

Carbon Offsets: The Real Deal?



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Carbon offsets: The real deal?

You've heard the evidence, you've argued with your neighbours and you've watched *An Inconvenient Truth*. You've also been through the common cycle of reactions: denial ("oh come on, the world's ecosystems are complex enough to self-correct as they have for centuries"); anger ("how can we have been so short-sighted and selfish to create this frightening situation?!..."); and depression ("it's all just too big and hopeless"). You've slowly come around to accepting the growing consensus: human induced climate change is the world's greatest challenge. And you're concerned enough to want to do something about it.



Looking at the range of options in front of you, one idea that may appeal is the notion of carbon offsets. We hear about these all the time in the news, touted by individuals, organizations and even governments as a practical and viable means of tackling the amount of greenhouse gas (GHG) emissions emitted into the atmosphere. A good indication of offset popularity is the growing number of companies selling offsets. According to a joint report by Ecosystem Marketplace and New Carbon Finance, between 2002 and 2006 the number of voluntary offset providers grew by a whopping 220 per cent.¹

Despite its explosive growth, the offset industry is still very young. There is often a lack of clarity about fundamental questions:

- What exactly *are* carbon offsets?
- How can investing in carbon offsets possibly help the larger climate change picture?
- If I decide to invest in carbon offsets, is there any way to differentiate between the various providers that are ready to take my investment?
- What should I look for – and avoid – if I think that carbon offsets might work for me?

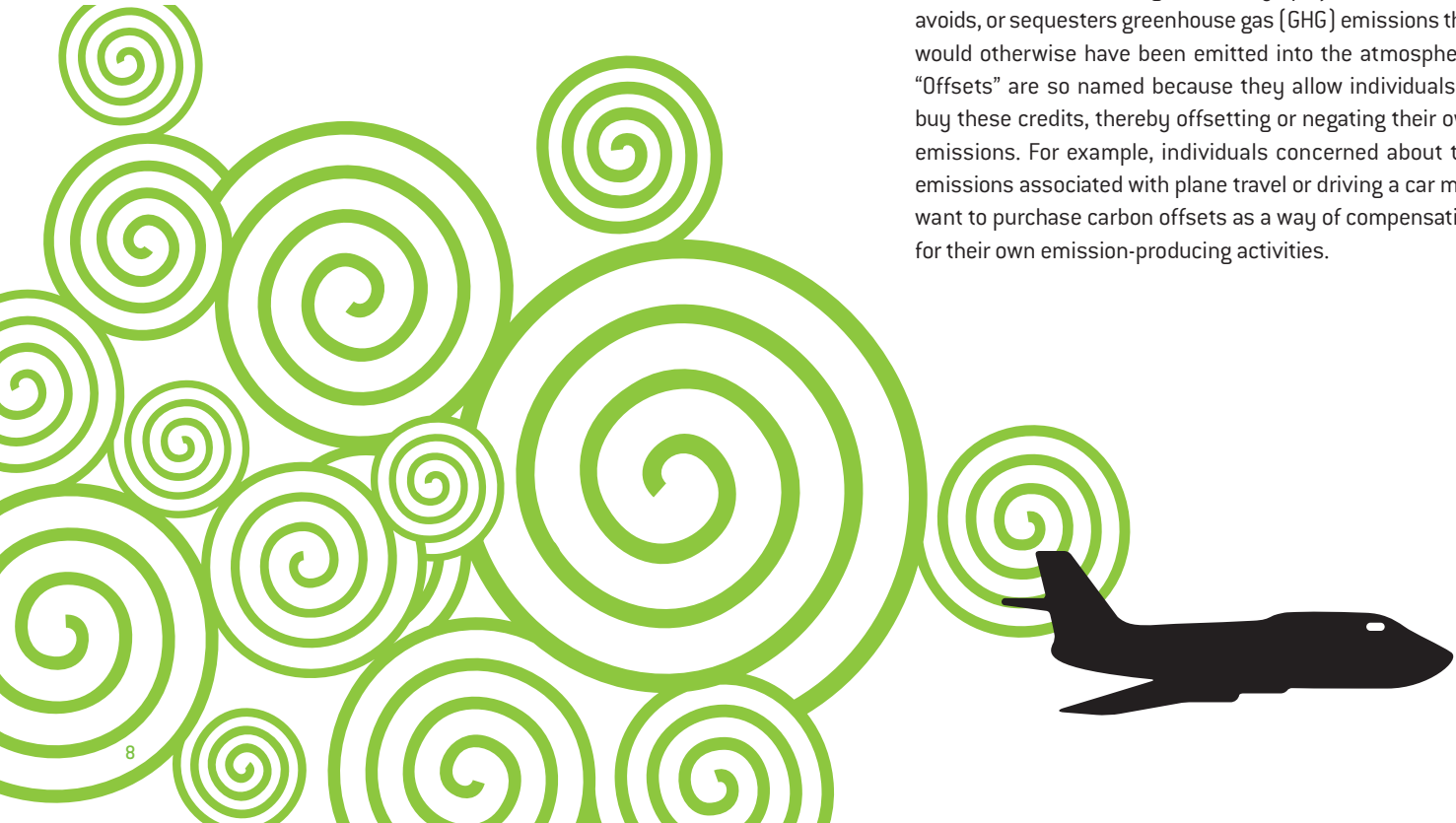
Distinguishing between offset providers can be a daunting challenge. This publication is aimed at helping individuals and organizations who may be contemplating purchasing offsets. It

