

<b>Title:</b> <b>Amendments to the Renewable Transport Fuel Obligation for compliance with the Renewable Energy Directive - (5) Overarching Impact Assessment</b>  <b>Lead department or agency:</b> Department for Transport <b>Other departments or agencies:</b>	<b>Impact Assessment (IA)</b>
	<b>IA No:</b> DfT00122
	<b>Date:</b> 12/08/2011
	<b>Stage:</b> Final
	<b>Source of intervention:</b> EU
	<b>Type of measure:</b> Secondary legislation
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## Summary: Intervention and Options

### What is the problem under consideration? Why is government intervention necessary?

Greenhouse gas (GHG) emissions from transport are significant and impose costs on others through their contribution to climate change; those costs are not taken into account by those that emit them. Using renewable energy can reduce GHG emissions and there are therefore EU and UK renewable energy targets. However, these are not likely to be met by the market alone, because of the extra cost of renewable energy compared to fossil fuels in the near term at least. The UK intends to meet its Renewable Energy Directive (RED) transport target through the Road Transport Fuel Obligation (RTFO). This impact assessment aggregates the cost and benefits of measures outlined in 4 additional impact assessments so that the impact of these measures can be considered in their entirety.

### What are the policy objectives and the intended effects?

The policy changes covered in this overarching impact assessment are aimed at improving the sustainability characteristics of biofuel supplied under the RTFO ('sustainability criteria' and 'double certification'), encouraging the development of '2<sup>nd</sup> generation' advanced biofuels and waste-derived biofuels which do not use food as feedstock ('double certification') and widening the scope of the RTFO to give obligated suppliers more flexibility in meeting their obligation under the RTFO at least cost ('partially renewable fuels').

### What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

The policy changes described in this overarching impact assessment are:

- (1) introduction of minimum sustainability criteria for biofuels supplied under the RTFO
- (2) introduction of a system of verification which ensures that the sustainability criteria have been met
- (3) introduction of double certification of highly sustainable waste-derived biofuels
- (4) inclusion of partially renewable fuels under the RTFO

These policy changes are being pursued so as to improve the sustainability characteristics of biofuel supplied under the RTFO, encourage the development of advanced biofuel technologies and give obligated suppliers more flexibility to supply biofuel at least cost. Alternative options have been described in the individual impact assessments which underpin this overarching impact assessment.

**Will the policy be reviewed?** It will be reviewed. **If applicable, set review date:** 4/2014

**What is the basis for this review?** Duty to review. **If applicable, set sunset clause date:** Month/Year

**Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?**

Yes

**Ministerial Sign-off** For final proposal stage Impact Assessments:

*I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.*

Signed by the responsible Minister:

*Norman Baker*

Date: 19 October 2011

# Summary: Analysis and Evidence

# Policy Option 1

## Description:

Implement sustainability criteria, verification of sustainability criteria, double certification of waste-derived biofuel and inclusion of partially renewable fuels in the RTFO.

Price Base Year 2010	PV Base Year 2011	Time Period Years 18	Net Benefit (Present Value (PV)) (£m)		
			Low: 974	High: -818	Best Estimate: 282

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.03	7	109
High	0.09	68	1,083
Best Estimate	0.06	20	324

### Description and scale of key monetised costs by 'main affected groups'

The majority of the costs arise from a temporary increase in biofuel prices which is expected to result from implementation of the sustainability criteria (£318m over the period 2012 to 2030 - central estimate). The remainder of the estimated costs result from the requirement to have compliance with the sustainability criteria independently verified (£6m). These costs will be incurred by fuel suppliers obligated under the RTFO who are expected to pass them through to fuel consumers.

### Other key non-monetised costs by 'main affected groups'

Implementation of double certification of waste-derived biofuel is expected to shrink the RTFO market for crop-derived biofuel. As a result crop-derived biofuel producers may experience lower profitability. Double certification is also expected lead to greater demand for waste feedstocks (e.g. tallow, waste wood, wood chips) pushing up prices in these markets. Higher prices for waste feedstocks may result in lower profitability in industries which currently make use of these resources.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	-1	0
High	0	83	1083
Best Estimate	0	46	606

### Description and scale of key monetised benefits by 'main affected groups'

Monetised benefits have been calculated by estimating changes in net RTFO GHG savings (relative to the baseline). These GHG savings have been monetised using Department of Energy and Climate Change carbon values.

### Other key non-monetised benefits by 'main affected groups'

Non-monetised benefits include potential innovation benefits from advanced biofuel production technologies which may result from double certification. Increased uptake of waste-derived biofuel may also lead to indirect GHG emissions and less pressure from crop-derived biofuel driven demand in food markets.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5

It is assumed that the baseline GHG savings and the supply of waste-derived biofuel in the baseline RTFO fall (relative to current levels) as other EU member states implement the Renewable Energy Directive and, as a result, offer a higher financial incentive for sustainability criteria-compliant and waste-derived biofuel. Sensitivities have been modelled around the level of GHG savings in the baseline. Biofuel prices are assumed to rise as a result of the implementation of the sustainability criteria. The extent to which prices will increase is highly uncertain. Low and high sensitivities have modelled around central estimates to reflect this uncertainty. Three different supply scenarios, based upon research and historical data, have been used to analyse the impact of double certification.

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: NA	Benefits: NA	Net: NA	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	United Kingdom				
From what date will the policy be implemented?	05/12/2011				
Which organisation(s) will enforce the policy?	DfT				
What is the annual change in enforcement cost (£m)?	0.0028				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	No				
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)	<b>Traded:</b> 2.1		<b>Non-traded:</b> 12.6		
Does the proposal have an impact on competition?	Yes				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	<b>Costs:</b> NA		<b>Benefits:</b> NA		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)		< 20	<b>Small</b>	<b>Medium</b>	<b>Large</b>
Are any of these organisations exempt?	No	No	No	No	No

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	No	
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	Yes	21
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	Yes	18
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	22

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

## Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

### References

Include the links to relevant legislation and publications, such as public impact assessments of earlier stages (e.g. Consultation, Final, Enactment) and those of the matching IN or OUTs measures.

No.	Legislation or publication
1	EU Renewable Energy Directive – Promotion of the use of energy from renewable sources: <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:en:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:en:PDF</a>
2	The individual impact assessments which look at each each of policies outlined in this overarching impact assessment can be found at <a href="http://www.[insert].com">www.[insert].com</a>
3	Renewable Fuels Agency carbon and sustainability data (archived) <a href="http://webarchive.nationalarchives.gov.uk/20110410141814/http://renewablefuelsagency.gov.uk/carbon-and-sustainability/rtfo-reports">http://webarchive.nationalarchives.gov.uk/20110410141814/http://renewablefuelsagency.gov.uk/carbon-and-sustainability/rtfo-reports</a> DfT biofuels statistics webpage <a href="http://www2.dft.gov.uk/pgr/statistics/datatablespublications/biofuels/">http://www2.dft.gov.uk/pgr/statistics/datatablespublications/biofuels/</a>
4	NNFCC advanced biofuels research (currently unpublished – soon to be published on DfT website)

+ Add another row

### Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

#### Annual profile of monetised costs and benefits\* - (£m) constant prices

	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>	Y <sub>8</sub>	Y <sub>9</sub>
Transition costs										
Annual recurring cost										
Total annual costs										
Transition benefits										
Annual recurring benefits										
Total annual benefits										

