

<b>Title:</b> <b>Amendments to the Renewable Transport Fuel Obligation for compliance with the Renewable Energy Directive - (2) Verification</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> DFT00050
	<b>Date:</b> 05/08/2011
	<b>Stage:</b> Final
	<b>Source of intervention:</b> EU
	<b>Type of measure:</b> Secondary legislation
	<b>Contact for enquiries:</b> Craig Mills - 020 7944 4895 craig.mills@dft.gsi.gov.uk

## 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) target through the Road Transport Fuel Obligation (RTFO). To count towards the UK's renewable energy target, biofuels must be verified as meeting the minimum sustainability criteria set out in the RED.

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

The set of amendments to the Renewable Transport Fuels Obligation (RTFO) considered in this Impact Assessment aim to ensure that the most cost-effective regime for verifying whether biofuels meet the sustainability criteria is implemented. Issue of Renewable Transport Fuel Certificates (RTFCs) (which are used to demonstrate compliance with the RTFO) would be contingent on verification of the minimum sustainability criteria. This impact assessment should be considered alongside that relating to "minimum sustainability criteria". These amendments would be intended to balance minimising the cost of RTFO compliance to different businesses in the market for biofuel with the cashflow needs of biofuel producers (in particular smaller businesses).

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

The following policy options for verification of the minimum sustainability criteria (which have been analysed relative to a "do nothing" baseline) are:

- 2a) Issue RTFCs once per year after receipt of annual verifier's opinion. Allow a trading window after this.
  - 2b) Issue RTFCs in-year, but only after receipt of verifier's opinion on relevant batches. Trading as per now.
  - 2c) Issue 'provisional' RTFCs, or volume certificates (VCs), on validation of volume data. Annual conversion to RTFCs, if verifier's opinion is received. Trading allowed in both RTFCs and VCs.
  - 2d) Issue VCs and (if verified) RTFCs in year. Trading allowed in both RTFCs and VCs at same time.
- Option 2b is the preferred option, as it is expected to minimise cashflow impacts upon the majority of firms and the admin burden impact upon the RTFO administrator.

**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

**SELECT SIGNATORY 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:

2a) Issue RTFCs once per year after receipt of annual verifier's opinion. Allow a trading window after this.

Price Base Year 2010	PV Base Year 2011	Time Period Years 18	Net Benefit (Present Value (PV)) (£m)		
			Low: -22	High: -174	Best Estimate: -80

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low			22
High			174
Best Estimate		5.9	80

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

Additional cashflow costs for some suppliers that are reliant on certificate trading revenues associated with generating in-year cashflow where there exists only one annual opportunity to collect RTFCs. All of the costs shown would be assumed to be net costs to business in the first instance but fully passed through to consumers through pump prices.

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

Possible loss of competition and innovation if smaller suppliers are substantially disadvantaged by potential cashflow constraints. Potential reduction in the liquidity of the certificate trading market due to annual verification.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low			
High			
Best Estimate	0	0	0

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

Monetised benefits have not been identified relative to the baseline because the overarching purpose of the verification process is to facilitate the delivery of the benefits of the sustainability criteria i.e. the greenhouse gas savings. These have been assessed and quantified in the accompanying sustainability criteria impact assessment.

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

Verification facilitates the delivery of the benefits of minimum sustainability criteria by ensuring the integrity and credibility of the regulatory regime. Possible positive impacts on UK employment and output may result if strong and clear verification standards for minimum sustainability criteria strengthen the UK's reputation as a leader in sustainable biofuels, through increased investment in UK biofuels production.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

The valuations of costs due to potential cashflow impacts, verification and administrative impacts are dependent on advice received from a variety of sources. These are best estimates and represent the best available information on what are largely private costs but are subject to substantial uncertainty. The remaining key assumptions relate to petrol and diesel fuel demand and projected bioethanol and biodiesel blending rates, these are discussed with sensitivity tests and in the annex.

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?	15/12/2011				
Which organisation(s) will enforce the policy?	DfT				
What is the annual change in enforcement cost (£m)?	0				
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)	Traded: n/a		Non-traded: n/a		
Does the proposal have an impact on competition?	Yes				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs: n/a		Benefits: n/a		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)		< 20	Small	Medium	Large
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	24
Small firms <a href="#">Small Firms Impact Test guidance</a>	Yes	24
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
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>	Yes	24
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	25

<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.

# Summary: Analysis and Evidence

# Policy Option 2

## Description:

2b) Issue RTFCs in year, but only after receipt of verifier's opinion on relevant batches. Trading as per now.

Price Base Year 2010	PV Base Year 2011	Time Period Years 18	Net Benefit (Present Value (PV)) (£m)		
			Low: -3.2	High: -8.6	Best Estimate: -5.9

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.1	0.3	3.2
High	0.1	0.7	8.6
Best Estimate	0.1	0.5	5.9

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

Additional costs associated with up to 3 in-year verifications on top of a baseline single annual verification have been estimated. These are subject to substantial uncertainty. Minor additional government administration costs associated with a somewhat increased administrative burden for the RTFO administrator may be incurred. All costs shown here would be assumed to be net costs to business in the first instance but then fully passed through to consumers through pump prices.

