



Department
for Transport

Post-Implementation Review of the Renewable Transport Fuels Obligation: Summary of Responses and Government Response

April 2014

The Department for Transport has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the Department's website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact the Department.

Department for Transport
Great Minster House
33 Horseferry Road
London SW1P 4DR
Telephone 0300 330 3000
Website www.gov.uk/dft
General enquiries <https://forms.dft.gov.uk>

© Crown copyright 2014

Copyright in the typographical arrangement rests with the Crown.

You may re-use this information (not including logos or third-party material) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence **OGI** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.

Introduction

As part of government's overall commitment to improving regulation and to reducing the burdens it imposes, ministers committed to reviewing the effectiveness of the Renewable Transport Fuel Obligation (RTFO) through a post-implementation review (PIR). The scope of the review covers the extent to which the RTFO has achieved its objectives, to assess costs and benefits, and to identify any unintended consequences. In addition, the review is intended to consider how implementation and enforcement could be improved.

In December 2013 the government published an initial draft PIR and invited comment and input from businesses, individuals and other organisations on the analysis and invited further evidence.

This document summarises the responses received as part of this process and provides a government response. A final post-implementation review is published alongside this document. The government would like to thank all those inputting to the review.

Background

The government is committed to tackling climate change, and we have a comprehensive package of policies and legal commitments in place to enable us to do this. Through these we aim to make the transition to a low carbon economy, driving down emissions whilst maintaining energy security, becoming less reliant on imported fossil fuels, and minimising costs to consumers.

Transport makes up a large proportion of our domestic greenhouse gas emissions (21% by source in 2010)¹, and reducing these requires a step change in technology and investment. Sustainable biofuels can deliver substantial reductions in emissions from transport and have an important role to play in the transition to a low carbon economy.

The Renewable Transport Fuel Obligation (RTFO) was introduced in April 2008 to support the supply of sustainable biofuels in the UK, and to meet our European obligations. The RTFO implemented the EU Biofuels Directive and requires fuel suppliers to ensure that a minimum proportion of their transport fuel is from a renewable source.²

¹ <https://www.gov.uk/government/publications/total-greenhouse-gas-emissions-from-transport>

² Directive 2003/30/EC

The RTFO was amended extensively in 2011 to implement the EU Renewable Energy Directive (RED).³ This gave greater certainty over the sustainability of biofuels by introducing mandatory sustainability criteria, as well as incentivising non-crop biofuels by introducing ‘double counting’ for those derived from wastes and residues. At the same time further amendments were made to implement the EU Fuel Quality Directive by including a reporting requirement on emissions of fossil fuels and extending the scope of the obligation to include fuels used in non-road mobile machinery (NRMM).⁴ Further amendments are expected to address indirect land use change (ILUC) following the outcome of European negotiations.

As part of the process for amending the RTFO in 2011, and in line with good practice, ministers committed to reviewing the effectiveness of the RTFO through a post implementation review (PIR) by April 2014.

Who responded?

The review was published on 16 December 2013 to 7 February 2014. We received a total of 31 responses. The names of respondents are listed at the end of this document.

2	Small to Medium Enterprise (up to 50 employees)
12	Large Company
9	Representative Organisation
-	Trade Union
4	Interest Group
-	Local Government
-	Central Government
-	Police
2	Member of the Public
2	Other (academic and government body)

³ Directive 2009/28/EC

⁴ Directive 2009/30/EC

1. General responses

In addition to answers to the specific questions on the draft post-implementation review, several respondents raised other issues related to the wider policy.

Biofuel suppliers considered that there had been a disconnect between investor expectations and market reality due to variation between the UK national renewable energy action plan (NREAP) and deployment in transport⁵. These respondents, and others responsible for fuel supply, generally emphasised the importance of investment certainty and a trajectory in the RTFO to meet the EU Renewable Energy Directive target of 10% renewables for transport by 2020.

In contrast, respondents from the non-governmental organisation (NGO) community emphasised the evidence around the indirect effects of biofuels production including impacts on global food prices and indirect land use change. They generally considered that the RTFO targets should not be increased, or even that the mechanism should be phased out. Some respondents considered that alternative measures should be introduced to reduce energy use, for example reductions to speed limits.

Government response

The government considers that sustainable biofuels have a role to play in our efforts to address greenhouse gas emissions in the transport sector alongside other measures, including measures to improve efficiency. It is a prerequisite that biofuels used must lead to a worthwhile reduction in carbon emissions and be sustainable.

Negotiations on how to address the indirect effects of biofuels are currently ongoing. Until discussions are concluded, we do not believe it would be beneficial to revise the current policy framework while it is unclear what the UK will be required to deliver under European targets. Any significant changes made now to the UK scheme might need to be reversed or amended at a later date. Therefore, the government does not intend to make significant changes to UK biofuel supply legislation until these negotiations have concluded. Nor do we intend to raise the current RTFO obligation level.

⁵ The UK NREAP was required by the Directive 2009/28/EC. It set out an illustration of how the overall 15% target for the UK could be met.

However, we are keen to end the current policy uncertainty as soon as possible. For this reason we will continue developing the policy options that were set out in the call for evidence for advanced biofuels, so that we are in a position to establish a new policy position as soon as we get clarity from Europe. We will engage with stakeholders in doing this, so that any policy options are robust and ready for implementation.

2. Biofuels supply⁶

Chapters 1 and 2

- 2.1** Chapter 1 of the draft PIR set out the policy intent of the RTFO to reduce carbon emissions in road transport. It charted the development of policy support for biofuels in the UK, including the introduction of the RTFO in April 2008 which set targets for increasing the use of renewable fuels in UK road transport, and amendments made in 2011 that introduced mandatory sustainability requirements. It outlined how the RTFO was expected to overcome limitations of the duty incentive and provide a more certain framework to secure a mainstream market.
- 2.2** Chapter 2 considered the extent to which the RTFO has ensured the intended supply of biofuel and where the biofuels have come from. It showed that supply targets had been met each year.

Q 2.1 Do you agree that the RTFO is an effective mechanism to ensure supply of sustainable biofuels in line with Government targets?

Yes	No	Neutral or other comments
14	4	1

Summary of stakeholder responses

- 2.3** The majority of respondents agreed that the RTFO is an effective mechanism.
- 2.4** Several commented that it is well managed by the RTFO Unit, and that certain aspects, including the lists of waste and residue materials for double counting, was useful.
- 2.5** Some respondents considered that certain aspects of the RTFO were overly onerous – in particular, the verification requirements.
- 2.6** The main shortcoming of the RTFO amongst the majority of respondents was the lack of clarity going forward, particularly around meeting the 2020 Renewable Energy Directive target of 10%.
- 2.7** In contrast, several respondents from the NGO community made the case that because indirect land use change (ILUC) was not included in

⁶ Note that chapter 1 of the consultation document formed the introduction and did not contain questions.

the RTFO the measure was ineffective in supporting sustainable biofuels and should be scrapped.

2.8 One respondent considered that mandatory social criteria should be introduced in addition to environmental criteria. This respondent considered that if biofuels can play a crucial role in mitigating dangerous climate change then, depending on certain key considerations, there is a duty to develop such biofuels.

2.9 Comments included:

“The RTFO has proved generally effective to date. We remain concerned about the lack of clarity going forward and how it will develop over the next 5-6 years.”

“Notwithstanding the Government’s failure with its own commitment to the Renewable Energy Directive, the RTFO mechanism itself, within the constraints of policy, has delivered sustainable biofuels with GHG savings well above the RED minimum.”

“Ultimately, the RTFO should be scrapped and a new policy brought forward in the transport sector that 1) achieves genuine and ambitious greenhouse gas (GHG) savings and 2) includes an energy reduction target.”

Government response

2.10 The government notes that the RTFO is generally held to be an effective mechanism, but also that there is considerable concern about ILUC and future targets.

2.11 The government remains of the view that sustainable biofuels are required as one of many measures to tackle climate change. It is a prerequisite that biofuels used must lead to a worthwhile reduction in carbon emissions and be sustainable, which in the government’s view means ensuring that ILUC is appropriately addressed in support mechanisms such as the RTFO.

Q 2.2 Has the replacement of fuel duty derogations for biofuel with RTF certificates had a [positive / negative / neutral] effect on your business? Why?

Positive	Negative	Neutral
0	11	5

Summary of stakeholder responses

2.12 The majority of respondents considered that the removal of the fuel duty relief for biofuels and replacement with RTF certificates had a negative effect on their business.

2.13 The negative effects noted by a number of respondents included the following:

- the final cost to the motorist increased;
- it removed the incentive for using biofuel as a high blend alternative, for example, into the fleet market;
- it had a negative effect on cash flow compared with duty incentives, which was particularly problematic for smaller suppliers;
- the value of the RTF certificate is uncertain compared with the duty incentive;
- the RTFO effectively caps the overall volume supplied.

2.14 However, a number of respondents also noted that the RTFO lowered the cost of the fuel [to the taxpayer] compared to duty incentives, because the additional cost of the fuel was met by the motorist rather than through general taxation.

2.15 There were contrasting views on who benefited from the duty incentive: one biofuel producer considered that “the financial value from the duty derogation went solely to the obligated suppliers and did not move through the supply chain to the biofuel producer or feedstock supplier”, whilst one obligated party considered that “The fuel duty incentive was mainly kept by the biofuel producers but a small proportion was passed on to fuels suppliers.”

2.16 Comments included:

“The fuel duty derogation for biomethane was not removed. However the replacement of an incentive with certain value (duty derogation) with one with uncertain value (RTFO) has been damaging to the domestic biofuels industry in general.”

“The removal of the differential has been disastrous for small producers. Reduction in income, certainty, cash flow, and the introduction of an illiquid poorly functioning certificate market have combined to push many producers into closing their businesses.”

Government response

2.17 The government acknowledges that fuel duty incentives are a more popular mechanism than the obligation amongst the majority of respondents. It also acknowledges that the RTFO has disadvantages compared to duty incentives from producer and supplier perspectives.

2.18 However, we note two significant advantages the obligation offers compared to duty incentives:

- In theory, it ensures the supply of biofuels at least cost to the taxpayer. This is because the additional cost of biofuels compared to fossil fuels is volatile, so a fixed duty incentive could prove to be too high or too low. At times when the incentive is more than the additional cost of biofuel compared to fossil fuel, there is no guarantee that this taxpayers’ money is all passed on to the motorist. This contrasts to the RTFO where certificate prices are determined by the market.
- The RTFO is effective in ensuring that a certain amount of biofuels are supplied. This means that it is effective for the purposes of meeting policy targets and that the overall cost of the policy can be accurately anticipated and controlled.

