prior to that, another audit took place in 2018 that looked at the scheme's approach to risks and risk scoring, the recommendations of which have been subsequently addressed.
- 1.11 The RTFO scheme aims to support the Government's plan for a green industrial revolution⁴ by reducing GHG emissions in transport.

Recent Updates to the RTFO

- 1.12 In 2018 the RTFO was amended to set out increasing renewable fuel volume targets to 2032, introduced a crop cap from 15 April 2018, and to introduce a target, from 2019 onwards, for a specific sub-set of advanced fuels termed 'development fuels'.
- 1.13 The development fuel target takes into account the fuel type, production pathway and feedstock, and aims to incentivise those fuel pathways which need greater support and fit the UK's long term strategic needs. Eligible fuels include aviation fuel, drop in fuels, hydrogen and synthetic natural gas. It was introduced on 1 January 2019, and requires that obligated suppliers provide a proportion of their total obligated fuel supply as development fuels. For 2019 this proportion is 0.1% and development fuels will be issued separate development fuel RTFCs (dRTFCs).
- 1.14 Another policy that ran parallel with the RTFO is the Motor Fuel (Road Vehicle and Mobile Machinery) Greenhouse Gas Emissions Reporting Regulations 2012 as amended ('the GHG Reporting Regulations'), which came into effect on 15 April 2012. The GHG Reporting Regulations were a key measure for reducing GHG emissions from the fuel supplied for use in transport. They required that suppliers of fuels for use in road transport and non-road mobile machinery to achieve at least a 4% and 6% reduction in life cycle GHG emissions in 2019 and 2020, respectively, relative to a fossil fuel baseline set in 2010.
- 1.15 Like the RTFO, the GHG Reporting Regulations runs by a tradable credit scheme, where GHG credits are awarded to each kg of CO₂ eq. saved, for eligible fuels that have a GHG intensity below the GHG target level for the relevant year. The majority of this target is met by the RTFO, whereas there are some other ways suppliers can generate credits such as supplying renewable aviation fuel, fossil gases to transport, and electricity to vehicles, or they can raise credits through purchasing upstream emission reductions (UERs), which are projects that reduce GHG emissions from

³ <https://www.gov.uk/government/publications/renewable-transport-fuel-obligation-rtfo-guidance-2021>

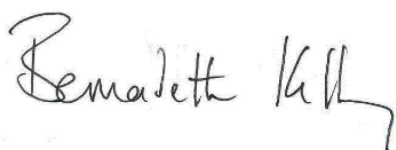
⁴ <https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution>

upstream processes related to crude or gas extraction and other processes before the fossil raw material for transport fuel is refined.

- 1.16 As most of the GHG Reporting regulation target is met by the RTFO, it is not included in the outturn for 2019. Instead an estimate of the potential additional costs is provided in Chapter 6, which is an additional chapter to previous versions of the RTFO Annual Report. A forecast is provided for 2020 in that chapter.
- 1.17 Another recent amendment to the RTFO is that, following a public consultation, the price for a supplier to buy out from their obligation has been raised from 30p to 50p per RTFC. This has been implemented for the 2021 obligation year. The buy-out price has increased due to recent increases in the cost of biofuels relative to petrol and diesel mean that there is a risk that suppliers will 'buy-out' of their obligations to supply renewable transport fuel. This increase provides a greater certainty of delivering continued GHG savings in transport as it helps future proof against increased costs to the industry from meeting the RTFO obligation.

2. Sign-off of report

- 2.1 As Accounting Officer for the Department for Transport I am responsible for ensuring that there is a high standard of financial management, including a sound system of internal control and effective financial systems. This responsibility includes the Renewable Transport Fuel Obligation (RTFO). I am content that appropriate financial controls over the RTFO are in place and that sufficient checks and reviews have been made to produce accurate and reliable financial data within this report. The audit by the National Audit Office, on behalf of the Comptroller and Auditor General, relates to the 2019 outturn. I have taken all reasonable steps to be aware of and provide necessary information to the auditors and I am not aware of any additional relevant information.



Bernadette Kelly

March 2021

Permanent Secretary and Accounting Officer
Department for Transport
Great Minster House
33 Horseferry Road
London
SW1P 4DR

3. Assurance report

Renewable Transport Fuel Obligation Annual Report - Assurance Report 2019

ASSURANCE REPORT TO THE SECRETARY OF STATE FOR TRANSPORT IN RELATION TO THE DISCLOSURE OF THE ADDITIONAL COST OF RENEWABLE TRANSPORT FUEL SUPPLIED UNDER THE RENEWABLE TRANSPORT FUEL OBLIGATION

I have evaluated through a reasonable assurance engagement the disclosure of the outturn related to the additional cost of renewable transport fuel supplied under the Renewable Transport Fuel Obligation (RTFO) included as section 4 in the Renewable Transport Fuel Obligation Scheme Annual Report for the year ended 31 December 2019.