\* For non-monetised benefits please see summary pages and main evidence base section



Microsoft Office  
Excel Worksheet

# Evidence Base (for summary sheets)

## Introduction & Context

1. The Renewable Transport Fuel Obligation (RTFO) is the UK's mechanism for incentivising the supply of biofuels in the road transport sector. A series of amendments to the RTFO are proposed in order to implement the transport elements of the Renewable Energy Directive. These are:
  - Sustainability Criteria
  - Verification of compliance with the sustainability criteria
  - Double certification of waste-derived and '2<sup>nd</sup> generation' advanced biofuel
  - Inclusion of partially renewable fuels
2. This impact assessment provides a high level summary and overview of the market impacts and costs and benefits of all the proposed amendments in their totality. A more detailed analysis of these changes, including the underlying rationale for making the changes and alternative options which have been considered can be found in the individual impact assessments
3. At a high level the measures outlined in this impact assessment are aimed at improving the sustainability of biofuels supplied under the RTFO ('Sustainability Criteria' and 'Verification' – impact assessments 1 and 2), incentivising increased supply of waste-derived and '2<sup>nd</sup> generation' advanced biofuels ('Double Certification' – impact assessment 3) and providing increased flexibility for obligated suppliers to meet their obligations at least cost through the use of partially renewable fuels ('Partially Renewable Fuels' – impact assessment 4).

## **RTFO overview**

4. Under the RTFO road transport fuel suppliers ('obligated suppliers') are required by law to deliver a given proportion of the fuel supply as biofuel. The proportion of biofuel supplied is determined by the level of RTFO target (figure 1). The RTFO creates demand for biofuel which may not be there in its absence. If biofuel is more expensive than fossil fuel (as is typically the case), the RTFO in effect provides a subsidy for biofuel. For each litre of biofuel (or kg of biogas) supplied a tradable Renewable Transport Fuel Certificate (RTFC) is issued. Obligated suppliers demonstrate compliance with their obligation under the RTFO by surrendering certificates at the end of the year. They can obtain these certificates by either supplying biofuel directly or purchasing RTFCs on the market. Given that fuel suppliers are assumed to minimise costs and maximise profits, it is assumed that the RTFO is the 'least cost' mechanism for supplying biofuel.

Figure 1: RTFO target trajectory

2012/13	4.5%
2013/14 onwards	5%

## **Overview of RTFO amendments**

### Sustainability Criteria – overview & recommended option

5. The Renewable Energy Directive sustainability criteria require that biofuel supplied under the RTFO:

- (1) Meet minimum GHG savings thresholds (*GHG Savings Criteria*)
- (2) Are not sourced from areas of high biodiversity (*Land Based Criteria*)
- (3) Are not sourced from areas of high carbon stocks (*Land Based Criteria*)

### GHG Savings Criteria

6. The biofuel GHG saving (relative to fossil fuel) required by the sustainability criteria increases over time and varies by the point in time at which a refinery commenced operation (i.e. older refineries do not have to comply with the criteria before 2013 and refineries commencing operation post-2017 are subject to a higher GHG saving threshold). From 2011, refineries which commenced operation post 2012 are required to deliver GHG savings of at least 35%. From 2013, all refineries are required to deliver at least 35% GHG savings. From 2017, all refineries are required to deliver at least 50% GHG savings. From 2018, refineries which commence operation post 2017 are required to deliver at least 60% GHG savings.

Figure 1: Minimum GHG & grandfathering periods for biofuel installations (RED)

Period	Date production started at an installation		
	Pre 24/01/08	Post 24/01/08	Post 01/01/17
05/12/2010 – 31/03/2013	No criteria	35%	-
01/04/2013- 31/12/2016	35%	35%	-
01/01/2017- 31/12/2017	50%	50%	50%
01/01/2018- 31/12/2020	50%	50%	60%

7. Figures 2 and 3 show the levels of GHG savings being obtained by biofuels supplied under the RTFO up to Jan 2011.

Figure 2: Profile of reported biodiesel GHG savings (RTFO data Apr 2008 – Jan 2011)

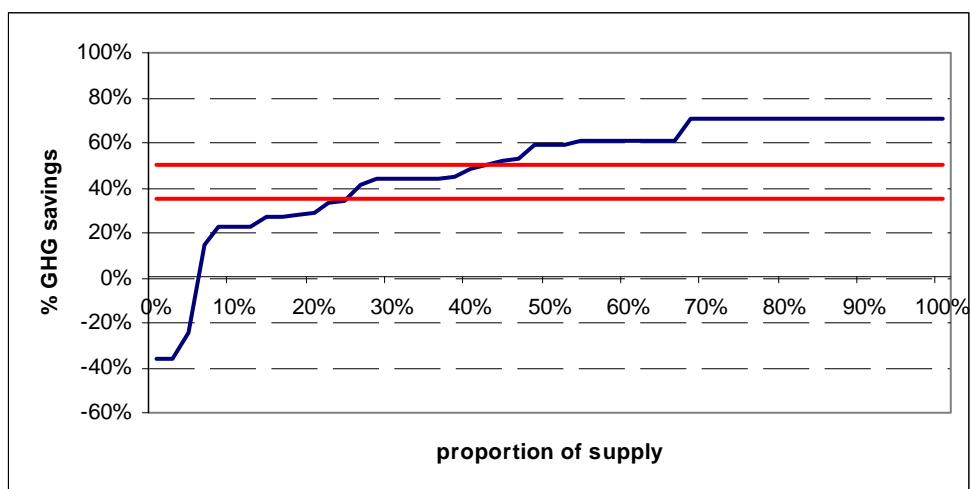
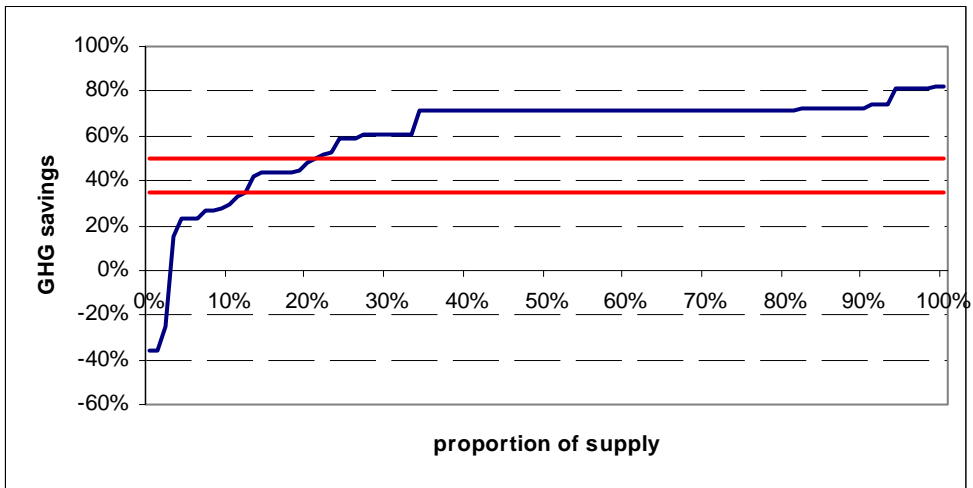


Figure 3: Profile of reported bioethanol GHG savings (RTFO data Apr 2008 – Jan 2011)