2.19 The government also notes that across the EU the vast majority of Member States have moved from fiscal incentives to obligation mechanisms to support biofuels.⁷

⁷ According to a briefing document produced by industry association e-pure, only four member states do not have obligations.

**Q 2.3 Do you have any further comments on the analysis in this chapter?
[on biofuel supply under the RTFO]**

Yes	No
19	1

Summary of stakeholder responses

- 2.20** The majority of respondents made additional comments on chapter 2.
- 2.21** Many respondents considered that whilst the RTFO had ensured certain levels of biofuels had been supplied, it had not proved to be supportive of domestic production. This was the case for both smaller and larger producers and had led to poor returns on investment and loss of investor confidence.
- 2.22** A major factor leading to uncertainty was the changes to targets (e.g. following the Gallagher review when targets were re-profiled) and the lack of trajectory to 2020.
- 2.23** The majority of respondents made the case that a trajectory to 2020 was required for investment certainty.
- 2.24** Several suggested that a ‘split obligation’ (for example, separate targets for biodiesel, bioethanol and potentially biogas) would provide further certainty. However, some fuel suppliers specifically made the case against a split obligation on the basis that it would reduce flexibility and increase costs.
- 2.25** One respondent noted that the RTFO provided insufficient subsidy for biomethane into transport, noting that the Government’s Renewable Heat Incentive offered considerably higher support. They made the case that transport was a higher value end use than heat for biomethane, and would result in greater GHG savings.
- 2.26** Several respondents noted that the standard for petrol, BS EN 228:2012 allows up to 10% ethanol to be blended with petrol and not 5%.
- 2.27** One respondent called for the government to bear in mind that a significant percentage of the vehicle population will remain subject to problems arising from ethanol inclusion as vehicles which survive to be historic tend not to be scrapped. Conversion might not be a suitable solution for some older vehicles.
- 2.28** A number also pointed out typographical errors on the duty incentive and buy-out where the decimal place was misplaced.
- 2.29** Comments included:
- “A reduction in targets, the introduction of double counting and a lack of direction in policy to 2020, have reduced potential GHG savings. The same issues have created uncertainty, and reduced (or stopped) present and future investment in 1st and 2nd gen[eration] biofuels.”

“This section has not taken into account the benefits to agriculture in the UK. EU Biofuels demand has helped promote greater productivity with UK oilseed rape yield increasing by around 25% in the last 10 years.”

Government response

- 2.30** The government has noted the additional comments.
- 2.31** Recommendations for policy changes are addressed in chapter 7.
- 2.32** With regard to vehicle compatibility concerns with higher blends of ethanol, we have communicated to industry that it is not the right time to roll out E10 due the number of incompatible vehicles in the current fleet, but we will keep this under review. In addition, we have introduced a ‘protection grade’ for petrol that requires fuel retailers to ensure provision of petrol with a maximum ethanol content of 5% on busier forecourts until the end of 2016.

3. Greenhouse gas savings

- 3.1 Chapter 3 of the draft PIR considered the contribution that the RTFO has made over the period in the context of the Government's wider emissions reduction targets and the expectations in the original impact assessment.
- 3.2 It explained that the lifecycle GHG benefits of most crop derived biofuels are lower than they were understood to be in 2007 due to increased scientific understanding of the overall effects, in particular GHG emissions from indirect land use change (ILUC). Analysis was presented using both carbon savings estimates derived from the methodology in the current Renewable Energy Directive and more recent methodologies which seek to capture the impact of ILUC on GHG savings.
- 3.3 Stakeholders were asked for comments on the analysis and preliminary conclusions.

Q 3.1 Do you have comments on the methodology used to assess ILUC effects (see Annex A)?

Yes	No
19	3

Summary of stakeholder responses

- 3.4 The majority of respondents had a view on the use of ILUC factors in the analysis.
- 3.5 Many respondents, primarily biofuel producers and representatives, considered the ILUC factors were presented as figures of fact rather than noting that they are the result of modelling and subject to uncertainty. They considered that ILUC factors have not achieved any scientific consensus. Some of these respondents considered that the analysis is not appropriate to as a basis for policy because the science is uncertain.
- 3.6 Several of these respondents considered that ex-post ILUC analysis should now be conducted based on empirical data to check the results of the modelling.
- 3.7 Some respondents considered that the International Food Policy Research Institute (IFPRI) analysis used for the ILUC modelling (also used by the European Commission) did not take into account co-products from biodiesel production which can be used for animal feed and reduce the need for imports of feed such as soy beans from South America.

- 3.8** Many respondents, primarily oil suppliers and NGOs, considered that the use of the IFPRI analysis was appropriate. These respondents also acknowledged that the ILUC factors were subject to uncertainty, but generally considered that they presented the best available scientific evidence and should be taken into account for policy.
- 3.9** Respondents from the NGO community considered that whilst the IFPRI analysis was the 'best available scientific evidence', the ILUC factors for ethanol were optimistic and based on the assumption that more people would go hungry.
- 3.10** A number of respondents made some specific comments on the application of the IFPRI analysis in the review, including that:
- It was inappropriate to have average ILUC factors for biodiesel and bioethanol; these should be feedstock specific;
 - The factors used for bioethanol were too low compared with the IFPRI numbers;
 - ILUC factors should be applied to pure plant oil (made from oilseeds).
- 3.11** Several respondents were concerned that imported used cooking oil (UCO) would have indirect effects where it is imported from markets that use it for animal feed or biodiesel production. Some suggested that only household UCO should double count.
- 3.12** Several respondents noted that the lack of a clear EU position on ILUC is preventing the setting of future RTFO/RED/FQD targets, which in turn is making it very difficult for planning and investment decisions.
- 3.13** Comments included:

"Whilst intellectually, we can accept that there is a potential for ILUC around biofuels and any other product that uses crops as a raw material, the factors presented in the review are presented as fact, rather than as the result of one of many studies which are still subject to significant debate. In fact, certain reports, including the E4Tech report commissioned by the Department for Transport¹, indicate that wheat ethanol has a positive ILUC impact. A policy of capping crop biofuels is therefore flawed."

"We welcome the Government's commitment to address Indirect Land Use Change from biofuel demand... Additionally it has to be pointed out that the relatively low ILUC values for bioethanol in the IFPRI analysis are the result of trade-offs for higher impacts on food availability and prices as demonstrated by Tim Searchinger. I.e. IFPRI assumes bioethanol is better for the climate because more of the additional farmland will come from people eating less (due to higher prices)."

Government response

- 3.14** The government notes that views on the use of ILUC modelling are sharply divided between respondents. Although it is widely acknowledged that the models are necessarily imperfect, the government notes that they have improved over time and that the IFPRI analysis, which has recently been updated with very similar results, does take into

account protein co-products from both bioethanol and biodiesel production in the analysis.

3.15 The government’s view remains that ILUC must be taken into account in developing policy in this area to ensure that biofuels offer genuine carbon reductions.

3.16 In the light of comments received the ILUC modelling used in the draft PIR has been revised to:

- use the same feedstock specific factors from the IFPRI analysis;
- add a feedstock specific ILUC factor to pure plant oil;
- ensure that the review makes clear that whilst the ILUC factors used are the best scientific evidence available, they are the result of modelling and are uncertain.

3.17 The government notes that changes made to the modelling have made a minor difference to the results. For example, in the draft PIR the average GHG saving in years four and five of the RTFO including estimates for ILUC were both 56%, whilst in the final review the comparative savings are 55% and 60% respectively.

Q 3.2 Do you have evidence indicating whether the GHG performance of biofuels delivered under the RTFO will improve or worsen in the period to 2020 (including the effects of ILUC)?

Yes	No	Neutral or other comments
12	5	1

Summary of stakeholder responses

3.18 Many respondents noted that the GHG performance of biofuels - both the average GHG saving and the overall contribution - would depend to quite a large extent on the policy framework including target levels.

3.19 Some respondents indicated that ambitious long-term targets, particularly if focussed on carbon, would drive innovation and improvement.

3.20 Several respondents noted that the minimum GHG requirements in the Renewable Directive (and RTFO) would rise to 50% from 2017.

3.21 Several respondents indicated that there were reasons to anticipate improvements in average GHG savings - from innovative developments in the range of waste and residue feedstocks, and also from refining existing production techniques. Advanced biofuels in significant volumes would come later, if sufficiently stimulated, for example, through carbon based measures.

3.22 Some respondents considered that higher targets would lead to worse emissions due to ILUC effects unless measures were in place to address ILUC. The IFPRI analysis, indicating higher targets would lead to higher ILUC, was cited in support of this view.

- 3.23** Several respondents questioned the GHG savings offered by importing UCO from outside the EU, and noted concerns about the risk of fraudulent claims. Many also suggested that the overall volumes of UCO and other waste materials available to the UK might decrease in future if other countries incentivise its use for biofuels.
- 3.24** Some respondents noted that biomethane can offer a positive contribution in transport, though use is constrained by competing subsidies.
- 3.25** Several respondents noted that it would be better to show the GHG progress of the ethanol, crop biodiesel and waste biodiesel separately to show how the GHG have progressed over time.

Government response

- 3.26** The government has noted the responses. There are opportunities for further improvements in the greenhouse gas savings that biofuels offer, through using a wider range of waste materials, further refinements in existing production, further use of biomethane and also further developments in advanced technologies. However, there are also risks from ILUC, potential constraints around volumes of used cooking oil available, and fraudulent claims for materials such as used cooking oil.
- 3.27** With regard to risks of fraudulent claims, we note that the main voluntary schemes recognised by the European Commission for demonstrating the sustainability of biofuels have improved their processes in response to input from the UK government amongst others. The RTFO Unit introduced a new 'compliance policy' in April 2013 which has provided further assurance that biofuels are being traced appropriately through supply chains and can be demonstrated to meet the sustainability criteria.
- 3.28** The analysis has been updated to split out the costs per tonne of carbon saved for ethanol, crop biodiesel and waste biodiesel to illustrate the relative cost effectiveness of these fuels over time. These illustrate the relative benefits of bioethanol and waste based biodiesel compared to crop biodiesel, but also a general trend of increasing costs of carbon abatement over the period.

4. Cost and effectiveness

- 4.1** A key tenet of the Government's policy for bioenergy is that it should make a cost effective contribution to UK carbon emission objectives.
- 4.2** Chapter 4 of the draft PIR provided analyses on the additional costs of the RTFO over the period. Carbon cost effectiveness is measured in terms of £/tCO₂ and is a critical measure to assess how the RTFO is performing. Results were modelled both with and without estimates for the effects of indirect land use change.