Subject matter, criteria and limitations

- 3.1 The Secretary of State for Transport is required by HM Treasury direction, as an imputed tax and spend measure, to prepare an annual report in respect of the RTFO scheme established under the Renewable Transport Fuel Obligations Order 2007 (as amended). Included within this report, at section 4, is a disclosure of the outturn related to the additional cost of renewable transport fuel supplied under the RTFO scheme for the period 1 January 2019 to 31 December 2019. This disclosure is derived from a model designed by the Department for Transport, with observable inputs.
- 3.2 I have reviewed the output of the model and considered the adequacy with which the model derives a figure for the additional cost of renewable transport fuel supplied under the RTFO scheme. I have not considered alternative measurement or evaluation methods. I have considered whether the disclosure has been properly prepared in accordance with HM Treasury direction.
- 3.3 My review extended only to providing assurance on the disclosures made for the period 1 January 2019 to 31 December 2019. My historic evaluation is not relevant to future periods due to the risk that the model may become inadequate because of changes in conditions.

Specific purpose of this assurance report

- 3.4 This report has been prepared to provide the Secretary of State with reasonable assurance over whether section 4, the outturn related to the additional cost of renewable transport fuel supplied under RTFO, gives a true and fair view for the period 1 January 2019 to 31 December 2019.

Responsibilities

- 3.5 The Permanent Secretary on behalf of the appointed administrator, the Secretary of State for Transport, is responsible for preparing section 4, the outturn related to the

additional cost of renewable transport fuel supplied under RTFO, and for being satisfied that this note is true and fair. My responsibility is to gather appropriate evidence to support an opinion on section 4, the outturn related to the additional cost of renewable transport fuel supplied under RTFO, in accordance with International Standards on Assurance Engagements 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information.

Performance of the engagement in accordance with International Standards on Assurance Engagements 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information

- 3.6 I performed a reasonable assurance engagement in accordance with the principles of International Standards on Assurance Engagements 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. The objective of a reasonable assurance engagement is to perform such procedures as to obtain information and explanations which I consider necessary in order to provide me with sufficient appropriate evidence to express a positive conclusion on the disclosure. No other section of the annual report has been evaluated under this engagement.

Quality control and compliance with ethical standards

- 3.7 I apply International Standard on Quality Control 1, Quality Control for Firms that perform audits and reviews of Financial Statements, and other Assurance and Related Service Engagements. Accordingly, I maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.
- 3.8 I have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Summary of work performed

- 3.9 The additional cost of renewable transport fuel is estimated using a cost model. My assurance work included an examination of this cost model, to confirm that this is consistent with its intended function and that its inputs are consistent with the underlying source data. I also made enquiries with management as to the controls surrounding the collection of data where it was from internal sources.

Conclusion

- 3.10 In my opinion, section 4 of the RTFO annual report, showing the outturn related to the additional cost of renewable transport fuel supplied under the RTFO scheme for the period 1 January 2019 to 31 December 2019, is both fairly stated and properly prepared in accordance with HM Treasury direction.



Matthew Kay
Director

1 April 2021

National Audit Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

4. Outturn (audited) for 2019

RTFO outturn	
RTFO outturn for 2019	£998.7 million

Table 1 RTFO outturn 2019

Cost estimation methodology and data sources

- 4.1 The RTFO requires road transport fuel suppliers to blend a certain volume of renewable fuels into fossil fuels. The most significant renewable fuels deployed through this mechanism are bioethanol (28% of renewable fuel supply in 2019), which is blended into fossil petrol and biodiesel (66% of renewable fuel supply in 2019, when including biodiesel ME, HVO and off-road biodiesel), which is blended into fossil diesel.
- 4.2 Renewable fuels have historically been more expensive than fossil fuels. Fuel suppliers/retailers are likely to pass some of these additional costs onto the final consumer. Renewable fuels also have lower energy content per litre, so the use of renewable fuels increases the cost of motoring.
- 4.3 This price difference between fossil fuels and renewable fuels can be observed in the market. The Department receives renewable fuels market price data that is produced weekly by 'Argus Media', a leading global provider of market data⁵.
- 4.4 We have estimated the cost imposed by the RTFO using monthly volumes of renewable fuels as reported through the RTFO statistics⁶ and price differentials as reported through Argus Media's market reports. To take account of the lower energy content of renewable fuels, we compare fuel costs in terms of £/MJ and not £/litre, based on energy density factors quoted in the Renewable Energy Directive⁷.
- 4.5 Since the biodiesel price varies depending on the feedstock, we have generated separate estimates for biodiesel from different feedstocks. For bioethanol, there is just one market price and no distinction between feedstocks. For the remaining renewable fuels that are not bioethanol or biodiesel, pricing information is not readily available. We have used proxies for these small-volume fuels, based on their closest substitute fuels.
- 4.6 The 2019 report has been conducted on an annual basis, differing from the 2018 RTFO reporting year which ran from 15th April 2018 to 31st December 2018.

