

LEGAL DEVELOPMENTS RELATED TO GREENHOUSE GAS EMISSIONS

July 2008



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Wallace King Domike & Reiskin, PLLC is a Washington, D.C.- based law firm that specializes in environmental litigation and regulatory counseling. WKDR's attorneys have extensive experience litigating complex toxic tort and product liability cases and defending against environmental enforcement actions at both the federal and state levels. The firm also has substantial expertise in federal and state environmental laws, with a particular emphasis on air pollution law. WKDR attorneys also specialize in judicial and administrative challenges to agency rulemakings. For additional information regarding this report, and GHG legal developments, contact Alec Zacaroli, (202) 965-6021, e-mail: azacaroli@wallaceking.com, or Julie Domike, (202) 204-3701, e-mail: jdomike@wallaceking.com regarding regulatory issues and Peter C. Condrón, (202) 204-3707, e-mail: pcondron@wallaceking.com, regarding litigation issues.



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I. Introduction

Despite government's ongoing reluctance to regulate greenhouse gas emissions at the federal level, the prospects for increased regulation have grown increasingly strong in recent years. A combination of federal court mandates, actions by states, and increased political pressure on all governments to act has shifted the debate from one of whether to regulate greenhouse gas emissions to one of when and how to regulate them. At the same time, civil lawsuits alleging damages resulting from climate change are cropping up from Mississippi to Alaska. While these cases are subject to dismissal on any number of grounds, not the least of which is failure to prove causation, they do signal a legal environment that is growing increasingly hostile toward industries perceived as contributing to global warming.

The following report provides an update on legal developments with respect to climate change and regulation of greenhouse gases. The goal of the document is to provide our clients with a framework from which to initiate or expand upon strategic planning with respect to this issue. While the direction of climate change regulation and law remains unclear, the expansion of this body of law, and the liability associated with it, is certain. Companies will have to take action, *potentially beginning as early as next 2010*, when EPA is required by law to adopt new rules requiring the reporting of greenhouse gas (GHG) emissions.

However, the current state of affairs may present as many opportunities as it does uncertainties. Companies that identify the lowest-cost alternatives to reducing greenhouse gases early – prior to establishment of regulations – will be in the best position to steer the development of climate change laws and regulation in a favorable direction. On the other hand, companies that do not initiate strategic planning on this issue likely will find themselves in the unenviable position of having to revamp their operations to fit regulatory models influenced or even developed by others, including their competitors.

Building on extensive experience in air pollution law, administrative law and toxic tort litigation, Wallace King Domike & Reiskin (“WKDR”) has positioned itself to assist our clients with strategic planning on this fundamental issue. The firm has invested considerable resources building a solid base of knowledge on climate change law, and remains committed to staying abreast of legal developments in this area. We recognize the significant impacts that regulations and litigation related to climate change may have on our clients, and have invested accordingly to best prepare to assist you in this time of uncertainty.



II. Background

There remains little doubt that sources of greenhouse gas emissions in the United States will face new obligations to curb their emissions in the future. The question is not whether this will occur, but when and how. Ratification of the Kyoto Protocol would be the most obvious driver of new legislation to reduce GHG emissions, as it would mandate a federal response to this issue. However, ratification of the Protocol remains uncertain, with continued fierce opposition to a mandate on the United States that is not matched by similar mandates on other large, industrialized nations, such as China. Other efforts to adopt legislation mandating reductions in GHG emissions often are seen as backdoor attempts to implement the Kyoto Protocol, and face the same opposition. While a potential for additional turnover in Congress could lead to a shift in this train of thought, for the time being the greatest potential for new regulations on GHG emissions is emerging from existing authorities – most particularly, the Clean Air Act.

