

# 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 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

Each of the 25-odd countries in the trading system was allowed to set its own cap—often based on projections of “business as usual” that were provided by the regulated firms. 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. To ensure that we achieve the reductions we need, the cap must be based on the underlying climate science.

## BANKING AND OFFSETS DECREASE COSTS

Allowing everyone to “bank” unused allowances for future use is a crucial tool to help manage costs. Although the EU ETS allowed banking, it did so only within each phase. To be truly effective, banking should apply over a much longer time horizon.

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 prompted enormous 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

Preliminary results indicate that the EU ETS decreased emissions by 3% in 2008. That is a significant achievement and even larger than reductions due to the economic downturn, which accounted for a 2% decrease in 2008.

## 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 as well as national and EU-wide registries to easily track and verify emissions.

## SET STAGE FOR POLICY INNOVATIONS

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

**Further background: [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<sub>2</sub> 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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# Lessons from EU's carbon trading experiment

The EU ETS tested the waters for a large-scale carbon market, established a long-term price for CO<sub>2</sub> 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<sub>2</sub> emissions from 10,000 power generators and the most polluting factories. All told, the cap covers 50% of the region's CO<sub>2</sub> and 40% of overall greenhouse gas emissions.

The system ensures that it is no longer free to pollute. Although far from perfect, this system is blazing a path for future comprehensive trading schemes in Europe, the United States and elsewhere.

## Has Europe's ETS decreased emissions?

The program didn't fully get underway until January 2008. However, it seems to have made a difference even in the first year. A preliminary analysis suggests that EU ETS decreased emissions by 3% in 2008, relative to 2007.<sup>1</sup>

Between 2008 and 2012, overall allocations are 10% below previous emission levels, virtually guaranteeing further reductions.

<sup>1</sup> Actual emissions were 5% lower. The difference of 2% is explained by the economic crisis in the second half of 2008. Source: New Carbon Finance (16 February 2009): "Emissions from EU ETS down 3% in 2008".

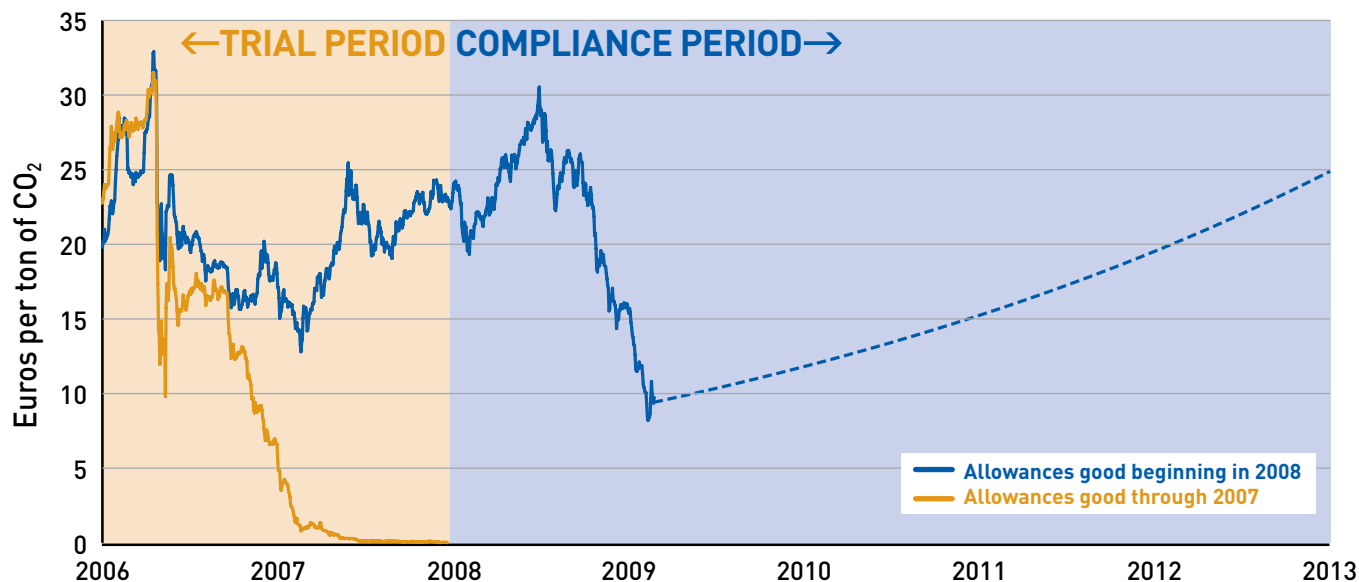
<sup>2</sup> Dechezleprêtre et al. (ICERNA 2009): "Invention and Transfer of Climate Change Mitigation Technologies on a Global Scale: A Study Drawing on Patent Data".

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

The largest solar and wind plants and manufacturers can all be found in Europe. The continent is also pulling ahead in clean tech patents.<sup>2</sup> 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 is the EU ETS.

By putting a price on carbon, the cap-and-trade program is releasing a flood of entrepreneurial activity across the EU, sparking investment in research and development to decrease emissions even further. Once CO<sub>2</sub> 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 CO<sub>2</sub>. 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 then made them 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 brakes, 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.