⁵ <https://www.argusmedia.com/en>

⁶ <https://www.gov.uk/government/collections/renewable-fuels-statistics>

⁷ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0028>

5. Forecasts

Future RTFO value	
RTFO forecast for 2020	£1,712.3 million
RTFO forecast for 2021	£1,745.7 million

Table 2 Future RTFO value forecasts

Cost estimation methodology and data sources

RTFO Forecast for 2020

- 5.1 The forecast for 2020 (£1,712.3 million) has been modelled using the same methodology and data sources as the outturn for 2019, with the following exceptions:

Fuel supply volumes were available from January to August, but were unverified for the following months. To estimate the remaining months in the year, each respective month was calculated by taking the same month in the previous year (e.g. to calculate September 2020, the quantity for September 2019 was taken) and multiplying it by a fraction, consisting of the average of June to August 2020 divided by the average of June to August 2019. Actual price data, extracted from Argus, was available from January to October 2020. For the two remaining months, the October price was simply rolled over. The main driver for the large increase from 2019 is increasing RTFO obligation targets. Another reason is the increased price spreads between renewable fuels and their fossil fuel equivalents.

- 5.2 The forecast for 2021 (£1,745.7 million) has been modelled using the same methodology and data sources as the forecast for 2019, with the following exceptions:

- Actual fuel supply volumes for 2020 have been used and adjusted for the increase in the obligation. This was done by using the forecasted number of certificates required to meet the 2021 obligation, a figure taken from internal modelling.
- The 2020 forecast price data has been adjusted for inflation and used for the 2021 forecast, therefore some effects of the COVID-19 pandemic on fossil fuel prices are captured by the current 2021 forecast.

6. Greenhouse Gas Reporting Regulations

Estimated value and forecast for the GHG Reporting regulations	
GHG Reporting Regulations estimate for 2019	£37.55 million
GHG Reporting Regulations forecast for 2020	£228.29 million

Table 3 Estimated value and forecast for the GHG Reporting regulations

GHG Reporting Regulation Estimate for 2019

- 6.1 The GHG Reporting Regulations ran alongside the RTFO. The requirement for suppliers to meet a given GHG reduction target began on 1 January 2019 and ended on 31 December 2020.
- 6.2 The GHG Reporting Regulations placed a mandatory requirement for suppliers of fuels for use in road transport and non-road mobile machinery to achieve at least a 4% and 6% reduction in life cycle GHG emissions in 2019 and 2020, respectively, relative to a fossil fuel baseline set in 2010. Suppliers could meet this GHG saving target by redeeming GHG credits towards their GHG saving target. One GHG credit is awarded to each kg of CO₂ eq. saved.
- 6.3 In 2019, suppliers surpassed the 4% GHG emission saving target, reaching an overall saving of 4.4%. This was predominantly met (74%) by the renewable fuel supplied under the RTFO, whereas a smaller proportion was met by upstream emission reductions (UERs, 25%), fossil gases (1%), and electricity supplied to vehicles (0.1%).
- 6.4 Price data is not available for UERs, therefore the potential additional value of the GHG Reporting Regulations is estimated using data on the price of GHG Credits. This has been done by using:
 - Actual weekly price data on GHG credits from Energy Census from first trading to the close of the 2019 RTFO year (September 2020).
 - Actual data on dates and volumes of GHG credit trades between suppliers and traders, as recorded on the GHG Reporting Regulations Operating System.
- 6.5 The total demand for additional GHG credits needed to meet the GHG Reporting Regulation target was calculated by deducting the number of GHG credits awarded to renewable fuels, that were supplied and valued under the RTFO, from the total number of GHG credits redeemed by suppliers under the scheme.
- 6.6 Following this, the estimated value of the GHG Reporting Regulations, that is additional to the RTFO is £37.55 million. This is considerably smaller than the maximum cost estimate that was published in the 2018 RTFO Annual Report (£143 million).

