

Consultation on establishing a voluntary Code of Best Practice for the provision of carbon offsetting to UK customers

January 2007

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Department for Environment
Food and Rural Affairs

Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Telephone: 020 7238 6000
Website: www.defra.gov.uk

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Information about this publication and further copies are available from:

Public Engagement Team
Climate and Energy: Households and Markets Division
Department for Environment, Food and Rural Affairs
3/H17 Ashdown House
123 Victoria Street
London
SW1E 6DB

Email address: kate.i.smith@DEFRA.GSI.GOV.UK
Tel: 020 7082 8877

This document is also available on the Defra website

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Contents

Summary	2
Introduction	4
Context and aims of the Code	7
Methodologies for offsetting and calculating emissions	13
Procedures under the Code	18
Accreditation	23
Summary of questions and next steps	26
Annexes	
Annex A – Partial Regulatory Impact Assessment	29
Annex B – Glossary of terms and acronyms	50

Summary

- 1.1 This document outlines the Government's proposals for establishing a voluntary Code of Best Practice on carbon offsetting.
- 1.2 Government has a role in helping individuals be aware that their actions leave a carbon footprint. We also need to provide reliable, authoritative information allowing individuals to make decisions about which actions to take, in the context of their own lives, and in full knowledge of the relative impact of those actions. It is most appropriate to avoid and reduce emissions through changing behaviour by, for example, installing insulation or choosing public transport. When it is not possible or easy to avoid and reduce emissions consumers can consider offsetting.
- 1.3 Our everyday actions consume energy and produce carbon emissions, for example driving a car, heating a home or flying. Offsetting is a way of compensating for the emissions produced with an equivalent carbon saving. Government acknowledges that carbon offsetting is not a 'cure' for climate change but it can help raise awareness and reduce the impact of our actions.
- 1.4 Offsetting involves buying "carbon credits" that have been generated by projects that have reduced carbon emissions, for example, through renewable technology or energy efficiency projects. But for offsetting to help tackle climate change, the credits need to have been generated from emissions reductions that are regulated and verified, and consumers need to have confidence about this.
- 1.5 The purpose of establishing a Code is to ensure consumer confidence in an emerging market and continued growth of that market through that confidence. The Code will be voluntary and offset providers can choose whether to seek accreditation for all, or some, of their offsetting products.
- 1.6 The aims of establishing a Code are to:
 - educate consumers about offsetting and its role in addressing climate change;
 - to enable, and encourage, consumers to make active choices about offsetting;
 - increase consumer confidence in the integrity and value for money of the offset products available to them;
 - provide signals to the UK offset sector on the quality and verification standards to which they should aspire, so that market participants

can focus their attention on developing the UK's position as a global market leader in the field; and

- encourage the provision of credit types which are consistent with the Government's policies on meeting its Kyoto obligations and strategy for supporting the development of a robust and liquid global market infrastructure for carbon trading.

1.7 The credits proposed in the Code will be Certified Emission Reductions (CERs), EU Allowances (EUAs) and Emission Reduction Units (ERUs) because they are robust and verifiable.

1.8 Many of the offsets currently available to consumers come from the unregulated market, ie purchasing non-certified credits known as Voluntary Emissions Reductions (VERs). The Government supports how this market has increased demand for offsetting. Consumers who have already purchased VERs have made the important decision to pay for the consequences of their actions. They have not been wasting their money, far from it, they have helped to blaze a trail. But, as this market is expanding it is necessary to provide some clarity.

1.9 The Code will include the following elements:

- The use of certified credits to offset emissions,
- Accurate calculation of emissions to be offset;
- Clear information for consumers regarding the mechanism and/or projects supported;
- Transparent pricing;
- Timescales for cancelling credits; and
- Companies offering offsetting at the point of sale with other goods and services should encourage consumer take-up (for example including offsetting as a 'compulsory choice' to be made or as a 'default option' included within the price of goods and services).

1.10 A quality mark will be developed to represent the Code and will be attached to accredited products to help consumer confidence in purchases. Only the offset providers who choose to sign up to the Code and those products that are approved will be able to use the quality mark.

1.11 During the period of this consultation Government will begin to identify an independent organisation who is best placed to administer the Code by accrediting businesses, ensuring compliance and periodically reviewing the content of the Code.

Introduction

- 2.1 This consultation paper has been prepared by the Department for Environment Food and Rural Affairs in consultation with other Government departments including the Department for Transport and the Office of Climate Change.
- 2.2 The paper requests information and comments from interested suppliers, providers, users, non-governmental organisations and other parties on proposals to introduce a voluntary Code for the provision of offsetting services to UK consumers. This consultation builds on other stakeholder engagement activities that Government has carried out, during which the proposals for a voluntary Code have been discussed with individual companies involved in both the supply and use of offsets. This formal consultation will be supported by further stakeholder engagement.
- 2.3 A partial Regulatory Impact Assessment (RIA) examining costs and benefits of the various options considered is provided as Annex A. A glossary of terms and acronyms is also provided at Annex B.
- 2.4 We are particularly interested in your views on the impact these proposals would have on the offsetting market, and the likely resulting effects on consumer behaviour. A number of specific questions are set out throughout the document, and these are summarised in later in the document.

How to respond to this consultation

- 2.5 The commencement date of this consultation is 18 January 2007. The closing date for responses is 13 April 2007. Written responses to inform the Government on these proposals should be sent to:

Kate Smith
Climate and Energy: Households and Markets Division
Department for Environment, Food and Rural Affairs
Ashdown House Zone 3/H17
123 Victoria Street
London SW1E 6DE

Email: Offsetting.code@defra.gsi.gov.uk
Telephone: 020 7082 8877

- 2.6 When responding please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of an organisation, please make it clear who the organisation

represents, and where applicable, how the views of members were assembled.

Outcome

- 2.7 Early responses would be most welcome. We aim to publish a summary of consultation responses by the end of May and have the Code in place by autumn 2007.

Confidentiality

- 2.8 In line with Government's policy of openness, at the end of the consultation period copies of the responses we receive may be made publicly available through the Government Information Resource Centre, Lower Ground Floor, Ergon House, 17 Smith Square, London SW1P 3JR. The information they contain may also be published in a summary of responses.
- 2.9 If you do not consent to this, you must clearly request that your response be treated confidentially. Any confidentiality disclaimer generated by your IT system in e-mail responses will not be treated as such a request.
- 2.10 You should also be aware that there may be circumstances in which Government will be required to communicate information to third parties on request, in order to comply with its obligations under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004.
- 2.11 The Information Resource Centre will supply copies of consultation responses to personal callers or in response to telephone requests (020 7238 6575) or e-mail requests (Government.library@Government.gsi.gov.uk). Wherever possible, personal callers should give the library at least 24 hours' notice of their requirements. An administrative charge will be made to cover photocopying and postage costs.
- 2.12 If you wish to make a complaint, or query the consultation process, please write to:
- Mr Henry Derwent
Director, Climate, Energy and Environmental Risk
Department for Environment, Food and Rural Affairs
Ashdown House Zone 3/E15
123 Victoria Street
London SW1E 6DE
- 2.13 If your concern remains unresolved following this, please write to

Marjorie Addo
Consultation Co-ordinator
Defra
Room Area 7B
Nobel House
17 Smith Square
London SW1P 3JR

consultation.coordinator@defra.gsi.gov.uk

Consultees

- 2.14 We are seeking information and comments from the industry, other non-governmental organisations, consumer groups, trade associations and any other interested parties.
- 2.15 Please tell us if you know of others who would be interested in receiving this consultation document.
- 2.16 Hard copies are also available by request from Government; please contact Colin Austin ([020 7082 3896](tel:02070823896)). [Additional copies of this document can be made without seeking permission.](#)

Help with Enquiries

- 2.17 If you would like help with queries, or require further information about this consultation please contact:

Kate Smith: kate.i.smith@defra.gsi.gov.uk, 020 7082 8877
Frances Raynor: frances.raynor@defra.gsi.gov.uk, 020 7082 8825

Government Code on [consultations](#)

- 2.18 A copy of the Government Code on Consultations has been published by the Cabinet Office. A copy can be obtained from <http://www.cabinetoffice.gov.uk/regulation/consultation/code/index.asp>
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Context and aims of the Code

- 3.1 This document outlines UK proposals to introduce a voluntary Code of Best Practice ('the Code') for carbon offsetting. This section provides the background to this proposal and how it fits into the government's overall strategy for helping individuals to address their personal impact on climate change.

Government strategy for individual action on climate change

- 3.2 Climate change is one of the biggest challenges facing society today. The Stern Review Report¹, published in November 2006 stated that 'there is still time to avoid the worst impacts of climate change, if we take strong action now.' The report states that the costs of inaction will be greater than the costs of taking action now. In order to do this, everyone needs to play their part, individuals, business and Government. Government can provide reliable, authoritative information allowing individuals to take decisions about which actions they can take to help tackle climate change, in full knowledge of the relative impact of those different actions.
- 3.3 As part of its Climate Change Communications Initiative Government is planning a communications campaign to educate people about climate change and what actions they can take. An interactive carbon calculator will be developed to highlight the steps an individual can take, relevant to their lifestyle, to save carbon. The launch of the calculator is planned for spring 2007. A database of Government-agreed carbon emissions and factors for households and transport (private road transport and aviation) will be collated to inform the Government's carbon calculator.
- 3.4 Avoiding and reducing emissions is the most appropriate way to tackle climate change, through changing behaviour and taking actions such as insulating homes, using energy efficient appliances, and choosing public transport.
- 3.5 Once a consumer, or a business, has taken steps to reduce its emissions at source, they can then offset their remaining unavoidable emissions, or a part of those emissions; for example a flight or annual car mileage. Government acknowledges that carbon offsetting is not a cure for climate change but it can help raise awareness and reduce the impact of our actions.

¹The Stern Review Report on the economics of climate change. See <http://www.hm-treasury.gov.uk>

What is offsetting?

