



## Overseer's Undercurrent Decarbonation

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Now that a carbon cap through AB 32 is about to become law, the debate needs to shift. Instead of discussing what kind of greenhouse gas policies are politically acceptable, we need to figure out how to achieve the goals that will be required.

To be sure, we can expect several years of contention while policies and programs are developed to quantify - and then reduce - carbon and other greenhouse gas emissions. With legislation allowing for possible creation of market-based approaches to emissions reductions, we can further anticipate a lot of attention and argument over "cap and trade" mechanisms for achieving compliance. And no doubt, there will be lawsuits along the way to test whether California actually possesses the sweeping authority it claims it has.

Regardless of those battles to come, passage of this bill signals a new chapter in California's long history of preemptively defining the nation's environmental priorities. Along with the actions of a few other states to espouse greenhouse gas reduction goals, and the regional approaches being established in the Northeast, California's policies will help push the federal government - eventually - to finally address climate change in a more serious and systematic manner.

California Senator Dianne Feinstein last week promised to introduce legislation in January that would enact a federal cap-and-trade system for carbon, much stronger emissions standards for all passenger vehicles, and a national energy-efficiency program modeled after the state's highly successful efforts. The near-term prospects for Feinstein's bills will likely depend on the outcome of the November elections and whether Democrats win control of Congress. But it's clear that the issues are forcing their way onto the federal energy agenda and are unlikely to dissipate.

My concern is what to do in the meantime. The good news is that states are not waiting around for a national program, and neither are an increasing number of individuals and corporations. With or without mandates, we are already witnessing the creation of numerous markets for the buying and selling of carbon-offset credits at all levels of the economy.

Some of these markets are the formalized schemes developed for nations and industries to comply with the Kyoto Protocols. For example, this week Natsource, which proclaims itself the world's largest private-sector greenhouse gas assets manager, announced the landmark purchase of 23 million "certified emission reductions" from the World Bank's Umbrella Carbon Facility.

In a deal valued at \$1 billion, two Chinese chemical companies will contain and incinerate their emissions of greenhouse gas fluorocarbons rather than releasing them into the atmosphere. The net reduction will be equivalent to about 19 million tons of carbon dioxide. Natsource will use the credits for its own carbon funds and market some internationally to companies and governments. The Chinese government will use much of the proceeds to create a Clean Development Fund for renewable resources and other GHG-reduction efforts.

At the individual level, Internet travel sites Expedia.com and Travelocity.com this week began offering customers the option of buying carbon offsets to mitigate the emissions from their flights and other travel-related activities. Expedia is partnering with TerraPass of Menlo Park, California, to sell carbon-offset packages starting at \$5.99 to offset about 1,000 pounds of CO<sub>2</sub>, which is about what is emitted per passenger during a New York-to-Los Angeles round trip. Travelocity is working with the Conservation Fund, charging \$10 to offset one person's

air, hotel, and rental car emissions, according to the company.

These are just the latest developments in a growing market for individual offsets - with such firms as CarbonFund.org, DriveNeutral.org, and Native Energy active here in the U.S., selling offsets and applying the proceeds to renewable energy projects, reforestation efforts, and other programs to reduce carbon.

And there are many other trading platforms in between, with each day seeing more transactions by brokers such as Cantor-Fitzgerald, Evolution Markets, and Natsource filling the needs of both compliance and voluntary markets for greenhouse gas reductions. Separately, there are a growing number of "carbon registries" that will be used to document transactions and their impacts on meeting carbon goals.

All this activity begs the question of whether these are simply "feel-good" programs or effective mechanisms for reducing emissions - a key issue for any policies that will be developed as a result of AB 32. Because of the wide variation in offers and the start-up nature of many of these carbon intermediaries, consumers and policy makers alike need to be able to verify that we're not spending too much and that the promises become reality.

Thankfully, the market is not waiting around for creation of a U.S. Decarbonation Verification Agency. Already on the Internet, you can find at least one Consumer Report-like survey that compares carbon-offset sellers' prices and offerings ([www.ecobusinesslinks.com](http://www.ecobusinesslinks.com)).

On the verification front, the Center for Resource Solutions of San Francisco has put together an advisory group of climate-change activists and environmental concerns to devise a plan for quantifying carbon-reduction benefits associated with renewable energy certificates (RECs) and such offset packages as described above.

Cathy Fogel, CRS's new initiatives coordinator, said the advisory group includes representatives of the Natural Resources Defense Council, the World Resources Institute, Interface Fabrics, and TerraPass.

"In the past few years there's been an increase in the number of individuals and companies that want to purchase carbon offsets, but there's no real oversight or regulation of that voluntary market," Fogel said. "We're hoping to come up with a consensus for standards and appropriate offset sources."

The goal of the certification group will be to provide a greater level of comfort for offset purchasers and validation for sellers, she said.

CRS, which established the Green-e certification program for green power products in 1997, monitors REC markets around the country. It verifies that voluntary energy purchases made for environmental reasons come from qualified resources and are not counted twice.

RECs, which unbundle the positive environmental attributes of energy produced by renewable resources, are sold separately from the commodity electricity. Generally, a single REC equals 1 MWh of electricity.

Right now, there is an overlap between the REC marketplace and carbon offsets. Much of the current voluntary market for RECs is from companies that want to do something to reduce their greenhouse gas footprint, Fogel said. The first task of the advisory group will be to work out how to measure the distinct greenhouse gas benefits associated with RECs and apply lessons learned from the Green-e renewables program. One thorny issue will be harmonizing the varying values that states and regions place on carbon reductions.

Another issue will be how to provide validation for offsets purchased under "cap-and-trade" systems being put into place regionally, such as the Northeast Regional Greenhouse Gas Initiative.

"In no way are we trying to replace those markets," Fogel said. "In the short run, we're just trying to introduce some stability to the markets for companies that want to do something about reducing carbon."

Separately, CRS is finalizing its annual survey of green power sellers across the country. It

reports that more than 5 million MWh of certified renewable energy was sold in the United States last year, up from 3.9 million MWh in 2004 and 2.9 million MWh in 2003.

The tabulation covers sales by utilities and retail energy sellers' "green power products." It also tracks voluntary purchases of tradable renewables certificates known as "green tags" or renewable energy certificates. CRS estimates that certified green power represents more than half of the total marketplace for renewable energy sold in the country. These sales are separate from any energy purchased or generated to meet any of the 22 state renewables portfolio standards now in place.

Nearly all the new sales growth came from recently operational wind projects. The increase in wind-derived sales amounted to 1.6 million MWh more than in 2004, CRS reported. Wind has dominated the new market, but a significant portion of the certified energy has come from biomass and small hydro projects in recent years.

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