GHG Reporting Regulation Forecast for 2020

6.7 The forecast for 2020 (£228 million) for the GHG Reporting Regulations has been modelled by:

- Projecting the GHG savings required to meet the GHG Reporting Regulations Target in 2020, and the GHG savings from the RTFO in 2020 (using 2019 fuel-specific GHG emission factors);
- The GHG emission saving 'gap' between the RTFO forecast GHG savings and the projected GHG emission savings by the GHG Reporting Regulations is calculated.
- The GHG emission saving 'gap' is then multiplied by the GHG Reporting Regulation buyout price (£74/t CO₂ eq.) to calculate the maximum compliance cost required to cover the GHG savings gap.
- The maximum pump price impacts have been estimated by dividing the maximum compliance cost of the GHG Reporting Regulations by the total obligated fuel supply.

7. Scheme outcomes

Introduction

7.1 The main policy objective of the RTFO is to reduce GHG emissions from transport. It requires that a certain percentage of road transport fuel is renewable and meets minimum GHG sustainability criteria.

Greenhouse gas savings

7.2 The increased RTFO Obligation is reflected by an increase in renewable fuel supplied as a proportion of total fuel (5.1% vs. 4% in 2018). This represents a supply of 2.68 billion litres equivalent (eq.) of renewable fuels in 2019. Figure 1 shows the total CO₂ eq. savings and cars removed from the road. The figure shows the 2019 short year when extrapolated to represent a full calendar year.

This volume includes 2.60 billion litres of liquid fuel and a small volume (44.7 million kg, or 80.0 million litres eq.) of transport gases (biomethane and biopropane). There was also a small volume of Hydrogen (593 kg, or 2,716 litres eq.) following the introduction of development fuels. Biodiesel ME and bioethanol represent 62.3% and 28.2% of the total volume of renewable fuels, respectively, with other fuels accounting for the remaining 9.5%.

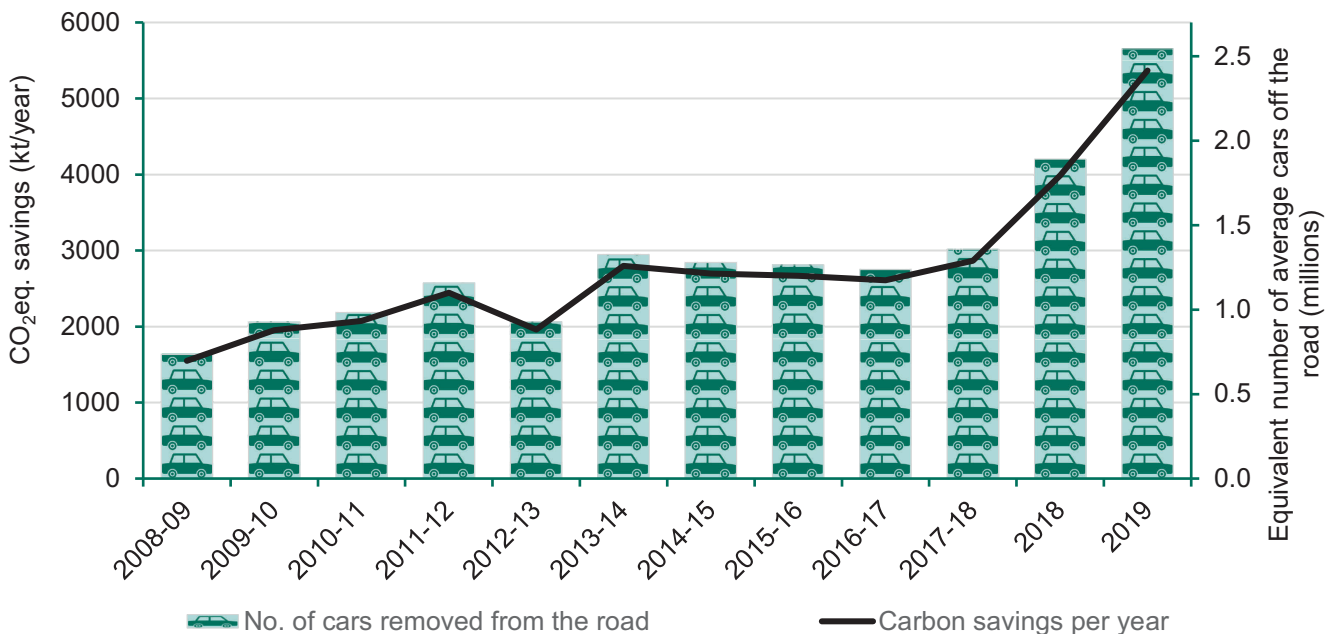


Figure 1 Greenhouse gas savings from the RTFO

Note- Figure 1 has been updated with the most recent (2018) estimate for the average GHG emissions per car per year (2.11t CO₂ eq./year according to [BEIS's GHG Inventory](#)).