- 3.6 Our everyday actions consume energy and produce carbon emissions for example, driving a car, heating a home or flying. Offsetting is a way of compensating for the emissions produced with an equivalent carbon saving. In this way it lessens the impact of a consumer's actions. However, it is important to note that offsetting does not actually reduce the emissions contributing to climate change which is why it is important that we all reduce and avoid consuming energy.
- 3.7 Consumers can offset a particular activity (eg a flight) or emissions over a period of time (eg an individual's annual car mileage) or across their entire lifestyle or business (eg all of the gas and electricity consumed in their home/business premises and all of the emissions from transport such as driving and flying).
- 3.8 Offsetting involves buying emission reduction credits (or carbon credits) generated by projects that have reduced carbon emissions. These projects often involve small-scale or large industrial renewable energy or energy efficiency technologies. In practice, offsetting involves two stages:
 - a. Calculating the amount of emissions to be offset from the activity carried out. The results of these calculations can be presented in the form of carbon, CO₂ or CO₂e (CO₂ equivalent) emissions, depending on which greenhouse gases have been taken into account. It is best to make these calculations using a standard metric to ensure consistent and accurate emissions are offset, and
 - b. Investing in projects that prevent or remove an equivalent amount of emissions from the atmosphere or buying and cancelling credits from such projects. For example, if a flight abroad on holiday has created 2.5 tonnes of CO₂e, a consumer can offset this by buying 2.5 tonnes worth of carbon credits. Currently, there are a wide range of different carbon credits available and these are outlined in the next section.
- 3.9 Projects that generate emissions reductions can be allocated credits for each tonne of emissions they save. The Government Carbon Offsetting Fund uses Certified Emissions Reductions (CERs) from the Clean Development Mechanism (CDM).
- 3.10 Offsetting projects are generally delivered outside of the UK. Due to the fact that greenhouse gases have a long life-span and tend to mix evenly in the atmosphere it does not matter where gases are emitted in the world: the effect on climate change is the same. These emission reduction credits then cancel out the emissions from an action such as flying, driving your car or heating your home.
- 3.11 Offsetting can be provided to a consumer through the following routes:

- a. Directly by an offset provider to individual consumers or to businesses.
 - b. By a company, using an offset provider, to offer offsetting to their customers as part of a package of goods and services. The company could manage this service or an offset provider could do so on their behalf.
 - c. Directly by a mainstream company which has set up its own accredited carbon reduction projects or purchased carbon credits from the market for sale to its customers as part of a package of goods and services.
- 3.12 Each of these models uses the same principles, but may involve slightly different processes and hence incur different levels of cost. Furthermore, each of these supply mechanisms needs to be considered in the development of the Code.

How does the Government offset its own emissions?

- 3.13 In order to lead by example in the use of offsetting, the UK has developed a Government Carbon Offsetting Fund (GCOF) to meet the commitment to offset carbon dioxide emissions arising from central Government official and Ministerial air travel from April 2006. This commitment was made by the Prime Minister as part of the wider UK Sustainable Development Strategy, which was launched in March 2005.
- 3.14 The GCOF has been developed through an Inter-Departmental Working Group and is available for all central Government departments to offset emissions from official air travel in a simple and cost effective manner, which will also ensure high environmental integrity.
- 3.15 The central feature of the GCOF is a portfolio of projects under the Kyoto Protocol Clean Development Mechanism (CDM), which will deliver the required emission reductions. The portfolio will offset the total estimated emissions of participating departments and agencies for a period of three years, from April 2006 to April 2009.
- 3.16 The portfolio of projects will consist of selected project types from within the CDM, focusing on those involving renewable energy and energy efficiency, with high sustainable development benefits. The fund will be flexible such that the final amount of emission reductions delivered may be increased to allow for additional and unforeseen offsetting requirements.
- 3.17 The Government is committed to ensuring transparency in the operation of the GCOF. We will be regularly reviewing the success of the scheme, and will publish annually information about its design, operation and results to serve as a source of best practice for other organisations.

Aims for developing a Code

- 3.18 Offsetting is a relatively new but growing activity. In response to rising consumer demand the industry has worked hard to develop the market for offsetting. There is now a range of offset products available to consumers, from a range of providers. These products offer consumers the opportunity to invest in a diverse range of projects designed to reduce or abate Greenhouse Gas emissions. Offsetting can have broader benefits such as sustainable development projects in developing countries.
- 3.19 The Government welcomes the efforts of companies to develop and market robust carbon offset products. We are aware however that the absence of recognised standards in the industry could damage consumer confidence and thereby impact on the emissions reductions that offsetting can provide. It is also important that Government raises awareness about offsetting and its role in tackling climate change.
- 3.20 The Government believes that establishing a Code that offset providers can choose to sign up to will provide a framework to support the development of robust, transparent, reliable and timely carbon offset products that offer consumers genuine value for money. A communications campaign will support the Code to address the uncertainty among consumers about the role of offsetting in tackling climate change. In turn, having a Code could enable the UK offset supply sector to emerge a global market leader in the field.
- 3.21 At this early stage in the development of the offset market, regulatory or legislative intervention would not be the most effective way for the Government to provide such a framework. A voluntary Code would allow flexibility for market participants and new entrants both to evolve existing business models and to innovate.
- 3.22 Establishing a voluntary Code that mirrors Government's own criteria for offsetting is designed to encourage others to move towards the use of standardised, verified and transparent carbon emissions reductions from the regulated market. This is particularly appropriate for those industries who would like to be included in international Emissions Trading Schemes in the future.
- 3.23 The main aims of the proposed Code are to:
- help educate consumers about offsetting and its role in addressing climate change;
 - to enable, and encourage, consumers to make active choices about offsetting;
 - increase consumer confidence in the integrity and value for money of the offset products available to them;

- encourage the provision of credit types which are consistent with the Government's policies on meeting its Kyoto obligations and show leadership to the UK offset industry; and
- develop the UK's position as a global market leader in the field and encourage the development of a robust and liquid global market infrastructure for carbon trading.

3.24 As far as possible, the underlying principles and contents of the proposed Code would be harmonised with guidance recommended by the EU, the UN and other countries. This is important to ensure consistency with the Government's policy of supporting the development of robust and coherent international market mechanisms for trading carbon emissions.

Q1: Do you agree that the Government should publish a Code for offset providers?

Q2: Do you agree with the proposed aims of this Code?

Q3: Should Government consider, in the future, making the Code mandatory and putting it in legislation?

Content of a standard for offsetting

3.25 A Code for selling carbon offsetting should ensure that the right amount of carbon is offset in a robust and timely way and that transparent information is provided to consumers. A quality mark will be developed to enable consumers to identify carbon offsetting that meets best Practice. The Code will include the following elements.

- Robust and verifiable emission reduction credits from the regulated market, ie CERs, EUAs and ERUs;
- Accurate calculation of the emissions to be offset, using the database of Government-agreed carbon emissions and factors;
- Clear information for consumers regarding the mechanism(s) used and/or projects supported;
- Transparent pricing;
- Timescales for cancelling credits; and
- Companies offering offsetting at the point of sale with other goods and services should encourage consumer take-up (for example including offsetting as a 'compulsory choice' to be made or as a 'default option' included within the price of goods and services).

3.26 The Code will be voluntary, ie offset providers operating in the UK could choose to seek accreditation for some or all of their offsetting products. If an offset provider offers a range of offsetting products, then

only those products that have been approved under the Code can use the quality mark.

Q4: Do you agree that the Code should be voluntary in nature?

3.27 The next section of this consultation document details the suitable mechanisms for offsetting and methodologies for calculating emission reductions. The following section sets out our proposals for providing clear information, transparent pricing and timescales for cancelling credits. Government also needs to consider how the Code will be administered, enforced, and reviewed so proposals on the process for accreditation are included. Our next steps and summary of consultation questions are listed towards the end of the document.

Methodologies for offsetting and calculating emissions

- 4.1 It is important that when an activity is offset the emissions are accurately calculated. It is also important that the proceeds from the sale of offsets are invested in credits that offer genuine and verifiable carbon abatement. This section describes how the Government proposes to meet these aims.

The Regulated Market for offsetting

- 4.2 There are different categories of carbon credit on the market. These vary according to the type of project that has been used to generate them, the procedures involved in their certification, and the ways in which they may be used, sold or traded.
- 4.3 In meeting their Kyoto targets, countries have the option of using 'Flexible Mechanisms' such as the Clean Development Mechanism (CDM), Joint Implementation (JI) or Emissions Trading. These mechanisms allow for carbon credits from offsetting to be used by Government and companies to demonstrate compliance against the Kyoto Protocol or the EU Emissions Trading Scheme. This is known as the Compliance Market (or the regulated market). Credits and allowances in the regulated market are subject to a full verification process under the EU Emissions Trading Scheme or the Kyoto Protocol with these processes overseen by the European Commission or the United Nations Clean Development Mechanism Executive Board. The accreditation process ensures that the reductions achieved by the projects must be additional to what would have happened without that project. Credits generated by the regulated market can be surrendered or purchased by businesses for compliance reasons but also can be purchased by those volunteering to offset their emissions. Details on the types of carbon credits available under the regulated market are detailed below.
- **The Clean Development Mechanism (CDM)** recognises the importance of reducing emissions growth and promoting sustainable development in the developing world. Companies from countries with Kyoto targets (Annex 1) can undertake CDM projects in those without Kyoto targets. Following a verification process, such projects are credited with Certified Emission Reductions (CERs), which are generated by reducing emissions relative to a monitored baseline (business-as-usual scenario). One CER is equal to emissions reductions of greenhouse gases of one metric tonne of CO₂ equivalent. Once generated, the CERs are transferred to the project investors, to be used for compliance either by governments retiring them to help meet Kyoto targets, or by companies surrendering them to help meet

their allocations under the EU emissions trading scheme. At present, credits can be obtained by investing directly in a project or by purchasing them from the open market. Through the same means, CERs can also be used by individuals or businesses to voluntarily offset emissions. CERs currently trade at lower prices than allowances from the EU Emissions Trading Scheme and direct investment in projects can deliver credits at even lower cost, reflecting the risk of delivering the credits to a particular timescale. Projects are approved by Designated National Authorities (DNAs) and the baselines verified by the United Nations Clean Development Mechanism Executive Board (CDM EB). The CDM EB will not release any CERs to a project until the emissions reductions have been verified. There is, therefore, an internationally recognised process for ensuring that emissions reductions are real.

UK companies are significant investors in CDM projects. Details of companies who have registered CDM projects with the UK DNA are available at <http://www.defra.gov.uk/environment/climatechange/internat/kyotomech/documents/cdm-dna-approvals.pdf>

- **EU Allowances (EUAs)** are specific to the **EU Emissions Trading Scheme (EU ETS)**. The EU ETS covers around 12,000 energy-intensive installations across the EU. EU Member State governments are required to set an emission cap for all installations covered by the scheme. Each installation is then allocated allowances (EUAs) on an annual basis for the particular commitment period in question. In Phase II of the EU ETS (scheduled for 2008), these will be converted directly from Assigned Amount Units (see below) to ensure that the EU ETS can be linked to the EU's Kyoto targets. Once allocated, these allowances can be traded between installations on the open market to ensure each installation has enough allowances to cover its emissions in any one year. Anyone volunteering to offset can purchase an EUA and cancel it, therefore removing it from the national registry and reducing the number of EUAs available in the EU.
- All countries with Kyoto targets will be issued with **Assigned Amount Units (AAUs)** which will set a cap on their emissions for the period 2008-2012. These AAUs can be traded between countries, and EU Allowances are each backed by an AAU.
- **Emission Reduction Units (ERUs)** are credits generated by Joint Implementation (JI) projects. Provided for by the Kyoto Protocol, JI is a means by which companies undertake emission reduction projects in countries with a Kyoto target (known as Annex I countries). The international rules for JI provide two sets of JI procedures, commonly referred to as "Track 1" and "Track 2". Track 1 is subject to supervision by the host country and Track 2 is subject to international supervision of the Supervisory Committee for JI. JI projects are subject to approval

by national Designated Focal Points (DFPs). The UK Government is not currently approving JI projects in the UK. ERUs need to be converted from AAUs before they can be traded which requires national government involvement and makes them less easy to trade by individuals or small organisations. For this reason they would not be a preferred option for offsetting.

