

# Carbon Neutrality

Carbon dioxide emissions are causing the Earth's climate to warm, already causing serious and irreversible changes around the world. Carbon dioxide emissions are about 40% higher than they were before the Industrial Revolution and at their highest levels in recorded history, covering over 650,000 years. Today, glaciers are receding at unprecedented speeds, whole chunks of the Antarctic ice shelf are breaking off, warmer seasons are becoming longer, and storms are becoming more severe and causing more and more damage.



Going carbon neutral is an easy way to take responsibility for the greenhouse gas emissions we create every time we drive our cars, take a plane, or turn on our computers. It's based on the principle that, since climate change is a global problem, an emission reduction made elsewhere has the same positive effect as one made locally. Here's how it works: if you add polluting emissions to the atmosphere, you can effectively subtract them by purchasing 'carbon offsets'. Carbon offsets are simply credits for emission reductions achieved by projects elsewhere, such as wind farms, solar installations, or energy efficiency projects. By purchasing these credits, you can apply them to your own emissions and reduce your net climate impact. To solve the problem of climate change, we all need to take account of our personal carbon emissions and make continued efforts to reduce them wherever possible. But it is impossible to reduce our carbon emissions to zero, no matter how hard we try. Going carbon neutral by purchasing carbon offsets is a practical and affordable way to do something about those remaining emissions.

In addition, by voluntarily calculating and assigning a cost to your carbon emissions, you can begin to prepare for the inevitability of an economy in which carbon dioxide and other greenhouse gases are regulated and taxed. Whether you are a business or an individual, this is an important step towards managing your carbon emissions efficiently and identifying potential for reductions and savings. Frontier is committed to reducing our carbon footprint as much as possible. We encourage all of our volunteers to enrol in carbon offsetting schemes and we offset staff travels wherever possible. (Information: [www.frontier.ac.uk](http://www.frontier.ac.uk))

## What Does 'Carbon Neutral' Mean?

Becoming 'carbon neutral' means that you have neutralized the effect of your personal greenhouse gas emissions, so that your personal and household activities no longer contribute to the dangers of global warming. On average, 25% of emissions come from our personal activities. The rest comes from industry, commerce, agriculture, oilfields, trucking, defence, and so on. So far, no-one has developed a way to measure the carbon emissions of all the things we buy (cars, houses, food, stuff), which require energy to manufacture, ship, and package, so those emissions are not included in that 25%. Global climate change is an enormous problem that needs our urgent attention. A January 2004 study from a team of conservation biologists based at the University of Leeds, Britain, concluded that by 2050, if temperatures continue to increase as forecast, between 15% and 37% of all land-based animals and plants will become extinct; around one million species. This is on our watch, while we are the ones who are responsible, with the ability to reduce this toll. In addition to striving to reduce your personal emissions, becoming carbon neutral at the household level is one way to exercise this responsibility.

## What Are Carbon Offsets?

A carbon offset is an initiative which neutralizes the impact of a carbon emission. Carbon offsets represent the act of reducing an equal amount of carbon somewhere else to counterbalance the carbon emissions from your energy-using activities (called your "carbon footprint"). A "carbon offset" is an emission reduction credit from another organization's project that results in less carbon dioxide or other greenhouse gases in the atmosphere than would otherwise occur. For example:

\* If you support the development of a wind turbine or solar photovoltaic panel which would not have otherwise been installed, replacing the use of diesel, gas, kerosene or oil, this will reduce the CO<sub>2</sub> emissions that would have been released by those fossil fuels. The buyers of the offsets benefit because they can claim that their purchase resulted in new non-polluting energy, which they can use to mitigate their own greenhouse gas emissions.

\*Many types of activities can generate carbon offsets. Renewable energy such as the wind farm example above, or installations of solar, small hydro, geothermal, and biomass energy can all create carbon offsets by displacing fossil fuels. Other types of offsets available for sale on the market include those resulting from energy efficiency projects, methane capture from landfills or livestock, destruction of potent greenhouse gases such as halocarbons, and carbon sequestration projects (such as reforestation) that absorb carbon dioxide from the atmosphere.

There are numerous websites where you can find more information about carbon offsetting.