- provides background information on carbon offsets including the basic features of credible offsets and the controversy surrounding their use;
- gives a list of rating systems readers can consult if they decide to purchase offsets; and
- gives a list of resources that can provide more information about carbon offsets.



What are carbon offsets?

A carbon offset is a credit generated by a project that reduces, avoids, or sequesters greenhouse gas (GHG) emissions that would otherwise have been emitted into the atmosphere. "Offsets" are so named because they allow individuals to buy these credits, thereby offsetting or negating their own emissions. For example, individuals concerned about the emissions associated with plane travel or driving a car may want to purchase carbon offsets as a way of compensating for their own emission-producing activities.



What is an example of a carbon offset?

Carbon offset credits can come from a number of different types of projects. Some examples include wind farms, ecosystem restoration, methane capture, or even retrofits that make buildings more energy efficient. In theory, all of these projects somehow reduce the amount of GHGs that would otherwise have been released into the atmosphere.

Offsets are bought and sold as the equivalent of one tonne of carbon dioxide (CO₂e) though they can reduce a number of greenhouse gases.² To calculate the number of offset credits that these projects can sell, a baseline scenario must be established to calculate the amount of GHG emissions that would be released in a business-as-usual situation. The difference between the baseline scenario and the amount of GHGs emitted once the project is in place is the amount of offset credits that can be sold.



The Carbon Trust, an independent company set up by the British government, lists five examples of the technologies that are used in offset projects:³

- Renewable energy
- Energy efficiency
- Gas recovery or destruction
- Fuel switch
- Biological sinks [i.e. Reforestation]



What should I look for?

What makes a good quality offset?

There are five main features that characterize quality offset projects:

ADDITIONALITY: Additionality means that the emissions reductions achieved by a project are additional to what would have otherwise occurred under a business-as-usual scenario. If a project would have happened despite the voluntary or compliance market, then it cannot be considered additional and should not be selling offsets.

PERMANENCE: Offset projects should be able to ensure that the reductions/ avoidance of GHG emissions are not compromised in the future, and providers should be able to guarantee that the offsets are permanent.

LEAKAGE: The establishment of an offset project should not result in increased emissions somewhere else. This is called leakage and has the potential to negate any offsets created by a project.

THIRD-PARTY VALIDATION, VERIFICATION, AND MONITORING:

To ensure that offset projects are designed well and that once implemented are performing as expected, offset projects should be validated, verified, and monitored by third-party organizations. Validation generally occurs when the project is still in the design phase. Verification occurs once the project is up and running, while monitoring should be conducted throughout the project's life. The point of all these steps is to ensure that offset projects are actually resulting in the reduction, sequestration, or absorption of greenhouse gases.

REGISTERED: Because carbon offsets are intangible commodities, there is a risk that sellers could double-sell them to two or more buyers. Those two buyers, in turn, could both claim those offsets. This is called double counting. In order to ensure that this does not happen, registries may be used to track and record the sale and retirement of offsets. In March 2008, the Vancouver based Globe Foundation announced its intention to establish a voluntary carbon registry.



