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Another Inconvenient Truth

Behind the feel-good hype of carbon offsets, some of the deals don't deliver

The organizers of the Academy Awards declare all their celebrity presenters to be "carbon-neutral." Vail Resorts Inc. ([MTN](#)) in Colorado boasts that its chairlifts and lodges are "100% powered by wind." Seattle's municipal utility claims that its net contribution to global warming is zero.

A growing number of organizations, corporations, cities, and individuals are seeking to protect the climate—or at least claim bragging rights for protecting the climate. Rather than take the arduous step of significantly cutting their own emissions of carbon dioxide, many in the ranks of the environmentally concerned are paying to have someone else curtail air pollution or develop "renewable" energy sources (see [BusinessWeek.com](#), 2/1/07, "[Ethanol: Too Much Hype—and Corn](#)"). Carbon offsets, as the most common variety of these deals is known, have become one of the most widely promoted products marketed to checkbook environmentalists.

Done carefully, offsets can have a positive effect and raise ecological awareness. But a close look at several transactions—including those involving the Oscar presenters, Vail Resorts, and the Seattle power company—reveals that some deals amount to little more than feel-good hype. When traced to their source, these dubious offsets often encourage climate protection that would have happened regardless of the buying and selling of paper certificates. One danger of largely symbolic deals is that they may divert attention and resources from more expensive and effective measures.

The market for carbon offsets in the U.S. could be as high as \$100 million, according to researchers' best guesses. That's up from next to nothing just a couple of years ago. One reason for this growth is that the U.S. remains one of the few industrialized countries that hasn't ratified the Kyoto Protocol, a global agreement setting emission limits by nation. In the absence of a mandatory national cap, some Americans have begun taking action on their own, but without widely recognized standards as to what constitutes a valid offset. As long as there are willing buyers and sellers, almost anything goes. "Right now it's a no-man's land out there," says Jennifer Martin of the nonprofit Center for Resource Solutions in San Francisco.

Hollywood celebrated environmental activism at this year's Academy Awards, and not just by giving an Oscar to the AI Gore documentary *An Inconvenient Truth*. The Academy of Motion Picture Arts & Sciences promoted the show itself having "gone green," by means of a variety of initiatives. One element: Each performer and presenter received a glass statue representing the elimination of the amount of greenhouse gas associated with a celebrity lifestyle over the course of a year. The offsets were issued by TerraPass Inc., a two-year-old for-profit company in San Francisco that identifies climate-protection efforts and, for a fee, gives its customers the opportunity to buy a piece of the environmental action. Each Oscar favor represented 100,000 pounds of emission reductions drawn from TerraPass' portfolio of offset projects.

One of the largest in its portfolio is a sprawling garbage dump outside of Springdale, Ark., from which TerraPass has purchased thousands of tons of gas reductions. The vast sloping mound of the Tontitown landfill rises near stands of bare-limbed hickory and oak trees, with the blue Ozark foothills in the background. The decomposing trash generates methane, a gas 23 times as potent as carbon dioxide in trapping heat in the earth's atmosphere, melting glaciers and raising ocean levels. Waste Management Inc., ([WMI](#)) the huge garbage processor that operates the facility, tends nearly 90 wells dotting the trash mountain, each giving off a barely audible hiss as it sucks methane from the depths of the landfill and delivers the gas to a single towering flare. Once torched, the gas is released into the atmosphere as less-damaging co2. But company officials and Arkansas environmental regulators say Waste Management began to burn methane, and continues to do so, for reasons having nothing to do with TerraPass' offsets.

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'ICING ON THE CAKE'

Concerned that methane might be contaminating groundwater beneath the landfill, Waste Management first floated the idea for a gas-collection system in early 1999. Arkansas regulators urged the company to pursue this remedy. In 2001 the state increased its pressure by imposing a requirement for "corrective action" at the Tontitown facility. Waste Management promised to make the methane flare operational by late 2001. After probes subsequently detected methane levels exceeding allowable levels, Dennis John Burks, then chief of the Solid Waste Management Div. of the Arkansas Environmental Quality Dept., wrote to Waste Management on June 27, 2001, saying that the state "strongly urges WM to bring the newly installed Tontitown Landfill gas extraction system online as soon as possible."

Asked about Waste Management's response, Gerald Delavan, a supervisor at the Arkansas environmental agency, says: "It started out as a voluntary effort" by the company. "But it ended up being guided by corrective action," imposed by the state. Wes Muir, a Waste Management spokesman, says: "We felt a gas collection system was the most effective way to deal with this.... It was a voluntary process."

Regardless of who deserves credit for taking the initiative, one thing is clear: The methane system was launched long before any promise of carbon-offset sales. In other words, it appears that the main effects of the TerraPass offsets in this instance are to salve guilty celebrity consciences and provide Waste Management, a \$13 billion company based in Houston, with some extra revenue.

