

# Probing Question: What are carbon offsets?

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While most Americans are aware that they increase carbon dioxide in the atmosphere by burning fossil fuel to drive their cars and heat their homes, they tend to think less about the greenhouse impacts of other daily activities.

According to Tim Considine, professor of natural resources at Penn State, people shouldn't forget that half of the electricity they use for everything from toasting their morning bagels to running their computers is generated by coal-fired power plants.

Carbon emissions are considered to be major offenders in the global warming crisis, a fact that has spurred researchers in academia and industry to seek cleaner coal technologies. For instance, Penn State and Chevron recently formed a strategic alliance to explore the possibilities.

Cleaner-burning coal and natural gas are poised to become a much bigger part of the energy picture, said Considine, who believes that despite the promise in renewable energy harvested by solar panels and wind turbines, people are still "a long way off" from actually powering the country from these alternative sources.

"Some proponents of solar and wind power are not being realistic," said Considine. "Those options are just not yet ready for prime time. They are unlikely to provide large amounts of reliable, low-cost electric power for the foreseeable future."

Another increasingly popular interim approach is carbon offsets.

To date, 174 countries have ratified the Kyoto Protocol, which commits them to either reduce their national emissions of greenhouse gases or engage in emissions trading, a plan in which polluting countries can buy carbon credits from nonpolluting ones.

Now companies are lining up in what some call a "green gold rush" to sell consumers a promise to remove carbon by planting trees, investing in renewable energy or, in the case of Planktos, a Foster City, Calif. company, fertilizing a swath of ocean with iron-containing dust to spur carbon-absorbing plankton blooms.

"Carbon-neutral" has become the latest buzzword, with John Edwards and Hilary Clinton pledging that at least part of their campaigns will achieve such status, and rock groups Coldplay, Barenaked Ladies and Bon Jovi all buying carbon offsets to wipe out the emissions from their multi-city tours.

Even the U.S. House of Representatives spent \$89,000 in November on credits to offset 30,000 tons of annual carbon emissions spewed from the U.S. Capitol's coal-burning power plant, as part of Speaker Nancy Pelosi's pledge to green the Capitol by the end of 2008. The U.S. market for carbon offsets is already \$100 million and growing fast.

Does purchasing carbon offsets represent a less expensive and more convenient alternative to reducing one's own fossil-fuel consumption? Or are people just lining the pockets of companies cashing in on a trend?

While carbon offsetting brings attention to environmental causes and raises public awareness, they've come under fire for many reasons, Considine said.

Since regulation for this new industry is in development (through, for example, the Clean Development Mechanism of the Kyoto Protocol),

companies selling offsets are not closely monitored to ensure that they follow through on their promises.

Critics also say the offsets can divert focus away from energy-efficiency efforts and the need for significant changes in energy-use habits. (The average global citizen generates 4.5 tons of carbon dioxide annually, compared to the 20 tons generated by the typical American each year.)

The Federal Trade Commission has promised to conduct a review in 2008 of how companies market environmental claims, including measures to offset carbon dioxide emissions. Scam-wary buyers looking for legitimate carbon offset projects can check out "A Consumer's Guide to Retail Carbon-Offset Providers" by the environmental group Clean Air/Cool Planet, which identifies the eight most reliable sellers of carbon-offsets.

Considine cautions that there is no silver-bullet solution to cutting carbon, given the sources of energy available in the near future.

"It may be difficult to avoid substantial increases in electricity prices if we're serious about cutting carbon," he added. "That's the fact of the matter. Going green may be costly."

Source: By Lisa Duchene, Research Penn State

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