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BACKGROUND PAPER: WOODS INSTITUTE CARBON OFFSET PROJECT

A growing retail market has developed in the U.S. for carbon “offsets,” driven by individuals and businesses who are seeking to become “carbon neutral.” In addition, as Congress, California, and other jurisdictions consider (or, in the case of California, begin to implement) regulatory constraints on carbon emissions, legislators and policymakers are evaluating what role carbon offsets should play in a market-based regulatory system.

A number of NGOs and some governmental authorities have been developing guidelines and standards for offsets and offset providers to help address concerns regarding the credibility and viability of offsets, particularly in the voluntary, retail market. The stakes will increase, however, when carbon offsets become part of a market-based regulatory system in the U.S., given regulated entities’ interest in financing lower-cost carbon reduction projects, the necessity that such projects have environmental and financial integrity, and the imperative that offsets neither replace nor compete with regulated entities’ own emissions reduction requirements.

Stanford University’s Woods Institute on the Environment is undertaking a focused examination of two essential questions involved when designing the appropriate role of carbon offsets in mandatory carbon control schemes:

1. Identifying the appropriate balance between requiring primary emissions reductions by regulated entities, and allowing such entities to generate reductions or credits from carbon offset projects; and
2. Establishing a statutory and/or regulatory approach for defining the rules and standards, and validation and enforcement mechanisms, for carbon offsets, and identifying the agencies and/or other authorities that should have responsibility to oversee the use of carbon offsets as part of a mandatory carbon scheme. As part of this exercise, the Woods Institute is evaluating whether such standards and mechanisms should relate to those employed in voluntary offset markets, or in mandatory control schemes, such as the Kyoto Protocol.

The goal of this activity is to define whether and, if so, how offsets should be included as part of mandatory state and/or federal cap-and-trade regulatory programs. Concepts developed through this exercise will be incorporated into potential statutory and regulatory options for consideration by federal and state lawmakers and regulators.

INTRODUCTION TO THE PROBLEM/CHALLENGE/OPPORTUNITY

The U.S. is moving toward the adoption of absolute constraints on overall carbon emissions, most likely coupled with a cap-and-trade system that will provide opportunities for the trading of validated emission reductions. Congress is actively engaged on the issue, with both Senate and House leaders promising to pass climate change legislation that includes mandatory limits on emissions and market-based mechanisms for achieving emissions reductions. California already has enacted legislation that constrains carbon emissions, and state officials are working on the design of a market-based system. Likewise, design and implementation issues associated with market-based carbon reduction requirements are being addressed in the northeast states under the auspices of the Regional Greenhouse Gas Initiative (RGGI).

All of these initiatives assume that regulated entities will be forced to work within a carbon emissions budget, but that market-based mechanisms will offer companies some choices in determining each company's lowest-cost pathway for achieving reductions. By way of example, regulated companies will likely have the option of over-investing in their own reduction projects and achieving greater-than-required reductions, and then recouping the carbon benefits associated with their over-investment via the sale of the excess carbon reductions that they have achieved. Alternatively, traditional cap-and-trade schemes give regulated companies the option of purchasing such carbon allowances or credits from other companies, rather than investing in their own reductions, where it is more economic to do so.

“Offset” Projects

Project-based investments that reduce carbon emissions from non-industrial sources that are not otherwise regulated under a cap-and-trade system are often called “offset” projects because they may be used to counterbalance or “offset” emissions from unrelated sources.¹ These types of project investments potentially can yield several advantages:

1. Offset projects that reduce carbon emissions from unregulated sources such as, for example, collecting otherwise-fugitive methane emissions from landfills, or from feedlots, can extend the reach of a carbon reduction effort beyond the scope of regulated industries into unregulated sectors and generate real and significant reductions in the atmospheric loadings of greenhouse gases. As the enormity of the challenge of achieving a carbon balance has

