



Renewable Transport Fuels Obligation (RTFO)

- Biofuels can play a part in reducing CO₂ emissions from road transport but the amount saved, measured on a 'well to wheel basis', will vary substantially dependent upon the source material and the process used to produce the biofuel.
- The oil industry is adding biofuels to petrol and diesel to meet the Renewable Transport Fuel Obligation (RTFO) which commenced on 15th April 2008; the RTFO's targets are: 2.5% by volume of biofuels in 2008/9, 3.25% in 2009/10, 3.5% in 2010/11, 4% in 2011/12, 4.5% in 2012/13 and 5% in 2013/14.
- The RTFO was amended in December 2011 to include only biofuels that meet the Renewable Energy Directive's Carbon and Sustainability Criteria, excluding ILUC (indirect land-use change) effects.
- From April 2013, the RTFO includes Non-Road Mobile Machinery in the obligation, along with road petrol and diesel. The level of biofuel to be added is expected to reduce to around 4.7% for 2013/14 and subsequent years.
- On 17th October 2012, the European Commission announced proposals to start the transition to biofuels that deliver substantial GHG savings when also estimated indirect land-use change emission are included.
- Further increases in the level of biofuels to 10% by energy have been agreed, subject to review in 2014, under the Renewable Energy Directive.

Renewable Transport Fuel Obligation (RTFO) Questions & Answers

Q Why was the RTFO introduced?

The UK Government first announced its intention to introduce the RTFO in November 2005. This was in response to the EU Biofuels Directive in 2003, setting member states an indicative target of 5.75% by energy content in road fuels by 2010. Since then the Government has conducted a number of consultations on the RTFO, and set in train the legislative process in July 2006.

In October 2007, Parliament approved the Renewable Transport Fuel Obligation, requiring suppliers of road fuels to incorporate a proportion of biofuel in petrol or diesel.

Q Who administers the RTFO?

The Renewable Fuels Agency (RFA), established on 26 October 2007, has been responsible for monitoring the implementation of the RTFO by obligated companies until 1 April 2011, when the Department of Transport (DfT) took over responsibility for the governance of the RTFO. Obligated companies are required to submit monthly reports of the volumes of fuels sold and the biofuel content. Each year guidance notes are issued on how to report carbon saved and sustainability of biofuels.

Q What are the targets for biofuel content under the RTFO?

The RTFO commenced on 15th April 2008 with an original target of 2.5% by volume biofuel content in road fuels in 2008/9, followed by 3.75% in 2009/10 and 5% in 2010 onwards. Revised Renewable Transport Fuel Obligation limits were approved by Parliament in April 2009. The new levels are 2.5% by volume of biofuels in 2008/9, 3.25% in 2009/10, 3.5% in 2010/11, 4% in 2011/12, 4.5% in 2012/13 and 5% in 2013/14.

On 1 April 2010, following the ending of the duty differential for biofuels for road use, the duty rates for biodiesel and bioethanol have been increased to the same rate as the main road fuels, with a current buy-out penalty for suppliers failing to meet the obligation of 30p per litre. Though, biodiesel made from waste cooking oil continued to benefit from a 20p per litre duty differential until 31st March 2012.

From April 2013, the RTFO includes Non-Road Mobile Machinery (NRMM) in the obligation. Because DfT does not want to increase the volume of biofuel supplied to the market, the RTFO target is expected to change from 5% by volume to around 4.7% for 2013/14 and subsequent years.

Q Concerns had been expressed about the sustainability of biofuels?

In 2008, a review was carried out by the Government's Renewable Fuels Agency (RFA) - which administered the RTFO until 2011- led by the RFA's Chairman Prof. Ed Gallagher, into the indirect effects of the production of biofuels (food vs fuel and indirect land use changes), advised a slowing in the pace of biofuel use originally envisaged under the Renewable Transport Fuels Obligation. The review also looked at the impact upon food prices and supply. The revised levels now form part of the RTFO.

In addition, the RTFO was amended in December 2011 to reflect the requirements of the Renewable Energy Directive (RED, 2009/28/EC). The RED came into force and required that all biofuels crossing the duty point should meet the carbon and sustainability criteria as defined in the Directive.

Q What are the benefits from the RTFO?

The use of biofuels can reduce the "well to wheels" emissions of carbon dioxide associated with road transport. The exact reduction will depend on the biofuels used and their source.

Q Are bio fuels likely to give rise to problems with vehicles?

Current fuel standards in the UK limit the concentration of biofuel content of conventional petrol to 5% ethanol (E5) by volume and diesel to 7% biodiesel (B7) by volume without affecting the vehicle manufacturer's warranty.

A European and UK standard for E10 is currently under development. E10 is not suitable for all vehicles and appliances used in the UK.

Q Are there alternatives to biofuels

UKPIA in its 2004 publication '*Future Road Fuels*' outlined a number of possible new fuel and vehicle technology routes to lower carbon road transport, including biofuels, compressed natural gas (CNG), LPG, 'biomass to liquids' (BTL) fuels and hydrogen.

The '*Future Road Fuels*' report highlighted the fact that the CO₂ savings of biofuels calculated on a 'well to wheels basis' varied considerably, depending upon the source material and the processes involved. The report also highlighted the potential impact of biofuels upon land use and sustainability.

There has been focus on biofuels because they are readily available, albeit they can be more expensive than conventional petrol and diesel, and the processes and technology are well known.

Biofuel options include current biofuels from food crops, and advanced bio fuels that use fuel blending components derived from non-food crops (straw, wood, waste, etc). Aside from not diverting land from food production, advanced biofuels have a number of potential benefits in comparison with conventional biofuels, including the potential for superior carbon dioxide (CO₂) reduction and less energy intensive energy inputs during the growing and production cycle. However, currently there is a cost penalty.

A number of studies, including those from the Royal Commission on Environmental Pollution, DEFRA's Biomass Task Force and the December 2007 report by the EU Commission's Joint Research Centre, have also highlighted the greater potential CO₂ and cost benefit of using biomass to generate heat and power, rather than conversion into liquid fuels for use in road vehicles.