Q 4.1 Do you agree with the costs presented in this chapter?

Yes	No	Neutral or other comments
1	14	0

Summary of stakeholder responses

- 4.3** The majority of respondents disagreed with the costs presented. These related to fuel prices, particularly of bioethanol, but respondents also provided further information on verification, administration, infrastructure and investment costs.
- 4.4** Those commenting on bioethanol costs considered that the analysis had overestimated the costs. This was particularly because during the period under review the UK pricing was lower than European traded prices due to imports from outside of the EU.
- 4.5** Fuel suppliers considered that some of the costs of the obligation have been underestimated. Costs for major fuel suppliers for import, blending and distribution facilities had been at least £240 million.
- 4.6** For example, whilst several agreed that the additional costs of verification were broadly accurate, the wider administrative cost of the obligation was higher, at around £300-500k per annum.
- 4.7** The costs of preparing and maintaining retail operations for biofuels supply were also felt to be underestimated. The original impact assessment estimated a total of £5 million spread over 10,000 filling stations. Fuel suppliers indicated that initial cleaning costs were around £5,000, with annual cleaning costs at £1,200.
- 4.8** Several respondents considered that the chapter did not state its data sources for a range of factors which made assessment impossible.

- 4.9 Several respondents noted that the comparisons in the analysis with other renewable technology deployment options were useful.
- 4.10 Several respondents suggested that costs for different fuels should be presented separately – for crop biodiesel, waste biodiesel, and for ethanol.
- 4.11 Several respondents also considered that the analysis assumes that while the duty rebate was in place, the benefit of the rebate was passed on to the consumer, and that the evidence for this should be shown.

Government response

- 4.12 Costs in the PIR have been revised to take into account comments received. In particular:
 - Ethanol costs – have been revised downwards to reflect the UK situation.
 - Infrastructure investment costs, blending costs, fuel supplier administration costs and fuel retailer costs have been added.
- 4.13 Data sources for costs have been cited where possible, and assumptions underpinning the analysis more clearly explained.
- 4.14 Cost effectiveness for different fuels have also been presented separately.
- 4.15 With regard to the duty rebate, we acknowledge that there is some question as to whether the full value of the fuel duty rebate was passed onto consumers. However, the economic analysis in the review is focussed on the overall additional cost to the economy, and makes no assumptions about whether the value of the duty rebate was passed on to motorists.

Q 4.2 Are the verification costs quoted in paragraph 4.26 an accurate reflection of costs faced by fuel suppliers obligated under the RTFO?

Yes	No	Neutral or other comments
4	4	0

Summary of stakeholder responses

- 4.16 In general respondents agreed that the typical costs of the verification itself were about right, but that there were some additional costs not accounted for.
- 4.17 For some smaller suppliers verification was more frequent than anticipated in the review, as much as monthly. This is because smaller producers need to sell certificates every month to maintain cash flow.

- 4.18 Larger suppliers indicated direct verification costs at around £20k per annum but wider administrative costs associated with verification of around £80k per annum.
- 4.19 Biofuel producers and others in the supply chain noted that they also faced additional costs related to verification, for example, through membership and certification under voluntary schemes. This was of the order of £20k. Some noted that multiple accreditations could be required if more than one scheme was used.

Government response

- 4.20 The government notes the responses.
- 4.21 Verification costs for fuel suppliers have been added to the analysis as part of overall administrative costs in line with industry comments. Verification costs further down the supply chain are assumed to be reflected in the cost of RED compliant biofuel.

Q 4.3 Do you anticipate the cost will increase, decrease or remain steady over time?

Increase	Decrease	Remain steady
10	1	2

Summary of stakeholder responses

- 4.22 The majority of respondents felt that verification costs would increase over time. This related to anticipated developments over time including a wider variety of feedstocks and production pathways; inflation; and higher volumes (assuming the obligation level increased).

Government response

- 4.23 The Government has noted the responses.

Q 4.4 Are there ways to reduce the cost of verification while maintaining effective compliance?

Yes	No	Neutral or other comments
12	1	0

Summary of stakeholder responses

4.24 One respondent suggested that higher volumes of fuel required under obligations would lead to lower verification costs per tonne.

4.25 A large number of suppliers considered that the RTFO verification requirements exceed those of the RED and could be streamlined to reduce costs.

4.26 Suggestions for reducing verification costs included:

- not to require a final verification where a voluntary scheme is used;
- automatically accept any biofuel which meets one of the EU recognised voluntary schemes without any further checking by the RTFO Unit;
- include a list of approved verifiers and guarantee issue of RTFCs with no further checking by the RTFO Unit;
- guarantee that once an RTFC is issued to an obligated supplier it would not be revoked;
- include an appeal mechanism against RTFO Unit decisions not to award an RTFC (within Department for Transport rather than resorting to the courts);
- require that voluntary schemes mutually recognise each other;
- pre-accredit production facilities to simplify verification;
- allow suppliers to use up existing stocks of biofuel which may no longer meet revised RED criteria.

4.27 Comments included:

“The RTFO verification requirements exceed the requirements of the RED. In other Member States it is sufficient to have a proof of sustainability issued under one of the recognised voluntary schemes. However, in the UK a verifier’s opinion is also required. In addition, the RTFO Unit also reserves the right not to issue RTFCs even if all the requirements (i.e. voluntary scheme and a positive verifier’s opinion) have been met. Consequently, as a large obligated supplier we carry a substantial financial risk that RTFCs will not be issued for biofuels we have purchased since there seems to be no absolute level of proof that is automatically accepted by the RTFO Unit. By contrast, in the Netherlands their government has recently eliminated the need for independent verification as long as the biofuel has met the requirement of one of the EU approved voluntary schemes.”

Government response

- 4.28** The Government has noted and considered the industry's suggestions to reduce verification costs. In the Government's view, options suggested to reduce costs would also add to the risk of undermining compliance and therefore are not considered appropriate at this time. The Government will however keep this issue under review.
- 4.29** Turning to each suggestion in turn:
- not to require a final verification where a voluntary scheme is used.
- 4.30** The Government considers that at this point in time a final verification continues to provide added value through ensuring that appropriate evidence (including that the voluntary scheme documentation is valid) is in place at the final point of supply into the UK market. We have enquired about developments in the Netherlands and understand that they are introducing a similar verification check to that required in the RTFO at the point fuels are entered into their national register.
- 4.31** It should also be noted that not all voluntary schemes cover all of the sustainability criteria and/or the full chain of custody. These aspects would need to be covered as part of the assurance exercise. We continue to work at EU level to encourage improvement in voluntary scheme coverage.
- automatically accept any biofuel which meets one of the EU recognised voluntary schemes without any further checking by the RTFO Unit
 - include a list of approved verifiers and guarantee issue of RTFCs with no further checking by the RTFO Unit
- 4.32** The RTFO Unit's experience of undertaking risk based checks has led to the identification and resolution of shortcomings in what remains a relatively novel system. These checks included looking at evidence from the supply chain, checking proofs of sustainability (or equivalent documentation) issued by voluntary schemes and reviewing assurance statements. Most significantly, these checks led the Unit to identify that chains of custody for waste based biofuels were not starting at the point of origin in many instances, opening up the system to an elevated risk of fraudulent claims. This issue was subsequently largely resolved through the Unit's intervention, but provides an example of why the government considers that checks by the regulator are necessary.
- 4.33** The RTFO legislation and guidance already includes the requirements for verifiers conducting independent audits for RTFC applications. We do not consider that adding a list of approved auditors would add value or negate the need for the Unit to conduct its own checks.
- 4.34** The RTFO Unit continues to keep its processes for checking applications under review, and aims to streamline processes as far as possible.
- guarantee that once an RTFC is issued to an obligated supplier it would not be revoked

- include an appeal mechanism against RTFO Unit decisions not to award an RTFC (within Department for Transport rather than resorting to the courts)
- 4.35** The grounds for revocation of RTFCs are specified in the RTFO Order and the RTFO Process Guidance and include, for example, that an RTF certificate was issued as a consequence of fraudulent behaviour. The Government considers that it is necessary to have measures in the legislation to rectify serious breaches of the obligation. The process for revocation is also set out in both the Order and the Process Guidance. It provides that a supplier may make representations before a revocation decision is made, and that a supplier may make further representations against a revocation to have the initial decision reconsidered. In the Government's view this process already encompasses an appeal mechanism.
- require that voluntary schemes mutually recognise each other
- 4.36** The government notes that voluntary schemes are recognised by the European Commission, not individual Member States. It further notes that voluntary schemes are already able to mutually recognise each other, and that a number do. However, whilst recognised voluntary schemes meet the RED criteria, some offer higher sustainability standards beyond the minimum legal threshold. Enforcing mutual recognition could undermine schemes which offer higher levels of sustainability.
- accredit production facilities to simplify verification
- 4.37** In the government's view 'pre-accreditation' is similar to if not the same as certification under a voluntary scheme. It is open to suppliers to employ verifiers or use voluntary schemes to demonstrate that their supply meets the RED/RTFO sustainability requirements. The RTFO Guidance provides that verifiers do not need to repeat the work of other verifiers at earlier stages in the chain of custody.
- allow suppliers to use up existing stocks of biofuel which may no longer meet revised RED criteria
- 4.38** The RED specifies minimum sustainability criteria for biofuels, and the dates from when these criteria apply. Member States are not allowed to reward biofuels supplied that do not meet the sustainability criteria at the time they are supplied to the market.
- 4.39** The RED contains certain 'grandfathering provisions' on the minimum GHG savings requirements to enable suppliers and producers time to adapt to aspects of the RED that become more demanding over time. These are clearly specified in the legislation and the RTFO Guidance so that suppliers can plan to use any existing stocks of fuels affected.

5. Minimum sustainability criteria

- 5.1** The RTFO included the world's first operational sustainability reporting scheme for biofuels implemented by a national government. Whilst the original legislation did not require that biofuels met any sustainability criteria, mandatory reporting of carbon and sustainability data was a key element. The transport elements of the Renewable Energy Directive (RED) were implemented in the UK on 15 December 2011. This included the introduction of mandatory carbon and sustainability requirements.
- 5.2** Chapter 5 of the draft PIR considered the effects of reporting under the RTFO and of the introduction of mandatory sustainability requirements.

Q 5.1 Do you agree that the market was adequately prepared for the introduction of the mandatory sustainability criteria and that mandatory reporting of carbon and sustainability data in the preceding 3.5 years played a key role?