Trading credits

- 4.4 EUAs are, and CERs will become, tradable through national emissions trading registries. Registries record the holdings of organisations and individuals in accounts as in a bank account. Currently all members of the EU have registries in order to comply with the EU Emissions Trading Scheme. By 2008 all countries with a Kyoto target are also required to have a registry open to allow international emissions trading.
- 4.5 The UK registry is available at <http://emissionsregistry.gov.uk/>. Any individual or organisation can open an account in the UK registry after providing proof of identity and other details. The price for a voluntary account in the registry is £175. Individuals with accounts in the registry may also cancel CERs, EUAs and ERUs.

The non-regulated market for offsetting

- 4.6 A market for carbon offsetting has also developed, outside of government targets and policies, where businesses and individuals choose to offset their emissions. Carbon credits produced in this non-regulated are generally referred to as **Voluntary Emissions Reductions (VERs)**.
- 4.7 VERs come from projects outside of the regulated market and are therefore not recognised by, and do not form part of, the Kyoto protocol. VER projects can range from forestry to energy efficiency schemes and are often non-industrial projects. These projects sometimes have broader environmental or sustainability benefits which have greater appeal to consumers. There is no overarching, internationally agreed project approval or emission reduction verification procedure for such projects. In addition, there is no international registry for tracking or cancelling VERs. Since the non-regulated market is not linked to the ETS, their prices vary considerably between projects, and bear little relation to the established carbon price, although they are generally cheaper than EUAs.
- 4.8 Various players in the industry have already raised the need for a standard to provide assurance for consumers about the offsets they are purchasing. However, at present the majority of offset providers currently supply VERs. Whilst the government welcomes the efforts of the offsetting industry in this area, it feels that at the current time VERs do not provide a suitable basis for offsetting best practice. Government

recognises that some companies have invested in the non-regulated market and therefore the Code is voluntary so companies can choose to develop and accredit those products that do meet the standard.

Best practice in offsetting

- 4.9 The Government believes that best practice in carbon offsetting requires verifiable certified credits for example: CERs, EUAs or, less easily ERUs. Certified credits only allow for emissions reduction credits to be created ex-post, ie after that reduction has actually been achieved. This provides a guarantee to the consumer that the necessary volume of emissions reduction has taken place. Certified credits are generally more expensive than VERs, but this more accurately reflects the cost of carbon which in turns raises consumer awareness.
- 4.10 ISO 14064 sets standards for projects and could offer the same quality and integrity for VERs as the regulated market. The regulated market has processes for assessing and approving projects. To support this market there is also an established international registry for certified credits to govern how they are traded and ensure there is no potential for double counting. These procedures already established and operating in the regulated market demonstrate best practice.

Q5: Do you agree that the most appropriate credits to demonstrate best practice in offsetting are one, or a combination of, CERs, EUAs or less easily, ERUs?

Compatibility with EU ETS

- 4.11 It is important that this Code does not conflict with the aims, objectives and practical operation of the EU ETS.
- 4.12 Where offsets are purchased to cover emissions already covered under other mechanisms, compliance with the Code will not allow business to use offsets purchased by their customers to demonstrate compliance with these mechanisms. This may be varied in accordance with any proposal from the regulatory authorities regarding the terms of inclusion of sectors in particular regulatory mechanisms.
- 4.13 The inclusion of electricity generation in the EU ETS means a consumer's electricity consumption, is already accounted for under other mechanisms. Businesses offering such offsets should make it clear to consumers that they are purchasing 'emissions reductions', akin to them making a charitable donation to reduce carbon emissions that may or may not be additional to offsetting occurring as part of compliance with other regulation or mechanisms.

Q6: With a Code that includes EUAs, do you agree with this proposed treatment of the ‘double-counting’ issue?

Calculating emissions to be offset

4.14 The government is producing a carbon calculator for householders to show the relative impact of their individual actions. A database of Government-agreed carbon emissions and factors for households and private road transport and aviation will be collated for this purpose. In order to comply with the Code, it is proposed that domestic and transport emissions should be calculated using this Government-agreed database.

4.15 Compiling an emissions database for business emissions (such as freight) is currently outside the scope of this project. However, offset providers wishing to comply with the Code should use the relevant emissions factors in Government’s Guidelines for Company Reporting of Greenhouse Gas Emissions. We will consider if it is appropriate to provide guidance on a consistent way to calculate business emissions. For example when calculating the energy consumed by business premises meter readings should be used to ensure accuracy.

4.16 As there are no plans to develop a database of business emissions, and, unlike households, business emissions can vary greatly. As a result, businesses cannot use the Code quality mark to badge their company as being ‘carbon neutral’. This is explained further at the start of the next section.

Q7: Do you agree with the proposal to use the government-agreed database of emissions figures as the approved method of calculating emissions to be offset?

Q8: Should guidance be provided on how to calculate emissions from businesses?

Procedures under the Code

- 5.1 This section sets out who seek accreditation under the Code and who can use the quality mark. The proposed procedural elements of the Code are detailed, ie the information that should be provided to consumers, providing transparent pricing and the timescales for cancelling credits.

Businesses covered by the Code

- 5.2 The Code is intended for offset providers offering their products to individuals or businesses in the UK. The Code will be voluntary, ie offset providers can chose to seek accreditation for some or all of their products.
- 5.3 Businesses will be able to associate the quality mark to any of their products that have been accredited as meeting the requirements of the Code. If a company chooses to offer both CERs and VERs for example, the quality mark can only be applied to offsetting products using CERs (providing it complies with the other requirements in the Code).
- 5.4 Companies may choose to purchase offsets directly, rather than using an offset provider. These offsets may be sold individually or with other goods and services, such as a flight. Another example would be an energy supplier offering offsetting as part of an electricity tariff. Such companies can choose to seek accreditation under the Code and the offset product can be badged with the quality mark.
- 5.5 Alternatively, a company may choose to purchase offsets from an offset provider before selling them on to consumers as part of a package of goods and services. If the offset has been approved under the Code, the company can also apply for approval under the Code providing it meets the necessary criteria regarding consumer information and transparent pricing. The company can then use the quality mark for the offset product.
- 5.6 Where companies offer offsetting as part of other goods and services they should consider ways to encourage a significant level of consumer up-take. Businesses seeking to use the quality mark should offer offsetting as a 'compulsory choice', ie that at the point of sale consumers have to actively chose 'yes' or 'no' to offsetting that activity. Alternatively companies offering offsetting with other goods and services under the Code should offer it as a 'default option', ie the price of offsetting would be automatically included within the price and consumers would have to actively opt out from offsetting. This could apply to companies such as airlines or third parties such as travel agents or internet brokers who offer offsetting alongside flights.

Businesses not covered by the Code

- 5.7 The Code is designed to label those who sell offsetting and not to label those who purchase it.
- 5.8 The Government's offsetting quality mark can only be applied to a suitable offset product and not to a company's general branding.
- 5.9 If a business decides to offset all of its emissions and wishes to advertise that to its consumers, it can inform them that the offsetting product that it purchased meets the government standard. However, the company who purchased the offsetting cannot use the quality mark. Business cannot use the standard to claim that they are carbon neutral, due to the complexities involved in proving this. Also, the Government-agreed database of emissions figures and factors will not cover all business emissions.

Q9: Do you agree that companies providing offsets, as part of a package of goods and services, should be entitled to use the quality mark?

Q10: Do you agree that the Code should require companies offering offsetting at the point of sale with other goods or services, to give consumers a compulsory choice or and/or a 'default option'?

Q11: Do you agree that the quality mark should only be for accredited offsetting products and not to label businesses that have offset their own emissions?

Q12: Are there any other conditions that should apply to the use of the quality mark?

Consumer information

- 5.10 It is important that clear and appropriate information is available for consumers on offsetting their emissions so that they understand what it entails and they are reassured that they are getting value for money. It is proposed that the following information should be made available when selling offsets;
- A clear and simple explanation of offsetting (including that purchasing credits from an emissions reduction project can help to address emissions produced from the consumers' activities);
 - Information should be provided on tackling climate change and the importance of avoiding and reducing energy consumption. Guidance should be provided to individuals or businesses (as appropriate) on steps they can take to reduce their emissions. This information can be

provided directly by the offset provider or there can be a link to a suitable organisation such as the Energy Saving Trust or Carbon Trust.

- An explanation of the mechanisms (eg CDM) that have been used to source the carbon credits. As this information is more detailed it does not need to be provided at the point of sale but it must be accessible for consumers, for example on the provider's website;
- Details of the projects supported should be provided and, where possible, consumers should be able to choose from which projects they would like to buy carbon credits;
- A statement on whether the credits come from the provider's portfolio or through a third party broker. This will help to explain any additional administration charges from using a broker. This is similar to charities and other organisations identifying how much of your money contributes to goods and services (in this case offsetting) and how much goes towards administration; and
- Written confirmation that the credits have been purchased and cancelled should be sent or emailed to the consumer.

Q13: Do you agree that these six points are necessary information to be made available to consumers?

Q14: Should consumers be allowed to choose which projects they fund from an offset provider's portfolio?

Q15: Should written confirmation of the credit purchase and cancellation be provided, a) to all consumers or b) on request only?

Transparent pricing

5.11 The cost of offsetting a particular activity may vary between companies for a number of reasons. The cost of credits varies greatly depending on the type of credit purchased; for example, due to their more rigorous nature, CDM credits (CERs) are often more expensive than VERs. Prices may also vary dependant on fluctuations in the market price and whether the offset provider has invested directly in a project or purchased credits. Administration charges will also be added.

5.12 Currently offset providers generally use their own emissions data or calculation methodology to determine the emissions to be offset. As result, different companies may offset different volumes of emissions for the same or similar activities. Using the Government-agreed database of emissions figures will help to avoid these discrepancies.

5.13 Whether the offset is being sold as a stand-alone product, or as part of a package of goods and services, it is proposed that the following

information should be clearly available to consumers at the point of sale, and displayed in pounds sterling unless otherwise stated.

- Volume of emissions being offset (in tonnes of CO₂e)
- Cost per credit being purchased
- Total cost of credits purchased
- Any charge for processing and administration
- Total cost of offsetting service being purchased.

5.14 Consumers can then use this information to ascertain exactly what they are paying for, and how prices compare between different offset providers.

Q16: Do you agree that this breakdown of prices should be provided to consumers?

Q17: Do you agree that this price information should be provided at the time of purchasing offsets? Or on request only?

Timescales for purchasing and cancelling carbon credits

5.15 In order to purchase credits, offset providers must first set up an account in the UK emission trading registry in which credits can be stored and cancelled and transactions recorded. Guidance on how this can be done is available on the Environment Agency website². The registry is available for recording EUA transactions already and will be available to record CER transactions from June 2007.

