

# Climate Change, Sustainable Development, and Ecosystems Committee Newsletter

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## MESSAGE FROM THE CO-CHAIRS

**William R. Blackburn**

**Joseph A. Siegel**

### ***Co-Chairs, Climate Change, Sustainable Development, and Ecosystems Committee***

This newsletter reviews diverse legal and policy issues related to climate change reflecting the range and complexity of the intersections between climate change, sustainable development, and ecosystems.

In his article, *EPA Appeals Board Decision Stirs the Pot on Whether to Address Carbon Emissions by Regulation or Legislation*, **Dustin Till**, a senior associate at the Marten Law Group, analyzes a recent EPA decision with important ramifications for the Obama administration as the new president decides whether and how to regulate carbon dioxide under the Clean Air Act. (*Editor's note:* Subsequent to the completion of the article, EPA issued a proposed rule finding "endangerment" on April 17, 2009 and published in the Federal Register on April 24, 2009. Text available on-line at <http://www.epa.gov/climatechange/endangerment.html>.)

In the article, *Offset Allowances Under Cap-and-Trade: Key Concepts*, **Richard B. Herzog**, a partner in the law firm of Harkins Cunningham, LLP, describes why a federal cap-and-trade system is likely to create substantial revenue opportunities for private entities. He explains the key concepts relating to those revenue opportunities and addresses some of the anticipated policy choices that lawyers will need to consider as an

outcome from federal legislation and agency rulemaking.

**Richard A. Perry**, a recent graduate from George Washington University with an LLM in Environmental Law, proposes and applies a framework for evaluating the Western Climate Initiative's (WCI's) program design. His article, *Evaluating the Western Climate Initiative*, concludes that the WCI has fallen notably short in several important aspects but has performed admirably in others.

In, *Southern Exposure: Insurance Coverage for Climate Change Damages*, **Christopher R. Reeves**, counsel at The Finley Firm, P.C., explores the risks that insurance companies face from climate change-related disasters. His article reveals a potentially significant impact of climate change for sustainable development and ecosystems and examines the implications of recent judicial opinions. The author explains the key issues in determining whether a particular policy will cover climate change damage.

**Lauran Sturm**, an associate at Stites & Harbison, PLLC, describes and analyzes Kentucky's new comprehensive energy plan. Her article, *Kentucky Unveils New Energy Plan*, highlights the challenges that a "coal state" faces in diversifying its energy generation at a time of increasing focus on climate change.

*Carbon Leakage in the European Union Emissions Trading System: Myth or Reality?* by **Neil M. Peretz**, a trial attorney for the United

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**Gabriel Calvo and Alan Miller, Editors**

***In this issue:***

Message from the Chairs  
*Joe Siegel and William Blackburn*..... 1

EPA Appeals Board Decision Stirs the Pot on Whether to Address Carbon Emissions by Regulation or Legislation  
*Dustin Till* ..... 2

Offset Allowances under Cap-and-Trade: Key Concepts  
*Richard B. Herzog*..... 8

Evaluating the Western Climate Initiative  
*Richard A. Perry* ..... 10

Southern Exposure: Insurance Coverage for Climate Change Damages  
*Christopher R. Reeves, Esq.*..... 14

Kentucky Unveils New Energy Plan  
*Lauran Sturm* ..... 17

Carbon Leakage in the European Union Emissions Trading System: Myth or Reality?  
*Neil M. Peretz* ..... 20

Report on ANSI'S Draft National Standard for Sustainable Agriculture  
*Thomas P. Redick and Shawna Bligh*... 25

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This newsletter is a publication of the ABA Section of Environment, Energy, and Resources, and reports on the activities of the committee. All persons interested in joining the Section or one of its committees should contact the Section of Environment, Energy, and Resources, American Bar Association, 321 N. Clark St., Chicago, IL 60654.



States Department of Justice describes and analyzes the European Union’s new carbon leakage policy. He advises that European policymakers and others interested in the design of carbon trading systems should reconsider the risks of carbon leakage because many widely held beliefs about it may be erroneous. The final article, *Report on ANSI’s Draft National Standard for Sustainable Agriculture* is by **Thomas P. Redick**, principal for the Global Environmental Ethics Counsel, and **Shawna M. Bligh**, an associate at The Session Law Firm. Their article describes recent progress toward the development of a draft national standard for sustainable agriculture, a process that may not be familiar to many readers but one they show impacts directly on sustainability and certain ecosystems.

We are very fortunate to be publishing articles that touch upon some the important topics in the fields of climate change, sustainable development, and ecosystems. We are grateful to the authors and our two Committee Newsletter vice chairs, Gabriel Calvo and Alan Miller, who have put together and edited this valuable edition of our committee newsletter.

**EPA APPEALS BOARD DECISION STIRS THE POT ON WHETHER TO ADDRESS CARBON EMISSIONS BY REGULATION OR LEGISLATION**

**Dustin Till**

President Obama has at least two clear paths for upholding his campaign promise to mitigate climate change through greenhouse gas (GHG) regulations for stationary sources. The first is through new legislation, such as the cap-and-trade proposals floated in the 110th Congress. The other, quicker, path—but one with its own set of problems—is to use existing laws, notably the Clean Air Act (CAA). An example of the latter approach is a petition recently filed by the Sierra Club seeking to block a permit to construct a coal-fired power plant. In its petition to the Environmental Protection Agency’s (EPA’s) Environmental Appeals Board (the Board), the Sierra Club successfully argued

that a CAA permit needed to operate the plant could not be issued without a showing that the plant would use “Best Available Control Technology” (BACT) to reduce carbon dioxide (CO<sub>2</sub>) emissions, linking the pollution control objectives of the CAA to GHG mitigation. *In re Deseret Power Cooperative*, PSD Appeal No. 07-03 (EAB, Nov. 13, 2008).

Fossil-fuel fired power plants, petroleum refineries, and other major stationary sources are required to include BACT for air pollutants “subject to regulation” under the CAA. EPA granted the permit at issue in *In re Deseret Power Cooperative* after concluding that CO<sub>2</sub> was not “subject to regulation” under the CAA, and that BACT review was therefore unwarranted. The Sierra Club appealed to the Board, which hears challenges to EPA permits. Although not ruling on the specific issue, the Board did find that EPA’s rationale for not including BACT was unsupported by the administrative record and remanded the matter back to the agency for further deliberation.

EPA subsequently issued an interpretive memorandum that set forth the same long-standing interpretation it relied upon before the Board: because CO<sub>2</sub> is not a “regulated NSR pollutant” under the intended meaning of that phrase, BACT is not required for CO<sub>2</sub> emissions. *See* EPA’s Interpretation of Regulations that Determine Pollutants Covered by Federal Prevention of Significant Deterioration (PSD) Permit Program (Dec. 18, 2008). EPA’s memorandum, issued in the Bush administration’s waning days, faces challenges on two fronts. First, the Sierra Club filed a petition challenging the memorandum in the D.C. Circuit Court of Appeals. Second, and perhaps more significantly, Lisa Jackson, the new EPA administrator, agreed to reconsider EPA’s interpretative memorandum.

The Board’s decision in *In re Deseret Power Cooperative* and the uncertainty surrounding EPA’s subsequent interpretive memorandum make clear that the new Obama EPA will be required to address whether CO<sub>2</sub> is indeed “subject to regulation” under the CAA early on. EPA has three principal options on remand. First, EPA could bolster its administrative record to further support the conclusion that CO<sub>2</sub> emissions do not trigger BACT requirements. Given

President Obama’s pledge to address GHG emissions early in his administration, it would appear unlikely that EPA would make such a determination. Second, EPA can conclude that CO<sub>2</sub> is “subject to regulation.” Such a conclusion would have far reaching ramifications. Not only would it require BACT to control CO<sub>2</sub> emissions at major industrial facilities, but it would also potentially impose BACT requirements on a broad range of smaller facilities that generate over 250 tons of CO<sub>2</sub> carbon dioxide per year but that have previously been unregulated under the CAA, including hospitals, schools, and apartment buildings.

Finally, as the Board points out, EPA could engage in a nationwide rulemaking. As the Board noted, whether to regulate CO<sub>2</sub> under the CAA “is an issue of national scope that has implications far beyond this individual permitting proceeding.” The Board went on to suggest “that [EPA should] consider whether interested persons, as well as [EPA], would be better served by . . . addressing the interpretation of the phrase ‘subject to regulation under this Act’ in the context of an action of nationwide scope, rather than through this specific permitting proceeding.”

## Statutory Framework

The CAA establishes a cooperative framework under which states are primarily responsible, pursuant to EPA-approved plans, for implementing and enforcing various programs which regulate air emissions from stationary sources. The programs over which states have regulatory responsibility include the New Source Review (NSR) program. The NSR program has a number of preconstruction review provisions, including Prevention of Significant Deterioration (PSD) permits which are required for “major emitting facilities” in areas meeting EPA’s air quality standards. Prior to constructing or modifying a “major emitting facility” subject to PSD permitting requirements, the permittee must demonstrate that the facility will not cause or contribute to air quality violations, and that it is deploying “the best available control technology for each pollutant subject to regulation . . . [that is] emitted from . . . [the] facility.” BACT requires facilities to implement controls to achieve “the maximum degree of reduction of each pollutant subject to regulation.”

BACT determinations are facility- and pollutant-specific, and take into consideration energy, environmental, and economic impacts.

A broad range of industrial sources qualify as “major emitting facilities” and are subject to regulation under the PSD program, including fossil fuel-fired power plants, Portland Cement plants, municipal incinerators, phosphate rock processing plants, and copper smelters. In addition to the specific facility types enumerated in the statute, “major emitting facilities” also include “any other source with the potential to emit two hundred and fifty tons per year or more of any air pollutant.” Historically, these thresholds have limited BACT requirements to a relatively small number of large industrial sources. EPA estimates that it annually issues 200-300 PSD permits.

### **The Deseret Bonanza Facility**

In November 2004, Deseret submitted a PSD permit application to construct a new waste coal-fired electric generation unit at its existing Bonanza power plant, located near Vernal, Utah. The facility is located within the boundaries of the Uintah and Ouray Indian Reservation. Because the Reservation does not have a federally-approved tribal CAA permitting program, EPA Region 8 retains primary authority for implementing the PSD program and approving Deseret’s permit.

During the public review period, Petitioner submitted comments indicating that the Supreme Court’s decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007), compelled EPA to impose BACT requirements on the new facility. That case involved challenges to EPA’s denial of a petition requesting rulemaking to address greenhouse gas emissions from mobile sources under the CAA. EPA’s denial was predicated on its determination that it did not have authority to regulate CO<sub>2</sub> and other GHGs under the CAA. The Court, however, disagreed, holding that “greenhouse gases fit well within the Clean Air Act’s capacious definition of ‘air pollutant.’” The Court remanded the petition back to EPA to determine whether GHGs “endanger public health or welfare.” Although EPA has yet to make that determination, Administrator Jackson has suggested that EPA’s endangerment decision is forthcoming—

perhaps as soon as the April 2009 second anniversary of *Massachusetts v. EPA*.

In response to Petitioner’s comments on the pending Deseret permit, EPA stated that *Massachusetts v. EPA* “does not require [EPA] to set CO<sub>2</sub> emission limits” and that “EPA does not currently have authority to address the challenge of global climate change by imposing limitations on emissions of CO<sub>2</sub> and other greenhouse gases in PSD permits.” EPA also stated that its historical interpretation of the phrase “subject to regulation” required actual control of emissions, as opposed to monitoring or reporting. EPA issued Deseret a PSD permit authorizing construction of the new waste coal-fired facility in October 2007. While the permit imposed BACT requirements for some pollutants, it did not include BACT requirements for carbon dioxide.