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

There may be some costs to suppliers due to the need to familiarise themselves with the revised regulatory regime and the preparation of information in order that it can be verified - these have not been possible to quantify.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low			
High			
Best Estimate	0	0	0

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

Monetised benefits have not been identified relative to the baseline because the overarching purpose of the verification process is to facilitate the delivery of the benefits of the sustainability criteria i.e. the greenhouse gas savings. These have been assessed and quantified in the accompanying sustainability criteria impact assessment.

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

Verification facilitates the delivery of the benefits of minimum sustainability criteria by ensuring the integrity and credibility of the regulatory regime. Possible positive impacts on UK employment and output if strong and clear verification standards for minimum sustainability criteria strengthen the UK's reputation as a leader in sustainable biofuels, through increased investment in UK biofuels production.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

The valuations of costs due to cashflow, verification and administrative impacts are dependent on advice received from a variety of sources. These are best estimates and represent the best available information on what are largely private costs but are subject to substantial uncertainty. The remaining key assumptions relate to petrol and diesel fuel demand and projected bioethanol and biodiesel blending rates and sensitivity tests are presented in the annex.

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)?	0.03				
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)	Traded: n/a		Non-traded: n/a		
Does the proposal have an impact on competition?	Yes				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs: n/a		Benefits: n/a		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)		< 20	Small	Medium	Large
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	25
Small firms <a href="#">Small Firms Impact Test guidance</a>	Yes	25
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
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>	Yes	25
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	26

<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.

# Summary: Analysis and Evidence

# Policy Option 3

## Description:

2c) Issue 'provisional' RTFCs, or VCs, on validation of volume data. Annual conversion to RTFCs, if verifier's opinion is received. Trading allowed in both types of certificate.

Price Base Year 2010	PV Base Year 2011	Time Period Years 18	Net Benefit (Present Value (PV)) (£m)		
			Low: -22	High: -175	Best Estimate: -81

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low		1	1.1	22
High			8.6	175
Best Estimate	0.1		4.0	81

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

Additional costs associated with generating in-year cashflow may be incurred where there exists only one annual opportunity to collect RTFCs. Minor additional government administration costs associated with a somewhat increased administrative burden for the RTFO administrator. All costs shown here would be assumed to be net costs to business in the first instance but assumed to be fully passed through to consumers through pump prices.

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

There may be a potential loss of competition and innovation if smaller suppliers are substantially disadvantaged by possible cashflow constraints and lower volume certificate prices for less well-known suppliers. There may also be costs associated with the need for suppliers to familiarise themselves with the revised regulatory regime and engage in two forms of certificate trading.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low				
High				
Best Estimate	0		0	0

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

Monetised benefits have not been identified relative to the baseline because the overarching purpose of the verification process is to facilitate the delivery of the benefits of the sustainability criteria i.e. the greenhouse gas savings. These have been assessed and quantified in the accompanying sustainability criteria impact assessment.

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

Verification facilitates the delivery of the benefits of minimum sustainability criteria by ensuring the integrity and credibility of the regulatory regime. Possible positive impacts on UK employment and output may result if strong and clear verification standards for minimum sustainability criteria strengthen the UK's reputation as a leader in sustainable biofuels, through increased investment in UK biofuels production.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5

The valuations of costs due to cashflow, verification and administrative impacts are dependent on advice received from a variety of sources. These are best estimates and represent the best available information on what are largely private costs; they are subject to substantial uncertainty. The remaining key assumptions consist of petrol and diesel fuel demand and projected bioethanol and biodiesel blending rates are presented with sensitivity tests in the annex.

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?	15/12/2011				
Which organisation(s) will enforce the policy?	DfT				
What is the annual change in enforcement cost (£m)?	0.04				
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)	Traded: n/a		Non-traded: n/a		
Does the proposal have an impact on competition?	Yes				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs: n/a		Benefits: n/a		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)		< 20	Small	Medium	Large
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	25
Small firms <a href="#">Small Firms Impact Test guidance</a>	Yes	25
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
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>	Yes	25
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	26

<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.

# Summary: Analysis and Evidence

# Policy Option 4

## Description:

2d) Issue VCs and (if verified) RTFCs in year. Trading allowed in both, both types on market at same time.

Price Base Year 2010	PV Base Year 2011	Time Period Years 18	Net Benefit (Present Value (PV)) (£m)		
			Low: -2.7	High: -8.1	Best Estimate: -5.4

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low		0.2	2.7
High		0.6	8.1
Best Estimate	0.04	0.4	5.4

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

Additional costs associated with up to 3 in-year verifications on top of a baseline single annual verification have been estimated. These are subject to substantial uncertainty. Minor additional government administration costs associated with a somewhat increased administrative burden for the RTFO administrator may be incurred. All costs shown here would be assumed to be net costs to business in the first instance but then fully passed through to consumers through pump prices.