Much of the increased potential for regulation of greenhouse gases, such as CO₂, under the Clean Air Act stems from the U.S. Supreme Court’s April 2, 2007 decision in *Massachusetts v. EPA*, 549 U.S. ____ (2007). This decision reversed a federal appeals court ruling that upheld a finding by EPA that GHG emissions are not subject to regulation under the Clean Air Act. EPA’s finding was prompted by a petition filed by several states and environmental groups demanding that EPA undertake rulemaking to regulate GHG emissions from mobile sources. EPA denied the petition in 2003, concluding: (1) it did not have statutory authority to regulate GHG emissions from motor vehicles; and (2) even if it did have such authority, it was declining to exercise that authority at that time.¹

On the first argument, the Court rejected EPA’s position, ruling that CO₂ is an “air pollutant” as that term is defined in the Clean Air Act, and further that EPA “has the statutory authority to regulate the emission of such gases from new motor vehicles” under the statute.² On EPA’s second point – that if it does have authority to regulate CO₂, the agency was exercising its discretion not to do so at this time – the Court curtailed the amount of discretion the agency has in making this determination, and remanded the matter to EPA. It concluded: “While the statute does condition the exercise of EPA’s authority on its formation of a ‘judgment,’ that judgment must relate to whether an air pollutant ‘cause[s], or contribute[s] to, air pollution which may reasonably be anticipated to endanger public health or welfare’... If EPA makes a finding of endangerment, the Clean Air Act requires the agency to regulate emissions of the deleterious pollutant from new motor vehicles.”³

The case was remanded to EPA with instruction that the agency make a determination as to whether an endangerment finding is necessary, and further that EPA “ground its reasons for



action or inaction in the statute.”⁴ As noted, EPA’s reasons must relate solely to the question of whether greenhouse gases “cause[s] or contribute[s] to air pollution, which may reasonably be anticipated to endanger public health or welfare.”⁵ The court further refined this determination to a question of whether GHG contribute to climate change, noting “[u]nder the terms of the Clean Air Act, EPA can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do.”⁶

Although EPA initially announced that it would make a determination with respect to an endangerment finding by the end of 2007, the agency has yet to act. In fact, it has since waffled considerably on the subject. EPA Administrator Stephen Johnson stated initially that the agency would propose regulations addressing GHG emissions from motor vehicles, but did not say when. The agency later indicated that such a rulemaking may no longer be necessary due to the enactment of energy legislation in 2007 that sets tighter corporate average fuel economy (CAFE) standards for cars and trucks.⁷ In the latest development, Administrator Johnson told members of Congress that EPA will instead undertake an effort to solicit public input on a strategy for regulating GHG emissions from all sources, through the use of an advance notice of proposed rulemaking (ANPRM). He noted that in considering how to address the mandate in *Massachusetts v. EPA*:

