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# Draft Code of Best Practice for Carbon Offset Providers

## Accreditation requirements and procedures

February 2008



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procedures

Draft for comment

## Code of Best Practice for Carbon Offset Providers

AEA Energy & Environment have been selected by Defra to be the Accreditation Body for their Code of best practice for selling carbon offsetting. This voluntary Code sets standards for how offsets are sold to consumers. The offsetting industry is invited to comment on the procedures for accreditation outlined in this draft Code.

Responses to this draft Code should be sent to:

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Please forward all comments by midday on March 31<sup>st</sup> 2008.

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# 1 Introduction to the Code

Climate Change is one of the biggest threats facing us. Government, businesses and individuals are all responsible for reducing the carbon emissions they create. However, some emissions are unavoidable and in such situations we can choose to offset our emissions. For individuals this often involves voluntary offsetting. Voluntary offsetting involves paying someone else to save carbon equivalent to the carbon you have emitted, despite there being no statutory obligation to do so. The Government acknowledges that voluntary offsetting is not a 'cure' for climate change, the most effective way to combat climate change is to reduce our emissions. However, voluntary offsetting can reduce the impact of our actions and help raise awareness of the issue.

This document is the Government's Code of best practice ('the Code') for voluntary offset products. It sets out best practice requirements for voluntary offset products. Voluntary offset products that meet these requirements may be accredited under this Code and will be awarded a quality mark so that individual or business consumers can easily recognise that they comply with this Code. This Code has been initiated and its development funded by Government and is managed by the Accreditation Body.

In setting best practice requirements for voluntary offset products this Code helps consumers make informed choices as to the products they purchase and gives them confidence in the environmental integrity of those products. This Code also enables consumers to understand better the role of offsetting in tackling climate change.

In setting up these standards for voluntary offset products the Code also aims to:

- 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;
- Increase customer confidence in the integrity and value for money of the offsetting accredited offsets available to them; and
- Increase consumers's understanding of offsetting and of its role in addressing climate change.

Seeking accreditation under this Code is voluntary, i.e. offset providers can choose to seek accreditation for the offsets they sell. Offset providers who sell accredited offsets will not be prevented from selling offsets that may not meet the Code, but may only use the quality mark for products that have been accredited.

The Code will be reviewed annually to ensure continual improvement. For example, if the voluntary offsetting industry develops a good quality standard for Voluntary Emissions Reduction projects/credits, subject to an independent audit and subsequent Government decision, such credits may be permitted to be used as part of a voluntary offset product accredited under this Code.

This Code has been developed following a statutory consultation launched in January 2007. The consultation and the responses can be viewed at <http://www.defra.gov.uk/corporate/consult/carbonoffsetting-cop/index.htm>.

This document is the draft Code and we welcome your comments on it. There are specific questions at Annex 3.

## **Role of the Accreditation Body**

The Accreditation Body will manage the Code. This will involve maintaining the accreditation website, assessing applications, awarding accreditation to accredited offsets and issuing the quality mark. The Accreditation Body will monitor and ensure compliance with the requirements of the Code and the use of the quality mark.

The accreditation will be self-financing, ie companies wishing to be accredited will have to pay for this service. This recognises the commercial value attached to using the quality mark.

### **Who is this Code for?**

Any offset provider can seek accreditation for a specific voluntary offset product that they sell. An 'offset provider' is a company/organisation who sells offsets to consumers. The offset provider is the company that sells the offset to the end consumer. As such, any company selling accredited offsets along with another product, such as a flight, will also need to be accredited. They may only sell offsets or they may sell offsets with other goods or services (for example an airline may sell an offset with a flight). Offset providers do not have to be based in England to apply for accreditation of any of their voluntary offset products and to use the quality mark.

An offset provider may directly fund a project that generates credits permitted to be accredited under this Code or they may buy such credits from an intermediary such as a broker or another offset provider.

An offset can become an 'accredited offset' if it meets all of the criteria set out in this Code. The best practice requirements ensure only robust verified offsets are sold, emissions are calculated correctly and clear and transparent information is provided to consumers.

### **Information for consumers**

Ultimately this Code aims to provide confidence and clarity to consumers. If a consumer, whether an individual or a business, wishes to learn more about offsetting more information is available from [www.direct.gov.uk/en/Environmentandgreenerliving/Greenerlivingaquickguide/DG\\_070060](http://www.direct.gov.uk/en/Environmentandgreenerliving/Greenerlivingaquickguide/DG_070060).

### **Contents of the Code**

The remaining sections detail the different requirements and components of the accreditation processes and the role of the Accreditation Body. The sections are:

- Accreditation process
- Calculation of emissions
- Environmental integrity
- Purchasing and cancelling credits
- Consumer information
- Quality mark
- Role of the Accreditation Body

## 2 The Requirements of the Code

The following boxes set out the core requirements of the Code. To be accredited and awarded with the quality mark an offset must meet all of the requirements set out in this document. Further detail on how to comply is provided in remaining sections of the Code:

<b>Administration</b>	<ol style="list-style-type: none"> <li>1. Offset providers must pay a fee in relation to their product for it to be assessed and accredited.</li> <li>2. A signed declaration will be required from the primary applicant stating that they will abide by the Code.</li> <li>3. Accredited offsets must continue to meet the requirements of the Code throughout the accreditation period (12 months from the granting of accredited status) unless the accreditation body is informed in writing that accreditation is no longer wanted.</li> </ol>
<b>Calculating Emissions</b>	<ol style="list-style-type: none"> <li>1. Offset providers must calculate emissions to be offset accurately, using the factors provided for in this Code.</li> <li>2. The factors to be used shall be included in the application.</li> <li>3. Only direct carbon emissions<sup>1</sup> can be offset using accredited offsets.</li> <li>4. Where applicable an offset provider may make an application to the accreditation body if they wish to propose a specific emission factor which is not listed in this Code. These factors must be agreed by the Accreditation body before they can be used.</li> <li>5. Offsets will only be accredited if they calculate emissions from a particular activity or over a period of time.</li> </ol>
<b>Environmental Integrity</b>	<ol style="list-style-type: none"> <li>1. Accredited offsets must only include Kyoto compliant credits.</li> <li>2. If an accredited offset includes credits from forestry (tCERs and ICERs) the offset provider must guarantee that the credits will be renewed or replaced once they expire.</li> <li>3. Credits to fulfil a consumer's purchase should be bought within 6 months of the transaction.</li> <li>4. They should be retired from the Environment Agency's registry within 5 days of purchase.</li> <li>5. Offset providers must be able to provide evidence that this has occurred to the accreditation body.</li> </ol>
<b>Consumer Information</b>	<ol style="list-style-type: none"> <li>1. Offset providers will provide general information about climate change and the importance of reducing a carbon footprint to consumers.</li> <li>2. Offset providers will provide explanatory information to consumers about the role of offsetting in contributing to tackling climate change.</li> <li>3. Clear and transparent pricing should as a minimum be provided at the point of sale.</li> <li>4. Marketing materials should accurately reflect the nature of the offsets being sold.</li> </ol>
<b>Quality Mark</b>	<ol style="list-style-type: none"> <li>1. Only accredited offsets can display the quality mark.</li> <li>2. The quality mark will be copyrighted and only those offset providers licensed to use it can do so.</li> <li>3. The terms of the licensing agreement covering the use of the Quality mark shall be adhered to.</li> <li>4. Sellers of accredited offsets must follow the guidelines for how and where to use the quality mark.</li> <li>5. An offset provider will distinguish the accredited offsets from any offsets it may sell which are not accredited.</li> </ol>

<sup>1</sup> I.e. emissions directly associated with end-user activity for example electricity and fossil fuel use directly associated with an individual or an organisations activities such as flying, heating a home or office, use of electrical equipment. The Code is not yet intended for use by organisations wishing to offset emissions associated with the manufacture of products – 'indirect' or "embodied" emissions.

## Accreditation Code for carbon offset providers

In addition to the requirements for applicants to the accreditation scheme, this Code sets out the role of the Accreditation Body:

### Role of the Accreditation Body

1. The Accreditation Body will manage a web-based application process
2. Queries about the Code and the accreditation process should be sent to the Accreditation Body.
3. Compliance with the Code will be regulated by the Accreditation Body.
4. Complaints against an accredited offset should be sent to the Accreditation Body.
5. Complaints regarding an accreditation decision should be sent to the Accreditation Body and may be dealt with by an industry panel.

