

The Renewable Transport Fuel Obligation – an essential guide

What is the RTFO?

The Renewable Transport Fuel Obligation (RTFO) commenced on 15 April 2008 and is one of the Government's main policies for reducing greenhouse gas emissions from transport. The RTFO delivers greenhouse gas emission savings by encouraging the supply of renewable fuels for use in UK transport.

Under the RTFO, suppliers of relevant transport fuel (petrol, diesel, gas oil or renewable fuel) in the UK must meet an annual obligation using tradeable certificates which are awarded for the supply of sustainable renewable fuel. The RTFO is administered by a team within the Department for Transport (DfT) called the RTFO Unit.

In 2021, because of the RTFO, 2,562 million litres of renewable fuel was supplied for use in UK transport. This constitutes 5.4% of total transport fuel supplied. This delivered greenhouse gas savings of 5.07 million tonnes of CO₂ eq., roughly equivalent to the annual emissions of 2.5 million average cars. Further details on the outcomes, cost and impact of the RTFO can be found in the RTFO [statistics](#) and [annual report](#).

How does the RTFO work in practice?

The RTFO applies to fuel suppliers who own fossil and/or renewable transport fuel at the point that it becomes liable for HMRC fuel duty (the 'duty point'). Suppliers of relevant fuel totalling 450,000 litres or more for use in a relevant transport mode during an obligation period¹ must register with the RTFO Unit and may be subject to an obligation. The relevant transport modes are:

- road vehicles
- non-road transports (including non-road mobile machinery - NRMM)
- aviation
- maritime, if the fuel used is a renewable fuel of non-biological origin (RFNBO)

The obligation has two elements - the 'main obligation' and the 'development fuel target'. The obligation is calculated by multiplying the obligated amount (the total fossil and unsustainable renewable fuel supplied²) by the obligation percentage for that period. For 2023, this percentage is 13.078% for the main obligation and 1.142% for the development fuel target.

Obligated suppliers can 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. An obligated supplier can obtain RTFCs either by supplying

¹ Obligation periods run 1 January to 31 December

² The obligated amount is calculated by subtracting the total volume of sustainable fuel (renewable fuel that has been awarded certificates) from the total volume of (fossil and renewable) fuel supplied.

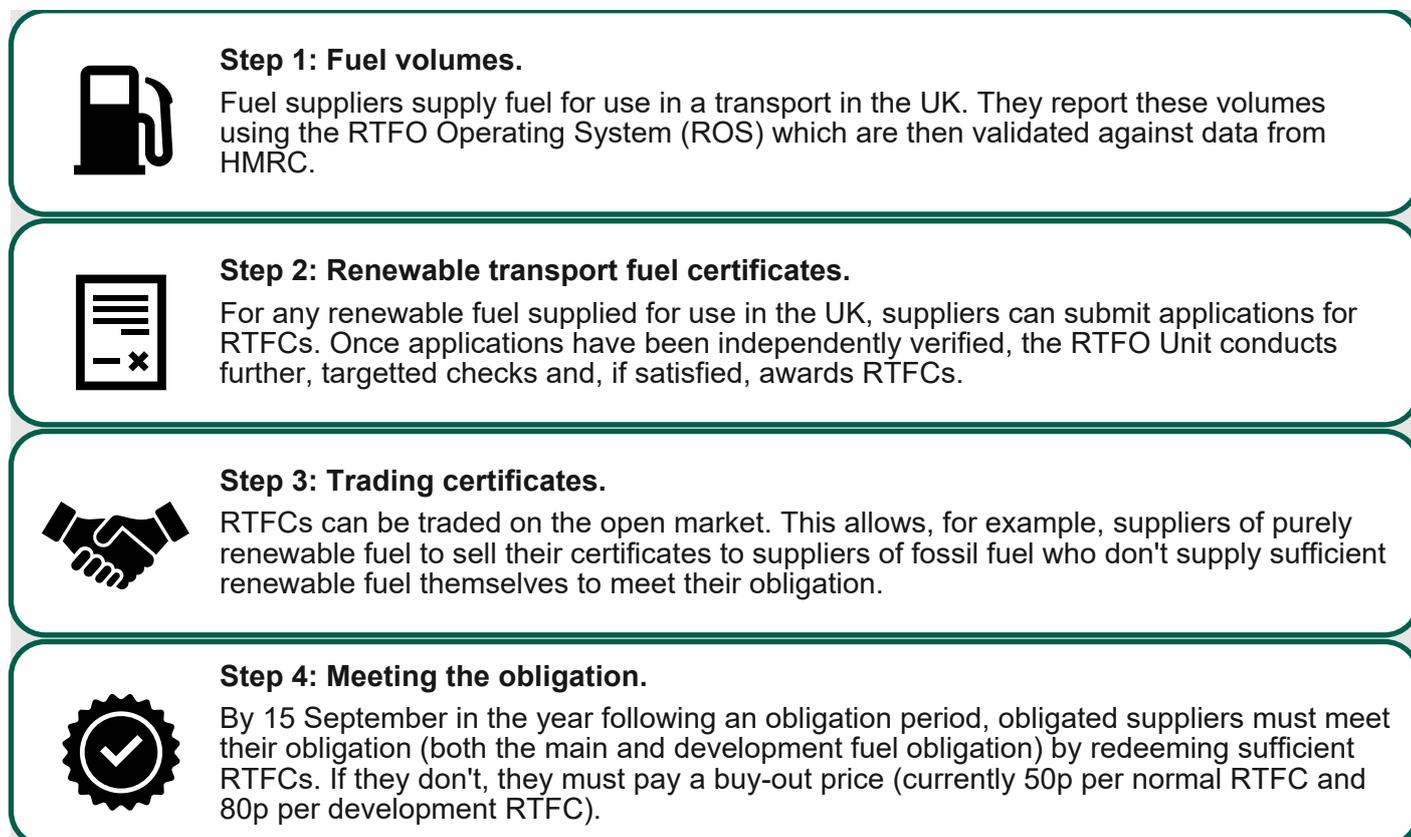
renewable fuels, or by buying them from renewable fuel suppliers. DfT sets the buy-out price³ and the market determines certificates prices based on supply and demand.