¹ For purposes of the Woods Institute's examination of this issue, we will assume – as many commentators do – that carbon reductions which are implemented by regulated entities in connection with addressing their own carbon emissions do not qualify as “offsets.” While a regulated entity is likely to engage in emissions reduction projects of various types to reduce its overall emissions, and these reductions may, as a literal matter, help to “offset” the emissions totals that would otherwise be attributable to the regulated entity, because such projects typically are tied closely to the regulated entity's own production-related activities, they are not the type of offsets that form the focal point of this project. Instead, the offset projects that are the subject of the Woods Institute's analysis involve projects that typically are undertaken by third parties who are not subject to carbon emissions constraints. Regulated entities may be interested in financing (or even directly undertaking) these projects because they may receive credit for carbon reductions that the projects achieve, but the projects themselves typically are not bound up with a regulated entity's production processes, and are not otherwise required by any law or regulatory requirement.

come into focus, proponents argue that all available tools need to be employed to reduce carbon emissions, including investments in offset projects that otherwise are beyond the reach of regulated activity and would not be undertaken.

2. In a similar vein, investments in projects that capture and sequester carbon that would otherwise be released into the atmosphere, via certain farming or forestry techniques, for example, may provide real and significant reductions in the atmospheric loadings of greenhouse gases. Such projects also have the potential to provide ancillary environmental benefits (e.g., reduced particulate emissions in the case of no-till farming; increased habitat in the case of forestry protection).
3. Offset projects may be able to provide lower-cost opportunities to reduce atmospheric loadings than would otherwise be available to regulated emitters of greenhouse gases. As concerns grow about the overall economic burden that a mandatory constraint on carbon emissions might have on the U.S. economy, the potential opportunity to find and exploit all lower-cost emission reduction projects, wherever they may arise (i.e., regardless whether they are in a carbon-regulated business or not) becomes particularly attractive.
4. Offset projects may provide “retail” offset sales opportunities for individuals, service businesses and other non-regulated entities who are interested in investing directly in efforts to address the causes of global warming and in reducing the impact of their carbon “footprint.” Proponents would argue that encouraging this type of behavior in the general population is a positive development that should continue to be encouraged, given the fact that individual citizens are responsible for significant greenhouse gas emissions, and given the strong interest that many individuals and businesses have demonstrated by engaging in the voluntary carbon market transactions.

At the same time, however, offset projects have attracted many skeptics. Concerns about offset projects fall into three primary categories:

1. Companies that are subject to emissions reductions mandates may use the availability of lower-cost offset credits to avoid making the difficult but necessary investments needed to reduce their direct emissions, thereby putting off or avoiding entirely the types of fundamental changes in industrial practices that must be confronted now if we are to successfully address the climate change challenge.
2. Some offset projects do not provide reliable and/or credible reductions of carbon emissions for one or more of several reasons:
 - a. **Baseline:** The pre-existing *baseline* against which reductions should be measured is not reliably identified.
 - b. **Additionality:** Would the offset project have been undertaken anyway, under a “business-as-usual” scenario?
 - c. **Leakage:** Will the carbon benefit associated with the project be wiped out by activity in another venue?

- d. **Quantification/Methodology:** Have scientists identified a sound, well-accepted and workable methodology to quantify emission reductions? As a corollary, can the carbon benefit be calculated with accuracy and confidence?
3. Can mechanisms be put in place which will root out fraud and ensure that offset project proponents are adhering to all relevant requirements? Who will enforce such requirements, and how will they do so?

In recent months, skeptics' voices regarding carbon offset projects have become louder. In the absence of governmental oversight of today's voluntary carbon market in the U.S., a large number of organizations are offering to sell carbon offsets to individuals and businesses. Some offset providers are generating such credits via self-imposed standards that they have developed, or which have been borrowed from a growing number of organizations that have adopted voluntary guidelines for offset projects. Others are not. Even as to those offset providers that purport to follow some type of guideline, the proliferation of voluntary guidelines, and the lack of consistency across such guidelines, has created confusion in the marketplace and deep skepticism in some quarters regarding the legitimacy of many carbon offsets. This skepticism has been fueled by a number of highly-publicized exposes of dubious offsets.

Meanwhile, in the mandatory, Kyoto-based market where there is a governmental standard-setting and oversight body (the CDM Executive Board), other frustrations have developed, including concerns that the oversight process is excessively cumbersome. Some have argued, in addition, that the CDM Executive Board is approving projects that have limited carbon benefits and/or that create ancillary environmental harms. And still others have expressed concern that there is inadequate enforcement of CDM project requirements.