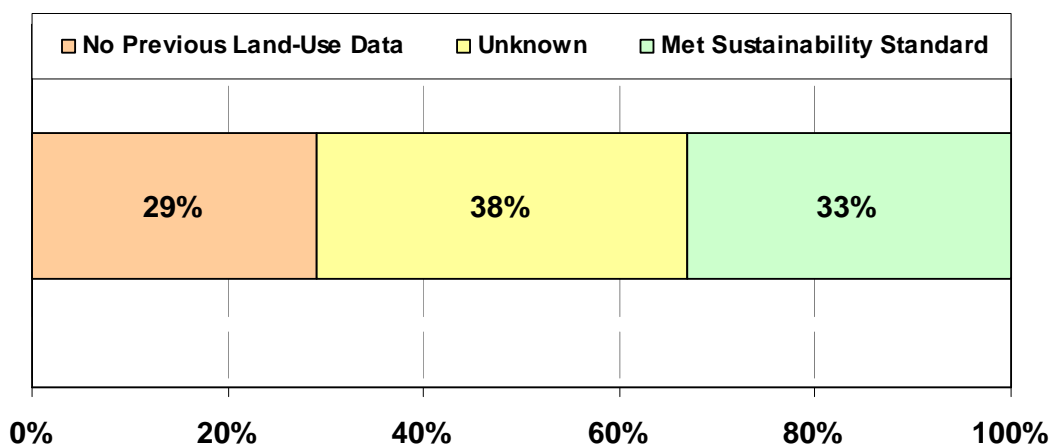


8. The horizontal red lines in figures 2 & 3 represent the sustainability criteria proposed. Biofuels supplied are required to achieve a 35% GHG saving in 2012 to 2016 and 50% saving from 2017 onwards. On the basis of fuels supplied under the RTFO up to January 2011, 71% of biodiesel would have been exceeded the 35% GHG savings threshold and 26% would have exceeded the 50% GHG savings threshold. 87% of bioethanol would have been exceeded the 35% GHG savings threshold and 79% would have exceeded the 50% GHG savings threshold. The sustainability criteria would be expected to raise the minimum and average levels of GHG savings delivered by biofuels supplied in the UK. In order to achieve higher GHG savings, there may be some increase in the cost of biofuels.
9. Biofuel producers are expected to increase average GHG savings following the implementation of the sustainability criteria. This can be achieved in a number of ways including increasing crop yields, reducing fertiliser use, improving energy efficiency / GHG intensity of refining processes and changing the geographical source of the biofuel feedstock.

*Land Based Criteria*

10. The implications of the requirement that biofuels are not sourced from areas of high carbon stock or high biodiversity areas are particularly uncertain and difficult to evaluate.
11. Figure 4 gives an indication of the proportions of the current UK biofuel supply that could be affected by the land-based criteria. Those with no previous land-use data could be considered more likely to not satisfy the land-based criteria. Those which have supplied land-use data but not demonstrated compliance with current RFA sustainability standards may or may not satisfy the land-based criteria. Those which have demonstrated compliance with current RFA sustainability standards could be considered more likely to satisfy the land-based criteria.

Figure 4: UK biofuel supply by land-use sustainability data (2009/10 RTFO data)



12. Given that there is significant global agricultural production occurring in areas which do not have high carbon stocks or biodiversity, it is anticipated that the market will adapt and obligated suppliers will be able to obtain increased volumes of compliant biofuel following the introduction of the sustainability criteria. However, there may be some short term price pressures as biofuel producers gradually adapt to the requirements of the criteria.

### Verification

13. The Renewable Energy Directive requires that biofuel supplied under the RTFO must be independently verified in order to demonstrate compliance with the sustainability criteria. As such is proposed that biofuel supplied under the RTFO must be independently verified before an RTFC (tradable certificate) is issued.

### Double Certification

14. The EU Renewable Energy Directive (RED) requires biofuels that are derived from wastes, residues, non-food cellulosic material, and ligno-cellulosic material inputs (i.e. biofuels which are not derived directly from food) to be counted twice towards compliance with any national renewable energy obligation (i.e. in the RTFO in the UK) and the 10% RED transport target, thus providing an increased incentive to supply these types of fuels. The intended effect is that these incentives are expected to increase the price obligated suppliers are willing to pay for these fuels, which in turn should lead to an increase in the available supply.
15. The technologies/feedstocks covered in following analysis of double certification are '2<sup>nd</sup> generation' Fischer-Tropsch biodiesel, '2<sup>nd</sup> generation' bioethanol (from both gasification and biological pathways), used cooking oil (UCO)-derived biodiesel, tallow-derived biodiesel and biomethane.
16. The RTFO supply of waste-derived biofuel (in absence of double counting) up to January 2011 is shown in figure 5. To date, no biofuel from '2<sup>nd</sup> generation' advanced processes has been supplied under the RTFO. In obligation year 1 and 2, tallow-derived biodiesel was the most prevalent of the waste-derived biofuels in the RTFO. In year 3 of the RTFO, UCO-derived biodiesel was the most prevalent of the waste-derived biofuels following the introduction of a (temporary) 20 pence per litre duty differential which will provides an additional financial incentive for the supply of UCO-derived biodiesel. Supply of biomethane has been consistently low (less than 1 million kg per year) since the introduction of the RTFO.

Figure 5: Waste-derived biofuel supply under the RTFO to date

#### *Tallow (litres)*

	08/09	09/10	10/11 (pro-rated)
<b>UK</b>	5,156,672	40,032,147	27,005,464
<b>EU</b>	5,220,474	50,376,553	26,691,997
<b>RoW</b>	96,070,974	65,347,536	15,352,395
<b>Unknown</b>	8,737,367	26,552,035	1,223,795
<b>Total</b>	115,185,487	182,308,271	70,273,651

#### *UCO (litres)*

	08/09	09/10	10/11 (pro-rated)
<b>UK</b>	35,921,395	29,809,440	98,329,331
<b>EU</b>	2,169,647	7,130,141	268,714,771
<b>RoW</b>		273,638	35,292,160
<b>Unknown</b>	1,431,380	5,912,516	16,962,277
<b>Total</b>	39,522,422	43,125,735	419,298,539



*Biomethane (kg)*

	<b>08/09</b>	<b>09/10</b>	<b>10/11 (pro-rated)</b>
<b>UK</b>	415,700	195,797	435,401

Partially Renewable Fuels

17. At present, only biofuel considered to be 'wholly renewable' are eligible under the RTFO. As a result, many partially renewable biofuels are not eligible under the RTFO and therefore cannot be used by suppliers to meet their obligation.
18. Inclusion of partially renewable fuels in the RTFO is intended to create a level playing field in the supply of biofuels across a wide range of potential renewable fuels. This will give obligated suppliers increased flexibility to meet their obligation to supply biofuel at least cost. Inclusion of partially renewable fuels is also expected to give suppliers more scope to supply biofuel in excess of the 'blend wall' (i.e. the maximum limit to which bioethanol and FAME biodiesel can be blended into standard 'protection grade' petrol and diesel fuel streams).

**Consultation**

19. The final stage impact assessments which underlie this overarching impact assessment have been updated and amended extensively following a public consultation exercise carried out by the Department for Transport and upon receiving comments from the Regulatory Policy Committee. During the consultation interested parties were invited to comment on the policy options and underlying analysis either at public meetings (2 of which were held) or through written responses. Some of the major changes to the analysis include:

*Sustainability Criteria*

- Market price data has been used to inform and validate the (biofuel) price impacts of the sustainability criteria.
- Sensitivities around the length of time taken for biofuel prices to return to trend following implementation of the criteria have been added.