What are the benefits of carbon offsets?

Offsets are popular for a number of reasons: they can be easily and quickly purchased, do not cost a great deal to use, and can have a number of benefits besides reducing GHG emissions. Take the example of a small-scale wind farm development on land leased from a local farmer. The wind energy company benefits because the carbon offsets it sells creates revenue. The buyer(s) of the offsets benefit because their purchase helped fund non-polluting energy. They can also claim the cost of purchasing the credit as a deduction against their own greenhouse gas emissions. Purchasing offsets also allows buyers to make a positive difference while implementing and investing in more long-term changes to their own practices.

Carbon offset projects can also have indirect positive results as well, including environmental, social, and economic benefits. For example, in the case of rural wind power developments, economic benefits are provided to the local farmers, from whom land is leased in order to set up wind energy capturing equipment.

What are the downsides to carbon offsets?

At first glance, using carbon offsets to achieve 'carbon neutrality' sounds like a simple and effective way to take responsibility for one's own carbon footprint. However, there are a number of important challenges, including:

- Carbon offsets do not actually reduce the amount of overall emissions in the atmosphere.⁴ Rather offsets only prevent the release of new GHG emissions. Therefore purchasing offsets should only be used to counteract emissions that cannot otherwise be reduced.
- There are many outstanding questions regarding the legitimacy and credibility of offsets given the lack of oversight and industry-wide standards.
- Distinguishing between offset providers is difficult: without knowing how carbon offset markets operate or who the players are, it's hard for consumers to feel confident that the offsets they are buying will actually reduce, avoid, or sequester greenhouse gas emissions.



Where should I look if I want to buy carbon offsets?

There are two main types of carbon markets: the compliance (or regulatory) carbon market and the voluntary carbon market. The compliance market generally applies to states and industries that must meet mandated reduction targets, such as those specified in the Kyoto Protocol.

For individuals and organizations wanting to purchase relatively small quantities of offsets, there is the voluntary market. Here consumers purchase offsets from offset providers/retailers, usually through the provider's website. These providers typically buy their credits either directly from individual offset projects or wholesalers. Good offset providers will have at least some information on their website about the projects they invest in and where they source their credits from.

Does the voluntary market work well?

Since its rapid growth, the voluntary carbon market has received a fair amount of criticism. Throughout 2006 and 2007 a number of media stories and articles questioned the validity and credibility of the offsets being sold.⁵ The market is often characterized as a 'fragmented' market and one that suffers from a dearth of impartial information. One of the most commonly cited weaknesses of the market is the lack of common standards or oversight.⁶

Standards

As the voluntary market matures there is a growing demand for standards to ensure quality in the offsets being sold. To date, there are over a dozen voluntary offset standards being developed by different organizations. Some standards only apply to certain types of offset projects, while others may include a focus on the co-benefits a project might produce. Each standard has its own set of rules and regulations surrounding the offset projects it certifies, but should include accounting standards (ensuring additionality), monitoring, verification and certification standards, and a registration and enforcement standard.⁷

In March 2008, the Stockholm Environmental Institute and Tricorna jointly released the first comprehensive report on emerging voluntary offset standards. Readers interested in standards are encouraged to download the report at www.panda.org.

Like the voluntary offset market itself, the world of offset standards is still fairly young, though one standard in particular deserves mention. The Gold Standard is an initiative of the World Wildlife Federation, SouthSouthNorth, and



Helio International. It was set up to help ensure that offset projects located in developing countries were not only real and additional, but that they also support broader sustainable development goals. The Gold Standard only applies to renewable energy and energy efficiency projects.

www.cdmgoldstandard.org



So are carbon offsets the right way to go?

Although investing in carbon offsets can be very positive and provide a sense of immediate accomplishment, not everyone agrees that offsets are the right way to go. George Monbiot, noted journalist and climate change commentator, compares offsets to the selling of indulgences in the 15th and 16th century.⁸ Monbiot's concern is that the idea of offsets – that we can negate our own emissions by paying others – only delays our acceptance of the fact that climate change requires everyone to take immediate action.

