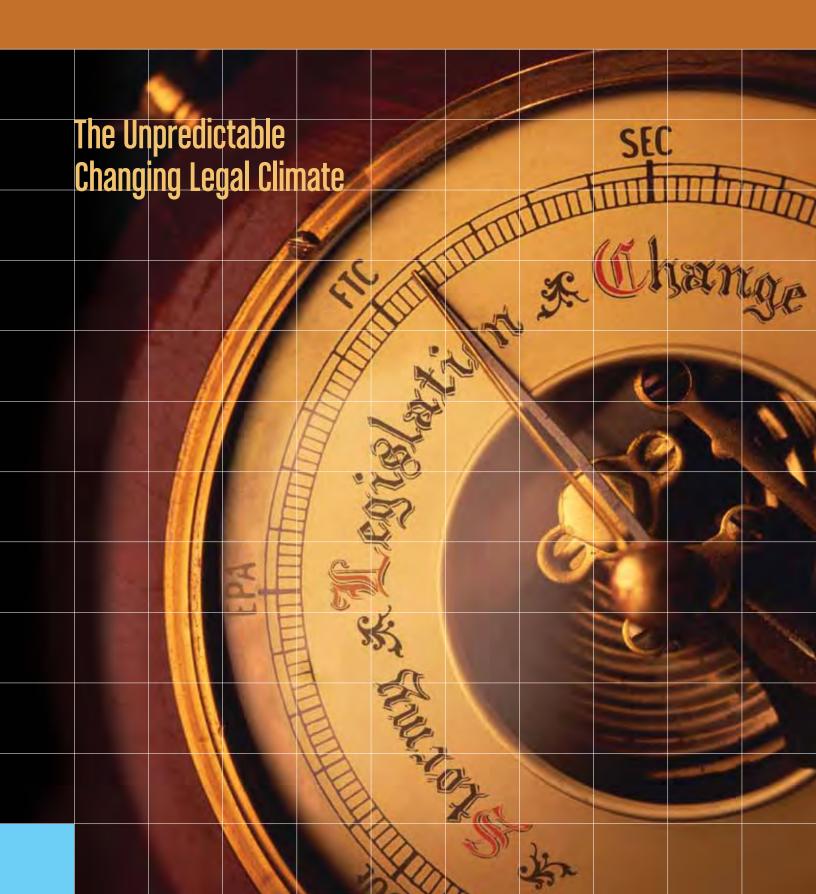


PRACTICE PERSPECTIVES: ENVIRONMENTAL, HEALTH & SAFETY



Ietter from the practice chair

With this first issue of Jones Day's Environmental, Health & Safety *Practice Perspectives*, our lawyers address some of the legal issues most likely to be of interest to our clients as the United States works to develop the legal mechanisms for addressing climate change. With greenhouse gas ("GHG") regulation as one of the top priorities of the Obama administration and the 111th Congress, along with public opinion polls that consistently show that the American public is convinced of the need for vigorous governmental action to regulate GHG emissions, the debate has moved from whether the United States should adopt measures to regulate climate change to what those measures should be.

Whatever legal mechanisms eventually emerge, it is very likely that they will fundamentally alter the way our clients manage their businesses, as well as how the U.S. economy operates. For example, the legislation that is likely to be enacted will require the reduction of GHGs and allow market mechanisms to be used to achieve those reductions. A component of the legal mechanisms that emerge will encourage, if not mandate, the use of wind, solar, biomass, and other renewable sources of energy and prescribe how clients can market their "green" products and services. But because the growth of GHGs from countries such as India and China can effectively wipe out any meaningful reduction of those emissions by the United States and other developed countries, the world economy will necessarily need to respond with advanced technologies to help developing economies address their own contributions to climate change. Those emerging technologies will create market opportunities of their own for our clients.

The emerging legislative, regulatory, and economic landscape affected by climate change will not be without litigation and disputes. Those disputes are likely to arise in response to the way the federal government mandates or allocates GHG reductions. Another probable area of dispute will be whether those required reductions provide immunity to GHG emitters or preempt tort claims by nongovernmental and other entities contending that further actions are necessary despite the comprehensive GHG emissions reduction program adopted by those emitters and the U.S. government.

Whatever the precise contours of the legal landscape that emerges, our lawyers are ready and determined to help our clients deal with and respond to that new landscape—always with a level of competence, marked by creativity and judgment, that makes the quality of our services distinctive.

Kevin P. Holewinski

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AWARDS AND RECOGNITION

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Chambers USA 2008 recommended nine Jones Day lawyers in California, Georgia, New York, Ohio, Texas, and Washington for environmental law.

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Chambers UK Recognizes U.K. Environmental Practice Chambers UK 2009 recommended Jones Day and partner Chris Papanicolaou for environmental law.

Jones Day's Environmental Practice offers the collective experience of more than 85 lawyers based in offices throughout the U.S. and Europe.

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Our Environmental Practice lawyers help clients throughout the world comply with complex laws and regulations pertaining to solid and hazardous waste, air emissions, water quality, and employee health and safety.

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Several Jones Day environmental lawyers have served in federal agencies, including the U.S. Department of Justice and the Environmental Protection Agency, where they were involved in some of the most high-profile and precedentsetting environmental matters at the time. Their experience is complemented by that of lawyers whose scientific training and professional backgrounds make them especially well suited to the interdisciplinary challenges of environmental regulation and litigation, and of lawyers who focus on such related areas as real estate and property, toxic tort, insurance coverage litigation, and OSHA counseling and trial practice.

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With one of the most distinguished litigation practices in the world, Jones Day has the strength to handle the most complex and potentially costly environmental cases. Our lawyers, several of whom served as trial lawyers at the U.S. Department of Justice, have extensive litigation and trial experience. That work has included the defense of criminal and civil investigations and prosecutions in the U.S. and Europe involving a wide range of claims, contaminants, and environmental media. Our environmental lawyers have successfully defended clients in litigation arising from climate change impacts, as well as other private-citizen suits, natural resource damage claims, Superfund cost recovery claims, public nuisance claims, class actions, and individual toxic tort claims.

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For further information on our Environmental, Health & Safety Practice, please contact the practice leader:

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PAINTING A GREENER PICTURE

The FTC's Future Regulation of the Business of Climate Change

As every antitrust and competition lawyer knows, the Federal Trade Commission ("FTC") seeks to prevent deception and unfairness in the marketplace through the FTC Act. That act gives the FTC the power to bring law enforcement actions against false or misleading marketing claims, including environmental, or "green," claims. The FTC issued its Environmental Guides, often referred to as the "Green Guides," in 1992 and revised them most recently in 1998. The Guides explain how the FTC will apply Section 5 of the FTC Act, which prohibits unfair or deceptive acts and practices, to environmental marketing claims. Until recently, environmental, energy, and climate change lawyers have had little reason to be well versed in them. But that is expected to change soon.

The Green Guides are expected to address more broadly the "greenwashing" of products by companies, that is, marketing the "environmentally friendly" nature of products without necessarily being able to reasonably and fully substantiate those claims. If the findings by the environmental marketing firm TerraChoice are reasonably accurate, 99 percent of 1,018 products randomly surveyed were found to have been greenwashed. See "The Six Sins of Greenwashing," TerraChoice, December 2007. Two areas of green marketing that have drawn the most attention from environmental organizations as they focus on climate change are carbon offsets and renewable energy certificates ("RECs"). Generally speaking, "carbon offsets" are greenhouse gas emission reduction products, which effectively represent the commoditization of those reductions. An offset is essentially a property right to claim ownership or responsibility for a quantity of greenhouse gas emissions avoided or removed from the atmosphere. RECs, in turn, commoditize the reductions in emissions achieved through energy produced from renewables instead of carbon sources. For example, RECs may represent the renewable attributes of power sold from sources such as wind or solar.



GUARANTE

The FTC, through its Green Guides, looks at advertising from the consumer's perspective—specifically, what message does the advertising actually convey to consumers? To answer that question, the Guides give environmental marketing claims the meaning consumers would give them, which is not necessarily the technical or scientific definition of the terms used, so that marketers can avoid making claims that are false or misleading. (The Guides do not establish standards for environmental performance or prescribe testing protocols.)

For environmental claims that the Guides do not address specifically, FTC law requires "substantiation" and "specificity" for all reasonable interpretations of an ad. These general concepts are described below.

SUBSTANTIATION

All marketers making express or implied claims about the attributes of a product, package, or service must have "substantiation," that is, a reasonable basis for their claims. When it comes to environmental claims, a reasonable basis often may require "competent and reliable scientific evidence" tests, analyses, research, studies, or other evidence based on the expertise of professionals in the relevant area, conducted and evaluated in an objective way by qualified people, using procedures generally accepted in the profession to yield accurate and reliable results.

SPECIFICITY

An environmental marketing claim should specify whether it refers to the product, the pack-



aging, or both, or just to a compo-

Sycled Materia

nent of the product or its packaging. An example used by the FTC's Guides is a box of cereal that is labeled "recycled package." The package consists of a paperboard box with a wax-paper bag inside holding the cereal. By itself, the claim "recycled package" could apply to both the box and the bag. But as the Guides emphasize, if only the box is recycled, the claim is deceptive. It should be qualified to say, for example, "recycled box." Conversely, a steel can that contains vegetables is sufficiently specific if it is labeled "recycled." No qualification is necessary for this claim because it is obvious to consumers that the can is recycled, not the vegetables.

Equally important, the Guides make plain that qualifications (that is, disclosures or explanations) pertaining to an environmental claim should be clear, prominent, and understandable. Clarity can be achieved through the size of the typeface, the proximity of the qualification to the claim being qualified, and the absence of contrary language that could undercut effectiveness. Finally, environmental claims should not exaggerate or overstate attributes or benefits. For example, a greeting card seller declares on its web site that its greeting cards now contain "50 percent more recycled content than before," which may convey a false impression that the use of recycled material was increased significantly, even if the increase in recycled content was only 1 percent, according to the Green Guides.

GENERAL CLAIMS

Specific environmental claims are easier to substantiate than general claims and are less likely to be deceptive. An unqualified general claim of environmental benefit may convey that the product has far-reaching environmental benefits when it actually does not. Some examples of the FTC's philosophy regarding general claims, as contained in the existing Green Guides, are summarized below.

The packaging on a pad of writing paper claims that the writing paper is "environmentally safe" with this explanation: The paper is "environmentally safe because it was not chlorine bleached, a process that has been shown to create harmful substances." As the Green Guides explain, this may be a deceptive claim, because although the paper was not bleached with chlorine, the production process created and released significant quantities of other harmful substances into the environment. Thus, according to the FTC, because consumers are likely to interpret the "environmentally safe" claim and the explanation to mean that the paper caused no significant harmful substances to be released into the environment, the "environmentally safe" claim would be deceptive.

Similarly, products advertised as "environmentally preferable" are likely to convey to consumers an environmental superiority to other products. A broad claim of this kind would be deceptive if the manufacturer could not substantiate it. On the other hand, the claim would not be deceptive if it was accompanied by clear and prominent qualifying language that limited the environmental-superiority representation to the particular product attribute that could be substantiated, provided that the context did not create any other deceptive implications.