- 7.3. In 2019, the average GHG saving from the renewable fuels supplied under the RTFO was 83% compared to fossil fuels. This represents a total saving of 5.37 million tonnes of CO₂ eq. This is equivalent to taking approximately 2.5 million cars off the road (Figure 1). This is an increase of over a third on 2018 (3.99 million tonnes of CO₂ eq. when extrapolated for a full calendar year).
- 7.4. In recent years the level of GHG savings have gradually increased, which is likely due to higher volumes of renewable fuels and the increasing proportion of waste-derived renewable fuels (69% in 2019). The RTFO awards double RTFCs to waste-derived renewable fuels as they do not have ILUC implications and generally have greater GHG emissions savings than crop-derived renewable fuels.

Indirect land use change

- 7.5. When agricultural land is used to grow a feedstock for renewable fuel production, there may be a 'knock-on' effect on expansion of agricultural land use into other areas. This is called 'indirect land use change' (ILUC). ILUC may involve expansion onto areas of high carbon stock which leads to additional GHG emissions. The RTFO accounts for these GHG emissions.
- 7.6. After accounting for ILUC, in 2019, the total GHG saving from the RTFO was 4.89 million tonnes of CO₂ eq. (Figure 2).
- 7.7. Figure 2 shows that in the early years of the RTFO, there was a high proportion of crop-based feedstocks. The total GHG emission savings for these years were low, and even negative after accounting for the risk of ILUC from these crops. Since 2011 there has been additional incentives for renewable fuels from waste-based feedstocks, and now (in 2019) 69% of UK renewable fuels were made from waste.

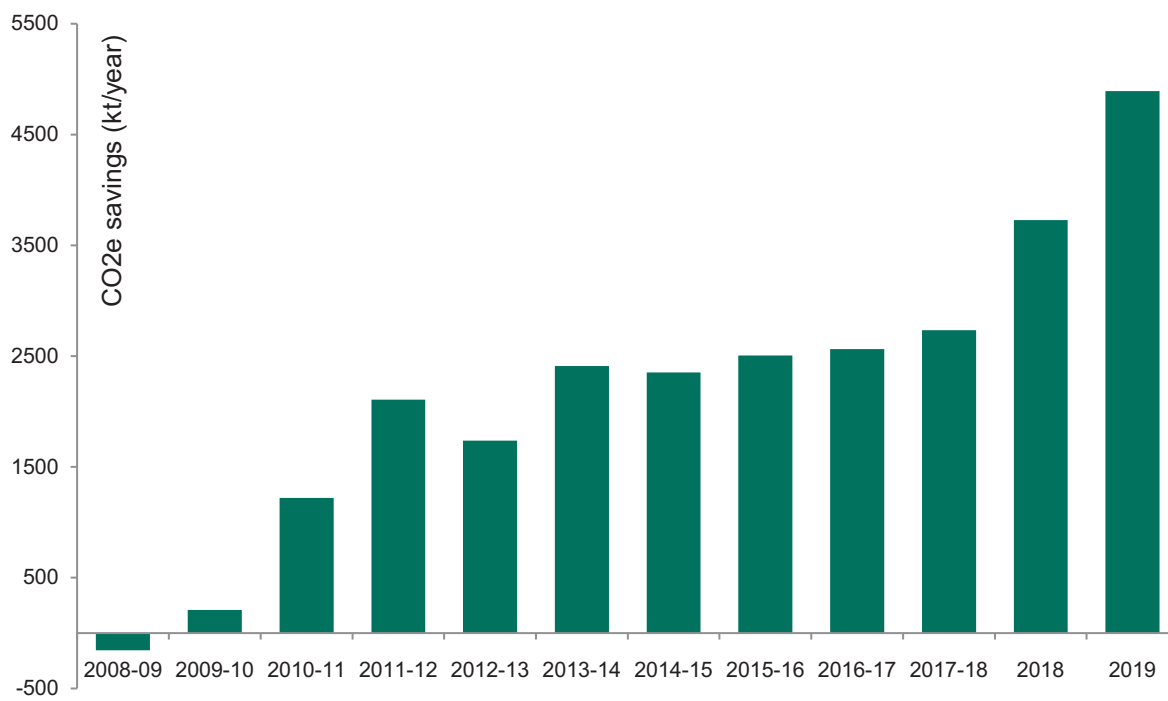


Figure 2 RTFO GHG savings including ILUC per obligation year*

The GHG savings are shown if the 2018 short year was extrapolated to represent a full calendar year. This also applies to Figure 1.