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

There may be a potential loss of competition and innovation if smaller suppliers are substantially disadvantaged by possible cashflow constraints and lower volume certificate prices for less well-known suppliers. There may also be costs associated with the need for suppliers to familiarise themselves with the revised regulatory regime and engage in two forms of certificate trading.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low			
High			
Best Estimate	0	0	0

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

Monetised benefits have not been identified relative to the baseline because the overarching purpose of the verification process is to facilitate the delivery of the benefits of the sustainability criteria i.e. the greenhouse gas savings. These have been assessed and quantified in the accompanying sustainability criteria impact assessment.

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

Verification facilitates the delivery of the benefits of minimum sustainability criteria by ensuring the integrity and credibility of the regulatory regime. Possible positive impacts on UK employment and output if strong and clear verification standards for minimum sustainability criteria strengthen the UK's reputation as a leader in sustainable biofuels, through increased investment in UK biofuels production.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5

The valuations of costs due to cashflow, verification and administrative impacts is dependant on advice received from a variety of sources. These are best estimates and represent the best available information on what are largely private costs and are subject to substantial uncertainty. The remaining key assumptions consist of petrol and diesel fuel demand and projected bioethanol and biodiesel blending rates - these along with sensitivity tests are presented in the annex.

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?	15/12/2011				
Which organisation(s) will enforce the policy?	DfT				
What is the annual change in enforcement cost (£m)?	0				
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> 0		<b>Non-traded:</b> 0		
Does the proposal have an impact on competition?	Yes/No				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	<b>Costs:</b> n/a		<b>Benefits:</b> n/a		
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.

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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	25
Small firms <a href="#">Small Firms Impact Test guidance</a>	Yes	25
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
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>	Yes	25
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	26

<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	UK Renewable Energy Strategy 2009: Impact Assessment for the Transport Sector: <a href="http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/res/res.aspx">http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/res/res.aspx</a>
3	Committee on Climate Change website – transport sector: <a href="http://www.theccc.org.uk/sectors/surface-transport">http://www.theccc.org.uk/sectors/surface-transport</a>
4	Climate Change Act 2008: <a href="http://www.legislation.gov.uk/ukpga/2008/27/contents">http://www.legislation.gov.uk/ukpga/2008/27/contents</a>
5	Renewable Transport Fuel Obligations (Amendment) Order (2009): <a href="http://www.legislation.gov.uk/uksi/2009/843/contents/made">http://www.legislation.gov.uk/uksi/2009/843/contents/made</a>
6	NFPA RTFC traded price data <a href="http://www.nfpas-auctions.co.uk/etoc/trackrecord.html">http://www.nfpas-auctions.co.uk/etoc/trackrecord.html</a>

+ 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>
<b>Transition costs</b>										
<b>Annual recurring cost</b>										
<b>Total annual costs</b>										
<b>Transition benefits</b>										
<b>Annual recurring benefits</b>										
<b>Total annual benefits</b>										

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



Microsoft Office  
Excel Worksheet

# Evidence Base (for summary sheets)

## Introduction

1. Transposition of the EU Renewable Energy Directive (RED) into UK law means that changes are required to the Renewable Transport Fuel Obligations Order (RTFO Order)<sup>1</sup> in order for the UK to be compliant.
2. This Impact Assessment is one of five final stage impact assessments covering transposition of transport elements of the RED. The focus of this impact assessment is potential options around verification of compliance with the RED sustainability criteria.
3. The suite of 5 impact assessments cover:
  - i) Sustainability Criteria
  - ii) Verification
  - iii) Double-Certification of Waste-Derived Biofuels
  - iv) Partially Renewable Fuels
  - v) Overarching Impacts
4. There are significant uncertainties in the analysis presented, not only because of the long timeframe considered (to 2030) but also uncertainty around underlying costs. The analysis is presented to 2030 to capture the potential long-run effects of the policy options.
5. The structure of this IA is as follows: it will set out the problem under consideration and the rationale for government intervention, before then explicitly stating the policy objectives of this intervention. Four options for systems of verification are described and the methodology for analysing the costs and benefits of each option is explained, including the key assumptions and areas of uncertainty. Wider impacts and relevant specific impact tests are described in the annex. The impact assessment concludes by describing the preferred option.

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<sup>1</sup> The Renewable Transport Fuel Obligations Order 2007 (SI no 2007/3072) as amended by the Finance Act 2008 and the Renewable Transport Fuel Obligations (Amendment) Order 2009 (SI no 2009/843)

## **Problem under consideration**

6. In 2008, transport accounted for around a quarter of UK greenhouse gas emissions (132 MtCO<sub>2</sub>e) and the majority (around 90%) of those emissions come from road transport (Committee on Climate Change, 2010). The UK has legally binding climate change targets both for the long term to reduce emissions by at least 80% below 1990 levels by 2050; and, in the short term to reduce emissions by 34% below 1990 levels by 2020 (Climate Change Act, 2008). The UK also has a renewable energy target for 15% of UK energy to be supplied from renewable sources by 2020, with a transport-specific target of 10% (Renewable Energy Directive).
7. Biofuels are currently the only significant option for increasing renewable energy usage in transport, particularly in the period up to 2020 when other options are limited due to the lead in times for technological developments.
8. The Renewable Energy Directive (RED) requires biofuels that are used to: count towards the Member State meeting its transport target; or towards any national renewable energy obligation (such as the Renewable Transport Fuel Obligation, or RTFO); or, that qualify for financial support, must have been verified as passing the sustainability criteria. The relationship between the provision of this proof and the issuing of the certificates used to demonstrate compliance with the RTFO (RTFCs) can be linked in a number of ways and several options have been considered in this IA.

