



SUSTAINABLE LIVING TASMANIA

Carbon Offsetting

Sustainable Living Information

With so much publicity recently about climate change, there has been a lot of talk about 'carbon offsetting' and going 'carbon neutral'. Businesses who offer people the chance to pay money to 'offset' their carbon emissions have sprung up everywhere.

What is carbon offsetting?

Carbon offsetting involves a business, organization or individual paying another party or acting themselves to 'offset' their carbon emissions by things like planting trees, investing the money in renewable energy projects, methane recovery projects and energy efficiency projects. Offset websites will calculate the carbon emissions from your car, home energy use and air travel and charge you to offset these emissions.

Is it effective in combating climate change?

In reality, on it's own, small scale voluntary offsetting is not capable of counteracting our ever increasing emissions and destruction of carbon sinks. The unavoidable reality of climate change is that we need to drastically reduce our greenhouse gas emissions, as well increase offsetting activities, and fast. This involves a combination of individual action to reduce household emissions, government action to shift towards sustainable energy and transport systems, action from businesses to clean up emissions from industry and an end the destruction of carbon sinks such as forests. It is clear that mandatory emission reductions are needed to curb our addiction to emitting GHG's.

It is for this reason that carbon offset schemes invite some skepticism. They send the message that it is acceptable to carry on with 'business as usual', and pay someone else to 'fix' the problem of your carbon emissions.

This being said, if you have made green house gas emissions, it is better to offset your emissions than not to offset them.

We need to ultimately achieve below zero green house gas emissions on a daily basis which means becoming good at reducing emissions and becoming good at offsetting. Ideally we would stop emitting all together and conduct offsetting to counteract our past lifetime of GHG emission. And maybe even our forefathers.

When you consider the effort that is needed to fight climate change, even when GHG emissions become more stringently regulated, there will probably always be a place for voluntary offsetting. People going beyond what the government of the day is doing and taking responsibility for their emissions. It seems that there are many solutions which need to embarked on simultaneously and in support of each other, to combat the multifaceted issue of climate change. So if used as a complimentary measure to reducing individual emissions as far as possible, offsetting projects are a part of the solution to tackling climate change.

Some offsetting projects are more effective than others and to choose these we must understand some common offsetting pitfalls. One of the underlying problems to the offsetting market is that there is no compulsory industry standards. Among the biggest voluntary standards are the Gold Standard for Voluntary Emission Reductions and the Voluntary Carbon Standard (VCS). This lack of policing creates the following problems for voluntary offsetting: offsetting may not be additional to business as usual; there may not be monitoring to verify offsetting; and there may be double counting.

The introduction of mandatory industry standards for voluntary offsetting would make offsetting projects more effective. It would also encourage more people to take offsetting seriously, making voluntary

offsetting more effective in tackling climate change.

Reduce your emissions first!

We advocate doing everything you can to actually reduce your carbon emissions (see separate sustainable living guides on household energy use, passive solar house design, and sustainable shopping, or visit our Environment Challenge website www.up2me.com.au). Of course, there may be some car and air travel that is unavoidable. Carbon offsetting schemes therefore have a role to play in offsetting emissions we can't reduce.

Which scheme?

Some schemes are based on worthy principles, and others are more questionable. It pays to do a bit of research first.

First, you need to be sure that the offset project is 'additional' to 'business as usual'. Otherwise you will be simply funding a project that, however worthy, will not actually 'cancel' the additional carbon that you are releasing.

Because there are no offsetting standards, it is up to the consumer to do the research; is the offset provider actually offsetting effectively and doing so in a sustainably and socially correct way? Is there a more effective, more long term way to offset?

Guidance on choosing offsetting providers may be found at: www.carbonoffsetguide.com.au/, <http://cdmgoldstandard.org> and www.carbonoffsetwatch.org.au

Tree-planting

The most popular form of offsetting is planting trees. However, there is much debate about how much carbon trees actually absorb. Further research is also being carried out on the amount of carbon stored in soil and water. It is thought that

3-4 times as much carbon in forests is actually stored in the soil rather than the vegetation above. Seeing as most tree-planting involves clearing of grasses, this soil gets disturbed and releases carbon. This release can exceed the carbon absorbed by growing trees for at least the first 10 years. Trees can take sixty years to reach maturity, and absorb relatively little carbon in the establishment phase, so carbon saving is being 'deferred' for several decades. One solution to counteract this time lag phenomenon is to undertake future trading and offset in advance so that you are years ahead. In the mean time, you could pursue additional offsetting options in addition to tree planting to account for this lag phenomenon. Tree planting is still a positive step in the right direction. It will help future generations to replenish the sinks that have been so drastically reduced in the past. Giving some protection against climate change they have been robbed of for generations of deforestation, claiming about a half of the worlds forests. And considering it takes so long for the trees to start to capture carbon, this could be seen as a reason to plant now rather than later. In addition, reforestation can lead to less soil erosion and loss of water in soil, which also holds carbon. Research suggests that as forests become more established they store more carbon. For this reason it is more effective to protect old growth forests than to grow new forests, however it is best to do both.

It is important to investigate what the future will be for the trees planted on your behalf. Will they reach maturity? Or will they die from drought, or be burnt in a bushfire, both increasingly frequent events as the planet warms? Will they be replanted at the end of their lifetime or in the case of a fire?