RTFCs may be claimed for every litre (or equivalent) of sustainable renewable fuel supplied. These RTFCs can be of three types, "relevant crop" which are subject to the crop cap, "development fuel" which can be used to meet the development fuel target, and "general" which covers everything else. Fuel from certain wastes or residues, dedicated energy crops, and RFNBOs are awarded double the RTFCs per litre (or equivalent) supplied. Those wishing to apply for RTFCs must have an account with the RTFO Unit.

All applications for RTFCs must be independently verified and must demonstrate compliance with the RTFO sustainability criteria, which consist of the following:

- **GHG emissions savings criteria:** Requires that renewable fuels deliver greenhouse gas savings relative to fossil fuels of at least 55-65% (depending on when the production installation started operating).
- **Land criteria:** Ensures the preservation of land with high biodiversity value or high carbon stock.
- **Forest criteria:** Ensures legal harvesting, forest regeneration and the maintenance of soil carbon where forest biomass is used as a feedstock to make renewable fuels.
- **Soil carbon criteria:** Requires impacts on soil quality and soil carbon from the use of agricultural wastes and residues as renewable fuel feedstocks to be monitored and addressed.

In summary, complying with the RTFO tends to follow the following process (see Figure 1):



³ The buy-out price is currently 50p per standard RTFC and 80p per development fuel RTFC.

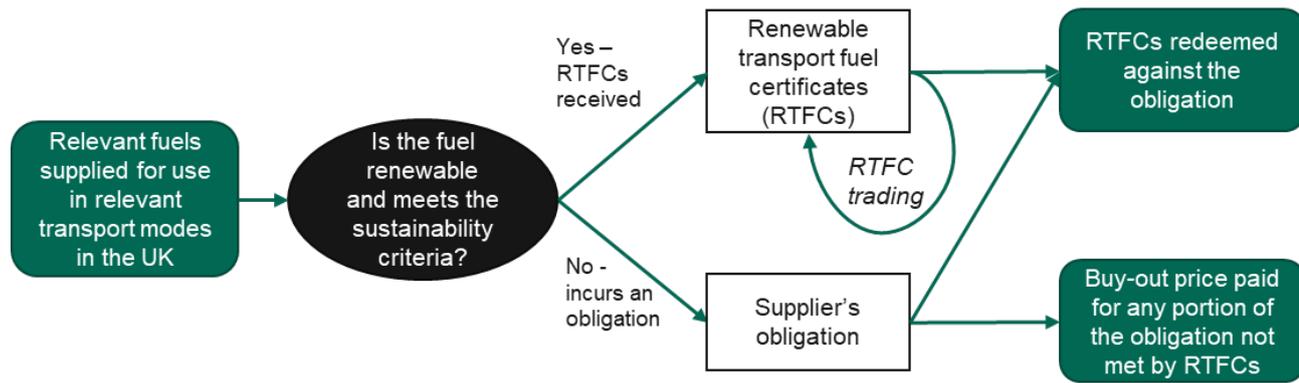


Figure 1 A simplified flow diagram of how the RTFO works

FAQs

What happens if fuel suppliers fail to comply with the RTFO?

If RTFCs have been awarded based on an erroneous application, the relevant RTFCs will be revoked. In certain cases of serious non-compliance, the RTFO Unit has powers to impose civil penalties as set out in the civil penalties policy outlined in Annex A of the [RTFO compliance guidance](#).