Yes	No	Neutral or other comments
9	7	

Summary of stakeholder responses

- 5.3** Stakeholders were divided on this issue. Just over half felt that industry was adequately prepared for the introduction of mandatory sustainability criteria and further felt that these should have been introduced earlier. On the other hand, a number of oil majors felt that the changes were made too quickly, that there should have been a 'dry run' and that industry should have been permitted to use up non-RED compliant material following the introduction of mandatory criteria. Several respondents expressed frustration at the time the European Commission took to recognise voluntary schemes which can be used to demonstrate compliance with the criteria.
- 5.4** A number of obligated parties also commented that that the inclusion of fuel used in non-road mobile machinery (NRMM) was implemented without sufficient consultation and that the matter was still not resolved.
- 5.5** Comments reflected the two opposing viewpoints. Examples from those who felt the market was prepared are as follows "close co-operation between Government and all stakeholders was exemplary and gave ample opportunity for stakeholders to understand how the system would work" and "The UK Government did a good job in preparing industry and the market for the introduction of mandatory sustainability criteria. This was achieved by implementing early a voluntary mechanism for reporting

and compliance with carbon saving and sustainability targets... stakeholder participation in the process was supported and encouraged”.

- 5.6 Opposing viewpoints included “the information and associated evidence required in the preceding 3.5 years was very different than that required to operate under the RED... The changes were made too quickly without adequate time to consult with stakeholders”.

Government response

- 5.7 The government considers that industry was fully consulted and involved in developing the systems and guidance for implementation of the RED sustainability criteria. Further, we consider that the 3.5 years of reporting carbon and sustainability data, 20 months of which were against a ‘RED-ready’ system, were sufficient to prepare the industry, and allowed time to use up non-compliant stocks. It would be inconsistent with UK and EU legislation to provide support for biofuels for which the sustainability criteria were not demonstrated.
- 5.8 The government will continue to work with industry to address reporting concerns related to NRMM.

Q 5.2.a Do you have data on the impact of the RED sustainability criteria on biofuel prices?

Yes	No	Neutral or other comments
9	7	1

Summary of stakeholder responses

- 5.9 A number of stakeholders referred to Argus and Platts data for information on prices. Platts, for example, has data showing RED-compliant FAME has a premium of \$40-50/t over non-compliant FAME. Argus data indicates 3-4 ppl though there are large day to day variations.
- 5.10 One noted that their average of quotes for supply of RED and non-RED FAME was close to our middle assumption but there is considerable spread.
- 5.11 A bioethanol producer reported that there is no premium for RED-compliant bioethanol. An oil major reported that they had not paid price premiums for RED-compliant biofuel as there was sufficient availability of producers supplying sustainable biofuel. These producers only required verification of sustainability rather than expensive changes to practices to comply.

Government response

- 5.12 The Government notes the figures and comments submitted and has updated the PIR to reflect these.

Q 5.2.b If so, do the observed impacts match the projected impacts shown in figures 5.1 and 5.2?

Yes	No	Neutral or other comments
4	4	0

Summary of stakeholder responses

- 5.13** Respondents were equally split as to whether the observed impacts match the projected impacts.
- 5.14** An industry representative noted that the impacts will depend on policy; “we feel it is not necessarily correct... to assume the differential... will reduce in future years without significant technical justification”.
- 5.15** One oil major noted that it is not correct to assume that there will always be sufficient sustainable biofuel available (e.g. due to crop failures or environmental damage to production facilities). They commented that “the risk of suppliers using crop based biofuels... versus feeding people in the event of a widespread crop failure has not been comprehensively addressed since the Gallagher report... and would be beneficial in informing this debate”.
- 5.16** Another oil major noted that volumes had not been restricted to date.
- 5.17** An ethanol producer noted that many producers had been unable to pass on their full costs of manufacture and verification due to oversupply in the EU market (due to lower than forecast mandates), together with high levels of subsidised imports.

Government response

- 5.18** The government notes the mixed views on projected prices

Q 5.3 Are the reasons for the uptake of voluntary schemes correct i.e. reduced risk to the supplier and lower verification costs? If not, please provide reasons in the box to the right.

Yes	No	Neutral or other comments
14	3	1

Summary of stakeholder responses

- 5.19** The majority of respondents agreed that voluntary schemes reduce the risk to the supplier, though some of those noted that they increase verification costs of the supply chain. An industry representative reported that voluntary schemes also add administrative burden whilst, conversely, another reported that they offer ease of operation. It was noted by a number of obligated parties and an industry representative that voluntary schemes do not remove the risk altogether but that this should be the case i.e. RTFCs should be guaranteed for biofuel meeting a voluntary scheme.
- 5.20** A biofuel producer noted that whilst obligated parties significantly reduce their workload this is absorbed by the supply chain and it is difficult to pass on this cost.
- 5.21** An oil major noted that the dip in voluntary scheme uptake immediately following implementation could be attributed to the change in supply to US corn with actual supply chain evidence rather than due to limits on available supply of biofuel meeting a voluntary scheme.
- 5.22** It was further noted that the implementation of the RTFO Unit's sustainability compliance policy had encouraged the transition to biofuel meeting voluntary schemes. Biofuel outside a voluntary scheme might require the submission of supply chain evidence and consistency of opinions on sufficient evidence could lead to delays or uncertainty as to whether RTFCs would be issued.
- 5.23** A biofuel producer noted that the most popular voluntary schemes are 'trader driven and lack accountability' and have been turned into an 'administrative game infused with fraud'.

Government response

- 5.24** The government notes that a primary driver of the use of voluntary schemes is reduced risk. Schemes have a verification cost attached which is felt by the entire supply chain. In the government's view they offer an increased level of assurance of biofuel sustainability and their use is therefore encouraged. The government will continue to work with the European Commission, other Member States and the voluntary schemes themselves to ensure they have robust systems in place to address non-compliance; that they are accountable; and apply the sustainability criteria consistently.
- 5.25** To maintain the integrity of the RTFO, it is essential that only sustainable biofuels are rewarded – this may mean revoking RTFCs in the rare circumstance that information comes to light that throws doubt on the sustainability of that fuel. The RTFO requires that all fuels are traceable back to the origin and our systems, including the sustainability compliance policy, are in place to ensure biofuel sustainability.

Q 5.4 Do you consider that there have been unintended consequences as a result of the RTFO amendments to include mandatory GHG and sustainability criteria? If so, please provide an explanation of unintended consequences in the box to the right.

Yes	No	Neutral or other comments
9	7	0

Summary of stakeholder responses

- 5.26** Nine stakeholders considered the RTFO had resulted in unintended consequences; however, five of these respondents felt the effects were negative and four that there were positive effects. A further seven did not consider there to be any unintended impacts.
- 5.27** A number of obligated parties felt that the RTFO goes beyond the requirements of the RED as RTFCs can be withheld, even when the biofuel is sourced through a voluntary scheme due to upstream issues of which the reporting party is not required to have knowledge.
- 5.28** One party noted that double counting and incentivising of waste based materials could lead to fuel quality issues.
- 5.29** An NGO commented that as indirect impacts are not being addressed this undermines sustainability and greenhouse gas saving claims. They also noted that ‘few meaningful conclusions can be drawn about the actual origin and direct impacts’ due to ‘lack of any credible monitoring’.
- 5.30** Positive impacts reported by stakeholders include:
- amendments of farm assurance schemes including RED Tractor, such that the same sustainability standards apply irrespective of the end use of the crop;
 - consequently most of the crops now grown in the UK are fully compliant with RED sustainability standards, despite only a relatively small percentage being used for biofuels;
 - EU biofuels demand has helped promote greater productivity including increased rapeseed yield and increased protein feed production.

Government response

- 5.31** As outlined in the response to question 5.3 the RTFO Administrator must be satisfied that the sustainability data is accurate before awarding RTFCs.
- 5.32** The government will continue to monitor any fuel quality issues related to biofuels and work with industry to resolve – see also response to question 6.4.

- 5.33** The government acknowledges that assurance over the origin of biofuel crops is a relatively new area that requires monitoring and development. However, it considers that in general the system is now working well and continues to improve.
- 5.34** The government recognises that applying sustainability standards to biofuels can have a wider positive impact on the sustainability of agricultural production, however, it is important that indirect effects are also addressed.

Q 5.5 Within the boundaries of the EU RED legislative requirements, could the UK implementation of the GHG and sustainability criteria be improved? If so, how? Please explain in the box to the right.

Yes	No	Neutral or other comments
18	2	0

Summary of stakeholder responses

- 5.35** A number of suggestions were made including:
- Incentivise fuels with greater GHG savings, for example, through linking the number of RTFCs issued to GHG savings delivered. The Californian system was cited as an example of how this might work;
 - Encourage high blend fuels including rolling out the introduction of E10;
 - Include/address the impacts of indirect land use change, for example, through capping or phasing out crop based fuels, which would also prevent land grabs and increased food prices;
 - Other stakeholders did not want ILUC factors to be included due to the current model being flawed/the science not being sufficiently developed. In addition, this would lead to the UK (and EU) being at a competitive disadvantage relative to other countries/regions where such policies do not exist; others opposed a cap on crop based fuels;
 - Incentivise domestic products from wastes;
 - Include reporting on social impacts such as food security, food prices, land grabs;
 - Extend reporting of environmental criteria to include high carbon stock areas such as permanent grasslands or biodiverse habitats such as savannah;
 - Develop a comprehensive ethical standard for biofuels, including the protection of human rights and the environment, full life cycle assessment of greenhouse gas emissions, trade principles that are fair, and access and benefit-sharing schemes. It should be set within wider frameworks for mitigating climate change and addressing land

use change (direct and indirect) and should be open to future revision as needed.

- RTFCs should not be revoked once awarded, but if this does remain as an aspect of the RTFO there should be an appeals mechanism. Concerns were expressed over the lack of certainty for suppliers over whether RTFCs would be issued even where biofuel was supplied under a voluntary scheme and was covered by an independent verifier's opinion;
- Improve verification and traceability so that issues such as that identified by Department for Transport related to improbably high volumes of used cooking oil arising from the Netherlands are not repeated;
- Suppliers should have time to use up existing stock when rules and/or guidance changes;
- Encourage the Commission to ensure greater harmonisation including measures to combat fraud, treatment of wastes.

5.36 A number of suppliers noted that ROS was generally user friendly and helpful. In addition, that it is useful to have the list of wastes and residues.

