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Briefing Note 2010 – 4 21 May 2010

Market Stability Reserve

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Commissioned and edited for the Pacific Institute for Climate Solutions (PICS) by Dr. Alison Shaw and Dr. James Tansey

Issue

Carbon markets are unlike any other commodity markets since by design, supply is expected to contract over time. The Market Stability Reserve (MSR) is a mechanism used to guard against the price fluctuation of carbon credits within a cap-and-trade system. These price fluctuations, or more specifically price spikes, are caused by shortages in the supply of credits within the market. The price of carbon rises as competition for the credits increases. The shortage of credits would occur for two primary reasons:

1. Economy driven increases in the production of CO₂ results in an unexpected shortfall in the number of allowances available;
2. Offset supply falls due to market concerns and non-conformity to established offset standards e.g. additionality, underperformance of carbon credit production.

Both of these conditions would trigger the MSR. The Reserve is owned and managed by the appropriate carbon regulating body. Within the US, the [Natural Resource Defense Council \(NRDC\)](#) has commissioned [New Energy Finance \(NEF\)](#) to model approximately eight different market scenarios under which the MSR will be called into action. The conclusion is that the reserve they intend to use (approximately one quarter the size of the all the credits in the market) is at least two to three times larger than is needed to control price shocks, while still maintaining the environmental integrity of the system. The NRDC believes that this 1:4 ratio is appropriate in order to keep speculators from trying to take advantage of the reserve by artificially driving up the price of carbon. The NRDC is likely to conclude that those involved in drafting the Kerry-Boxer bill are using the correct numbers.

Background

In January 2005 the [European Union Greenhouse Gas Emission Trading System \(EU ETS\)](#) commenced operation as the largest multi-country, multi-sector Greenhouse Gas Emission Trading System in the world. One of the major criticisms of the scheme has been the volatility of

the price of carbon, and the ease with which speculators have been able to take advantage of the system. This price manipulation is the issue that the MSR is intended to address.

The MSR would create a pool of emission allowances, set aside from each year's limit, that could be injected into the market should a certain price limit be reached. The allowances would be auctioned off and the proceeds would then be used to buy international forestry offset credits or domestic credits. The credits purchased from the proceeds of the MSR would then be retired and added to the reserve total. The MSR provision would allow for the injection into the market of additional allowances up to 15% to 25% of the cap in a given year at a minimum reserve price in order to contain price volatility.

The MSR will allow a price cap to be set on the credits within the market. NEF has modeled a number of scenarios where a shortage of credits occurs within the market. A few of the scenarios modeled by NEF forecast that without MSR intervention, carbon prices could reach \$155 per tonne by 2020. Prices this high would play a considerable role in dampening the economic activity of those parties subject to the emissions cap.

The conclusion drawn by NEF is that the MSR appears to respond well to both supply and demand shocks to emissions volumes. Under the scenarios the 15-25% limit on allowances available for auction appears to be at least two to three times larger than what is needed to contain prices. As a result, it is expected that the MSR will effectively serve as a price cap on allowances that will keep compliance costs for emitters contained while the cap-and-trade system is in place.

Options/Recommendations

The implementation of the MSR will effectively place a price-cap on carbon. There are both pros and cons to this price containment approach:

Pros:

1. Future conditions resulting in an increase in demand or a decrease in supply will not cause the price of carbon to increase dramatically;
2. Some investors will be more confident about investing in a market that is not excessively volatile, although volatility can serve the goals of risk-seeking investors;
3. Companies affected by cap-and-trade are able to forecast future carbon prices to some extent and more accurately plan for future projects;
4. A MSR would make it more affordable for companies to become compliant and meet with the requirements of the cap.

Cons:

1. Questionable environmental integrity of the market in terms of emissions output over a specific time frame. Will GHG emission targets be met under an MSR-enforced price cap?;
2. How strongly does the price cap incentivize a change in behavior; i.e. will the "forced" price of carbon really encourage big emitters to decrease their carbon footprint?;
3. The MSR will undermine the free market nature of the cap-and-trade system. In order to prevent speculators from gaming the system administrators will effectively be calibrating the system themselves at the margins.

Conclusion

BC began to implement a cap-and-trade system at the beginning of 2010. Cap-and-trade will also

play a central role in the Western Climate Initiative, coming into effect in 2012. Some form of market stability reserve could play a role in the market in the WCI. Considering all the lessons learned from the EU ETS and in light of how badly financial markets have recently been abused, the MSR may well be an important vehicle for establishing the credibility of the carbon market. The implementation and structure of the MSR must hold system-wide environmental integrity at its core and protect the core commitment to reduce the availability of allowances within a cap and trade system.

Sources

European Commission website

http://ec.europa.eu/environment/climat/emission/index_en.htm

Stress Testing the Market Stability Reserve, Andy Stevenson, Senior Finance Analyst, Natural Resources Defense Council, January 26th, 2010

http://docs.nrdc.org/globalWarming/files/glo_10012702a.pdf

Further Reading

Full text of the Kerry Boxer bill can be found here:

<http://kerry.senate.gov/cleanenergyjobsandamericanpower/pdf/bill.pdf>