Finally, "ozone safe" and "ozone friendly" claims mean that neither the product nor its packaging harms the atmosphere by contributing to the depletion of the stratospheric (upperatmosphere) ozone layer or to the formation of ground-level ozone. The FTC cautions that because consumers may confuse the upper ozone layer with ground-level ozone, companies marketing their products must be especially careful in this regard. Generally speaking, the ozone layer in the upper atmosphere prevents the sun's harmful radiation from reaching the earth. But when ozone develops at ground level, it forms smog, which can cause serious breathing problems. Accordingly, the FTC's Green Guides caution that companies should avoid "ozone safe" and "ozone friendly" claims on products that contribute to the formation of ground-level ozone, even if the product is safe for the upper ozone layer.

THE FTC GREEN GUIDES REVISION PROCESS, CARBON OFFSETS, AND RECS

On November 27, 2007, the FTC published a *Federal Register* notice commencing the decennial regulatory review of the FTC's Green Guides, 72 Fed. Reg. 66094. That notice solicited

AN UNQUALIFIED GENERAL CLAIM OF ENVIRONMENTAL BENEFIT MAY CONVEY THAT THE PRODUCT HAS FAR-REACHING ENVIRONMENTAL BENEFITS WHEN IT ACTUALLY DOES NOT.

public comment in response to questions about the Guides' costs and benefits, and it also raised claim-specific questions. The notice further indicated that the FTC would hold public hearings on issues related to the review of the Guides. Thereafter, the FTC conducted a series of public meetings on the Guides, including one on January 8, 2008—a workshop on carbon offsets and RECs.

At and following this workshop, the FTC accepted public comment on carbon offsets, RECs, and related advertising claims. Because carbon offsets and RECs are increasingly marketed to consumers, the chair of the House Select Committee on Energy Independence and Global Warming specifically asked the FTC to consider the potential for false marketing claims with respect to these two products. The need for some administrative guidance is driven by the existing legislative vacuum; currently, there is no federal capand-trade program to address greenhouse gas emissions. Instead, there are several U.S. regional greenhouse cap-andtrade programs, and approximately 32 states have adopted renewable portfolio standards or requirements and voluntary REC and carbon offset markets, all with varying, if not conflicting, requirements. Whatever the future might hold with respect to a federal cap-and-trade program, it is very likely that under any federal program adopted, the environmental marketing of RECs and carbon offsets will greatly increase. For example, the market for carbon offsets has been estimated to exceed \$100 million and is projected to multiply 40-fold by 2010. See "Voluntary Carbon Offsets-Getting What You Pay For," Testimony of Derik Broekhoff before the House Select Committee on Energy Independence and Global Warming (July 18, 2007). Thus, it is very likely that the FTC, state attorneys general, and private citizens' organizations will assert themselves to ensure that the markets governing carbon offsets are appropriately regulated and enforced.

Given the various comments submitted to the FTC on the environmental marketing of carbon offsets and RECs, the key question of what constitutes a "real" offset of carbon emissions remains difficult to answer and has been the subject of much debate among the various stakeholders. Indeed, the lack of common standards and definitions, along with the intangible nature of carbon offsets and RECs, makes it difficult for companies to substantiate, as well as for regulators and consumers to verify, that the claims being made are valid, and it creates the potential for deceptive claims.

Consumer marketing claims occur in two contexts: representations made in conjunction with the sale of carbon offsets (and RECs) directly to consumers, and representations made by companies about their carbon footprints or their products' or services' carbon footprints. Given reports estimating that 80 percent of offset purchases are currently made by companies, the latter subset of claims may, for the moment, be the more important.

Among the difficult issues implicated by the offer and sale of carbon offsets and RECs that drew substantial comments on the revision to the Green Guides are these:

Additionality. While there appears to be a conceptual consensus that carbon offsets should be "additional," there is broad disagreement over the meaning of "additionality." Some stakeholders take the position that for offsets to be additional, the money raised from the sale of the offsets must cause a project that would not otherwise be built to go forward ("financial additionality"). Others, including the U.S. Environmental Protection Agency, argue that it is sufficient if offsets are generated by newer projects that perform with lower emissions than the vast majority of existing projects, even if they would have gone forward without the money raised from selling offsets ("performance-based additionality").1 Ultimately, the FTC must look to consumers and stakeholders to determine what additionality criteria will be necessary to substantiate a "carbon offset" certificate for marketing claims of "carbon neutrality" made on the basis of purchase of carbon offsets. As the FTC noted (at page 10 of its announcement in the Federal Register), the FTC's Guides "focus on the way in which consumers understand environmental claims and not necessarily the technical or scientific definition of various terms."

Renewable Energy Certificates as "Carbon Offsets." There is also substantial disagreement among stakeholders on the question of whether selling a REC as a "carbon offset" is always, sometimes, or never deceptive. This debate is linked in part to the differing standards for additionality. Some regard offsets as limited to actions that directly reduce emissions from an existing practice (e.g., capturing emissions from an existing landfill) and question whether REC projects are actually displacing generation from existing fossil fuel plants as opposed to meeting an increased demand for power. For others, the question is linked to the debate over the standard for additionality, where a financial test would allow offsets to be sold only if the sale of RECs caused a renewable energy project to go forward.

Baseline Emissions. While there is little disagreement over the need to calculate the baseline emissions for a project, for many project types there is a lack of agreed-upon standards for quantification of those baseline emissions. Rather, there are competing standards. The concern here is that this lack of common standards allows for the inflation of baselines—directly increasing the quantity of offsets—and leads to deceptive claims.

Benefit Quantification. Similarly, there are no common standards for quantifying the emissions reductions from offset projects. Aside from the technical differences in measurement formulas and techniques, there can be disagreements over what to count (e.g., are indirect increases in emissions subtracted?) and when to count it.

Avoiding Double-Counting of Offsets. Because carbon offsets and RECs are intangible products, there must be safeguards against the double-selling of the offset or REC. Part of the solution to this problem is the creation of registries for the retirement of offsets and RECs. However, the existence of multiple registries, along with the possibility that the same offset or REC is being claimed by multiple entities, creates uncertainty.²

FUTURE ENFORCEMENT

Revisions to the Green Guides under the Obama administration are likely to usher in a new era of litigation. While the FTC actively filed environmental marketing claims in the 1990s, there was very little similar enforcement activity by the FTC in the 2000s. With the Green Guides certain to be revised, the FTC will once again become active in enforcing environmental marketing claims, including those with respect to carbon offsets and RECs.

Litigation under analogous state law programs has similarly been sporadic. But with the Green Guides revisions and the

increase in environmental marketing claims, states also are likely to increase their enforcement. State attorneys general have periodically pursued environmental marketing claims under environmental or general consumer deception statutes. Given the current public concern with environmental issues, attorneys general could seize on enforcing the Green Guides through state law as a way of building public support.

Finally, aside from the upsurge in environmental marketing enforcement that likely will follow Green Guides revisions, another enforcement window may open to more federal environmental marketing claims by private parties, *i.e.*, the Lanham Act, which governs federal trademark law and also bans false or misleading representations in the advertising of goods and services. The Lanham Act creates a cause of action for "any person who believes that he or she is likely to be damaged" by such misrepresentation. However, while it has been applied to a variety of other types of claims, it has not been applied by a court to a claim in environmental advertising. But corporate counsel should bear in mind that the Lanham Act potentially gives consumer and environmental groups a powerful tool to privately enforce environmental marketing claims in the future.

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¹ For an example of a "tool" used to evaluate additionality, see United Nations Framework Convention on Climate Change, Tool for the demonstration and assessment of additionality (EB 39 Annex 10), http://cdm.unfccc. int/Reference/tools/ls/meth_tool01.pdf. (Web sites last visited June 1, 2009.)

² See 1999 NAAG Environmental Marketing Guidelines for Electricity ("NAAG Guidelines," accessible at http://www.oregon.gov/ENERGY/RENEW/docs/ GreenMarketing.pdf, sec. 2(b) (Comment), in connection with a related concept, substantiating the generation characteristics of electricity marketed as "green":

For any claim that is based on a tagging system, the supplier should have certificates that reliably establish that, for the period relevant to the claim, the supplier purchased the sole rights to the claimed attributes in an amount adequate to meet consumption demand for the product consistent with the claimed attributes. In addition, no more than one certificate should be issued for any one unit of power. To help consumers understand what they are buying, it is recommended that the claim be accompanied by a clear and prominent disclosure of the use of a tagging system to substantiate the claim.

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Can Greenhouse Gases Be Regulated Effectively Under Existing Law?

President Obama has touted quick action against climate change as a major goal of his administration. Perhaps recognizing that a new law will take time (and motivation), the administration is now showing signs of pursuing its goal through the existing Clean Air Act (the "Act"). 42 U.S.C. §§ 7401 *et seq.* Administrator-designate of the U.S. Environmental Protection Agency ("EPA") Lisa Jackson told senators at a hearing on January 14, 2009, to expect "an extraordinary burst of activity" on climate change and other problems. When asked specifically about her willingness to regulate new problems under existing laws, Jackson responded that those laws "were meant to address not only the issues of today, but the issues of tomorrow."¹ Using the Act to address climate change would require an unprecedented amount of legislative license on the part of EPA. The Bush-era EPA began to formally explore this issue in July 2008, when it published an Advanced Notice of Proposed Rulemaking ("ANPR") on regulating greenhouse gases ("GHGs") under the Act. 73 Fed. Reg. 44354 (July 30, 2008). This article reviews some of the general issues raised by the ANPR with respect to stationary sources. For source types subject to potential regulation, the ANPR should serve as a blueprint for predicting, and preparing for, EPA's next move. For the Obama administration, it should serve as a warning against using the Act as anything other than a prod to Congress for new legislation.

Apart from the potential lack of any market mechanism, there are other drawbacks to regulating GHGs under the NAAQS and NSPS programs. Neither program was designed to address a pollutant that is distributed equally throughout the global atmosphere and emitted by such a wide range of sources.

BACKGROUND

The United States Supreme Court set the stage for the current debate on regulating climate change with its landmark decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007). The Court in that case overturned EPA's denial of a petition for rulemaking under section 202 of the Act. The petition sought to have EPA regulate GHG emissions from new motor vehicles. In the holding, the Court ruled that EPA has the authority to regulate GHG emissions under section 202 if it finds that such emissions endanger public health or welfare. The Court reversed the court of appeals' ruling and remanded with instructions for EPA to determine whether GHG emissions from new motor vehicles endanger public health or welfare, or to explain why scientific uncertainty prevents a reasoned judgment on the matter.

The July 2008 ANPR discussed EPA's work as of that date in response to the Supreme Court's decision. Rather than focusing on the issue of endangerment, however, the ANPR reviewed several Clean Air Act programs and requested comment on whether those programs could be used to effectively address GHG emissions from different source types.