5.16 To allow offset providers to identify suitable projects we are proposing that, initially, offset providers will have up to six months after the consumer's offset purchase to buy the necessary amount of credits. This timescale will be reviewed.

5.17 A consumer's activities will only be offset once sufficient credits from a carbon-reduction project have been purchased and cancelled. Once units / allowances have been cancelled they can no longer be bought, traded or used for compliance and so there is no potential for double counting. All types of units and allowances can be voluntarily cancelled.

5.18 When an offset provider purchases credits on behalf of a consumer they must cancel the appropriate number of credits from their account, and remove them from the UK Registry, within 48 hours.

² <http://www.environment-agency.gov.uk/business/444217/590750/590838/1294204/1296463/?version=1&lang=e>

5.19 In summary an offset provider has up to six months to purchase the credits for a consumer and once purchased must cancel them within 48 hours.

Q18: Does the government need to issue more guidance on how the process of purchasing and cancelling credits works in practice?

Q19: Is the timescale for purchasing credits appropriate?

Q20: Is the timescale for cancelling credits appropriate?

Accreditation

- 6.1 This section details how we propose to allow companies to sign up to the Code, how compliance will be policed and how the Code will be reviewed.

Accreditation and compliance

- 6.2 All parties wishing to have offsetting products approved will need to comply with the criteria detailed in the Code. The primary purpose of accreditation is to provide assurance to consumers that the product they are purchasing complies with the Code. Government will appoint an appropriate accreditation body to administer the Code.
- 6.3 Those companies complying with the Code will be entitled to make use of the quality mark, which will act as a signal to consumers about the quality of the product being offered. This quality mark is currently under development by Government. The accreditation body will ensure the quality mark is used correctly in marketing and promotional activities by offset providers. They will also ensure that the brand is not misused or used by an organisation without permission.
- 6.4 Government, or the accreditation body will also provide independent advice to the public on how offsetting works, and will communicate the benefits of offsetting, relative to other environment actions to address climate change such as energy efficiency.
- 6.5 Accreditation will involve an upfront assessment process and annual auditing to verify compliance against the Code.
- 6.6 Government will hold a register of all companies who have offsetting products approved under the Code on its website.
- 6.7 Failure to meet any of the criteria would constitute a breach of the Code. In such an event the company will no longer be able to use Government's quality mark and they will be removed from the register of providers.

Accreditation quality mark

- 6.8 An accreditation quality mark would allow offset providers to advertise the quality of their product to consumers and provide assurance that their service meets the government Code. This quality mark could be used on websites, brochures, advertising etc.
- 6.9 It is proposed that the quality mark would apply to accredited offsetting product and not to the business supplying or buying those products.

Q21: What evidence should offset providers have to show to demonstrate compliance with the Code?

Accreditation body

6.10 The Code itself will be developed and owned by the Government. It will be appropriate for a third party to administer the Code on the Government's behalf. An accreditation body may need to undertake additional activities such as promotion of the quality mark and provision of advice to consumers. During the consultation period we will consider who is the most appropriate body to administer the Code, bearing the following points in mind:

Independent: In order to remove any conflict of interest, the accreditation body should not provide its own offsetting service to consumers, and it should not be in partnership with or have financial investments in businesses that provide offset products.

Trusted: The organisation that provides the accreditation service should be recognised in the market and trusted by consumers.

Technical and commercial competence: The organisation will need to have the right level of technical and commercial competence to undertake proficient audits to ensure compliance.

Communication and advice role: The organisation will require strong communication and advice capabilities to ensure the accreditation mark is well understood by the public.

6.11 The Code for best Practice will be promoted by the Government as part of the Government's Climate Change Communications Initiative. We will consider the role of the accreditation body in promoting the Code and educating consumers on offsetting.

Q22: Do you think that industry could have a role in helping to promote the Code?

Financing

6.12 The accreditation of an offset product provides the offset business with added value to differentiate and promote the quality of their product to customers. Accreditation therefore has a market value. Government propose that the costs to undertake an upfront audit and provide annual accreditation should be charged to those offset providers who wish to use the accreditation quality mark.

Q23: Do you agree that the administration of the quality mark scheme should be financed by fees charged for upfront accreditation and from annual subscriptions from those using the accreditation quality mark?

Reviewing the Code

6.13 Government reserves the right to review and modify the Code from time to time as it sees fit. Any major proposed changes will be consulted on, and the industry will be given appropriate advance notification of any modifications made to the Code.

6.14 The Government may ask the accreditation body to produce regular reports on the state of the offsetting market.

Q24: Should the Code be reviewed on a regular basis?

Q25: If so, how frequently, every year?

Summary of questions and next steps

- 7.1 The deadline for responses to this consultation is 13 April 2007.
- 7.2 All comments in relation to the proposals and the partial Regulatory Impact Assessment are welcome. The Government will consider the responses received to this consultation and will use them to determine the content of the Code.
- Q26: Do you agree with the assessment of costs and benefits as described in the partial RIA?**
- 7.3 We will aim to publish a summary of the consultation responses by the end of May 2007. The Government aims to finalise the Code and appoint an accreditation body by autumn 2007.
- 7.4 Consultees wishing to be kept in touch with developments should email offsetting.code@defra.gsi.gov.uk and can check for updates on www.defra.gsi.gov.uk.

Summary of Questions

- Q1: Do you agree that the Government should publish a Code for offset providers?
- Q2: Do you agree with the proposed aims of this Code?
- Q3: Should Government consider, in the future, making the Code mandatory and putting it in legislation?
- Q4: Do you agree that the Code should be voluntary in nature?
- Q5: Do you agree that the most appropriate credits to demonstrate best practice in offsetting are one, or a combination of, CERs, EUAs or less easily, ERUs?
- Q6: With a Code that includes EUAs, do you agree with this proposed treatment of the 'double-counting' issue?
- Q7: Do you agree with the proposal to use the government-agreed database of emissions figures as the approved method of calculating emissions to be offset?

- Q8: Should guidance be provided on how to calculate emissions from businesses?
- Q9: Do you agree that companies providing offsets, as part of a package of goods and services, should be entitled to use the quality mark?
- Q10: Do you agree that the Code should require companies offering offsetting at the point of sale with other goods or services, to give consumers a compulsory choice or a 'default option'?
- Q11: Do you agree that the quality mark should only be for accredited offsetting products and not for businesses that have offset their own emissions?
- Q12: Are there any other conditions that should apply to the use of the quality mark?
- Q13: Do you agree that these six points are necessary information to be made available to consumers?
- Q14: Should consumers be allowed to choose which projects they fund from an offset provider's portfolio?
- Q15: Should written confirmation of the credit purchase and cancellation be provided, a) to all consumers or b) on request only?
- Q16: Do you agree that this breakdown of prices should be provided to consumers?
- Q17: Do you agree that this price information should be provided at the time of purchasing offsets? Or on request only?
- Q18: Does the government need to issue more guidance on how the process of purchasing and cancelling credits works in practice?
- Q19: Is the timescale for purchasing credits appropriate?
- Q20: Is the timescale for cancelling credits appropriate?
- Q21: What evidence should offset providers have to show to demonstrate compliance with the Code?
- Q22: Do you think that industry could have a role in helping to promote the Code?

- Q23: Do you agree that the administration of the quality mark scheme should be financed by fees charged for upfront accreditation and from annual subscriptions from those using the accreditation quality mark?
- Q24: Should the Code be reviewed on a regular basis?
- Q25: If so, how frequently, every year?
- Q26: Do you agree with the assessment of costs and benefits and described in the partial RIA?

Annex A Partial Regulatory Impact Assessment

Title of proposal

1. Introduction of a voluntary Code for the provision of offsetting services to UK consumers.

Purpose and intended effect

2. The purpose of developing a Code on carbon offsetting is to educate consumers about the role offsetting has in tackling climate change. A quality mark will be produced that consumers can easily identify to ensure they have confidence that the offset products they provide are robust and verified.
3. The Government recognises, and welcomes, the growth of the offsetting market and the intended effect of this consultation is to identify best practice and encourage offset providers to offer certified and regulated credits to consumer.

Objectives

4. Given the range of offset products emerging onto the market and absence of any trusted quality mark/branding, there is a great deal of uncertainty among consumers about the environmental value of offsetting. As a result, this growing market risks becoming discredited.
5. This proposal aims to address these issues by:
 - Encouraging offset providers to supply credits which are robust, verified and transparent;
 - Establishing a quality mark or to identify best practice in carbon offsetting and provide assurance to consumers purchasing offsets;
 - Having a supporting campaign to raise consumer awareness about offsetting and its role in helping to tackle climate change;
 - Setting a UK standard for the provision of offsetting products that will help establish an international benchmark; and
 - Providing UK companies with an opportunity to familiarise themselves with the frameworks and processes required in international emissions trading and, where appropriate, the EU Emissions Trading Scheme.

Background

6. Climate change is one of the biggest challenges facing society today. Government has the responsibility to educate consumers about the hierarchy

of actions they can take to tackle climate change. Avoiding and reducing emissions is the most appropriate way to tackle climate change, through changing behaviour and taking actions such as insulating homes, using energy efficiency appliances, and choosing public transport. Once a consumer, or a business, has taken steps to reduce its emissions at source, they can then offset their remaining unavoidable emissions, or a part of those emissions; for example a flight or annual car mileage.

7. Our everyday actions consume energy and produce carbon emissions, for example driving a car, heating a home or flying. Offsetting is a way of compensating for the emissions produced with an equivalent carbon saving. Offsetting involves buying emission reduction credits that have been generated by projects and activities that have reduced carbon emissions. These projects involve renewable technologies or energy efficiency projects, generally outside of the UK. Due to the fact that greenhouse gases have a long life-span and tend to mix evenly in the atmosphere it doesn't matter where gases are emitted in the world: the effect on climate change is the same.
8. In practice, offsetting involves two stages:
 - a. Calculating the amount of emissions to be offset from the activity carried out. The results of these calculations can be presented in the form of carbon, CO₂ or CO₂e (CO₂ equivalent) emissions, depending on which greenhouse gases have been taken into account. It is best to make these calculations using a standard metric to ensure consistent and accurate emissions are offset.
 - b. Investing in projects that prevent or remove an equivalent amount of emissions from the atmosphere or buying and cancelling credits from such projects. For example, if a flight abroad on holiday has created 2.5 tonnes of CO₂e, a consumer can offset this by buying 2.5 tonnes worth of carbon credits.

Mechanisms for carbon offsetting

9. There are different categories of carbon credit on the market. These vary according to the type of project that has been used to generate them, the procedures involved in their certification, and the ways in which they may be used, sold or traded.
10. In meeting their Kyoto targets, countries have the option of using 'Flexible Mechanisms' such as the Clean Development Mechanism (CDM), Joint Implementation (JI) or Emissions Trading. These mechanisms allow for carbon credits from offsetting to be used by Government and companies to demonstrate compliance against the Kyoto Protocol or the EU Emissions Trading Scheme. This is known as the 'Regulated Market.' Credits and

allowances in the regulated market are subject to a full verification process under the EU Emissions Trading Scheme or the Kyoto Protocol with these processes overseen by the European Commission or the United Nations Clean Development Mechanism Executive Board.