### **Analysis**

In October 2007, the Sierra Club sought review of EPA’s permit before the Board. The principal issue before the Board was whether carbon dioxide was a pollutant “subject to regulation” under the CAA. Citing *Massachusetts v. EPA* and EPA regulations which require certain facilities to monitor and report CO<sub>2</sub> emissions, the petition contended that carbon dioxide was indeed “subject to regulation” under the CAA. As a result, according to Petitioner, EPA was required to include BACT controls for CO<sub>2</sub> in the PSD permit. EPA countered with a variety of textual and historical interpretation arguments.

The Board first ruled that the phrase “subject to regulation” “is broad enough to embrace different meanings, or shades of meaning.” Petitioner argued that the monitoring and reporting requirements constituted “regulation,” while intervenor Deseret argued that “regulation” requires affirmative emission controls. The Board sided with EPA, ruling that the term “subject to regulation under this Act” “is not so clear and unequivocal as to preclude the Agency from exercising discretion in interpreting the statutory phrase.”

Although the Board ruled that the statute’s plain language did not compel a particular interpretation, it

rejected EPA's contention that its historic interpretation of the phrase "subject to regulation" prohibited it from imposing BACT limitations on CO<sub>2</sub>. In its response to Petitioner's public comments, EPA indicated that it was bound by a historic interpretation of the phrase "subject to regulation" as meaning "subject to a statutory or regulatory provision that requires actual control of emissions." EPA relied on a variety of sources to support its historical interpretation argument, including certain regulatory preambles, a definition of "regulated NSR pollutant" developed in a 2002 rulemaking, and two EPA memorandums. The Board rejected those arguments on grounds that they "provided little, if any, support for the contention that the phrase applies only to provisions that require actual control of emissions" and consequently was not supported by the administrative record and clearly erroneous. The Board remanded the matter to EPA for further consideration.

## Conclusion

The implications of the Board's decision in *In re Deseret Power Cooperative* are predictably contested. The Sierra Club and other environmental groups heralded the decision as a major victory and a step towards the direct regulation of CO<sub>2</sub> under the CAA. Industry representatives, however, pointed out that the Board's decision, like the Supreme Court's decision in *Massachusetts v. EPA*, is procedural and does not compel a certain substantive outcome. Nonetheless, *In re Deseret*, coupled with uncertainty as to whether EPA will withdraw the interpretive memorandum issued in the wake of the Board's decision, casts a pall of uncertainty over as many as 100 coal-fired power plant projects with outstanding CAA permits.

The CAA's cooperative federal/state framework may potentially constrain the impact of the Board's decision. In most instances, states are the primary CAA permitting authority pursuant to EPA-approved implementation plans. State-level permitting decisions in states with delegated CAA authority are not subject to review by the Board. As a result, the precedential value of the Board's decision may be limited to the narrow situations, like those presented in *In re Deseret Power Cooperative*, in which EPA is the primary

permitting authority. States may remain free to make their own determination whether CO<sub>2</sub> is "subject to regulation." Indeed, that issue is currently subject to litigation at the state-level. In Georgia, for example, the state appellate court recently accepted review of a June 2008 state trial-court order ruling that a permit for a new coal-fired power plant was required to include BACT controls for CO<sub>2</sub> carbon dioxide.

The decision nonetheless pushes EPA down a path it has (so far) been reluctant to travel—direct regulation of CO<sub>2</sub> under the CAA. In response to the Supreme Court's remand in *Massachusetts v. EPA*, EPA issued an Advanced Notice of Public Rulemaking (ANPR) in July 2008 which provided a roadmap of various options for regulating GHGs under the CAA. *See* *Regulating Greenhouse Gas Emissions under the Clean Air Act*, 73 Fed. Reg. 147, 44,353 (July 30, 2008). The CAA's emission thresholds for stationary source permitting (100 tons per year for enumerated facility types and 250 tons per year for all other facilities) have limited preconstruction review and BACT requirements to a relatively small number of stationary sources. Unless EPA were also to take measures to limit the scope of the PSD program, a finding that CO<sub>2</sub> is "subject to regulation" would exponentially expand the reach of that program.

The U.S. Chamber of Commerce estimates that over one million previously unregulated sources emit (or have the potential to emit) enough CO<sub>2</sub> to trigger BACT requirements, including office buildings, schools, restaurants, and hospitals. In the ANPR, EPA noted that BACT review is complex and costly, and that federal, state, and tribal permitting authorities, not to mention permittees, would be faced with significant new costs and administrative burdens if the program was expanded to include carbon dioxide and other greenhouse gases. While EPA proposed a number of options for streamlining PSD review in its ANPR, these proposals are untested and would be exposed to potential legal challenge if enacted. As with *Massachusetts v. EPA*, the ramifications of the Board's decision in *In re Deseret Power Cooperative* have the potential to extend far beyond the smokestack, and the decision tees up a series of vexing issues for the new administration.

*Editor's note:* Subsequent to the completion of the article, EPA issued a proposed rule finding “endangerment” on April 17, 2009 and published in the Federal Register on April 24, 2009. Text available on-line at <http://www.epa.gov/climatechange/endangerment.html>.

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## **OFFSET ALLOWANCES UNDER CAP-AND-TRADE: KEY CONCEPTS**

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### **Richard B. Herzog**

As of this writing, a cap-and-trade system remains the most likely congressional outcome in the debate as to whether a cap-and-trade system or a carbon tax is the preferred way to elicit reductions of greenhouse gas (GHG) emissions. Even before the president on Feb. 24 called on this Congress to enact cap-and-trade legislation, key committee chairmen in both the House and Senate had described aggressive timetables for reporting such bills. It appears likely that a federal cap-and-trade system would create not only obligations but substantial revenue opportunities for private entities.

This note explains key concepts relating to those revenue opportunities, and suggests some of the policy choices and highly consequential detail that will emerge if Congress enacts legislation and agencies begin to develop the rules. Regulatory approval will be required to realize the revenue opportunities. Because that approval will depend not only on the capacity of a project to reduce GHGs but on the investment analysis that preceded the project, it is not too soon to begin consideration of these matters.

### **Allowance Supply and Demand**

In the lexicon of cap-and-trade, an “allowance” is a right to emit during a compliance period (probably a year) a specified amount of carbon dioxide (CO<sub>2</sub>) or

other regulated GHGs (specified as CO<sub>2</sub> equivalents). A mandatory cap-and-trade system establishes a gradually declining total number of allowances that the program administrator will issue in each year—the cap. The owners or operators of facilities subject to the cap are required to present to the administrator of the program shortly after the end of a compliance period a number of allowances equal to the number of tons of CO<sub>2</sub> or CO<sub>2</sub> equivalents associated with their activities during the period. I will refer to such facilities as “covered facilities” and their owners or operators as “covered entities.” Covered facilities will likely include a wide range of facilities that directly emit GHGs, as well as certain facilities that produce or import products that release GHGs when combusted.

Various bills introduced in the last Congress provided that allowances would be distributed to covered entities and others through annual free allocations and through auctions, with the percentage distributed through auction gradually increasing. The president’s budget proposal calls for a 100 percent auction from the outset. If, nonetheless, the legislation as enacted provides for any allocations to covered facilities, they would likely be based, as to some types of facilities, on emissions during a fixed or rolling historical base period. Allocations to other covered facilities would be based on the GHG emission-potential of products they produced or imported during the base period. A likely example of the latter is petroleum refiners, whose allocation would be based not only on emissions at the refinery, but on the emissions associated with the refiner’s end-products.

As the total number of allowances issued annually by the administrator declines, covered entities will have to reduce their emissions or buy additional allowances in the allowance market. Compliance through purchases will create demand for allowances. There may be five general sources of allowances to meet this demand: allowances auctioned by the administrator, allowances (if any) allocated to covered entities that have physically reduced their GHG emissions so that their allocation, based on their historical base period, is more than they require (some argue that free allocations confer a “windfall”), allowances (if any) allocated to states or others to support a variety of GHG-reducing and efficiency-enhancing activities, and

for assistance in adapting to climate change; and international allowances. The fifth source is likely to consist of allowances earned by non-covered entities that voluntarily choose to reduce, avoid, or capture and permanently store GHG emissions (hereafter, “reduce”) so that, in comparison with a forward-looking baseline (discussed below), less GHGs enter the atmosphere than would be expected under business as usual (BAU) assumptions.

## Offset Allowances

Projects by non-covered entities that achieve voluntary reductions are “offset projects” when they are eligible to earn and sell a type of allowance known as “offset allowances” or “offset credits.” Examples may include fuel switching and energy-efficiency enhancements in the production of goods and services; capture and sequestration of GHGs in underground geologic structures; capture and combustion of methane (a highly potent GHG) from active or abandoned coal mines or landfills; and changes in agricultural, rangeland, and forestry practices. It is likely that offset allowances will not be part of the cap, so that they (along with international allowances) would expand the total supply of allowances, thereby constraining allowance prices.

A federal cap-and-trade program might not treat offset allowances as fully equal to regular allowances. Covered entities might be allowed to satisfy only a specified percentage of their allowance requirements with offset allowances. The specified percentages would likely be on the order of 5 to 20 percent of the obligation, perhaps with the percentage increasing within that range as the cap gradually tightens. It is possible, moreover, that a cap-and-trade program will recognize only a percentage of each offset allowance, at least for some types of offset projects, in order to account for imperfect verification and monitoring, or imperfect outcomes such as lack of “permanence,” or “leakage” (discussed below).

Offset allowances shift the physical location of reduced emissions from a facility that must submit allowances to one that is not required to do so. When a covered entity purchases offset allowances to satisfy its obligation to submit allowances, it has not reduced its

emissions. But, total emissions have been reduced nonetheless, through the offset. There is general agreement in published discussions of offset allowances that, to ensure that trading in offset allowances advances the emissions-reduction goals of the cap-and-trade program, offsets must be “real,” “verifiable,” “permanent,” and “additional,” and must account for “leakage.”

## “Real,” “Verifiable,” and “Permanent”

Offset allowances must of course be based on “real” reductions to achieve the yearly reduction in net emissions that is contemplated by the yearly reductions in the total number of allowances. “Verifiability” is an ancillary requirement, to confirm that reductions from an offset project are “real,” facilitate enforcement, and encourage standardized methods of monitoring and measurement.

“Permanence” is straightforward where the offset project captures GHGs and stores them. The molecules of GHG still exist; they just have been prevented from entering the atmosphere. Capture and sequestration in stable underground geologic structures is an example. Reforestation (planting trees on deforested land) or afforestation (planting trees on land that is not forested, such as cropland or pasture) could be others. But geologic structures may release stored GHG over long periods. And planted trees may be subject to insect infestations or fires that release GHG. The cap-and-trade program will require mechanisms to deal with these risks; as already suggested, discounting the offset allowances may be one such mechanism.

“Permanence” can also be achieved where an offset project involves not storage but reducing GHG emissions in the course of producing goods or services (if the concept is applied at all to such projects). If more energy-efficient equipment or processes reduce the GHG emissions from the production of a particular widget, or from the movement of freight a particular ton-mile, that particular reduction is complete and permanent when the widget has been produced or that freight has moved, notwithstanding that the factory or railroad might in the future revert to less efficient equipment or processes.