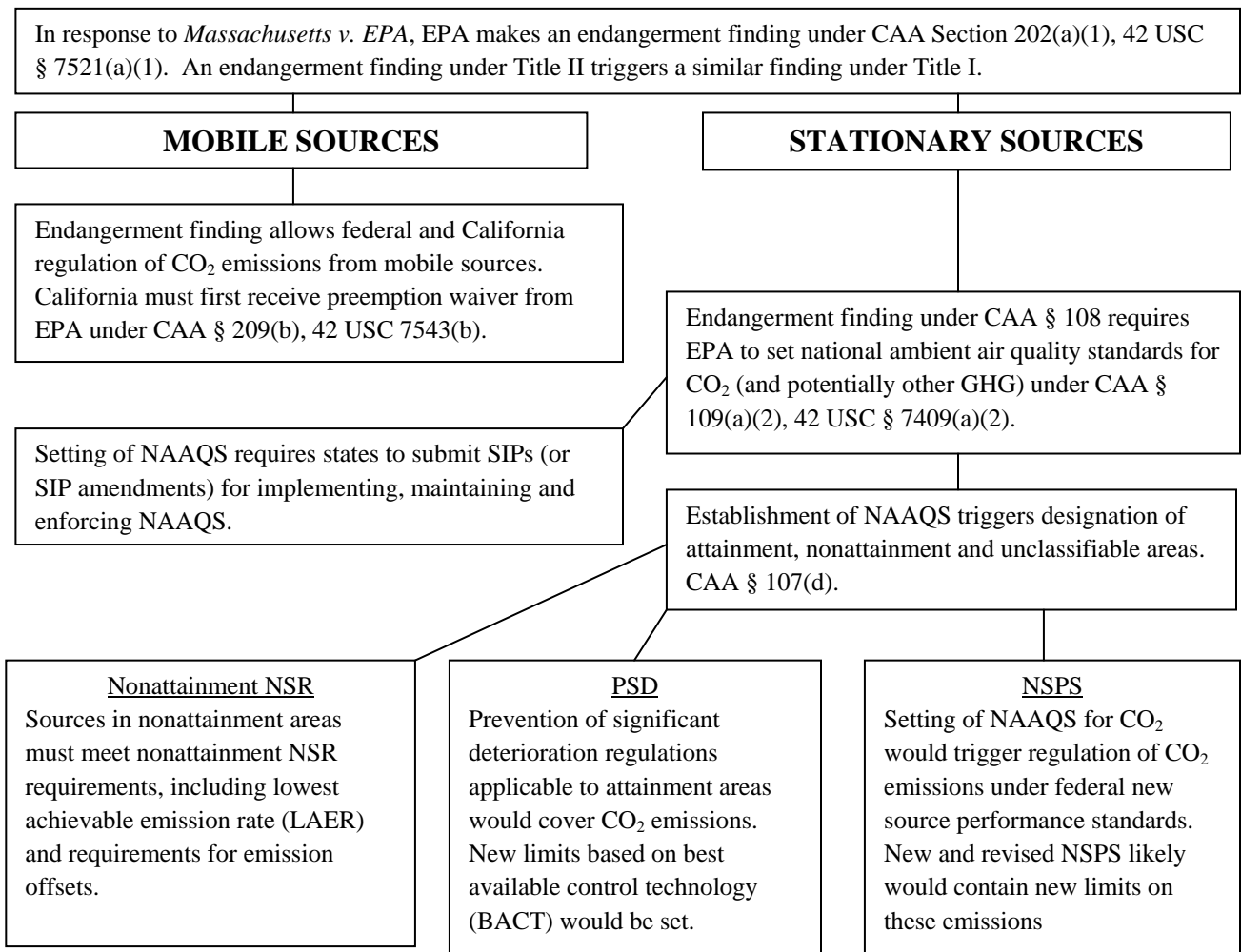
EPA has gone beyond the specific mandate of the Court under section 202 of the Clean Air Act and evaluated the broader ramifications of the decision throughout the Clean Air Act. This review has made it clear that implementing the Supreme Court’s decision could affect many sources beyond just the cars and trucks considered by the Court, including schools, hospitals, factories, power plants, aircraft and ships...During this review, I considered the option of soliciting public input through an Advance Notice of Proposed Rulemaking (ANPR) as the Agency considers the specific effects of climate change and potential regulation of greenhouse gas emissions from stationary and mobile sources under the Clean Air Act. I have concluded this is the best approach given the potential ramifications.⁸

According to Johnson, the ANPR will “present and request comment on” available science regarding the “specific and quantifiable effects” of GHG, which will be relied upon in making the endangerment finding. The agency also will be seeking comment, however, on “the implications of this finding with regard to the regulation of both mobile and stationary sources.”⁹



There is some question whether this approach is legally permissible, given that the mandate from the Court was to make a determination on endangerment independent of other considerations, such as impacts on potentially regulated sources. In any event, the agency will remain under intense pressure from states and public health groups to make an endangerment finding. In fact, more than a dozen states and environmental groups have already filed a lawsuit in federal court seeking an order that would require EPA to make an endangerment finding within 60 days. That litigation was filed April 2, 2008.¹⁰ In addition, there is a high likelihood that the change in the Administration in 2009 will lead to a change in EPA’s approach of delaying a decision on this issue. The potential ramifications of EPA’s making an endangerment finding are set forth in the Table 1. Additional, more detailed discussion of these ramifications follows.