## **Consultation Exercise**

9. This final stage impact assessment follows a public consultation exercise carried out by the Department for Transport. 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.
10. Stakeholder views on the accuracy of verification cost estimates were split with some stating that they thought actual verification costs would be lower and others higher. In order to address this uncertainty, a range (50% lower and 50% higher) around the central verification estimates has been modelled and high and low scenarios are now presented in the impact assessment.
11. Stakeholders also presented evidence indicating that the RTFC price assumptions used in the consultation stage impact assessment were out of date. The RTFC price assumption has been revised and a high and low range (all based upon published auction prices) have also been added to reflect the uncertainty over future prices.

## **Rationale for intervention**

12. A market failure occurs when market outcomes do not maximise society's welfare. One example of this is climate change resulting from greenhouse gas emissions, which are formally known as a negative externality i.e. emissions are generated but those

responsible for them do not take into account the impact they are having on others. Where the market is not likely to rectify this, it may be appropriate for public policy to do so through government intervention.

13. Sustainable biofuels have the potential to deliver GHG savings relative to fossil fuels. However, the GHG savings of biofuels are not automatically captured in their market prices without public policy intervention, therefore there is no incentive to consider sustainability when meeting targets.
14. Currently, the RTFO does not directly price biofuels on the basis of % GHG savings or sustainability of the fuel, as it is a volume-based (rather than GHG-based) mandate. There is therefore no incentive for more sustainable or lower GHG fuels to be supplied. Government intervention to ensure sustainability is therefore justified. Implementing a verification system for sustainability criteria will ensure the credibility and integrity of the sustainability criteria.

### **Policy objective**

15. The transposition of the Renewable Energy Directive is intended to ensure all biofuels supplied in the UK meet the sustainability criteria, delivering a sufficient level of GHG savings to meet UK and EU renewable energy targets and demonstrating compliance with GHG saving targets.
16. The RTFO will need to be amended in order to be compliant with the RED. The particular amendment considered is for the integrity and credibility of the implementation of sustainability criteria to be secured through appropriate verification mechanisms.
17. Implementing a system for verifying the sustainability criteria have been complied with (before that fuel is counted towards being compliant with the RTFO) will enable the UK to meet the requirements of the RED, and contribute to the UK meeting its commitments to the Fuel Quality Directive (FQD) and climate change targets.
18. While implementing a verification system is needed to ensure that the sustainability criteria are met, there are a number of options as to how this verification can be linked to the issuing of RTFCs. We would like this linkage to minimise any additional costs and administrative burden on the suppliers of biofuel.

### **Description of options considered**

19. The baseline against which all options are assessed is assumed to be the current RTFO mechanism, rolled forward to 2030 with no further changes beyond 2014 (the final date that the current obligations are set to). Therefore all options are assessed as compared with a counterfactual baseline of an unamended RTFO.
20. Whilst the current RTFO does not link RTFC issuing to the provision of a verifier's opinion of the carbon and sustainability information, the RTFO administrator is able to request a

verifier's opinion to be provided on the company's annual report to the RTFO administrator (which includes all of their carbon and sustainability data for that obligation period). Therefore the costs of verification and the impact of the different options for linking verification to RTFC issue are compared against this baseline of a once per year, not linked to RTFC issue, assessment.

21. The government intends to require a minimum frequency of an annual verifier's opinion upon the additional sustainability information (termed the "appropriate and relevant" information).
22. The importance of verified RTFCs essentially derives from the guarantee that the fuel provided by a producer will count towards meeting a supplier's obligation. Suppliers have no incentive to buy fuel that they later find is not going to count towards their obligation. The requirement at RTFO year-end is to redeem sufficient RTFCs to meet their obligation (which is based on the total quantity of fuel each supplier has supplied), rather than the supply of biofuel per se – the incentive to supply biofuel derives from the requirement of the RTFO to produce sufficient RTFCs at the end of the obligation period.

#### *Volume Certificates (VCs)*

23. A VC could be supplied as a way to recognise the volume of biofuel supplied, without having the associated GHG saving verified. A verification system which creates unverified VCs would rely on supplier reputations to support any value in the market for VCs. This is because they would be purchased on the basis of trust that the biofuel that created them will be verified at the end of the obligation year and therefore the VCs converted into RTFCs. Any risk premium may be reflected in the price of the VC (i.e. the price would be lower). Therefore, smaller suppliers who have not had the same opportunities to build up their reputation with potential purchasers of VCs may potentially be at a disadvantage to larger suppliers.
24. Some suppliers and traders have suggested that the value of VCs would be significantly lower than RTFCs (due to the risk of non-verification), thereby calling into question the benefit of having them in operation. Their purpose would be to aid in the liquidity of the market by creating a potential mechanism to maintain cash flow for suppliers. At a high level, there are two approaches for mitigating the potential impacts of a cashflow interruption due to the requirement for verification against the sustainability criteria:
  - I. Issue provisional "volume certificates" (VCs) which can be traded pre-verification.
  - II. Allow regular issuing of final certificates throughout the year.