11. This regulated market also allows consumers to purchase credits if they wish to volunteer to offset their emissions. The Government Carbon Offsetting Fund uses **Certified Emissions Reductions (CERs)** from the **Clean Development Mechanism (CDM)**.
12. The Clean Development Mechanism recognises the importance of reducing emissions growth in the developing world. Investors from countries with Kyoto targets can invest in CDM projects in those without Kyoto targets. Credits (CERs) can be generated by reducing emissions relative to a monitored baseline (business-as-usual scenario). Once generated, the CERs can be transferred to the sponsoring country, to be used for compliance with their Kyoto commitment. To date credits have generally been obtained by investing directly in a project. However, they are also traded on the open market, and should become more freely available in 2007 when the UN's International Transaction Registry is up and running. CERs can be used to offset emissions by cancelling them and preventing them from being used to meet Kyoto reduction targets. CERs currently trade at lower prices than allowances from the EU Emissions Trading Scheme due to the lower abatement costs involved. Direct investment in projects can deliver credits at even lower cost, reflecting the risk of delivering the credits to a particular timescale. Projects are approved by Designated National Authorities (DNAs) and the baselines verified by the United Nation's Clean Development Mechanism Executive Board (CDM EB). There is, therefore, an internationally recognised process for ensuring that emissions reductions are real and are delivered before any credits can be generated. One CER is equal to emissions reductions of greenhouse gases of one metric tonne of CO₂ equivalent.
13. UK companies are significant investors in CDM projects. Details of companies who have registered CDM projects with the UK DNA are available on Defra's website³.
14. **EUAs** are emissions allowances from the **EU Emissions Trading Scheme (EU ETS)**. EU Member State Governments are required to set an emission cap for all installations covered by the Scheme. Each installation is then allocated allowances (EUAs) on an annual basis for the particular commitment period in question. In Phase II of the EU ETS, these will be converted directly from Assigned Amount Units (see below) to ensure that the

³<http://www.defra.gov.uk/environment/climatechange/internat/kyotomech/documents/cdm-dna-approvals.pdf>

EU ETS can be linked to the EU's Kyoto targets. Once allocated, these allowances can be traded between accounts on the open market to ensure each installation has enough allowances to cover its emissions in any one year. Anyone purchasing an EUA can use it to offset emissions by cancelling it and therefore removing it from the national registry, thus reducing the number of EUAs available in the EU. Prices of EUAs are determined by the market and fluctuate daily. For the purposes of comparison with other credits, a range of €5-40 per credit can be assumed for Phase II of the EU ETS.

15. All countries with Kyoto targets will be issued with **Assigned Amount Units (AAUs)** which will set a cap on their emissions for the period 2008-2012. These AAUs can be traded between countries, and EU Allowances are each backed by an AAU.
16. **Emissions Reduction Units (ERUs)**. These are generated by Joint Implementation (JI) emissions reduction projects between two 'developed' countries. They need to be converted from AAUs before they can be traded. This therefore requires national Government involvement which makes them less easy to trade. For this reason they would not be a preferred option for offsetting.

Trading credits

17. EUAs are, and CERs will be, tradable through national emissions trading registries. Registries record the holdings of organisations and individuals in accounts much the same as in a bank account. Currently all members of the EU have registries in order to comply with the EU Emissions Trading Scheme. By 2008 all countries with a Kyoto target are also required to have a registry open to allow international emissions trading.
18. The UK registry is available at <http://emissionsregistry.gov.uk>. Any individual or organisation can open an account in the UK registry after providing proof of identity and other details. The price for an individual account in the registry is £175, as set out on the Environment Agency's website⁴. Individuals with accounts in the registry may also cancel CERs, EUAs, and ERUs.

The non-regulated market

19. A market for carbon offsetting has also developed, outside of Government targets and policies, where businesses and individuals choose to offset their emissions. Carbon credits produced in this non-regulated market are generally referred to as Voluntary Emissions Reductions (VERs).

⁴ <http://www.environment-agency.gov.uk/business/444217/590750/590838/1294204/1296463/?version=1&lang=e>

20. **VERs** come from projects outside of the regulated market and are therefore not recognised by, and do not form part of, the Kyoto protocol. VER projects can range from forestry to energy efficiency schemes and are often non-industrial projects, which have greater appeal to consumers. There is no overarching, internationally agreed project approval or emission reduction verification procedure for such projects. In addition, there is no international registry for tracking or cancelling VERs. Since VERs are not linked to the ETS, their prices vary considerably between projects, and bear little relation to the established carbon price, although they are generally cheaper than EUAs.
21. There are already a number of private companies offering a range of offsetting services to consumers. These companies each have some form of 'carbon calculator' allowing consumers to estimate their emissions. The offset providers then charge consumers a fee per tonne (or part of a tonne) of CO₂ or CO_{2e} to offset these emissions. There are at least 60 companies worldwide known to be operating in the offset market, supplying offsets to businesses and individuals. However, the actual number is likely to be considerably higher. Prices range from £2 to £25 per tonne of CO₂. The total volume of offsets purchased per annum is unknown, but is not thought to be significant when compared to the number of CERs or EUAs available or to total emissions produced.
22. Offsetting can be provided to a consumer through the following routes:
- Directly by an offset provider to individual consumers to offset, for example, a flight abroad or heating their home or to businesses to offset, for example, their business travel or energy consumption.
 - By a company, using an offset provider, to offer offsetting to their customers as part of a package of goods and services. The company could manage this service or an offset provider could do so on their behalf.
 - Directly by a mainstream company which has set up its own accredited carbon reduction projects or purchased carbon credits from the market for sale to its customers as part of a package of goods and services.
23. Each of these models uses the same principles, but may involve slightly different processes and hence incur different levels of cost. Although each of these supply mechanisms needs to be considered in the development of a standard on Best Practice, the modelling in this RIA is based around companies offering offsetting with other goods and services, since these are expected to constitute the largest proportion of offsetting activities under the Code.

Rationale for Government intervention

24. Climate change is one of the biggest challenges facing society today. Government has the responsibility to educate consumers about the hierarchy of actions they can take to tackle climate change. Government acknowledges that carbon offsetting is not a 'cure' for climate change but it can help raise awareness and reduce the impact of our actions. As the Government embarks develops its communications campaign to educate people about climate change and what actions they can take, a standard for offsetting will help to engage consumers and give them the tools for tackling action.
25. There is currently no approved standard for the provision of offsets. Given the uncertainty surrounding the effectiveness of some offsets, the lack of an approved standard means that the offset market risks becoming discredited.
26. The offsetting industry has already raised the need for a standard to provide assurance for consumers about the offsets they are purchasing. At present the majority of offset providers currently supply VERs and a number of standards for this market have been proposed. Although it is likely that the different VER standards may merge over time, this process may take a few years.
27. The Government welcomes the efforts of the offsetting market in developing a demand for offsetting. By introducing a Government standard, consumers will be able to offset with confidence and the market can develop further. Confidence that verified emissions reductions have been delivered is vital to encourage and enable individuals and businesses to take action.
28. The Government believes that best practice in carbon offsetting requires verifiable CERs, EUAs or, less easily, ERUs to offset carbon. Certified credits only allow for emissions reduction credits to be created ex-post, ie after that reduction has actually been achieved. This provides a guarantee to the consumer that the necessary volume of emissions reduction has taken place.
29. ISO 14064 sets standards for projects and could offer the same quality and integrity for VERs as the regulated market. The regulated market has processes for assessing and approving projects. To support this market there is also an established international registry for certified credits to govern how they are traded and ensure there is no potential for double counting. The mechanisms already established and operating in the regulated market demonstrate best practice.

30. The Code is not just concerned with identifying robust and verified projects for carbon off setting it also proposes procedures that should be adopted when offering offsetting to consumers. The Code will set standards for;

- Robust and verifiable emission reduction credits from the regulated market, ie CERs, EUAs and ERUs;
- Accurate calculation of emissions to be offset, using the Government's carbon metric;
- Clear information for consumers regarding the mechanism and/or projects supported;
- Transparent pricing; and
- Timescales for cancelling credits.

Consultation

31. Various stakeholders, both within and outside Government, have been informally consulted on the proposal, and their feedback forms the basis of this RIA. This partial RIA is now being included as an Annex to the formal written consultation document on the proposal.

Options

32. In addressing the objectives of this proposal, a number of options have been considered, which are described in detail below. The options are set out in order of increasing robustness, and hence increasing levels of consumer confidence, take-up, and consequent emissions reductions. For ease of reference, these are as follows:

Option 1:	Do nothing
Option 2a:	Voluntary Code, based on all credit types
Option 2b:	Mandatory Code, based on all credit types
Option 3a:	Voluntary Code, based on CERs, EUAs and ERUs
Option 3b:	Mandatory Code, based on EUAs, CERs and ERUs

33. It should be noted that for the purposes of estimating the effects of these options, **this RIA focuses on two specific sub-sectors of the offsetting market: offsetting through aviation providers and domestic energy suppliers.** These sectors are expected to be where most offsetting will occur and which offer the greatest potential for individuals to offset.

34. Therefore, where this RIA refers to 'business involvement', it relates to the emissions of businesses within these sectors. In other words, business involvement of 50% would mean that businesses accounting for 50% of the

sector's emissions had offsetting schemes complying with the Code of Practice.

35. Given the increasing business interest in offsetting, business involvement is assumed to be in the range 30% to 95% for a voluntary Code (with a central estimate of 60%), ie businesses accounting for 60% of the emissions from the aviation and energy supply sectors are expected to offer offsetting to their customers. For a mandatory Code, business involvement is likely to be 95% (since it is unrealistic to assume 100% compliance).
36. Likewise, 'consumer uptake' relates to uptake of offsetting by consumers of the aviation and energy supply sectors who have signed up to the Code.
37. Analysis regarding certified credits includes EUAs, CERs and ERUs. The consultation is seeking views on the appropriateness of using different types of certified credits.

Option 1: Do nothing

38. As described above, in the absence of Government intervention the offsetting industry is likely to develop a variety of different offsetting standards, based around VERs. The Government is aware of a number of these already being developed by various organisations. Over a period of time it is likely that market forces would cause these to converge into just one or two industry-wide standards.
39. VERs are not verified to a consistent standard, and are not aligned with the Kyoto protocol. Industry standards based on VERs would therefore mean the uncertainty associated with non-certified credits would remain, and would impact on consumer confidence and uptake. This in turn could negatively effect the growth in the offsetting market.
40. For the purposes of this RIA, it is assumed that if the Government does not introduce a Code take-up would remain at a relatively low level 5% (ie 5% of the customers of the aviation industry and energy suppliers who offer offset, would buy them). This level of take up is somewhat higher than current levels (take-up of 1 in 200 customers has been reported by some sources) due to the growing awareness of climate change.
41. VERs are bought or traded at varying prices, which are likely to be lower than the price of verifiable emissions reductions like CERs and EUAs because they do not have to go through the same verification process. VERs cannot be used within the EU ETS and are generally seen as a low cost alternative to certified credits. Doing nothing would allow another carbon price and could potentially undermine the established carbon market and would enable

consumers to realise the cost of carbon. Encouraging the use of certified credits also lends support to established mechanisms like the CDM.

