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**W**hen Air Canada began offering carbon offsets to its customers earlier this year, it clearly had someone like me in mind: a frequent flyer full of carbon guilt.

Your carbon footprint is your share of greenhouse-gas emissions, which play a significant role in climate change. You can control some of it — drive less, use energy-efficient compact fluorescent light bulbs, get your electricity through Bullfrog Power, which uses clean, emission-free sources such as wind and low-impact water power instead of carbon-intensive sources like coal and oil. Other areas you have less control over, such as the energy used by corporations and government offices. The average North American has an annual carbon footprint equal to 20 tonnes of carbon dioxide (CO<sub>2</sub>). He or she is directly responsible for about half that.

If 2007 was the year we all started calculating our carbon footprints, it's also the year my shoe size jumped to 28. My household is car-free and in fact is well below the average for emissions. But six transatlantic flights doubled my CO<sub>2</sub> output.

# carbon offsets

THE IDEA IS TO REDUCE YOUR GREENHOUSE-GAS EMISSIONS. SOUNDS SEDUCTIVE. BUT DO OFFSETS DELIVER?

By Craig Saunders

What's a jet-setting greenie to do? Air Canada's carbon offsets — some other airlines offer them, too — are extra payments you make so that someone, somewhere, takes a tonne of carbon dioxide out of the atmosphere so you can maintain your carbon-carefree lifestyle. In Air Canada's case, offsetting a flight from Toronto for a weekend of skiing in the Rockies costs less than \$12. In the first three weeks of the program, around 500 people paid a total of \$6,000 to offset about 353 tonnes of carbon, roughly equal to taking 64 cars off the road for a year.

That's definitely helpful, but the Intergovernmental Panel on Climate Change has suggested things won't really start to change unless a tonne of CO<sub>2</sub> costs about US\$100. Currently, Air Canada's per-tonne rate is only about \$16.

Meanwhile, buying offsets is easy. While almost all retail providers are based in Europe or the United States, they generally sell offsets online. Their prices vary from less than \$10 a tonne to more than \$30 a tonne, but an average North American household theoretically could offset all

its personal emissions for less than \$150 a year.

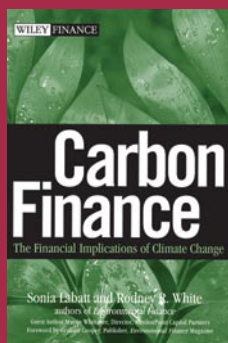
The bad news is that offsetting by itself isn't a solution. Dr. Rodney White, a geography professor at the University of Toronto and a pioneer in the field of environmental finance, recently celebrated the publication of *Carbon Finance*, co-authored with Dr. Sonia Labatt, an associate faculty member at U of T's Centre for the Environment (see sidebar). He views corporate emissions-trading as an efficient way to tackle the climate problem, with carbon offsets a small but potentially important part of the solution. Still, he says, we actually have a more significant effect on the environment by installing CFLs, using less water and walking more.

Mark Trexler, president of Trexler Climate and Energy Services, a climate-change consulting company based in Portland, Oregon, agrees. Last December, his company prepared *A Consumers' Guide to Retail Carbon Offsets* as a first step towards creating an industry report card. (The guide is available at [www.cleanair-coolplanet.org](http://www.cleanair-coolplanet.org), as well as on the David Suzuki Foundation website: [www.davidsuzuki.org](http://www.davidsuzuki.org).) Trexler believes every bit helps. But, he adds, "The political and educational role of offsets is probably more important than the absolute emissions reductions. If 20 million people were to start offsetting their travel, policy-makers would start to take notice."

The early response to Air Canada's efforts was encouraging in that regard. "People are saying they want to do something for the environment," says Peter Fitzpatrick, manager, media relations



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Carbon offsets available to consumers are just a small part of the new field of environmental finance. In their new book *Carbon Finance*, University of Toronto professors Sonia Labatt and Rodney White describe the economics of climate change.