#### I. Issue provisional "volume certificates" (VCs) which can be traded pre-verification:

25. Issuing VCs would allow suppliers to buy and sell certificates as they currently do and maintain cash flow evenly throughout the year. This could imply the creation of a second market for VCs (in effect "shadow" RTFCs) in addition to the market for fully verified RTFCs.

26. However, given the risk inherent in verification (i.e. VCs may fail the verification process and therefore become worthless), VCs are likely to trade at a discount relative to fully verified RTFCs. A lower price for VCs could increase the overall cost of supplying biofuels if they were not later verified and converted to RTFCs. In turn, this could raise the overall cost of the RTFO and pump prices.
27. In a market for VCs, the risk premium (which reflects the risk of non verification) would be likely to vary depending on the reputation of the supplier (i.e. the higher the perceived risk, the lower the VC price). This may hand larger suppliers with proven reputations a competitive advantage relative to smaller suppliers who may not be able to secure a high price for their VCs as they may not be able to demonstrate their credibility in the market.

## II. Allow regular verification and issue certificates throughout the year

28. Regular verification against the sustainability criteria would increase the administrative costs for suppliers who will need to obtain a third party verification opinion before they are issued with an RTFC. Verification costs are likely to vary widely and will depend upon the complexity of the individual supply chain concerned. This can be seen between the prices quoted by 'simple' waste product biodiesel suppliers of ~£200 per verification and those quoted by companies that supply biofuel from crop-based feedstocks with complex supply chains (typically the larger suppliers) who have quoted prices of up to £8,000 for each verification.
29. Regular verification of whether fuel has passed the sustainability criteria would allow suppliers to claim RTFCs as often as they wished throughout the year (subject to the practicalities of the RTFO administrator issuing them). Such a system would give suppliers flexibility to maintain cash flow throughout the year. It would also facilitate the fluidity and efficient operation of the RTFC market.
30. Given the costs of verification, suppliers would balance these with the need for cash flow. Suppliers may be able to take measures to mitigate the increased burden of regular verification such as sourcing from less complex supply chains or potentially making contractual arrangements to sell certificates in advance of verification.
31. The specific changes to the RTFO for each option are therefore as follows:

### **2a) Only issue RTFCs once per year after receipt of an annual verifier's opinion. Allow an RTFC trading window after this.**

This would maintain a single market for RTFCs, and minimise verification costs to only one set of verifications per year. However, annual verification is likely to cause a significant cash flow interruption for biofuel suppliers as they will only be able to sell fully verified (full value) RTFCs after a certain point in the year. It could potentially distort the market due to lack of a year-round price signal (created by traded certificates), leading to inefficient production/supply decisions.

**2b) Issue RTFCs in year, but only after receipt of verifier’s opinion on relevant fuel. Trading as per now.**

This would maintain a single market for RTFCs, and would allow suppliers flexibility in managing cash flow year round as they will be able to verify and claim RTFCs on an “as and when basis”. However, there will be increased administrative costs through a greater number of verifications per year (though the number of verifications would be at the prerogative of each supplier).

**2c) Issue a ‘provisional’ RTFC (a volume certificate, or VC) on validation of volume data. Only annual conversion to RTFCs, if a verifier’s opinion is received. Trading allowed in both VCs and RTFCs.**

VCs would in theory allow suppliers to generate cash flow immediately after biofuel has been supplied (it would be for that supplier to pay for the final verification allowing conversion to RTFC). However, issuing VCs would lead to the creation of a secondary market which may see VCs trade at a discount relative to fully verified RTFCs potentially raising RTFO compliance costs. Under a VC system, smaller suppliers (who may be perceived to be riskier if the market does not believe their VCs will be verified) may be put at a competitive disadvantage as their VCs may fetch a lower market price or, as a worst case, may not sell at all.

**2d) Issue VCs and (if verified) RTFCs in year. Trading allowed in both types of certificate on the market at same time.**

VCs and in year verification will both allow suppliers flexibility to generate cash-flow through either trading VCs or trading RTFCs. “As and when” verification of RTFCs would however be likely to undermine the secondary market for VCs which may trade at a deeper discount than they would do otherwise. There would be no incentive to purchase VCs as they would compete with RTFCs for market share.

**Costs and benefits of each option**

32. This section sets out the approach that has been used to assess the estimated costs and benefits of each of the options outlined above, relative to the baseline. It will set out:

- The context in terms of what each of the options might mean in practice
- The methodology used to assess the estimated costs of each option
- The results of estimating the costs
- The methodology used to assess the benefits of these changes to the regulatory regime and results
- Key assumptions and uncertainties
- Summary and conclusion of the preferred option

33. Based on best available evidence but subject to uncertainty, the following analysis examines potential cash flow and wider market impacts of options for verification of biofuel against the sustainability criteria and the issuance of RTFCs.



34. It should be noted that the purpose of verification is to facilitate the delivery of the benefits of the sustainability criteria (and the associated GHG savings). As such, they are not assessed to deliver benefits in their own right, but are essential to the integrity and credibility of the sustainability criteria.

