Will the massive number of offsets allowed under the proposed Waxman-Markey climate change bill destroy its effectiveness? Waxman-Markey allows for a huge number of offsets from both domestic and international sources – up to 2 billion tons. Some analysts estimate that if all of these offsets are used domestic emissions will not begin to decline until 2030.
Even more problematic many worry that due to gaming and administrative difficulties, a large percentage of the offsets will not be for real reductions.

First, some background. Virtually all proposed and operational cap and trade programs to reduce carbon emissions allow for offsets. Regulated entities included under the cap can either reduce their own emissions, purchase allowances from other emitters who need fewer allowances than they've been allocated or purchase offset credits from sources not covered by the cap. Offsets can be domestic — say a forestry project that will sequester carbon — or international — say a switch from a proposed coal fired power plant to a less carbon-intensive natural gas plant.

In theory, offsets are allowed because they have the potential to provide cheaper carbon reductions than reductions made by entities included under the cap. So in a domestic cap and trade program in the U.S., reducing one ton of carbon from a coal fired power plant in the southeast may be more expensive than reducing one ton of carbon by reducing methane from a landfill abroad. Since for purposes of reducing emissions it doesn't matter where a ton of reduction takes place (because greenhouse gas emissions are a global, not a local, problem), offsets are supposed to allow for the cheapest emissions reductions.

In theory, that's how offsets should work. In practice, however, things get trickier. The administrative problems in ensuring that offsets represent actual reductions in carbon emissions are immense.

Virtually everyone agrees that if a cap and trade program allows offsets the offsets must meet a number of criteria. Most importantly, the offsets must produce real and additional emissions reductions (to put the issue in the negative, we should ensure that offsets are not given to projects that would have occurred without the additional incentive an offset credit creates, so called "anyway" credits). In addition offsets must be quantifiable, permanent, verifiable, transparent and enforceable.

But how do we ensure that offsets are additional and real? Numerous challenges can arise. Sometimes it's difficult to measure how much carbon is actually reduced (or sequestered in the case of forestry and many agriculture projects). Even more

problematic is determining whether offsets are additional. How do we prove that carbon reductions from an offset project would not have occurred without the additional incentive of the offset credit? And these problems are magnified when a domestic cap and trade system allows international offsets. Do we have the staff, enforcement authority and cultural sophistication to determine whether offset projects around the globe are credible?

Some of these problems can be reduced with effective administrative oversight. A coaltion of groups has proposed protocols to enhance the credibility of offsets by, for example, designing standardized protoc0ls for categories of offset projects like forestry while providing for independent verification of the integrity of particularly large projects. But other groups remain skeptical that the administrative difficulties in establishing the credibility of offsets can ever be overcome. For example in a report examining the European Unions's cap and trade program, the U.S. Government Accountability Office concluded that even with a rigorous screening program many of the offsets allowed were granted for "anyway" credits. Stanford professors Michael Wara and David Victor estimate that between a third and a half of the EU credits (under the CDM program) were for reductions that weren't real or additional.

With this background in mind, two major questions arise about the use of offsets in Waxman-Markey. First, if offsets are so problematic, why include them at all? The answer is simple: offsets dramatically lower the cost of a cap and trade program. The EPA estimates that without international offsets, allowance prices would rise by 96 percent. Political reality suggests that a ny successful bill is going to include offsets. Indeed in order to get the bill out of the House of Representatives, the authors relaxed the offset provisions in a fashion that lowered EPA's estimate of allowance prices by another 7 percent per year compared with the original version. If the offsets are credible and represent actual emissions reductions, the inclusion of offsets in the bill will produce emissions cuts at a much lower price. So far so good.

But will bogus offsets completely undermine the effectiveness of the cap on emissions? The answer to this second question is decidely less clear. Two arguments about the effectiveness of offsets seem to be in tension with one another. On the one hand are the problems of offset integrity and credibility described above. If a large percentage of eligible offsets turn out not to achieve real emissions reductions then the cap will not be met. But there is another very real possibility. If offset administration is effective in at least dramatically reducing the number of projects eligible to meet offset standards, there may not be enough

offset projects available to meet the 2 billion tons of offsets allowable under Waxman-Markey. This is a real possibility: as Wara and Victor point out, the Clean Development Mechanism under the Kyoto Protocol has faced precisely this problem, with an administrative bottleneck over offset review dramatically slowing the availability of offsets.

To date, I have yet to see a good analysis of whether scenario #1 will be true, with a high percentage of bogus offsets undermining the cap, or scenario #2 will be true, with not enough offsets being available to lower the costs as predicted by the EPA. If scenario #2 is true domestic entities included under the cap and trade program will have to cut their emissions much earlier and much more deeply than some estimates predict. And the price of allowances is, in turn, likley to be higher. There are benefits to higher allowance prices and domestic emissions reductions, including greater technology forcing incentives. But there are costs, too, in higher domestic energy prices and greater political controversy. If Waxman-Markey or something like it passes, we may have to wait and see as to which scenario materializes.