



By Robert N. Stavins

## The Ninth Largest Economy Steps Up

Late last year, while some 195 nations prepared to meet in Doha, Qatar, for the 18th Conference of the Parties of the United Nations Framework Convention on Climate Change, the ninth largest economy in the world took a significant step toward achieving its own ambitious greenhouse gas reduction goals. I am referring to the CO<sub>2</sub> cap-and-trade allowance auction held by the state of California (which ranks just below Brazil and just above India in the size of its economy) on November 14.

Just a few days after the auction, the California Air Resources Board released the results. All 23,126,110 metric tons of allowances for 2013 emissions were sold, with the number of qualified bids exceeding the number available by about 6 percent. These 2013 vintage allowances sold for \$10.09, just above the auction's reserve price of \$10.00. Some 97 percent of the allowances were bought by compliance entities, as opposed to investors of various kinds. The advance auction of 2015 allowances produced significantly different results, with only 14 percent of available allowances sold, at the same auction reserve price.

What do these results tell us? First of all, the fact that the auction ran smoothly and compliance entities and others put their money down is one important step in es-

tablishing the program's credibility and operational success. Second, given that all 2013 vintage allowances sold and there was significant demand above the clearing price (mean prices were \$13.75 per ton), the cap is clearly binding. Third, the expected marginal abatement cost (accounting for market uncertainty and regulatory risk) is roughly at the reservation price of \$10.00.

On the one hand, it is good news that the allowance price is as low as it is, because this is indicative of the market's prediction of what the marginal cost of abatement will be. Lower cost is good news for the California economy. Of course, low prices mean smaller funds raised by the auction (\$233 million raised by the 2013 auction, and \$56 million by the 2015 auction). However, given that the fundamental purpose of the auction is to cap emissions through the cap-and-trade system, not to raise revenues for the state, this does not appear to be bad news either.

But there is some bad news in these low allowance prices, and in the 2015 results. First, the 2015 results may indicate that there is significant "regulatory risk" that is lowering prices firms are willing to pay for allowances. Such regulatory risk could arise from concerns that state legislators will backpedal on the program, or that legal challenges to certain rules or policy action in Washington will reduce allowance demand.

Other factors driving down demand for allowances and the auction price are the emission reductions that have already been achieved or are expected to be achieved by so-called "complementary programs," such as energy efficiency programs, renewable portfolio standards, and low-carbon fuel standards. You might think this is good news, but it is not.

These complementary programs

exist under the cap of the cap-and-trade system. Hence, there are two possible outcomes from this situation. On the one hand, these additional programs can be irrelevant in terms of CO<sub>2</sub> emissions; that is, their emission reductions would be achieved anyway by the cap-and-trade system, which — remember — allocates the abatement burden cost-effectively across sectors and sources. Or, on the other hand, these programs could achieve greater emissions reductions in some sector or by some sources than the cap-and-trade regime would have done on its own. But, by doing this, the effect is simply to free up allowances for other sources and/or other sectors through the trading mechanism.

On the margin, nothing is accomplished in terms of additional CO<sub>2</sub> emissions reductions; rather, the emissions are simply relocated. And, because under such circum-

stances marginal abatement costs are no longer equated, the allocation of the reductions is no longer cost-effective; that is, aggregate costs are driven up. This is

precisely what has happened in the European Union Emissions Trading System.

So, this specific bad news about perverse policy interactions is not a problem of the cap-and-trade system per se, any more than it is in the European system. Rather, the problem is with adding well-intentioned complementary programs under the coverage of a cap-and-trade system. Unfortunately, it is misguided public policy, at least from the perspective of this economist.

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*It is good news that the allowance price is low, but there is some bad news as well*