42. A number of different standards are being developed by industry. We can assume it will take 5 years before these various industry-led initiatives converge to a single standard and this would have cost implications for the industry. It would also take some time to create a registry for the non-regulated market. A Government Code could be implemented in a much shorter timescale.
43. If the Government chooses not to establish a standard for carbon offsetting, this would reduce the potential to raise public awareness and understanding about how offsetting contributes to tackling climate change. As part of its mass engagement strategy on climate change and carbon, it is important that Government provides consumers with the tools they need to address their carbon footprint. Having a robust Government standard and quality mark for offsetting will support this.
44. The 'do nothing' scenario forms a baseline to which the other options can be compared.

Option 2a: Voluntary Code allowing all credit types

45. Under this scenario, a Voluntary Code would be introduced by Government which offsetting providers could sign up to. This would include all of the necessary procedural requirements such as consumer information and timescales for cancelling credits, and include all credit types including VERs. It would therefore be similar to the single standard eventually adopted by the industry under Option 1.
46. This option would be more time consuming and costly than options 3a and 3b. There is an established regulatory framework for the regulated market and Government would have to create one for VERs by creating, for example, an international registry. However, it is likely that the Government could do this in a shorter timescale than the industry could, under Option 1.
47. This Code would be voluntary, so would not in theory prevent industry from developing its own standard(s). However, it is assumed that the Government standard would be the one to which any other standards converged in the long run (i.e. the 5 year timescale assumed in Option 1). Given this time taken for convergence, it is not clear that a voluntary standard developed by Government and including VER credits would add anything significant to the do-nothing scenario. It would not allow Government to differentiate 'best' practice in this industry. This option is therefore not developed further.

Option 2b: Mandatory Code allowing all credit types

48. This option would involve developing a Code to include voluntary and certified credits, as in Option 2a, that would be compulsory for all offset providers in the UK market to adhere to it. This would remove the industry's incentive to develop their own standard(s), and would therefore deliver a greater level of certainty for consumers, potentially leading to an increased take-up of offsetting services.
49. VERs are not regulated, verified and tracked in the same way as certified credits. If Government was to introduce a mandatory standard to include all credits it would not differentiate best practice for the consumer. Developing a regulatory framework for non-certified credits, in addition to that already in place for certified credits would be complicated and expensive and take some years to set up. One benefit would be that all offset providers would adhere to the same procedures, for example in terms of consumer information and timescales for cancelling credits. The different mechanisms offered by this option could be confusing for the consumer.
50. A mandatory scheme would require legislation, increasing the time needed to introduce the Code, which might in turn impact on consumer confidence. Offset providers would have no choice but for all of their products to adhere to this Code. This, together with the problems of standardisation surrounding VERs, might prevent take-up from increasing significantly. For the purposes of this RIA, take-up of offsetting by consumers under this scenario is assumed to be in the range 5-10%, with a central estimate of 7.5% (ie 7.5% of the customers of the aviation industry and energy suppliers who offer offset, would buy them).

Option 3a: Voluntary Code allowing certified credits

51. This option involves developing a Code allowing verifiable emission reductions only, i.e. CERs, EUAs and ERUs. Offset providers could choose to seek accreditation under the Code for all or some of their offset products. A quality mark would be created so that consumers can identify those products differentiated as offering best practice. As in other options, the Code would cover the procedural requirements such as consumer information.
52. Once a voluntary standard based around certified credits is in place, market forces would move more offset providers towards supplying products in line with the voluntary Code. This might have a positive impact on consumer confidence in the offsetting market, and could therefore increase the take-up of offsetting products. Take-up could vary considerably depending on the price of offsetting products, and CERs are likely to be more expensive than

VERs, potentially suppressing consumer demand. For the purposes of this RIA, it is assumed that take-up of offsetting under Option 3a would be in the range 20 – 60%, with a central estimate of 30% (ie 30% of the customers of the aviation industry and energy suppliers who offer offset, would buy them).

53. Having a voluntary standard allows offset providers to get some, or all, of their products accredited. This will allow the market to develop over time. Since the Code would be voluntary, there would be nothing to prevent the industry from continuing to develop its own standards. The Government's Code can emerge as the market leader, supported by its marketing campaign and support from key industries or high profile organisations.

54. This scenario would have a number of impacts on different parts of the offsetting industry:

- Identifying certified credits as best practice would lead to an increased under the CDM and it is assumed that supply would increase (within a relatively short timescale) to meet demand, thus having no significant effect on the price of CERs.
- Although CERs are likely to be the credit of choice for offsetting due to their association with specific projects, demand for EUAs could also increase, which could potentially increase their price given that supply is fixed. However, installations participating in EU ETS can purchase CERs as well as EUAs to cover their emissions, so in reality supply of credits is not completely fixed. In addition, if the price of EUAs were to rise above the CER price, demand among offset providers for EUAs would fall and the price would stabilise in line with the CER price.
- Finally, there would be implications for those individuals and businesses involved in the provision of credits that would not conform to the standard (namely VERs). If these entities cannot transfer to different markets (like CDM), demand for their products and services might fall over time after the standard was introduced. However, due to their lower price, there could be continuing demand for these products. Given the voluntary nature of the Code under this option, any market changes would not happen immediately, giving individuals and businesses sufficient time to appraise shifting market conditions and adapt their behaviour accordingly.

55. A potential subset of this option would be to set a Code allowing the use of CERs only, in line with how the Government offsets its travel emissions. This would be similar in impact as demand for CERs would increase, thereby increasing the price. This could lead to increased demand for EUAs, or reduced demand for CERs in the EU Emissions Trading Scheme leading to higher prices. Since the effects are similar, and CERs would likely be the

credits of choice under Option 3a anyway (as described above), a CER-only standard is not developed as a separate option.

Option 3b: Mandatory Code allowing certified credits

56. This option would make it mandatory for offset providers operating in the UK to sell certified credits. Offset providers currently selling, or investing in, non-certified credits would have to change their businesses completely and would have to sell any remaining VERs to another country.

57. Although all offset providers would have to reach this standard consumer take-up would not necessarily be any greater than under a voluntary scheme, as there would be no product differentiation. Instead, it reduces the opportunity for offset providers to use the accreditation quality mark as a marketing tool, which could reduce awareness of offsetting schemes. Take-up under this option is therefore also assumed to be in the range 20-60%, in line with Option 3a, but with an estimated uptake at the lower end of this range of 25% (ie 25% of the customers of the aviation industry and energy suppliers who offer offset, would buy them).

58. A mandatory Code would have a number of implications for the offsetting industry:

- As in Option 3a, a Code based on verified emissions reductions would increase the demand for EUAs and CERs. The effects would be the same under this option – no increase in price, but an increase in the demand and supply of CDM projects.
- This option would halt the established market for VERs and have consequences for the countries in which these projects take place, since investment would be transferred to locations involved in the CDM. It would also have implications for businesses supplying VER credits to consumers (which includes the majority of the current offset providers market). The firms would have to change their businesses in line with the Code, which could be problematic if the supply of CDM credits did not respond fast enough to the increased demand.

59. In terms of timing, a mandatory scheme would take longer to implement than a voluntary scheme due to the need for legislation and a reasonable phasing-in period. This would have the effect of prolonging uncertainty about offsetting, which would counteract any increases in certainty gained through the implementation of a mandatory (rather than a voluntary) scheme.

COSTS AND BENEFITS

Sectors and groups affected

60. The proposal will potentially affect the following sectors and groups:

- All those involved in the supply and trading of carbon credits (CERs, EUAs, ERUs, VERs);
- Offset providers and businesses providing offsets as part of a package of goods and services;
- Consumers (current and potential, individual and corporate) of the aforementioned offset providers;
- Organisations developing and investing in emissions reduction projects.

61. A marketing campaign to explain the role of off setting in tackling climate change and to promote the Code will be necessary to encourage increased awareness and consumer take up.

Analysis of costs and benefits

62. The do-nothing scenario was outlined above. This section assesses the magnitude of some of the effects in that scenario, and compares the other options to it in terms of their probable outcomes under a number of headings.

Compliance costs

63. In the do-nothing scenario, the industry is expected to develop its own carbon offsetting standards, which would converge over time. Once the standard was in place, the industry would face some costs of complying with the standard. These set-up and compliance costs would depend on the level of rigour of the standard adopted, but could include the costs associated with establishing a monitoring and reporting protocol to assess the additionality of emissions reduction projects and verify the emissions reductions being claimed.

64. An exact figure for these costs is not known, but would be significant, due to the lack of an established framework for the banking and verification of VERs.

65. Options 2a and 2b would be based around the same credits as Option 1, so the set-up and compliance costs would be similar.

66. In contrast, Options 3a and 3b would operate within the existing framework of CERs. Thus compliance costs would be limited to the cost of setting up an account to purchase and cancel the credits, and participation in the carbon market. The cost of setting up an account for non EU ETS participants is currently **£175 per firm** (one-off cost). This cost would apply to any offset

suppliers choosing to participate under Option 3a, or all firms under Option 3b, since compliance with the Code would be mandatory under the latter.

Enforcement costs

67. Under all the options considered an independent organisation would be required to accredit products and monitor the use of the quality mark. This would incur a cost for offset providers to cover the costs of accreditation. A voluntary scheme would provide the offset provider with added value to differentiate and promote the quality of their product to the consumer. Accreditation would therefore have a market value, and so under a voluntary Code (Options 1, 2a and 3a) the costs of enforcing the scheme would be charged to those offset providers who wish to use the accreditation quality mark. Based on accreditation schemes in other industries (such as the Organic Register which registers approved Organic Certification Bodies, such as the Soil Association), this cost could be in the region of **£1000 – 5000 per business** per annum, possibly varying according to firm size or turnover. This cost would be similar, regardless of whether the Code was administered by industry or Government. The costs will depend upon the procedures and information required for demonstrating compliance, to be determined following the consultation.
68. Under a mandatory scheme (Options 2b and 3b) the enforcement costs would be similar, but would not necessarily fall on industry, since firms would not be able to use the accreditation quality mark to add value to their products.

Cost to consumers

69. As already discussed, the preferred credits for offsetting are likely to be CERs. Although voluntary, the purchase of offset products by consumers represents a cost, since by purchasing CERs from overseas CDM projects, the money is transferred away from the UK economy. The cost of offsetting one tonne of CO₂ varies depending on the type of credit used for offsetting. VERs range in price from £2 to £25, while CERs are expected to be similar in price to EUAs in Phase II of the EU ETS. The current estimated range for the price of Phase II EUAs is €5 – €40 (£3.40 – £27.10). Central estimates used in this RIA are £7.50 for VERs and €25 (£16.90) for CERs, based on expected future market conditions.
70. The costs of offsetting to an individual consumer can be presented as representative figures based on the above credit costs; for example, the central estimated cost of offsetting an average household's annual domestic energy use could range from £42 to £95 depending on the price of carbon credits. Costs would be higher under Options 3a and 3b, since CERs are, on average, generally more expensive than VERs.