In connection with its on-going efforts to develop federal climate change legislation, Congress is grappling with questions regarding the appropriate definition and role of carbon offsets in the cap-and-trade schemes that are receiving serious attention in both the Senate and the House. Likewise, the California Air Resources Board is evaluating the appropriate role for carbon offsets in the new regulatory system that A.B. 32 requires it to develop. In particular, policymakers are attempting to determine what types of projects are appropriate for offsets; the ground rules that will be applied to qualifying projects, including how and by whom standards governing the projects will developed, defined and enforced; the limits that should be placed on the use of offsets in a cap-and-trade scheme; and the appropriateness of crediting investments in offset projects outside the United States and, if so, how that should be done. Most of the bills currently under consideration in Congress include offset provisions, but the provisions include limited details regarding how offsets would work.

DISCUSSION POINTS FOR THE WOODS INSTITUTE CARBON OFFSET DIALOGUE

These competing tensions have prompted legislators and policymakers to struggle with the two key questions identified above, including: what role carbon offsets should have in a mandatory carbon control scheme; and how to design a statutory and/or regulatory approach for defining the standards and enforcement mechanisms that should govern the use of carbon offsets as part of a mandatory carbon scheme. These primary questions spawn a number of important sub-questions which are presented below, and which will be used to help frame the dialogue session that will be held on October 22-23. Additional reference materials on these subjects will be provided to dialogue participants prior to the October 22-23 session.

What's the appropriate relationship between the unregulated voluntary market for carbon credits that has developed in the U.S. and an offset scheme that is part of a mandatory cap-and-trade program and which is subject to rigorous standards?

- Will the criticism that is being directed at some carbon credits sold in voluntary markets have a spill-over effect that will limit regulators and legislators' interest or ability in incorporating offsets as part of a mandatory, regulated cap and trade scheme? ²
- Should the "retail" voluntary offset market be subject to regulation, so that there can be more confidence in all offset mechanisms – including unregulated offsets that are sold in the voluntary market?
 - Would more rigorous regulation by the Federal Trade Commission, focused on avoiding fraud and misrepresentations, provide an adequate mechanism to inject more confidence into offset markets?

² The emergence of a retail market for carbon offsets has introduced significant complications in developing carbon offset policies. By definition, retail offset buyers typically are interested in acquiring limited offsets that are tailored to their own modest carbon footprints. Sellers, as a result, are more likely to make small scale offerings such as agreeing to "plant a tree" in return for a cash payment. As a result, retail offsets bring with them the special challenge of aggregating offset purchases into viable, larger-scale projects, and then tracking the performance of such aggregated investments. The relative absence of scale associated with retail projects also makes it difficult to develop an oversight structure that can validate representations made regarding the purported benefits associated with the sale of carbon offsets. If retailers are obtaining offsets from third party sources that are subject to regulation and/or oversight, some derivative protections may (or may not) be in place regarding the viability of underlying projects, but disclosures regarding the source of offsets may be limited and, even if some underlying projects are being monitored, consumers may not be in a position to confirm that their purchases have yielded the promised carbon benefits. The retail market has responded in a number of ways to this state of affairs. Some retailers emphasize that reputable third parties -- such as, for example, the Chicago Climate Exchange -- are generating the offset credits that they are selling. These retailers typically emphasize that such offset sources are adhering to a code of conduct or voluntary standard which provides assurances regarding the legitimacy of the offsets that they are selling. Likewise, some retailers have teamed up with NGOs and they are representing that offsets purchased through them adhere to a standard that is endorsed by the NGO. (PG&E and Pacific Trust.) Retail offset providers also are potentially subject to elementary consumer product regulation via the Federal Trade Commission.