Government response

5.37 The government thanks respondents for their suggestions.

5.38 Suggestions concerning verification, traceability, non-compliance and revocation of RTFCs are addressed in chapter four.

5.39 We have communicated to industry that it is not the right time to roll out E10 due the number of incompatible vehicles in the current fleet, but we will keep this under review.

5.40 Recommendations concerning support for domestic fuels and additional reporting requirements would be likely to be precluded by EU rules on the single community.

5.41 A cap for crop based biofuels is part of the proposal for addressing ILUC at EU level. The UK supports the introduction of a cap and is pursuing a swift conclusion to negotiations.

5.42 As outlined in the executive summary, the government is considering potential improvements to the RTFO and will take this consultation into account in developing proposals.

6. Double certification

- 6.1 Double certification of waste-derived biofuels was introduced into the RTFO in December 2011. This measure was required to transpose the requirements of the Renewable Energy Directive into UK law. As a result waste-derived biofuels now receive two certificates (which can be used to demonstrate compliance with the RTFO) in contrast to crop-derived biofuels which continue to receive one certificate.
- 6.2 Chapter 6 considered the effects of the introduction of double counting and invited comment on the analyses and how the system is working.

Summary of stakeholder responses

- 6.3 A number of stakeholders find the list of wastes and residues helpful in ensuring clarity. One obligated supplier commented that they welcome the fact the RTFO Unit is willing to approve new waste materials though the approval process can be quite long, whilst another was pleased with the speed of response.
- 6.4 It was noted that further guidance would be helpful for some materials, including tallow sourced from outside the EU, where it is not categorised in the same way. This lack of clarity makes it difficult for foreign feedstocks to compete on a level playing field.
- 6.5 An industry representative commented that “The government must learn from the consequences of the removal of the duty differential without replacing it with a sufficiently robust mechanism. This was unnecessary and has cost 10s of firms, hundreds of jobs and the abrupt halt to a rapidly growing and dynamic industry.”
- 6.6 One fuel supplier suggested that additional incentives are needed for some wastes to reach the market and that treble or quadruple counting of ‘better’ wastes is needed.

Government response

- 6.7 The Government will continue to work with industry to update the lists of wastes and residues with new materials and will review the guidance given on an ongoing basis. The length of time taken to assess new applications depends largely on how much information is provided/available on the proposed waste material. Some assessments have been concluded in a few weeks whereas others have taken several months or have remained unresolved where the applicant has been unable to provide sufficient information. We encourage suppliers to submit applications for new materials early and to include comprehensive information in the application form. As set out in the guidance, the RTFO Administrator expects that most new materials will be assessed within eight weeks.

- 6.8** The Government acknowledges that suppliers generally preferred the duty incentive as a means of supporting waste based biofuels compared to double counting. The Government also acknowledges that the RTFO has proven less effective at supporting smaller businesses compared to duty incentives.
- 6.9** However, as outlined in response to question 2.2, the Government considers that the RTFO has significant advantages compared to duty incentives and overall remains a more effective mechanism to secure supply of sustainable biofuels at least cost to the economy. Double counting in the RTFO has maintained volumes of UK UCO and has also stimulated production from new types of waste. The Government is currently considering what incentives may be necessary for advanced biofuels.

Q 6.1 How has double counting affected your business?

Summary of stakeholder responses

- 6.10** Some stakeholders felt that double counting had supported their business in the following ways:
- reducing the cost of compliance;
 - helping to meet obligations under the RTFO;
 - enabling prices to increase;
 - enabling investments to be made (examples from one stakeholder include expanding their biodiesel plant, building a pre-processing plant, as well as investing in the supply chain itself, and in expertise within the company).
- 6.11** One respondent noted that it was critical to maintain both the double counting element and those wastes qualifying for double counting in order to establish long term sources of supply. Another noted that whilst the support was positive it is not adequate to compete for new sources of liquid biomethane.
- 6.12** However, a number commented that it was important to ensure that the final fuel remains fit for purpose whether with higher levels or new waste materials.
- 6.13** Other stakeholders, mainly representing the bioethanol industry, were not supportive of double counting and made the following comments:
- It prevents advanced fuel investments (existing wastes/materials get same reward yet investments required for advanced fuels are huge);
 - It artificially reduces the target and the market size, leading to less greenhouse gas savings being delivered by the policy overall;

- It has a negative impact on virgin oil supply chains and potentially to ethanol;
- The level of the premium is uncertain and favours one type of biofuel producer over another;
- It encourages fraud by skewing the reward system and can incentivise greater production of waste;
- Wastes have limited availability and potential indirect effects.

Government response

- 6.14** The responses from those producing or supplying biofuels from waste support the view that double counting is an effective mechanism to incentivise supply. As anticipated in the impact assessment to implement double counting, a further effect is a decrease in biofuel supply needed to meet obligations. It is important that only true wastes are included to avoid any indirect effects and maximise greenhouse gas savings delivered by the policy.
- 6.15** The Government will continue to work with industry, verifiers and voluntary schemes to ensure the validity of claims made in applications for RTFCs.

Q 6.2 Do you anticipate supplying new kinds of waste/non-agricultural residue/other double counting biofuels? Which ones?

Yes	No	Neutral or other comments
9	4	2

Summary of stakeholder responses

- 6.16** Nine stakeholders indicated that they anticipated supplying new kinds of wastes or non-agricultural residues. These included materials which could be processed using broadly conventional technologies and those that would require advanced production processes. Suppliers wished to keep specific materials confidential.

Government response

- 6.17** It is positive that the industry is actively investing in sourcing new waste materials and processing capability for biofuel use.

Q 6.3 Are you investing or considering investing in new production or supply as a result of double counting?

Yes	No	Neutral or other comments
4	8	0

Summary of stakeholder responses

- 6.18** Four stakeholders indicated that they were investing in new production or supply. One producer reported that they had invested in diversifying feedstocks for their production facility from municipal, retail and industrial waste. An industry representative stated that this was a commercial matter.
- 6.19** It was noted that double counting is not an effective mechanism to stimulate investment in advanced ethanol and that a separate consumption target was needed.

Government response

- 6.20** Since additional incentives for biofuel from wastes were introduced the volume of waste derived biofuel has increased significantly, particularly used cooking oil. The number of new waste materials has also increased since double counting was introduced.
- 6.21** The Government notes the significant investment required to bring advanced biofuels to market. Support for advanced biofuels is considered in the response to the 'call for evidence' on the subject published alongside this document.

Q 6.4 Do you consider that there have been any unintended consequences as a result of the double counting of waste based biofuels in the RTFO?

Yes	No	Neutral or other comments
19	4	

Summary of stakeholder responses

- 6.22** The majority of stakeholders considered that there had been unintended consequences as a result of double counting. These were:
- diverting used cooking oil to biofuel results in a similar level of ILUC as palm oil due to palm oil replacing the diverted UCO, particularly for imported UCO;
 - a reduction in biofuel supply;
 - increased prices for waste;
 - theft of UCO;
 - increased potential for fraud;

- lack of certainty provided by RTFCs and therefore associated risk to the market – led to business closures and job losses;
- small operators went out of business when double counting replaced the duty incentive;
- a perception that all crop based biofuels are bad leading to lack of investment including second generation;
- potential fuel quality issues – need to ensure new waste materials are produced into fuel that is fit for purpose.

6.23 Other comments included:

- concerns over levels of UCO imports;
- support should focus on micro-level collection of UCO, not from big restaurants etc;
- concerns that despite the Administrator’s strong suspicions of that sustainability criteria were not being met (due to high levels of UCO from the Netherlands in year 4b), non-compliance was not proven;
- certification and verification has proven to be ineffective and the chain of custody must be improved;
- indirect impact and other uses of wastes must be considered – could put limits on levels of use of some material e.g. straw, forestry residues;
- double counting does not stimulate investment in cellulosic ethanol.

Government response

6.24 The Government agrees that avoiding indirect emissions is important and alternative uses of materials are an important consideration when assessing whether they should be incentivised through double counting. For used cooking oil it notes that whilst some UCO has alternative uses, mainly in animal feed in countries where this is a legal application, research indicates significant global potential that can be used for biofuels without negative indirect effects. Further work would be required to distinguish UCO, for example, in the same way that tallow is categorised according to allowable end uses. As with crop based biofuels, transportation adds a relatively small amount to lifecycle GHG emissions.

6.25 The Government notes the actions taken to address the risk of non compliance for double counting materials, both within the RTFO and in the EU’s leading voluntary schemes. As discussed elsewhere the Government will continue to work with other member states, the commission, voluntary schemes and the industry to monitor and address the risks.

6.26 The other comments have been addressed in earlier ‘Government response’ parts of this section (including reductions in biofuel volumes, support for advanced biofuels, fuel quality issues, support provided by RTFCs and removal of the duty differential).

7. Industry impacts and economic effects

- 7.1** The RTFO affects a number of industry groups, most obviously obligated fuel suppliers, but also others in the fuel production and supply industry including biofuel producers, fuel retailers and the farming industry.
- 7.2** Chapter 7 of the draft PIR considers the impact that the RTFO has made on the various parts of industry over the period, including following the implementation of the amendments in 2011.

Q 7.1 Approximately how much has your company invested in order to produce/supply biofuels following the introduction of the RTFO and subsequent RED implementation?

Summary of stakeholder responses

- 7.3** Individual producers had invested up to £350m where investment in production facilities was involved. The REA estimated that nearly £1bn has been invested in UK biofuels production facilities in the UK as a whole. Fuel suppliers had also invested significantly in capacity to blend and supply fuel.
- 7.4** In addition, one respondent provided estimates of the value of the UK biofuels industry to the farming community. This included:
- £700 million to farmers;
 - A potential reduction in imported animal feed dependency valued at more than £600m (currently 80% of animal feed consumed in the livestock and pig and poultry sectors is imported at a cost of nearly £7.5 billion in 2012) or 20 million hectares cultivated outside the EU.

Government response

- 7.5** The Government notes the figures submitted and has updated the PIR to reflect these.

Q 7.2 Does the RTFO provide a level playing field for all biofuel producers and suppliers? If not, how could this be improved?