71. Aggregate consumer costs can be obtained by making various assumptions about the proportion of firms adopting offsetting schemes, and consumer take-up of these schemes. Assumptions on take-up are outlined in the options above. Business involvement is assumed to be between 30% and 95% for voluntary schemes (Options 1, 2a and 3a) and 95% for mandatory schemes (2b and 3b), since 100% compliance is unrealistic. Again, **costs are higher under Options 3a and 3b, but this is because more emissions are offset.** These reduced emissions are examined below.

Benefit of reduced emissions

72. The benefit of each of the options in terms of reduced emissions can be estimated by multiplying the emissions offset (in tonnes of CO₂ per annum) by a monetary valuation of the removal of 1 tonne of CO₂e from the atmosphere. This monetary valuation is derived from the social cost of carbon, currently **£86 per tonne of carbon.**

73. This value has been calculated according to guidelines drawn up by the Government's inter-departmental analysts group (IAG) www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/greengas-policyevaluation.pdf. It should be noted that this benefit will increase over time, since the social cost of carbon rises by £1 per year in real terms.

74. The benefits for each option are presented as a range, according to the same parameters as the costs to consumers above – see Table 1 below. Due to the higher levels of take-up expected from a scheme based around CERs, **Options 3a and 3b have significantly higher expected benefits than other options.**

Effects on the markets for CERs, VERs and other carbon credits

75. A Code allowing VERs (as in Options 1, 2a and 2b) would not have any significant impact on carbon credit markets, since this does not represent a step-change from the current situation. However, only allowing certified credits (as in Options 3a and 3b) is likely to provide a boost for the CDM market, therefore having a direct effect on UK companies investing in these projects. Option 3b would dictate this change whereas option 3a would allow industry players to decide. The VER market would not be stimulated through options 3a and 3b, but demand for these credits would not necessarily reduce under a voluntary Code (at least in the short term), since any growth in demand for CDM is likely to be due to increases in offsetting as a whole, rather than at the expense of the existing VER market.

76. A mandatory scheme for certified credits (Option 3b) would halt the use of VERs in the UK. This would have a negative effect on UK companies involved

in selling and investing in VERs and they would have to invest in changing their business. However, any losses in the VER market would occur at the same time as increases in demand for CERs. Hence although the exact magnitude of these effects is uncertain, for the purposes of this RIA it is assumed that the net effect would still be positive, i.e. **benefits to the CDM market (in terms of increased employment, etc.) would more than make up for any costs to the VER market.**

77. The effects of these options on the emissions reductions projects themselves, for example in terms of local employment in project locations, is assumed to be outside the scope of this RIA.

Timescales

78. Although not strictly a cost, the timescale for implementation of a Code under each of the options is also an important factor in deciding how to proceed. Under the do-nothing scenario, it could take industry around 5 years to develop a single standard for offsetting. Under a voluntary Government-initiated Code using CERs (Option 3a), the timescale would be considerably shorter, around 6 months. Basing a standard on VERs would add at least another 12 months due to the extra complexity and lack of an existing framework for these credits. Furthermore, as discussed under Option 2a, it would take time for the various industry standards to converge under this scenario, to the extent that the ultimate timescale under Option 2a would be similar to that of the do-nothing scenario. There would be no need for convergence under Option 3a, as the Government standard would be more rigorous than any of the standards currently proposed by industry, and would therefore be expected to quickly emerge as the market leader.

79. Making the Code mandatory (Options 2b and 3b) would remove the need for standards to converge, but would require legislation, which would add at least 6 months to the time required to develop the Code.

Summary of costs and benefits

80. The table below summarises the central estimates for costs and benefits of each option. Costs and benefits are quantified where possible, but due to the uncertainty surrounding a number of factors including consumer take-up of offsetting under each scenario, and the future price of carbon credits which have generally been calculated as ranges. Table 1 shows a summary of costs and benefits, using the central estimates, and based on a series of assumptions about the most likely outcomes. The full costs and benefits ranges, based on a number of scenarios, are presented at Table 2.

81. It is clear from the Table that a Code based on CERs (Options 3a and 3b) is the best way forward, due to the higher levels of estimated take-up associated with this type of scheme, and hence the greater impact on CO₂e emissions.
82. The preferred option is for this Code to be voluntary (Option 3a), due to the shorter timescale needed for implementation, and the lower burden of regulation compared to a mandatory scheme. In addition, it is expected that a voluntary scheme is more likely to deliver slightly higher levels of take-up, since firms could use the quality mark as a selling point to encourage consumers to participate in their offsetting schemes. Under a mandatory scheme, firms would find it harder to differentiate their products, since all firms would be obliged to adhere to the Code.

Table 1: Summary of Costs and Benefits (Central Estimates)

	Option 1 - do nothing Take-up 5%; Business involvement 60%; VER price	Option 2a - voluntary, VERs Take-up 5%; Business involvement 60%; VER price	Option 2b - mandatory, VERs Take-up 7.5%; Business involvement 95%; VER price	Option 3a - voluntary, CERs Take-up 30%; Business involvement 60%; CER price	Option 3b - mandatory, CERs Take-up 25%; Business involvement 95%; CER price
Costs					
Compliance cost (one-off)	Establishment of monitoring and reporting protocol - significant	Establishment of monitoring and reporting protocol - significant	Establishment of monitoring and reporting protocol - significant	£175 per company	£175 per company
Enforcement cost (per annum)	£1000-5000/company	£1000-5000/company	£1000-5000/company	£1000-5000/company	£1000-5000/company
Cost to consumers	per tonne CO ₂	£7.50	£7.50	£7.50	£16.90
3.36	per return flight to New York	£12.60	£12.60	£12.60	£28.39
5.65	per annual energy bill	£42.35	£42.35	£42.35	£95.43
	total (overall) per annum - £m	47.4	47.4	112.6	642.2
Cost to VER project providers in the UK	no change	no change	no change	neutral	negative
Benefits					
Reduced emissions (per annum)	per tonne of carbon	£86	£86	£86	£86
	per tonne CO ₂	£23.45	£23.45	£23.45	£23.45
	total (overall) - £m	125.6	125.6	298.3	753.6
	total (overall) - mT CO ₂ e	5.4	5.4	12.7	32.1
Benefit to CDM project providers in the UK	no change	no change	no change	positive	Positive (> costs to VER providers)
Timescale for implementation	5 years	5 years	2 years	6 months	1 year

NB. 'Total emissions' refers to emissions offset in the aviation and energy supply sectors. All figures are based on CO₂ emissions in 2005 and are therefore indicative.

Table 2: Summary of Costs and Benefits (Using a range of scenarios)

		Option 1 - do nothing		Option 2a - voluntary, all credits		Option 2b - mandatory, all credits		Option 3a - voluntary, CERs		Option 3b - mandatory, CERs	
		<i>Take-up 5%; Business involvement 30-95%; VER prices</i>		<i>Take-up 5%; Business involvement 30-95%; VER prices</i>		<i>Take-up 5-10%; Business involvement 95%; VER prices</i>		<i>Take-up 20-60%; Business involvement 30-95%; CER prices</i>		<i>Take-up 20-60%; Business involvement 95%; CER prices</i>	
Compliance cost		Establishment of monitoring and reporting protocol - significant		Establishment of monitoring and reporting protocol - significant		Establishment of monitoring and reporting protocol - significant		£175 per company		£175 per company	
Enforcement cost		£1000-5000/company		£1000-5000/company		£1000-5000/company		£1000-5000/company		£1000-5000/company	
Cost to consumers		<i>Lower</i>		<i>Upper</i>		<i>Lower</i>		<i>Upper</i>		<i>Lower</i>	
<i>per tonne CO2</i>		£2		£25 £2		£25 <i>Upper</i>		<i>Lower</i> <i>Upper</i>		<i>Lower</i> <i>Upper</i>	
1.68 <i>per return flight to New York</i>		£ 3.36	£ 42.00	£ 3.36	£ 42.00	£2	£25	£3.40	£27.10	£3.40	£27.10
5.65 <i>per annual energy bill</i>		£ 11.29	£ 141.17	£ 11.29	£ 141.17	£ 3.36	£ 42.00	£ 5.71	£ 45.53	£ 5.71	£ 45.53
<i>total (aviation) - £m</i>		1.0	38.2	1.0	38.2	£ 11.29	£ 141.17	£ 19.20	£ 153.02	£ 19.20	£ 153.02
<i>total (household) - £m</i>		4.4	173.7	4.4	173.7	3.1	76.5	6.5	497.0	20.7	497.0
<i>total (overall) - £m</i>		5.4	212.0	5.4	212.0	13.9	347.5	29.7	2258.2	94.1	2258.2
Cost to VER project providers in the UK	no change	no change	no change	neutral	negative	17.0	423.9	36.3	2755.3	114.8	2755.3
Benefits											
Reduced emissions		<i>per tonne of carbon</i>		<i>Lower</i>		<i>Upper</i>		<i>Lower</i>		<i>Upper</i>	
<i>total (aviation) - £m</i>		£86	£86	£86	£86	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>
<i>total (household) - £m</i>		11.3		35.9		11.3		35.9		£86	
<i>total (overall) - £m</i>		51.5	163.0	51.5	163.0	35.9	71.7	45.3	430.5	143.5	430.5
<i>total (aviation) - mT Co2</i>		62.8	198.9	62.8	198.9	163.0	326.0	205.9	1955.9	652.0	1955.9
<i>total (household) - mT CO2</i>		0.5	1.5	0.5	1.5	198.9	397.7	251.2	2386.4	795.5	2386.4
<i>total (overall) - mT CO2</i>		2.2	6.9	2.2	6.9	1.5	3.1	1.9	18.4	6.1	18.4
Benefit to CDM project providers in the UK		2.7	8.5	2.7	8.5	6.9	13.9	8.8	83.4	27.8	83.4
Benefit to CDM project providers in the UK		no change	no change	positive	positive (> cost to VER providers)	8.5	17.0	10.7	101.7	33.9	101.7
Timescale for implementation		5 years		5 years		2 years		6 months		1 year	
Notes		All figures are based on CO2 emissions in 2005, and are therefore indicative		All figures are based on CO2 emissions in 2005, and are therefore indicative		All figures are based on CO2 emissions in 2005, and are therefore indicative		All figures are based on CO2 emissions in 2005, and are therefore indicative		All figures are based on CO2 emissions in 2005, and are therefore indicative	

Further Notes:

Return flight to New York calculated on the basis of emissions of 1.68 tonnes CO2 (other climate change effects are not considered)

Annual energy bill calculated on the basis of emissions of 5.65 tonnes CO2

Assumptions about take-up and business involvement are outlined under each option in the table

All other assumptions are explained in the main text of the RIA

Small firms impact test

83. The offsetting market is largely populated by small firms. The proposal for a voluntary standard is designed to keep administrative costs to a minimum, whilst maintaining a robust standard of verification for offsetting. If, as under the preferred option, the enforcement of the Code was self-financing, the costs per company for accreditation of their offset product(s) and using the quality mark would be in the region of £1000 - 5000. A smaller fee would be charged each year to maintain accreditation.
84. The impact on small firms will be further informed by this consultation.