## “Additional”

“Additionality” is necessary if offset allowances are not to impede progress toward GHG-reduction goals that depend upon the cap. As a first, approximate definition, it can be said that a reduction is “additional” if it would not have occurred but for the cap-and-trade program, and, in particular, the opportunity to earn and sell offset allowances. The gradual reduction in the cap is designed to force covered entities as a group to make reductions greater than they would have made under BAU in the absence of the caps. An offset allowance substitutes a reduction by a non-covered entity for a reduction that otherwise would have been made by a covered entity. Without effective standards for “additionality,” the total of emissions from covered and non-covered entities would be greater than it would have been under a cap-and-trade program that did not recognize offset allowances.

Determining “additionality” differs fundamentally from the practice in corporate-level accounting for GHG reductions, which compares actual emissions in a historical base year to actual emissions in subsequent years. “Additionality” entails a forward-looking comparison of emissions from the offset project against a predicted BAU baseline, which is not necessarily a continuation of present equipment and practices. The BAU baseline could involve future GHG reductions through investment in new technologies, or through different practices that are predicted to become technically feasible and economic without regard to offset allowances. The existence of a cap-and-trade system might cause GHG reductions in such a way as to require a reduction in the BAU baseline due to increases in the price of carbon fuels. To earn offset allowances, offset projects must achieve reductions in addition to those under a forward-looking BAU scenario; a scenario that may itself reflect the economic effects of the cap-and-trade system.

Thus, the assessment of “additionality” is ordinarily going to be a co-product of the analysis that establishes the BAU baseline. The point is illustrated in the GHG protocol developed by the World Resources Institute and the World Business Council for Sustainable Development, which “does not require a demonstration of additionality *per se*. . . . Additionality

is incorporated as an implicit part of the procedures used to estimate baseline emissions . . . .” World Business Council for Sustainable Development & World Resources Institute, Greenhouse Gas Protocol: The GHG Protocol for Project Accounting, at 8 (2005), *available at* [http://www.ghgprotocol.org/files/ghg\\_project\\_protocol.pdf](http://www.ghgprotocol.org/files/ghg_project_protocol.pdf).

The development of forward-looking BAU baselines will frequently involve numerous assumptions and judgments, resulting in more than one plausible BAU baseline. A project developer may have an incentive to choose the BAU baseline that represents the smallest GHG reductions, thereby maximizing the reductions deemed incremental to the project. The administrator may have an incentive to choose the BAU baseline that represents the largest GHG reductions. Such an approach by the administrator may be inappropriate, however, because the proper perspective in determining BAU reductions and “additionality” is that of the investor at the time of the investment decision, and the investor is not going to internalize all of the benefits of GHG reduction.

“Additionality” may be assessed on an individual project basis or on a standardized basis such as efficiency standards for a technology or sector, or some combination. Any of these approaches will involve substantial trade-offs; for example, maximizing environmental integrity may be at the cost of wider participation and technological innovation by non-covered entities. The administrator of a federal program will have no shortage of lessons learned in developing and applying “additionality” requirements. The experience with “additionality” under the Clean Development Mechanism of the Kyoto Protocol (with nearly \$13 billion of offset allowances in 2007) suggests mixed success. *See* U.S. Govt. Accountability Office, International Climate Change Programs, at 33, 40-41 (2008). Offsets in voluntary cap-and-trade programs in the United States have posed quality-control issues. *See generally*, U.S. Govt. Accountability Office, Carbon Offsets (2008).

Whatever the approach, regulatory criteria for “additionality” will likely recognize a variety of factors. A federal program will likely weigh heavily a criterion that the revenue opportunity presented by offset

allowances have made the difference in the decision whether to undertake the offset project. That test may not always be decisive, however. It may be difficult to apply to a project that has its own revenue stream from the production of goods or services. And, a GHG-reducing project with an expected rate of return that is economic without regard to revenues from offset allowances might still be “additional” if it employs a technology that would not be used in the absence of a purpose to reduce GHG emissions. Nonprofit organizations that develop offset projects based on their financial capacity to do so, and not on ordinary economic criteria, may pose additional issues in determining “additionality.”

Reductions that would have occurred anyway under BAU will typically include those that satisfy the entity’s investment criteria without revenues from offsets (subject to the possible qualifications just noted), are or will soon become common practice in the industry sector or geographic area, or are required by command-and-control regulations. (Reductions to levels below the mandated levels might satisfy “additionality.”) Such criteria make it evident that those considering an offset project should consider “additionality” right from the conception of the project. The internal analyses that lead to the decision to undertake a project may be critical in demonstrating “additionality.”

It follows that what is BAU and what is “additional” can and will change over time. Offset projects will remain eligible to earn offset allowances for a series of specified periods (“crediting periods”). The actual number of offset allowances that they earn may be determined annually for each compliance period embraced within the multi-year crediting period, based on actual reductions below the BAU baseline for the compliance period. It is conceivable that a project might eventually become BAU in fact even though it was not considered BAU in the predictions that led to project certification. The prospect of revenues from offset allowances may affect only the timing of an offset project, which, absent the prospect of those revenues, would have been initiated anyway in a later period. Investors will, however, require certainty as to a minimum period during which the project will be eligible to generate offset allowances. They must be

able to count on a period during which the regulator will not reexamine “additionality” or the BAU baseline. Various proposals have suggested initial crediting periods of five to ten years, with longer periods for afforestation projects, and with renewal opportunities.

### “Leakage”

An emission of GHG anywhere contributes to global climate change. Thus, a reduction in one location through an offset project is ineffective if it causes an equivalent increase in another location by another facility that is not a covered facility. Therein is the “leakage” problem.

“Leakage” typically involves shifts of emitting activities in the production of goods and services from one location to another, where the new facility or activity in the second location is not subject to the cap. Insofar as some types of *covered* entities are economically able to move their emitting activities abroad or are exposed to competition from foreign facilities, the potential for “leakage” will inhere in a U.S. cap-and-trade program. The problem could increase as the cap tightens and an increasing portion of allowances is auctioned rather than allocated for free, and if other countries do not have, and do not appear close to adopting, a comparable allowance requirement and do not otherwise limit GHG emissions. Measures to address that problem will not involve any particular covered entity, and might range instead from new international agreements to unilateral trade measures on imports from such other countries if consistent with existing or new trade agreements.

The “leakage” issue is different with respect to offset projects. Such projects by definition will be undertaken by non-covered entities. The issue will be whether the offset project is likely to cause an increase in emitting activities elsewhere. The increase might be abroad, or it might be in the United States because the facility at the different location, which probably provides the same goods or services as the facility with the offset project, presumably is also not a covered facility. Entities that harvest timber, for example, are not likely to be covered entities under cap-and-trade legislation, even though harvesting releases GHG. Forebearance from harvesting timber in a working forest, even though

the avoided GHG emissions are “real,” and “additional” in that the forbearance was induced by the prospect of selling offset allowances, will not contribute to the goals of cap-and-trade if the result is an increase in harvesting elsewhere in the United States or abroad.

“Leakage” impairs the environmental goals of cap-and-trade even if the increase in emitting activity is at facilities not owned or controlled by the entity that received the offset allowances. Thus, the concept could require assessments of the likely behavior of market participants other than the entity undertaking the offset project, making it difficult for the project developer to obtain the needed information. An individual project approach could cause unacceptable uncertainty and delay for those considering investments in offset projects.

A generic approach may be a feasible regulatory alternative with respect to many types of projects. “Leakage” is most likely to be a problem where the GHG reduction involves a substantial reduction in the supply, or increase in the price, of the goods or services produced by the emitting activity. Many types of offset projects will not have those effects, because of the nature of the project or because of the nature of the markets for the goods or services, or both. For those types of projects, regulations that address “leakage” on a generic basis may make sense, with periodic revisions that would apply only prospectively.

## Conclusion

The offset features of cap-and-trade will be the subject of extensive rulemaking proceedings. Those features will be designed to widen the universe of suppliers of GHG reductions by inducing the participation of sectors not subject to the mandatory cap, in order to minimize the overall cost of GHG reductions and encourage innovation in non-covered sectors while advancing the reduction goals. As in any effort to induce a supply response, there will be risks of over- and under-inclusiveness. The administrator will have to choose among the risks. The best choices are likely to emerge if the administrator has had the benefit of thoughtful, well-informed discussion with for-profit and

nonprofit organizations well in advance of any notice of proposed rulemaking.

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## EVALUATING THE WESTERN CLIMATE INITIATIVE

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### Richard A. Perry

The Western Climate Initiative (WCI) is a greenhouse gas (GHG) reduction program implemented by seven western American states and four Canadian provinces (California, Arizona, New Mexico, Utah, Oregon, Washington, Montana, British Columbia, Manitoba, Ontario, and Quebec). The WCI completed design recommendations in September 2008 for a cap-and-trade program that will begin trading in 2012 (“Design Recommendations”). The jurisdictions building a GHG-reduction program such as the WCI must make many choices as to the program’s design. This article proposes and applies a framework for evaluating these design choices for the Western Climate Initiative. The WCI has fallen notably short in several important aspects, but has performed admirably in others.

Not all design choices are of equal importance. Those who are appropriately frightened by the impending dangers of climate change should focus their attention and influence on those design choices that are most important—those that determine whether the WCI will send a strong and swift signal to businesses, consumers, the federal government, and the rest of the world at large that GHG emissions will be credibly regulated. This entails a GHG-reduction program that covers a broad portion of the carbon economy,

imposes meaningful cuts in emissions, has strong regulatory and political integrity, and is implemented as soon as possible. On the other hand, matters of distributional equity, such as the method of allowance allocation, are not essential to send a strong signal to the world that it must prepare for a carbon-constrained future, yet these issues consume a disproportionate share of the attention of environmental groups.

**The scope, breadth, and depth of the WCI program.** The WCI's stated goal is to cut emissions 15 percent below 2005 levels by 2020, which corresponds to a 12 percent reduction below 2000 emissions levels, and a 2 percent *increase* from 1990 emissions levels in the covered states and provinces. However, this goal falls somewhat below what is needed for the WCI jurisdictions to do their share toward avoiding dangerous climate change. Much of the world-wide discussion on climate change focuses on preventing global average temperatures from rising more than 2° Celsius above pre-industrial levels. If temperatures rise more than 2° Celsius, scientists predict increased droughts, heat waves, and infectious diseases; bleaching of coral reefs; and the increased risk of extinction for 20-30 percent of all species on earth. To have a reasonable chance of avoiding this scenario, most scientists believe that the concentration of CO<sub>2</sub> equivalent in the atmosphere ("CO<sub>2</sub>eq") must stabilize at no more than 450 parts-per-million (ppm). To stay within this level, the Union of Concerned Scientists estimates that GHG emissions from industrialized countries must peak in 2010 and then steadily decline through 2050. The United States must reduce emissions 15-20 percent below 2000 levels by 2020 to stay on track to meet the longer-term 2050 goal. Thus, the WCI goal of a 12 percent reduction below 2000 levels by 2020 falls below the *minimum* reduction needed for the WCI jurisdictions to do their share to keep atmospheric CO<sub>2</sub>eq levels below 450ppm, implying that the WCI jurisdictions are not doing enough to avoid dangerous climate change.