Two programs in the Act are plausible options for addressing GHG emissions from stationary sources: the National Ambient Air Quality Standards ("NAAQS") of sections 108–110 and the New Source Performance Standards ("NSPS") of section 111.² As discussed below, neither program provides clear authority for a market mechanism, and both will entail complicated and costly rulemakings followed by protracted litigation.

PROBLEM 1: FINDING AUTHORITY FOR A CAP-AND-TRADE PROGRAM

The need for a market mechanism may present the most fundamental obstacle to effective regulation of GHG emissions from stationary sources under the Act. The President favors a cap-and-trade approach, as do most supporters of climate change regulation.³ EPA, too, has found that "[m]arketoriented approaches are relatively well-suited to controlling GHG emissions." 73 Fed. Reg. at 44410. If GHGs are to be regulated under the Act, a trading program may be the most widely accepted approach.

For purposes of the NAAQS, however, a recent decision of the U.S. Court of Appeals for the D.C. Circuit may preclude the use of a cap-and-trade program. The ANPR in July 2008 pointed to the Clean Air Interstate Rule for the trading of sulfur dioxide and nitrogen oxide emissions as evidence of EPA's cap-and-trade authority under the NAAQS. After the ANPR was issued, a three-judge panel of the D.C. Circuit ruled that any trading scheme that allows facilities in upwind states to maintain or increase emissions to the detriment of downwind states is inconsistent with the Act. even if it ultimately results in a regional emission reduction. State of North Carolina v. EPA, 531 F.3d 896, 901 (D.C. Cir. 2008). The court relied on section 110(a)(2)(d) of the Act, which prohibits one state from contributing significantly to nonattainment in another state or interfering with another state's maintenance of NAAQS. The decision may prohibit the use of any trading program under the NAAQS.

A trading program under the NSPS also would face legal uncertainty. In the July 2008 ANPR, EPA mentioned the Clean Air Mercury Rule ("CAMR") as precedent for the agency's cap-and-trade authority under section 111. 73 Fed. Reg. 44490, n. 247. The D.C. Circuit vacated CAMR on February 8, 2008, albeit for reasons unrelated to EPA's cap-and-trade authority. *State of New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). EPA acknowledged the vacatur in the ANPR but failed to mention that environmental parties in the case vehemently challenged the agency's authority for a trading program under section 111. The D.C. Circuit did not address those arguments when reaching its decision. Thus, EPA's ability to utilize any trading system under section 111 has never been confirmed by a court.

PROBLEM 2: FINDING A CLEAN AIR ACT PROGRAM THAT FITS GHGs

Apart from the potential lack of any market mechanism, there are other drawbacks to regulating GHGs under the NAAQS and NSPS

> programs. Neither program was designed to address a pollutant that is distributed equally throughout the global atmosphere and emitted by such a wide range of sources.

NAAQS. The NAAQS framework presents at least three major problems for GHG regulation. First, because GHGs disperse equally throughout the atmosphere, the entire U.S. would have the same attainment or nonattainment status for GHGs, depending on the level of the NAAQS. This is a problem because states bear primary responsibility for ensuring their own attainment or maintenance of the NAAQS. In the case of GHGs, no single state could ensure its own progress toward attainment or maintenance of any standard. Worse yet, no action by the United States alone could ensure attainment or maintenance of the standard without international cooperation.

Second, EPA interprets section 108 of the Act to mean that the Administrator may not consider compliance costs when setting NAAQS. There would be no way to control the effects of a GHG standard on the nation's already unstable economy.

Last, but not least, the time frames for NAAQS regulation could prove infeasible for the orderly regulation of GHGs. Preparation of air quality criteria under normal circumstances can take several years. The process would be particularly burdensome for GHGs, because climate change research is uniquely complex. Nevertheless, if EPA were to list GHGs as a criteria pollutant, an assessment of air quality criteria and a NAAQS proposal would be due 12 months after listing. Clean Air Act § 108(a)(2); 42 U.S.C. § 7408(a)(2). EPA would have another 90 days after that to promulgate final NAAQS. *Id.* at § 109(a); 42 U.S.C. § 7409(a). Because EPA's only discretion lies in the timing of the original listing decision, the agency would need to delay issuance of the decision until it was able to develop air quality criteria in a scientifically sound manner. By that time, better avenues for addressing climate change could be available through new legislation.

NSPS. In the ANPR, EPA seemed to embrace the NSPS as the most promising method of regulating GHGs under the Act, in large part because section 111 "provides for consideration of cost, and allows substantial discretion regarding the types and sizes of sources to be regulated." 73 Fed. Reg. 44486. Notwithstanding small allowances for flexibility, there are serious drawbacks to regulating GHGs through the NSPS.

One drawback is that EPA would have to develop hundreds of subcategories to fairly regulate all, or even a substantial portion of, GHG emitters. Each subcategory would require its own standard. The result would be a highly complicated regulatory regime that could quickly overwhelm EPA, as well as the states primarily responsible for implementing the standards.

An even more serious problem arises from the fact that GHG controls are emerging technologies. EPA would have a hard time acquiring information to support a standard based on those technologies. Under section 111, EPA must set NSPS at a level that reflects the degree of emission limitation achievable through application of the Best Demonstrated Technology ("BDT"), meaning the best system of emission reduction that has been achieved in practice.

It is far from clear that any GHG control technology could satisfy the BDT standard. In the ANPR, EPA suggested that it might use future-year standards for GHGs based on technology that is not actually in use. 73 Fed. Reg. at 44490. Given that EPA has authority for periodic review of NSPS, any attempt to establish a standard based on what technology might be used in the future makes little sense and is likely to be challenged.

THE FINAL STRAW: PREVENTION OF SIGNIFICANT DETERIORATION AND TITLE V PERMITTING

Even if EPA could find a way to make the NAAQS or NSPS program work for GHG regulation, there is another problem:

regulation of GHG emissions under any section of the Act could have tremendous effects on Prevention of Significant Deterioration ("PSD") and Title V requirements that would quickly overwhelm permitting authorities and sources alike.

PSD Permitting. A PSD permit is required for the construction or modification of any source that emits or has the potential to emit a certain amount of a regulated pollutant in an area that is in attainment with the NAAQS. Emission limits in PSD permits must reflect the level of emission control achievable through use of the Best Available Control Technology ("BACT").⁴ BACT limits are required for any air pollutant that is "subject to regulation" under the Act. Clean Air Act § 165(a)(4); 42 U.S.C. § 7475(a)(4); see also 40 C.F.R. § 52.21(b)(5).⁵

The role of GHGs in PSD permitting is already a contentious issue. Environmental groups have relied on GHG monitoring and reporting provisions in the Act for certain sources to argue that GHGs are "subject to regulation," and therefore PSD permits must reflect BACT for GHGs. See, e.g., In re Deseret Pwr. Electric Coop., EPA Environmental Appeals Board, PSD Appeal No. 07-03. In a recent memorandum, the EPA Administrator disagreed and interpreted the phrase "subject to regulation" as excluding pollutants for which regulations require only monitoring or reporting. 73 Fed. Reg. 80300 (Dec. 31, 2008). Environmental groups recently filed a legal challenge to the Administrator's interpretation. Sierra Club v. EPA, D.C. Circuit, No. 09-1018 (Jan. 15, 2009).

Whatever the merits of current arguments to require BACT limits for GHGs, it seems clear that regulation through NAAQS, NSPS, or even section 202 for mobile sources would require their inclusion in PSD permitting. The thresholds for PSD applicability normally restrict PSD requirements to a relatively small number of large stationary sources. In the case of GHGs, however, those same thresholds would dramatically expand the number of PSD-regulated sources. EPA estimates that the number of PSD permits issued annually would increase by a factor of more than 10 if carbon dioxide were to become "subject to regulation" under the Act. 73 Fed. Reg. at 44499.

Title V Permitting. Title V permits must include conditions necessary to ensure compliance with all "applicable require-

ments" of the Act. 40 C.F.R. § 70.3(c). Regulation of GHGs under any provision of the Act (including the PSD program) could create "applicable requirements" for sources that emit a relatively small quantity of any GHG—just 100 tons per year. According to EPA, if carbon dioxide were to become an "applicable requirement," the number of sources requiring a Title V permit "would easily number in the millions absent a means to limit potential to emit." 73 Fed. Reg. at 44511.

EPA's Alternative Schemes. In the ANPR, EPA presented various alternative schemes to mitigate the impact of GHG regulation on PSD and Title V requirements for small sources. For PSD, the agency suggested limiting a source's "potential to emit" and increasing major source thresholds and PSD significance levels for GHGs. For both PSD and Title V, EPA suggested using general permits and phasing in requirements by starting with the largest sources of GHGs.

EPA's alternative schemes are of questionable legality. For example, the use of general PSD permits arguably conflicts with the statutory definition of "BACT" as being a case-bycase determination. Clean Air Act §§ 165(a)(4), 169(3); 42 U.S.C. §§ 7475(a)(4), 7479(3). Also, thresholds for PSD and Title V applicability are created by statute and cannot be modified through agency regulation. At the very least, if EPA were to propose a regulation that triggers PSD and Title V requirements for GHGs, it is unclear whether the agency could use any of the alternative schemes set forth in the ANPR.

CONCLUSIONS AND RECOMMENDATIONS

At its core, the ANPR illustrates that the Clean Air Act is not designed to address a problem like global climate change. The new administration has vowed to act quickly, however, and seems willing to do so under existing law, if for no other reason than to guard against legislative deadlock. As a result, the climate change debate is likely to proceed more quickly on both the legislative and regulatory fronts during the next several months and years.

The regulated community should stand ready to reaffirm the need for new legislation in lieu of any EPA proposal to regulate GHGs under the Act. The agency's path forward technically may depend on the outcome of its endangerment analysis under each section of the Act, but that analysis inevitably will be influenced by a more practical concern for whether the NAAQS or NSPS program is capable of effectively addressing the problem. Vulnerable source types should position themselves to explain why those programs will not work. At the same time, companies should analyze their existing carbon footprints and develop strategies for achieving reductions in compliance with either future legislation or regulation under existing law.

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¹ A webcast of the hearing is available at http://epw.senate.gov/public/ index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=ae2c3342-802a-23 ad-4788-d1962403eb76#files. (Web sites last visited June 1, 2009.)

² The NAAQS program operates within a highly regimented framework. Based on certain prerequisites, EPA identifies air pollutants that endanger public health or welfare due to their presence in the U.S. ambient air. EPA must develop air quality criteria encompassing all identifiable effects of those pollutants and establish NAAQS for each. Once NAAQS are set, states bear the primary responsibility for ensuring their own attainment or maintenance of the standards. All of these measures must be completed according to specific time frames.

The NSPS program consists of federal performance standards for new and modified stationary sources that cause or contribute significantly to air pollution that may endanger public health or welfare. Generally, states implement the NSPS by developing plans with standards for sources within the NSPS categories.

³ The Obama-Biden Plan for Energy and Environment is available at http:// change.gov/agenda/energy __and__environment__agenda.