## 3 Accreditation

### 3.1.1 Requirements

1. Offset providers must pay a fee to be assessed and accredited.
2. A signed declaration will be required from the primary applicant stating the intention to abide by the Code.
3. Accredited offsets must continue to meet the requirements of the Code throughout the accreditation period (12 months from the granting of accredited status) unless the Accreditation Body is informed in writing that accreditation is no longer wanted.

### 3.1.2 Explanation

Any provider of offsets wishing to use the quality mark must apply for accreditation. The Accreditation Body will determine that the offset meets all of the necessary criteria. Applications for accreditation will only be accepted from offset providers selling the offsets to the end consumer (whether to businesses or individuals).

#### **Application process**

Offset providers seeking accreditation for their voluntary offset products must complete an online application form and pay an initial fee. Once all information is provided the application will be logged and an acknowledgement e-mail sent to the primary contact. Details of individual applications will not be published. A signed declaration must be received from a Manager or Director at the offset provider company to confirm that all of the information provided is accurate. Accreditation will be for one calendar year. Each year offset providers can apply for a renewal of each accredited offset. These processes will be available on the accreditation body's website.

The Accreditation Body will determine new applications within 30 working days and 20 working days for renewals of accreditation. Within this time the accreditation body will write to confirm accreditation and send a countersigned copy of the licence agreement.

Applicants who are considered not to have met the Code will be given feedback on what they must do to meet the requirements, until a successful application is achieved or the application is withdrawn. No further fees will be required for that application. Fees for withdrawn applications will not be refunded.

The accreditation process is a paper exercise that does not require the Accreditation Body to visit an offset provider's premises or see physical evidence of compliance. Instead a signed declaration from Manager or Director is necessary to prove the information provided is correct.

### 3.1.3 Cost of Accreditation

The accreditation scheme will be self funding. Fees will be charged for the following activities:

- An initial application to the accreditation scheme
- Application of a non-standard emission factor
- Renewal of accreditation.

We propose that the following fees are required:

Adding an Accredited offset product to the accreditation database:	£4500
Annual accredited offset product renewal fee:	£2000
Addition of specific emission factor:	a minimum of £1000 per emission factor

**All prices exclude VAT**

**Q1: A fixed fee system is currently suggested. Are there any alternative payment methods which might be appropriate, specifically for smaller businesses? For instance it may be possible to base a charge on the size (number of employees or turnover) of the applicant or on an initial fee plus a fee per offset sold basis?**

### 3.1.4 Evidence required of applicants

#### **Accredited Offset Application Administrative Checklist**

- Company name, status (i.e. ltd, plc,), registration number at Companies House or national equivalent, and address.
- Lead contact name, telephone number and e-mail
- Cleared application fees
- A signed declaration from a Manager or Director stating that all the information provided is correct.
- Two signed copies of the licence agreement

### 3.1.5 Additional activities

The Accreditation Body will also carry out the following activities on behalf of Government:

Annual Reporting	The Accreditation Body will publish an annual report. This will report on the activities of the Accreditation Body and state of the offsetting industry, and will help educate consumers about offsetting. Accurate reporting on the industry will allow consumers to make informed decisions about purchasing accredited offsets as well as increasing consumer confidence in the integrity of the offset market. The annual report will be posted on the website. The report will also be available on the Defra website and <a href="http://www.direct.gov.uk">www.direct.gov.uk</a> .
Review of the Code	This Code, including emission factors, will be reviewed by Government (drawing on the findings of the accreditation body's report and other information) on an annual basis. The Government also reserves the right to review and modify the Code from time to time as it sees fit. Any major changes will be consulted upon and the offsetting industry will be given appropriate advance notification of any modifications made to the Code.

### 3.1.6 Industry Panel

Members of the offsetting industry and other key/interested stakeholders are invited to set up an expert panel to discuss the operation of the Code. To ensure independence there should be no involvement from Government or the Accreditation Body. The Government and the Accreditation Body will liaise with the panel when developing and revising the Code. This panel may input into the development of a standard for VERs which could allow their inclusion in the Code as set out under the Government's challenge to develop such a standard.

**Q2: Would an industry panel be a useful way of providing oversight to the Accreditation Body? If so what roles might they fulfill?**

## 4 Calculating Emissions

### 4.1.1 Requirements

1. Offset providers must calculate emissions to be offset accurately, using the factors provided for in this Code
2. The factors to be used shall be included in the application.
3. Only direct<sup>2</sup> carbon emissions can be offset using accredited offsets
4. Where applicable an offset provider may make an application to the Accreditation Body if they wish to propose a specific emission factor which is not listed in this Code. These factors must be agreed by the Accreditation Body before they can be used.
5. Offsets will only be accredited if they calculate emissions from a particular activity or over a period of time.

### 4.1.2 Explanation

#### Methodological approach

When offsetting emissions from a particular activity or over a period of time, it is important that the emissions are calculated accurately using a consistent agreed dataset and methodological approach.

Acceptable methodological approaches include:

- Defra's Company Reporting Guidelines<sup>3</sup>
- WRI Greenhouse Gas Protocol<sup>4</sup>
- ISO standards such as ISO14064

#### Emissions factors

Accredited offsets must also use the set of emissions factors included within the Code. Draft factors are attached at Annex 1. These are based on conversion factors used in the Act on CO<sub>2</sub> Calculator as well as the factors annexed to Defra's Company Reporting Guidelines. In addition to these, new factors have been developed for aviation (by seating class), as well as for other passenger transport modes (including buses, vans, taxis and cars by market segment) and for freight transport. A background note explaining how the additional and updated factors have been developed is being provided in parallel with this draft Code.

It is intended that in future conversion factors will be updated annually (in the spring) to take account of any changes to the UK UNFCCC Greenhouse Gas Emissions Inventory. Further details of this process will be published shortly within the 2008 update of the Company Reporting Guidelines. These Greenhouse Gas Conversion Factors will need to be used as a requirement of the Code and will be available on the Defra website.

Further information about the current factors annexed to the Company Reporting Guidelines and the factors used in the Act on CO<sub>2</sub> calculator can be found at:

<http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>

<http://www.defra.gov.uk/environment/climatechange/uk/individual/actonco2/index.htm>

Applicants will be able to use the factors current at the time of application for the duration of that application. A list of factors to be applied shall be submitted with the application for accreditation.

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<sup>2</sup> I.e. emissions directly associated with end-user activity for example electricity and fossil fuel use directly associated with an individual or organisations activities such as flying, heating a home or office, use of electrical equipment. The Code is not yet intended for use by organisations wishing to offset emissions associated with the manufacture of products – 'indirect' or 'embodied' emissions.

<sup>3</sup> <http://www.defra.gov.uk/ENVIRONMENT/business/envrp/index.htm>

<sup>4</sup> <http://www.ghgprotocol.org/>

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Further approved factors are set out in Annex 1. All these factors are currently draft and may change upon finalisation of the 2008 update to the Defra conversion factors for the Guidelines to Company Reporting.

This Code accredits offsets sold to cover direct end-user emissions of CO<sub>2</sub>, for example emissions from heating homes, powering appliances or fuelling transport. At this stage it does not include indirect emissions for example those associated with the manufacture of a product and the factors do not therefore cover such situations. We are aware that there is work being carried out looking to better understand the emissions arising from the manufacture of products and may allow offset providers to apply for product based offsets in future revisions of the Code.

### **Q3: How might we expand the Code to include indirect emissions and emissions of non-CO2 greenhouse gases?**

#### **Offsetting electricity**

Offset providers wishing to allow electricity use to be offset may offer emissions factors based on:

- The UK average fuel mix factor, or
- The electricity supplier's average fuel mix factor, or
- A tariff specific fuel mix factor (see also section below on specific emissions factors).

However the supplier of the offset should be clear and transparent about which emissions factor is being applied.

This requirement may be changed pending the outcome of Ofgem's deliberations on the subject of green tariffs.

#### **Offsetting flights**

It is proposed that it is up to offset providers whether or not to include a radiative forcing factor in calculating emissions from flights. The provider should make it clear if they are applying one. In line with best scientific evidence we recommend the use of 1.9<sup>5</sup>.