On the other hand, the scope of the WCI's proposed cap-and-trade program is admirable. The Design Recommendations propose a much broader cap-and-trade program than either the Regional Greenhouse Gas Initiative (RGGI) of the northeast and mid-Atlantic United States, or the European Union Emissions

Trading Scheme. In its first compliance period, the WCI will cap emissions from power generation within its jurisdiction but will also (unlike the RGGI) cap emissions from imported electricity, requiring the first entity subject to the jurisdiction of the WCI that delivers electricity into a participating state or province to hold allowances equal to the emissions generated to produce that electricity. The first period will also include combustion, process, and fugitive emissions from large industrial and commercial sources. In the second compliance period beginning in 2015, the WCI program will expand to include emissions from transportation fuels and commercial and residential natural gas and thus will encompass close to 90 percent of the GHG emissions from participating jurisdictions. Including such a large portion of the economies and emissions in the WCI cap-and-trade program will be a major development in the design of climate change programs.

**The regulatory integrity of the WCI program.** The most ambitious emission reduction goals and the broadest coverage of emissions sources matter little if the emissions cap is not firm or is not stringently enforced. For the WCI cap-and-trade program to be effective it must include an exceptional enforcement program. Imposing a price on carbon for the first time creates a significant financial incentive for regulated sources to break the law. Given the consequences of failure to control GHG emissions and the stringent level of compliance needed to stay on track with emissions goals, enforcement measures must go above and beyond the normal enforcement practices of state environmental regulatory bodies. The Design Recommendations appropriately include a strong enforcement provision that will penalize regulated entities by taking away three allowances for every excess ton of CO<sub>2</sub>eq they emit. This follows the model of the NOx Budget Trading Program, which has had nearly 100 percent compliance, in contrast to traditional discretionary environmental enforcement programs.

Many stakeholders sought to have a "safety valve" in the WCI program that would relax or revoke the WCI's emissions cap if the price of allowances exceeded a certain amount. The objective of a safety-valve is supposedly to limit program compliance costs.

At first blush this may sound reasonable, but in fact a safety-valve provision would constitute a fundamental abandonment of serious efforts to address climate change, and the WCI has wisely decided against it. We can take action now to deal with climate change, or we can take action later at a much higher price after much permanent damage has already occurred. The Stern Review estimated that if the world takes strong action now to combat global warming, the costs can be limited to 1 percent of gross world product each year. Sir Nicholas Stern, Her Majesty's Treasury, Stern Review Report on the Economics of Climate Change, Cambridge University Press, 2006, at vi. If we do not act immediately to limit climate change, the costs of global warming will rise to "at least 5% of global GDP each year, now and forever" and could rise to as high as 20 percent of global GDP each year. *Id.* The safety-valve idea is therefore fundamentally flawed because whatever the current costs of a climate change program, they will only be dramatically higher in the future.

Although the Design Recommendations rejected a safety-valve, they unfortunately adopted three other provisions that undermine the regulatory integrity of the WCI emissions cap. One, the WCI will allow jurisdictions to grant additional allowances, *in excess of their caps*, to entities that reduce emissions prior to 2012. Awarding these "Early Reduction Allowances" from outside the cap simply raises overall emissions, and negates the emissions reductions that the plan seeks to reward. Several commentators argued that awarded allowances for early emissions reductions should be in addition to the cap because these emission reductions will have already occurred and because they will have lowered the 2012 baseline emissions level. Such arguments do not withstand scrutiny; it is true that early action will enable us to have an emissions baseline that will be lower than it would be otherwise would have been, but that emissions baseline will nonetheless gravely threaten our planet, and will urgently require as much immediate reduction in emissions as possible. Issuing early action credits outside the cap defeats that cap and the environmental integrity of the program.

The WCI also allows allowance borrowing in the form of a three-year compliance period. This provision enables regulated facilities to under-comply in the first year with the hope that they will compensate by over-complying in the second two years. A three-year compliance period basically allows entities to borrow allowances for two years at a time. The problem is that borrowing provisions require greater emissions reductions in the future, when the cap will be declining. The required reductions may by that time be too large and the emission cuts may not be "made up," putting the integrity of the cap in danger. It is the same risk that would make credit-card companies loathe to accept payments only every three years —there is a risk of running up unpayable debts. Surprisingly, there is virtually no opposition among environmental organizations to the three-year compliance period, even though it poses a nontrivial risk to the integrity of the cap.

Finally, the Design Recommendations allow regulated entities to purchase "offsets" from the "Clean Development Mechanism" or "CDM," the program under the Kyoto Protocol whereby emissions reduction projects in the developing world may be funded and used by regulated entities to meet their compliance obligations. However, studies have shown substantial problems with the monitoring and verification of CDM projects, and have called into question the "additionality" of CDM projects, asserting that many of these projects would have likely occurred regardless of any climate change program. The legitimacy of CDM credits cannot be assumed, and their acceptance by the WCI without some further screening or verification may undermine the integrity of the WCI's cap.

**The political integrity of the WCI cap.** I use the term "political integrity" to refer to the danger that carbon prices will rise to politically unsustainable levels under a cap-and-trade program. The WCI program is flawed because it consists of a cap-and-trade program designed almost entirely in isolation from command-and-control emissions regulations. Stronger, "enlightened" command-and-control regulations should have been considered as an essential counterpart to the cap-and-trade program to strengthen the political

integrity of the cap. Having insufficient command-and-control measures weakens the political integrity of the emissions cap because it allows for the potential for politically untenable high carbon prices.

Some have argued that command-and-control measures can be abandoned once a cap-and-trade system is in place because the cap can replace all other emissions regulations. However, political, economic, and social realities argue for the need to maintain and strengthen command-and-control measures even after a cap is implemented. This is because a pollution cap is only meaningful so long as there is the political will to maintain it. A regulatory program with insufficient command-and-control mechanisms that relies entirely on an emission cap creates a situation where business and industry have an incentive to play a game of “chicken” with lawmakers that the latter will almost certainly lose. Although the WCI has not advocated abandoning existing command-and-control measures, existing measures are too weak and an insufficient part of the overall WCI effort. A weakness of the WCI is its failure to consider the necessity of strengthening these measures.

The risk in relying solely on a cap-and-trade program was demonstrated in the Regional Clean Air Incentives Market (RECLAIM), a cap-and-trade program designed to control emissions of harmful nitrogen oxides (NO<sub>x</sub>) in southern California. In RECLAIM, existing command-and-control restrictions were replaced entirely by a cap on NO<sub>x</sub> emissions that was initially weak but gradually tightened. However, covered sources did not install new pollution control technology in anticipation of the day when the cap would be much tighter. As a consequence, during the California energy crisis of 2000-2001, power plants that had not updated their pollution controls kept emitting more and more NO<sub>x</sub>, prices spun out of control, and the cap on power plant emissions was removed. The RECLAIM saga provides an example of what could go wrong with a cap-and-trade program operating in isolation.

Command-and-control measures are necessary to ensure that the demand for CO<sub>2</sub> declines regardless of consumer response, and regardless of whether the

energy and auto sectors build new low-emitting generators and hybrid cars in anticipation of the declining cap. Emissions performance standards can restrict the demand for carbon and ensure that carbon prices stay within tolerance levels, which will in turn signal to regulated entities that the cap will remain politically feasible and in effect. This in turn will incentivize industry to plan for a declining cap and invest in low-carbon technology. At the same time, the cap-and-trade system will provide a continuing incentive for sources that can cheaply reduce emissions to do so, and enable those facing more expensive options to purchase allowances and continue operating so long as they do not exceed the maximum emission rates set by command-and-control regulations. The cap-and-trade system will enable regulated sources to more cheaply and cost-effectively achieve emissions reductions, while the command-and-control regulations ensure that prices will not rise so high that the political will to maintain the cap is threatened.

Command-and-control regulations do not by themselves provide an incentive for continual improvement and do not typically reward the decision to simply produce less. However, if command-and-control regulations are implemented alongside a cap-and-trade program, regulated facilities will indeed have a continuous incentive to reduce emissions because they will still face the cost of an allowance for each ton of CO<sub>2</sub>eq emitted and will still benefit from each ton of CO<sub>2</sub>eq abated. Command-and-control measures should also be designed such that they do not require the use of any specific emissions control technology, but rather simply require that emissions stay below a proscribed rate. The WCI should implement and strengthen such command-and-control measures that limit GHG emissions rates from power plants, appliances, and buildings. WCI jurisdictions have already taken the important step of adopting California’s “Pavley Regulations,” which set a limit on average GHG emissions from automobiles. These regulations had been prevented from going into effect by the Bush administration, but on Jan. 26, 2008, President Obama began the process of allowing WCI jurisdictions to implement these regulations. This will be an important step in strengthening the political integrity of the WCI emissions cap.

**Distributional equity questions.** Few issues surrounding the WCI design inspired as much fervent disagreement as the question of how to allocate allowances. Environmental organizations passionately argued for most or all allowances to be auctioned by the WCI, whereas businesses (among others) argued for the free allocation of allowances. This passion, however, was misplaced. The free allocation of allowances to sources regulated under the cap-and-trade program, even if arguably inequitable, generally does *not* undermine the integrity of the cap, and therefore should not be a top priority for those deeply concerned about climate change. Apart from the potential effects at the margins of using auction revenues to reduce distortionary taxation or to fund energy efficiency measures, freely allocating allowances and auctioning allowances are identical with respect to both environmental integrity and economic efficiency. The free allocation of allowances may also help acquire the acquiescence of business and industry in the program and thereby enable it to actually be enacted. This does not necessarily provide the greatest distributional equity, but that may be a necessary accommodation given the monumental threat of global climate change. The Design Recommendations require that WCI jurisdictions auction a minimum of 10 percent of allowances in 2012 and 25 percent of allowances in 2020. Though disappointing to many environmentalists, this is a far less important aspect of the WCI program than the other matters discussed above. The energy and resources of the environmental movement should be focused on those matters that undermine the regulatory or political integrity of the cap, and not on achieving distributional perfection.

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## SOUTHERN EXPOSURE: INSURANCE COVERAGE FOR CLIMATE CHANGE DAMAGES

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**Christopher R. Reeves, Esq.**

On Election Day 2008, the first of its kind climate change insurance coverage case was filed: *Steadfast Ins. Co. v. The AES Corp.*, Case No. 2008-858 (Cir. Ct. Arlington Cty., Va.). Arising out of the California climate change litigation case, *Native Village of Kivalina v. ExxonMobil Corp.*, CV 08-1138 SBA (N.D. Cal.), the insurer seeks to deny coverage for the Kivalina claimants' asserted damages resulting from climate change caused by the insured's emissions. Specifically, the *Kivalina* case argues the emissions caused warmer winters, which ultimately lead to ice melt and the loss of shoreline around their property. Steadfast seeks a declaratory judgment that it was not obligated to defend or indemnify its insured. This case has the potential to set the tone for many other coverage disputes likely to arise because of the increased acknowledgment of climate change.

Notably, climate change was recently named the top risk to insurers by Ernst & Young's report on Strategic Business Risks for 2008. Developments such as windstorms, flooding, spread of environmental litigation, and negative impacts on political and financial markets were all cited as the likely results of climate change. With thousands of miles of coastline and low-lying areas, the U.S. South is particularly vulnerable to these impacts and potential litigation. To properly prepare for these events and the risks associated with them, it is important for insurers to evaluate their current policies to determine their level of exposure. Most often, insurers will look to the absolute pollution exclusion to decline coverage for events cause by "pollution," arguably including gases such as carbon dioxide (CO<sub>2</sub>). But, the strength of that argument is tightly bound to the venue in which it is located.