On the other side of the coin, some argue that carbon offsets do have an important role to play in the fight against climate change.⁹ This view holds that the voluntary offset market should only be temporary and just one component of a broader, co-ordinated worldwide effort to tackle climate change. While there is no doubt that domestic greenhouse gas emissions need to be reduced, given the scale and urgency of the problem, offsets offer the greatest potential to reduce huge volumes of emissions in the short-term. This is not an “either / or” view, but rather one that sees offsets being useful in tandem with domestic measures and technologies.

Still others take a decidedly more cautionary approach and argue that the benefits of the voluntary carbon market lie not in the emissions reductions it achieves, but rather in its ability to educate the public and inform long-term public policy.¹⁰ For people holding this view, this potential benefit will only come about through a properly structured market that includes standards and regulations.

How can I make an informed choice about carbon offsets?

When individuals or organizations purchase carbon offsets, they are buying intangible commodities they can't see or touch. This makes it difficult for consumers to have confidence in the quality of their purchase. We have found four organizations that have recognized this challenge and have developed criteria to evaluate offset providers:

- Tufts Climate Initiative
- Clean Air-Cool Planet
- Environmental Defense
- Carbon Catalog

Each of these organizations has applied their criteria to a number of different offset providers. In our opinion, Tufts Climate Initiative and Clean Air-Cool Planet provided the most thorough evaluations. Unfortunately for Canadian consumers wanting to buy offsets from Canadian providers, each organization only rated one Canadian company. For basic information about Canadian providers, Carbon Catalog is a good place to start.



Tufts Climate Initiative¹¹

www.tufts.edu/tie/tci/

In 2006, Anja Kollmuss and Benjamin Bowell produced a guide for consumers wishing to offset their air travel emissions. The guide has since been revised twice [the latest in April 2007]. The report evaluated 13 companies, 11 of which specifically sold offsets for air travel. The authors used data reported by the companies themselves on either their websites or in their company literature. In some cases, the authors also contacted the companies. One of the advantages of this report is that it evaluates the emissions calculators available on the websites of different retailers. This is important because without an accurate estimate of the amount of greenhouse gases released by certain activities, it is impossible to know how many offset credits should be purchased.

TUFTS CLIMATE INITIATIVE RECOMMENDED PROVIDERS

- atmosfair
- climate friendly
- Myclimate
- NativeEnergy

TUFTS CLIMATE INITIATIVE: EVALUATIVE CRITERION

Company profile – whether the company was for-profit or non-profit and where the company was founded
Percentage of income spent on overhead versus projects
Standards and verification
Price per tonne of carbon offset
Accuracy of the air travel emissions calculator
Project Type – renewable energy or energy efficiency project, not bio-sequestration projects (forestry)
Project/offset quality including: • additionality • permanence • accounting for leakages • contribution to long-term goal of carbon free, energy efficient economy • capacity building • biodiversity
Transparency in the stated procedures, verification schemes, financial arrangements and partnerships of companies.

Clean Air-Cool Planet¹²

www.cleanair-coolplanet.org

In 2006, Clean Air-Cool Planet commissioned Trexler Climate + Energy Services, Inc. to survey and evaluate retail offset providers. Thirty retail offset providers were evaluated and detailed questionnaires were sent to all of them. Less than half of those contacted responded and the rest were evaluated by their websites. The goal of this evaluation was to encourage greater transparency and quality among offset providers and to give consumers a tool to help them make more informed decisions when purchasing offsets. One of the unique features about this report is that it assumes that the voluntary offset market has an important role to play in educating the public and raising awareness about climate change. Thus, one of the criteria weighted relatively heavily is whether or not retailers give priority to educating consumers about global warming and global warming policy. Another interesting feature is the relatively low weight given to the criterion of third-party verification. The authors argue that because there are no widely accepted standards applied to the voluntary offset market, because some standards are proprietary, and because the standards being used may

not be very effective in ensuring offset quality, third-party standards do not necessarily signal quality offsets.

CLEAN AIR-COOL PLANET: EVALUATIVE CRITERION	
	Weighting
Providers' prioritization of offset quality	10
Buyers' ability to transparently evaluate offset quality	9.4
Transparency in provider operations and offset selection	9.2
Provider's understanding of the technical aspects of offset quality	9.0
Priority assigned by provider to educating consumers about global warming and global warming policy	7.8
Ancillary environmental and sustainable development benefits of offset portfolios	5.6
Use of third-party project protocols and certification	3.9

Those companies that scored higher than five out of ten were in the authors' opinion, "more likely than those of other providers to result in high-quality GHG emissions reductions."¹³ However, the authors also note that the report did not evaluate the individual projects offered by the companies.