⁴ BACT reflects the maximum achievable degree of emission control, taking into consideration energy, environmental, and economic impacts. BACT can involve the addition of control equipment or the modification of production processes or methods. If imposition of an emission standard is not feasible, BACT may be a design, equipment, work practice, or operational standard.

⁵ More stringent requirements, called the "Lowest Achievable Emissions Rate," apply in areas that are not in attainment with the NAAQS. Although it is not yet clear whether the U.S. would be in attainment with any future NAAQS for GHGs, the July 2008 ANPR focused primarily on PSD.

Financial Disclosure of Climate Change Risks:

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By James R. Williams and Christine M. Morgan



Recent Developments and a View of the Future

Financial disclosure of climate change risks has become a controversial and complex issue as states and investor and industry groups clamor for more thorough reporting of the risks relating to greenhouse gas ("GHG") emissions and climate change. While New York has pushed for climate change risk disclosure through its own enforcement mechanisms tied to filings with the Securities and Exchange Commission ("SEC"), trade and investor groups have focused on seeking greater guidance from the SEC and on preparation of "best practices" guidelines through ASTM International. California, on the other hand, may be on the path to creating new laws requiring comprehensive climate change risk disclosure rather than waiting for federal guidance.

Financial disclosure of environmental risks is not a new topic. For many years, the SEC has required disclosure in 10-K filings of the material effects of compliance with environmental regulations (17 C.F.R. § 229.101(c)(1)(xii)) and costs of environmental litigation with potential liability exceeding \$100,000 (17 C.F.R. § 229.103). Recognizing that the SEC regulations provided little guidance to companies regarding the required scope and applicability of the environmental disclosure standards, ASTM International issued standards in 2001 to establish a framework for companies to use in complying with the SEC environmental risk disclosure requirements. ASTM, Standard Guide for Disclosure of Environmental Liabilities, E2173-07. Yet despite ASTM's efforts to develop a uniform environmental disclosure framework, the standards have not been widely accepted or adopted by issuers.

In recent years, investors and other groups have raised concerns that, under the existing framework, companies were not fully disclosing the financial risks posed by climate change. This new focus is driven by both the increased likelihood of GHG regulation at the federal level and the materializing risk of litigation relating to climate change in some industry sectors. In addition, there is a new focus on climate change risks such as damage to physical assets and market shifts related to public and investor sensitivity to climate change concerns. This article discusses how the increased focus on financial risks associated with climate change has resulted not only in state enforcement and legislative initiatives seeking greater financial disclosure of climate change risks by companies, but also in a new push at several levels for guidance from the SEC and ASTM regarding how climate change risks should be quantified and reported in financial disclosures.

INVESTOR GROUP ADVOCACY FOR CLIMATE CHANGE RISK DISCLOSURE GUIDANCE

In September 2007, a group of environmental organizations, state officials, and institutional investors filed a petition asking the SEC to issue interpretive guidance on the scope of public companies' reporting obligations with respect to climate change risk in corporate disclosures under existing SEC regulations. Petition for Interpretive Guidance on Climate Risk Disclosure, filed with the SEC on Sept. 18, 2007. Additionally, on the same date, the petitioners also submitted a letter to John W. White, the director of the SEC's Division of Corporation Finance, asking that the Division, when reviewing a company's 10-K and 10-Q filings, devote "particular attention to the adequacy, under existing regulations, of disclosures concerning climate risk." Letter to Mr. John W. White, Sept. 18, 2007.

Citing research from the Intergovernmental Panel on Climate Change and others that evidence of climate change is now "unequivocal," the petition outlines the implications on the financial condition of businesses, such as physical damage to facilities, new regulatory compliance costs, and market shifts in demand for products and/or services. Because of these implications, the petition argues that information regarding material climate change risks for business is imperative for investors to make informed investment decisions and for the market to respond to climate change. The petition states that it is not seeking new rulemaking from the SEC, but rather guidance that clarifies that the SEC's existing regulations, specifically Items 101, 103, and 303 of Regulation S-K, already require disclosure of material information regarding climate change risk. The petitioners argue that "corporate practice on climate risk disclosure is lagging behind the rapidly evolving economic, legal, and scientific developments related to climate change." Petition for Interpretive Guidance filed with the SEC, at 20. Absent guidance, the petitioners express concern that the existing inconsistency of reporting climate change risk information will continue, to the harm of investors.

In order to respond to arguments that climate change risks are too speculative or uncertain to require disclosure, the petition outlines then-current, pending, and proposed state, national, and international regulations regarding GHG emissions and characterizes material regulatory developments as a "known trend," the effects of which, if material, must be disclosed under Regulation S-K. It concludes that the risks of climate change meet the materiality threshold for disclosure, because this is the very type of information that a reasonable investor would consider important in assessing a company's value. Based on these assertions, the petition seeks to have the SEC issue interpretive guidance that requires reporting companies to:

- Perform a thorough review of the implications of climate change for their financial condition and operations, including calculation of current and projected GHG emissions associated with their operations; and
- Disclose climate change risks that are material (either as material contingent liabilities on the balance sheet or notes to financial statements or in disclosures pursuant to Regulation S-K).

Additionally, the petition suggests that three categories of climate change risk should be assessed and disclosed: physical risks, financial risks associated with present or probable future regulation, and legal proceedings.

Although it has been more than a year since the petition was filed, the SEC has yet to respond to the petition or to issue interpretive guidance. In the meantime, the activist investor group Investor Network on Climate Risk has sought SEC inclusion of climate change risk disclosure as part of the SEC's 21st Century Disclosure Initiative. See http://www.sec.gov/comments/4-567/4567-20.pdf (web sites last visited May 13, 2009). Additionally, the Senate Appropriations Committee report issued in July

The petitioners argue that "corporate practice on climate risk disclosure is lagging behind the rapidly evolving economic, legal, and scientific developments related to climate change."

DISCLOSURE

2008 to authorize the SEC's funding specifically states that the SEC "is encouraged to give prompt consideration to this petition and to provide guidance on the appropriate disclosure of climate risk." S. Rep. 110-417, at 108. Collectively, the petition itself, other pressures on the SEC, the likelihood of GHG regulation, the increase in GHG-related litigation and investor awareness of GHG issues, and the Senate recommendation greatly increase the likelihood of SEC action under the new administration. Given that the petition does not seek a change in law but rather a clarification of existing law, even in the absence of SEC action, public companies will likely face greater scrutiny of their climate change disclosures (or lack thereof).

RECENT STATE INITIATIVES

As further evidence of the growing focus on climate change risk disclosure, the State of New York recently began an enforcement initiative to mandate climate change financial risk disclosure for public corporations with connections to New York. In September 2007, the New York attorney general ("AG"), Andrew Cuomo, initiated an investigation into alleged incomplete disclosures by Xcel Energy Inc. and four other energy companies. Claiming authority under the Martin Act, N.Y. Gen. Bus. Law § 352 (2007), which forbids the use of any deception or other misrepresentation in connection with the issuance or distribution of securities in the State of New York, the New York AG alleged that Xcel violated the Martin Act by failing to properly disclose climate change-related risks in its 2006 10-K filing to the SEC. Specifically, the AG cited as a Martin Act violation the failure to disclose the GHG-related risks from Xcel's proposed opening of a coal-fired electric generating unit in Colorado. Xcel Energy Inc., Assurance of Discontinuance, AOD #08-012, at 1, *available at* http://www.oag.state.ny.us/ media_center/2008/aug/xcel_aod.pdf.

In July 2008, Xcel and New York settled the matter. Xcel contended and believed its SEC filings, as well as other publicly available Xcel documents (such as its annual Triple Bottom Line report), adequately disclosed climate change risks in a manner fully compliant with SEC and state requirements, and Xcel settled the matter

voluntarily and without admission to any violations of the Martin Act. In moving forward with a voluntary settlement, Xcel saw an opportunity to consolidate its climate change disclosures into its 10-K filing. As part of this settlement, Xcel agreed to disclose the following information and analysis in its SEC 10-K filings for the next four years: (a) an analysis of financial risks from present and probable future regulation of GHG emissions; (b) an analysis of financial risks from GHG-related litigation; (c) an analysis of financial risks from the physical impacts of climate change (including increased sea levels and extreme weather conditions related to climate change); and (d) a strategic analysis of climate change risk and emissions management, including Xcel's current position on climate change, current and anticipated emissions management, and corporate governance actions concerning climate change. Id. at 3-5. The AG settled similar allegations against Dynegy under substantially the same terms in October 2008. Dynegy, Inc., Assurance of Discontinuance, AOD #08-132, available at http://www.oag.state.ny.us/media_ center/2008/oct/dynegy_aod.pdf.

New York's direct regulation of Xcel's climate change disclosure policies and practices under the Martin Act would be relatively unremarkable except for the fact that Xcel provides services in only "eight Midwestern and Western states." Xcel Energy Inc., Assurance of Discontinuance, at 2. It does not provide any services within the borders of New York, and the main activity prompting the action by the AG-the prospective building of a coal-fired electricity plant-was to occur in the State of Colorado.¹ Nevertheless, the AG claimed jurisdiction under the Martin Act over Xcel, based on the fact that the New York State Common Retirement Fund was a "significant" holder of Xcel stock.² Significantly, the Retirement Fund holds stock in nearly 2,000 American companies, each of which, under this theory, is potentially subject to Martin Act jurisdiction. Also, since nearly 4,000 American companies currently list stock on the New York Stock Exchange³ and more than 2.800 American companies list stock on the New York-based NASDAQ exchange,⁴ a substantial number of American companies could possibly be subject to scrutiny by New York under the Martin Act. See N.Y. Gen. Bus. Law § 352 (2007) (forbidding misrepresentation in connection with the issuance or sale of securities in New York). Because the Xcel settlement was a voluntary decision to disclose, it sets no legal precedent requiring heavy GHG producers

to disclose climate change risks. The New York AG's broad and aggressive exercise of jurisdiction, however, shows that thousands of companies nationwide are potentially at risk of enforcement, even though the scope of current requirements for disclosure of climate change risks at the federal level is not fully developed.

In a move for even broader control at the state level of climate change disclosure, California's legislature recently attempted to require statewide climate change risk disclosure as well. On May 22, 2008, the California State Senate passed Senate Bill 1550, a measure that would require the State Controller to develop a climate change disclosure standard for all companies doing business in California by December 1, 2009.⁵ The State Assembly passed an amended version of the bill on August 13, 2008.⁶ The Assembly's amended version of the bill failed to pass in the Senate by one vote, however, and any discussion of the bill must therefore be deferred to the 2009 session. Although the California bill failed to pass both houses by a single vote, the lesson to be learned is that some states are serious about mandating climate change disclosure now-with or without SEC action. Additionally, California's example demonstrates that state initiatives may well go beyond the imposition of requirements on publicly traded companies regulated by the SEC, possibly imposing GHG risk reporting obligations on private companies. The implications of this broad jurisdiction would be significant and costly.