### **The Absolute Pollution Exclusion**

In litigation brought in Arlington, Virginia, Steadfast argues coverage for "property damage," i.e., loss of land from flooding as a result of arctic melt, that occurs during the policy period is excluded under its pollution

exclusion provision. The insured, AES, counters arguing insurance exclusions are to be construed narrowly against the insurer. AES further argues the duty to defend “arises whenever the complaint alleges facts and circumstances, some of which, if proved, would fall within the risk covered by the policy.” Steadfast asserts that excluded from coverage is “any injury or damage which would not have occurred in whole or in part but for the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of pollutants at any time.” Under this analysis, it is asserted CO<sub>2</sub> is a pollutant and the exclusion applies.

In *Steadfast*, the relevant policy defines a pollutant as an “irritant or contaminant.” This is a typical “absolute pollution exclusion” definition for a “pollutant.” Adopted in 1985, the insurance industry introduced this exclusion which was touted to be an “absolute” or “total” pollution exclusion. The exclusion replaced an earlier pollution exclusion often referred to as the “sudden and accidental” pollution exclusion that was the source of what one commentator has called, “the most hotly litigated insurance coverage questions of the late 1980s.” J. Stempel, *INTERPRETATION OF INSURANCE CONTRACTS: LAW AND STRATEGY FOR INSURERS AND POLICYHOLDERS* 825 (1994). Much like its predecessor, the absolute pollution exclusion is generating significant litigation.

This is emphasized by recent opinions around the country differentiating “traditional” versus “non-traditional” pollution claims with vapor claims being classified under the non-traditional category. In *Nav-Its, Inc. v. Selective Insurance Company of America*, (NO. A-20/21. N.J. 2005), the Supreme Court of New Jersey adopted this approach when it concluded a pollution exclusion clause was limited to “traditional” environmental pollution, and found coverage for a vapor claim. Yet, there are jurisdictions that are not following this trend. Specifically, the Iowa Supreme Court in *Bituminous Casualty Corp. v. Sand Livestock Systems, Inc.*, No. 135/05-1063, 2007 LEXIS 23 (Iowa Feb. 23, 2007), rejected this idea of “traditional” versus “non-traditional” noting that carbon monoxide fumes from a concentrated hog farm were pollutants under the policy at issue.

The argument comes down to the history of the absolute pollution exclusion. As argued in *MacKinnon v. Truck Ins. Exchange*, 31 Cal. 4th 635, 642 n. 1 (Aug. 14, 2003), the “pollution exclusion” was drafted in response to the marked increase in environmental liability associated with new environmental statutes and the “environmental disasters of Times Beach, Love Canal and Torrey Canyon.” The first version of the exclusion—the so-called “qualified pollution exclusion”—excluded coverage for injuries and damages arising out of the “discharge, dispersal, release or escape” of “pollutants” unless such discharge dispersal, release or escape was “sudden and accidental.” When the insurance industry revised the exclusion in 1985 to eliminate the exception for the “sudden and accidental” release of pollution, it maintained the revision was not intended to broaden the exclusion’s scope, but was merely intended to continue to “exclude traditional environmental pollution rather than all injuries from toxic substances.”

Relying on this history, two lines of authority have developed interpreting the revised “absolute” pollution exclusion. A majority of jurisdictions apply the exclusion to “traditional environmental pollution” but not to “injuries involving the negligent use or handling of toxic substances that occur in the normal course of business,” i.e., “non-traditional” pollutants. These jurisdictions point to the “absurd or otherwise unacceptable results” of “an interpretation of ‘pollutant’ as applying literally to ‘any contaminant or irritant . . . .’” They also focus on the common meaning of the term “discharge, dispersal, release or escape” as “implying expulsion of the pollutant over a considerable area rather than a localized toxic accident occurring in the vicinity of intended use.” Examples of toxic accidents found not to be excluded include: the accidental spraying of insecticides, leaks of carbon monoxide from furnaces and the ingestion of paint chips. On the other end of the debate are those minority of jurisdictions who rely on the “plain” language of the exclusion’s terms to hold that the “absolute” pollution exclusion is unambiguous and applies to all manner of negligent acts involving toxic substances even outside the scope of traditional environmental pollution.

## Carbon Dioxide a “Pollutant”?

The question then becomes, is CO<sub>2</sub>, the causal agent of climate change, a “pollutant” for purposes of the absolute pollution exclusion? The most notable case to date on this issue is the Supreme Court case of *Massachusetts v. EPA*, 549 U.S. 497, 127 S. Ct. 1438 (2007). Challenged for refusing to regulate CO<sub>2</sub> emissions, the Environmental Protection Agency (EPA) suggested it lacked the authority or obligation to regulate such greenhouse gases. Citing Congress’ refusal to enact specific climate change legislation and the CAA itself, EPA suggested CO<sub>2</sub> is not considered an “air pollutant” sufficient to mandate its regulation. The Court disagreed, finding the state’s challenge to EPA was both proper and warranted. Most notable is that the Supreme Court has acknowledged the existence of climate change and its associated damages. In issuing its opinion in *Massachusetts v. EPA*, the Court noted,

The harms associated with climate change are serious and well recognized. Indeed, the NRC Report itself—which EPA regards as an “objective and independent assessment of the relevant science”—identifies a number of environmental changes that have already inflicted significant harms, including “the global retreat of mountain glaciers, reduction in snow-cover extent, the earlier spring melting of rivers and lakes, [and] the accelerated rate of rise of sea levels during the 20th century relative to the past few thousand years.”

As a result of the Supreme Court’s opinion, CO<sub>2</sub> can be regulated and is arguably a “pollutant” under the Clean Air Act. This is key, because it did not address the issue as to whether CO<sub>2</sub> is generally a pollutant as is required under an insurance exclusion. Thus, this does not end the analysis, as insurance coverage is very much a local, state-based, issue because the rights obtained by an insured arise out of contract, a traditionally state domain.

The most recent southern state to take on this issue is Georgia. Until recently, Georgia appeared to side with the majority of other states. In the 2002 Georgia Court

of Appeals decision in *Kerr-McGee v. Ga. Cas. & Sur. Co.*, 256 Ga. App. 458 (2002), the court interpreted an insurer’s total pollution exclusion clause as ambiguous, and thus not excluding coverage. In *Kerr-McGee*, the insurer brought a declaratory judgment action to determine whether its exclusion stating, “this insurance does not apply to ‘bodily injury’ or ‘property damage’ which would not have occurred in whole or in part but for the actual, alleged, or threatened discharge, dispersal, seepage, migration, release, or escape of pollutants at any time.”

When an employee of the insured suffered injuries following his exposure to the unintended release of industrial chemical titanium tetrachloride within a plant not owned by the insured, the court of appeals determined the exclusion did not apply. The court explained a reasonable insured could believe the exclusion did not apply when the insured neither caused nor contributed to the pollution. Key to this opinion, the court determined the chemical release was not an environmental contamination and the chemical released was not a waste, but rather an industrial chemical. Thus, by classifying the chemical as industrial, i.e., non-traditional, rather than waste, i.e., traditional, the court found there was sufficient ambiguity in the policy to resolve it against the insurer as drafter.

Yet, on July 16, 2007, the court of appeals in *Auto-Owners, Inc. v. Reed*, jumped lines on determining coverage under the “traditional” vs. “non-traditional” pollutant and the absolute pollution exclusion debate. In a 5-2 decision, the court reversed the Butts County Superior Court’s order denying Auto-Owner’s Motion for Summary Judgment and found the absolute pollution exclusion of a commercial general liability (CGL) policy excluded coverage to a commercial landlord in a suit involving his tenant’s exposure to carbon monoxide.

The Georgia Supreme Court ultimately agreed with the court of appeals, on Sept. 22, 2008, reversing the grant of summary judgment on the issue of coverage under an absolute pollution exclusion. *Auto-Owners, Inc. v. Reed*, 284 Ga. 286 (2008). Recognizing the well-established coverage rules, the court noted

insurance companies are generally free to set the terms of their policies as they see fit so long as they do not violate the law or judicially cognizable public policy. Thus, a carrier may agree to insure against certain risks while declining to insure against others.

In construing an insurance policy, courts begin, as with any contract, with the text of the contract itself. Where the contractual language unambiguously governs the factual scenario before the court, the court's job is simply to apply the terms of the contract as written, regardless of whether doing so benefits the carrier or the insured. In *Reed*, the court was faced with allegations of "bodily injury" from the "release" of carbon monoxide gas "at . . . [the] premises," i.e., the rental house, "owned . . . by . . . [the] insured." The ultimate question before the court was, whether carbon monoxide gas is a "pollutant," i.e., matter, in any state, acting as an "irritant or contaminant," including "fumes." In ruling against coverage found in other states, the court held:

We need not consult a plethora of dictionaries and statutes to conclude that it is. After all, the very basis for Reed's lawsuit is her claim that the release of carbon monoxide gas inside the rental house "poison[ed]" her, causing her to suffer difficulty breathing, dizziness, insomnia, vomiting, nausea, headaches, and decreased appetite. Accordingly, we agree with the Court of Appeals that the plain language of the pollution exclusion clause excludes Reed's claim against Waldrop from coverage under the CGL policy.

Similarly, Virginia, often relying upon Georgia coverage opinions, could decide not to look to the Supreme Court's determination in *Massachusetts v. EPA*, but rather the literal meaning of "pollutant" to make its determination. Or, it could do as several states have begun to do, and look at the history of the exclusion itself. Regardless, the *Steadfast* case is bound to make waves in the insurance coverage arena whatever the result may be. For now, climate change claims will continue to leave attorneys with heartburn when trying to advise insurers of coverage. Though *Steadfast* will offer some guidance to coverage, this will not be the decisive case on this issue. There are numerous

jurisdictions that have adopted the "non-traditional," historical line of analysis and found similar gases such as carbon monoxide a non-pollutant and thus, granted coverage. It remains to be seen where and if coverage will be found for climate change damages resulting from the release of CO<sub>2</sub>.

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## KENTUCKY UNVEILS NEW ENERGY PLAN

### Lauran Sturm

In November 2008, Kentucky Governor Steven Beshear issued a comprehensive energy plan for the commonwealth that identifies and addresses "four key issues" of the 21st century: (1) global warming caused by human activity is occurring and must be addressed, (2) in a global economy, the United States alone controls neither energy prices nor supply and demand, (3) Kentucky's electricity energy infrastructure requires major rebuilding over the next 20 years, and (4) national security is directly tied to how energy independent [Kentucky] can become. Gov. Steven L. Beshear, *Intelligent Energy Choices for Kentucky's Future 1* (Nov. 2008), <http://eec.ky.gov/NR/rdonlyres/3BB23D1C-F42C-4E3D-808D-CF7588926BD3/0/FinalEnergyStrategy.pdf>.

The plan rightly characterizes Kentucky as a "coal state." It is both a major user and producer of coal (currently ranking third among states in total coal production and relying on coal for more than 90 percent of electricity) and garners significant economic benefits from the industry: coal "provides more than 17,000 high-wage jobs and . . . brings in more than \$3 billion from out-of-state sales." In

addition, historically low electricity rates have encouraged businesses to locate—and remain—in Kentucky. Absent changes to Kentucky’s energy infrastructure, energy use in the state is expected to increase by approximately 40 percent between now and 2025, meaning that greenhouse gas (GHG) emissions will rise by the same percentage barring significant changes in technology. The prospect of climate change legislation, however, means that in spite of the state’s “abundant coal resources, [it] must . . . contend with the implications of using these resources in a world of likely limitations on the emissions of carbon dioxide, a primary greenhouse gas.” *Id.* at 1. Thus, the plan argues that it is imperative for Kentucky to diversify its electricity generation “to include renewables and other sources, such as nuclear power.”