### **Context: the current RTFO mechanism and what the options are likely to mean in practice**

#### *The RTFO*

35. The Renewable Transport Fuel Obligation (RTFO) issues one renewable transport fuel certificate (RTFC) per litre of renewable transport fuel supplied, provided it meets existing qualifying provisions. The introduction of the sustainability criteria (discussed in the first impact assessment of this suite of five final stage impact assessments regarding amendments to the RTFO) will require changes to these qualifying provisions.
36. Under the current RTFO system, suppliers receive certificates (RTFCs) when they supply biofuel. The certificates can be used to prove compliance with the obligation. Certificates can be bought and sold, enabling suppliers to meet their obligation at least cost.
37. The introduction of the sustainability criteria means that the RTFO administrator must not issue a certificate that is capable of being used to meet the obligation until the sustainability criteria have been demonstrated to be met.
38. This derives both from the requirements of the RED that a biofuel can not count towards a national renewable energy obligation unless compliance with the sustainability criteria has been demonstrated and the requirement in the Energy Act 2004 that an RTFC carries all of the information needed to meet the obligation. This gives rise to the four options regarding the structure of the verification process for issuing RTFCs.
39. In the current RTFO, certificates are awarded on a monthly basis. This has enabled suppliers to trade these certificates on a regular basis, thereby enabling suppliers to realise cash flow from their sale in a timely manner, minimising potential financing costs if they are dependent on such revenues (e.g. reducing the need to use overdraft facilities) and facilitating the fluidity and effective operation of the RTFC market. It also reduces uncertainty for obligated suppliers for the level of RTFCs that may be available on the market for purchase.

### **Methodology – Costs**

40. At present, RTFCs are issued each month for biofuel which has passed the duty point in that month, with the annual verification of the carbon and sustainability information having no impact upon this issuing. Relative to the current situation, the requirement that biofuel must be verified against the sustainability criteria before RTFCs can be issued would be likely to increase the time taken between purchase/supply of biofuel and the point at which

the value of the RTFC can be realised. This delay could have the potential to impact upon the cash flow of biofuel suppliers that are dependent on revenues from the sale of certificates. Given that the supply of biofuel is a relatively low margin and cash flow intensive business, an interruption to cash flow would have implications for some suppliers' business models and may require suppliers to incur additional financing costs or, in the extreme, cease trading. These cash flow impacts and constraints are the basis for the estimates of increased costs and potential pump price impacts below.

41. The costs of each option are discussed together, since many of the key issues overlap. Key differences between them have been highlighted, but essentially the options differ in terms of which categories' of costs (cashflow, verification, administrative) each option would be expected to imply. The value of each category of costs is constant across each option with the exception of a slight differential in administrative costs. Therefore, to avoid repetition, each category of costs is addressed before comparing the total of costs attributed to each option.

### Potential Additional Cashflow Costs

42. A verification process that was only, say, once a year could have two possible effects:
  - i) Biofuel producers may find it harder to sell their fuel to suppliers if they face tougher sustainability criteria and are unable to obtain official verification of meeting the criteria ahead of year-end.
  - ii) Suppliers who rely on the sale of surplus RTFCs (because they supply more than they are obligated) may not be able to gain that revenue in a timely way. This implies a potential cash-flow impact.
43. To give an estimate of the order of magnitude of potential financing costs required to maintain cash-flow in an annual verification scenario, we assume that some 20% (this figure was based upon discussions with the RTFO regulator. A low and high sensitivity of 10% and 30% have been taken to reflect the uncertainty) of the total certificate value in each year is borrowed at an interest rate of 10% for 8 months. Certificate values is calculated using a central RTFC price of £0.165 with low and high sensitivities (certificate price estimates are based upon historical data published by the NFPA<sup>2</sup>). Taking the central assumptions implies total financing costs (in real 2010 prices and discounted to 2011 as per Green Book guidance) of £80m (within a range of £22m to £174m) over the period 2010-2030. This equates to roughly a 0.01 ppl (within a range of 0.003 ppl to 0.02 ppl) average impact on pump prices, assuming full cost pass-through.
44. Those options that have more regular verification processes would not be expected to have such an impact on cash flow because RTFCs would be issued on a more regular basis and we assume suppliers would be unlikely to borrow money over short periods of time. In such cases we have assumed the impact on cash flow to be negligible.

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<sup>2</sup> Non Fossil Purchasing Agency

### Additional Verification Costs

45. Options 2b and 2d may create additional verification costs for biofuel suppliers, by allowing more frequent than annual verification and therefore higher verification costs (if a supplier chooses to verify more frequently than is allowed in options 2a and 2c). This process for being awarded RTFCs would however mean that RTFCs would be available throughout the obligation year, potentially avoiding any potential cash-flow effects.
46. Biofuels suppliers have estimated (and some have re-iterated during the consultation period) that, should they wish to obtain RTFCs in-year, it could potentially require three additional verification processes (i.e. to allow quarterly verification) compared with annual verification only. Under the central scenario 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 (in real 2010 prices) if this were assumed to affect all relevant market players. These verification costs are derived from the Impact Assessment of the RTFO and are in line with range estimates by LowCVP / Fivebargate's report to the RTFO administrator on the impacts of the RTFO (links in references section). Summing these costs over the total period 2010-2030, and discounting to 2010 as per Green Book guidance, implies total verification costs of £5.4m. High (50% higher) and low (50% lower) sensitivities around the costs of verification have been taken which give a range of £2.7m to £8.1m around this central estimate. This equates to roughly a 0.001 ppl (plus or minus 0.0005 ppl) average impact on pump prices, assuming full cost pass-through.