Also check where the trees *are* being planted. Many offset schemes involve planting in developing countries. This scenario, whereby affluent citizens in the West take up land in poorer countries to compensate for our fossil fuel consumption,

raises serious ethical issues. This land might otherwise be used for food crops, and may lead to the clearing of forests elsewhere. Similarly, offsetting by avoided deforestation projects can lead to deforestation elsewhere. Once again, the need for adequate policing of offsetting schemes is apparent. Also, does the scheme have other positive effects on the environment? Some tree planting schemes simply involve plantation style 'tree farms', whereas others involve native revegetation of vulnerable sites, having the additional benefits of reducing erosion and salinity.

Renewable Energy

Other offset schemes will put your money towards renewable energy projects such as wind, solar, tidal / wave, geothermal and micro-hydro. Given the debate over the value of tree planting as a carbon sink, these energy schemes appear to be a more straight forward option. Not only are you offsetting your emissions but you are helping to fund the energy systems of the future, thereby reducing carbon emissions at source. Check that a scheme is not funding nuclear, 'clean coal' or large-scale hydro projects.

How much does it cost?

Fortunately the Federal Government is supporting some offsetting companies by making them tax deductible.

There is a lot of scientific uncertainty about the carbon cycle, making exact calculations about the amount of carbon offset by a particular project difficult. For this reason, there is significant variability between different offset websites.

We entered the Tasmanian average annual driving distance (15, 000 kms) by a medium sized car into 5 different offset websites, and got varying estimates as to the amount of carbon produced and the cost of offsetting it. The carbon produced

ranged between 3.75 and 4.4 tonnes of CO₂, with different companies charging between \$37.50 - \$69 to offset this.

One return flight between Hobart and

Sydney will produce between 0.67 and 0.76 tonnes of CO₂, and will cost you between \$7 and \$14 to offset. A longer distance flight to Europe will produce between 10.3 – 21.8 tonnes of CO₂ (note that the average Australian household produces 14 tonnes per year). This is the equivalent of driving your car for 4 years! You can expect to pay between \$112 - \$218 to offset this.

Don't just choose the cheapest! We are after all trying to undo the harm we are causing by our travel.

Also, it is easy to get caught up in offsetting for our current lifestyle and ignoring our lifetime of emitting GHG's. Why not offset you / your family's emissions for a lifetime rather than the usual trip or yearly offset!

DIY Offsetting

Offset websites are useful for calculating how much carbon your activities are emitting, but then you might choose to avoid the 'middle-man' of the offset company and invest your money directly in carbon-saving.

There are a few options. Some people are choosing to plant their own trees, or spend their money on installing a solar hot water system or other carbon saving technology. Others are choosing to donate to environment groups campaigning on climate change or forest protection (as well as planting trees, you could help to keep trees in the ground!). Another idea is to invest through ethical investment schemes in renewable energy companies.

Links

(Sustainable Living Tasmania does not necessarily endorse these offset providers).

Carbon Offset Guide

<http://www.carbonoffsetguide.com.au>

The aim of this website is to provide an independent directory of Australian carbon offset providers. The site has an extensive list of providers with information on costs, offset projects and contacts.

Climate Friendly

<http://www.climatefriendly.com.au/>

Australian based, funds renewable energy projects. Used by WWF Australia to offset their travel and events

Greenfleet

<http://www.greenfleet.com.au/index.asp>

Australian based, carries out native revegetation planting

Greening Australia

<http://www.greeningaustralia.org.au/>

Australian based, planting of a mix of species for carbon offsets, landscape transformation and nurtured biodiversity.

Carbon Neutral

<http://www.carbonneutral.com.au/>

WA based, carries out native revegetation planting

Elementree

<http://www.elementree.com.au/> Australian based, uses revegetation professionals and claims 90% survival rates for trees

Origin Energy

<http://www.originenergy.com.au/carbon/>

Australia's leading Green Energy supplier. Funds a range of offset projects including methane flaring, donations of energy efficient appliances and tree planting

Cheat Neutral

<http://www.cheatneutral.com/>

Finally, you might like to have a look at this excellent spoof site, which highlights the moral issues involved in carbon offsetting

'Carbon Offsets – The Facts', New Internationalist magazine, July 2006

'Want to go Carbon Neutral?', Habitat magazine, Australian Conservation Foundation, January 2007

Hopkins, Rob, 'The Transition Handbook From oil dependency to local resilience', 2008

Kill, Jutta. 'The Carbon Neutral Myth', Resurgence magazine, Jan / Feb 2007

Monbiot, George. *Heat*, Penguin 2006

Pearce, Fred. 'Tree farms won't halt climate change', New Scientist, October 2002

The Gold Standard,
<http://www.cdmgoldstandard.org/>

The Voluntary Carbon Standard

<http://www.v-c-s.org/>

Global Deforestation, Lecture: University of Michigan, 2010

<http://www.globalchange.umich.edu/globalchange2/current/lectures/deforest/deforest.htm>
1

Carbon offsets: a tool in the fight against global warming,
<http://beta.davidsuzuki.org/blogs/science-matters/2009/08/carbon-offsets-a-tool-in-the-fight-against-global-warming/> August, 2009

July 2010

Sources

Carbon Conservation (QLD)

<http://www.mindingthecarbonstore.com/>

Tasmanian Environment Centre Inc. trading as Sustainable Living Tasmania
2nd floor, 191 Liverpool Street, Hobart, Tas 7000, Phone (03) 6234 5566, Fax (03) 6234 5543
Email info@sustainablelivingtasmania.org.au
www.sustainablelivingtasmania.org.au

Printed on recycled paper