If an offset provider chooses not to include a radiative forcing factor, they should be clear that the product is only offsetting CO<sub>2</sub> across the range of sectors covered, and that in some areas there are wider impacts.

Alternative factors may be used. However, they should be greater than 1, and used with guidance that justifies the choice of factor. The consumer should also be referred to the accreditation website, where further information about radiative forcing will be available.

We wish to see standardisation in the way that emissions from flights are calculated in terms of the distance travelled and any uplift factors applied to account for circling and delay. However, we acknowledge that a number of methods are currently used.

### **Q4: Should aviation emissions factors be applied to great circle distances, distance bands or by city pairs? Are there any alternatives to these and what might their merits be?**

#### **Specific Emission Factors**

If an offset provider is selling an offset with services it may be appropriate to allow them to use emissions factors specific to that service. For example, if an airline sells offsets for their own fleet of planes they may have more accurate fleet-specific data. If an offset provider wishes to use a specific set of emissions factors they must request this in their application. The Accreditation Body will confirm whether it is appropriate to use data specific to that offset provider and what they offset. The factors,

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<sup>5</sup> Aviation radiative forcing in 2000: An update on IPCC (1999) Meteorologische Zeitschrift 14: 555-561

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and the supporting evidence base must be sent to the accreditation body who will review the calculation methodology.

**Q5: We are of the opinion that additional emissions factors may be proposed for surface transport, air transport and individual electricity suppliers (based on fuel mix). Do you agree with this approach? Are there any other areas where bespoke emissions factors might be applied?**

## Code of best practice for carbon offset providers

The following box provides details on how an offset provider may apply for a specific or “bespoke” emissions factor to be approved for use

### **Verification process for specific emission factors**

The offset provider will provide:

- The emission factors
- Justification for using specific data
- The data sources and methodology and techniques used in the calculation of the emission factor,

The accreditation body will check and validate the emission factors

- Proposed emission factors will be assessed against the evidence provided and the methodology proposed
- Offset provider pays fee

Additional emissions factors supplied will be kept confidential.

### **4.1.3 Evidence required of applicants**

- Details and justification of emissions factors to be applied.

## 5 Environmental Integrity

### 5.1.1 Requirements

1. Accredited offsets must only include Kyoto compliant credits.
2. If an accredited offset includes credits from forestry (tCERs and ICERs) the Offset provider must guarantee that the credits will be renewed or replaced once they expire.
3. Credits to fulfil a consumer's purchase should be bought within 6 months of the transaction.
4. They should be retired from the Environment Agency's registry within 5 days of purchase.
5. Offset providers must be able to provide evidence that this has occurred to the Accreditation Body.

### 5.1.2 Explanation

The primary aim of offsetting is to save a robust and measured amount of carbon. It is important that offsets offer genuine and verifiable carbon abatement. This Code does not set standards for the actual projects or technologies used to offset but identifies the mechanisms that are established and show best practice. Only offsets selling Kyoto compliant credits from the regulated market can be accredited, ie:

- Certified Emission Reductions (CERs).
- European Union Allowances (EAUs).
- Emission Reduction Units (ERUs).

Kyoto-compliant credits were developed as a route for Government and business to demonstrate compliance against targets. By cancelling these credits from the Environment Agency's EU ETS registry the emissions reduction can be claimed by a consumer as a voluntary offset rather than by Government or business to demonstrate compliance. This Code sets out requirements for cancelling credits to ensure that credits sold for voluntary offsets are not used for compliance purposes.

Carbon credits from the non-regulated market are generally referred to as Verified or Voluntary Emissions Reductions (VERs). Offset projects may produce VERs whilst they are going through CDM accreditation. Only once the project has been approved under the CDM and CERs are delivered can the offset be accredited under this Code.

### Forestry: tCERs and ICERs

There is clear evidence that the permanent creation of new woodland removes carbon from the atmosphere. There are some concerns that offsetting through forestry will not carbon permanently if the woodland subsequently dies or is lost through land clearance and is not replanted. Two types of CER have been developed to cover such potentially non permanent projects. Under the CDM, forestry projects are awarded temporary credits to take into account the nature of carbon sequestration in trees. A Temporary CER (tCER) expires at the end of the 5 year commitment period following the year of issue. Long-term CERs (ICER) expire at the end of the crediting period of the project, this can be either 20 or 30 years .

This Code allows these credits to be used, to support best practice in forestry. However as these credits expire after 5 years the Code will require offset providers to guarantee the credits will be renewed or replaced once they expire. This will ensure that consumers receive the carbon saving they pay for. An additional signed declaration to this effect will be required before accreditation.

**Q6: How might an offset provider selling forestry credits best demonstrate and guarantee that the credits will be renewed or replaced?**

### 5.1.3 Purchasing and cancelling credits

#### Guidance

A consumer's activities will only be offset once sufficient credits from a carbon reduction project have been purchased and cancelled. Once credits have been cancelled they can no longer be bought, traded or used for compliance. To ensure the integrity of this Code the following deadlines must be met for credit transactions:

- Within 6 months of consumers' offset purchase, offset providers must buy necessary credits
- Once the credits have been purchased, the offset provider must cancel the appropriate amount from their Environment Agency Registry account within 5 working days.
- Offset providers will provide an annual statement of transactions and cancellations to the accreditation body

Offset providers may choose to own and operate their own registry account or allow a third party to purchase and cancel credits on their behalf. With either route the offset provider must be able to demonstrate to the accreditation body that purchases and cancellations have occurred within the timescales prescribed.

**Q7: Is 6 months + 5 days an appropriate timescale for purchasing and cancelling allowances, if not, why not, and what timescales would be appropriate?**

### 5.1.4 Evidence required of applicants

Accredited offset providers must provide statements of account for each accredited offset at accreditation +6 months and accreditation + 12 months.

The statement of account should include the following information:

- Volume of accredited offsets sold
- CITL / ITL Identification numbers for all credits bought and cancelled
- Date when each offset was sold to the consumer
- Date when each credit was purchased
- Date when each credit was cancelled

**Q8: Is it reasonable to require an accredited offset provider to make this information available?**

A random sample of transactions will be checked to ensure the purchasing and cancellation requirements have been met.

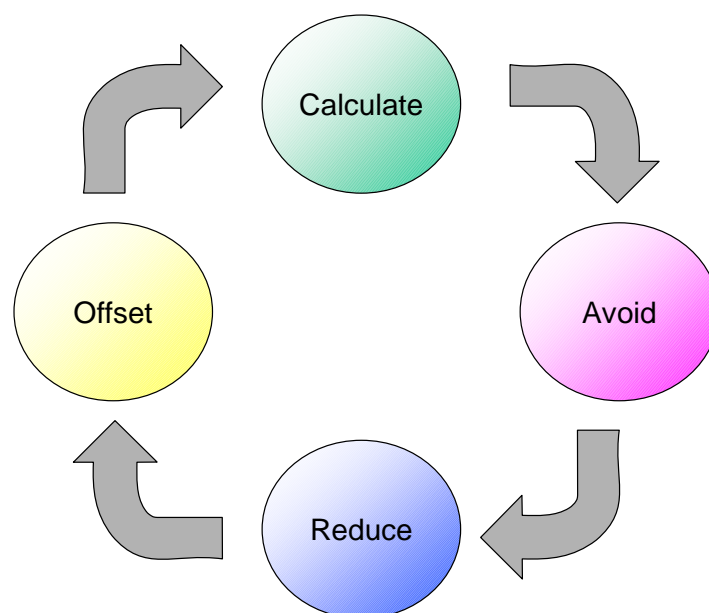
## 6 Consumer Information

### 6.1.1 Requirements

1. Offset providers will provide general information about climate change and the importance of reducing a carbon footprint to consumers.
2. Offset providers will provide explanatory information to consumers about the role of offsetting in contributing to tackling climate change.
3. Clear and transparent pricing should be provided as a minimum at the point of sale.
4. Marketing materials should accurately reflect the nature of the offsets being sold.