In response to anticipated climate change legislation and the four key issues identified above, the plan outlines seven high-priority strategies to “improve the quality of life for all Kentuckians by simultaneously creating efficient, sustainable energy solutions and strategies; by protecting the environment; and by creating a base for strong economic growth” by 2025. The seven strategies are:

- (1) improve the energy efficiency of Kentucky’s homes, buildings, industries, and transportation fleet;
- (2) increase Kentucky’s use of renewable energy;
- (3) sustainably grow Kentucky’s production of biofuels;
- (4) develop a coal-to-liquids industry in Kentucky to replace petroleum-based liquids;
- (5) implement a major and comprehensive effort to increase gas supplies, including coal-to-gas in Kentucky;
- (6) initiate aggressive carbon capture and sequestration (CCS) projects for coal-generated electricity in Kentucky; and
- (7) examine the use of nuclear power for electricity generation in Kentucky.

According to the plan, implementation of these strategies will allow Kentucky’s GHG emissions to fall to a level at least 50 percent lower than expected under a business-as-usual scenario. See Fig. ES-1 (illustrating an estimated reduction in carbon dioxide emissions from approximately 220 million metric tons to approximately 90 million metric tons). Brief summaries of each of the strategies follow.

## Energy Efficiency

With respect to Strategy 1, the plan notes that “Kentucky has been a high user of energy largely because of [its] historically low electricity rates.” For instance, while the state ranked 45th in energy prices in 2005, it had the sixth highest per capita energy usage. Strategy 1 thus provides the goals of reducing both energy demand and energy consumption by 2025. Specifically, Strategy 1 contemplates that energy efficiency can decrease energy needs by 18 percent and that establishment of an Energy Efficiency Resources Standard for electric and natural gas facilities can decrease energy consumption at least 16 percent below projected 2025 energy consumption. As part of this strategy, the commonwealth’s Energy and Environment Cabinet (EEC) will identify and recommend new tax incentives to encourage greater energy efficiency within the state.

## Renewable Energy

As Kentucky currently relies on renewable resources for less than three percent of its electricity generation, Strategy 2 proposes to triple Kentucky’s renewable energy generation by 2025. As part of this strategy, “state government will lead by example by requiring new or substantially renovated public buildings to use renewable energy as a percentage of total energy consumption.” In addition, the EEC will recommend policies and incentives necessary to achieve these goals, such as increased economic incentives for the establishment of non-electric, renewable energy sources. The plan deems such incentives necessary because current incentives (e.g., maximum tax credits of \$500 (homeowners) or \$1,000 (businesses) for installation of renewable energy systems) “were judged ‘too small’ to significantly move the market.”

## Biofuels Production

In addition to minimal use of renewable resources, the state also currently uses only 5 to 10 percent of its potential biomass resources for the production of biofuels. Thus, Strategy 3 projects a goal of deriving 12 percent of the state’s motor fuels demand from biofuels by 2025. To help achieve this goal, Kentucky

plans to invest in programs to develop algae and other non-food crops as feedstock for biodiesel within the next 1-3 years. The University of Kentucky's Center for Applied Energy Research will support this effort by operating a small-scale (50,000 gallons per year) pilot algae oil production plant and then convert that oil into biodiesel, and the state will establish an initial renewable fuel standard of 10 percent for the state's vehicle fleet.

### **Coal-to-Liquids Industry**

To address the need for energy independence and continued economic viability in the state, Strategy 4 proposes "to develop a coal-to-liquids (CTL) industry that will use 50 million tons of coal per year to produce four billion gallons of liquid fuel per year by 2025." Specifically, the state will begin operating two 500 million gallon-per-year CTL facilities in both 2013 and 2014, with plans to bring on line two additional 438 million gallon-per-year CTL fuel facilities by 2018 and two more by 2025. Strategy 4 recognizes that such a drastic expansion in CTL facilities will also require increased coal production in the state and thus expects "[t]he coal-to-liquids industry [to be] key to the continued employment of miners within the commonwealth." Despite these expected benefits, the plan notes that a CTL facility may emit twice the amount of carbon dioxide emitted by a petroleum-based facility and looks to Strategy 6 (described below) to help offset this concern.

### **Coal-to-Gas Industry**

Strategy 5 similarly promotes continued coal production in the state and sets a goal of "produc[ing] the equivalent of 100 percent of [the state's] annual natural gas requirement by 2025 by augmenting in-state natural gas production with synthetic natural gas (SNG) from coal-to-gas (CTG) processing." The plan notes that Kentucky has already established several incentives to attract CTG plants to the state (e.g., KY. REV. STAT. ANN. § 154.27-020 provides an array of tax incentives related to CTG projects) and recommends additional research on SNG production and coal/biomass gasification. BESHEAR at 83-84.

### **Carbon Capture and Sequestration**

To further protect Kentucky's coal industry while also addressing greenhouse gas emissions, Strategy 6 proposes that "by 2025, Kentucky will have evaluated and deployed technologies for carbon management, with use in 50 percent of [its] coal-based energy applications." *Id.* at x. Strategy 6 specifically relates to carbon capture and sequestration (CCS). Based on a 2005 study, the plan estimates that Kentucky has enough geologic capacity to store over 100 years' worth of carbon dioxide generation associated with its coal production. Given the high costs of most CCS systems, Strategy 6 also promotes research on microalgal carbon capture and promises that "the most technologically feasible and cost-effective CCS methods will begin being implemented by 2018."

### **Nuclear Power**

Finally, to combat increased energy use and the imminent restrictions on coal-based energy, Strategy 7 provides that "[n]uclear power will be an important and growing component of the nation's energy mix, and Kentucky must decide whether nuclear power will become a significant part of meeting the state's energy needs by 2025." *Id.* at xi. Kentucky legislation currently bans the construction of new nuclear power plants in the commonwealth until the federal government has "identified and approved a demonstrable technology or means for the disposal of high level nuclear waste." KY. REV. STAT. ANN. § 278.605. The plan therefore notes that Kentucky must revisit this statute and consider the "environmental, security and economic issues surrounding nuclear power" because, as a non-carbon dioxide emitting energy source, it could help meet the state's electricity needs without contributing to climate change. BESHEAR at v.

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## CARBON LEAKAGE IN THE EUROPEAN UNION EMISSIONS TRADING SYSTEM: MYTH OR REALITY?

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Neil M. Peretz

The next phase of the European Union (EU) Emissions Trading System (EU ETS) will require the auction of emissions credits in many sectors of the economy, effectively forcing companies to factor the cost of emissions into their profit and loss calculations. Many significant greenhouse gas (GHG) emitters, however, argue they should be granted free emissions permits to prevent “carbon leakage.”

Carbon “leakage” occurs when efforts to control GHG emissions in one place cause the emissions-producing activity to shift to a location not subject to the emissions control policy. If rules and regulations governing emissions only apply to EU companies, then some argue they will be forced to move operations outside the EU lest offshore industries facing fewer emissions restrictions have an unfair advantage. A recent survey indicates that 17 percent of EU ETS participant companies considered relocating as a result of the emissions cap imposed by the EU, making carbon leakage “a political flash point in the debate over how to combat climate change.” *See Post-2012 is now*, Carbon 2008, PointCarbon, Mar. 11, 2008 at 16, and William Pentland, *Cooking The Carbon Books*, Forbes.com, Oct. 13, 2008.

According to lobbying group BusinessEurope, “[c]arbon leakage is already happening”; and “manufacturers of products like chemicals and aluminium . . . are facing stiff competition from firms operating in countries like Saudi Arabia, where access to cheap energy is abundant.” *See Industry deal key to EU climate efforts, says Commission*, EurActiv.com, May 16, 2008.

The potential impacts of carbon leakage are multifold. First, the EU may lose jobs and corporate profits to countries with lesser or no regulation of carbon emissions. Second, emissions abated in the EU will merely be redistributed to less regulated locales, akin to stepping on a bump under the carpet that merely shifts location rather than flattening out. Third, dirtier

production methods may be used outside the EU, creating more per unit emissions for each manufactured good: in essence, the bump under the carpet gets bigger. Fourth, the transport of goods produced abroad back to the EU creates additional emissions.

### The EU’s New Carbon Leakage Policy

In response to these threats, the EU has promised free emissions allowances to industries and sub-sectors exposed to a significant risk of carbon leakage, provided that they adopt “the best technology available” to reduce emissions. *See Council of the European Union Note 17215/08*, Dec. 12, 2008. While many industries aspire to receive these free emission credits, it is unclear how many will qualify.

According to the recent European Council compromise, the threshold for exposure to carbon leakage is that implementation of the next phase of EU ETS cause the industry’s direct and indirect costs to rise by greater than 5 percent, and offshore imports into the EU combined with exports from the EU exceed 10 percent of the EU market size for that industry. Industries facing a 30 percent cost increase or 30 percent of their market exposed to foreign competition may also qualify.

In short, only industries facing much higher costs as a result of purchasing emission allowances, major international competition, or some combination of the two, will qualify for free emissions in response to carbon leakage. The energy and transport sectors, for example, account for 80 percent of the EU’s total carbon emissions, however they are less likely to benefit from leakage prevention policies because most EU member states are sufficiently geographically isolated from unregulated countries to face energy and transport competition from abroad. *See “The European Community’s initial report under the Kyoto Protocol: Annex 1 - EC GHG Inventory report 2006”*, *European Environment Agency, Technical Report No. 10/2006*, Dec. 2006 at 14. As a result, the power generation industry can pass on its increased costs to consumers without a fear of price competition from countries lacking an emissions control policy.

## Susceptible Industries

Industries most susceptible to carbon leakage are those that generate significant emissions directly through their production process or indirectly through the energy consumption. Energy intensive industries claiming susceptibility to leakage include the production of certain ferrous (e.g., steel) and non-ferrous (e.g., aluminum) metals, cement, and chemicals. See Figure 1.

Steel: An analysis of the Dutch steel industry suggested that the cost of carbon emissions would raise steel production costs by 6 percent, however the industry will be able to pass roughly 50 percent of this cost increase on to the consumer. *See* S. de Bruyn, Impacts on competitiveness of EU ETS: An analysis of the Dutch industry for post-2012 EU ETS, Ad hoc meeting of the ECCP working group on emissions trading on Carbon leakage, Sept. 26, 2008. An EU-wide study for the European Commission Directorate General for Environment forecasts the cost of emissions permits will increase steel production costs by 17 percent; however, 6 percent of increases in steel production from scratch (Basic Oxygen Furnace production) and 66 percent of increases in recycled steel production (Electric Arc Furnace) can be passed through to customers. *See EU ETS Review: Report on International Competitiveness, European Commission Directorate General for Environment, McKinsey & Company, Ecofys, Dec. 2006.*

Aluminum: Often referred to as “canned electricity,” 30 to 40 percent of aluminum’s production cost is the electric power consumed in the process. *See* “EAA warns emissions trading could hurt European aluminum sector,” Platts, Oct. 7. Aluminum production also triggers emissions of potent greenhouse gases (GHGs) perfluoromethane (CF<sub>4</sub>) and perfluoroethane (C<sub>2</sub>F<sub>6</sub>), for which emissions allowances would need to be purchased. One simulation of higher electricity costs, assuming carbon emission prices of •20 per ton of carbon dioxide (CO<sub>2</sub>) and electricity prices at •14/MWh, suggests that higher electricity prices could lead to a 6 percent increase in the cost of producing aluminum. *See* de Bruyn (2008).

