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Overseer's Undercurrent California CarbonDollars

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In describing ways to derive a price for carbon emissions and the potential cost of reducing same in last week's column, some readers may have thought I dismissed the European Union's experience with carbon trading as not especially relevant to California.

Let me clarify. What I meant was that the pricing results from EU carbon trading were not directly applicable to what we will see on these shores. At some point, there may be a worldwide market for carbon offsets, and Governor Arnold Schwarzenegger has opened a dialogue with the United Kingdom for the development of new markets for offsetting projects and technologies. But for the time being, we won't be arbitraging euro carbondollars as part of the state's program to reduce greenhouse gas emissions.

That doesn't mean we don't have something to learn from the EU experience. This week, in somewhat unprecedented sessions before committees of both houses of Congress, experts, executives, and pundits provided a tutorial on the European trading scheme (not a pejorative; that's what they call it there). There were also some media sideshows, including a conference call hosted by Ray Kopp of Resources for the Future, to explain to reporters basics of the EU program and observations about "what it all means" as the U.S. lawmakers contemplate setting up a national GHG cap-and-trade program.

On the basis of these sources, plus a few related research papers, I've come to some simple conclusions of my own.

The bigger the market, the better. California cannot legislate carbon reductions anywhere outside its borders, but we're certainly trying to exert influence, both through restrictions on regulated utilities' (and other load-serving entities') purchases of electricity from coal plants and through cooperative regional initiatives with other states. But the real value to offset trading will come when California entities will be able to buy and sell across territorial borders.

Yes, we will need to achieve in-state goals for greenhouse gas reductions, but there is a case to be made that since this is a global issue, we might be able to accomplish more by investing in other places that are not so adept at meeting similar goals.

Price volatility is a fact of life. Prices for offset credits or allowances will not necessarily reflect the actual costs of eliminating emissions because there will be a wide range of values associated with reduction activities. Some efforts, such as inventing coal-carbon sequestration, will be very costly at first. Others, such as instituting energy efficiency, may be less costly. These physical costs will likely establish the outside boundaries of market pricing, but any given price point will reflect expectations of future costs and regulation.

According to an analysis of the first year of EU trading, there were several major drivers of price swings: regulatory policy shifts, the price of energy, and weather - which is a significant

component of the energy market price. Allowance prices moved up with higher natural gas prices and decreasing coal prices, and vice versa. Here in the West, we must add the fluctuations of hydroelectricity availability to that equation, meaning that weather becomes even more important.

Allocation, allocation, allocation. The biggest price change on the EU market came last May, when several countries reported an overabundance of allowances and the market price plummeted. This means that getting the initial allocation of credits correct is of paramount importance, leading to the wisdom of California's early requirement for accurate greenhouse gas reporting and the value of entities such as the California Climate Exchange.

One of the debates in market development circles is whether offset allowances will be initially distributed or sold. Reports from the market-mechanism committee working with the California Air Resources Board to implement AB 32 - the state law that mandates curbing the emission of greenhouse gases - indicate they are leaning toward sales, not distribution (Circuit, March 23, 2007). My own feeling is that whatever method is chosen, the allowances should be earned - not created out of whole cloth. This may provide a means for companies that are already taking effective actions to curb carbon output to receive offsets from an initial pool.

Not just price, but value. The market price for offsets necessarily reflects a value for the particular period covered by the trade. Most likely, one unit will represent one ton of carbon equivalent delivered during a particular year or priced for a particular date. But the nature of carbon reductions over time can be quite elastic.

In the short term, I could claim some credit for not driving a car for a week, a month, or a year. On the other hand, retrofitting a power plant or manufacturing process is a 50-year investment that needs to be accounted for - even though our designated trading periods may be of much shorter duration.

There will also be different values derived for the noncarbon greenhouse gases that have to be properly accounted. I suspect the science of equivalence is not completely cemented on what should be the relative values for methane and other gases.

Trading not for its own sake, but for actual reductions. I can't emphasize this enough. The first phase of the EU market, 2005-07, was really a shakedown period to test the allowance distribution system, not to achieve reductions. We need to keep that introductory period as brief as possible here in the U.S., where there are well-established trading programs for energy, commodities, and even sulfur dioxide. The "cap" part of cap and trade needs to be on a constant and consistent downslope as we strive for our reduction goals.

The goal is to change the world, not just to have money change hands.

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