*Verification*

- Sensitivities have been added to the assumed cost of verification.
- Market data for RTFC prices have been taken into account in the analysis.

*Double Certification*

- Development of more detailed biofuel supply scenarios for Double Certification, taking into account recent research into '2<sup>nd</sup> generation' advanced biofuel and the most recent supply data from the RTFO.
- Analysis of the potential impact of double certification on the size of the RTFO market for crop-derived biofuel.

*Partially Renewable Fuels*

- More detail on the potential market impact of including partially renewable fuels into the RTFO has been added to the analysis

20. For a more detailed discussion of changes made to the analysis following on from the public consultation, please refer to the individual underlying impact assessments.

## Cost-Benefit Analysis

### Baseline (do nothing)

21. In the baseline scenario no changes are made to the RTFO. That is to say no sustainability criteria (and accompanying verification process) are introduced, all biofuel continues to receive one certificate per litre irrespective of the feedstock or production process used (i.e. there is no additional financial incentive for biofuels derived from wastes, residues, non-food cellulosic material, and ligno-cellulosic material inputs) and partially renewable fuels remain ineligible under the RTFO.

#### *Baseline – Sustainability Criteria*

22. It is assumed that the sustainability characteristics of biofuel supplied under the baseline RTFO worsens as other EU member states implement the sustainability criteria (as required by the Renewable Energy Directive). This is because fuel suppliers in other EU Member States are therefore assumed to purchase more sustainable biofuel, leaving UK suppliers with the (relatively unsustainable) remainder. The projected distribution of baseline GHG savings has been modelled taking the bottom half of the GHG savings distribution which has been supplied to date under the RTFO (figure 1).
23. Given the uncertainty around the baseline GHG savings distribution, 'high baseline GHG savings' and 'low baseline GHG savings' sensitivities have also been explored in the following analysis of GHG saving benefits. The 'high baseline GHG savings' scenario has been modelled by assuming that the baseline profile of GHG savings reflects the GHG saving profile of the actual GHG savings distribution reported under the RTFO up to Jan 2011. The 'low baseline GHG savings' takes the bottom 25%.

Figure 1: Assumed distribution of baseline biodiesel GHG savings and sustainability criteria GHG saving thresholds (35% and 50%)

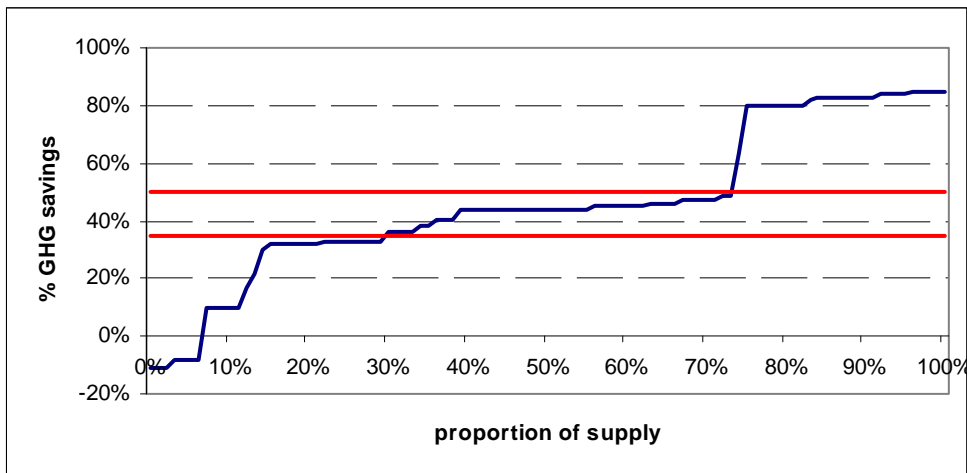
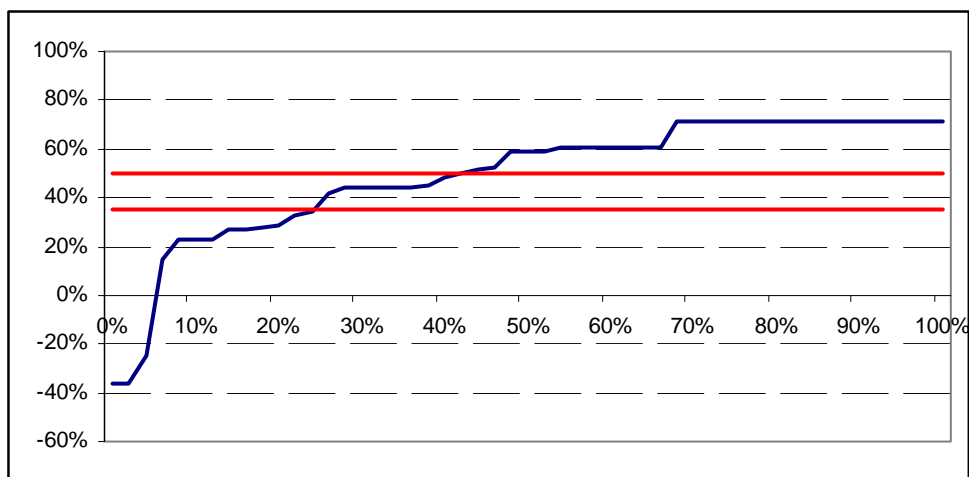


Figure 2: Assumed distribution of baseline bioethanol GHG savings and sustainability criteria GHG saving thresholds (35% and 50%)



### Baseline – Double Certification

24. Other EU Member States are also assumed to implement double certification of waste-derived biofuel (as required by the Renewable Energy Directive). As a result, biofuel which could be supplied in the UK is now diverted into other EU member state biofuel markets due to the greater financial incentive on offer in these markets. The UK supply of biofuel eligible for double certification is therefore estimated to fall to almost zero in the baseline.

Figure 3: Projected baseline RTFO fuel mix 2012 to 2030 (million litres/kg)

	biodiesel	Ethanol	UCO	Tallow	biomethane	2G ethanol	2G biodiesel
<b>2012</b>	1004	1141	0	0	0	0	0
<b>2013</b>	1092	1283	0	0	0	0	0
<b>2014</b>	1071	1304	0	0	0	0	0
<b>2015</b>	1043	1316	0	0	0	0	0
<b>2016</b>	1020	1328	0	0	0	0	0
<b>2017</b>	1001	1339	0	0	0	0	0
<b>2018</b>	984	1349	0	0	0	0	0
<b>2019</b>	969	1359	0	0	0	0	0
<b>2020</b>	956	1368	0	0	0	0	0
<b>2021</b>	946	1376	0	0	0	0	0
<b>2022</b>	937	1383	0	0	0	0	0
<b>2023</b>	929	1391	0	0	0	0	0
<b>2024</b>	923	1398	0	0	0	0	0
<b>2025</b>	919	1406	0	0	0	0	0
<b>2026</b>	913	1412	0	0	0	0	0
<b>2027</b>	906	1418	0	0	0	0	0
<b>2028</b>	899	1424	0	0	0	0	0
<b>2029</b>	892	1430	0	0	0	0	0
<b>2030</b>	885	1436	0	0	0	0	0

### Baseline - Verification

25. In absence of a sustainability criteria verification requirement, RTFCs (tradable certificates which demonstrate compliance with the RTFO) are issued immediately after biofuel has been supplied and obligated suppliers continue to have their biofuel supply data verified once a year.