On a worldwide basis, aluminum production accounts for nearly one percent of the world’s GHG emissions. Because of its capital intensity, the industry is concentrated, with the ten largest producers responsible for 54 percent of global output. To remain competitive, European aluminum producers need to be responsive to world pricing signals, and thus cannot easily pass on their own cost increases stemming from emissions allowances purchases to their customers.

Notwithstanding the price of carbon emissions, the aluminum industry is already drawn to countries with lower electricity costs or cleaner sources of power, such as Iceland, which possesses enormous untapped reserves of non-CO<sub>2</sub> emitting geothermal energy.

Chemicals: Chemicals manufacturing, a heavily energy-intensive process is responsible for about 5 percent of worldwide GHG emissions—more than either steel or aluminum production. *See* E. Bartsch, *The Economics of Climate Change—a Primer*, Morgan Stanley Research Europe, Oct. 3 2007. The EU, United States, and Japan together account for 75 percent of worldwide production. Although the majority of chemicals are sold in the country where they are produced, 30 percent of the finished products are traded internationally. This suggests that offshore competition for EU chemical manufacturers is possible.

Cement: Representing about 18 percent of all industrial emissions and 5 percent of global CO<sub>2</sub> emissions, cement emissions stem less from energy consumption than from direct emissions during production. *See* L. Szabo, I. Hidalgo, J.C. Ciscar & A. Soria, *CO<sub>2</sub> emission trading with the European Union and Annex B countries: the cement industry case*, ENERGY POL’Y, Vol. 34, 72-87 (2006). About half of the emissions are caused by chemical processes, while burning large quantities of coal to heat the kiln accounts for just 30 to 40 percent of the production cost.

An EU-wide model of the cement industry projects that, if CO<sub>2</sub> emissions cost •40/ton, then EU cement companies will cut production by 3.5 percent; however, other, non-regulated regions may increase their production by more than this amount. *Id.* At present, EU cement producers face scant competition

<b>Industry</b>	<b>Percent of GHG Emissions</b>	<b>Chief Source of Emissions</b>	<b>Local Market Pricing Power/ Susceptibility to Foreign Competition</b>	<b>Possible Financial Impact of Purchasing Emissions Allowances</b>
Steel	15 percent of all manufacturing emissions and 4 to 5 percent of worldwide emissions.	70 percent of emissions due to energy consumption during production.	Shipped and sold worldwide.	Between 6 and 17 percent cost increase, and between 6 and 66 percent of new costs passed onto consumer.
Aluminum	0.9 percent of worldwide emissions.	Electricity consumption during production.	Sold at world market price.  Transportable via ship, truck, and rail.	Possible 6 percent cost increase and 12 percent drop in profits.
Chemicals	5 percent of worldwide emissions.	Energy consumption during production.	30 percent of finished products sold abroad.	Between 2.7 and 7.1 percent of gross value added at a carbon price of €20 per tonne.
Cement	18 percent of all industrial emissions and 4 to 5 percent of worldwide emissions.	Largely decomposing limestone, which frees CO <sub>2</sub> , and other chemical processes. Also burning coal to heat kilns.	Expensive to transport, except by sea.  Developing country demand outstrips supply.	Between 8 and 35 percent cost increase.

**Figure 1**

from abroad because cement is not conducive to international trade due to its relatively high weight and low value. International competition is limited to coastal regions because weight has less impact on the cost of sea transport. Once the cement makes landfall, however, it rarely is transported more than 100 miles inland. This explains why, as of 1997, only seven percent of cement consumption was provided through international trade. *See de Bruyn (2008)*. Thus, inland regions are protected against foreign competition and local cement companies can pass any price increases onto the consumers. However, one study for the European Commission suggests that the cost of emissions allowances for the cement industry would be “roughly equal to freight costs from northern Africa or the eastern European countries outside the EU.” European Commission Directorate General for Environment, McKinsey & Company, Ecofys (2006).

In the future, the cement-producing countries facing less stringent emissions regulations, such as China, Southeast Asia, and India, will also be the world’s largest consumers of cement. The EU, by comparison, produces and consumes only about 11 percent of the world cement market, and this share is declining. Szabo, Hidalgo, Ciscar & Soria (2006). By 2030, it is expected that China and India will consume almost half of the world cement production. *Id.* Because cement is relatively expensive to transport, these markets will likely rely on domestic production, rather than EU exports.

### **The Real Cost of Leakage**

From the perspective of energy- and emission-intensive industries, the specter of carbon leakage looms large enough for them to request both free emissions allowances and subsidies. Empirical studies, however, suggest this concern is overblown. This is especially so when “serious leakage problems could only occur for a narrow range of sectors and products,” representing less than 1 percent of GDP and an even smaller share of employment. *See The role of auctions in emissions trading*, EurActiv.com, Oct. 14, 2008 and Karsten Neuhoff & Felix Matthes, *The Role of Auctions for Emissions Trading*, CLIMATE STRATEGIES, Sept. 17, 2008. The Economist

concurr, reporting that “even the most vulnerable industries would not suffer the Armageddon that lobbying groups are predicting[.]” *Emissions suspicions*, ECONOMIST, June 19, 2008.

On a more practical basis, the International Energy Agency reports that European aluminum production has not been negatively impacted by putting a price on carbon emissions; to the contrary, “a shuttered smelter in Germany reopened in 2007, despite the cost of rising emissions.” *Id.* Likewise, a study by New Carbon Finance showed that power prices in Poland and Germany already reflected the cost of carbon emissions permits, effectively passing costs through to consumers, despite that these permits were initially provided free of charge to power producers. As a result, power consumers, including aluminum and steel companies, are already paying for carbon emissions in their power bill, yet have failed to flee the EU.

### **Factors That Reduce Prospective Carbon Leakage**

First, there are often barriers to entry preventing a surge of imports from countries that lack emissions regulations. The European Commission’s own research shows that “market concentration in the cement industry is rather high and prone to collusion and the formation of cartels” and “the cement sector is unlikely to be significantly exposed to international competition due to high transportation costs.” S. Kumar, *Carbon leakage or auctioning avoidance: how to pervert emissions trading*, POINT CARBON NEWS: CARBON MARKET EUROPE, Vol. 7, No. 33, 5 Sept. 2008. Because most energy-intensive industries are also capital-intensive, much of the production in unregulated countries is the result of investment from EU and other Western firms already in the industry. EU firms can use their ownership of foreign subsidiaries to require that the subsidiaries focus on their home market, rather than export to the EU.

Second, emissions pricing alone is unlikely to drive most manufacturers out of the EU. Manufacturing plant movement is more likely driven by factors such as “labour costs and skills, market size, political stability, income levels, physical infrastructure and a wide range

of government policies (taxes, financial and investment regulations).” E. Korhola, *Emissions trading- the last chance to get it right*, POINT CARBON NEWS: CARBON MARKET EUROPE, Vol. 7, No. 35, Sept. 19, 2008. Morgan Stanley concurs: “concerns that carbon-intensive industries could relocate due to loss of competitiveness seem overblown. Only a relatively small number of carbon-intensive industries would feel a significant impact even if GHG emissions were fully priced. Even for those industries, climate policy would be only one of many factors in their decision about location of production.” Bartsch (2007).

Third, rather than relocating, many companies have a financial incentive to stay in the EU and develop new emissions abatement technologies. As a result, countries with tighter emissions regulations are well-positioned for international sales of environmental protection equipment. In short, putting a price on carbon emissions might foster, rather than impede, industrial growth and employment.

Fourth, estimates of the cost of emissions abatement often fail to consider technology innovations and economies of scale to be spurred by the emissions cap. An apt analogy is the Acid Rain Program required by the Clean Air Act, wherein industry overestimated the cost of abatement by 300 percent, due to a failure to include technological advances in their forecasts. A recent study by McKinsey & Company suggests that energy efficiency improvements would suffice to meet all of the EU’s emissions targets. Academic econometric models and simulations confirm this hypothesis. For example, in a model of two countries’ economies, wherein only one country enforces a cap on emissions, employment of “directed technical change” (e.g., technology designed to reduce emissions) brings about “a counterbalancing induced technology effect” and a lowering of carbon leakage. If energy demand is elastic, which it is more likely to be in the long-run, then even a non-regulated country will be induced “to voluntarily reduce its own emissions,” effectively creating negative leakage. Accordingly, “the leakage rates reported in the literature so far may be too high, as these estimates neglect the effect of relative price changes on the incentives to innovate[.]” See Corrado Di Maria & Edwin van der Werf, *Carbon*

*Leakage Revisited: Unilateral Climate Policy With Directed Technical Change*, ENVTL. & RESOURCE ECON., 39:55-74 (2008). The Intergovernmental Panel on Climate Change (IPCC) projects that there are enough untapped efficiencies in the steel industry that the cost of abating carbon emissions is likely to be negative.

Fifth, many forecasts of carbon leakage seem to be based on a faulty assumption that production of energy-intensive products in unregulated countries will inherently be less energy efficient and produce more carbon emissions. This perspective neglects that developing countries like China and India are in the early stages of growing their industrial base and can often do so with newer, more efficient technologies. Claude Turmes, a Green Party member of the European Parliament points out that energy efficiency performance in energy-intensive industries like steel, cement, and aluminum are more stringent outside the EU, with the world’s lowest emission steel plant located in South Korea, the world’s cleanest cement plant in Brazil, and the world’s best primary aluminum plant in Dubai. An MIT study of China’s energy sector yielded similar findings: many plants employ state-of-the-art equipment from global suppliers and some of the newest and most advanced coal combustion technologies, including clean coal technologies and flue-gas desulfurization scrubbers.

## Conclusion

Although many EU industries claim immediate or imminent threat from carbon leakage, policymakers need to apply careful scrutiny before addressing this issue for several reasons. First, many of these industries are not subject to true international competition because offshore products are expensive to transport to and within the EU and other barriers to entry will reduce foreign competition. Second, new energy efficiency and carbon abatement technologies may enable EU manufacturers to compete cost-effectively in the world market while still reducing their emissions. Third, moving industrial plants from the EU to developing countries like China or India may not increase, and could possibly decrease, carbon emissions because many plants in these countries are

new and incorporate the latest energy efficiency technology. Lastly, responding to potential carbon leakage by providing free emissions allowances disincentivizes the development of emissions abatement technologies and potentially harms the development of cleaner industries by depriving them of capital.

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## **REPORT ON ANSI'S DRAFT NATIONAL STANDARD FOR SUSTAINABLE AGRICULTURE**

**Thomas P. Redick  
Shawna Bligh**

This article updates recent progress toward adoption of the proposed national standard on sustainable agriculture under the auspices of the American National Standards Institute (ANSI). A global standard on sustainable agriculture would impact millions of lives around the world. Such a standard impacts consumer purchasing decisions, environmental policy-making, and marketplace economics. The Draft Standard for Trial Use (DSTU) called "Sustainable Agriculture Practice Standard for Food, Fiber, and Biofuel Crop Producers and Agricultural Product Handlers and Processors (SCS-001)" (hereinafter "SCS-001 Draft Standard") was proposed by Scientific Certification Systems (SCS). SCS is a professional third-party certification and assessment corporation. As the drafter and principal promoter of the SCS-001 Draft Standard, SCS funds the meetings seeking stakeholder input and the activities of the Standards Development Organization (SDO). The Leonardo Academy (Leonardo), based in Madison, Wisconsin, was selected by SCS as the SDO for the SCS-001 Draft Standard. Leonardo took over this project from a prior SDO, the National Sanitation Foundation (NSF) in Ann Arbor, Michigan. NSF and another agricultural SDO, the American Society of Agricultural and Biological Engineers (ASABE), are the leading SDOs in the ANSI community for food and agriculture, with thousands of standards under their auspices. Having found no home with the established SDOs, SCS chose the new and uniquely "environmental" Leonardo, which gives 25 percent of the votes on all its committees to "environmentalists" (a procedure not used by the other agricultural SDOs).

