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ISSUES 

Glossary

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Additionality of a carbon offset means showing that the emissions reductions being used as "carbon offsets" are not 'business as usual'.

'**Business as usual**' is the 'High scenario' **according to IPPC and** consists of a world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and the rapid introduction of new and more efficient technologies.

Carbon Budgets are going to be set every five years and will require the Government to set, in secondary legislation, binding limits on carbon dioxide emissions, "to provide clarity on the UK's pathway towards its key targets and increase the certainty that businesses and individuals need to invest in low-carbon technologies". ([DEFRA Climate Change Bill 2007](#))

Carbon Capture & Storage is where carbon dioxide is captured from the air (near say a power station) and stored, usually in natural storage facilities like old gas fields. www.co2capture.org.uk

[Carbon comparator](#) works out what your carbon footprint is in real terms. And doesn't offer you a number of trees or few pounds to buy your conscience but spells out what you need to DO to make CO₂ reductions equivalent to your flight emission.

Carbon Credits are part of a tradable permit scheme. They provide a way to reduce greenhouse gas emissions by giving them a monetary value. A credit gives the owner the right to emit one tonne of carbon dioxide. Carbon credits held in offshore funds, primarily hedge funds, will now be treated as exempt from tax on profits in the same way as equities or bonds ([Budget of 2007](#)).

Carbon dioxide is a chemical compound composed of one carbon and two oxygen atoms. It is often referred to by its formula CO₂. It is present in the Earth's atmosphere at a low concentration and acts as a greenhouse gas. In its solid state, it is called dry ice. It is a major component of the **carbon cycle**.

CERs: certified emissions reductions, issued by the UN under the Kyoto protocol

Carbon footprint is the measure of the amount of carbon dioxide or CO₂ emitted through the combustion of fossil fuels in carrying out a process or making a product. The scope of a carbon footprint analysis can vary and may/may not include all GHGs - reflect a life cycle approach (see below) to quantify upstream and downstream emissions. When it includes all GHGs (eg with nitrous oxides & methane) the footprint is expressed as a "CO₂ equivalent units" The carbon footprint for a typical British person is around 10 tonnes of CO₂e which reflects activities under somebody's control - eg home energy use and personal transport. *Why is it called a "footprint" when it is about a volume of gas?" Ans: This is because originally we talked about an 'ecological' footprint, which is a measure of the amount of land needed to provide the resources and absorb the pollution. "Carbon footprint" has also lost the part of the equation called "resources" and concentrates just on the pollutant - CO₂.*

Carbon Neutral is "the potential for net carbon emissions to be zero, all else being equal. For operational activity, this would involve some form of offset, with the question of 'additionality' (?? Check) being central. *For plans and policies:* carbon neutrality might mean

no net increase in carbon emissions from the proposed activity/development, with offsetting done through investments in other sectors or locations". Both these definitions differ from 'zero carbon' (below) "[Definitions from UKERC Briefing Paper](#)

Carbon offset is the act of reducing or avoiding GHG emissions in one place in order to "offset" GHG emissions occurring elsewhere. Because GHGs mix well in the atmosphere, it doesn't matter where that mitigation occurs.

Carbon sequestration refers to the provision of long-term storage of carbon in the terrestrial biosphere (soil and organisms) - or the oceans, so that the buildup of carbon dioxide concentration in the atmosphere will reduce or slow.

Carbon Sink is a carbon reservoir that is increasing in size. The main natural sinks are the oceans, soil, plants and other organisms that use photosynthesis to remove carbon from the atmosphere by incorporating it into biomass. CO₂ sinks are a form of carbon offset.

Clean Development Mechanism (CDM) is the an emissions trading mechanism under the Kyoto Protocol. It is intended to help industrialised countries reduce the costs of meeting their targets by achieving reductions elsewhere - cheaper than if they cleaned up their own. [More from UNFCCC](#)

Climate Change originally meant changes in climate over a period of time, although now it has come to mean the changes in climate, in particular temperature and rain, over the last few decades, and widely considered to be due to changes in industrial processes. Also called "Global Warming" (see below)

Direct emissions refer to those released from activities occurring in specified area - eg UK. Indirect emissions refer to those created elsewhere in order for the UK activities to occur - eg fires in Malaysia to make way for palm oil that then imported for biofuel.

Environmental Condition Indicators is measure the condition of land, air or water in the outside environment.

