MARKET OVERSIGHT UNDER THE CLEAN POWER PLAN

C2ES SOLUTIONS FORUM

Carbon markets, like other commodities markets, require provisions to ensure that the market functions effectively and is not manipulated by some participants. Regulators conduct oversight to ensure that buyers can procure carbon credits when needed at a price that reflects the cost of reducing emissions and buyers' risk tolerance. By making sure that buyers only pay a fair and transparent price, regulators help protect consumers from overpaying for cleaner electricity. This fact sheet investigates the options and implications of potential market oversight provisions that might be useful as states consider implementing the Clean Power Plan.

Carbon markets differ from traditional commodities markets in two distinct ways. First, they are developed specifically to address an environmental goal set out by regulation. Second, the regulation creates both the demand and conditions for supply necessary for a market and trading. A central feature of a trading program is that it creates a price on emissions, which in turn provides information to firms about whether it is cheaper for them to reduce their emissions or buy credits from the market.

A carbon market can best achieve its environmental aim if it is designed to function efficiently from the beginning. A well-designed policy should include effective means to prevent excessively high prices, extreme price volatility, and market manipulation—actions by an individual or small group of individuals to alter the price of a good for their own advantage. Examples of manipulation could include speculators buying enough credits to cause a price spike and then selling them for a large profit or environmental activists buying credits and refusing to sell them, thereby reducing supply in the market and forcing more reductions (at a higher cost) than required by the Clean Power Plan. Experience shows these risks are small; nonetheless, proper oversight is key to preventing manipulation, promoting confidence in the market, and allowing trading to achieve the desired reductions at the least cost.

HOW DO CLEAN POWER PLAN PROVISIONS PROMOTE MARKET OVERSIGHT?

While the Clean Power Plan does not explicitly reference "oversight," the plan contains a few key provisions that promote price transparency, accuracy, and consistency to help ensure a fair and functional market. First, the Clean Power Plan requires that states use an approved tracking system that can monitor the holding and transfer of compliance units. The U.S. Environmental Protection Agency (EPA) proposes to use its existing Allowance Tracking and Compliance System as a tracking system in states in which it implements a federal plan, and states could also use this existing system in their state implementation plans. Any individual or company wishing to participate in the market would have to register with the government and request an account in the tracking system. Select information about accounts in this system would be made public, for example information about ownership and transactions, to promote transparency. Regulators could have access to additional confidential information that would allow them to monitor for market manipulation.

Trading systems rely on carbon credits accurately reflecting the emissions or reductions they purport to represent; they must have environmental integrity. Allowances, used for compliance under a mass-based

approach, are issued solely by the government and thus, if properly allocated and tracked, will tend to have a high level of environmental integrity. Under a rate-based approach, additional steps are necessary to ensure the environmental integrity of emission reduction credits (ERCs). The Clean Power Plan, for example, requires third-party verification that an ERC accurately represents a zero-emissions megawatt hour of electricity before it may be issued. Third-party verification is used by many programs to ensure accuracy, and in this case, prevents fraudulent ERC issuance from undermining the environmental objectives of the regulation.

In addition, the Clean Power Plan only allows interstate trading among covered emitters under certain conditions. One allowable interstate trading option is between facilities in "ready-for-interstate-trading" states. To qualify, a state must be implementing either a mass-based emission standards approach or a rate-based emission standards approach using subcategory-specific standards. Under these plan types, the tradable unit, either an allowance or an ERC for a mass-based approach or rate-based approach respectively, has a consistent meaning across states. Alternatively, states can join together to submit a multi-state plan that achieves a uniform weighted average rate across participating states. Facilities in states implementing this type of approach would also be trading ERCs with a consistent meaning across state lines. These provisions to guarantee a consistent meaning of the tradable unit maintain the environmental integrity of Clean Power Plan markets and also prevent market manipulation by making sure a facility cannot mistakenly purchase a unit that was not eligible for compliance in its state.

WHAT ARE SOME MARKET OVERSIGHT PROVISIONS IN EXISTING CARBON TRADING PROGRAMS?