ASTM INTERNATIONAL DRAFT CLIMATE CHANGE RISK DISCLOSURE STANDARD

As with its development of ASTM E2173 for disclosure of environmental risks, ASTM International observed a gap in guidance regarding disclosure of climate change risks, and beginning in 2008, it has acted to address this apparent gap. Specifically, ASTM recognized that investor groups and other parties, such as the petitioners in the SEC matter, were looking for greater consistency and thoroughness of financial disclosure by public companies of climate change risks. Accordingly, ASTM's Committee E50 on Environmental Assessment, Risk Management and Corrective Action created a Climate Change Task Group as part of its Subcommittee 50.05—Environmental Risk Management. This task group performed extensive research regarding climate change issues and risks and sought interested-party



Pending any formal guidance from the SEC, ASTM's climate change Disclosure Standard, if formalized, may ultimately provide the best guidance for the thousands of publicly traded companies that face financial risks as a result of climate change.

consensus regarding best practices for financial disclosure of these risks. The result was the Draft ASTM Standard entitled "Disclosure of Financial Impacts Attributed to Climate Change," which was first balloted in October 2008 and is now undergoing its second subcommittee ballot. A copy of the Draft Standard is available through ASTM. Significantly, in researching climate change issues and preparing the Draft Standard, ASTM has specifically declined to take a position regarding the scientific proof of climate change or the source of any climate change.

As with the petition and the New York actions, the Draft Standard focuses on the financial impacts of climate change, such as costs arising from enforcement of or compliance with environmental laws, anticipated changes in resource availability or cost, asset impact (such as by way of weather changes), or litigation by third parties. The Draft Standard provides guidance to companies regarding how to identify this information, how to quantify the information and determine materiality, and what content the disclosure may need to include. For example, the Draft Standard provides guidance for when a reporting entity may need to include a GHG emissions summary and how management should present a statement concerning its strategic analysis of the company's climate change financial risk.

LOOKING FORWARD

Pending any formal guidance from the SEC, ASTM's climate change Disclosure Standard, if formalized, may ultimately provide the best guidance for the thousands of publicly traded companies that face financial risks as a result of climate change. In any event, the regulatory and litigation trends discussed here point only to growth in potential business impacts due to climate change—whether by way of federal regulation of GHGs or by virtue of actual physical impacts on company assets resulting from altered climate conditions. This continued growth in climate change risks will most certainly continue to bring greater SEC and investor scrutiny of public companies' disclosures regarding such risks. Even if the Draft Standard is finalized, absent SEC regulatory guidance, publicly traded companies will continue to face complex disclosure decisions when reporting their climate change risks, along with increased risks of inadequate disclosure regarding this complex phenomenon.

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¹ Letter from Katherine Kennedy, Special Deputy Attorney General, State of New York, to Xcel Energy Inc., Sept. 14, 2007.

² *Id.* As of November 14, 2008, the Retirement Fund held 1,559,974 shares of Xcel Energy. Mutual Fund Facts About Individual Stocks, http://www.mffais.com/institutions/125321/. This represented 0.3 percent ownership of outstanding Xcel stock. *The Wall Street Journal*, Market Data, http://online.wsj.com/public/quotes/main.html?type=djn&symbol=XEL.

³ The NYSE Listings Directory, http://www.nyse.com/about/listed/lc_all_overview.html.

⁴ The NASDAQ Listed Companies, http://www.nasdaq.com/services/listedcompanies.stm.

⁵ California Senate Bill No. 1550, May 22, 2008, available at http://info.sen. ca.gov/pub/07-08/bill/sen/sb_1501-1550/sb_1550_bill_20080424_amended_sen_v97.pdf.

⁶ Senate Bill 1550, History, available at http://info.sen.ca.gov/pub/07-08/bill/ sen/sb_1501-1550/sb_1550_bill_20080831_history.html.



SHAPING FEDERAL CLIMATE CHANGE LEGISLATION:

Throughout his campaign, Barack Obama expressed his commitment to combating climate change. In his inaugural address, he again discussed working to "roll back the specter of a warming planet."¹ With the new federal administration and Congress, there remains little doubt that federal climate change legislation is on the horizon. However, the extent and parameters of such legislation are very much an open question. This article identifies and discusses some of the fundamental issues that will need to be resolved in any federal climate change legislation.

As an initial matter, some have questioned whether the current economy makes near-term federal climate change legislation unlikely. In these difficult economic times, the impact of climate change legislation on job growth and development will be hotly debated. Yet while the costs of reducing greenhouse gas emissions can be seen as a drag on economic growth, economic policies and climate change policies are not necessarily in conflict.

First, the compliance date in any federal legislation can be set to some point in the future in order to permit businesses time to prepare to meet their new obligations. A new international climate change treaty is currently being negotiated to take effect in 2012, which could be a target date for federal regulations to take full effect. Second, industry itself is pushing for federal climate change legislation in order to avoid a patchwork of conflicting local programs or regulation under the Clean Air Act, both of which are seen as undesirable.² Federal climate change legislation, on the other hand, will provide industry with certainty.

Additionally, a cap-and-trade program, as discussed below, has the potential for injecting significant money into the Treasury that could be used for investments in clean energy technologies and the creation of new jobs. At the same time, the implementation of energy efficiency projects and the construction of renewable energy facilities can be drivers for the creation of a new, green economy. While addressing the



Consensus is building among the administration, and industry groups for an 80

economy is currently the No. 1 priority, there is no indication that it will supplant efforts for greenhouse gas regulation.

CHOOSING A REGULATORY APPROACH

At least three different approaches have been suggested to regulate greenhouse gas ("GHG") emissions: (1) cap-andtrade; (2) carbon tax; and (3) command-and-control. Under a cap-and-trade approach, an overall cap on carbon emissions would be established and companies would be required to possess tradable allowances to emit greenhouse gases. Cap-and-trade is the regulatory approach favored by the Obama administration and has been the approach of most of the significant federal climate change legislative proposals to date, including the Waxman-Markey American Clean Energy and Security Act, which the House Energy and Commerce Committee approved in May.

As an alternative to cap-and-trade, some experts have suggested imposing a carbon tax, which would set a fixed price per ton of GHG emissions, thereby providing a financial incentive for companies to reduce their emissions. Proponents argue that a tax would be easier to implement and would have fewer transactional costs than a cap-andtrade system. Furthermore, economic costs are easier to quantify for a carbon tax than for a cap-and-trade system, since the price of emissions would be set and not subject to market fluctuations. However, opponents argue that a tax would not provide a guaranteed level of emission reduction and would place an unfair burden on the consumers who are least able to afford the resulting increased energy and gas prices. While some companies may prefer a carbon tax because they would be better able to plan for its costs and have more flexibility, garnering political support for a substantial new tax would likely be difficult.

Rather than choosing these market-based approaches, the federal government could instead elect to reduce GHG emissions through a more traditional "command and control" program, under which limits on GHG emissions would be imposed on facilities through air permits, with penalties for exceeding such limits. This could be accomplished through new legislation or amendments to the Clean Air Act, or potentially by using the existing Clean Air Act (an alternative that is explored further in this issue of *Practice Perspectives*; see "A Word of Caution: Can Greenhouse Gases Be Regulated Effectively Under Existing Law?"). Economic theory suggests that a command-and-control approach would be the least efficient means of accomplishing a reduction in GHG emissions because it mandates specific emission reductions without regard to cost.

DRAFTING A CAP-AND-TRADE PROGRAM

Because some variation of a cap-and-trade program appears to be a likely component of any federal climate change legislation, this section explores some of the key issues that must be resolved in developing such a program. First, since a cap-and-trade system is premised on a target future emission cap, that overall target must be established. Consensus is building among the administration, Congress, and industry groups for an 80 percent reduction by 2050.³ However, there is less agreement regarding the number and types of sources that would be subject to regulation, how allowances would be distributed, treatment of offsets, and the effect of federal regulation on state and regional programs.

Whom to Regulate? A decision must be made between an economy-wide program that would address GHG emissions from a variety of sources versus a more targeted program that would be limited to some subgroup of larger emitters. Here, legislators must strike a balance between the fairness and usefulness of regulating only certain sectors that represent only a percentage of total emissions and the administrative burden of regulating all sources down to each individual vehicle. One possible solution is a "phase-in" approach, whereby certain economic sectors that have more experience in implementing GHG emission controls, such as the

Congress, percent reduction by 2050.



electric utility industry, would be regulated first, with other sources being added over time. Another possible solution is to establish a threshold emission amount and exempt from regulation emissions below the threshold.

In addition to identifying the sources that will be regulated, the point of regulation must be determined. Will emission limits apply "upstream," at the point fossil fuels are extracted, or "downstream," at the point that greenhouse gases are actually emitted into the environment? In an "upstream" system, a coal company would need to possess an allowance for every ton of carbon contained in the coal it extracts from the earth, while in a "downstream" system, the allowance would be required of the party burning that coal, such as an electric power plant. The benefit of "upstream" regulation is that it limits the number of regulated entities. For example, only a relatively small number of oil and gas companies would be required to possess allowances, as opposed to requiring each individual who drives a car or fires a natural gas furnace to have a carbon allowance for those emissions. The benefit of "downstream" regulation is that it places the regulatory burden on the parties most able to reduce emissions: the end users. Most likely, a workable economy-wide cap-andtrade system will require some combination of upstream and downstream regulation. For example, the point of emissions may be the compliance point for stationary-source emissions, while the regulations would apply to fuel distributors for mobile-source emissions.

Distribution of Allowances. Another fundamental issue is how to distribute emission allowances. A cap-and-trade system works by providing a certain number of emission allowances at the outset of the program and then ratcheting down the total number of allowances in the market over time in order to meet the ultimate emission targets. These initial allowances can be either allocated among affected sources, purchased through an auction process, or distributed through some hybrid of allocation and auction. An auction process would generate significant revenue, which could be used to fund clean energy technologies, provide energy assistance for low-income persons, or fund GHG-related research. However, opponents of an auction system raise concerns about fairness (e.g., deep-pocket buyers may have an advantage over small businesses), hoarding (e.g., large companies or hedge funds may purchase large blocks of allowances, leaving a shortage for smaller emitters), international competitiveness (e.g., the costs of purchasing allowances would be passed on to customers, disadvantaging domestic industries with strong foreign competition, such as the steel and paper industries), and market volatility.

One way to address volatility and cost concerns in an auction system is to provide a "safety valve" if allowance prices exceed a certain threshold level. If the cost to purchase an emission allowance exceeded that predetermined level, the government would make additional allowances available at the threshold price in order to flatten the market and control costs. Of course, this is easy in concept but potentially challenging to administer. Setting an appropriate maximum threshold price may be difficult prior to the development of the market. In addition, there would need to be some method for adjusting the threshold price over time and in reaction to the market. If the threshold price is set too high, it will not achieve the goal of controlling market volatility and economic impact. On the other hand, if the threshold price is set too low, it will allow excess allowances into the market, making it difficult, if not impossible, to meet the emission targets. Some have proposed placing authority either in an existing agency, such as EPA, or in a newly created carbon market control agency, to set threshold prices and make other adjustments to the market as needed.