Yes	No	Neutral or other comments
4	14	0

Summary of stakeholder responses

- 7.6** The majority of respondents did not consider that the RTFO provides a level playing field, though the reasons given and those considered to be affected varied widely.
- 7.7** A number of respondents noted that because the RTFO is volume based, it does not distinguish by [GHG savings] or energy density. A consequence is that the RTFO favours ethanol (which is lower in energy density) over fuels with higher energy density such as biodiesel, and particularly over biomethane.
- 7.8** Several respondents noted that the ‘double counting’ provisions for waste based biofuels were not ‘a level playing field’. Some of these considered this to be a positive however, given that waste based biofuels are generally more sustainable. However, some ethanol producers considered that double counting favoured waste biodiesel, even though some UCO could have indirect effects, and that there was insufficient recognition of the animal feed co-products arising from bioethanol production.
- 7.9** Ethanol producers also considered that the UK’s approach to import tariffs created an unlevel playing field for UK bioethanol producers compared to their EU counterparts. This is because the UK allows bioethanol that is denatured at the point of entry to the UK to qualify for the RTFO. EU import tariffs are considerably lower for denatured ethanol than for undenatured product. Many other Member States provide some protection to their domestic market by requiring that ethanol is undenatured at the point it qualifies for their incentive mechanisms.
- 7.10** A number of obligated parties considered that UK requirements for verification were more stringent than other member states, where it was understood that certified fuels were automatically accepted.
- 7.11** Obligated parties also considered that there was no mechanism which could accurately measure the volume of low sulphur gas oil destined for use in ‘non-road mobile machinery’ [and therefore obligated fuel]. As a consequence, obligated parties who have a larger NRMM market were considered to be disadvantaged against those who have little or none.
- 7.12** One respondent considered that UK refiners were at a disadvantage under the RTFO compared to UK fuel importers/blenders who could purchase the optimum blend of fossil fuel components to complement the biofuels in the finished fuel blend. In contrast refiners have less flexibility and need to utilise the specific fossil fuel components produced in their own refinery, leading to shortages and surpluses of specific fuel components.
- 7.13** Two respondents considered that it was difficult for biofuel producers to extract commercial value from RTFCs, that the RTFC market was not

liquid and that it favours those who didn't need to extract value regularly for cash flow.

Government response

- 7.14** The Government notes the prevailing view that the RTFO does not provide a level playing field, though it also notes that there are a wide range of sometimes divergent views from different sectors on what the specific issues are.
- 7.15** The Government acknowledges that the current volume-based obligation is relatively favourable to bioethanol over biodiesel and biomethane. It notes however that the current fuel duty system, which is also volume based, works in the opposite direction, where for example bioethanol is taxed relatively more on a volume basis than biodiesel. The Government is keeping under consideration the most appropriate way to incentivise biofuels under the RTFO. However, in our view significant changes would be premature ahead of an EU agreement on addressing indirect land use change.
- 7.16** With regard to double counting, incentivising wastes has led to a significant increase in supply of waste based over crop based biofuels in recent years, and the Government considers this to be a positive impact given sustainability concerns over crop based fuels. Whilst this market has, to date, been dominated by biodiesel derived from UCO and tallow, we are also seeing an increasing number of applications for waste derived bioethanol, and a high degree of innovation in these markets. The use of co-products for animal feed is accounted for in ILUC factor calculations, and the UK has taken a strong position in the EU negotiations on inclusion of ILUC.
- 7.17** With regard to import tariffs, UK government policy is generally to remove trade barriers and to promote free trade. Introducing trade barriers would increase costs to UK consumers and we have no reasonable justification for excluding bioethanol legitimately imported under a particular code. However, the UK is supportive of measures taken at EU level to address subsidised imports. The Department will continue to work with HMRC to ensure that appropriate tariffs are applied. Country of origin and related tariff loopholes are factors taken into account in the Unit's compliance policy.
- 7.18** With regard to verification and RED implementation, the Government does not agree that the RTFO is "gold plating" the requirements of the RED. The Administrator operates a risk based mechanism detailed in its compliance policy, published in 2013. Overall the market has responded positively to this and other factors by moving to EU approved voluntary schemes, which we regard as a positive step because they provide an additional level of assurance. EU voluntary schemes are accepted as demonstrating compliance with the RED, except in exceptional circumstances of 'serious wrongdoing', for example where a competent authority is investigating a complaint.

- 7.19** The RTFO Unit continues to review its processes on a regular basis, to ensure that they are effective, proportionate and as streamlined as possible.
- 7.20** On NRMM, we note that to date no obligated party has overturned the presumption that low sulphur gas oil is used for NRMM, and therefore all such fuel is being treated as obligated. The RTFO Unit is continuing to work with suppliers to identify evidence that might overturn this presumption, though this remains the supplier’s responsibility.
- 7.21** With regard to gaining value from RTFCs, the Government notes that the RTFO is a market based mechanism and as such is subject to market forces and fluctuations. Trading data is published on a quarterly basis and demonstrates that RTFCs are traded. The Government is open to suggestions as to how liquidity could be further improved.

Q 7.3 Does the RTFO contribute to a stable market for biofuel production and supply in the UK with sufficient certainty for investors? How could this be improved?

Yes	No	Neutral or other comments
0	18	0

Summary of stakeholder responses

- 7.22** The majority of respondents felt that the RTFO mechanism itself is working well, but that the underlying policy on targets set under the RTFO had caused uncertainty and instability. Factors causing uncertainty cited included:
- The publication of the Gallagher report into indirect land use change in July 2008 and subsequent re-profiling of targets to reach 5% by volume in 2013/14 rather than 2010/11.
 - The reduction of the target for 2013/14 from 5% to 4.75% by volume.
 - The drafting discrepancy in the original RTFO Order that reduced the effective level of the obligation in the first year.
 - The lack of trajectory to meet the RED target of 10% by energy by 2020.
 - The government’s support for ILUC factors.
 - The government’s lack of recognition of the benefits to the UK economy of a domestic biofuels production industry.
 - The government’s reluctance to endorse E10 and its introduction.
- 7.23** The primary issue raised was the lack of a clear trajectory to 2020 and unresolved issues relating to ILUC as negatively impacting current investment as well as future investment in advanced biofuels. Some

respondents considered that this was an issue affecting investment in biofuels across the EU.

7.24 Other issues raised by some respondents related specifically to the design of the RTFO. This included:

- uncertainty of certificate values leading to banks not taking into account potential revenues from RTFCs for investment finance;
- uncertainty on the size of the market for different types of fuels (primarily bioethanol and biodiesel);
- it is open to non-domestic competition (compared to other renewable energy).

7.25 In terms of improvements, the vast majority of respondents wished to see clear trajectories set out to 2020, and many emphasised the need for clarity towards 2030. For some obligated suppliers and bioethanol producers, the timing of the rollout of E10 and even higher blends of ethanol was a key aspect that should be addressed. Comments included:

“The RTFO has worked well but has not delivered a stable market. Investor confidence declined due to the Gallagher review, reduced targets, the drafting error, no forward target trajectory to 10%.”

“Failure to see that uncertainty for first generation biofuels will negatively impact confidence and investment in advanced biofuels. As a result there is little interest in the UK as an investment opportunity and the continued uncertainty means this is unlikely to improve.”

“The issue of ILUC which is being debated at European level means there is much uncertainty for biofuel investors, regardless of the RTFO.”

“Generally speaking, investors need stability and medium/long term vision in regulations.”

Government response

7.26 The Government notes that the majority of respondents consider that the RTFO mechanism itself works well, but acknowledges that the current investment climate is poor. There are a range of reasons for this, including the economic recession, and for bioethanol, reduction in demand for gasoline relative to diesel. However, the Government acknowledges that policy uncertainty at EU level related to concerns about ILUC is a contributory factor.

7.27 Until the EU discussions are concluded, we do not believe it would be beneficial to revise the current policy framework, including the level of targets, while it is unclear what the UK will be required to deliver. Any significant changes made now to the UK scheme might need to be reversed or amended at a later date. Therefore, the government does not intend to make significant changes to UK biofuel supply legislation until these negotiations have concluded.

- 7.28** Suggestions for improvements to the RTFO are addressed in response to question 7.6 below.
- 7.29** The Government announced in August 2013 £25 million capital funding to underpin significant private sector investment in one or more demonstration-scale advanced biofuel plants in order to drive the development of the UK's biofuel industry. The Government Call for Evidence on Advanced Fuels published in December 2013 aims to establish whether additional UK government action will be necessary to develop the advanced fuel technologies we need to decarbonise transport. The response to this review is published alongside this document.

Q 7.4 How does the UK biofuel market compare to other European markets in terms of attractiveness of investment?

Summary of stakeholder responses

- 7.30** All those responding to this question felt that the UK market does not compare favourably with other European markets in terms of attractiveness of investment. Reasons provided included:
- policy uncertainty;
 - a greater exposure to import competition which erodes UK producer margins;
 - lack of certainty owing to the joint obligation in the RTFO.
- 7.31** Comments included:

“The policy of stagnating the mandate, introducing double counting, and reducing the pool by counting Non Road Mobile Machinery all erode investor confidence.”

“Another factor that detracts investors from the UK is it is one of the few large markets in Europe, which allows denatured alcohol to be moved and blended. This has resulted in the UK being one of the key markets for importers as they can benefit from lower duties and have flexibility to avoid / reduce tariffs even further through blending. This tends to result in the UK being one of the most competitive markets in Europe. Whilst this is positive when the market is long and product in ample supply, however when the market is short and product not freely available, this will likely result in higher prices for UK motorists, compared to countries, which have encouraged and supported investment in local production.”

“Other MS protect their markets to some degree against non EU imports. We support Free Trade but UK has become first port of call for non EU ethanol due to UK's trade policy. What results, is the artificial erosion of UK producers margins versus the rest of the EU, and the temporary or permanent closure of plants, with the potential loss of jobs etc.”

“The lack of a clear policy beyond 2020 does not help and in fact is viewed as a major disincentive for advanced biofuel investment at the current time.”

Government response

7.32 The Government has noted the responses.

Q 7.5 Do you typically trade/ sell your RTF certificates at a published market value (i.e. traded prices stated on RTFC on line auctioneer websites).

Yes	No	Neutral or other comments
2	3	1

Summary of stakeholder responses

7.33 The majority of respondents did not answer this question, many citing commercial confidentiality.

7.34 Those who responded tended to sell direct to obligated parties, or through a broker, with comparatively few trades going through auction houses.

7.35 Views were mixed almost evenly on whether traded prices on RTFC on line auctioneer websites reflected typical values achieved. The UKSBA producer survey provided a range of values.

Government response

7.36 The government notes the response to this question, which was also addressed in the Ecofys UK biofuel producer survey published alongside this review. This noted the high range of values and high degree of volatility there has been in the RTFC market over time, and also a correlation between significant policy changes, such as the introduction of double counting, with publicly traded RTFC values.