### 6.1.2 Explanation

It is important that clear and appropriate information is available for consumers on offsetting their emissions so that they understand what it entails and how it contributes to tackling climate change. Consumers should be encouraged to avoid and reduce their emissions prior to offsetting (see figure 1). For example, by considering whether a journey is necessary or by choosing a form of transport which produces reduced carbon emissions, rather than simply offsetting their default decision. Information provided on this may be sector specific i.e. advice on insulation for a customer wishing to offset their heating or generic advice on reducing an individual or businesses carbon footprint.



**Figure 1: Carbon reduction virtuous circle**

More information on how to avoid and reduce emissions can be found on the following websites:

**For business:**

<http://www.defra.gov.uk/ENVIRONMENT/climatechange/index.htm>

<http://www.carbontrust.co.uk>

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<http://www.businesslink.gov.uk/bdotg/action/layer?r.l1=1079068363&r.l3=1079335745&topicId=1079068363&r.l2=1079363464&r.s=m>

**For consumers:**

[http://www.direct.gov.uk/en/Environmentandgreenerliving/Greenerlivingaquickguide/DG\\_070060](http://www.direct.gov.uk/en/Environmentandgreenerliving/Greenerlivingaquickguide/DG_070060)

<http://actonco2.direct.gov.uk/index.html>

<http://www.energysavingtrust.org.uk>

**Q9: What type of information about offsetting's role in tackling climate change, and about avoiding/reducing emissions should be provided, and at what level of detail? At what point during the transaction should it be provided?**

### **Transparent Pricing**

Whether the offset is being sold as a stand alone accredited offset, or as part of a package of goods and services, the following information shall be clearly available at the point of sale.

#### **Pricing information to be shown at point of sale**

- Volume of emissions calculated to being offset (in tonnes of CO<sub>2</sub>)
- Price to the consumer per credit being purchased (£/tCO<sub>2</sub>)
- Total price of credits being purchased (£)
- Total price of offsetting service to be purchased (£)

All prices should be in pounds sterling.

**Q10: At what point during the purchasing process should transparent pricing information be displayed?**

### **Additional information which may be provided**

Offset providers may wish to provide consumers with a choice from which projects they would like to buy credits. If this occurs the offset provider will ensure and be able to demonstrate to the accreditation body, that the supply of a particular offset meets sales. In addition, marketing materials, of any form should represent the nature of the credits being sold.

Links to further sources of information on how consumers (individuals or businesses) can reduce their emissions.

### **After the transaction**

Written or e-mailed confirmation that the credits will be purchased and cancelled may be sent or emailed to the consumer. If an accredited offset provider chooses to do this then they should include links to information regarding the role of offsetting and the importance of avoiding and reducing emissions.

**Q11: When should any such confirmation be sent, bearing in mind the requirement to purchase allowances within 6 months of the offset purchase?**

## **6.1.3 Evidence required of applicants**

**Mock up or live web pages demonstrating that the following information is being provided during the sale:**

- A clear and simple explanation of offsetting and how it can help to tackle climate change.
- Information on the importance of avoiding and reducing energy consumption before considering whether to offset emissions.
- Transparent pricing as described above.

## 7 The Quality Mark

### 7.1.1 Requirements

1. Only accredited offsets can display the quality mark.
2. The quality mark will be copyrighted and only those offset providers licensed to use it can do so.
3. The terms of the licensing agreement covering the use of the Quality mark shall be adhered to.
4. Sellers of accredited offsets must follow the guidelines for how and where to use the quality mark.
5. An offset provider will distinguish the accredited offsets from any offsets it may sell which are not accredited.

### 7.1.2 Explanation

The quality mark will be used to identify accredited offsets to consumers. This mark can be used on websites, brochures and other promotional material. It can be used to distinguish accredited offsets from other offsets in the market.

The quality mark will be developed to be linked in some way to the Act on CO2 logo. A strapline will also be developed to explain what the quality mark stands for.

If an offset provider offers a range of offsets, then accredited offsets must be distinguished from those that are not accredited. The quality mark must be clearly attached to the accredited offset and separate from any not accredited, to avoid confusion. Guidelines will be provided to ensure this.

The accreditation body will conduct random checks of accredited offsets for correct use of the quality mark. The accreditation body will also carry out monitoring to ensure that no one is using the quality mark without being licensed to use it.

The quality mark will be copyrighted. Where an organisation uses the quality mark but is not authorised to do so they may be invited to apply for accreditation. In the event of continuing misuse legal proceedings could be initiated.

**Q12: Are these appropriate conditions of use for the quality mark? If not how could this be changed?**

### 7.1.3 Evidence required of applicants

- Businesses wishing to demonstrate their appropriate intended use of the quality mark may satisfy the accreditation body by providing mock ups of marketing materials (websites, brochures etc) including the logo.
- Two signed hard copies of the licence agreement will be required before accreditation. The accreditation body will sign these to confirm accreditation and send back a copy to the offset provider.

## 8 Role of the Accreditation Body

1. The Accreditation Body will manage a web-based application process.
2. Queries about the Code and the accreditation process should be sent to the Accreditation Body.
3. Compliance with the Code will be regulated and enforced by the Accreditation Body.
4. Complaints against an accredited offset should be sent to the Accreditation Body.
5. Complaints regarding an accreditation decision should be sent to the Accreditation Body and may be dealt with by an industry panel.

The Accreditation Body will hold an accreditation database to list offset providers who sell accredited offsets. This list will be available on both the Accreditation Body's website, Defra's website and [www.direct.gov.uk](http://www.direct.gov.uk).

The Accreditation Body will review the operation of the Code and the development of the offsetting market. The Code will be reviewed and updated each year, as appropriate. The Government and the Accreditation Body reserves the right to change the requirements of the Code. If changes are made to the Code, offset providers will need to meet the new requirements when their accreditation expires and they reapply for accreditation.

Fees received will be used by the Accreditation Body to:

- Review and assess the applications
- Maintain the accreditation website
- Monitor the market to ensure the requirements are being met and the quality mark is being used correctly
- Complete audits
- Ensure compliance with Code
- Respond to queries and complaints
- Provide an annual report to Defra on the scheme and state of the offsetting industry

### 8.1.1 Breaches of the Code

If an accredited offset no longer meets the requirements against which it was accredited but the offset provider continues to use the quality mark the offset provider will be in breach of the Code. Similarly if accreditation is gained through false or misleading statements accreditation will be suspended.

The licence agreement will set out the requirements which the accredited offset must continue to comply with. Where offset providers fail to comply with the requirements of the Code, they will be informed and offered the chance to correct the error within 10 working days. In the event that no corrective action is taken, the right to use the quality mark will be withdrawn. A breach of the licence agreement will be considered a breach of contract and the offset provider may be taken to court. The accreditation body will perform bimonthly reviews of the internet to check for breaches of the Code including incorrect use of the quality mark.

Where an offset provider changes the attributes of an accredited offset they should inform the accreditation body. The accreditation body will then assess the change and determine if the offset still meets the requirements of this Code or a new application for the offset has to be submitted. For example, if the offset provider's website is completely redesigned the accreditation body may need to check that the quality mark is still being used correctly and that the right consumer information is provided in the right place.

If any organisation or individual has any information on any suspected breaches of the Code, this information should be passed on to the accreditation body. Organisations deemed to be in breach of the Code, but persisting in using the quality mark and any organisations using the quality mark without having applied for accreditation will also be named on both the accreditation body's and Defra's website.

### 8.1.2 Complaints Process

If an offsetting provider has a complaint with regard to the application or audit process they should contact the accreditation body. The complaint will be considered independently of the application and audit process. Offset providers making a complaint must explain the issues in writing, within 20 working days of the matter arising. A response will be sent within a further 15 working days. If the complaint is not resolved satisfactorily it may be presented to Government.

If a consumer or stakeholder has a complaint against an accredited product, for example the offset provider is not using the quality mark correctly, they should provide details to the accreditation body. The accreditation body will then assess the issue and take any required action.

Should the offsetting industry decide to create an industry panel then we would welcome the opportunity to discuss how this panel might contribute to the resolution of complaints.

### 8.1.3 Audits

As detailed above the accredited body will conduct surveillance of the market and accredited offsets, Compliance will also be checked through auditing.

- The accreditation body will audit offset providers representing at least 5% of the total accredited offsets sold to ensure they meet the requirements of the Code.
- The selection of those providers of accredited offsets to be audited may be targeted or random.
- Offset providers will be given 4 weeks notice that they will be audited.
- It is expected that the audit exercise will be completed within 10 weeks of notice being given.