- Should carbon offsets be regulated as commodities and subjected to the jurisdiction of the Commodities Futures Trading Commission? See, e.g., S. 2057: “Close the Enron Loophole Act.”
- Alternatively, can the offset program that is designed as part of a mandatory cap and trade system be structured in a way that will allow “retail” buyers to purchase offsets that are validated under the system, even though retail buyers are not regulated under the system and have no obligation to participate in it?
 - If an offset program is developed as part of a mandatory cap and trade program, should we consider offering two levels of offset projects – one more rigorous, and one somewhat less rigorous – to provide an outlet for participants in the voluntary market? (Note that in the U.K., the government encourages individuals who enter the voluntary carbon market to purchase offsets that are validated through Kyoto’s CDM mechanism).
 - Should there be a class of offset projects that are undertaken by a governmental or quasi-governmental entity which can enable small investors to take part in larger, more robust and credible offset projects? (e.g., the Oregon Trust model.) Should this be the model for *all* offset projects?

What is the appropriate balance between requiring primary emissions reductions by regulated entities, and allowing such entities to generate reductions or credits from carbon offset projects?

- Some mandatory cap and trade programs are putting limits on the quantity of reductions that will be allowed via offsets (see, e.g., RGGI). Others have questioned whether there need to be any limits (see, e.g., the California market design committee report). Should hard limits be put on reductions that regulated entities can establish via offset projects? If so, how should such limits be identified? Should an initial limit be established, but subject to revision?

What is the best statutory and/or regulatory approach for defining the rules and standards, and validation and enforcement mechanisms, that should govern the use of carbon offsets as part of a mandatory carbon scheme?

- Should some lines be drawn at the outset -- in statutory or regulatory language -- regarding projects that will, or will not, be allowed to generate offset credits as part of a mandatory cap and trade system?
 - The RGGI program will allow offsets from only a few specific types of projects; is this type of prescriptive approach limiting the types of projects a wise approach?
 - Many industries and services are now looking to attract offset funding, including industries as diverse as energy-efficient lighting, recycling, and wood products manufacturers. How do we limit/control the “bandwagon” phenomenon? Should

- some bright lines be drawn early on to disallow some types of offset funding? If so, how should those lines be drawn?
- With regard to energy efficiency, in particular, should carbon offsets wade into the world of “green tags,” “white certificates,” “energy star” labels, bulb replacement programs or similar initiatives?
 - The CDM program has announced that it will allow “clean coal” projects to generate offset credits – is this a good idea?
- A large number of entities have been developing a broad range of methodologies that are potentially applicable to offset projects. How could an offset program adopted under a mandatory cap and trade program take advantage of existing methodologies? What features of an offset methodology are essential ingredients of any offset program that is adopted under a mandatory cap and trade program?
 - How should the key questions of baseline, additionality, and leakage be approached? Recognizing that judgment calls will need to be made in terms of how strictly to apply these principles, should the offsets governing body be more strict, or more lenient, in applying these requirements?
 - How should concerns about additionality be balanced against the desire to ensure that dollars are attracted early and often to good projects? Should a second class of offsets – perhaps without regulatory benefits -- be established for projects that can’t meet a strict additionality test? Same questions for baseline and leakage.
 - The agriculture and forestry sectors present special challenges in terms of generating offset credits. How should these sectors be approached? Have the protocols developed by the California Registry for forestry, and by the Duke initiative for the ag and forestry sectors, reduced concerns in that regard? If not, what more needs to be done? What do those efforts tell us in terms of the “whos” and “hows” of putting credible offset methodologies in place?
 - As a corollary, how important is it that a new offset program adopted as part of a mandatory federal or state cap and trade system conform with any particular methodology that has been adopted in another mandatory system (such as under Kyoto’s CDM program) or a voluntary system (such as CCX)?

What type of entity should have responsibility to make the technical and policy decisions needed to implement an offset system under a mandatory cap and trade program?

- Is a governmental body needed to perform this function? Can self-implementing standards be identified and adopted?

- If an authoritative body is needed, should it be part of a regulatory agency? Should it be an “independent” agency or commission?
- What types of enforcement mechanisms should be put in place to assure compliance? What can we learn in that regard from other environmental regimes?
- How long will it take, realistically, for the appropriate entity to get a mandatory offset system up and running? **Should we encourage policymakers and lawmakers to get a jump start on the process by empanelling an officially-sanctioned Task Force or other body to begin move all of these issues forward toward closure and/or implementation? If so, what types of individuals be on such a Task Force, and what should its charge be?**

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