

# Offsets Improve Flexibility

**T**iming isn't the only choice that can improve the efficiency of climate change emissions reductions. Integrating cap-and-trade internationally with a robust market for high quality offsets from uncapped sources can harvest the most economically efficient opportunities to meet the challenge of mitigation. Recent analyses of federal cap-and-trade proposals in the United States show that the inclusion of offsets reduces the marginal costs of the program by up to 70 percent.

The costs of reductions can vary greatly by location and source. Economic modeling has shown that at least in the initial stages, reductions of greenhouse gas emissions from the electric power sector are cheaper on the margin than reductions in the transportation sector due to a wider mix of fuel options. Costs will generally vary by country as well, reflecting differences in technology and the relative cost of the factors of production.

This all means that to achieve a certain emissions target, a cap-and-trade policy should include as many sources as possible, regardless of sector and location. Even if sources remain outside the cap, they can still participate in the market by voluntarily reducing emissions and generating credits to sell to capped entities as offsets. If the out-of-cap reductions are cheaper than reductions inside the cap, such offset trading reduces the overall cost of meeting the target. An example is the Clean Development Mechanism, in which GHG reduction projects in developing countries generate credits for use by countries complying with the Kyoto Protocol.



**Brian Murray**

There are economic and political reasons why some sources will not be capped. Developing countries have been excluded from mandates thus far because of economic hardship and the sense that the developed economies, the primary source of historic emissions, should be where mandatory reductions start. Even within capped countries, there will be sources not covered by the cap for different reasons — agriculture may have widely dispersed sources that are hard to monitor, small businesses may be exempt because the cost of compliance is difficult for them to handle, and other sectors may have mobilized political support for their exclusion which, while not efficient, is reality. Offset trading helps to bring these sources into the worldwide push to reduce climate change.

Offset trading does raise concerns that the reductions being credited may have occurred anyway (additionality), that emissions merely shift from the party receiving the credits to other parties not bound by a cap or an offset program (leakage), or that certain offset activities such as forest carbon sequestration are at risk of subsequent re-emission (permanence). These concerns are real, but a substantial amount of effort has been put into developing protocols to address them and enable equitable trading of offsets into compliance markets. Properly implemented, an internationally integrated cap-and-trade system with offsets offers a more robust and efficient path to climate goals.

**Brian Murray** is Director for Economic Analysis, Nicholas Institute for Environmental Policy Solutions, Duke University.