All six other project developers selling offsets to TerraPass that *BusinessWeek* was able to contact said they were pleased with the extra cash. But five of the six said the offsets hadn't played a significant role in their decision to cut emissions. "It's just icing on the cake," says Barry Edwards, director of utilities and engineering at Catawba County, N.C., which installed a system in 1998 to turn landfill gas into electricity to power 944 homes. "We would have done this project anyway."

A big player in the growing industry of brokers and retailers marketing offsets, TerraPass was the brainchild of Karl Ulrich, a professor at the Wharton School. Ulrich, an environmentalist who bikes to work, became concerned several years ago about the carbon dioxide emitted when he drove to his cabin in Vermont. In the fall of 2004 he gave one of his classes \$5,000 and challenged students to create an affordable carbon-offset program.

TerraPass, with a number of Wharton graduates as shareholders, has soared since then. The company now claims 42,500 customers. Tom Arnold, the 30-year-old former Ulrich student who runs the business, says TerraPass has already had a major impact by offsetting more than 117,000 tons of greenhouse gases. Ford Motor Co. ([E](#)) and the travel Web site Expedia.com ([EXPE](#)) collaborate with the offset-retailer to offer customers the option of neutralizing travel-related emissions for an added cost.

TRICKLE DOWN

Arnold concedes that TerraPass hadn't known until approached by *BusinessWeek* that concerns about groundwater contamination had led to the Tontitown methane project. TerraPass, he says, will now rethink how it evaluates such landfill gas-reduction efforts. But Arnold stands behind the legitimacy of offsets related to the Tontitown dump. He emphasizes that Waste Management acted voluntarily, and he praises an \$800,000 upgrade to the methane system last year: "That's behavior consistent with somebody trying to enhance methane capture." He also warns against getting too bogged down in the intricacies of how particular offset projects were conceived. "Let's get the market working well," he says. "That will do a lot of greater good."

As the offset market now works, intermediaries typically pocket a big portion of the money coming in. Consider two projects in the TerraPass portfolio that are run by dairy farmers in Princeton, Minn., and Lynden, Wash. Several years ago, the farmers had installed expensive equipment that uses methane from cow manure to generate electricity. In theory, the promise of offset income encourages farmers to invest in such equipment. TerraPass typically sells offsets for about \$9 per ton of carbon dioxide, or the corresponding amount of methane. The company takes a cut of that \$9, but won't say what the percentage is. A broker that introduced TerraPass to the dairy farmers also took a cut. In the end, the farmers say they each received less than \$2 a ton out of the original \$9. Darryl Vander Haak, the farmer in Washington, says he's happy with the \$16,000 he earned last year from offset sales. But offsets didn't factor into his decision to start the methane venture, he adds.

TerraPass' Arnold nevertheless maintains that "the [offset] prices out in the market now are changing behavior." The fees intermediaries collect cover costs such as auditing projects and marketing to buyers. "It's much like Starbucks ([SBUX](#))," Arnold says. "What do you think Starbucks pays for a pound of coffee, and how does that translate into a \$3.50 latte?"

Seattle, the home of Starbucks, made an astounding announcement in 2005: Its municipal utility, Seattle City Light, had eliminated its contribution to global warming. The power company still annually spewed some 200,000 tons of greenhouse gases. But Seattle said it had negated every last ton by paying other organizations around the country to curtail their emissions. "We can power our city without toasting our planet,"

Seattle Mayor Greg Nickels declared.

But as in the case of the Oscar presenters, the bulk of the pollution reductions for which Seattle paid would have happened regardless of its offset deal. The city's experience illustrates the difference between more expensive methods of cutting greenhouse gases close to home, vs. more far-flung deals with third parties.

In 2000 the Seattle City Council imposed the long-term goal of Seattle City Light becoming carbon-neutral. At first the utility pursued local projects, such as one in 2003 with Seattle's municipal trucking department. The strategy was to convert 900 diesel vehicles to a more climate-friendly blend of fuel containing 20% biodiesel. The blend was expected to cost an additional 25 cents a gallon, so Seattle City Light agreed to chip in half of the difference. In exchange, the utility has taken credit for the relatively modest 700 to 1,400 tons of annual greenhouse-gas reduction the cleaner fuel allowed. This arrangement, which improved air quality in Seattle, wouldn't have occurred without the financial incentive provided by Seattle City Light.

"Our approach initially was very strict," says Corinne Grande, a strategic adviser to the utility. "The project would only happen if the check came in the mail from us." But Seattle sought to offset hundreds of thousands of tons of gas a year. "We wanted offsets quickly, not offsets coming 10 or 20 years in the future," Grande says.

City officials culled dozens of offers from various middlemen. Several factors drew attention to a DuPont ([DD](#)) project reducing emissions at a Louisville (Ky.) plant that manufactures the refrigerant Freon, Grande recalls. DuPont enjoyed a strong reputation for reducing greenhouse gases, and the Louisville plant provided the chance to buy in bulk. Seattle City Light purchased its largest block of offsets in 2005 from DuPont, for nearly \$600,000. The 300,000 tons of CO₂ reductions were enough for Seattle to claim "net zero" emissions for its utility, with plenty left over for 2006. The price, at only \$1.95 per ton, was tiny compared with that of the biodiesel venture, which ran as high as \$220.

