Learning from Europe's carbon market

LONG-TERM POLICY CERTAINTY CRUCIAL

A key success factor for cap-and-trade is a long-term planning horizon. This creates certainty, allowing companies to make wise investments for the future.

The EU ETS suffered some glitches because of the intentional short-term nature of its trial phase. Proposed U.S. legislation already takes this into account and aims to establish a system for the long-term.

SET THE CAP BASED ON SOUND SCIENCE AND HARD DATA

In the early phases, each of the 27 countries in the trading system was allowed to set its own cap. Not surprisingly, the overall cap in the trial phase turned out to be overly generous.

Federal legislation in the United States will avoid the problem of multiple caps. Continuous emissions monitoring on utilities is already providing accurate plant-level data, and new rules will ensure similar reporting for all industrial installations beginning in 2011 to allow transparent monitoring of emissions.

BANKING AND OFFSETS DECREASE COSTS

Allowing entities to "bank" unused allowances for future use is necessary to help manage costs. In the case of the EU ETS, entities were not allowed to bank allowances from the first phase for use in later years from the very beginning the trial. To be truly effective, banking should apply over a much longer time horizon (something since adopted by the EU as well).

Offsets from verified emissions reductions on farms and forests are another crucial tool to keep costs down and get other countries on board.

Europe's ETS achievements

CREATE A MARKET FOR CARBON

The EU ETS's main achievement is to put a price on carbon. Pollution is no longer free, and businesses have taken notice.

JUMP-START THE RENEWABLES SECTOR

A long-term price for carbon has helped prompt large investments in Europe's alternative energy sector. The EU has pulled ahead of the United States in renewable investment and entrepreneurial activity.

DECREASE CARBON EMISSIONS

Even during the trial phase (2005-07), the EU ETS led to estimated reductions of between 2 and 5% relative to what emissions would have been in the absence of the program. Since 2008, the overal cap has been tightened by another 6.5%, with more reductions scheduled and further ones discussed for 2012-20.

PUT BUILDING BLOCKS IN PLACE

The EU got a head start on the fundamental building blocks of any carbon market. The ETS put in place comprehensive monitoring of emissions from each installation as well as national and EU-wide registries to easily track and verify emissions.

SET STAGE FOR POLICY INNOVATIONS

The trial phase allowed experiments with policy options—some to be widely adopted, some to serve as key lessons for future markets.

Additional brochure in this series:
Cap and trade 101

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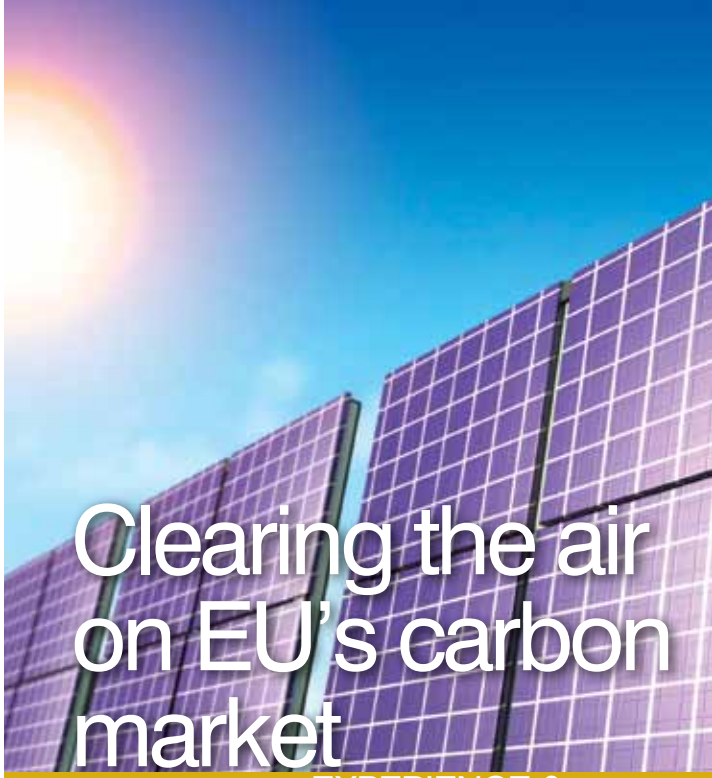

Clearing the air on EU's carbon market

EXPERIENCE & LESSONS LEARNED

The European Union Emissions Trading Scheme (**EU ETS**) is the world's first mandatory cap-and-trade program for CO_2 emissions. This brochure describes how it works, what it has accomplished and what lessons the United States should draw from the EU's experience.

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Finding the ways that work

Lessons from EU's carbon trading experience

The EU ETS tested the waters for a large-scale carbon market, established a long-term price for CO_2 emissions and set Europe on a path toward crucial innovation in its energy sector.

The EU ETS is the most comprehensive cap-and-trade system for carbon emissions anywhere in the world. It caps around 2 billion ton of CO_2 emissions from 11,500 power generators and the most polluting factories. All told, the cap covers 50% of the region's CO_2 and 40% of overall greenhouse gas emissions.

