

Carbon and Sustainability Reporting within the Renewable Transport Fuel Obligation: Summary

The Renewable Transport Fuel Obligation

The Renewable Transport Fuel Obligation (RTFO) is one of the Government's main policies for reducing greenhouse gas emissions from road transport. The RTFO will commence on 15 April 2008 and is intended to deliver reductions in carbon dioxide emissions from the road transport sector of 2.6 - 3.0 million tonnes per annum (equivalent to carbon savings of 700,000 - 800,000 tonnes) by 2010, by encouraging the supply of renewable fuels.

The greenhouse gas (GHG) and sustainability impacts of different biofuels vary significantly. The GHG benefits of biofuels depend, among other things, on the system of cultivation, processing and transportation of feedstock. The introduction of biofuels can also lead to unintended negative environmental and social impacts. Maintaining public confidence in biofuels requires Government and the biofuels industry to find effective ways to manage the potential negative impacts of their increased demand.

The Reporting Framework

To encourage suppliers to source sustainable biofuels the Renewable Fuels Agency (RFA) requires biofuel suppliers to submit reports on both the net GHG saving and the sustainability of the biofuels they supply, in order to receive Renewable Transport Fuel Certificates (RTFCs). These reports address the *direct* impacts arising from biofuel cultivation that are potentially within the influence of companies sourcing or producing biofuels through effective supply chain management. The RFA will separately monitor the potential *indirect* impacts of biofuel production such as indirect land-use change or changes to food and other commodity prices that are beyond the control of individual suppliers.

A reporting framework will encourage the supply of those biofuels which deliver a high level of greenhouse gas savings in a sustainable way and is an essential 'stepping-stone' towards a mandatory assurance scheme. The Government announced on 21 June 2007 that it aims to reward biofuels under the RTFO:

1. **in accordance with the carbon savings that they offer from April 2010**, provided that this is compatible with World Trade Organisation rules and EU Technical Standards requirements, and is consistent with the policy framework being developed by the European Commission as part of the review of the Biofuels Directive, and subject to consultation on its environmental and economic impacts
2. **only if the feedstocks from which they are produced meet appropriate sustainability standards from April 2011**, subject to the same provisos and consultation as above and subject to the development of such standards for the relevant feedstocks.

This first step is necessary due to the currently limited availability of data and the need to test the robustness of the criteria and methodology in the absence of comprehensive internationally agreed standards. There are also concerns that the unilateral adoption by the UK of a mandatory assurance scheme at this early stage could give rise to possible breaches of World Trade Organisation rules.

The RFA will allow transport fuel suppliers, at least initially, to report that they do not have information on the sustainability or otherwise of their biofuel. This is in recognition of the fact that it may be difficult to provide information for some fuels – particularly those purchased on the spot market.

The RFA also requires annual, independently verified reports of overall supplier performance from suppliers applying for certificates. These reports will demonstrate suppliers' performance in sourcing sustainable biofuels with good GHG savings¹.

Targets

The Government has set targets for three key aspects of the reporting scheme. The targets are not mandatory (and there is no penalty for failing to meet them) but illustrate the level of performance which the Government expects from fuel suppliers.

Annual supplier target	2008-2009	2009-2010	2010-2011
Percentage of feedstock meeting a Qualifying Environmental Standard	30%	50%	80%
Annual GHG saving of fuel supplied	40%	45%	50%
Data reporting of renewable fuel characteristics	50%	70%	90%

The RFA will publish reports of individual supplier performance on GHG savings and sustainability on an annual basis and possibly more frequently. The RFA will also make available other information on the environmental impact of the RTFO including information from annual and monthly carbon and sustainability (C&S) reports that identifies individual suppliers. This will be undertaken in a manner which is consistent with the requirements of the Freedom of Information Act 2000 and Environmental Information Regulations 2004. The RFA will make information available in a way that is accessible to consumers and which could inform their purchasing decisions. In compiling this information the RFA will recognise and protect the commercial sensitivity of information such as individual suppliers' sales volumes from which market shares can be deduced.

Reporting Requirements

Obligated suppliers who wish to claim RTFCs must submit monthly and (if they apply for 450,000 or more certificates in an obligation period) annual C&S reports. Monthly reports should be submitted by the 15th day of the month following the month in which the fuel was supplied. This would mean that, for example, reports for the period 15 June 2008 to 14 July 2008 (inclusive) would be due by 15 August 2008. Non-obligated suppliers must report whenever they wish to claim RTFCs.