TABLE 1
Potential Ramifications of Carbon Dioxide Endangerment Finding





III. Regulation of Greenhouse Gases from Mobile Sources

A. Impact of Endangerment Finding Under Clean Air Act

In the event EPA makes a determination under CAA Section 202 that CO₂ or other GHG emissions from motor vehicles endanger public health or welfare, the agency will be compelled to establish GHG emissions standards for motor vehicles. The statute provides that the Administrator “*shall* by regulation prescribe... standards applicable to the emission of any air pollutant from any new class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”¹¹ As noted above, the current Administration’s unwillingness to regulate greenhouse gas emissions under the Clean Air Act – as reflected by both its position in the *Massachusetts v. EPA* litigation and its decision to deny California a waiver under the statute allowing the state to regulate GHG emissions from automobiles – likely will delay action on making an endangerment decision in the near term. Assuming, however, that this or a future Administration makes such a finding, the next step in meeting the statutory mandate would be promulgating regulations.

B. Approaches to GHG Regulations For Mobile Sources

Two approaches for regulating GHG emissions from motor vehicles have emerged in recent years. The first approach, which is embodied in the 2007 Energy Bill, would control GHG emissions through fuel efficiency. By setting more stringent corporate average fuel efficiency standards, regulators would force the manufacture of more fuel-efficient vehicles, which in turn would reduce the amount of fossil fuels combusted and thereby lower the amount of greenhouse gases emitted. The second approach, which has been adopted by California, would set direct limits on emissions of “Greenhouse Gas,” which the state defines to include carbon dioxide, methane, nitrous oxide and hydrofluorocarbons.¹²

1. California Standards

California has adopted regulations for greenhouse gas emission from passenger cars, light-duty trucks, and medium-duty vehicles. As explained below, these standards are currently unenforceable, as EPA has refused to grant a necessary waiver lifting the preemption provisions of the Clean Air Act, which otherwise bar states from regulating emissions from new motor vehicles. In addition, the state has not, as of yet, adopted GHG regulations for heavy-duty vehicles, although it is considering regulations designed to improve the fuel efficiency of on-highway trucks through measures to improve aerodynamic drag and rolling resistance. In the



event California chooses to regulate GHG emissions from heavy-duty vehicles, the state's existing motor vehicle standards likely will serve as a model.

a. California Motor Vehicle Standards

California regulates greenhouse gas emissions on a grams per mile of "CO₂ equivalent" basis, with the CO₂ equivalent value determined by a formula that accounts for each of the regulated greenhouse gases.¹³ The gases accounted for under California's definition of "greenhouse gas," and thus factored into the CO₂ equivalent value, are carbon dioxide, methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons. Hydrofluorocarbons are controlled through regulation of vehicle air conditioning systems, by a complicated formula for establishing "A/C emission allowances." Manufacturers are then required to use test procedures (the Federal Test Procedure for "city" driving, and a separate Highway Test Procedure, for "highway" driving) to determine emissions of the various GHG. CO₂ equivalent value is then determined using the following formula:

$$\text{CO}_2 \text{ Equivalent Value} = \text{CO}_2 + 296 \times \text{N}_2\text{O} + 23 \times \text{CH}_4 - \text{A/C Direct Emissions Allowance} - \text{A/C Indirect Emissions Allowance.}$$

For passenger cars and light-duty trucks below 3,750 lbs, the regulation sets a fleet-average limit of 323 g/mile of CO₂ equivalent beginning in 2009, and ratchets this limit down over the following seven years to a limit of 205 g/mile in 2016. For light-duty trucks between 3,751 lbs and 8,500 lbs, and for medium duty passenger vehicles, the regulation sets a fleet-average limit of 439 g/mile CO₂ equivalent in 2009, which is ratcheted down over seven years to a limit of 332 g/mile in 2016.¹⁴ The regulation also allows for generation of GHG emission credits, thereby allowing emissions averaging. As noted, California has not established GHG regulations for heavy-duty on-highway, non-road or marine engines. However, the passenger vehicle and light-duty truck regulations signal a possible mechanism for regulating additional engines, including diesel engines in trucks, buses, non-road equipment, and marine applications.