7.37 Year 5 values achieved for RTFCs in the UKSBA survey and the publicly traded values are similar.

7.38 On balance, the government concludes that published RTFC values appear to be a reasonable proxy for wider traded values. It acknowledges that there has been significant volatility in the market which is challenging for suppliers, but notes also that Year 5 values have been more stable.

Q 7.6 How would you develop the RTFO further?

Summary of stakeholder responses

7.39 Views from respondents on how to develop the RTFO were markedly divided and fell into three broad camps: NGOs, producers and obligated suppliers.

- 7.40** Those from the NGO community considered that the RTFO should be replaced with a new transport policy based on targets for energy demand reduction and GHG emissions reduction, excluding the use of crop-based biofuels.
- 7.41** Biofuel producers and producer representatives made a number of recommendations for developing the RTFO. Respondents uniformly wished to see a clear trajectory in the RTFO to at least 2020.
- 7.42** A further innovation supported by many producers was to move the RTFO to a GHG based mechanism to implement the FQD. This was one of the few developments that had support amongst all three groups - NGOs, suppliers and producers.
- 7.43** Other developments supported by at least some producers included:
- a split obligation (petrol, diesel, gas);
 - encourage high blend use for captive fleets and the introduction of E10; set a minimum price level for RTFCs at 15 pence;
 - introduce additional reward for domestically produced biofuels;
 - introduce energy equivalence across biofuels.
- 7.44** The majority of obligated suppliers considered that ILUC should be resolved before targets were increased, but at the same time emphasised the importance of setting a trajectory to ensure investment in supply infrastructure and consistency with vehicle fleet capability.
- 7.45** The majority of obligated suppliers explicitly opposed recommendations made by producers, including split obligations, minimum prices for RTFCs and specific incentives for high blend fuels. In all cases they argued that it should be left to the market to determine the most efficient way to meet the obligation, and that such innovations would increase costs without increased GHG benefits.
- 7.46** Several obligated parties had a number of recommendations on developing the RTFO:
- Volumes should not need to be reconciled to the last litre, we suggest volumes should be balanced to the nearest 1000 litre which is around 0.002% of the overall obligation (~36mte fuel) and well within the accuracy of the meters that actually measure the volumes.
 - Verification should be streamlined (see response to Q 4.4).
 - The approach to NRMM should be resolved (see response to Q 7.2)
 - The RTFO should be amended to allow the open trading of RTFCs across the EU.
 - The RTFO Administrator needs to review the use of HMRC tax and gain support from HMRC, such that partially renewable biofuels that may currently be considered fossil fuels under HMRC excise duty guidance can be clearly identified within the HMRC excise system.
- 7.47** Comments included:

“...we believe that going forward the use of crop-based biofuels should be phased out entirely. This is due to both their failure as climate mitigation tools (GHG emissions that are higher than fossil fuel in the case of crop-based biodiesel and low savings in the case of bioethanol), as well as the wide range of negative social and biodiversity impacts of crop-based biofuels.”

“As an over-riding priority, the Government must set a trajectory to meet the 10% RED target by 2020 to safeguard existing investments and stimulate the development of innovative technologies. This cannot wait for an outcome on the European Commission’s ILUC proposals which may not happen until 2015, if at all.”

“Before [the RTFO] can be developed clarity is required around ILUC. We disagree with minimum RTFC prices, the value of RTFC should be a matter for the market. Furthermore we disagree with split obligations for petrol and diesel, and support one overall target, which gives suppliers the flexibility to meet the target and supply consumers at the lowest cost.”

Government response

7.48 See response to 7.7.

Q 7.7 How would any proposed developments meet the criteria set out in the bioenergy strategy?

Summary of stakeholder responses

- 7.49** Respondents who answered this generally took the view that their recommendations in 7.6 were compatible with the bioenergy strategy.
- 7.50** Several respondents considered that the bioenergy strategy clearly acknowledged bioethanol as a sustainable biofuel, and that developing a clear year on year increase in mandate to 2020 for biofuels, and supporting the introduction and uptake of E10 would therefore help meet the criteria set out in the strategy.
- 7.51** There was also a strong view that the incentivisation of high blend use of waste derived biofuels can achieve a high greenhouse gas reduction in transport areas which are difficult to de-carbonise such as buses and large goods vehicles. In addition, it would stimulate the UK industry supporting job creation and fuel security with no food, agricultural, or biodiversity impact.
- 7.52** Obligated suppliers considered that measures to ‘streamline’ the RTFO, particularly on verification, would remove uncertainty and financial exposure that exists for obligated suppliers. This is consistent with the

policy that “Support for bioenergy should aim to maximise the overall benefits and minimise costs across the economy.”

7.53 Comments included

Para 4.32 of the Bioenergy Strategy also states: “In the short term, and potentially for as long as we use fossil fuels, sustainable first generation biofuels (including bioethanol, biomethane and waste-derived biodiesel) offer a cost effective contribution to reduced emissions from transport in line with our carbon reduction objectives.”

“The government is investing very significantly in the gas market for use in large goods vehicles and buses. This includes a ten year duty differential and millions of pounds of support. This is amazing as a solution already exists for lgvs which requires a fraction of the financial support and results in much higher ghg savings than any gas solution.”

Government response

7.54 The government has noted the responses on suggestions to develop the RTFO and the ways in which these might meet the criteria in the bioenergy strategy⁸.

7.55 The principles set out in the bioenergy strategy include that:

- Policies that support bioenergy should deliver genuine carbon reductions that help meet UK carbon emissions objectives to 2050 and beyond.
- Support for bioenergy should make a cost effective contribution to UK carbon emission objectives in the context of overall energy goals.
- Support for bioenergy should aim to maximise the overall benefits and minimise costs (quantifiable and non-quantifiable) across the economy.

7.56 The government acknowledges industry’s desire for policy certainty, but maintains that resolution to ILUC at EU level is required before setting a trajectory to 2020.

7.57 With regard to the other policy recommendations to develop the RTFO, the government notes that there is no consensus, with views typically diametrically opposed on most issues with the exception of a GHG based mechanism. It also notes that some of these recommendations would appear to conflict with the bioenergy strategy, particularly on cost. For example, setting a minimum price level for RTFCs and providing additional incentives for high blend biofuels would be expected to increase the cost to the consumer without bringing additional GHG benefits.

7.58 Suggestions to ‘streamline’ the RTFO have been addressed in response to earlier questions.

⁸ <https://www.gov.uk/government/publications/uk-bioenergy-strategy>

- 7.59** With respect to reporting of fuel volumes under the RTFO, we remain committed to ensuring that the administration of the RTFO is proportionate to ensuring that suppliers are correctly obligated and are only rewarded for the supply of sustainable biofuels. We have made significant changes to the validation of volumes against HMRC data over the last six years. For example in April 2011 we moved to the approach of reconciling to 'net' rather than 'gross' HMRC figures and have amended our IT system such that we, as the Administrator, have discretion to accept minor inconsistencies in the data submitted by suppliers. In addition, we have introduced a risk based approach to requesting evidence behind any differences to HMRC data, which is set out in the Process Guidance. However, we will discuss the matters raised directly with the major fuel supplier to determine what, if any, changes to our processes could be made.
- 7.60** On 'HMRC duty codes', we maintain a close working relationship with HMRC and have discussed the role that HMRC duty codes can play in enabling the smooth operation of the RTFO. It should be borne in mind that fuels at the duty point are often blends of fossil and biofuels, which means that whilst HMRC can validate the overall volume of supply they are less well placed to validate the split of fossil and renewable content. As such, any further disaggregation of fuel types on the HMRC duty forms may not provide the level of assurance that is necessary to operate the RTFO.
- 7.61** As outlined in the response to the call for evidence, the government is planning to make a number of changes to the RTFO for 2015 which should be unaffected by EU negotiations. We are also reflecting on more significant changes pending conclusions to the ILUC negotiations.

8. Wider impacts

8.1 Chapter 8 covered a number of non-monetised costs and benefits anticipated by the original and 2011 amendments impact assessments which were not considered elsewhere in the draft PIR. These included impacts on markets and employment (including agricultural and biofuels industry); diversity and security of national fuel supply; and innovation. It also considered whether the Administrator’s approach to compliance was working.

Q 8.1 Has the RTFO had a beneficial effect on market/employment opportunities in agriculture e.g. through the cultivation of biofuel feedstocks?

Yes	No	Neutral or other comments
2	6	0

Summary of stakeholder responses

8.2 Six of the eight respondents to this question considered that the RTFO had not had a beneficial impact on market/employment opportunities in agriculture. Reasons include:

- Supply variation has a greater impact on price than demand;
- Volatility in costs of inputs and output prices are greater drivers - weather patterns also have a greater impact;
- Beneficial impacts of the RTFO on agricultural employment/market reported by stakeholders include:
 - i. Supporting creation of UK value chains by adding value to commodity feedstocks such as sugar beet and wheat, which serve both the food and fuel markets;
 - ii. Giving farmers confidence there will be local demand for their crops;
 - iii. Stopping or slowing the abandoning of good quality arable land;
 - iv. Production of animal feed co-products – the UK imports large volumes of proteins so these co-products help stabilise prices and provide increased confidence of input costs to the livestock sector.

8.3 It was also noted that it was difficult to quantify the benefit to UK farmers but that “it is essential that the potential impacts of the RTFO in adding resilience on farm are considered and understood”.

8.4 Comments included:

“The UK is short of proteins and imports large volumes, these co-products from biofuel production reduce the reliance on imports, help stabilise prices and give greater confidence of input costs to the livestock sector.”

“The RTFO has had and can continue to have a positive impact on stopping or at least slowing the abandoning of good quality arable land. FAO data shows that arable land in the EU is abandoned at a rate of 0.5 million hectares every year.”

Government response

8.5 The Government notes the comments provided.

Q 8.2 Has the RTFO had a beneficial effect on market / employment opportunities in biodiesel production and the wider UK biofuels industry?

Yes	No	Neutral or other comments
9	2	0

Summary of stakeholder responses

8.6 Nine of the eleven respondents considered that the RTFO has had a beneficial effect on market/employment opportunities in biodiesel production and the wider UK biofuels industry.

8.7 Figures provided by industry representatives indicated that the UK biofuels sector employs 3500 people across 200 companies. Vivergo (a bioethanol plant) was considered to support around 1000 jobs indirectly (with 80 people directly employed). Industry had encouraged farmers to provide consistent levels of feed wheat which at full level of production is worth an estimated £350 million/year.