If this standard is adopted as an American National Standard under ANSI, it can then become an International Standard under the International Organization for Standardization in Geneva, Switzerland. For a summary of the twists and turns, including other legal challenges with the SCS-001 Draft Standard, see Thomas Redick & Shawna Bligh,

Ag Law Update, American Agricultural Law Association newsletter. 25 AGRIC. L. UPDATE 1, 3-6 (11-2008).

## **Background—Initial Drafting and Conception of a National Standard**

The SCS-001 Draft Standard is largely based on a prior voluntary standard (not under ANSI) called “Veriflora,” which sets environmental and labor standards for flower production. SCS certifies producers and handlers of flowers as an independent third-party verification body, and it hopes that “the VeriFlora®” standard will be incorporated into the SCS-001 Draft Standard allowing SCS to earn income from certification. Like Veriflora, the SCS-001 Draft Standard promotes a non-genetically modified organism (non-GMO), organic, and fair trade (i.e., fair labor) standard for agriculture that exceeds nearly all existing organic and non-organic practices in U.S. agriculture. SCS Web site, *available at* [www.scs-certified.com/csrpurchasing/veriflora/](http://www.scs-certified.com/csrpurchasing/veriflora/) (site visited Oct. 17, 2008).

Leonardo was chosen by SCS to administer the process of developing the SCS-001 Draft Standard, in part, for its lack of existing contacts in agriculture. Leonardo’s lack of agricultural standard-setting experience also meant lack of “conflicts of interest” of the sort SCS probably perceived in the American Society of Agricultural and Biological Engineers, which was given a copy of the SCS-001 Draft Standard to review in mid-2007 before Leonardo was selected as the SDO for the SCS-001 Draft Standard.

## **USDA Objects, Leonardo Cites the “Precautionary Approach”**

On June 6, 2008, the U.S. Department of Agriculture (USDA) sent Leonardo and ANSI a letter objecting to the exclusion of mainstream commodity agriculture from the proposed standard while favoring certain specialty, floral, and organic sectors. USDA’s strongly worded letter demanded action to bring the SCS-001 Draft Standard in line with 2008 Farm Bill’s definition of sustainability. USDA particularly noted that Leonardo’s rules provide 25 percent of the seats on the Standards Committee to “environmentalists,” and

25 percent each to “users,” “producers,” and “general interest,” which could lead to bias toward a “precautionary approach” to biotech crops and chemicals, including fertilizer.

Leonardo responded to USDA on June 24, 2008, stating that biotech crops are excluded from the SCS-001 Draft Standard in recognition of “a precautionary approach that permeates other sustainability labeling standards around the world.” However, this is inaccurate, as most agricultural sustainability standards do not exclude GMOs. This precautionary approach is not reflected in agricultural standards emerging from the World Wildlife Fund (WWF). WWF and other leading U.S.-based environmental groups have reversed past opposition to the use of biotech crops, and now suggest that they can be part of “sustainable agriculture” if they meet certain metrics. Jane Earley (WWF-US), *Certifying Sustainable Soy*, ABA Section of Environment, Energy, and Resources International Environmental Law-Agricultural Management Committees joint newsletter (Aug. 2006) (“technology neutral” approach for WWF-US in Roundtable on Responsible Soy), [www.abanet.org/environ/committees/agricult/newsletter/aug06/agmgmt0806.pdf](http://www.abanet.org/environ/committees/agricult/newsletter/aug06/agmgmt0806.pdf). The latest WWF-initiated approach is the “Farm to Market” initiative under the Keystone Center, which is posted at [http://www.keystone.org/spp/documents/Field-to-Market\\_Environmental-Indicator\\_Report.V1.Sep08.DRAFT.pdf](http://www.keystone.org/spp/documents/Field-to-Market_Environmental-Indicator_Report.V1.Sep08.DRAFT.pdf).

“Tech-neutral” approaches to biotech crops represent a historic break from past opposition. Other environmental groups, such as Environmental Defense and the Natural Resources Defense Council, are opting for similar technology-neutral positions on sustainable agriculture. They have accordingly expressed their opposition to a proposed non-GMO U.S. national standard on “sustainable agriculture” such as the SCS-001 Draft Standard in a September 2008 letter to Leonardo. These groups are involved in the new “Specialty Crop” sustainable agriculture metrics initiative announced in December 2008, details of which are posted at [www.stewardshipindex.org](http://www.stewardshipindex.org). This initiative seeks to develop a system for measuring sustainability through the specialty crop market.

Finding Leonardo's mistakes troubling, in August 2008 USDA filed an appeal with ANSI challenging Leonardo's accreditation. USDA argues that Leonardo's bias led to a pattern of systematic exclusion of representatives from trade associations focused on certain inputs (e.g., fertilizers, agricultural chemicals, etc.) and major agricultural sectors that are users of crops (e.g., livestock, biofuels, and processors). USDA did not want a standard purporting to cover all sectors of the agricultural community to arbitrarily exclude biotech crops, fertilizers, peat moss, and most chemicals. Such inputs maintain high yields, particularly in times of food scarcity. Moreover, USDA maintains that any national agriculture sustainability standard should be consistent with the 1990 Farm Bill's definition of sustainability, which includes:

- Satisfaction of human food and fiber needs;
  - Enhancement of environmental quality and the natural resource base upon which the agricultural economy depends;
  - Making the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
  - Sustaining the economic viability of farm operations; and
- Enhancement of the quality of life for farmers and society as a whole.

*See Food, Agriculture, Conservation, and Trade Act of 1990 (FACTA), Public Law 101-624, Title XVI, Subtitle A, Section 1603 (Government Printing Office, Washington, D.C., 1990) NAL Call # KF1692.A31 1990; see also comments at National Agricultural Library available at [www.nal.usda.gov/afsic/pubs/agnic/susag](http://www.nal.usda.gov/afsic/pubs/agnic/susag).*

### **Selection of a Standards Committee Leads to Objections from Organic and Mainstream Commodity**

The SCS-001 Draft Standard took its first step toward approval on July 28, 2008, when Leonardo published the list of members of the Standards Committee. At present, the membership ratios on the Standards Committee are weighted toward the floriculture and

organic industry interests, with “environmentalists” making up at least 21 percent and possibly 27 percent of the SCS-001 Standards Committee. Excluded groups include: (i) fertilizers, (ii) agricultural chemicals, (iii) livestock, (iv) biofuels, and (v) processors. A floral industry newsletter touted the strong representation—eight of fifty-eight votes—of floral industry interests on the Standards Committee. Several of the SCS-001 Draft Standards Committee members representing the floral industry are producers of flowers certified under the SCS Veriflora standard. Notably, the committee application from the largest floral trade association in the United States, the Society of American Florists (Peter Moran), was rejected in favor of these eight representatives. Even within the floriculture sector, the SCS-001 Standards Committee favors SCS and lacks balance.

Mainstream interests that were excluded from the Standards Committee filed appeals challenging Leonardo's decision in selection of the Standards Committee. Given the evident bias toward organic and floral interest in the selection of the Standards Committee, appeal briefs challenging the selection suggest that at least five major agricultural industry sectors were completely excluded.

Moreover, organic agriculture stakeholders saw this standard as a threat. The National Campaign for Sustainable Agriculture (NCSA) criticized the SCS-001 Draft Standard in August 2008 for ignoring economic viability, citing “serious harm to the very interests it purportedly aims to protect” and suggested that they were “unconvinced of the need for or merit of a new and broad sustainable agriculture standard beyond already existing ecolabels addressing sustainability in the farm and food sector.” NCSA suggested how hard defining this concept could be: “As scientists continue to demonstrate in countless ways, ecosystems in which agricultural practices operate are extremely versatile and dynamic. Creating static, universal ‘sustainable agriculture’ standards cannot meet the ever-changing and geographically different ecological conditions that govern agriculture. In our view, it is better to retain sustainable agriculture as a statement about goals and objectives rather than to try to capture it at one moment in time.”

## **First Meeting of the Standards Committee and Establishment of Six Task Forces**

On Sept. 25, 2008, the first meeting of the SCS-001 Standards Committee was held in Madison, Wisconsin. In response to requests from environmentalist members of the Standards Committee the agenda was changed to allow for more discussion of the vision and scope of the SCS-001 Draft Standard.

These discussions led to a near-consensus vote to “set aside” the SCS-001 Draft Standard, using it only as a “reference” document along with other relevant standards and initiatives. Toward that end, six Task Forces have been working since December on the following issues: (1) Mission and Principles, (2) Needs Assessment, (3) Reference Documents, (4) Metrics & Methodologies, (5) Funding, (6) Outreach. All Standards Committee members were urged to join one or more of the six Task Forces and observers were allowed to actively participate.

On Oct. 31, 2008, the Standards Committee elected as chair a scientist, Marty D. Matlock of the University of Arkansas. The vice chair is Ron Moore of Moore Farms, a board member of the American Soybean Association. The secretary, Will Healy, is floral and vice secretary, Grace Gershuny (organic), expressed the Organic Trade Association viewpoint that “organic agriculture has been at the leading edge of sustainability” in agriculture. This diverse group will help the committee and observers work together to try to define sustainable agriculture. The setting aside of the SCS-001 Draft Standard and election of these officers sets the stage for a national dialogue on the proper scope, metrics, and stakeholder set for creation of a national standard on sustainable agriculture.

## **USDA Challenge to Leonardo Academy Accreditation**

On Dec. 17, 2008, ANSI held a hearing on the accreditation appeal filed by USDA alleging bias in Leonardo’s Standards Committee, due to allocation of 25 percent of seats to “environmentalists.” In support, USDA saw a joinder by the National Institute of

Technology as well as many mainstream agriculture groups expressing support for continuing this appeal. ANSI’s Executive Standards Council (ExSC) issued its opinion on Jan. 13, 2009, denying the appeal of Leonardo’s accreditation, largely because of the perception that the appeal was not “ripe” due to the early stage of the proceeding. See ANSI Executive Standards Council Summary Decision, Agricultural Marketing Service (USDA) v. Leonardo Academy. The ExSC also expressed concern, however, at the appearance of “dominance” by SCS’s involvement in writing the draft, funding the process, certifying future users, and voting on the Standards Committee. Moreover, the opinion found Leonardo lacking in necessary “knowledge that all appropriate parties are represented” on the SCS-001 Standards Committee. *Id.* at 10. In the end, however, ANSI’s ExSC gave Leonardo leeway to allow the Standards Committee to work to redefine the vision, scope, and need for SCS-001 Draft Standard, and the outreach task force to recommend new members to balance the committee.

## **Conclusion**

The process described is open to the public, and anyone interested in observing need only send an e-mail to Leonardo. Assuming the standard is released for public comment in final form two years from now, public comments can be made and must be answered by Leonardo. USDA is not obligated to apply the standard if it ever becomes final, but a robust and balanced process of standard-setting could have significant market influence, if retailers and food manufacturers accept their proposal as a standard for “green procurement” practices increasingly used as the basis for public reporting in some food sectors.

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