Emissions are releases of gases to the atmosphere, caused by human behaviour. In the context of global climate change, they consist of radiatively important greenhouse gases, e.g., the release of carbon dioxide during fuel combustion. Carbon Dioxide Emissions of UK went up by 1% in 2006. [For more](#)

Emissions Trading Scheme is the central focus of the UK emissions reduction policy framework where heavy polluters are given permits to emit a given quantity of greenhouse gases and are fined if they exceed their permit quota. New sectors are going to be introduced to the scheme, including supermarkets and local authorities.

EUETS: the European Union emissions trading scheme, which began on January 1 2005. Its first phase ends on December 31 2007; the second runs from 2008-2012. **The EUs 'Emissions Trading Scheme'** is the largest scheme in the world to reduce emissions and is the EU commitment to the Kyoto Protocol.

EUA: EU allowance, a permit to emit one tonne of carbon under the EUETS

Global warming is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades, and its projected continuation. The [Intergovernmental Panel on Climate Change \(IPCC\)](#), consisting of scientists from 40 countries and representations from 113 countries, concludes in its fourth report that global warming is happening, and is very likely (probability is more than 90%) caused by human emissions of greenhouse gases.

Global warming potential (GWP) is a measure of how much a given mass of greenhouse gas is estimated to contribute to global warming. It is a relative scale which

compares the gas in question with carbon dioxide (whose GWP is '1' by definition) and is a measure of its radioactive forcing (see below). [Calculating a GWP](#). [More from Wikipedia](#)

GHGs or Greenhouse gases are components of the atmosphere that contribute to the greenhouse effect. Some greenhouse gases occur naturally in the atmosphere, while others result from human activities. Naturally occurring greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxide, and ozone. Certain human activities, however, add to the levels of most of these naturally occurring gases. [More from Wikipedia](#)

Kyoto Protocol is the internationally binding agreement under the UN Framework Convention on Climate Change that set GHG targets for signatories to abide by. Drawn up in 1997 and came into effect in 2005, it requires developed countries to reduce emissions by 5 per cent, compared with 1990 levels, by 2012. Administered by the secretariat of the UN Framework Convention on Climate Change. <http://unfccc.int>.

Life Cycle Analysis measures the environmental impacts of a product or process from 'cradle to grave' - ie from beginning producing the raw materials through manufacturing & processing to product and waste.

Management Performance Indicators examine the management contribution to environmental performance

Operation Performance Indicators (OPIs) show a measure of how well the process may be performing.

Peak Oil refers to the maximum rate of the production of oil in any area under consideration, recognising that it is a finite natural resource, subject to depletion.

Radioactive Forcing is the difference between the incoming radiation energy and the outgoing radiation energy in a given climate system. [More from Wikipedia](#)

Renewable Obligation Certificates (RoCs): are a representation of the amount of energy generated from renewable sources. see UK [OFGEM](#)

Renewable Transport Fuel Obligation (RTFO) will require transport fuel suppliers to ensure that, by 2010, 5% of all road vehicle fuel is supplied from renewable sources.

Scenarios. There are two main scenarios used to predict climate change. Low scenario consists of " convergent world with the same global population, that peaks in mid-century and declines thereafter, ... but with rapid change in economic structures toward a service and information economy, with reductions in material intensity and the introduction of clean and resource efficient technologies." High scenario (= '**business as usual**') consists of "a world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and the rapid introduction of new and more efficient technologies." IPCC predicts that, surface air warming during the 21st century for a "low scenario" is 1.8 °C (range of 1.1 to 2.9 °C to 3.2 °F (range of 2.0 to 5.2 °F). For a high scenario the best estimate is 4.0 °C (range of 2.4 to 6.4 °C) to 7.2 °F (range of 4.3 to 11.5 °F)

Sequesterate originally meant to seize assets (as UK government did with trade union funds in 1980's), but now means to capture gaseous carbon and keep in solid form in biomass, soils or oceans.

Voluntary Carbon Standard has been proposed by The Climate Group and the International Emissions Trading Association for carbon offsets bought and sold. These are standards, including gold standard, under which projects selling credits in the voluntary market can receive accreditation that they have met certain stringent criteria Still under development. [UK government's new standards for "carbon offsetters"](#)

VERs: verified (or voluntary) emissions reductions, sold on the voluntary market

Voluntary market: unregulated market for carbon credits, outside the Kyoto protocol and the EUETS

Vintage: the year in which carbon credits were generated. It is possible to buy credits years in advance of when the emissions reductions will occur. Some companies will only buy credits generated in the same year as the emissions being offset

Zero Carbon is any activity (whether an operation, plan or policy) where absolute carbon emissions are zero.



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