To pass the audit, offset providers must be able to provide information to prove that they meet the requirements of the Code by providing data on offsets sold and how they met the other requirements of the Code.

#### **Evidence required during auditing of accredited offset providers**

The offset provider will be required to provide the following information for each audit:

- Volume of accredited offsets sold
- CITL / ITL Identification numbers for all credits bought and cancelled
- Date when each offset was sold to the consumer
- Date when each credit was purchased
- Date when each credit was cancelled
- Evidence that the emissions to be offset were calculated correctly using the approved emission factors published by the Government.
- Evidence that the correct consumer information was provided
- Evidence that the quality mark has been used correctly

**Q13: Is it reasonable to request an accredited offset provider to make this information available?**

## **Annex 1: Emission Factors**

There are a wide variety of companies that offer the service of offsetting emissions. Each of these companies uses a variety of approaches to offsetting. This may be through how the emissions are reduced, for example buying allowances in the EU ETS market, or by reducing emissions by investing in low energy projects.

As well as offering different ways of offsetting emissions, the providers also calculate the emissions from different sources. Most use a CO<sub>2</sub>/carbon calculator, where a distance travelled or energy bill is inputted and a value for the associated emissions is calculated.

To provide a code for offsetting, a standard set of emission factors for each of the sources need to be developed to calculate the emissions. The existing factors have been developed and used as part of the Act on CO<sub>2</sub> Calculator as well as the factors annexed to Defra's Company Reporting Guidelines. These factors are updated annually (in the spring) to take account of any changes to the UK UNFCCC Greenhouse Gas Emissions Inventory and other national datasets. The new draft flight emission factors and other new transport emission factors presented in the following tables will form part of this year's update.

Further information about the current emission factors annexed to the Company Reporting Guidelines and the factors used in the Act on CO<sub>2</sub> calculator on these can be found at:

<http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>, and  
<http://www.defra.gov.uk/environment/climatechange/uk/individual/actonco2/index.htm>

The factors in this Annex will be set for the financial year 2008/2009. They will be reviewed annually in light of changes to the Defra Greenhouse Gas conversion factors and other pertinent information.

These factors include only direct emissions of CO<sub>2</sub> resulting from the use of the fuel and do not include emissions resulting from its production or extraction of primary materials/fuels.

### *Fuel CO<sub>2</sub> Conversion Factors*

The most accurate way to calculate CO<sub>2</sub> emissions for all purposes is using fuel-specific emission factors together with information on the actual quantity of fuel used. Emission factors to be used for this purpose are provided in the following Table A1 in a selection of the most common units for particular fuels. Most of the emission factors have been taken straight from the July 2007 update to the Defra conversion factors for the Guidelines to Company Reporting. These have been supplemented with emission factors for domestic coal and wood pellets for biomass heating systems developed for and used in the first version of the Act on CO<sub>2</sub> calculator released in June 2007. All these factors are currently draft and may change upon finalisation of the 2008 update to the Defra conversion factors for the Guidelines to Company Reporting. Until these are published please use 2007 Company Reporting Guidelines conversion factors<sup>6</sup>.

Offset providers wishing to allow electricity use to be offset may offer emissions factors based on:

- The UK average fuel mix factor (Table A1), or
- The electricity supplier's average fuel mix factor, or
- A tariff specific fuel mix factor (to be agreed/confirmed with the Accreditation Body).

However the supplier of the offset should be clear and transparent about which emissions factor is being applied. This requirement may be changed pending the outcome of Ofgem's deliberations on the subject of green tariffs.

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<sup>6</sup> <http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>.

**Table A1 Fuel CO<sub>2</sub> Conversion Factors**

Converting fuel types to CO <sub>2</sub>		Net CV Basis <sup>1</sup>
Fuel Type	Units	kgCO <sub>2</sub> per unit
UK Average Electricity	kWh	0.5266
Electricity from CHP <sup>2</sup>	kWh	0.2950
Natural Gas	kWh	0.206
	therms	6.023
Gas Oil	tonnes	3190
	kWh	0.265
	litres	2.674
Diesel (DERV)	tonnes	3164
	kWh	0.263
	litres	2.630
Petrol (motor spirit)	tonnes	3135
	kWh	0.253
	litres	2.315
Fuel Oil	tonnes	3223
	kWh	0.281
Burning Oil <sup>3</sup>	tonnes	3150
	kWh	0.258
	litres	2.518
Industrial Coal <sup>4</sup>	tonnes	2457
	kWh	0.346
Domestic Coal	tonnes	2523
	kWh	0.311
Marine Diesel Oil	tonnes	3190
	kWh	0.265
	litres	2.674
Compressed Natural Gas (CNG)	kg	2.728

Converting fuel types to CO <sub>2</sub>		Net CV Basis <sup>1</sup>
Fuel Type	Units	kgCO <sub>2</sub> per unit
Heavy Fuel Oil	kWh	0.280
	tonnes	3223
	litres	3.160
LPG	kWh	0.225
	therms	6.608
	litres	1.498
Coking Coal	tonnes	2810
	kWh	0.349
Aviation Spirit	tonnes	3128
	kWh	0.250
	litres	2.233
Aviation Turbine Fuel <sup>3</sup>	tonnes	3150
	kWh	0.258
	litres	2.518
Other Petroleum Gas	tonnes	2894
	kWh	0.217
Naphtha	tonnes	3131
	kWh	0.249
Lubricants	tonnes	3171
	kWh	0.263
Petroleum Coke	tonnes	3410
	kWh	0.361
Refinery Miscellaneous	kWh	0.259
	therms	7.585
Wood Pellets <sup>5</sup>	tonnes	118.8
	kWh	0.024

**Notes:**

1. Emission factors calculated on a Net Calorific Value basis. Energy and emissions are currently calculated on a Gross Calorific Value basis in the UK, however it is anticipated that in the near future calculations will be moved to a Net Calorific Value basis, which is also consistent with the European Union Emission Trading Scheme (EUETS) for CO<sub>2</sub> emissions.
2. The conversion factor for electricity from CHP may be used only for the percentage of the electricity sourced from your supplier that has been produced from CHP meeting the 'Good Quality CHP' criterion of the CHPQA programme. Otherwise the regular electricity emission factor should be applied.
3. Burning oil is also known as kerosene or paraffin used for heating systems. Aviation Turbine fuel is a similar kerosene fuel specifically refined to a higher quality for aviation.
4. Average emission factor for coal used in sources other than power stations and domestic, i.e. industry sources including collieries, Iron & Steel, Autogeneration, Cement production, Lime production, Other industry, Miscellaneous, Public Sector, Stationary combustion - railways and Agriculture. Users who wish to use coal factors for types of coal used in specific industry applications should use the factors given in the UKETS.
5. The emission factor for wood pellets for use in biomass heating systems is based on a life cycle basis, taking into account CO<sub>2</sub> adsorbed in the growth of the wood, production and transport of the pellets and direct emissions through combustion. The emission factor is adjusted to Net CV basis from 0.025 from SAP which is on a Gross CV basis, as used in the Act on CO<sub>2</sub> calculator.

*Passenger Transport CO<sub>2</sub> Conversion Factors*

The following methods of calculation of CO<sub>2</sub> from passenger transport are recommended in order of their accuracy:

- (1) It is recommended that where possible CO<sub>2</sub> emissions are calculated from the actual quantities of fuel used (i.e. in litres, tonnes, or energy units) using the factors in Table A1.
- (2) In the absence of data on actual quantities of fuel, this may be estimated from the observed average fuel consumption of the vehicle (e.g. in miles per gallon or similar units) and the distance travelled (in miles or km) and again using the emission factors in Table A1.
- (3) In the absence of fuel consumption data, manufacturer data on CO<sub>2</sub> emissions per km may be available for cars – based on the standard European test cycle. These factors must be uplifted by 15% (according to Table A3) to take into account ‘real-world’ driving conditions<sup>7</sup>.
- (4) In the absence of manufacturer data on the CO<sub>2</sub> emission factors, the average emission factors provided in Table A2 should be used. It is recommended that the highest level of detail is used (for example the specific vehicle type or engine size) where possible, rather than using the simple overall averages for a particular mode or fuel type. The emission factors for cars by size category are preferred over the alternative of market segmentation based factors.
- (5) If the actual distance travelled is unavailable, UK average values are provided for cars, motorcycles and flights in Table A3.