### Baseline – Partially Renewable Fuels

26. In the baseline, partially renewable fuels remain ineligible and are not supplied under the RTFO.

## Market Impact of preferred option

### Market impact – Sustainability Criteria

27. Implementation of the sustainability criteria will require suppliers obligated under the RTFO to supply biofuel which delivers at least 35% lifecycle GHG savings from 2012 onwards and 50% from 2017 onwards.
28. Biofuels which deliver GHG savings below these thresholds in the baseline are assumed to be replaced with biofuels which meet the minimum GHG saving criteria (i.e. deliver at least 35% GHG savings from 2012 – 2016 and 50% GHG savings from 2017).

### Market Impact - Verification

29. A system of verification whereby suppliers must have compliance with sustainability criteria verified (prior to a certificate being issued) by an independent auditor is introduced. On average suppliers are assumed to use the services of a verifier 4 times each year (3 additional verifications per year relative to the baseline).

### Market Impact – Double Certification

30. Following implementation of double certification, suppliers obligated under the RTFO will receive two certificates (rather than one, as in the baseline) for each litre of waste-derived biofuel that they supply. This will increase suppliers' willingness to pay for these biofuels which is expected to drive an increase in the available supply.
31. Double certification is also expected to result in lower overall volumes of biofuel being supplied under the RTFO as 2 litres of crop-derived biofuel is displaced by each litre of waste-derived biofuel
32. Three scenarios have been developed which show how the RTFO fuel mix might change following the implementation of double counting. These scenarios are shown in figure 4.

Figure 4: double certification RTFO fuel mix scenarios (million litres/kg)

#### Central Scenario

	biodiesel	ethanol	UCO	Tallow	biomethane	2G ethanol	2G biodiesel
<b>2012</b>	309	1004	151	265	0.4		
<b>2013</b>	401	1092	158	282	0.4		
<b>2014</b>	374	1071	166	299	0.4		
<b>2015</b>	336	666	174	316	0.4	189	
<b>2016</b>	298	643	182	333	0.4	189	
<b>2017</b>	260	623	190	349	0.4	189	
<b>2018</b>	221	606	198	366	0.4	189	
<b>2019</b>	181	591	205	383	0.4	189	
<b>2020</b>	0	579	213	400	0.4	189	70
<b>2021</b>	0	568	213	400	0.4	189	74
<b>2022</b>	0	559	213	400	0.4	189	78
<b>2023</b>	0	552	213	400	0.4	189	82
<b>2024</b>	0	546	213	400	0.4	189	85
<b>2025</b>	0	542	213	400	0.4	189	89
<b>2026</b>	0	535	213	400	0.4	189	92
<b>2027</b>	0	528	213	400	0.4	189	95
<b>2028</b>	0	521	213	400	0.4	189	98
<b>2029</b>	0	514	213	400	0.4	189	101
<b>2030</b>	0	507	213	400	0.4	189	104

*Low Scenario*

	biodiesel	ethanol	UCO	Tallow	biomethane
<b>2012</b>	725	1004	75	133	0.2
<b>2013</b>	842	1092	79	141	0.2
<b>2014</b>	839	1071	83	149	0.2
<b>2015</b>	826	1043	87	158	0.2
<b>2016</b>	813	1020	91	166	0.2
<b>2017</b>	800	1001	95	175	0.2
<b>2018</b>	785	984	99	183	0.2
<b>2019</b>	770	969	103	192	0.2
<b>2020</b>	754	956	107	200	0.2
<b>2021</b>	762	946	107	200	0.2
<b>2022</b>	770	937	107	200	0.2
<b>2023</b>	777	929	107	200	0.2
<b>2024</b>	784	923	107	200	0.2
<b>2025</b>	792	919	107	200	0.2
<b>2026</b>	798	913	107	200	0.2
<b>2027</b>	804	906	107	200	0.2
<b>2028</b>	810	899	107	200	0.2
<b>2029</b>	817	892	107	200	0.2
<b>2030</b>	823	885	107	200	0.2

*High Scenario*

	1G crop biodiesel	1G crop ethanol	2G ethanol	rest
<b>2012</b>	0	1004		571
<b>2013</b>	0	1092		641
<b>2014</b>	0	1071		652
<b>2015</b>	0	666	189	658
<b>2016</b>	0	643	189	664
<b>2017</b>	0	623	189	670
<b>2018</b>	0	228	378	675
<b>2019</b>	0	213	378	679
<b>2020</b>	0	201	378	684
<b>2021</b>	0	190	378	688
<b>2022</b>	0	181	378	692
<b>2023</b>	0	174	378	695
<b>2024</b>	0	168	378	699
<b>2025</b>	0	164	378	703
<b>2026</b>	0	157	378	706
<b>2027</b>	0	150	378	709
<b>2028</b>	0	143	378	712
<b>2029</b>	0	136	378	715
<b>2030</b>	0	129	378	718

*Market impact – Partially Renewable Fuels*

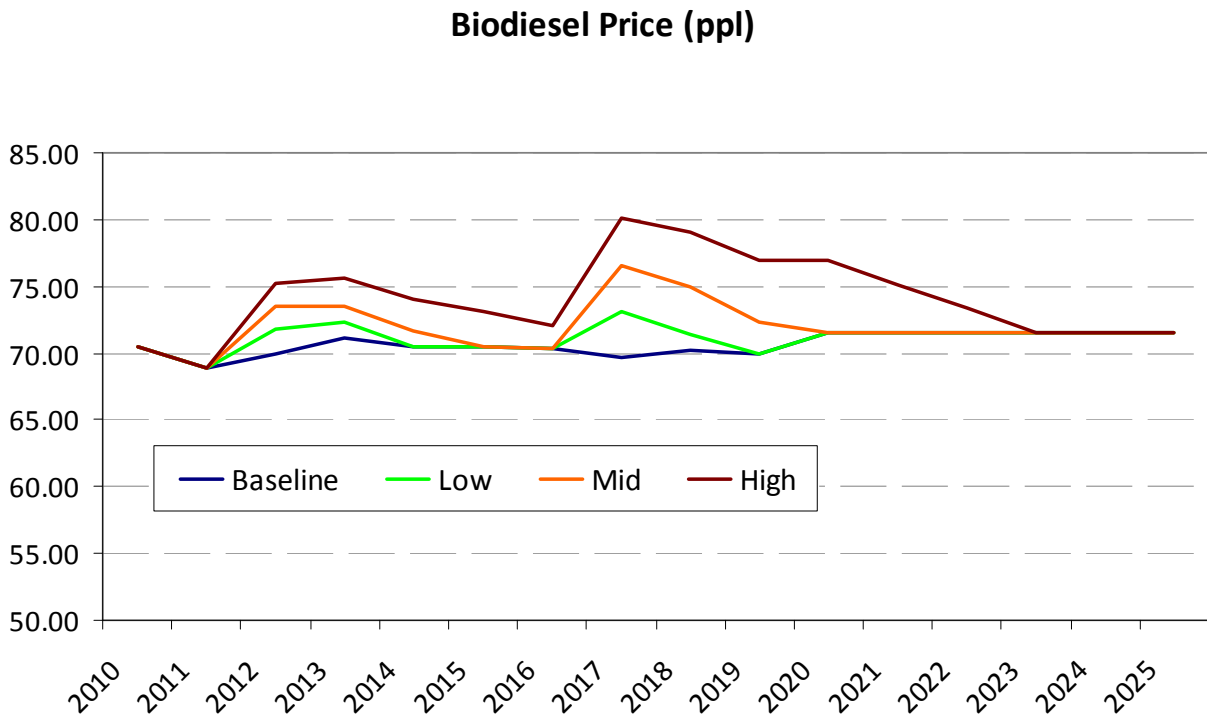
33. As a result of partially renewable fuels becoming eligible under the RTFO, obligated suppliers will be able to meet their obligation through supplying a wider range of fuels than in the baseline. It has not been possible to model what effect this will have on the RTFO biofuel mix. As suppliers are assumed to be profit maximising, it is expected the suppliers will choose to supply newly eligible fuels if they more cost effective than fuels which would have otherwise been supplied in the baseline.