¹ Suppliers claiming fewer than 450,000 RTFCs in an obligation period will not need to submit an annual report.

Under the RTFO Order the first obligation period ends on 14 April 2009 and each subsequent year. Annual reports must be submitted by 28 September in the same year and must be accompanied by an independent verifier's statement. The annual report will not initially be linked to the issuing of certificates, but failure to submit an annual report is in breach of a requirement which may incur a civil penalty.

Monthly Reports

As explained above, obligated suppliers must report monthly on the fuels they have supplied, and non-obligated suppliers must report whenever they wish to receive RTFCs for the fuel they supply. The term "monthly reporting" is used throughout this document to differentiate these reports from annual reports.

Monthly reports must list the "administrative batches" of feedstock or fuel. An "administrative batch" is one with homogenous sustainability characteristics. For example, three tanker movements of fuel with identical sustainability characteristics (e.g. palm oil from Malaysia meeting the requirements of the Round Table on Sustainable Palm Oil (RSPO)) could be reported as a single batch. But a separate tanker movement of palm oil from Malaysia without any form of assurance would have to be reported as a different batch to the ones above, as its sustainability characteristics would be different. The summary monthly data sheet is represented in Table A.

Annual Reports

Annual reports contain aggregate monthly information and in addition details of:

- Actions that have been taken to increase the sourcing of sustainable biofuels and biofuels with a lower carbon intensity, including actions to promote production on idle land.
- Environmental management system certificates.
- Successful prosecutions for breaches of compliance with any environmental and/or social regulations related to biofuels activities;
- Existing verified environmental / corporate responsibility reporting.

Table A: Monthly reporting summary format – example data

General Information						Sustainability Information				Carbon Information	
Batch number	Internal Batch number (optional)	Fuel type	Quantity of fuel (litres)	Biofuel Feedstock	Feedstock Origin	Standard	Env Level	Social Level	Land use on 31 Nov 2005	Carbon intensity incl LUC g CO _{2e} / MJ	Accuracy level
33001		Bioethanol	250,000	Wheat	UK	LEAF	QS	-	Cropland	61	2
33002		Bioethanol	100,000	Wheat	France	GlobalGAP	-	-	Grassland	122	2
33003		Bioethanol	250,000	Sugar beet	UK	ACCS	QS	-	Cropland	35	5
33004		Bioethanol	1,000,000	Sugar cane	Brazil	Meta-Standard	RTFO	RTFO	Cropland	24	2
33005		Bioethanol	500,000	Unknown	Unknown	Unknown	-	-	Unknown	61	0
33006		Biodiesel	1,000,000	Oilseed rape	UK	ACCS	RTFO	RTFO	Cropland	55	2
33007		Biodiesel	250,000	Oilseed rape	Unknown	Unknown	-	-	Unknown	55	2
33008		Biodiesel	500,000	Palm oil	Malaysia	RSPO	QS	QS	Cropland	45	2
33009		Biodiesel	500,000	Soy	Argentina	Basel	QS	QS	Grassland	177	2
33010		Biodiesel	250,000	UCO	UK	By-product	QS	QS	By-product	13	2
33011		Biomethane	150,000	Dry manure	UK	By-product	QS	QS	By-product	36	2

QS = Qualifying Standard
 RTFO = RTFO Meta-standard

Scope and Principles for RTFO C&S Reporting

Greenhouse Gas Calculation Methodology

The GHG calculation methodology is based on a well-to-wheel approach that includes all significant sources of GHG emissions. This enables direct comparison of fuel chain GHG saving on a like for like basis. Detailed calculations have been made for the principal feedstocks expected to supply biofuel to the UK at the start of the RTFO scheme:

- Ethanol from: sugar cane, sugar beet, molasses, wheat and corn
- Ethanol converted to ETBE
- FAME biodiesel from: tallow, used cooking oil, palm oil, soy and rapeseed
- Biomethane from anaerobic digestion of MSW and manure.

Detailed calculations have also been made for hydrogenated vegetable oil biodiesel from palm oil, soy and rapeseed, although this fuel will not be eligible for RTF certificates in the first year of the RTFO.