PROVIDERS THAT SCORED HIGHER THAN 5 OUT OF 10 with *Clean Air-Cool Planet*

- AgCert/DrivingGreen
- atmosfair
- Carbon Neutral
- Climate Care
- Climate Trust
- co2balance
- NativeEnergy
- Sustainable Travel/ MyClimate



Environmental Defense

www.fightglobalwarming.org

Environmental Defense, an American non-profit organization, launched their Fight Global Warming campaign in March of 2006. As part of this campaign, the website www.fightglobalwarming.org, features a list of offset providers that have met Environmental Defense's criteria. To evaluate offset providers, Environmental Defense issued a request for proposals for organizations interested in being featured on the site. The organizations that responded to the RFP were evaluated against the criteria by an internal team. Only the organizations that met the criteria are listed on the site.

ENVIRONMENTAL DEFENSE RECOMMENDED PROVIDERS

- AtmosClear Climate Club
- e-Blue Horizons
- Carbonfund.org

ENVIRONMENTAL DEFENCE CRITERIA

Projects must only include direct emission reductions, not indirect emission reductions as in renewable energy certificates (RECs).

The emission reductions must include and demonstrate a reasonable baseline and additionality should be explained. Leakage must be accounted for.

The timeframe for when the emission reductions were or are expected to be achieved must be clearly identified.

Emission reductions must be tracked and serialized to prevent double selling.

All emission reduction claims should be verified by a third-party.

Emission reductions should generate net positive environmental and community impacts.

Carbon Catalog

www.carboncatalog.org

The carbon catalog is a web-based directory that not only lists and rates carbon offset providers, but also the actual projects. Users can browse through a list of carbon offset projects and then choose to buy their offsets from the providers that sell the projects in which they are interested. In terms of rating providers, the Carbon Catalog gives checkmarks to those providers that meet the criteria listed.



CARBON CATALOG RATING CRITERIA

Does the provider give minimum information about the projects it supports?

Are the operators of the projects listed?

Does the provider state how much money paid for offsets goes to the projects?

Are full financial reports available on the provider's website?

Does the provider give details about the people running the organization?

Does the provider offer a range of projects?

Is information given about the amount of CO2e offset by each project?

Are the projects certified by the UN's Clean Development Mechanism or the Gold Standard?

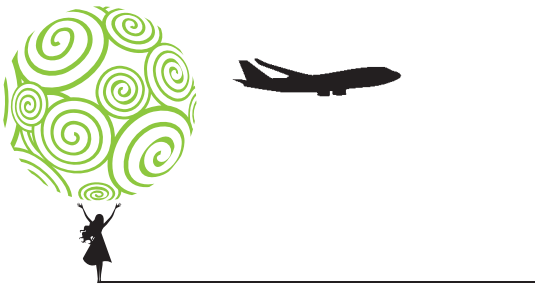
Do a majority of the projects reduce demand on the electricity grid?

Are most of the projects provided non-reforestation projects?

Canadian Offset Providers

To help those interested specifically in Canadian offset providers, the table below provides a list of Canadian offset providers and indicates:

- the score they received from Carbon Catalog,
- whether they invest in projects that have qualified for the Gold Standard and
- whether they invest in Canadian-based projects.



CANADIAN OFFSET PROVIDERS			
	Invests in Gold Standard Credits	Invests in Canadian-based projects	Carbon Catalog score out of 10
Carbon Friendly			3
CarbonZero Offsets			5
Cleanairpass		✓	7
Coolaction		✓	6
EcoNeutral		✓	5
Less	✓		6
LivClean			6
Offsetters	✓	✓	7
Planetair [Myclimate]	✓		8
Tree Canada		✓	3
Zerofootprint		✓	4
ZeroGHG	✓		7

Conclusion

Our aim in producing this pocket guide is to provide basic information about carbon offsets to assist you or your organization in making an informed decision. We hope you have found it useful. New carbon offset providers are constantly appearing, all vying for a share of the market. As we researched this publication, we found over one hundred offset providers worldwide. With such a range of options, distinguishing between providers can be a difficult task. The challenge for you as a consumer is to ensure that your money is helping to fund a quality offset project. For further information we have included a list of resources to enhance your quest for information about carbon offsets.



