THE G-20 AND CLIMATE CHANGE: ACHIEVING COMPARABLE EFFORT THROUGH A CARBON PRICE COLLAR

WARWICK MCKIBBIN, ADELE MORRIS AND PETER WILCOXEN

FRAMING THE ISSUE

Climate negotiations are currently at the forefront of global policy debates. Leaders at the G-20 Summit in Pittsburgh should focus on the challenges associated with the negotiations, how the recent economic crisis has affected countries on meeting emission targets, and how to move global climate policy forward. If effective, these discussions could be influential in implementing coordinated policy agreements at the 15th annual United Nations climate change conference in Copenhagen in December.

POLICY CONSIDERATIONS

The key to advancing global climate policy is in the United Nations Framework Convention on Climate Change (UNFCCC) 2007 Bali Plan of Action. The Plan highlights the need to ensure the "comparability of efforts" across developed countries while "taking into account differences in their national circumstances." Implementing these goals will require a modified approach to the negotiations that goes well beyond the Kyoto paradigm. The Kyoto Protocol focused on establishing national emissions targets measured as percentage reductions relative to a specified base year. However, differences in economic conditions can easily mean that countries with similar targets will experience very different costs, violating the goal of comparable effort. Indeed, variations in economic growth among developed countries between the Kyoto base year (1990) and the date at which it was to go into effect (2008) have led to large differences in emissions growth and, consequently, in the costs of meeting the Kyoto targets. To ensure comparability of effort, the new agreement implemented in Copenhagen will need to address costs directly. A transparent and robust method for doing so would be to include upper and lower bounds on the price of carbon dioxide emissions, a policy often described as a "price collar."

Expanding the agreement to include a price collar would have additional benefits as well. It would

provide a path for rapidly industrializing countries such as China and India to take on gradually increasing commitments without fearing that their growth will be stifled. It would also help stabilize the agreement in the face of major economic disturbances such as the recent financial crisis and global economic downturn. The agreement will need to endure through many economic and political crises, and a price collar would help it do so.

A collar would supplement the emissions targets already under negotiation. It would require that each party undertake at least a specified minimum level of abatement effort, even if the country's target could be achieved with less. In addition, each party would be allowed to exceed its target if it could show that it was unable to comply in spite of undertaking a high level of effort. Specifically, in addition to a cumulative emissions target for the 2013 to 2020 period, major economies would agree on three things, known collectively as the "price collar":

1. A starting floor price on a ton of carbon dioxide-equivalent emissions for 2013;

2. A starting price ceiling on a ton of carbon dioxide-equivalent emissions for 2013; and

3. An annual rate of growth in the price floor and ceiling that reflects the real rate of interest, such as 4 percent.

To be in compliance, each party would demonstrate: (1) that it had imposed a price on carbon-equivalent emissions no lower than the floor over most or all of the commitment period, and (2) that its cumulative emissions were no higher than its announced target OR that its price on emissions had reached the ceiling for an appropriate proportion of the commitment period given the extent of its excess emissions.

This approach has several advantages. The ceiling allows each party to comply even if its target turns out to be unexpectedly stringent and impractical to achieve. The floor ensures that no party's commitment is unduly lax; it reduces the incentive for parties to negotiate overly-generous targets; and it limits the downside risk for investors in low-carbon technologies by guaranteeing a minimum payoff per ton of emissions avoided. Both aspects of the collar help to reduce the risks faced by investors, which will accelerate the development and diffusion of new technology.

A price collar also accommodates developing countries like China that are uncomfortable with hard emissions caps but might be open to imposing a carbon tax. Such countries could adopt a price floor—possibly without an emissions target at first, or with a low price ceiling—and then gradually transition to commitments more like those of industrialized countries.

Several implementation details would need to be negotiated, including guidelines for demonstrating compliance with the price collar. This would include methods of verifying the carbon price and the extent to which the price was effective. Emissions above the cap would need to be accompanied by an appropriate duration of prices at the ceiling and allowances transacted at that price.

The price collar could be implemented by each party in a manner most suitable for its domestic economy. A tax or cap-and-trade system would provide

a transparent carbon price. However, regulatory measures could also be used via provisions for calculating an equivalent carbon price. For example, countries could calculate a shadow price on emissions analogous to the way the World Trade Organization converts trade protection policies into tariff equivalents. Parties could include existing fossil energy taxes when determining their compliance with the price floor, but such credit would have to be net of any subsidies to fossil energy or other greenhouse gas emitting activities. Each party would control any revenues generated by its domestic climate policy.

Some environmentalists are uncomfortable with a price collar because they believe that any limit on carbon prices would undermine the effectiveness of the agreement. However, without a price collar, parties to an agreement may be reluctant to undertake aggressive policies and may insist on loose caps, or none at all, rather than risk excessive stringency or non-compliance. Moreover, without a price ceiling, volatile macroeconomic conditions may cause countries to abandon the agreement entirely, a considerably worse outcome than allowing them to exceed their targets briefly.

ACTION ITEMS FOR THE G-20 SUMMIT

Focusing exclusively on reductions from historical emissions has greatly hampered climate negotiations to date, especially in regard to the role of developing countries where uncertainty about future growth and abatement costs is greatest. Combining a clear cumulative emissions target with a price collar would balance the environmental objective with the need to ensure that commitments remain comparable and feasible. Further, the price collar can ease major developing countries into the system by allowing them to adopt only a price floor in the early years. The G-20 Summit is the right group of countries meeting at the right time to steer global climate negotiations in a direction of comparable effort implemented through a price collar rather than by focusing on emissions targets alone.

Note: This paper is a shortened version of W. J. McKibbin, A. Morris and P. Wilcoxen (2009) "A Copenhagen Collar: Achieving Comparable Effort through Carbon Price Agreements" published by the Brookings Institution. The views expressed in the paper are those of the authors and should not be interpreted as reflecting the views of any of the above collaborators or of the institutions with which the authors are affiliated.