## Costs and Benefits

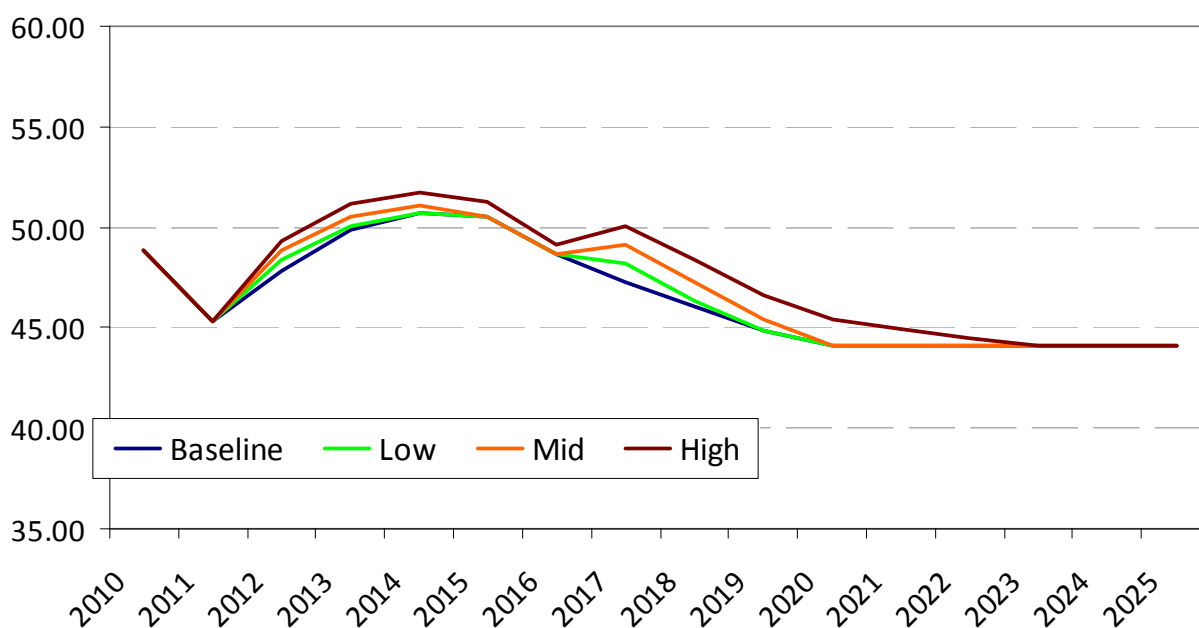
### Costs – Sustainability Criteria

34. Implementation of the sustainability criteria is expected to lead to a temporary increase in the cost of supplying biofuel under the RTFO. Prices are expected to rise due to a sudden increase in demand for compliant biofuel (as the sustainability criteria are implemented across all EU member states) and as biofuel producers incur costs from making investments to improve their refining processes. Prices are then expected to fall gradually as market supply adapts to the requirements of the sustainability criteria and as suppliers recoup money invested.
35. The sustainability criteria price impacts have been modelled as ‘pinch points’ (figure 5) over 3 scenarios (low, central, high). The magnitude of the sustainability criteria driven price increase and the length of the adjustment phase (as prices return to trend) is varied by scenario. Estimated price impacts are higher for biodiesel (than for bioethanol) as it is expected to be more difficult to meet the minimum GHG saving requirements. Estimated price impacts are also expected to be higher in 2017 (than in 2012) due to the more stringent (harder to achieve) GHG criteria. The central estimate for the 2012 biodiesel sustainability criteria price premium is in line with current market data (June 2011). High and low ranges have been taken to reflect uncertainty over future market movements. Price premium estimates for biodiesel in 2017 and for bioethanol in 2012 and 2017 are subject to a higher degree of uncertainty as there is no market price data available for validation.

Figure 5: Projected price impacts of the sustainability criteria (2010 prices)



## Bioethanol Price (ppl)



### Costs – Verification

36. Suppliers are assumed to require 3 additional verifications each year relative to the baseline. Under central assumptions 3 additional verifications were required at an estimated £15,000 each for say, 8 large suppliers; and 3 additional verifications at say £1,500 for around 15 small suppliers, which yields a total cost per year of around £427,500. Additional verification is also expected to increase government administrative costs with a one-off cost of £57,000 in 2012 and £28,000 each year from 2012 onwards.

### Costs – Double Certification

37. For a given obligation level (i.e. volume of biofuel to be supplied), the cost of supplying biofuel required to meet the obligation (which is borne by obligated suppliers and assumed to be passed through 100% to consumers of road transport fuel) is dependent on the market prices for various biofuel options and is not expected to increase as suppliers will still have the option of supplying only crop-derived biofuel if that is the cost effective option. However, costs may fall if suppliers are able to source waste derived biofuel for less than twice the additional cost (per litre) of supplying crop-derived biofuel and therefore choose to supply this instead.

38. As it is expected that the market price of waste-derived biofuel will increase as demand increases, it is not possible to estimate what potential cost saving could be made through the increased supply of waste-derived biofuel. Instead, the analysis makes the conservative assumption that the price of waste-derived biofuel rises such that it would cost the supplier the same whether they provide 2 litres of crop-derived biofuel or one litre of waste-derived biofuel (and therefore no supply constraints on the latter are assumed). Therefore, this estimate should be thought of as an upper bound on potential costs. It is possible that the overall cost of delivering the RTFO could fall as a result of double certification.

### Costs – Partially Renewable Fuels

39. Suppliers are assumed to minimise costs and maximise profits. As suppliers will still be able to make the same supply decisions, with regard to the eligibility of wholly renewable fuels, it is assumed that costs will not rise (i.e. suppliers could continue to supply wholly renewable fuels

with no additional costs above practices taking place under the current RTFO, the baseline) and could potentially fall if partially renewable fuels become eligible for RTFCs under the RTFO. This fall in costs would be expected because allowing a wider range of renewable fuels to be used to meet a given target would lead to suppliers having more options to meet targets and, depending on the cost, commercial considerations will determine the uptake of the partially renewable fuels. This potential cost saving has not been quantified as it is not possible to make a robust estimate of how partially renewable fuel would be used if it were allowed or what the per-unit cost saving would be. Given that the renewable part of any currently commercially available partially renewable fuels are derived from identical feedstock to conventional biofuels, it is not thought that any potential cost savings would be large. Lower costs for biofuel suppliers may be passed on to consumers through lower pump prices relative to in the baseline. Increased supply of partially renewable fuels would be offset by a decrease in the supply of wholly renewable fuels, with no net change in the overall volume of biofuel supplied.