### Additional Administrative Costs

47. Option 2c, and to a lesser extent 2b and 2d, are estimated to necessitate some small additional administrative costs to the RTFO administrator. These would be mainly caused by administrative changes to how frequently the RTFO administrator receives the verifier's opinion.
48. Option 2b is estimated to require one-off setup costs of up to £57,000 (assumed to comprise IT costs and staff costs for process design/user liaison). It could then require estimated annual costs of up to around £28,000 p.a. for staff to track and assess verification.
49. Option 2c is estimated to require one-off operating system and set-up costs of up to £88,000 (IT costs and staff costs for process design/user liaison). It could then require annual costs of up to around £38,000 p.a. for staff.
50. Option 2d is estimated to require a one-off operating system cost of £40k (IT costs and staff costs), but no annual costs, since staff costs would only be one-off.

### Costs - Summary

51. The following tables summarise estimated costs for each option 2a – 2d under central, low and high cost sensitivities.

Figure 1: Verification cost estimates (2010 - 2030, discounted, £2010m) for each option

CENTRAL COST SCENARIO

Option	Additional verification costs	Additional cashflow costs	Additional RFA administrative costs	Total Cost
2a	-	79.85	-	79.85
2b	5.40	-	0.45	5.85
2c	-	79.85	0.63	80.48
2d	5.40	-	0.04	5.44

LOW COST SENSITIVITY

Option	Additional verification costs	Additional cashflow costs	Additional RFA administrative costs	Total Cost
2a	-	21.80	-	21.80
2b	2.70	-	0.45	3.15
2c	-	21.80	0.63	22.43
2d	2.70	-	0.04	2.74

HIGH COST SENSITIVITY

Option	Additional verification costs	Additional cashflow costs	Additional RFA administrative costs	Total Cost
2a	-	174.20	-	174.20
2b	8.10	-	0.45	8.55
2c	-	174.20	0.63	174.83
2d	8.10	-	0.04	8.14

52. Options 2a and 2c appear substantially more costly than options 2b and 2d, due to the additional indicative cash-flow costs, which are significantly higher than either of the other two categories of costs. It should be noted however that the estimates of such costs that have been included are highly uncertain. While this table shows 2b to be a slightly higher cost option than 2d, it should be noted that 2b reduces any disadvantage to small suppliers through avoiding the creation of a market in VCs (the price of which would depend on the reputation of their seller; smaller suppliers may not have had the same opportunities to build reputation as larger suppliers).
53. Cash-flow constraints may be likely to impact small suppliers who wish to sell RTFCs to a relatively greater extent than larger suppliers with more established revenues and cash-flow, greater access to finance, and in some cases, the ability to supply their own biofuel (meaning that they do not trade a significant proportion of their RTFCs). Therefore those options which have the potential to impose cash-flow constraints may be relatively more burdensome for smaller suppliers.
54. The table below summarises these arguments together with the estimated pump price impacts and administrative costs of each option.

Figure 2: Economic assessment of options for verification of sustainability data (central cost scenario)

Option	Estimated pump price impact in 2020	Effects on small suppliers	RTFO administrator administrative burden
2a	0.01ppl	Potential cash-flow constraints	-
2b	0.001ppl	-	£57k one-off, £28k annual
2c	0.01ppl	Potential cash-flow constraints & reputational disadvantage in unverified RTFCs	£88k one-off, £38k annual
2d	0.001ppl	Reputational disadvantage in unverified RTFCs	£40k one-off

## Methodology – Benefits

55. There are no direct monetisable benefits attributable to any verification system option, beyond the benefits which all options would deliver through allowing suppliers to demonstrate that their biofuel has met the sustainability criteria. The verification process is essential to facilitate the delivery of those benefits. Therefore the sustainability criteria and the verification system employed to test compliance with them should be considered complementary as the benefits of one could not be delivered without the other. The benefits of the sustainability criteria have been assessed and presented in the first IA in this suite of seven IAs concerning proposed amendments to the RTFO so to avoid double-counting, these benefits are not attributed to the verification system cost benefit analysis.
56. In addition, the value of benefits delivered by each option for the verification system would not differ, so they would not provide any means of distinguishing between options 2a – 2d.