Renewable transport fuel sustainability and sources

- 7.8. To receive RTFCs suppliers must be able to provide evidence that their renewable fuels meet the sustainability requirements. For 2019, renewable fuels must meet a minimum GHG saving of 50% if the installation in which they were produced was operating on or before 5 October 2015, and 60% if produced in an installation that was in operation after that date.
- 7.9. Suppliers must ensure that growing crops as a feedstock for renewable fuels does not lead to a loss of biodiversity or loss of high-carbon stock land such as forest or peatland. In 2019, these sustainability requirements were met for 100% of the renewable transport fuel supplied into the UK.
- 7.10. A total of 34 different feedstocks made up the renewable fuel supply in 2019, 22 of which are wastes. Figure 3 shows the main feedstocks from which the UK's renewable fuels were made in 2019. "Other fuels" represent a mix of 8 renewable fuels including biomethanol, biomethane and biopropane.
- 7.11. The top five waste feedstocks in 2019 are used cooking oil (over half of all renewable fuel), food waste, waste pressings from vegetable oils, starch slurry (waste) and category 1 tallow.
- 7.12. High ILUC feedstocks represented a small (but significant) volume of renewable fuel, such as palm (2.6%) and oilseed rape (2.1%). A small volume of hydrogen was produced using wind power, which is the first instance of the RTFO awarding a development fuel certificate. The only other new feedstock used was ethanol from cleaning/extraction of blood plasma (0.2% of renewable fuel).

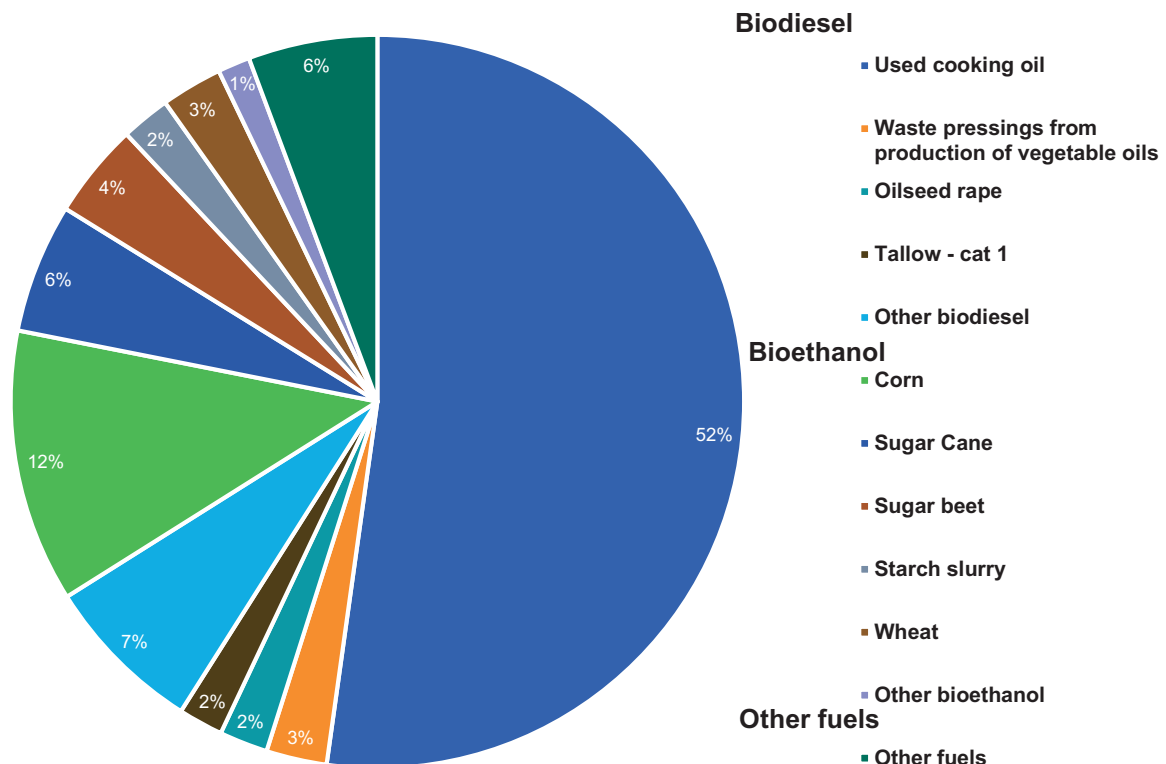


Figure 3 Feedstocks for UK renewable fuels in 2019

7.13. A total of 88 countries supplied renewable fuel to the UK, compared to 76 in 2018 and to 18 when the RTFO began in 2008-09. The five top supplying countries are China, UK, USA, Spain and France. Last year, in 2018, the same five countries supplied the highest volumes of renewable fuel but have been reordered from UK, France, China, Spain and USA. This is the first reporting period where the UK has not been the most common source for feedstocks used in UK renewable fuel. The proportion of renewable fuels supplied by the UK has decreased to 11% compared to 16% in 2018. Figure 4 shows the top supplying countries for biodiesel and bioethanol, with Ukraine being the top supplier of bioethanol despite not making the five highest supplying countries of all UK renewable fuels.

