An Expanded Three-Part Architecture for Post-2012 International Climate Policy

by Sheila M. Olmstead and Robert N. Stavins

Overview

Olmstead and Stavins propose a new architecture following the expiration of the Kyoto Protocol consisting of three essential elements: (1) it provides a means to ensure that key industrialized and developing nations are involved in differentiated but meaningful ways; (2) it would establish an extended time path of targets; and (3) it includes flexible market-based policy instruments to keep costs down and facilitate international equity. The proposed approach is consistent with fundamental aspects of the science, economics, and politics of global climate change. It addresses specific shortcomings of the Kyoto Protocol but also builds on the foundation of the existing United Nations Framework Convention on Climate Change (UNFCCC).

Discussion

Negotiations are now underway through the UNFCCC and other venues to develop a coordinated global response to the problem of climate change for the post-Kyoto period. As nations seek agreement on a new international policy regime, much can be learned from the strengths and weaknesses of the Kyoto Protocol. On the positive side, the Protocol encouraged market-based approaches, gave countries the flexibility to choose their own policies for reducing greenhouse gas (GHG) emissions, responded to fairness concerns by focusing on the developed countries that bear the largest responsibility for past emissions, and was able to attract sufficient political support to come into force (though it may not achieve its emissions goals). On the negative side, the Kyoto Protocol did not constrain GHG emissions from some of the world's leading emitters, failed to address the problem of leakage (that is, the potential for emissions-producing activities to shift to jurisdictions with no GHG constraints), did not establish effective mechanisms for international emissions trading, provided only short-term targets for what is essentially a long-term problem, and did not create sufficient incentives for compliance.

In sum, the approach taken under Kyoto imposes relatively high economic costs and generates relatively minor environmental benefits while failing to provide a long-term solution. That agreement came into force without the participation of the United States or developing countries, and its effects on warming will be trivial. Yet the economic and scientific consensus still points to the need for a credible international response. The three-part architecture described in this paper attempts to address two of the Kyoto Protocol's central flaws—its failure to elicit participation from major emitters and its lack of long-term targets—while building on one of its key strengths: an emphasis on market mechanisms as the least costly and most efficient way to achieve significant GHG reductions.

Key Findings & Recommendations

- *A broad set of participants must be engaged in GHG-reduction efforts for several reasons.* First, the share of global emissions attributable to developing countries is large and growing rapidly. Second, developing countries provide the greatest opportunities for relatively low-cost emissions reductions. Third, the United States and several other industrialized countries may not commit to significant emissions reductions without developing country participation. Fourth, broad participation is necessary to reduce the potential for emissions leakage and thereby ensure that the policy is effective in achieving its environmental goals.

- *Short-term emissions targets, such as those contained in the Kyoto Protocol, are inadequate for addressing the long-term problem of climate change and are unreasonable for countries that enjoyed significant economic growth after 1990.* Two elements can ameliorate this problem: (1) firm but moderate targets in the near term, to avoid rendering a large part of the existing

energy-system capital stock prematurely obsolete and (2) flexible but stringent targets over the longer term to motivate technological change, which is needed to bring costs down.

➢ *To keep costs down in the short term and bring them down even lower in the long term, market-based instruments must be embraced as the chief means of reducing GHG emissions.* Among alternative market-based policy instruments, cap and trade is emerging as the preferred approach in several industrialized countries. The experience of the EU Emissions Trading Scheme (EU ETS), the strong U.S. preference for trading, and support voiced by some key developing countries represent important political arguments for this element of a future global climate policy. At the same time, the emission-reduction credit system created under Kyoto, the Clean Development Mechanism (CDM), enjoys solid developing country support.

➢ *Linking domestic programs to allow for international trading presents numerous challenges, but could provide substantial benefits in terms of reduced costs, greater market liquidity, reduced price volatility, and diminished potential for market power and carbon leakage.* Direct linkage of domestic cap-and-trade systems may constitute a significant element of a future international climate policy architecture; allowances (permits) from one system would be recognized for use in meeting compliance requirements in another. Domestic cap-and-trade systems may also be linked indirectly, through mutual links with emissions-reduction credit systems like the CDM. A number of options exist for directly or indirectly linking domestic climate programs, each with different pros and cons.

CONCLUSION

The three-part policy architecture proposed in this paper can provide the framework for a new international climate agreement that is scientifically sound, economically rational, and politically pragmatic. For this approach to work, key nations—including major developing countries—will need to be involved. The challenges to successful adoption and implementation of this architecture are clearly significant. But they need not be insurmountable, and they are not greater than the hurdles that confront other proposed approaches to the threat of global climate change.

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ABOUT THE HARVARD PROJECT ON INTERNATIONAL CLIMATE AGREEMENTS

The goal of the Harvard Project on International Climate Agreements is to help identify and advance scientifically sound, economically rational, and politically pragmatic public policy options for addressing global climate change. Drawing upon leading thinkers in Australia, China, Europe, India, Japan, and the United States, the Project conducts research on policy architecture and key design elements of a post-2012 international climate policy regime. The Harvard Project also provides insight and advice regarding countries' domestic climate policies, especially as these policies relate to the prospects for meaningful international action. The Project is directed by Robert N. Stavins, Albert Pratt Professor of Business and Government, John F. Kennedy School of Government, Harvard University. Major funding for the Harvard Project on International Climate Agreements is provided by a generous grant from the Climate Change Initiative of the Doris Duke Charitable Foundation.

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