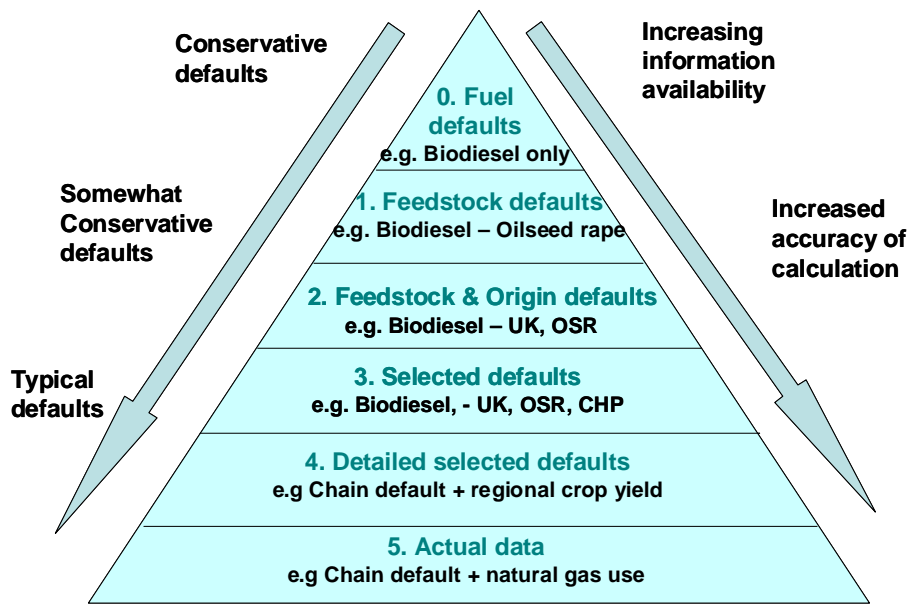
The Government is likely to extend the RTFO order to other renewable transport fuels if they are introduced into the UK market on a significant scale. It is also possible that new feedstocks or production pathways become available for existing renewable transport fuels covered by the scheme. In these circumstances, the RFA will develop new fuel chains and/or default values for these fuels.

The calculation methodology uses default values that provide estimates of the carbon intensity of different fuel chains. This enables suppliers with specific information about their supply chain to provide additional qualitative or quantitative data to improve the accuracy of the calculation. High level default values (where little is known about the origin of the supply chain) represent conservative GHG savings; but typical default factors (where the calculation includes more detailed information) are less conservative in order to encourage the supply of information. This is illustrated in Figure A. This flexible calculation method provides a practical, cost-effective and credible reporting system. Suppliers are also required to report on the type of information used in their calculations through reporting the levels 0-5 illustrated in Figure A.

Land Use Change

Where information on previous land use has been supplied the calculation includes the effect on overall GHG savings. Default values for specific land use changes are based on Intergovernmental Panel on Climate Change guidelines. Where information is not provided (i.e. 'unknown' is reported) the calculation does **not** require the use of a default value for land-use change impacts. This is because the systems providing assurance on the provenance of fuels are in the very early stages of development, and applying an assumed land-use change carbon impact "penalty" to the fuel in questions would be overly conservative. This approach is unlikely to be acceptable in the longer term, particularly if biofuels are rewarded on the basis of the amount of carbon saved and if mandatory sustainability standards apply. In the meantime the RFA will conduct an analysis of the potential emissions associated with 'unknown' land use changes as part of its regular reports to the Secretary of State.

Figure A: Hierarchy of default values used



Environmental and Social Principles

The principal environmental and social risks arising from biofuel production (such as deforestation and loss of biodiversity) arise at the plantation. Therefore sustainability reporting is focused on this part of the supply chain. A future evolution of the scheme may encompass the wider supply chain including processing and transportation of feedstock.

The reporting scheme is based on a "meta-standard" approach under which existing voluntary agri-environment and social accountability schemes have been benchmarked against an RTFO Sustainable Biofuel Meta-Standard. The Meta-Standard comprises seven principles identified in Table B existing schemes have been benchmarked to assess the extent to which the feedstock produced in accordance with each scheme can be considered sustainable.