Other Sources of Information

The Katoomba Group's Ecosystem Marketplace:
www.ecosystemmarketplace.com

The David Suzuki Foundation: www.davidsuzuki.org

Clean Air – Cool Planet: www.cleanair-coolplanet.org

Tufts Climate Initiative: www.tufts.edu/tie/tci/

The International Institute for Environment
and Development: www.iied.org

Exploring the Market for Voluntary Carbon Offsets
– Nadaa Taiyab: www.iied.org/pubs/pdfs/15502IIED.pdf

The Voluntary Carbon Offsets Market – Elizabeth Harris:
www.iied.org/pubs/pdfs/15507IIED.pdf

The Carbon Trust: www.carbontrust.co.uk

World Wildlife Federation: www.panda.org



Notes

- 1 Katherine Hamilton, Ricardo Bayon, Guy Turner and Douglas Higgins, *State of the Voluntary Carbon Market 2007: Picking Up Steam* (The Katoomba Group's Ecosystem Marketplace and New Carbon Finance, 18 July 2007), 21.
- 2 Other greenhouse gases include methane, nitrous oxide and HFCs. Each of these has a global warming potential (GWP) relative to CO₂. The global warming potential is a measure of the strength of these gases in the atmosphere over 100 years. For examples methane has an approximate GWP of 23 which means that one tonne of methane has the same effect on the atmosphere as 23 tonnes of CO₂. (Ricardo Bayon, Amanda Hawn, and Katherine Hamilton, *Voluntary Carbon Markets: An International Business Guide to What They Are and How They Work* (London: Earthscan, 2007), 4.
- 3 Carbon Trust, *The Carbon Trust Three Stage Approach to Developing a Robust Offsetting Strategy* (UK: Carbon Trust, 2006), 8.
- 4 This point is made by the World Wildlife Foundation, Friends of the Earth and Greenpeace in a Joint Statement. WWF, Friends of the Earth and Greenpeace, *Joint statement on offsetting carbon emissions – by Friends of the Earth, Greenpeace and WWF-UK* (n.d., accessed 10 December 2007), available from www.foe.co.uk/resource/briefings/carbon_offsetting.pdf.
- 5 Michael, Gillenwater, Derik Broekhoff, Mark Trexler, Jasmine Hyman and Rob Fowler, 'Policing the voluntary carbon market,' *Nature Reports* (vol. 6, Nov. 2007), 85.
- 6 For a good discussion about why government oversight is necessary for voluntary offsets, see Gillenwater et al.
- 7 Anja Kollmuss, Helge Zink and Clifford Polycarp, *Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards* (Stockholm Environment Institute and Tricorna, 2008), 14.
- 8 George Monbiot, "Selling Indulgences," *The Guardian*, 18 October 2006. Also found at: www.monbiot.com/archives/2006/10/19/selling-indulgences/

- 9 Elizabeth Harris notes this “general perception” amongst retailers. Elizabeth Harris, *The Voluntary Carbon Offsets Market: An analysis of market characteristics and opportunities for sustainable development* (London: International Institute for Sustainable Development, 2007), 28-29.
- 10 Mark C. Trexler and Laura H. Kosloff, “Selling Carbon Neutrality,” *The Environmental Forum* March/April (2006): 35.
- 11 Anja Kollmuss and Benjamin Bowell, *Voluntary Offsets for Air-Travel Carbon Emissions: Evaluations and Recommendations of Voluntary Offset Companies* (Tufts Climate Initiative, 2007).
- 12 Clean Air-Cool Planet, *A Consumers’ Guide to Retail Carbon Offset Providers* (2006).
- 13 Clean Air-Cool Planet, *A Consumers’ Guide to Retail Carbon Offset Providers* (2006), 21.





Carbon Offsets: The Real Deal is an essential guide for individuals and organisations who may be contemplating purchasing offsets. This guide provides

- background information on carbon offsets
- the downsides and benefits surrounding their use
- the basic features of credible offsets
- rating systems readers can consult if they decide to purchase offsets
- a list of resources that can provide more information about carbon offsets