I am supplying a fuel that doesn't have an appropriate HMRC duty point, what should I do?

Where there is no appropriate HMRC duty point, an alternative assessment time is used. The owner of the fuel at this alternative assessment time will be the entity which incurs an obligation and/or is eligible to receive RTFCs for that fuel. The following alternative assessment times are currently defined:

- **Renewable avtur:** The blending and certification point.
- **Renewable hydrogen:** The point of sale for consumption in transport.
- **Maritime RFNBOs:** The point at which it is dispensed for use in a ship.
- **Renewable gasses used in non-road transports:** The point which the fuel is 'set aside' for use in non-road transports.

Volumes for fuels without an HMRC duty point cannot be reconciled against HMRC data - the RTFO Unit will generally request additional evidence (e.g. sales invoices) to demonstrate that the fuels have been used in a relevant transport mode within the UK.

Can I carry over RTFCs from one obligation period to another?

Yes, unused RTFCs from a given obligation period can be carried over for use in the subsequent obligation year, but only once. For example, RTFCs from 2024 can be carried over into 2025, but not 2026. Obligated fuel suppliers can meet up to 25% of their obligation using certificates from the previous obligation year.

How are gasses like biomethane treated under the RTFO?

Gasses are mostly subject to the same provisions as renewable fuels. However, gasses are reported in kilograms rather than litres, with multipliers applied for specific gasses for the purposes of awarding RTFCs. Suppliers of biomethane, or fuels for which biomethane is a chemical intermediate, must also meet specific [guidance for biomethane](#).

I have a new renewable fuel feedstock or production pathway and I am not sure how it is treated under the RTFO, what should I do?

Renewable fuel feedstocks that have already been assessed for eligibility by the RTFO Unit are [listed online](#). Where a feedstock is not present on this list, fuel suppliers should contact the RTFO Unit who can undertake a feedstock assessment to determine how the feedstock should be classified under the RTFO.

For new production processes, particularly those resulting in a development fuel, fuel suppliers are encouraged to engage with the RTFO Unit to discuss their process. The RTFO Unit may be able to undertake a provisional assessment of whether fuel derived from the process would be eligible for RTFCs.

What are renewable fuels of non-biological origin (RFNBOs) and how are they treated under the RTFO?

Renewable fuels of non-biological origin (RFNBOs) are produced from renewable energy sources other than biomass, such as solar, wind, geothermal and hydro. The simplest form of RFNBO is hydrogen produced through electrolysis using renewable electricity. These fuels are potentially eligible for RTFCs and the core requirements of the RTFO remain the same. [Bespoke guidance for RFNBOs](#) sets out the GHG methodology to be used and “additionality” requirements for the consumption of grid electricity.

Partially renewable and co-processed fuels, what are they and how treated under the RTFO?

Partially renewable fuels are those that are made from a mix of fossil and renewable inputs. Co-processed fuels are those that are produced through intermediate products of fossil and renewable origin being co-processed together in the same refinery, resulting in a blend of renewable and non-renewable fuel. In both cases, the renewable share of the resulting fuel should be calculated based on the percentage (by energy) of all the feedstocks which are renewable. This renewable share may be eligible for RTFCs and the fossil share may be liable for an obligation – see Chapter 4 of the [RTFO compliance guidance](#).

What fuels can receive development fuel RTFCs?

To receive development fuel RTFCs, the fuel must be a RFNBO or be made from a material that is deemed by the RTFO Unit to be a double counting waste that is not a segregated oil and fat. They must also be one of the following fuel types:

- Hydrogen
- Aviation fuel
- Substitute natural gas – renewable methane produced from gasification or pyrolysis

- A “drop-in” petrol or diesel which can be blended to at least 25% while still meeting the relevant standards

All development fuels are awarded double the RTFCs per litre (or equivalent) of fuel supplied. For more details on development fuels, see Chapter 4 of the [RTFO compliance guidance](#).

Where can I find out more?

- [RTFO compliance guidance](#): A first port of call for further, more detailed information.
- [RTFO third-party assurance guidance](#): Specific guidance on the role of verifiers and voluntary schemes under the RTFO.
- [RTFO biomethane guidance](#): Specific additional guidance for the supply of biomethane or fuels derived from biomethane.
- [RTFO guidance on renewable fuels of non-biological origin](#): Specific guidance for renewable fuels made from non-biogenic renewable feedstocks
- [List of feedstocks, including wastes and residues](#): A list of feedstocks that have been assessed for eligibility by the RTFO Unit.
- [Carbon calculator](#): A free software tool which can be used by fuel suppliers to calculate the carbon intensity of the fuels they supply.

The RTFO Unit can be contacted at RTFO-compliance@dft.gov.uk.