Table B: Environmental and social principles

Environmental principles
1. Biomass production will not destroy or damage large above or below ground carbon stocks
2. Biomass production will not lead to the destruction or damage to high biodiversity areas
3. Biomass production does not lead to soil degradation
4. Biomass production does not lead to the contamination or depletion of water sources
5. Biomass production does not lead to air pollution
Social principles
6. Biomass production does not adversely affect workers rights and working relationships
7. Biomass production does not adversely affect existing land rights and community relations

Benchmarked standards that meet the required level of sustainability are called Qualifying Standards. Additional standards will be benchmarked as they become available. Suppliers are able to report any standard that has been benchmarked against the Meta-Standard.

Suppliers are also able to provide evidence of successful supplementary checks to demonstrate that feedstock complies with all the Meta-Standard criteria if they so wish.

The RFA recognises that there are some wider environmental and social issues (such as land use change arising as an indirect result of biofuel production and/or the impacts of biofuels on commodity prices) that are difficult to monitor and manage effectively at the fuel supplier level. The RFA will report on these potential effects as part of its annual report to the Secretary of State.

**Table C: Benchmarked and Qualifying Standards
(see Annex A for further detail)**

Benchmarked Standards	Qualifying Environmental Standard?	Qualifying Social Standard?
Linking Environment And Farming Marque (LEAF)	Yes	No
Roundtable on Sustainable Palm Oil (RSPO)	Yes	Yes
Sustainable Agriculture Network/Rainforest Alliance (SAN/RA)	Yes	Yes
Basel criteria for soy (Basel)	Yes	Yes
Forest Stewardship Council (FSC)	Yes	No
Assured Combinable Crops Scheme (ACCS)	Yes	No
Social Accountability 8000 (SA8000)	No	No
GlobalGAP	No	No
International Federation of Organic Agriculture Movements (IFOAM)3	No	No
Proterra	No	No
Other standards available to report	Qualifying Environmental Standard?	Qualifying Social Standard?
Genesis Crops Module	No	No
Scottish Quality Cereals	No	No
Qualität und Sicherheit (German Standard)	No	No
Fedioil (Finnish Standard)	No	No

Treatment of by-products

To minimise the burden on business, suppliers are not required to report on criteria where the risk of adverse impacts is minimal. An objective, risk-based metric has been used to develop this principle. Therefore, where a feedstock represents less than 10% of the farm or factory gate value it is considered a by-product.

Biofuel producers purchasing these by-products will have little influence on the sustainability of the production process for the original product. For example, a biofuel producer buying tallow will have little or no influence on the standards applied to rearing the cattle. All feedstock considered by-products (such as cooking oil and tallow) are listed in Annex B and suppliers are not required to report on the sustainability standard or land use in respect of biofuels produced from these feedstocks. Instead, suppliers should report all general information required and then enter 'by-product' into the remaining sustainability columns within the monthly report. Suppliers are however still required to report the carbon intensity of such fuels, and this should be derived using the GHG calculation methodology.

Verification

To validate the accuracy of C&S reports a Chain of Custody must be established from the feedstock producer to the fuel supplier. Where an existing standard operates its own certifiable Chain of Custody this should be used to report the carbon and sustainability information. The Chain of Custody must be specific to the feedstock and standard it represents.

Where the existing assurance scheme does not operate its own Chain of Custody, or where the Chain of Custody is broken within the supply chain a "mass balance" approach should be used. This requires suppliers in 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 feedstock. It ensures that for every unit of sustainable biofuel sold the corresponding sustainable feedstock has been produced.

A "mass balance approach" requires suppliers throughout the chain to keep input and output records of the feedstock characteristics entering and leaving the plant or process stage. The feedstock or fuel sold will have its C&S characteristics described on an invoice or related document.

"Equivalence trading" is practiced under the Common Agricultural Policy of the EU under which crops grown under contract for energy use can be substituted by other material from within the EU which has not been grown under an energy contract. The RTFO will not affect this practice. The C&S characteristics of the feedstock may be substituted in such exchanges as long as certain conditions, specified in this document, are met.

The reliability of claims made in annual C&S reports must be demonstrated through an independent verification (or assurance engagement) and the verifier's report must be submitted to the RFA alongside the annual report. The annual reports must be verified by auditors who are qualified to carry out audits against the International Standard on Assurance Engagements (ISAE 3000), which defines requirements for limited-scope engagements. The annual report and verifier's statement will be made publicly available.