Competition assessment

85. Developing a Code, either voluntary or mandatory, is likely to have some effect on competition, since it implicitly favours firms who already conform to it, or are already planning to change their business models in the near future in a way which will bring them in line with the Code. However, an assessment of the extent of this effect requires a more detailed examination of the markets to which the proposal applies.
86. The most obvious market where competition issues could arise as a result of this proposal is the market for the provision of offsetting services, since these firms would be most directly affected by the introduction of a Code. This market does contain some large and some small firms, but this proposal is not expected to affect small firms any more than large firms. Any compliance costs as a result of this proposal are not expected to be large relative to the turnover of most of these firms, although there is more chance that this could be a problem under a mandatory scheme.
87. The proposal could affect market structure amongst offset providers, since firms already complying with the proposed standard may gain a head start, and Option 3b effectively rules out a large proportion of the current market. However, whilst a mandatory Code would restrict the provision of certain offset products in the UK market, a voluntary scheme as in Option 3a would not explicitly affect the ability of offsetting firms to choose the price and quality of their products.
88. None of the options discussed would penalise new firms, or those wishing to enter the market.
89. Bearing all these factors in mind, it is unlikely that any voluntary Code (as in Options 2a and 3a) would have a significant impact on competition. However, the same certainty cannot be applied to mandatory schemes as suggested in Options 2b and 3b.

Enforcement, sanctions and monitoring

90. All of the options considered above would involve the development of a quality mark which could be used by offset providers to demonstrate to consumers that a particular product was accredited under the Code. Appropriate use of the quality mark would be enforced by a third party, to be decided during the consultation period.
91. Under a voluntary scheme, accreditation would have a market value, and it is therefore proposed that the costs of enforcing the scheme should be charged to those offset providers who wish to use the accreditation quality mark. This is taken into account in the analysis of cost and benefits above.
92. Under a mandatory scheme, accreditation would not have a market value, since all firms would have to abide by the Code. It might, therefore, be inappropriate to levy a fee on offset providers, and alternative funding sources might be necessary.
93. This consultation process will be used to develop an appropriate strategy of enforcement and monitoring for the recommended option.

Implementation and delivery plan

94. To be completed after consultation

Post-implementation review

95. To be completed after consultation

Recommendation

96. Given the preceding analysis, **the option recommended is Option 3a**, to introduce a voluntary Code governing the supply of offsetting services, based on CERs, EUAs, and ERUs. Informal consultation suggests a number of significant players are willing to adopt this standard meeting the proposal's objectives, without the added burden of regulation that would have to be borne under a mandatory scheme. In addition, it minimises the potential competition impacts of the proposal.
97. The use of a voluntary scheme will allow the VER market to choose adapt to changing demand. It will enable offset providers to gradually enter the regulated market by seeking accreditation for certain products. The voluntary standard could potentially encourage the market to develop a robust system for the quality control, verification and tracking of VERs.

Annex B Glossary of terms and acronyms

Annex 1 Countries – A country with a target inscribed in Annex B of the Kyoto Protocol. This includes the industrialized countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States. The full list is available on the following website.
http://unfccc.int/essential_background/convention/background/items/1346.php

Assigned Amount Units (AAU) – all countries with Kyoto targets will be issued with AAUs which will set a cap on their emissions for the period 2008-2012.

Brokerage – The carbon offsetting market has brokers (like in other financial markets) to assist clients in understanding the market, structuring terms for buying on the market, negotiating and executing the deal for buying credits both from the EU ETS and CDM markets.

Carbon offsetting – Involves buying emission reduction credits generated by projects and activities that reduce carbon emissions.

Cancellation (voluntary) – A means of removing allowances and units from the Emissions Trading Market. Once units / allowances have been cancelled they can no longer be bought, traded or used for compliance. All types of units and allowances can be voluntarily cancelled.

Certified Emissions Reductions (CERs) – These are tradable units generated by projects in developing countries (non-Annex 1 Parties) under the Clean Development Mechanism (CDM). They may be counted by Annex 1 Parties towards compliance with their UN and EU emissions target and are equal to one tonne of carbon dioxide equivalent gases.

Clean Development Mechanism (CDM) – One of the so-called “flexible mechanisms” under the Kyoto Protocol. The Protocol provides for a CDM in Article 12 as a means for companies to undertake projects in countries without a Kyoto target (non-Annex I Parties, i.e. developing countries) which reduce their emissions of greenhouse gases and contribute to sustainable development. Such projects are then credited with “Certified Emissions Reductions” (CERs).

Clean Development Mechanism (CDM) credit supplier – Any entity which has successfully applied for a CDM certificate, thereby generating a saleable Certified Emissions Reduction (CER).

CO₂ – Carbon Dioxide.

Carbon Dioxide Equivalent (CO₂e) – A measure used to compare the emissions from various greenhouse gases based upon their global warming

potential. For example, the global warming potential for methane (CH₄) over 100 years is 21. This means that emissions of one million metric tons of methane is equivalent to emissions of 21 million metric tons of carbon dioxide.

Certified credits – Internationally recognised carbon credits from the regulated market. These credits can be used for compliance with legal obligations (for instance under the Kyoto Protocol or EU Emissions Trading Scheme) or for voluntary offsetting.

Double Counting – When a carbon reduction is counted twice. This can either happen at a project level where credits are sold two or more times and/or at a national level where voluntary reductions are counted against national mandatory targets.

Emission Reduction Units (ERUs) – These are tradable units generated by projects in developed countries (Annex 1 Parties) (Joint Implementation). Emissions Reduction Units are converted from AAUs and Annex 1 Parties may count them towards compliance with their emissions target. Each ERU is equal to one tonne of carbon dioxide equivalent gases.

Emissions Trading – This is emerging as a key instrument in the drive to reduce greenhouse gas emissions. The rationale behind emission trading is to ensure that the emission reductions take place where the cost of the reduction is lowest thus lowering the overall costs of combating climate change.

Emissions Trading is particularly suited to the emissions of greenhouse gases, the gases responsible for global warming, which have the same effect wherever they are emitted. This allows the Government to regulate the amount of emissions produced in aggregate by setting the overall cap for the scheme but gives companies the flexibility of determining how and where the emissions reductions will be achieved. By allowing participants the flexibility to trade allowances the overall emissions reductions are achieved in the most cost-effective way possible.

Participating companies are allocated allowances, each allowance representing a tonne of the relevant emission, in this case carbon dioxide equivalent (CO₂e). Emissions trading allows companies to emit in excess of their allocation of allowances by purchasing allowances from the market. Similarly, a company that emits less than its allocation of allowances can sell its surplus allowances. The environmental outcome is not affected because the amount of allowances allocated is fixed.

EU Allowance (EUA) – These units are specific to the EU emission Trading Scheme, (EU ETS) which started in 2005, and are equal to one tonne of carbon dioxide equivalent gases. They are valid for use within the Community scheme and wherever there is an agreement to link the EUETS with another greenhouse gas emissions trading scheme in accordance with Article 25 of the Emissions Trading Directive).

European Union Emission Trading Scheme (EU ETS) – A trading scheme across Europe to reduce emissions of carbon dioxide and combat the serious threat of climate change. Phase I of the Scheme began on 1 January 2005 and will run until 31 December 2007. Phase II will run from 2008-2012 to coincide with the first Kyoto Protocol commitment period.

(<http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm>)

Ex-ante – ‘Beforehand’, ie expected in the future in the light of present plans. This means in terms of carbon credits that the reduction is estimated but has not yet been achieved.

Ex-post – ‘After the fact’, ie the emission reductions of a carbon credit are known and have already occurred.

Government Carbon Offsetting Fund (GCOF) – To offset travel from official and Ministerial air travel from April 2006

Greenhouse Gases – These usually include, the gases identified in the Kyoto Protocol;

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulphur hexafluoride (SF₆)

The EU ETS currently covers only CO₂ emissions, whilst the CDM and JI projects can cover all six of the gases.

Installation – An installation is a physical site that emits greenhouse gases. Each installation has a corresponding account in the national registry. The account must be held in the national registry of the country in which the greenhouse gases are emitted.

ISO 14064 – The ISO 14064 standards for greenhouse gas accounting and verification published on 1 March 2006 by ISO (International Organization for Standardization) provide government and industry with an integrated set of tools for programmes aimed at reducing greenhouse gas emissions.

Joint Implementation projects (JI) – A means for companies in developed countries to undertake emission reduction projects in other countries with a Kyoto target (Annex I).

Kyoto Protocol – The Kyoto Protocol to the United Nations Framework Convention on Climate Change strengthens the international response to climate change. Adopted by consensus at the third session of the Conference of the Parties (COP3) in December 1997, it contains legally binding emissions targets for Annex I (developed) countries for the post-2000 period.

Kyoto Units – These may be used by Annex 1 Parties towards compliance with their emissions target and are all equal to one tonne of carbon dioxide equivalent. AAUs, RMUs, ERUs, CERs are all described as Kyoto Units.

Non-annex 1 countries – Mostly developing countries. Certain groups of developing countries are recognized by the UNFCCC as being especially vulnerable to the adverse impacts of climate change, including countries with low-lying coastal areas and those prone to desertification and drought (http://unfccc.int/parties_and_observers/items/2704.php).

Non-certified credits – Carbon credits from the non-regulated market. These credits are used for voluntary offsetting.

Non-regulated market – The market that has developed for voluntary offsetting and involves trading carbon credits known as VERs.

Offset company – A company whose core business is the provision or marketing of offsets either directly to the public or as a service provider to another organisation to allow their consumers to offset.

Offset provider – Includes both offset companies that sell direct to consumers and businesses other than offset companies that provide offsets to their customers.

Regulated market (also known as the Compliance Market) – This is the carbon market for demonstrating compliance against the Kyoto Protocol or the EU Emissions Trading Scheme and includes the use of CERs, EUAs, AAUs and ERUs.

Retirement – The process whereby an EU Member State demonstrates compliance with their EU Emissions Target and a Party to the Kyoto Protocol demonstrates compliance with their target under the Kyoto Protocol.

UNFCCC (United Nations Framework Convention on Climate Change) – Sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. 189 countries have ratified the Convention [there a couple of notable exceptions].

Voluntary Emissions Reduction Credits (VERs) – Differ from all the other carbon credits in that they are not recognised by, and do not form part of, the Kyoto protocol or EU ETS. They are not verifiable in the same way as other carbon credits but they can often be linked to small, non-industrial projects.

PB 12374

**Nobel House
17 Smith Square
London SW1P 3JR**

Telephone: 020 7238 6000

www.defra.gov.uk