The two existing carbon trading programs in the U.S., the Regional Greenhouse Gas Initiative (RGGI) and California's cap-and-trade program, primarily distribute allowances via auctions, so many of their market oversight provisions focus primarily on ensuring fair auctions. Auctioning some or all allowances can help promote market transparency by distributing allowances at a price that is made public. Furthermore, both programs selected an auction design that has been shown to be at low risk for manipulation. Both programs use an outside company to monitor the market and evaluate auction data to ensure that manipulation has not occurred. They also impose purchase limits on auction participants so that a single entity cannot procure an unfair number of allowances that might give them a competitive edge in their electricity market.

Additionally, states in RGGI grant authority to the market monitor to review transaction data in the program's tracking system to investigate for signs of market manipulation. To date, no evidence of RGGI market manipulation has been found.[1]

California also sets holding limits, a maximum volume of allowances that any single market participant is allowed to hold in their account. This limit is enforced in the tracking system for allowances that the state oversees. An exemption exists for entities with a compliance obligation so that they can acquire allowances up to their expected compliance needs.

DOES LIMITING THE TYPES OF MARKET PARTICIPANTS LOWER THE RISK OF MARKET MANIPULATION?

No, in fact markets with broad participation by a large number of entities are *less likely* to experience price manipulation. One key element of any market that helps promote fairness and transparency is market liquidity, having enough buyers and sellers participating in the market to prevent any single trade from changing the price. Non-covered entities, like banks, can play a role in carbon markets by providing liquidity. These participants can help promote price discovery and provide capital that can facilitate trading. Additionally, independent actors and market intermediaries like exchanges and brokers play a valuable role in protecting market participants by facilitating transactions between compliance entities and providing anonymity for buyers, which can help prevent one party from taking advantage of information about the other. For example, suppose that a single power plant was responsible for the majority of emissions in a state. If a seller knew that this power plant was interested in purchasing from it, the seller could demand an above-market price because it knows the buyer needs these credits for near-term compliance.

HOW DO CONCERNS ABOUT MARKET MANIPULATION DIFFER UNDER RATE-BASED AND MASS-BASED PLANS?

In theory, because the two compliance options have inherently different timelines for distributing credits to market participants, they could experience different market dynamics, particularly in the first compliance year. Under a rate-based plan, ERCs would be issued only after generation occurs and verification reports are submitted—potentially a year or more after the ERC-generating activity occurred. In contrast, under a mass-based plan, allowances would be in circulation prior to emissions occurring. Under the proposed federal mass-based plan, EPA would distribute most allowances for a full multiyear compliance period on June 1 in the year prior to the start of the compliance period. Having compliance units in circulation even before the start of compliance could lead to greater trading activity, and greater trading activity often results in less market manipulation.

In practice, however, the timing of credit issuance may have little impact on market dynamics. Experience shows that financial markets for carbon credits can be developed even before these credits are issued. Futures contracts for California Carbon Allowances began trading in August 2012, three months before allowances were first distributed and more than a year before the first compliance surrender deadline. A large and robust financial market promotes price discovery and lowers the risk of market manipulation.

Market manipulation is also less likely when information about market fundamentals, supply and demand, is available to all participants. This would be the case under a mass-based program when the supply of allowances is defined in the final Clean Power Plan and thus known even today. Demand would be somewhat uncertain until emissions data is released, but it can be estimated by electricity generation data that is widely available to the public. In contrast, ERCs are issued only after generation or electricity avoidance has occurred (*ex post*). Consequently, rate-based programs would have inherent uncertainty about supply. While supply could be estimated by market participants, especially the volume of ERCs to be issued to electricity generators, *ex post* issuance could make it more difficult for buyers to determine the market price, which may inhibit trading. Fewer transactions can make manipulation easier, which implies that states with rate-based trading should monitor the market and potentially take additional additional steps, like more frequent ERC distribution, to prevent this.

Carbon markets can be an effective policy tool under the Clean Power Plan for promoting cost-effective emission reductions and can serve to promote innovation and spur investment in new, sustainable technologies. Because they will be a government-created market and because they are linked directly to electricity markets, it is important to ensure that carbon market manipulation does not negatively impact electricity users and result in consumers overpaying for cleaner electricity.

ENDNOTES

1 For example, see Potomac Economics, *Annual Report on the Market for RGGI CO2 Allowances: 2014* (New York, NY: RGGI, Inc., 2015), http://www.rggi.org/docs/Market/MM_2014_Annual_Report.pdf. The report with data for 2015 is due later this spring.

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