Offsets. Another issue is whether, and to what extent, to allow the use of offsets. An offset represents a GHG emission reduction generated by emission-reducing projects



An offset may represent GHG emission savings renewable energies, or installation

outside the regulatory system. For example, an offset may represent GHG emission savings achieved through reforestation projects, investments in renewable energies, or installation of emission-control technologies on factories in third-world countries. Offsets allow a company the flexibility to achieve some or all of its required emission reductions at a lower marginal cost by funding less expensive projects that provide an equivalent net emission reduction. Numerous studies have found that allowing the use of carbon offsets can significantly decrease the compliance costs necessary to achieve emission reductions. U.S. Government Accountability Office, "Carbon Offsets: The U.S. Voluntary Market Is Growing, but Quality Assurance Poses Challenges for Market Participants," GAO-08-1048, at 33 (August 2008). Offsets also stimulate investment in new technologies and encourage emission reductions from nonregulated sources.

Despite these benefits, many have raised concerns about the credibility of offsets and the potential for overuse or improper use of offsets to negate the overall effectiveness of legislation to meet emission targets. More than 600 entities develop, market, or sell offsets in the United States. *Id.* at 7. Any federal climate change legislation incorporating the use of carbon offsets must include standardized quality assurance mechanisms to ensure the integrity of the market and the credibility of the offsets. *Id.* at 38. Credible offsets must be additional (*i.e.*, the reductions must be above what would have otherwise occurred), quantifiable, verifiable, and permanent.

In addition to resolving concerns about the credibility of offsets, lawmakers will need to decide the extent to which offsets may be used to meet regulatory requirements. Both the percentage of emission reductions that may be achieved through offsets and the geographic distribution (domestic versus international) of permissible offset projects will need to be determined. This will involve a balancing act between cost and effectiveness—increased use of offsets will result in lower compliance costs but could also make it more difficult to meet national emission reduction commitments.

Leakage and Economic Impact. Any GHG regulatory structure must address the issue of leakage (or the increase of GHG-emitting activity in jurisdictions outside the United States as a result of stricter domestic GHG regulations). Energy-intensive industries such as cement and metals could have a competitive disadvantage if U.S. operations have GHG compliance costs that similar operations in other countries do not. Increased domestic compliance costs could also cause U.S. operations to move abroad to locations without similar climate policies. To prevent this, import fees could be imposed to compensate for cost differences or free allowances, or subsidies could be provided to industries at high risk for carbon leakage.

Interplay With Other Federal, State, and Regional Programs.

In the absence of federal regulation of greenhouse gases, several state and regional cap-and-trade programs have emerged, including the Regional Greenhouse Gas Initiative (in the northeastern and mid-Atlantic states), the Western Climate Initiative, the Midwestern Greenhouse Gas Reduction Accord, the California Global Warming Solutions Act of 2006, and the Florida Climate Protection Act of 2008. These local programs provide models for federal legislation and have served as a testing ground for some of the issues discussed above. Any federal climate change legislation will need to evaluate whether the federal program can exist alongside these programs or will preempt local regulations. While some state or regional programs may be redundant of federal regulations, others may impose stricter emission reduction targets, and Congress will need to decide whether states may exceed the federal limits.

Comprehensive federal climate change legislation will also raise questions about other federal, state, and local regu-

achieved through reforestation projects, investments in of emission-control technologies on factories in third-world countries.



lations aimed at curbing greenhouse gases. For example, approximately half of the states have implemented some type of Renewable Portfolio Standard, which establishes target dates by which a certain percentage of the electricity generated in that state must come from renewable sources, such as wind, solar, or geothermal. President Obama also favors a federal Renewable Portfolio Standard, requiring 25 percent of electricity to come from renewable sources by 2025.⁴ These goals are supported by the federal Production Tax Credit, which provides income tax credit for renewable energy production. Experts disagree about the place of Renewable Portfolio Standards and the Production Tax Credit in a market-based cap-and-trade program. Some argue that the amount of investment in renewable sources should be determined by the market and that Renewable Portfolio Standards place too much emphasis on investment in developing renewable energy at the expense of investment in carbon sequestration technologies. Others argue that incentives for renewable energies are necessary, at least in the early years of a cap-and-trade system, in order to stimulate the market until the market corrects itself under the cap-and-trade program.

The interplay between federal climate change legislation and vehicle and fuel standards meant to limit GHG emissions from the transportation sector will also need to be addressed. Currently, these mobile-source emissions are primarily regulated through federal Corporate Average Fuel Economy ("CAFE") standards, aimed at improving the average fuel economy of vehicles sold in the United States. On May 19, President Obama announced new, stricter nationwide CAFE standards to take effect in 2012. Additionally, several states have proposed low-carbon fuel standards, which require fuel suppliers to reduce the carbon their fuel emits by increasing the use of nonpetroleum fuels, such as ethanol or biofuels. President Obama also supports a national lowcarbon fuel standard. Again, federal climate change legislation will raise questions about the place for these programs in a national market-based cap-and-trade system as well as questions regarding whether these state programs can or should exist alongside federal regulation.

CONCLUSION

While momentum for federal regulation of greenhouse gas emissions is building, Congress faces significant challenges in crafting a system that will be both effective and efficient. In addition to designing federal climate change legislation, Congress will also need to address the role, if any, of other sector-specific regulations, such as Renewable Energy Portfolios, CAFE standards, and low-carbon fuel standards. Finally, any federal program will need to address preemption issues, because states have largely taken the lead, to date, on greenhouse gas regulation. In the end, the patchwork of state programs may provide the impetus and framework for federal regulation while ultimately proving unnecessary if a comprehensive federal program is enacted.

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¹ President Barack Obama Inaugural Address (Jan. 20, 2009), *available at* http://www.hitehouse.gov/blog/inaugural-address. (Web sites last visited June 1, 2009.)

 2 See, e.g., U.S. Climate Action Partnership Blueprint for Legislative Action (Jan. 15, 2009), available at http://www.us-cap.org/blueprint.

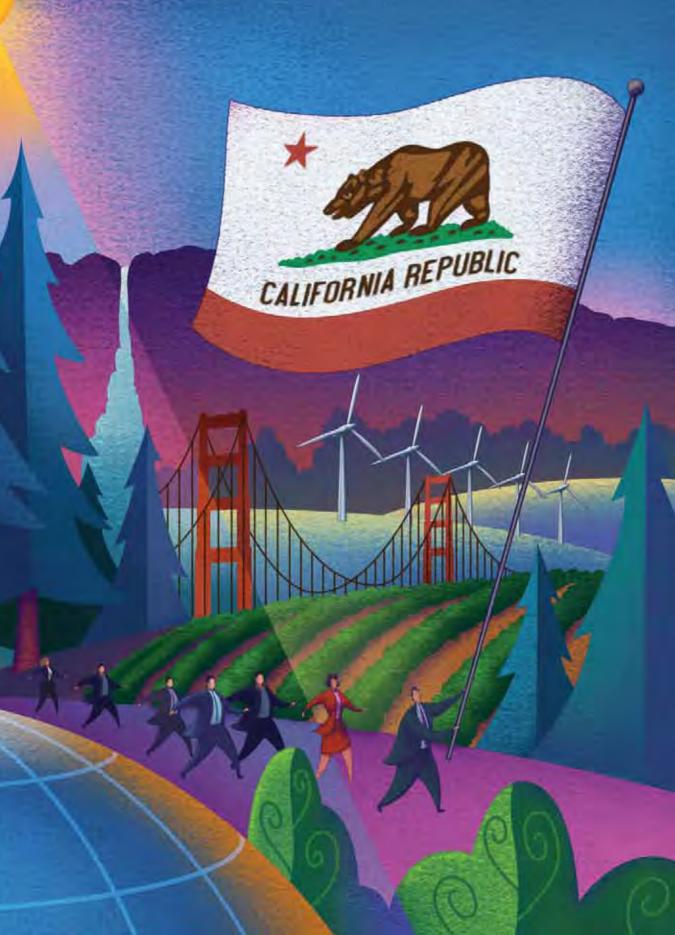
³ See, e.g., *id.* at 2; Obama Agenda—Energy and Environment, *available at* http://www.whitehouse.gov/agenda/energy_and_environment; Memorandum from Rick Boucher and John Dingell to Members, Committee on Energy and Commerce regarding Climate Change Discussion Draft, at 2 (Oct. 7, 2008).

⁴ Obama Agenda—Energy and Environment, *supra* note 3.

CALIFORNIA Still Leading the Way in Environmental Regulation

California continues to stand apart in enacting laws and regulations designed to protect the environment, with many of these laws and regulations serving as models for broader state, federal, and even global environmental regulation.

HOLLYWOOP



CALIFORNIA ALSO IS TAKING A LEAD ROLE IN ADDRESSING CONSUMER SAFETY FROM POTENTIAL EXPOSURE TO TOXIC SUBSTANCES IN CONSUMER PRODUCTS.

Recent developments confirm and advance this trend, most notably in the areas of climate change legislation, renewable energy source use, and chemical regulation. While these trends set high standards for the state, meeting those standards will entail significant thought, implementation, and potentially unseen regulatory consequences for affected businesses and other entities. Three of California's most recent environmental initiatives, discussed here, will substantially affect how companies do business in, and with, California.

In 2006, California enacted the California Global Warming Solutions Act ("AB 32"), setting forth an ambitious program aiming to combat global warming. Cal. Health & Safety Code \$\$ 38501–99 (West 2006). The law requires the California Air Resources Board ("CARB") to adopt rules and regulations that will achieve 1990 levels of greenhouse gas ("GHG") emissions by the year 2020. CARB will ultimately take on an enforcement and monitoring role. In addition, CARB must recommend initiatives to continue reducing GHG emissions beyond 2020.

In another emissions reduction and sustainability initiative, Governor Schwarzenegger signed the Renewables Portfolio Standard Executive Order in November 2008, requiring every retail seller of electricity to serve 33 percent of its load with renewable energy sources by 2020.

California also is taking a lead role in addressing consumer safety from potential exposure to toxic substances in consumer products. In September 2008 the California legislature passed two bills constituting California's "Green Chemistry" program. The program requires the state to develop a public clearinghouse of chemical hazard information and attendant regulations to protect consumers from those hazards.

This article summarizes these three initiatives, highlights their key provisions and timetables, and identifies several unresolved issues and potential consequences to California and the broader national and international business community.

CALIFORNIA'S GLOBAL WARMING SOLUTIONS ACT (AB 32)

AB 32 requires California to achieve 1990 levels of GHG emissions by 2020. AB 32 specifically defines GHGs as the following six gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 set forth the following timeline—with which CARB appears to be complying—to achieve the required reductions:

- June 30, 2007: Publish a list of discrete early-action measures to reduce GHG emissions.
- July 1, 2007: Appoint an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee.
- January 1, 2008: Adopt reporting and verification regulations for GHG emissions so that CARB can monitor and enforce compliance.
- January 1, 2008: Determine the 1990 GHG emissions level and set this level as the emissions limit to be achieved by 2020.
- January 1, 2009: Approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions. CARB must update this Scoping Plan at least once every five years.
- January 1, 2010: Adopt regulations to implement the discrete early-action measures previously published.
- January 1, 2011: Adopt regulations setting GHG emissions limits and establishing measures to achieve the maximum technologically feasible and cost-effective reductions in GHG emissions. These regulations take effect on January 1, 2012. However, CARB may adopt regulations before the January 1, 2011, deadline, and if it does, these regulations may take effect prior to January 1, 2012.
- January 1, 2020: Emissions reduction target must be achieved.