#### *Benefits – Sustainability Criteria*

40. Implementation of the sustainability criteria is expected to lead to an increase in GHG savings (relative to the baseline) as those fuels in the baseline which do not meet minimum GHG savings thresholds are replaced by higher GHG saving fuels which meet the requirements of the sustainability criteria. The change in GHG savings is monetised using Department of Energy and Climate Change carbon values. Implementation of the sustainability criteria is also expected to deliver other benefits (i.e. improved biodiversity outcomes) which have not been possible to quantify.

#### *Benefits – Verification*

41. There are no additional benefits associated with verification.

#### *Benefits – Double Certification*

42. Implementation of double certification is expected to lead to a change in GHG saving benefits as biofuel eligible for double certification will displace crop-derived biofuel at a rate of two to one (on a volume basis). In general, the displacement of crop-derived biodiesel with waste-derived biodiesel is expected to yield higher net GHG savings than displacing crop-derived ethanol with waste-derived bioethanol. This is because crop-derived bioethanol typically delivers higher GHG savings than crop-derived biodiesel.
43. In addition, the implementation of double certification is also expected to yield benefits which it has not been possible to quantify. These include innovation benefits from providing increased support to emerging technologies and also potentially lower GHG emissions from Indirect Land Use Change (i.e. where increased demand for waste-derived biofuel feedstock leads to lower indirect GHG emissions from land use change caused by the knock-on impacts of increased demand for feedstock substitutes).

#### *Benefits – Partially Renewable Fuels*

44. There are a number of benefits which could arise from the inclusion of partially renewable fuels in the RTFO. These include the potential for higher GHG savings (e.g. HVO biodiesel – a partially renewable fuel – typically delivers higher GHG savings than FAME biodiesel which it could potentially displace). The option to supply partially renewable fuels will give suppliers increased flexibility to meet their RTFO biofuel supply target at lower cost. It has not been possible to quantify these potential benefits due to a lack of robust data.

#### *Aggregated Costs*

45. Additional costs are estimated to result from implementation of the sustainability criteria (which are expected to result in a temporary increase in biofuel prices) and from verification of compliance with the sustainability criteria. Including partially renewable fuels and implementation of double counting are not expected to result in any quantifiable change to the cost of delivering



the RTFO. The aggregated costs attributed to the policy changes described in this impact assessment are estimated to be £324m (within a range of £109m to £818m), discounted to 2011. These are simply the costs which are presented for the preferred options in the disaggregated policy impact assessments.

Figure 6: Aggregated Cost Estimates for period 2012 - 2030 (£m, 2010 prices, discounted to 2011)

	low	central	High
Verification	3.2	5.9	8.6
Sustainability Criteria	105.9	318.1	809.0
Total	109.1	324.0	817.6

### Aggregated Benefits

46. Aggregated benefits have been monetised by modelling the change in (direct) GHG savings which are estimated to occur as a result of the changes outlined in this impact assessment. The estimated change in GHG savings has been monetised using DECC carbon values. It has not been possible to quantify or monetise other highlighted benefits.
47. Calculation of aggregated GHG savings is complicated by the fact that there are interactions between implementation of the sustainability criteria and implementation of double certification. These interactions have been modelled by varying (1) the level of baseline GHG savings from crop-derived biofuels (see paragraph 23) and (2) by varying the penetration of waste-derived biofuel (see figure 4).
48. In general GHG savings are higher (relative to the baseline) when: (1) baseline GHG savings are lower (and therefore the additional GHG savings from the introduction of minimum GHG thresholds and increased use of waste-derived biofuel are higher); (2) the penetration of double certified waste-derived biofuel is lower. This is because each litre of waste-derived biofuel supplied will displace two litres of crop-derived biofuel as a result of double certification. As a result of the sustainability criteria, crop-derived biofuel must deliver minimum GHG savings of 50% from 2017 onwards. Although waste-derived biofuels generally deliver high GHG savings (e.g. in the region of 80%), these are not sufficient to outweigh the displacement of twice the volume of biofuel which will have minimum GHG savings of 50% (i.e. twice the volume will have GHG savings of at least 100%).
49. Therefore the 'high benefit' sensitivity is a scenario comprised of low baseline GHG savings and low penetration of waste-derived biofuel sensitivities. The 'low benefit' sensitivity is comprised of high baseline GHG savings and high penetration of waste-derived biofuel sensitivities.
50. It is important to note the quantitative analysis of benefits only takes into account estimated direct GHG impacts and other potential benefits (e.g. lower GHG emissions due to Indirect land Use Change, lower 'food vs fuel' market tension, increased investment in advanced technology) of an increased uptake of non-food-derived biofuel and more stringent sustainability requirements have not been explicitly monetised in this analysis due to a lack of robust data.

Figure 7: Estimated net change in RTFO GHG savings (MT CO<sub>2</sub>e)

	Low	central	High
2012	0.20	0.61	0.89
2013	0.22	0.66	0.98
2014	0.22	0.68	1.00
2015	0.07	0.61	1.01
2016	0.07	0.62	1.02
2017	0.09	0.78	1.51
2018	-0.08	0.78	1.51
2019	-0.08	0.78	1.51
2020	-0.08	0.81	1.52
2021	-0.08	0.81	1.52
2022	-0.08	0.82	1.53
2023	-0.08	0.82	1.53

2024	-0.08	0.83	1.53
2025	-0.08	0.83	1.54
2026	-0.08	0.84	1.54
2027	-0.08	0.84	1.55
2028	-0.08	0.85	1.55
2029	-0.08	0.85	1.55
2030	-0.08	0.85	1.56

Figure 8: Monetised value of GHG savings (£m, 2010 prices, discounted to 2011)

	Low	central	High
2012	9	29	42
2013	10	31	46
2014	10	31	46
2015	3	27	45
2016	3	28	45
2017	4	34	65
2018	-3	33	64
2019	-3	33	63
2020	-3	33	62
2021	-3	33	62
2022	-3	33	62
2023	-3	33	61
2024	-3	33	61
2025	-3	33	61
2026	-3	33	60
2027	-3	33	60
2028	-3	32	60
2029	-3	32	59
2030	-3	32	58

51. Figure 9 shows the aggregated GHG savings and monetised values over the period 2012 to 2030 estimated to occur as a result of the policy changes outlined in the preceding analysis. The policy changes described in this impact assessment are estimated to deliver an additional 14.7 MT CO<sub>2</sub>e (within a range of -0.1 to 26.4 MTCO<sub>2</sub>e) over the period 2012 to 2030 relative to an unamended RTFO baseline. Using DECC carbon values these CO<sub>2</sub>e savings are valued at £606m (within a range of £0m to £1,083m) over the period 2012 to 2030 (discounted to 2011).

Figure 9: Aggregated GHG savings (MTCO<sub>2</sub>e) and aggregated monetised benefits (£m, 2010 prices, discounted to 2011)

		Low	central	High
GHG savings	MTCO <sub>2</sub> e	-0.1	14.7	26.4
GHG savings	£m	-0.1	606.0	1083.2

### Aggregated Cost Benefit Summary

52. Aggregated costs, benefits and combined net benefit across 'low', 'central' and 'high' net benefit scenarios (i.e. the high cost scenario is combined with low benefit scenario and vice versa) are presented in figure 10. These are the cost-benefit numbers which have been used in the summary sheet of the impact assessment. The central monetised net benefit of the policy changes outlined in this impact assessment is estimated to be £282m (2010 prices) within a range of -£818m to £974m.