Many of the emission factors have been taken straight from the July 2007 update to the Defra conversion factors for the Guidelines to Company Reporting. These have been supplemented with additional emission factors and updates to the bus and passenger flight emission factors. All these factors are currently draft and may change upon finalisation of the 2008 update to the Defra conversion factors for the Guidelines to Company Reporting. Until these are published please use 2007 Company Reporting Guidelines conversion factors<sup>8</sup>.

For flights, the emissions impacts in Table A2 have been estimated based on a calculation using the average flight distance (or actual great circle) and should be increased by 9% (from Table A3) to take into account indirect routing/delays.

**Table A2 Passenger Transport CO<sub>2</sub> Emission Factors**

<b>Passenger Transport CO<sub>2</sub> Emission Factors</b>				
<b>Mode</b>	<b>Category 1</b>	<b>Category 2</b>	<b>Units</b>	<b>Emission Factor</b>
		<b><i>By Size</i></b>		
<b>Car</b>	Petrol	Small, up to 1.4 litre engine	KgCO <sub>2</sub> /vehicle km	0.1831
<b>Car</b>	Petrol	Medium, from 1.4 - 2.0 litre engine	KgCO <sub>2</sub> /vehicle km	0.2162
<b>Car</b>	Petrol	Large, above 2.0 litre engine	KgCO <sub>2</sub> /vehicle km	0.2964
<b>Car</b>	<b>Petrol</b>	<b>Average petrol car</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.2095</b>
<b>Car</b>	Diesel	Small, up to 1.7 litre engine	KgCO <sub>2</sub> /vehicle km	0.1507
<b>Car</b>	Diesel	Medium, from 1.7 - 2.0 litre engine	KgCO <sub>2</sub> /vehicle km	0.1881
<b>Car</b>	Diesel	Large, above 2.0 litre engine	KgCO <sub>2</sub> /vehicle km	0.2635
<b>Car</b>	<b>Diesel</b>	<b>Average diesel car</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.1987</b>
<b>Car</b>	Hybrid Petrol	Medium	KgCO <sub>2</sub> /vehicle km	0.1262
<b>Car</b>	Hybrid Petrol	Large	KgCO <sub>2</sub> /vehicle km	0.2240
<b>Car</b>	LPG	Medium	KgCO <sub>2</sub> /vehicle km	0.1892
<b>Car</b>	LPG	Large	KgCO <sub>2</sub> /vehicle km	0.2594
<b>Car</b>	<b>LPG</b>	<b>Average LPG car</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.2243</b>
<b>Car</b>	CNG	Medium	KgCO <sub>2</sub> /vehicle km	0.1892
<b>Car</b>	CNG	Large	KgCO <sub>2</sub> /vehicle km	0.2594
<b>Car</b>	<b>CNG</b>	<b>Average CNG car</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.2243</b>
<b>Car</b>	<b>All</b>	<b>Average car</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.2075</b>

<sup>7</sup> Real world effects not covered in regular test cycles include use of accessories (air con, lights, heaters, etc), vehicle payload (only driver +25kg is considered in tests, no passengers or further luggage), poor maintenance (tyre under inflation, maladjusted tracking, etc), gradients (tests effectively assume a level road), weather, harsher driving style, etc.

<sup>8</sup> <http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>.

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Passenger Transport CO <sub>2</sub> Emission Factors				
Mode	Category 1	Category 2	Units	Emission Factor
		<b><i>By Market Segment</i></b> <sup>6</sup>		
Car	Petrol	A. Mini	KgCO <sub>2</sub> /vehicle km	0.1622
Car	Petrol	B. Supermini	KgCO <sub>2</sub> /vehicle km	0.1769
Car	Petrol	C. Lower Medium	KgCO <sub>2</sub> /vehicle km	0.2018
Car	Petrol	D. Upper Medium	KgCO <sub>2</sub> /vehicle km	0.2198
Car	Petrol	E. Executive	KgCO <sub>2</sub> /vehicle km	0.2632
Car	Petrol	F. Luxury	KgCO <sub>2</sub> /vehicle km	0.3588
Car	Petrol	G. Sports	KgCO <sub>2</sub> /vehicle km	0.2720
Car	Petrol	H. Duel Purpose 4x4	KgCO <sub>2</sub> /vehicle km	0.3041
Car	Petrol	I. MPV	KgCO <sub>2</sub> /vehicle km	0.2438
Car	Diesel	A. Mini	KgCO <sub>2</sub> /vehicle km	0.1335
Car	Diesel	B. Supermini	KgCO <sub>2</sub> /vehicle km	0.1455
Car	Diesel	C. Lower Medium	KgCO <sub>2</sub> /vehicle km	0.1712
Car	Diesel	D. Upper Medium	KgCO <sub>2</sub> /vehicle km	0.1912
Car	Diesel	E. Executive	KgCO <sub>2</sub> /vehicle km	0.2340
Car	Diesel	F. Luxury	KgCO <sub>2</sub> /vehicle km	0.3189
Car	Diesel	G. Sports	KgCO <sub>2</sub> /vehicle km	0.2418
Car	Diesel	H. Duel Purpose 4x4	KgCO <sub>2</sub> /vehicle km	0.2703
Car	Diesel	I. MPV	KgCO <sub>2</sub> /vehicle km	0.2148
Motorcycle	Petrol	Small, mopeds/scooters up to 125cc	KgCO <sub>2</sub> /vehicle km	0.0729
Motorcycle	Petrol	Medium, 125-500cc	KgCO <sub>2</sub> /vehicle km	0.0939
Motorcycle	Petrol	Large, over 500cc	KgCO <sub>2</sub> /vehicle km	0.1286
Motorcycle	<b>Petrol</b>	<b>Average motorcycle</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.1067</b>
Van	Petrol	Up to 1.25 tonne <sup>6</sup>	KgCO <sub>2</sub> /vehicle km	0.2244
Van	Diesel	Up to 3.5 tonne <sup>6</sup>	KgCO <sub>2</sub> /vehicle km	0.2716
Van	LPG	Up to 3.5 tonne <sup>6</sup>	KgCO <sub>2</sub> /vehicle km	0.2718
Van	CNG	Up to 3.5 tonne <sup>6</sup>	KgCO <sub>2</sub> /vehicle km	0.2718
Van	<b>Average</b>	<b>Average van</b> <sup>6</sup>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.2661</b>
Taxi	Diesel	Regular taxi <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.1613
Taxi	Diesel	Black cab <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.1757
Bus	Diesel	Local bus (Metropolitan areas /PTEs <sup>6,8</sup> )	KgCO <sub>2</sub> /passenger km	0.0863
Bus	Diesel	Local bus (non-PTEs <sup>6,8</sup> )	KgCO <sub>2</sub> /passenger km	0.1116
Bus	Diesel	London bus <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.0678
Bus	Diesel	Long distance /express coach <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.0425
Bus	<b>Diesel</b>	<b>Average local bus</b> <sup>6</sup>	<b>KgCO<sub>2</sub>/passenger km</b>	<b>0.0943</b>
Bus	<b>Diesel</b>	<b>Total average bus/coach</b> <sup>7</sup>	<b>KgCO<sub>2</sub>/passenger km</b>	<b>0.0687</b>
Rail		National rail	KgCO <sub>2</sub> /passenger km	0.0602
Rail		Light rail and tram	KgCO <sub>2</sub> /passenger km	0.0650
Rail		Underground	KgCO <sub>2</sub> /passenger km	0.0526
Ferry		Large Ro-Ro <sup>6</sup>	KgCO <sub>2</sub> /passenger km	TBC <sup>9</sup>
Flight	<b>Domestic</b>	<b>Average</b> <sup>7</sup>	<b>KgCO<sub>2</sub>/passenger km</b>	<b>0.1601</b>
Flight	<b>Short-haul</b>	<b>Average</b> <sup>7</sup>	<b>KgCO<sub>2</sub>/passenger km</b>	<b>0.0910</b>
Flight	Short-haul	Economy class <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.0868
Flight	Short-haul	First/Business class <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.1302
Flight	<b>Long-haul</b>	<b>Average – Option 1</b> <sup>7,10</sup>	<b>KgCO<sub>2</sub>/passenger km</b>	<b>0.0815</b>
Flight	Long-haul	Economy class – Option 1 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.0595
Flight	Long-haul	Economy+ class – Option 1 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.0952
Flight	Long-haul	Business class – Option 1 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.1726
Flight	Long-haul	First class – Option 1 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.2381
Flight	<b>Long-haul</b>	<b>Average – Option 2</b> <sup>7,10</sup>	<b>KgCO<sub>2</sub>/passenger km</b>	<b>0.1009</b>
Flight	Long-haul	Economy class – Option 2 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.0737
Flight	Long-haul	Economy+ class – Option 2 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.1179
Flight	Long-haul	Business class – Option 2 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.2137
Flight	Long-haul	First class – Option 2 <sup>6</sup>	KgCO <sub>2</sub> /passenger km	0.2948