California Environmental Protection Agency, Air Resources Board, Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration 3 (October 2007), available at http:// www.arb.ca.gov/cc/ccea/meetings/ea_final_report.pdf. (Web sites last visited June 1, 2009.)

WHICH STEPS HAS CARB COMPLETED?

Discrete Early-Action Measures. On June 21, 2007, CARB adopted three discrete early-action measures:

• Low-Carbon Fuel Standard: Sets the goal of reducing the carbon content of transportation fuels by at least 10 percent by 2020. On March 5, 2009, CARB released a proposed regulation to implement this standard. The proposed regulation requires providers, refiners, importers, and blenders to ensure that the fuels they provide for the California market meet an average declining standard of "carbon intensity." Carbon intensity is determined by examining the sum of GHG emissions that are associated with the production, transportation, and consumption of the fuel, also referred to as the "fuel pathway."

- Restrictions on High Global Warming Potential Refrigerants: Restricts the use of high global warming potential refrigerants for nonprofessional recharge of leaky automotive air-conditioning systems.
- Landfill Methane Capture: Standardizes installation and performance of active gas collection and control systems at uncontrolled municipal solid waste landfills.

Id. at 11–12.

CARB adopted these additional early-action measures at its meeting on October 25 and 26, 2007:

- Reduction of Sulfur Hexafluoride in the Non-Electric Sector: Bans the use of sulfur hexafluoride in nonessential applications.
- Reduction of High Global Warming Potential GHGs in Consumer Products: Reduces the amount of high global warming potential GHGs used as propellants in consumer items such as aerosol cans, tire inflators, and electronicscleaning and dust-removal products.
- SmartWay Truck Efficiency: Requires retrofitting of trucks and trailers with technology that increases energy efficiency (such as by reducing aerodynamic drag).
- **Tire Inflation Program:** Requires regular tire checks and inflation.
- Green Ports: Provides alternative sources of power to docked ships, such as cables that plug into onshore electrical outlets, allowing the ships to shut off auxiliary engines.

Id. at 13–15; California Air Resources Board, Summary of Board Meeting 4 (Oct. 25–26, 2007), *available at* http://www.arb.ca.gov/board/ms/2007/ms102507.pdf.

CARB must implement these discrete early-action measures by regulation no later than January 1, 2010. Cal. Health & Safety Code § 38560.5(b).

Reporting and Verification Regulations for GHG Emissions. On December 6, 2007, CARB approved regulations that mandate GHG emissions reporting. CARB first amended the regulations in response to comments on June 5, 2008. The comment period for these changes ended July 15, 2008. See California Environmental Protection Agency, Air Resources Board, Mandatory Greenhouse Gas Emissions Reporting, http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm.

The mandatory reporting regulations apply to the following entities, which (according to CARB) account for 94 percent of GHG emissions from industrial and commercial stationary sources in California:

- California cement plants.
- Petroleum refineries, hydrogen plants, and other facilities in California that emit 25,000 metric tons or more of carbon dioxide in any calendar year after 2007 from stationary combustion and process sources.
- Electricity-generating and cogeneration facilities, including hybrid generating facilities, in or outside California that provide electricity to retail end users in California, have a nameplate generating capacity greater than or equal to 1 megawatt, and emit 2,500 metric tons or more of carbon dioxide in any calendar year after 2007 from electricitygenerating activities.
- Electric service providers, publicly owned electric utilities, and community choice aggregators that provide electricity to retail end users in California.
- Marketers serving as the purchaser or seller at the first point of delivery for electric power imported into California or the last point of receipt in California for power exported out of the state.

See Second 15-Day Modified Regulatory Language for Public Comment, Proposed Cal. Code Regs. tit. 17, § 95101(b), *available at* http://www.arb.ca.gov/regact/2007/ ghg2007/ghgattachment1.pdf.

Although AB 32 originally required electricity-generating and cogeneration facilities to report their 2008 emissions of GHGs by April 1, 2009, and electricity retail providers and marketers to report on June 1, 2009, CARB recently agreed to push back the deadlines for all reports to June 1, 2009. *Id.* § 95103(a)(1). Determination of the 1990 Greenhouse Gas Emissions Level: The Emissions Limit for 2020. CARB determined that the 1990 level of GHG emissions measured 427 million metric tons of carbon dioxide equivalent, and it set that number as its target emissions limit for 2020.¹ CARB estimates that the limit will require a 30 percent reduction in projected "business as usual" emissions levels for 2020, or a 10 percent reduction in current emissions levels. To achieve such an ambitious mark, California must reduce carbon emissions by four tons per person per year.²

Scoping Plan. To meet the 2020 emissions limit, CARB unveiled its draft Scoping Plan in June 2008. CARB consulted with Climate Action Team subgroups, the Environmental Justice Advisory Committee, the Economic and Technology Advancement Advisory Committee, stakeholders, and the public. California Air Resources Board, *Climate Change Draft Scoping Plan: A Framework for Change* 7 (June 26, 2008), *available at* http://www.arb.ca.gov/cc/scopingplan/meetings/062608/sp_08-6-4pres.pdf. CARB approved the Scoping Plan at its December 11, 2008, meeting.³

Key elements of the Scoping Plan include the following⁴:

- A cap-and-trade program (enforceable beginning in 2012) that links to partner programs within the Western Climate Initiative to create a regional cap-and-trade market for electricity sources, industrial sources, transportation fuels, and commercial and residential sources. (Creating a regional program will help avoid leakage, offsetting emissions from non-California sources).⁵ In late March, California officials proposed three draft concepts "for limiting the use of [GHG] emission offsets under the state's evolving cap-and-trade program, including a proposal to cap the total quantity of allowable offsets, one to limit the number of offsets used by individual emitters and another to auction offsets much like emission allowances."⁶
- Carbon fees estimated at \$10 to \$50 per metric ton of carbon dioxide equivalent to influence investment decisions and fuel choices made by large suppliers of goods and services. Revenue would support further reductions in GHGs.
- Green building initiatives set by the state government, including using cleaner fuels in state motor vehicles, requiring green practices by the entities providing goods

and services to the government, and providing commuter alternatives for state employees.

- Increased transportation efficiency, including the use of hybrid vehicles, more aerodynamic trucks, and a highspeed rail system.
- Use of solar panels on roofs and water heaters.

HOW AB 32 WILL AFFECT BUSINESS

AB 32 and its attendant regulations will likely affect, either directly or indirectly, any sizable business that emits GHGs and does business in California. As CARB continues the process of implementing AB 32's extensive mandates, businesses will face the complex task of understanding their obligations and opportunities under AB 32. Among other items, businesses should consider the following issues raised by AB 32:

- AB 32's reporting requirements are complicated and onerous. Once businesses determine whether they are subject to reporting obligations, they must then consider the equipment and other infrastructure required to adequately monitor emissions for reporting.
- AB 32 affects not just California businesses but also those located outside the state that sell electricity to California. The current reporting obligations apply to "retail providers," defined as entities that provide electricity to retail end users in the state. Out-of-state utilities must consider the effect AB 32 regulation has on their operations and the law's effect on potential revenue from California customers.
- As California develops a carbon fee and a cap-and-trade system, businesses will pay for emissions but can potentially profit from emissions credit trading by selling credits gained from reduced emissions. Minimizing losses, or maximizing profits, from an emissions trading system will require vigilance on the progress of regulations and monitoring of facility emissions levels.
- AB 32 forces businesses across varying industries to consider the specific effect of AB 32's regulation on their activities. As noted above, the early-action measures provide very specific mandates to industries from energy to transportation to the operation of ports.

AB 32 requires businesses to assess the extent of their activity in California, the development of the implementing regulations, and the need to implement or alter institutional policies to comply with, and even benefit from, California's global warming laws.

At least one industry representative commented that more stringent environmental regulations like AB 32 may not make sense in an economic downturn in California and across the country: "Right now, most California businesses are just hoping to make payroll—not profit—each month. ... The state is in a recession, and how quickly we recover will be based on decisions like the AB 32 Scoping Plan." Letter, dated Nov. 10, 2008, from Crenshaw Die & Manufacturing Corporation to CARB re: Concerns with AB 32 Final Scoping Plan, *available at* http://www.arb.ca.gov/lists/scopingpln08/48-ab32_ crenshaw.pdf.

Yet despite the potential effects on business, California officials are optimistic. Mary Nichols, CARB chairperson, stated: "This plan is California's prospectus for a more secure and sustainable economy. It will guide capital investments into energy efficiency to save us money, into renewable energy to break our dependence on oil, and promote a new generation of green jobs for hundreds of thousands of Californians."⁷

WHAT ARE THE POTENTIAL CHALLENGES TO AB 32?

AB 32 is one of the first efforts by a legislative body at any level to reduce GHG emissions. However, a federal GHG emissions program may soon be a reality.

Congressmen Waxman and Markey, of the House Committee on Energy and Commerce, recently released a draft bill for comprehensive climate change legislation. The proposed legislation requires EPA to reduce GHG emissions by 20 percent in 2020 and by 83 percent in 2050. Interestingly, the proposed bill expressly prohibits federal vehicle emission standards from preempting California authority to adopt and enforce its own mobile-source emission standards. This bill, along with the enhanced interest in GHG regulation by the Obama administration generally, portends some action on the federal front.

In addition to the potential for overlapping federal activity, AB 32 may also face constitutional challenges. If AB 32 discriminates against out-of-state entities by, for example, "treating electricity generated outside of the state differently than electricity generated inside its borders," the statute could be vulnerable to Commerce Clause challenges. See Erwin Chemerinsky et al., "California, Climate Change and the Constitution," *Envtl. F.*, July–Aug. 2008, at 50–63. Even more broadly, if AB 32 ultimately links its program with any foreign cap-and-trade program, the federal government's constitutional authority to regulate foreign commerce could preempt it.

AB 32 may also attract criticism as an overly costly measure in uncertain economic times. State Senator Bob Dutton introduced a bill to restrict CARB from beginning to develop AB 32 regulations until state unemployment levels are below 5.8 percent for three consecutive months. The bill would also require CARB to evaluate, and make public, the costs associated with AB 32 regulations. The bill was scheduled for hearing on April 20, 2009. Cal. Sen. Bill 295 (Feb. 25, 2009).

RENEWABLES PORTFOLIO STANDARD

On November 17, 2008, Governor Schwarzenegger signed an executive order ("Order") requiring every retail seller of electricity to serve 33 percent of its load with renewable energy sources by 2020.