## Summary of Costs and Benefits

57. The above cost benefit analysis is summarised in the table below.

Figure 3: Summary table of estimated costs and benefits of verification system options (central cost scenario)

£2010 prices, discounted to 2011	Option 2a	Option 2b	Option 2c	Option 2d
<b>Present Value Costs (£m)</b>	79.9	5.4	80.5	5.4
<b>Present Value Benefits (£m)</b> <b>Net Present Value (£m)</b>	Not assessed here because these regulatory changes are essential to facilitate the delivery of all benefits of the sustainability criteria - already assessed in a separate IA			
<b>Pump price impact in 2020 - Petrol (ppl)</b>	0.01	0.001	0.01	0.001
<b>Pump price impact in 2020 - Diesel (ppl)</b>	0.01	0.001	0.01	0.001

## **Risks and assumptions**

58. The estimated costs due to potential impacts on cashflow, verification and administrative impacts are dependent on advice received from suppliers and the RTFO administrator. These are best estimates and represent the best available information on what are largely private costs, but are subject to uncertainty.
59. Full cost pass-through to pump prices – this is due in part to inelastic demand for transport fuel.

## **Wider impacts**

60. Under the options where small suppliers could be particularly impacted, either through relatively higher fixed costs of verification, or through reputational disadvantage if the market does not believe the VCs would be verified, wider knock-on impacts are possible. These could include a loss of future competitive pressure in the market for biofuels if small suppliers or new entrants are discouraged.

## **Conclusion: Summary and preferred option**

61. The preferred option is that RTFCs are issued in year, but only after receipt of verifier's opinion on relevant batches (2b), since it would be expected to:
  - I. Avoid excessive adverse cash flow impacts upon fuel suppliers.
  - II. Have a minimal impact on pump prices (estimated to be around 0.001 ppl).
  - III. Place a relatively small administrative burden upon the RTFO administrator, compared with the total cost of alternative options.
  - IV. Strike a balance between supporting the fluidity of the market and maintaining credibility of RTFCs, thus avoiding disadvantaging small suppliers.

# 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 proposed in this consultation exercise will be conducted in advance of 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 evaluate whether 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 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] Current verification costs have been estimated in analysis carried out for LowCVP and the RFA which can be used to form a 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] A well functioning verification system for the RTFO sustainability criteria.</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] Consultation with industry stakeholders and market data gathered by the RTFO administrator will inform the post implementation review.</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 Assessment**

62. All options involve imposing an additional element of fixed costs on suppliers which may impact on smaller suppliers disproportionately. This impact is estimated to be substantially greater in options 2a and 2c where there is the potential for significant cashflow impacts.
63. Under the options where small suppliers could be particularly impacted, either through relatively higher fixed costs of verification, or through reputational disadvantage if the market did not believe that VCs would be verified, wider knock-on impacts are possible. These could include a loss of future competitive pressure in the market for biofuels if small suppliers or new entrants are discouraged.
64. Economic theory suggests that a less competitive market may be less likely to reduce costs in the long run, due to a lack of pressure to reduce costs through price competition. Therefore, barriers to entry, or barriers to small suppliers being able to compete for market share with major fuel suppliers, could reduce the long-run competitiveness of the market for transport fuels.
65. Options may have relatively smaller impacts on competition if they support a level playing field in the treatment of suppliers. This is because it avoids unnecessary cash flow impacts on fuel suppliers, an issue likely to have relatively greater impacts on small or potential future suppliers who may enter the market. Both would provide competition which would in turn increase the likelihood of competitive prices and innovation.

## **Annex 3 - Small Firms Assessment**

66. The Renewable Transport Fuel Obligations Order exempts small transport fuel suppliers (supplying less than 450,000 litres/year). From having to supply biofuel under the RTFO.
67. The discussion of the impacts of potential cash-flow constraints and VCs in the Methodology and Wider Impacts sections covers the potential competition aspects of the four options for verification systems. The preferred option (2b) is expected to have no substantial impacts on small firms relative to other suppliers, whereas all other options may have at least some impacts.
68. Familiarisation with the verification requirements and the provision of relevant information to allow appropriate verification to occur may create additional compliance costs that may affect smaller firms to a greater extent (given their assumed overall fewer resources). These have not been monetised in this assessment.

## **Annex 4 - Rural Proofing Assessment**

69. UK biofuel feedstocks have the potential to meet a proportion of UK biofuel demand, and some deliver relatively higher GHG savings than feedstocks from other countries (above the minimum GHG savings thresholds). There is also a lower potential for UK biofuel



feedstock to be sourced from areas of high carbon stock or biodiversity relative to other countries.

70. Therefore, if implementing strong and clear verification standards for the sustainability criteria could strengthen the UK's reputation as a leader in sustainable biofuels, then this may potentially encourage demand for UK feedstock-derived biofuels, meaning some new business and job opportunities in rural areas as part of an expanding UK biofuel supply chain.
71. The pump price effects resulting from the changes to the regulatory regime discussed in this impact assessment are not expected to be of a magnitude which would have a material effect on demand, nor on the users of fuel. Therefore, it is not possible to say how rural fuel users could be affected differently to non-rural.

### **Annex 5 - Sustainable Development**

72. Implementing a verification system for sustainability criteria will help ensure that the increase in the use of biofuels in transport delivers carbon reductions and helps tackle climate change. In addition, enforcing the restrictions on feedstocks that have been directly grown on land with high carbon stocks and/or high biodiversity will contribute more widely to sustainable development (although these impacts have not been quantified).

### **Annex 6 – OIOO**

This measure is from a European origin and therefore it does not fall within the scope of OIOO.