

The Role of Derivatives Markets in Achieving a Low Carbon Economy

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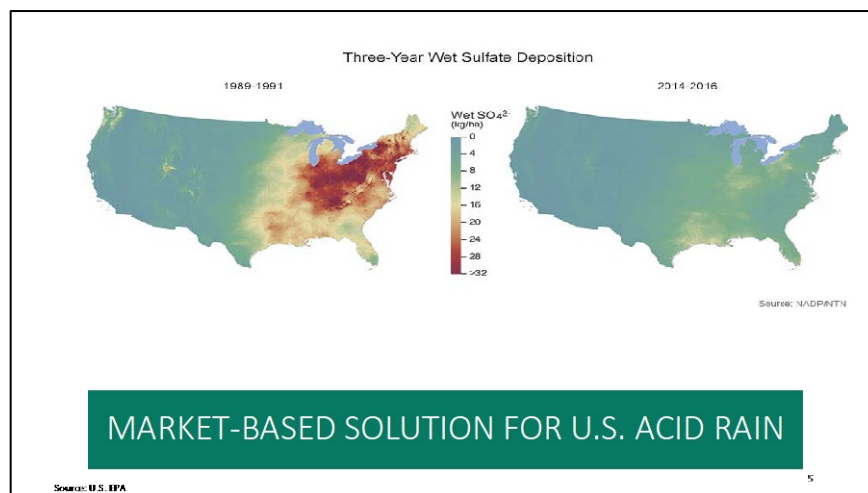
Comments to the Energy and Environmental Markets Advisory Committee (EEMAC) Discussion on the Proposed Subcommittee to Report on Guiding Principles for the Design of Markets for Trading Carbon Allowances and Offsets Focused on Secondary Markets and Derivative Markets.

September 15, 2020

1. The Cart and the Horse

A carbon trading market can be an important component of a larger government mandate to reduce emissions. A market can often find cheaper ways to accomplish the goal, marshalling an enormous set of businesses, engineers and others to pitch in and find better means to the end. My worry is that some people focus almost exclusively on the market and trading and overlook the larger government mandate. They put the cart before the horse.

This Committee has a very clear example of this mistaken focus. Back in 2019, at our November 7 meeting, we heard a panel presenting information on environmental derivative contracts, and we were presented this slide: [IncubEx, Scarbrough, slide 5].



It shows the dramatic decline of sulfate deposition across North America between the three-year period of 1989-1991—shown on the left—and the later three-year period of 2014-2016—shown on the right. The slide closes with the takeaway: “Market-Based Solution for U.S. Acid Rain”, presumably referring to the SO₂ Allowance Trading program instituted by the Clean Air Act Amendments of 1990.

Ladies and gentleman, I am sorry to bring you the bad news, but the SO₂ Allowance Trading program is long dead. There is no real trading and the price is approximately zero. The market is dead. It was killed by a series of political decisions, regulatory actions and court rulings beginning in the 2000s. A short narrative of events can be found [here](#).¹ It was dead before 2014-2016, which are the years for the second picture on that slide.

That slide creates the false impression that the market is the reason for the drop in sulfate deposition. It was not. Although the market was dead, the Clean Air Act was not. The SO₂ trading program was always a component of the larger emissions control legislation. It was never the market on its own. Indeed, the market was a tool to enable less expensive paths for achieving the overall mandate. The market was not a substitute for the mandate. And when the market died, the larger set of policies and frameworks did not die. Although SO₂ trading was no longer useful, polluters still had to comply with the mandates for emission reductions, and these mandates have grown tighter. It is the larger framework that should ultimately be credited with making the second map green.

If this Committee creates a subcommittee to produce a report on carbon markets, it is my hope that the subcommittee will focus not only on the market, disembodied from the larger framework that produces the emission reductions needed. It should also address the governmental authority and supervisory capacity needed to enable any market, and which assure reductions no matter how the market functions. It should also include relevant scientific expertise essential to guiding real emissions reductions.

2. Privately Organized Offset Markets are Precarious

Voluntary offset markets are a familiar tool for carbon emission reductions, with both good and bad lessons to be learned. Within a larger state-mandated and supervised system, offsets may perhaps play a useful role.

Offsets by their nature are inherently voluntary, even when they are enabled through a state-mandated and supervised system, such as California’s cap-and-trade program. But recently, the talk in the financial community and some in parts of industry has been for voluntary offsets created outside of any state-mandated and supervised systems, organized exclusively by private actors. That is a horse of an entirely different color.

¹ Schmalensee, R., & Stavins, R. N. (2013). The SO₂ allowance trading system: the ironic history of a grand policy experiment. *Journal of Economic Perspectives*, 27(1), 103-22.

Outside of a state-mandated emissions regime, offset cannot provide a foundation for a market that is well grounded to fundamentals and providing reliable price discovery and sound risk management. One main danger is that the private sector actors responsible for the market have interests that are not coincident with the long-run purpose of reducing emissions. The words manipulation are the touchstones here. The CFTC has already once confronted the manipulation problem in the credit default swaps markets. Getting ahold of this problem will be an order of magnitude more difficult in a purely voluntary offset market. Another danger is the possibility of a disruptive asset bubble. The state has many capacities that are essential to providing the needed social license as well as the economic reliability offset developers need. Without state involvement, for-profit actors are incentivized to exploit hype instead of realism. In the long-run, that undermines the success of the offset market, and worse undermines the goal of reducing emissions and protecting the planet's health.

The subcommittee should carefully distinguish between voluntary offset markets operated within state-mandated and supervised emission reduction programs and those operated outside of them, under the control or decisive influence of private industry. It should consider carefully the dangers of manipulation and whether the voluntary market can assure the price is reliable and reflective of fundamentals. It should ask whether the CFTC's statutory responsibilities can be faithfully executed with respect to such purely voluntary markets. It should address the potential benefit to voluntary offset markets of being organized within state-mandated and supervised programs.

3. Don't be myopic. Think beyond smokestack and tailpipe CO2 emissions.

The greenhouse gas problem is fundamentally different than other emission problems. It encompasses vast swaths of industry and agriculture. Creating a low-C economy involves not just reducing CO2 and other GHG emissions. Substitutes must be found. Industry and agricultural practices must be reshaped in many ways. New commodities will become important parts of the low-C economy. In the circles struggling to make these changes, hydrogen is currently all the fashion. And there is lots of talk about renewable natural gas and synthetic natural gas. We don't just need a market for carbon. We need markets for some of these new commodities.

My own crystal ball is broken, and currently in the shop, so I will refrain from making any firm predictions about which of these commodities will actually turn out to be important, and which not. But we need to be thinking about it. We need industry to be working with government on these new markets.

If the CFTC is going to have a subcommittee, let its mandate extend beyond carbon markets. Let's think about a positive future. How do we get to this low-C economy? The problems are large. The CFTC could be a useful convener and engager on this.

For example, the administration has made assuring competitive markets a priority. A competitive market for the underlying commodity is a pre-requisite for a derivative market in that commodity. How can we assure the vibrant competition in these new markets?

For another example, land-use is an important source of GHG emissions. It is a tough nut to crack. What is going to be the place of markets in regulating land-use emissions? Key to cracking this nut is science—both about the carbon cycle and about agriculture practices. This is another example why it is essential that the subcommittee include members able to provide the necessary scientific expertise.