Notes:

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6. New emission factors currently not included in the 2007 update to the Company Reporting Guidelines.
7. Draft updates to the current emission factors Company Reporting Guidelines, until published please use 2007 Company Reporting Guidelines conversion factor.
8. PTEs are the Passenger Transport Executives are the driving force behind the development of public transport in the city regions. They provide, plan, procure and promote public transport in the UK's largest conurbations including Greater Manchester, Merseyside, South Yorkshire, Strathclyde, Tyne and Wear, West Midlands and West Yorkshire.
9. Ferry CO<sub>2</sub> emission factors are still under development and will be updated at a later date.
10. There are currently two methodology options under discussion for the allocation of CO<sub>2</sub> emissions between passengers and freight on passenger services. The first option only takes into account the weight of the passengers + luggage, whilst the second option also incorporates additional weight for seating, galley, other passenger related equipment into the allocation calculation. A final decision on which option will be adopted is still pending further discussion and consultation with the aviation industry.

**Table A3 Average passenger transport activity and other factors**

Average transport activity factors				
Mode	Category 1	Category 2	Units	Factor
Car	UK Average	Average annual distance	Kilometers	14,484
Car	UK Average	Average annual distance	Miles	9,000
Car	Uplift to be applied to car test cycle emission factors to convert to 'real-world' <sup>11</sup> emission factor values		%	15%
Motorcycle	UK Average	Average annual distance	Kilometers	6,050
Motorcycle	UK Average	Average annual distance	Miles	3,759
Flight	Domestic	Average flight length	Kilometers	425
Flight	Short-haul	Average flight length	Kilometers	1,200
Flight	Long-haul	Average flight length	Kilometers	7,000
Flight	Uplift to be applied to average flight distance or actual Great Circle flight distances to take into account indirect routing/delays		%	9%
Flight	Recommended Radiative Forcing factor to be used for aviation			1.9

### Notes:

11. Real world effects not covered in regular test cycles include use of accessories (air con, lights, heaters, etc), vehicle payload (only driver +25kg is considered in tests, no passengers or further luggage), poor maintenance (tyre under inflation, maladjusted tracking, etc), gradients (tests effectively assume a level road), weather, harsher driving style, etc.

There is currently considerable uncertainty on the relative size of the impacts of non-CO<sub>2</sub> emissions from aviation through a process called radiative forcing (RF). RF is therefore not currently taken into account within the emission factors used for the Act on CO<sub>2</sub> calculator and in the Defra Greenhouse Gas Conversion Factors.

It is proposed that it is up to Offset providers whether or not to include a radiative forcing factor in calculating emissions from flights. The provider should make it clear if they are applying one. In line with best scientific evidence we recommend the use of 1.9, as provided in Table A3..

If an offset provider chooses not to include a radiative forcing factor, they should be clear that the product is only offsetting CO<sub>2</sub> and that in some areas there are wider impacts.

Alternative factors may be used. However, they should be greater than 1, and used with guidance that justifies the choice of factor. The consumer should also be referred to the accreditation website, where further information about radiative forcing will be available.

### Freight Transport CO<sub>2</sub> Conversion Factors

The following methods of calculation of CO<sub>2</sub> from freight transport are recommended in order of their accuracy:

- (1) It is recommended that where possible CO<sub>2</sub> emissions are calculated from the actual quantities of fuel used (i.e. in litres, tonnes, or energy units) using the factors in Table A1.
- (2) In the absence of data on actual quantities of fuel, this may be estimated from the observed average fuel consumption of the vehicle (e.g. in miles per gallon or similar units) and the distance travelled (in miles or km) and again using the emission factors in Table A1.

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- (3) In the observed fuel consumption is not available, the average emission factors provided in Table A4 should be used. It is recommended that the highest level of detail is used (for example the specific vehicle type or size and loading) where possible, rather than using the simple overall averages for a particular mode or fuel type.

All these factors are currently draft and may change upon finalisation of the 2008 update to the Defra conversion factors for the Guidelines to Company Reporting. Until these are published please use 2007 Company Reporting Guidelines conversion factors<sup>9</sup>.

**Table A4 Freight Transport CO<sub>2</sub> Emission Factors**

<b>Freight Transport CO<sub>2</sub> Emission Factors<sup>12</sup></b>				
Mode	Category 1	Category 2	Units	Emission Factor
<b>By HGV distance travelled</b>		<i>Load Factor</i>		
HGV	Rigid >3.5-7.5t	0%	KgCO <sub>2</sub> /vehicle km	0.5254
HGV	Rigid >3.5-7.5t	50%	KgCO <sub>2</sub> /vehicle km	0.5711
HGV	Rigid >3.5-7.5t	100%	KgCO <sub>2</sub> /vehicle km	0.6168
HGV	<b>Rigid &gt;3.5-7.5t</b>	<b>41% (UK average load)</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.5629</b>
HGV	Rigid >7.5-17t	0%	KgCO <sub>2</sub> /vehicle km	0.6719
HGV	Rigid >7.5-17t	50%	KgCO <sub>2</sub> /vehicle km	0.7679
HGV	Rigid >7.5-17t	100%	KgCO <sub>2</sub> /vehicle km	0.8639
HGV	<b>Rigid &gt;7.5-17t</b>	<b>39% (UK average load)</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.7468</b>
HGV	Rigid >17t	0%	KgCO <sub>2</sub> /vehicle km	0.7779
HGV	Rigid >17t	50%	KgCO <sub>2</sub> /vehicle km	0.9487
HGV	Rigid >17t	100%	KgCO <sub>2</sub> /vehicle km	1.1195
HGV	<b>Rigid &gt;17t</b>	<b>56% (UK average load)</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.9692</b>
HGV	<b>Rigid Average</b>	<b>Average load</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.8952</b>
HGV	Articulated >3.5-33t	0%	KgCO <sub>2</sub> /vehicle km	0.6720
HGV	Articulated >3.5-33t	50%	KgCO <sub>2</sub> /vehicle km	0.8401
HGV	Articulated >3.5-33t	100%	KgCO <sub>2</sub> /vehicle km	1.0081
HGV	<b>Articulated &gt;3.5-33t</b>	<b>43% (UK average load)</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.8165</b>
HGV	Articulated >33t	0%	KgCO <sub>2</sub> /vehicle km	0.6666
HGV	Articulated >33t	50%	KgCO <sub>2</sub> /vehicle km	0.8888
HGV	Articulated >33t	100%	KgCO <sub>2</sub> /vehicle km	1.1110
HGV	<b>Articulated &gt;33t</b>	<b>59% (UK average load)</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.9288</b>
HGV	<b>Articulated Average</b>	<b>UK Average load</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.9173</b>
HGV	<b>All HGVs</b>	<b>UK Average load</b>	<b>KgCO<sub>2</sub>/vehicle km</b>	<b>0.9059</b>
<b>By freight transport tonne km</b>				
HGV	Rigid >3.5-7.5t	UK Average	KgCO <sub>2</sub> /tonne km	0.5911
HGV	Rigid >7.5-17t	UK Average	KgCO <sub>2</sub> /tonne km	0.3361
HGV	Rigid >17t	UK Average	KgCO <sub>2</sub> /tonne km	0.1869
HGV	<b>Rigid Average</b>	<b>UK Average</b>	<b>KgCO<sub>2</sub>/tonne km</b>	<b>0.2758</b>
HGV	Articulated >3.5-33t	UK Average	KgCO <sub>2</sub> /tonne km	0.1633
HGV	Articulated >33t	UK Average	KgCO <sub>2</sub> /tonne km	0.0819
HGV	<b>Articulated Average</b>	<b>UK Average</b>	<b>KgCO<sub>2</sub>/tonne km</b>	<b>0.0862</b>
HGV	<b>All HGVs</b>	<b>UK Average</b>	<b>KgCO<sub>2</sub>/tonne km</b>	<b>0.1320</b>
Van	Petrol	Up to 1.25 tonne	KgCO <sub>2</sub> /tonne km	0.4488
Van	Diesel	Up to 3.5 tonne	KgCO <sub>2</sub> /tonne km	0.2716
Van	LPG	Up to 3.5 tonne	KgCO <sub>2</sub> /tonne km	0.2718
Van	CNG	Up to 3.5 tonne	KgCO <sub>2</sub> /tonne km	0.2718
Van	<b>Average</b>	<b>Average van</b>	<b>KgCO<sub>2</sub>/tonne km</b>	<b>0.2826</b>
Rail	Diesel		KgCO <sub>2</sub> /tonne km	0.0210
Ferry	Large Ro-Ro	Average	KgCO <sub>2</sub> /tonne km	TBC <sup>16</sup>
Shipping	Small tanker	844 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0200
Shipping	Large tanker	18,371 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0050
Shipping	Very large tanker	100,000 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0040