Figure 10: Aggregated cost-benefit analysis

	low	central	high
benefits	-0.1	606.0	1083.2

costs	817.6	324.0	109.1
Net benefit	-817.7	282.0	974.1

## Wider Impacts

### *Sustainability Criteria*

53. The UK typically supplies biofuels that offer higher GHG savings than across the EU; according to RTFO data (around 90% of biofuel produced in the UK meets the current qualifying standard). Increased sustainability of biofuels supplied in the UK could incentivise greater UK production of biofuels, as fuel suppliers would be incentivised to use sustainability criteria-compliant biofuels, including those produced in the UK. This could lead to greater output and employment opportunities in agriculture and the production of more sustainability criteria-compliant biofuels. Sustainability criteria could potentially improve biodiversity outcomes in the UK and the rest of the world if biofuels with negative biodiversity impacts were disincentivised through the RTFO. However, there is no obvious or clear methodology for monetising any of these impacts, as the size of the potential benefits would be highly uncertain.

### *Verification*

54. The requirement to have compliance with sustainability criteria independently verified before a certificate is issued will impose additional fixed costs on biofuel suppliers. This may be of relative benefit to larger suppliers who supply larger volumes of biofuel. The extent of any adverse competitive impact is likely to be offset somewhat by the fact that most small suppliers tend to supply waste-derived biofuel for which the verification process is straightforward and therefore relatively cheap.

### *Double Certification*

55. A decrease in demand for crop-derived biofuels due to double certification of waste-derived biofuel will reduce RTFO-driven demand for crop-derived biofuel which may have a negative impact on the profitability of crop-derived biofuel producers.
56. Increasing the share of waste-derived biofuels in the UK biofuel mix decreases the risk of biofuels contributing to increases in food prices. However, there is as yet no clear consensus on how to quantify and value any potential links between biofuel demand and food prices. Therefore any such possible impacts have been excluded from the analysis.
57. Double certification will increase RTFO obligated suppliers' demand and willingness to pay for eligible feedstocks (i.e. used cooking oil, tallow, waste wood, wood chips etc). Increased demand is expected to lead to a higher market price for these feedstocks. Therefore, industries which currently make use of these feedstocks (e.g. tallow in the oleochemical industry) are, as a result of double certification, expected to experience price increases for production inputs. This may have a negative impact on the profitability and may lead to the use of more expensive substitutes (i.e. virgin vegetable oil in the case of tallow and the oleochemicals industry) and lead to price increases in the product markets which they serve.

### *Partially renewable Fuels*

58. An increase in the supply of partially renewable fuels may lead to a lower RTFO supply of fuels which are currently eligible. It has not been possible to quantify this impact as it has not been possible to model the extent to which partially renewable fuels will be supplied.

## Assumptions and Risks

### *Sustainability Criteria*

59. It is assumed that the price of sustainability criteria-compliant biofuel will rise (and then return gradually back to trend) following the implementation of the sustainability criteria. This is highly uncertain and as such 'low' and 'high' sensitivities have been taken on both the magnitude of the price increase and the length of time taken for prices to return to trend.

#### *Verification*

60. It is assumed that suppliers will have to pay independent verifiers a given sum to have compliance with sustainability criteria verified. 'Low' and 'high' sensitivities have been taken to reflect the uncertainty surrounding this cost.

#### *Double Certification*

61. It is important to note the final list of feedstocks/processes eligible for double certification will be determined following a classification process and public consultation. The feedstocks/processes presented in this analysis are based upon a consideration of what is likely to be included following the consultation. However, it is possible that the final list of eligible feedstocks/technologies may be different.

62. The trajectories of future waste-derived biofuel supply following the implementation of double certification are based upon historical RTFO supply data and research in to the potential for '2<sup>nd</sup> generation' advanced biofuels. However, future uptake is highly uncertain and 'low' and 'high' sensitivities have been taken to reflect this uncertainty.

63. It is assumed that the entire supply of biofuel eligible for double certification will be supplied to other EU member states if the UK does not implement double certification. This assumption is based upon observed market behaviour (e.g. the surge in imports of UCO-derived biodiesel following the unilateral introduction of a tax incentive in the UK).

#### *Partially renewable Fuels*

64. Partially renewable fuels are assumed to have no cost impact on the RTFO. This is a conservative assumption because it is potentially possible that inclusion of partially may lead to lower compliance costs as suppliers will have greater flexibility to meet their obligation at least cost.

#### *General – GHG savings*

65. 14% of net GHG savings attributable to policy are assumed to take place in the 'traded sector' (e.g. within refineries captured by the EU Emissions Trading Scheme) and are priced using the traded price of carbon values. The remaining 86% of net GHG savings are assumed to take place within the 'non-traded sector' (e.g. agricultural emissions) and are valued using non-traded sector carbon values. This assumption is based upon internal analysis.

## Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

### Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

<p><b>Basis of the review:</b> [The basis of the review could be statutory (forming part of the legislation), i.e. a sunset clause or a duty to review, or there could be a political commitment to review (PIR)]; A review of all the RTFO amendments will be conducted in April 2014.</p>
<p><b>Review objective:</b> [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?] The objective of the review will be to ensure that the RTFO amendments are performing as intended.</p>
<p><b>Review approach and rationale:</b> [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach] The review will consist of an analysis of the impact of the RTFO amendments and will draw upon collected market data and stakeholder views.</p>
<p><b>Baseline:</b> [The current (baseline) position against which the change introduced by the legislation can be measured] Detailed data on the RTFO which is currently gathered by the RFA will be used to form the baseline.</p>
<p><b>Success criteria:</b> [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives] Success will be determined by an increase in the supply of highly sustainable biofuel.</p>
<p><b>Monitoring information arrangements:</b> [Provide further details of the planned/existing arrangements in place that will allow a systematic collection of monitoring information for future policy review] The RTFO administrator collects detailed data on RTFO performance.</p>
<p><b>Reasons for not planning a review:</b> [If there is no plan to do a PIR please provide reasons here]</p>

### Annex 2 – Competition Impact Test

66. The requirement to have compliance with sustainability criteria independently verified before a certificate is issued will impose additional fixed costs on biofuel suppliers. This may be of relative benefit to larger suppliers who supply larger volumes of biofuel. The extent of any adverse competitive impact is likely to be offset somewhat by the fact that most small suppliers tend to supply waste-derived biofuel for which the verification process is straightforward and therefore relatively cheap.

### **Annex 3 – Sustainable Development**

67. Implementation of the sustainability criteria and double certification of waste-derived biofuels are intended to improve the sustainability characteristics of the biofuel supplied under the RTFO. Sustainability criteria will mean that biofuel which comes from particularly sensitive areas (in terms of biodiversity or carbon stock) will not be eligible under the RTFO. Biofuels which do not meet minimum GHG savings thresholds will also be ineligible under the RTFO. Implementation of double certification will increase the relative incentive for the supply of highly sustainable waste-derived biofuel.

### **Annex 3– OIOO ('one in one out')**

68. The measures outlined in this impact assessment are EU in origin and therefore they do not fall within the scope of OIOO ('one in one out')