8.8 Further benefits of the RTFO for the UK farmer reported by an industry representative are:

- having a choice of end markets which increase the likelihood of a consistent stable value;
- the possibility of a market (for biofuels) when crops are not suitable to be sold for human consumption e.g. due to a poor harvest;
- reduction of reliance on imports of economically volatile soya meal for animal feed due to production of UK biofuel co-products which can be used for animal feed (namely rape meal and dried distillers grains and solubles (DDGS)).

8.9 It was further noted, however, that a clear forward biofuels trajectory was needed so as to not put this source of animal feed at risk.

8.10 Comments were not provided by the two stakeholders who disagreed that the RTFO had not had a beneficial effect on the UK biofuels industry.

Government response

8.11 The Government thanks respondents for the information provided The PIR acknowledges the employment benefits of the industry and potential value of the animal feed industry.

Outside of the UK, WifOR made a study on the employment and economic impact of their parent companies bioethanol production in Zeitz (Germany) and Wanze (Belgium). This (industry funded) study concluded the production benefited the economy substantially, with positive annual income effects of €213 million, fiscal effects of €253 million and direct, indirect and induced jobs safeguarded of 11,450, the majority of these jobs being in rural areas. The study claimed that for every direct job in the Wanze and Zeitz production facilities approximately 48 jobs are secured in downstream/upstream industries.

Q 8.3 Has the RTFO had a beneficial effect on diversity and security of national fuel supply?

Yes	No	Neutral or other comments
6	10	

Summary of stakeholder responses

8.12 Ten of the sixteen respondents did not consider that the RTFO has had a beneficial effect on diversity and security of national fuel supply, largely because of the relatively small volumes delivered. Whilst some stakeholders acknowledged the RTFO has had a small benefit by increasing diversity of supply they noted that the full benefit had not been realised by targets (and volumes) being too low.

8.13 Three respondents including an industry representative consider that the RTFO might have made diversity and security of national fuel supply worse due to:

- the inclusion of ethanol making the supply chain prone to greater quality degradation from water contamination;
- issues with FAME, for example, in ensuring jet fuel quality;
- refined gasoline being exported rather than being used in the UK - the lower value of this weakens the UK refining industry and reduces its ability to compete which might in turn lead to reductions in refining capacity for the UK.

Government response

- 8.14** The Government has noted that biofuels delivered under the RTFO have had a small but mixed effect on diversity and security of national fuel supply.

Q 8.4 Has the RTFO had a beneficial effect on innovation e.g. through developing technologies to improve the performance and production of biofuels, or with respect to advanced biofuels?

Yes	No	Neutral or other comments
3	12	

Summary of stakeholder responses

- 8.15** The majority of stakeholders did not consider that the RTFO has had a beneficial effect on innovation; although an industry representative noted that many of their members have advanced biofuels research and development programs. Another industry representative reported that they were “aware of a number of innovative developments in the range of feedstocks from wastes and residues that will be usable at commercial scale in the future to produce biofuels with high GHG savings”, but that without appropriate support “these developments are likely to be carried out in other countries than the UK”.
- 8.16** Reasons provided for the RTFO not encouraging innovation include:
- Lack of a clear framework and trajectory to 2020 (and beyond) hampering investment in innovative technology and new products;
 - Double counting of existing wastes and residues means inadequate return on investment of more advanced fuels and significant uncertainty of what, if any, benefit will accrue;
 - Lack of reward or benefit to achieving greater than the minimum sustainability required by the RTFO;
 - Competition for use in other energy sectors supported by other Government mechanisms, such as the RO and RHI.

Government response

- 8.17** As set out in the draft PIR the Government is aware of a number of innovations being carried out by UK biofuel producers. These include achieving increased carbon savings through delivering efficiencies in the production process such as maximising use of co-products, wastes and residues. We are pleased to note that suppliers are continuing to look for new waste feedstocks and conducting research into advanced biofuels.
- 8.18** Support to encourage advanced biofuels is addressed in the Call for Evidence published alongside this document.

Q 8.5 Is the Administrator’s approach to compliance working?

Yes	No	Neutral or other comments
10	3	

Summary of stakeholder responses

- 8.19** The majority of stakeholders agreed that the Administrator’s approach to compliance was working. An industry representative and fuel supplier noted that the approach could be streamlined. An ethanol supplier commented that “The RTFO Unit’s approach is in line with the Renewable Energy Directive, and the approach set out in the Technical Guidance is proportionate”.
- 8.20** Comments from those that disagreed include that “the standard of proof that is required by the RTFO Unit to issue RTFC’s seems to go beyond what is intended by the EU legislation”.

Government response

- 8.21** In order to ensure a robust system is in place which only rewards sustainable biofuel we will continue with our approach which we consider to be in line with the legislation. The Department is pleased to note that the majority of stakeholders felt that our approach to compliance is working.
- 8.22** Stakeholders’ suggestions on streamlining the Unit’s approach to compliance have been addressed under question 4.4.

Q 8.6 Do you agree with the analysis and conclusions of the separate reports on:

- 8.23** The UCO market?

Yes	No	Neutral or other comments
2	3	1

Summary of stakeholder responses

- 8.24** Of the five stakeholders responded to this question three did not agree with the analysis and conclusions of the report. Only one provided comments noting that the report was well written with “good overall analysis of a market that is yet to be transparent” but that the data set

was old. Another stakeholder commented that lots of UCO and tallow is not waste and therefore should not be double counted.

Government response

8.25 The report has been updated and is published alongside this response.

8.26 The report on tallow?

Yes	No	Neutral or other comments
2	1	1

Summary of stakeholder responses

8.27 Of the three stakeholders responded to this question one did not agree with the analysis and conclusions of the report, but did not provide any comments. One respondent noted that the report was well written with up to date data sources.

Government response

8.28 The report has been updated and is published alongside this response.

8.29 The report on wider industry?

Yes	No	Neutral or other comments
1	7	1

Summary of stakeholder responses

8.30 A number of stakeholders considered that the report did not reflect the impacts on the bioethanol industry sufficiently and offered to provide information for the final report. A number of corrections and clarifications were also provided.

8.31 Comments included:

- The analysis of the UCO market has not been carried out in the context of how the trajectory of the RTFO was supposed to develop;
- Needs analysis on why projects failed and why others have survived or were able to restart;
- A minimum price for RTFCs should be set at 15p/litre;
- The costs of a minimum price for RTFCs would be passed to the consumer which is unlikely to gain support;
- Measures of support such as minimum RTFC price would not be needed if the RTFO had a trajectory to 2020;

- The subsidies proposed by biofuel suppliers would disrupt the level playing field and do not represent the view of obligated suppliers – the price of RTFCs should be determined by the market;
- A biofuel supplier did not support the proposal for a tax differential for UK used cooking oil B100 producers as this would increase costs but supports additional RTFCs for high blend biofuels;
- An obligated supplier commented that multiple counting should only be applied to biofuel with a particular sustainability merit, not to high blend fuels;
- A split obligation would increase costs and favour ethanol blending which would contribute to worsening the worldwide gasoline excess.
- Previous work on carbon linkage was supported by the industry but must be done without double counting;
- Another biofuel supplier also supported carbon linkage but that double counting should be kept in place;
- Pre-approval of production facilities would improve liquidity and tradability of RTFCs.

Government response

8.32 We note the comments provided which were mainly in response to proposals to improve the RTFO rather than on the analysis presented in the report. The final report has been updated to include views from the ethanol industry.

Q 8.7 Have we captured all the impacts of the RTFO? Are there any costs or benefits that we have not considered which should be included in the final PIR?

Yes	No	Neutral or other comments
0	13	3

Summary of stakeholder responses

8.33 A number of stakeholders considered that there were further impacts of the RTFO that had not been considered including:

- food versus fuel was not adequately considered – no model was presented on impact of RTFO in international food prices, food insecurity, hunger or poverty;
- social impacts including direct and indirect effects on people, human rights, land grabbing;

- an estimate of foreign biodiversity impacts including “indirect biodiversity impacts” and indirect effects on wildlife;
- impacts of biofuel production on water and soil quality, and water use;
- the wider impacts of used cooking oil including the displacement of consumers to other feedstocks which is inconsistent with the consideration of the wider impacts of tallow;
- damage to old vehicles by ethanol;
- vehicle breakdowns due to fuel quality;
- publication of company specific data;
- implications of the legal drafting error in original RTFO Order that resulted in serious failure in intended operation of the RTFO;
- consequences to the biofuel production industry.

8.34 Benefits cited include:

- increased arable productivity;
- increased protein feed production;
- increased export earnings;
- ROS is an effective system – alongside electronic RTFCs these make for a much greater efficiency than systems in some other Member States;
- “publication of data arising from the RTFO makes it the most transparent system that we are aware of within the EU”;
- Impact and ongoing opportunity for creation of jobs, skills development, driving excellence in process manufacturing and the economic impact of new investments in the biofuels industry was underplayed.

Government response

8.35 The government acknowledges these comments and the final PIR has been updated to reflect a number of these. Some of these impacts are outside the scope of this PIR, but the government will continue to monitor these issues.

Q 8.8 Do you have knowledge of any additional data/analysis which can be used to examine the impact of the RTFO on food and feed markets?

Yes	No	Neutral or other comments
7	8	2

Summary of stakeholder responses

8.36 Seven respondents provided data and information on impacts of biofuel on food and feed.

8.37 Comments included:

- “The food versus fuel debate is flawed and misguided ... increased oilseed production benefits these markets and is largely met by increased domestic (EU) yields”;
- The value of co-products needs to be taken into account;
- A study by energy consultancy Ecofys (September 2013) shows that EU biofuels demand to 2010 only increased world grain prices by 1-2%, and would increase a further 1% to 2020 in the absence of a cap on crop based bioethanol.
- Department for Transport should not mix and match models i.e. the Aglink Cosmo model used by Defra and IFPRI.

Government response

The government notes the responses. We will consider whether further work is required to assess the net effects of UK produced animal feed co-products.

Respondents

AB sugar	Olleco
Action aid UK	Pannonia ethanol Zrt
AIC	Petroineos
Biofuels watch	Raizen Trading LLP
E Pure	REA
Ennovor	RSPB
Ensus Crop Energies	Scopa
Esso	Scottish environment protection agency (SEPA)
Federation of British Historic Vehicle Clubs	Shell
FiveBarGate	Total
Freight Transport Association	UKPIA
Friends of the Earth	UKSBA
Gasrec (and co)	Valero
Greenergy	Vivergo
Nuffield Council on Bioethics	Olleco
Two individuals also responded	