NO DETAILS

DuPont deserved to be rewarded for its climate efforts, says Grande, the adviser to Seattle City Light. The chemical company "took a chance on doing more than they needed to do," she adds. "We'd like to encourage the continued destruction of greenhouse gases."

But Seattle's offset purchase didn't prompt the cleanup of the once-dirty Louisville plant. DuPont had begun researching improvements all the way back in 1995 and installed a more environmentally friendly system in 2000, five years before Seattle began paying DuPont. "We would have continued with these emissions reductions anyway," says Stephanie Jacobson, a DuPont spokeswoman.

In a legal twist, Washington's state Supreme Court ruled earlier this year that the Seattle utility lacks authority to use ratepayer money to fight global warming. The state legislature could counteract that decision, but meanwhile the future of Seattle's offset program is uncertain.

The growing green marketplace offers an alternative to carbon offsets known as renewable energy certificates, or RECs. When RECs work properly, producers of wind-generated power and other "renewable" energy sell the certificates as a way of promoting the creation of additional renewable energy sources.

One RECs buyer is Vail Resorts, which runs ski and vacation destinations in the West. Vail Resorts declares in marketing material that it is now "100% powered by wind." But this claim isn't literally correct. Vail Resorts contemplated building expensive mountaintop wind turbines to power its ski lifts and other operations. But instead it decided last year to enter a multiyear agreement to buy, for a fraction of the cost, RECs representing 152,000 megawatt hours of wind-generated electricity each year, equivalent to its annual use. "We're in the travel business," says Rob Katz, chief executive of Vail Resorts. "We're not in the electricity-generation business." He adds that even if his business obtains its power from a standard utility, which in the Rocky Mountains means relying mostly on coal, "we're helping to push forward development of new wind projects."

Which new wind projects? Katz says he relies on a broker to select appropriate recipients. His broker, Renewable Choice Energy of Boulder, Colo., declines to identify any of the investments it makes on behalf of Vail Resorts or its scores of other clients. Neither party will discuss the price of the RECs. What Renewable Choice will say is that the RECs it buys and sells are confirmed by the Center for Resource Solutions, the San Francisco nonprofit, as representing power not counting toward any government mandate and coming from projects built since 1997. RECs related to more recently built projects are thought more likely to spark development of new projects.

Still, this kind of secretiveness provokes skepticism. "If neither a seller of RECs nor the buyer will provide any details of how, exactly, their transaction is reducing carbon emissions, I would suspect it's vaporware," says Randy Udall, director of the Community Office for Resource Efficiency, an Aspen (Colo.) nonprofit that promotes renewable energy.

Some developers go further, scoffing at the basic economics of RECs, most of which sell for \$1 to \$3 per megawatt hour—a small fraction of what wind projects can attract in

federal tax incentives. Voluntary REC purchases "are pure corporate marketing and image management" for buyers, says Mike O'Sullivan, senior vice-president for development at Juno Beach (Fla.)-based fpl Energy ([FPL](#)), the nation's largest developer of wind power. "The economics of our wind investments have to work without the green credits."

More broadly, the proliferation of suspect RECs and offsets may persuade consumers and businesses that preventing climate change comes cheap, says Anja S. Kollmuss, outreach coordinator of the Tufts Climate Initiative, an advocacy group affiliated with Tufts University. "We cannot solve the climate crisis by buying offsets and claiming to be climate-neutral," she adds. "Nature does not fall for accounting schemes."

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Nickname: thomastrujillo

Review: Our liberal physics teacher made our class watch the movie "An Inconvenient Truth." This is a false scientific documentary, propaganda. And our teacher wouldn't allow us to question the facts of the movie. He forces global warming down our throats, and we aren't allowed other point of views. Just the hippie way.

Date reviewed: Feb 28, 2008 12:55 AM

Nickname: Green Thumb up your ***

Review: Green thumb, your post is misleading. What the article you link to states is "a firm connection between sunspot numbers and climate remains elusive, many scientists say." Your attempt to say that the article refutes claims of sunspot-driven global warming are typical of the dishonest, "the science is settled" eco-propaganda that the Al Gore acolytes use.

Date reviewed: Feb 21, 2008 10:43 PM

Nickname: Green Thumb

Review: http://www.space.com/scienceastronomy/sunspot_record_041027.html Many researchers have tried to link sunspot activity to climate change, but the new results cannot be used to explain global warming, according to the scientists who did the study.

Date reviewed: Oct 22, 2007 2:49 PM

Nickname: gidgreen

Review: Readers of this article may be interested to know about CarbonCatalog.org, a new independent directory of carbon offsets. Carbon Catalog lists over 200 carbon offset providers and 100 of their products.

By Ben Elgin

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