<sup>9</sup> <http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>.

Freight Transport CO <sub>2</sub> Emission Factors <sup>12</sup>				
Mode	Category 1	Category 2	Units	Emission Factor
Shipping	Small bulk carrier	1,720 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0110
Shipping	Large bulk carrier	14,201 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0070
Shipping	Very large bulk carrier	70,000 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0060
Shipping	Small container vessel	2,500 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0150
Shipping	Large container vessel	20,000 tonnes deadweight	KgCO <sub>2</sub> /tonne km	0.0130
Flight	Domestic	Average	KgCO <sub>2</sub> /tonne km	1.75
Flight	Short-haul	Average	KgCO <sub>2</sub> /tonne km	1.23
Flight	Long-haul	Average – Option 1 <sup>18</sup>	KgCO <sub>2</sub> /tonne km	1.35
Flight	Long-haul	Average – Option 2 <sup>18</sup>	KgCO <sub>2</sub> /tonne km	0.55

**Notes:**

12. New emission factors currently not included in the 2007 update to the Company Reporting Guidelines.
13. **HGVs:** Factors are provided in kgCO<sub>2</sub>/vehicle.km for 3 different gross vehicle weight ranges of rigid-axled HGVs and 2 different gross vehicle weight ranges of articulated HGVs. A vehicle km is the distance travelled by the HGV. The % weight laden refers to the extent to which the vehicle is loaded to its maximum carrying capacity. A 0% weight laden HGV means the vehicle is travelling carrying no loads. 100% weight laden means the vehicle is travelling with loads bringing the vehicle to its maximum carrying capacity. The user alternatively may want to use factors in kgCO<sub>2</sub>/tonne.km for calculating the emissions due to transporting a given weight of freight a given distance for comparison with other modes of freight transport, e.g. for comparing road vs rail using tonne.km factors for other modes. A tonne.km is the distance travelled multiplied by the weight of freight carried by the HGV. So, for example, an HGV carrying 5 tonnes freight over 100 km has a tonne.km value of 500 tonne.km. As different users may require CO<sub>2</sub> factors for HGVs in different levels of detail of HGV type, factors are provided in kgCO<sub>2</sub>/tonne.km for: 3 different gross vehicle weight ranges of rigid-axled HGVs (most amount of detail possible) and 2 different gross vehicle weight ranges of articulated HGVs; fleet averaged factors for all types of rigids and articulated HGVs; factor averaged for all types of HGVs (least amount of detail).
14. **Vans (LGVs):** Emission factors for vans are based on an average load of 0.5 tonne for petrol vans up to 1.25 tonnes weight and an average load of 1 tonne for diesel, LPG and CNG vans up to 3.5 tonne weight.
15. **Rail:** The factor can be expected to vary with rail traffic route, speed and train weight, but comprehensive, robust and reliable fuel consumption data are not currently available in the public domain. Freight trains are hauled by electric and diesel locomotives, but specific rail freight energy use data are not available nationally and the current factors assume haulage only by diesel locomotives.
16. **Large Ro-Ro Ferry:** CO<sub>2</sub> emission factors are still under development and will be updated at a later date.
17. **Shipping:** The factors refer to kgCO<sub>2</sub> per deadweight tonne km. Deadweight tonnage is the weight of the cargo etc which when added to the weight of the ship's structure and equipment, will bring the vessel down to its designated waterline. This implies the factors are based on a fully loaded vessel. As a consequence, the factors expressed in kgCO<sub>2</sub>/tonne.km freight will be higher than the figures in the Table for ships that are only partially loaded (i.e. loaded to less than the vessel's deadweight tonnage). Figures on the typical loading factors for different vessels are not currently available in the public domain. The CO<sub>2</sub> factors will be reviewed and updated when the loading factors become available to provide factors that are more representative of vessel movements from UK ports. Meanwhile, the factors in the table should be regarded as lower limits.
18. **Flights:** Average air freight CO<sub>2</sub> emission factors are still to be finalised. As for the passenger emission factors, there are currently two methodology options under discussion for the allocation of CO<sub>2</sub> emissions between passengers and freight on passenger services. A final decision on which option will be adopted is still pending further discussion and consultation with the aviation industry.

## **Annex 2: Glossary of terms used in the Code**

**Carbon offsetting** – The purchase and cancellation of emission reduction credits generated by projects and activities that reduce carbon emissions.

**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).

**CO<sub>2</sub>** – Carbon Dioxide.

**Kyoto compliance 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.

**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>

**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 Compliance Credits** – 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 Compliance Credits.

**Offset** – The purchase and cancellation of sufficient carbon equivalents to cancel out the emissions created by an activity

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

An ‘offset provider’ is a company/organisation who sells offsets to consumers. They may only sell offsets or they may sell offsets with other goods or services (for example an airline may sell an offset with a flight). An offset provider may directly fund an offsetting project or they may buy credits from an

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intermediary such as a broker or another offset provider. The offset provider is the company that has the relationship with the consumer buying the offset.

An 'accredited offset' under this Code is one that meets best practice in terms of being a robust verified offset but also calculated emissions correctly and provides clear and transparent information to consumers. This whole package is accredited, therefore a company selling credits sourced from an offset provider who has an 'accredited offset' will need to seek accreditation as well.

**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.

**Verified 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.

### **Annex 3: Summary of questions**

Q1: A fixed fee system is currently suggested. Are there any alternative payment methods which might be appropriate, specifically for smaller businesses? For instance it may be possible to base a charge on the size (number of employees or turnover) of the applicant or on an initial fee plus a fee per offset sold basis?

Q2: Would an industry panel be a useful way of providing oversight to the accreditation body? If so what roles might they fulfill?

Q3: How might we expand the Code to include indirect emissions and emissions of non-CO2 greenhouse gases?

Q4: Should aviation emissions factors be applied through distance bands or city pairs?

Q5: We are of the opinion that additional emissions factors may be proposed for surface transport, air transport and individual electricity suppliers (based on fuel mix). Do you agree with this approach? Are there any other areas where bespoke emissions factors might be applied?

Q6: How might an offset provider selling forestry credits best demonstrate and guarantee that the credits will be renewed or replaced?

Q7: Is 6 months + 5 days an appropriate timescale for purchasing and cancelling allowances, if not, why and what timescales would be more appropriate?

Q8: Is it reasonable to request an accredited offset provider to make this information available?

Q9: What type of information about offsetting's role in tackling climate change, and about avoiding/reducing emissions should be provided, and at what level of detail? At what point during the transaction should it be provided?

Q10: At what point during the purchasing process should transparent pricing information be displayed?

Q11: When should confirmation be sent?, bearing in mind the requirement to purchase allowances within 6 months of the offset purchase.

Q12: Are these appropriate conditions of use for the quality mark? If not how could they be changed?

Q13: Is it reasonable to request an accredited offset provider to make this information available?