## READING MATERIAL

**CARBON FINANCE:  
THE FINANCIAL  
IMPLICATIONS OF  
CLIMATE CHANGE**

SONIA LABATT AND  
RODNEY R. WHITE  
WILEY FINANCE, 2007  
268 PAGES, \$101.99

The book, written for people in the financial-services industries, describes the emerging carbon-finance market and discusses ways in which businesses and governments should prepare. This most complex of

trading systems began after the 1997 Kyoto Protocol. It's a capitalist approach to an environmental problem, allowing companies that can reduce their emissions to profit by selling excess reductions to companies that aren't able to cut down their emissions.

The authors support this. "The carbon-offset market is quite fragmented," White says. "I think when Bush is replaced, things will coalesce quickly. Once America moves, Canada will. Business is ready to go."

*Carbon Finance* does an excellent job of laying out the mechanics and history of emissions-trading. It also covers the changing role of fund managers as climate change and other environmental issues become part of corporate reporting. It further covers changes in the insurance industry and new financial products coming onto the market, such as weather derivatives. For those in finance, insurance or government, *Carbon Finance* is essential reading. C.S.

for Air Canada. The company says it eventually wants to be carbon neutral, which would be impossible without using offsets. But it's also renewing the fleet with ultra-fuel-efficient aircraft, using ground vehicles with hybrid technology, expanding on-board recycling programs and devising more fuel-efficient flight plans. In the end, though, the most effective way to reduce greenhouse-gas emissions from air travel is to fly less, something airlines don't want to promote.

Air Canada teamed up with Toronto-based Zero-footprint, which generates its credits by planting trees, conserving existing forests and engaging in renewable-energy projects. But trees, while useful, aren't the only answer — or even necessarily the best one. There are also companies that generate offsets by keeping greenhouse gases from being generated in the first place. Germany's *atmosfair* focuses on solar energy and waste management, while *Climate Care*, a British company, has a variety of projects, ranging from restoring rainforests in Uganda to installing more efficient stoves that reduce the amount of wood burned in India.

But if you don't want to contribute to climate change, try keeping greenhouse gases from entering the atmosphere at all. As Professor White says, start by reducing your own emissions, then consider offsets.

And sorry, jet-setters, making a real difference still means making lifestyle changes. Next year, I'll be doing my bit and keeping my head out of the clouds. 🍃

## 3 KEY FACTORS to consider when choosing a carbon offset-provider

► **NO DOUBLE-COUNTING:** Make sure the company can demonstrate that offsets aren't being sold more than once. Offset-providers are increasingly moving towards using third-party review and registries to demonstrate double-counting isn't occurring.

► **PERMANENCE:** Look at the projects that generate the offsets. Do they avoid greenhouse-gas emissions permanently or are they potentially partially reversible (as in the case of a future forest fire)? A good offset-provider should have a portfolio of different types of projects to balance the risk of potentially reversible offsets.

► **ADDITIONALITY:** Would the project have occurred without offset-providers? Would a clear-cut forest have been replanted anyway by a timber company? Would a wind farm have been built anyway because it was cost-effective or because of other policy and financial incentives? If a project would have happened without offset-providers, it's not generating reductions that will offset someone else's emissions.

## 5 SIMPLE WAYS to help reduce your greenhouse-gas emissions

**1** Use compact fluorescent light bulbs (CFLs): they use a fraction of the electricity sucked up by incandescent bulbs. And turn off lights when you're not using them.



**2** Subscribe to Bullfrog Power. It costs a little more, but you can easily recoup some of the extra cost by saving energy around the house — which additionally benefits the planet.

**3** Conserve water: as much as 60% of the electricity used by the City of Toronto is employed in cleaning water.



**4** Believe it or not, eat less meat. A U.N. report from 2006, *Livestock's Long Shadow*, explains how the livestock sector generates more greenhouse gases than cars. Greenpeace says every kilo of meat produced causes the release of greenhouse gases equivalent to between three and four kilos of CO<sub>2</sub>.

**5** Visit the David Suzuki Foundation website to find a list of 10 ways you can stop global warming, reduce energy consumption and make a difference. [www.davidsuzuki.org](http://www.davidsuzuki.org)