The system ensures that it is no longer free to pollute. Although not perfect and still evolving, this system is blazing a path for future comprehensive trading systems in Europe, the United States and elsewhere.

Has Europe's ETS decreased emissions?

The program didn't get fully underway until January 2008. But even before then—during its three-year trial period—the EU ETS achieved reductions of between 2 and 5% relative to what emissions would have been otherwise.[1]

Between 2008 and 2012, overall allocations are 6.5% below previous emission levels, virtually guaranteeing further reductions.

1.Ellerman et al's Pricing Carbon (2010).

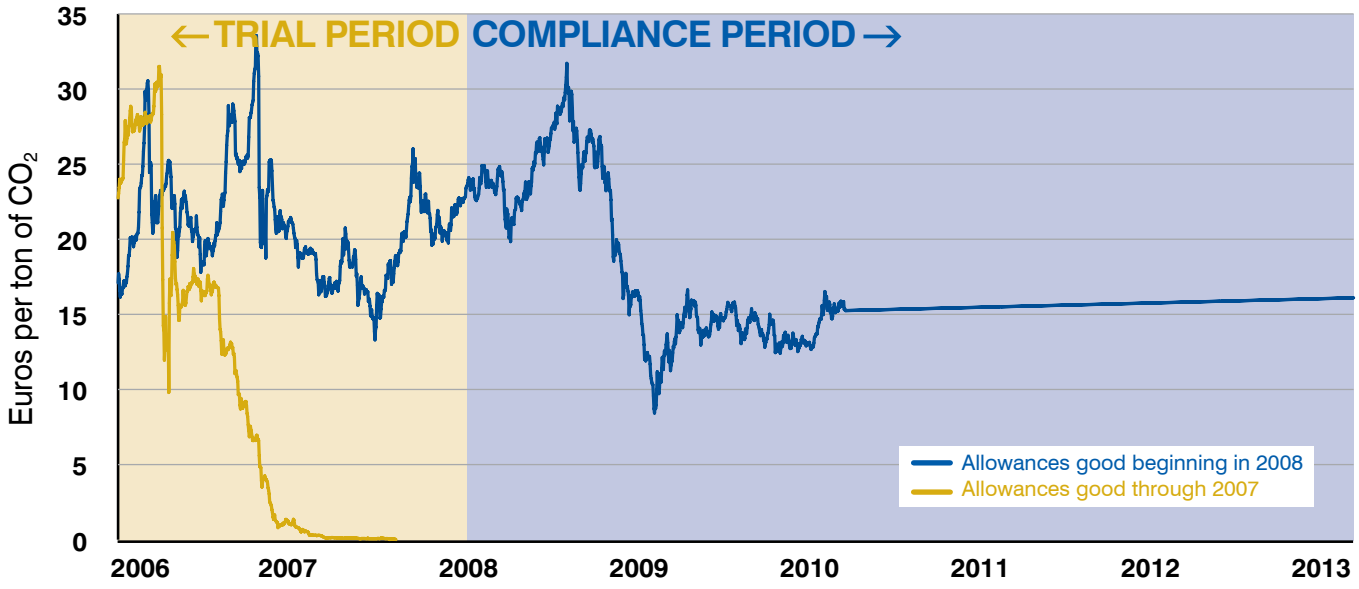
2 Dechezleprêtre et al. (CERNA 2009): "Invention and Transfer of Climate Change Mitigation Technologies on a Global Scale: A Study Drawing on Patent Data"

Europe forges ahead of U.S. in clean energy innovation

Some of the largest solar and wind plants and manufacturers can all be found in Europe. The continent is also pulling ahead in clean tech patents.[2] The reasons are clear: the EU and many individual countries have put into place policy frameworks to reward investment in renewable energy. The cornerstone of this approach—especially in the medium and long term—is the EU ETS.

Capping pollution releases a flood of entrepreneurial activity, and helps spark investment in research and development to decrease emissions even further. Once CO_2 has a price, emitting less of it pays.

Europe carbon allowance price



Spotlight on CARBON PRICES

The most important achievement of the EU ETS has been to put a price on carbon. For most European power generators and key industries, pollution is no longer free. This has helped to drive emissions down, even in the trial period.

Many observers have pointed to the market crash that occurred in the spring of 2006 as evidence that carbon markets are too volatile to work well. (See chart at left.) The truth is much simpler. The EU handed out too many allowances for the trial phase—and had rules to ensure that they would all expire at the end of 2007. Therefore allowance prices had to fall to zero; the only question was when that would happen.

Meanwhile, prices for allowances good in 2008 and beyond (the blue line in the chart) have remained strong in line with economic growth. Prices fell once the world economy hit the breaks, again just as we would expect and also hope to happen in a functioning market. As demand for allowances goes down, so does the price. All projections point to increased prices once the economy picks up and because allowances will become increasingly scarce.