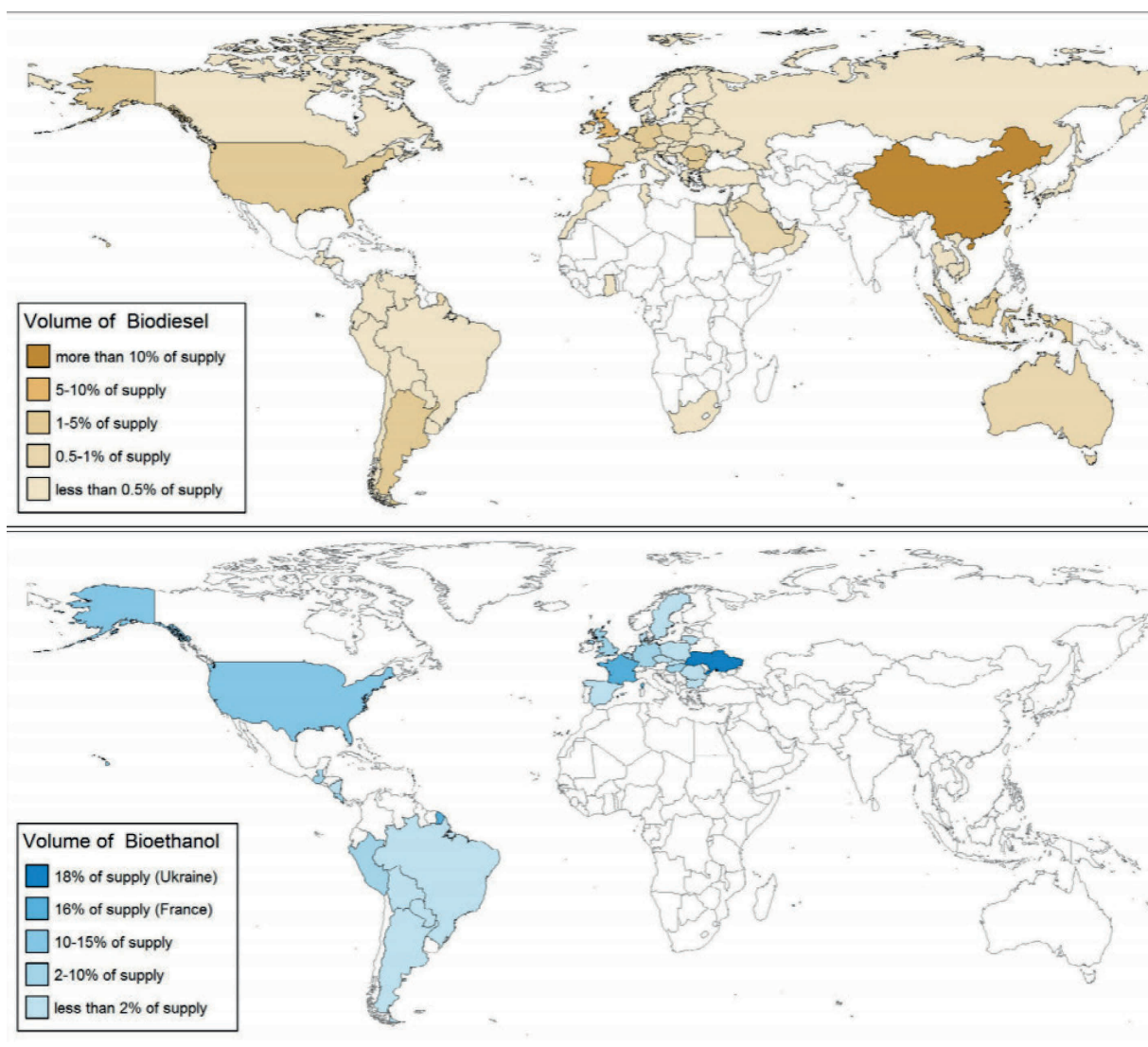


Figure 4 Global feedstock sources for UK Biodiesel and Bioethanol 2019

Meeting the 2019 obligation

7.14. After double counting renewable fuels produced from waste feedstocks, and carry-over of RTFCs from the previous year, the total obligation for 2019 (8.4%) was met by suppliers. Although two smaller obligated suppliers achieved this through buy-out.