Governor Schwarzenegger's Order accelerates California's already aggressive Renewables Portfolio Standard ("RPS"). The existing standard demanded that state utilities generate at least 20 percent of their energy from renewable sources by 2010. In order to meet the more stringent goal, the Order specifies the following as acceptable forms of renewable sources for the state's standard: biomass, solar, wind, anaerobic digestion, and landfill gas. The California Energy Commission will implement the program. *Biomass Magazine*, "California Enacts Ambitious Renewable Portfolio Standard" (Dec. 2008).

ACHIEVING 33 PERCENT

The Order requires a series of administrative actions to facilitate compliance with the aggressive mandate:

 The California Energy Commission and the California Department of Fish and Game must develop a "one stop" process for permitting renewable energy generation power plants.

- The Order creates a Renewable Energy Action Team ("REAT") and includes certain dates by which REAT must do the following:
 - Publish a Best Management Practices Manual to assist in designing renewable projects and minimize environmental impacts (Dec. 31, 2009).
 - Develop a conservation strategy that identifies and maps areas for renewables portfolio project development. REAT must concurrently identify areas for longterm natural resource conservation (Dec. 31, 2009).
 - Provide an estimate of total retail electricity sales in California in 2020 (Jan. 1, 2010).
- The Order further requires all regulatory agencies to "give priority" to renewable energy projects.⁸

California has many currently operating and pending projects designed to achieve the existing RPS. Despite that progress, the recent Order ups the ante for state utilities to convert to renewable sources. But the progress is not without its challenges. In an October 2008 report, the California Public Utilities Commission ("PUC") listed the major challenges to meeting the 33 percent RPS goal:

- The magnitude of a 33 percent RPS is unprecedented.
- Transmission planning, permitting, and construction require substantial lead times, which could inhibit timely delivery of renewable energy.
- The impact of integrating large amounts of intermittent renewable energy on the grid reliability of the transmission system is not yet known.
- Permitting of renewable generation facilities can be complex, long, and uncertain.
- The costs of renewable projects are increasing; the state needs a process to evaluate these costs and evaluate alternatives.
- Other project development barriers exist, such as financing and equipment procurement.

California Public Utils. Commission, Renewables Portfolio Standard: Quarterly Report (October 2008).

The PUC specifically identifies transmission and permitting issues as the primary barriers to meeting the 33 percent mandate.

Renewable energy producers meet persistent transmission problems. Renewable resources often are located far from the grid and often are location-constrained. In order to devise potential solutions to the location issue, the PUC announced the Renewable Energy Transmission Initiative, a statewide, multistakeholder initiative "to identify the transmission projects needed to accommodate the state's renewable energy goals."⁹

Though the infrastructure challenges persist, the PUC's first report of 2009 strikes an optimistic tone:

Clearly, 2008 was a turning point for the RPS program and contracted projects are beginning to deliver in large numbers. This may represent the end of the start-up phase of the RPS program, as contracts signed in the earlier years of the program are now built and the renewable market begins to mature.

California Public Utils. Commission, Renewables Portfolio Standard: Quarterly Report (April 2009).

The PUC also recognizes the complex permitting issues. Renewable energy generation facilities must obtain various permits and authorizations, including:

- Site construction permits (which will vary according to location, project size, and technology type).
- Federal permits, if the project is on federal land (either from the Bureau of Land Management or the U.S. Forest Service).¹⁰

The Order aims to streamline the application process and to create a "one stop" permitting process. The state and federal agencies committed in a memorandum of understanding to coordinate in some fashion to resolve permitting barriers.¹¹

THE ORDER'S EFFECT ON BUSINESS

Governor Schwarzenegger's 33 percent mandate may prove to be a double-edged sword for California businesses. From one perspective, the Order likely will enhance an already growing economy in California for clean energy technology. The Order itself states that "California's high standards and ambitious goals have resulted in California leading the nation in renewable energy innovation, receiving more investment funding in clean technology than anywhere else in the United States."¹² The Order further states that "producing electricity from renewable resources provides multiple and significant benefits to California's environment and economy, including ... enhancing economic development, and creating jobs."¹³ There is no doubt that entities involved in renewable energy sources will see opportunities created by the Order's mandates.

But businesses should be aware of the potential pitfalls of the new regulation. Electric utilities, in particular, must consider the costs of developing and transmitting energy from renewable sources. Beyond the logistical hurdles involved, there remains the question of how California will treat the inevitable failed contracts. One California research institute recognized the concern that signed contracts with renewable projects will "not all yield operating facilities on the schedule originally envisioned." Ernest Orlando Lawrence Berkeley National Laboratory, Does It Have To Be This Hard? Implementing the Nation's Most Aggressive Renewables Portfolio Standard in California, at 15 (August 2005). The position paper went on to "strongly encourage" California lawmakers to anticipate and address the risk now "by either imposing burdensome noncompliance penalties on utilities or essentially granting the utilities a 'free-ride' and forgiving their lack of compliance." Id. Furthermore, by December 31, 2009, REAT must develop a conservation strategy that addresses conservation concerns and protected land, which undoubtedly will affect potential project plans. Businesses should continue to monitor their opportunities and obligations as California implements the RPS Order.

GREEN CHEMISTRY PROGRAM

Finally, California enacted two laws in September 2008 that constitute the state's Green Chemistry program. Specifically, the laws require development of a hazardous substances clearinghouse and attendant regulations to protect consumers from potential exposure to those substances in consumer products.

Senate Bill 509 specifically requires the California Department of Toxic Substances Control ("DTSC") to create an internet-based "Toxic Information Clearinghouse." The clearinghouse will act to collect and disseminate chemical hazard information. Assembly Bill 1879 requires DTSC to develop and adopt regulations to both identify and prioritize chemical ingredients in consumer products that may be considered chemicals of concern. The regulations also must reduce public exposure to those chemicals.

BUILDING ON TSCA

Until the enactment of the Green Chemistry laws, California (along with other states) largely deferred to the federal regulation of potentially toxic chemicals under the Toxic Substances Control Act ("TSCA"). But in a recent report, the University of California identified three "policy gaps" in the TSCA regime:

The Data Gap: Manufacturers and businesses can sell a chemical or product without generating or disclosing adequate information about its potential health or environmental hazards.

The Safety Gap: Public agencies are unable to efficiently gather hazard information from producers; proactively regulate known hazards; or require producers to accept greater responsibility for the lifecycle impacts of their products.

The Technology Gap: There is insufficient public and private investment in green chemistry research, development, education, and technical assistance.

The Centers for Occupational and Envt'l Health, University of California, Green Chemistry: Cornerstone to a Sustainable California (2008).

The Green Chemistry program aims to close these gaps in two phases.

First, the program requires DTSC, by January 1, 2011, to "adopt regulations to establish a process by which chemicals or chemical ingredients in products may be identified as chemicals of concern." Second, and by that same date, the law requires DTSC to adopt regulations to regulate those chemicals in a manner that will best "limit exposure or ... reduce the level of hazard posed by a chemical of concern." Assembly Bill, 1879(1). The new Green Chemistry program gives DTSC two years to "identify and prioritize 'chemicals of concern,' a term that is currently undefined in the laws but is likely to include substances that are considered to be toxic, persistent, and bioaccumulative."¹⁴ The laws then grant authority to DTSC to regulate any identified substances.

When establishing its identification and prioritization process to determine what constitutes a "chemical of concern," DTSC must consider the following three factors:

- The volume of the chemical in commerce in California.
- The potential for exposure to the chemical in a consumer product.
- Potential effects on sensitive subpopulations, including infants and children.

Cal. Health & Safety Code §§ 25252(a)(1)-(3).

The program requires, also by January 11, 2011, regulation of any identified chemical of concern. DTSC regulations may include any of the following initiatives that are expressly outlined in the statute:

- Not requiring any action.
- Imposing requirements to provide additional information needed to assess a chemical of concern or its potential alternatives.
- Imposing requirements on labeling or other types of consumer product information.
- Imposing a restriction on the use of the chemical of concern in the consumer product.
- Prohibiting the use of the chemical of concern in the consumer product.
- Imposing requirements that control access or limit exposure to the chemical of concern in the consumer product.
- Imposing requirements for the manufacturer to manage the consumer product at the end of its useful life, including the recycling or responsible disposal of the product.
- Imposing a requirement to fund Green Chemistry challenge grants where no feasible safer alternative exists.
- Any other outcome the department determines accomplishes the requirements of this article.

Id. §§ 25253(b)(1)-(9).

By July 1, 2009, DTSC must appoint a "Green Ribbon Science Panel," composed of experts in chemistry, environmental health, and several other disciplines. The Green Ribbon Panel will advise DTSC on matters relevant to the Green Chemistry program and assist DTSC in generating and implementing policies and strategies. *Id.* § 25254.

California's initiative does not rise to the level of regulation required under the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") program. REACH "puts the onus on companies to provide data proving that their products are safe for particular uses."¹⁵ Though REACH differs from the Green Chemistry program in form and scope, businesses would do well to be aware of Europe's REACH regulations. California's program mandates DTSC to refer to available information from other nations, governments, and agencies that have undertaken similar efforts—likely a nod to Europe's chemical regulation under REACH. Cal. Health & Safety Code § 25252(b)(2).

The program is not without its critics. The Green Chemistry initiative, unlike REACH, notably requires the government, rather than business, to generate the list of regulated substances. Daryl Ditz, with the Center for International Environmental Law, criticized the law as "180 degrees different from REACH, which puts the burden on industry. This whole elaborate process could result in paralysis by analysis."¹⁶

Regardless of its ultimate effect, businesses, particularly those that manufacture consumer products, should become familiar with California's Green Chemistry program.

CONCLUSION

California's recent environmental laws will have a broad and significant effect on business. No matter what these laws' ultimate fate in California may be, they likely will be models for other states, and the federal government, for addressing climate change and potential exposure to hazardous chemicals in consumer products across the United States.

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¹ California Air Resources Board for the State of California, *Climate Change Draft Scoping Plan 8* (June 2008), *available at* http://www.arb.ca.gov/cc/ scopingplan/document/draftscopingplan.pdf.

² See id.

³ California Environmental Protection Agency, "ARB Says Yes to Climate Action Plan," News Release (Dec. 11, 2008).

⁴ See generally supra note 1, at 12–16, 41.

⁵ Cal. Health & Safety Code § 38505(j).

⁶ CarbonControlNews.com, "California Proposals To Limit GHG Offsets Spark Heated Debate" (Mar. 25, 2009).

⁷ Supra note 3.

⁸ Cal. Exec. Order S-14-08.

⁹ California Public Utils. Comm., RPS Project Transmission Barriers, http:// www.cpuc.ca.gov/PUC/energy/Renewables/RPStransmissionbarriers.htm.

¹⁰ Supra note 9.

¹¹ Supra note 8.

12 _{Id.}

13 Id.

¹⁴ Amer. Chem. Society, "California launches nation's first green chemistry program," *Environmental Science & Technology*, at 5 (Jan. 1, 2009).

15 Supra note 14.

16 Supra note 14.