- 7.15. The new development fuel obligation for 2019 (0.1%) was also met by suppliers, however all suppliers achieved this by buying out of their obligation.
- 7.16. In 2019, 4,516 million RTFCs were redeemed, of which 219 million, or 5%, related to fuel supplied in the previous year. Only 0.01% of the total obligation was met through buy-out. Figure 5 shows the number of RTFCs redeemed and surrendered each year.
- 7.17. As the Administrator of the RTFO, DfT operates systems and processes designed to prevent and detect inaccurate or fraudulent applications for RTFCs. It also has powers to impose civil penalties if certain requirements of the RTFO Order are not complied with. In 2019, 1.7 million RTFCs were revoked due to inaccurate applications made that year. No civil penalties were imposed.

Modelled RTFC prices

- 7.18. We have modelled certificate prices for the 2019 obligation year using market price data for fuels (since RTFC price data is not publicly available). For this purpose, we assume used cooking oil biodiesel is the marginal fuel supplied under the RTFO and therefore it is the price differential between diesel and used cooking oil biodiesel which determines the RTFC price. We estimate that RTFC prices in 2019 ranged from £0.12 per RTFC to £0.27 per RTFC, with a mean value of £0.18 per RTFC.

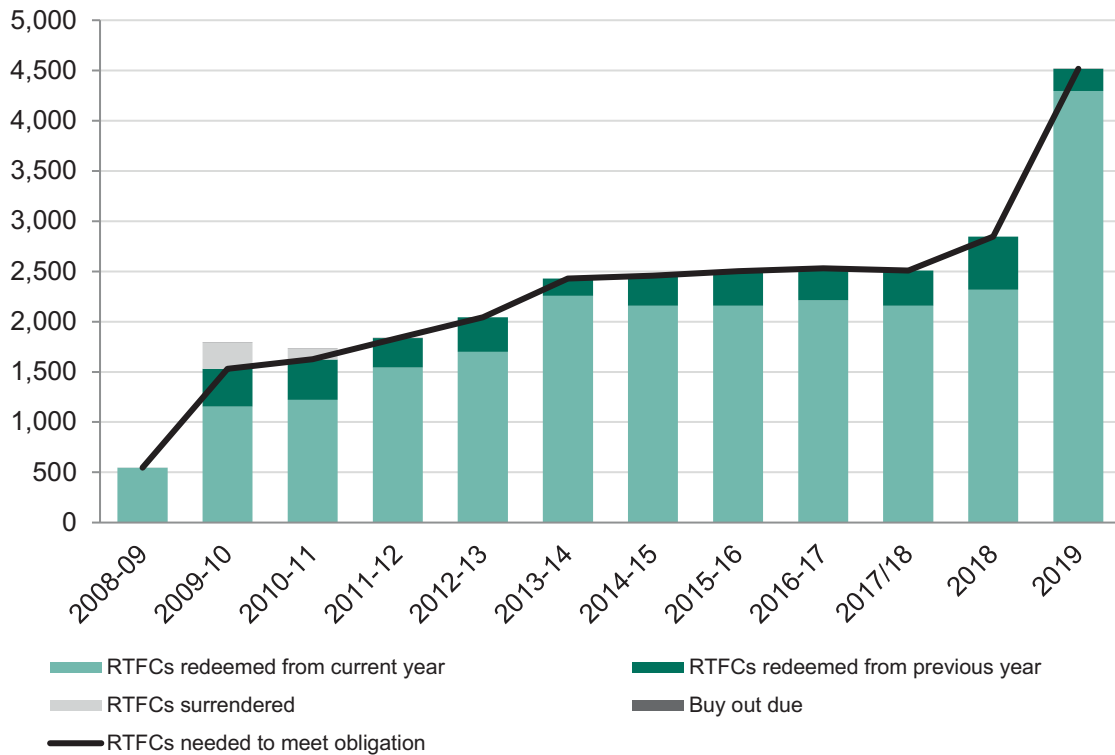


Figure 5 RTFCs redeemed and surrendered

Conclusion

- 7.19. The RTFO continues to meet its objective of reducing GHG emissions from road transport. All the renewable fuels rewarded under the RTFO meet the mandatory sustainability criteria. The RTFO is designed and managed to ensure a high level of compliance with its requirements.

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