b. California Waiver and Related Litigation

Section 209 of the Clean Air Act requires California to obtain a waiver of federal preemption from EPA before it can enforce its own motor vehicle emission standards. Furthermore, the state must "determine" that its standards will be, in the aggregate, at least as protective of public health and welfare as applicable federal standards. EPA may not grant a waiver if it finds: (1) California's determination is arbitrary and capricious; (2) California's regulation is not necessary "to meet compelling and extraordinary conditions," or (3) the standards are otherwise inconsistent with the Clean Air Act.¹⁵



On December 21, 2005, ARB submitted to EPA a Request for Waiver of Preemption with respect to its GHG regulation. On December 19, 2007, after holding a series of public hearings on the matter, EPA Administrator Stephen Johnson denied the waiver request. He concluded that the waiver was inappropriate because greenhouse gases “are fundamentally global in nature,” and the challenge presented by climate change “is not exclusive or unique to California.”¹⁶ Administrator Johnson concluded that “[i]n light of the global nature of the problem of climate change, I have found that California does not have a ‘need to meet compelling and extraordinary conditions.’”¹⁷ The State of California has since sued EPA over its decision to deny the state’s waiver request, and that litigation is pending. As it stands, California’s GHG standards are unenforceable in the absence of a waiver. However, a reversal of EPA’s current position – either by the courts or under a new Administration – is entirely possible.

It is worth noting that in the event EPA’s decision is overturned by the courts, or reversed by the Agency itself, this likely will pave the way for future regulation by California of other mobile sources, including diesel engines. Although California is required to obtain a waiver for any new standard regulating emissions from motor vehicles, the state’s past practice (often with the blessing of EPA) has been to pass regulations under the guise of having them fit within an existing preemption waiver. Therefore, if EPA were to waive preemption of California’s GHG regulation with respect to passenger and light-duty vehicles, the state likely will consider such a waiver as broad enough to cover GHG regulations for other types of engines, vehicles or equipment.

It also bears noting that concerns over GHG emissions also are driving, at least in part, greater regulation of in-use vehicles and engines – which may not be subject to the preemption provisions of the Clean Air Act. Many states, for instance, have adopted regulations that prohibit prolonged idling of diesel engines. Although these measures are primarily targeted at reducing emissions of particulate matter, the benefits associated with contemporaneous reductions in GHG emissions have clearly played a role in decisions to adopt these regulations. The California Air Resources Board, for instance, cited GHG reductions as a basis for adopting idling restrictions in 2005.¹⁸ Similarly, California has adopted new technology-based regulations that limit emissions from in-use non-road equipment (13 CCR § 2449 *et seq.*), and had proposed similar regulations for medium and heavy-duty on-highway vehicles (proposed 13 CCR § 2025 *et seq.*). With respect to the latter, the stated purpose of the regulation is to “reduce emissions of diesel particulate matter (PM), oxides of nitrogen and other criteria pollutants, and greenhouse gases from in-use on-road diesel-fueled vehicles.”¹⁹



c. Adoption of the California Standards by Other States

EPA’s authority to waive preemption extends only to California, and all other states are unequivocally preempted from adopting emissions regulations for new motor vehicles or motor vehicle engines. Other states, however, may “opt-in” to California standards for which EPA has granted a waiver. Two conditions apply: (1) the standards adopted by other states must be identical to California’s, and (2) states must provide at least two years of lead-time between adoption of the standards and the enforcement of them.²⁰

There is substantial and growing interest among states in adopting California’s motor vehicle standards. To date, at least 16 states have either passed laws adopting the regulations, or have signaled an intent to do so. These states include: Arizona, Colorado, Connecticut, Florida, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont and Washington.²¹ Of course, these regulations suffer the same fate as California’s if EPA’s refusal to grant a waiver survives challenge or is not overturned by a future Administration. By the same token, a reversal of EPA’s decision will open the door for unfettered adoption of California’s regulation. In addition, once California passes GHG regulations for other sources, other states are likely to follow – adopting the same logic that California adopts with respect to relying on existing waivers to justify future regulations, namely that they are all part of the same regulatory scheme.

2. 2007 Federal Energy Act

As part of its justification for refusing to grant California a waiver for its GHG regulation, EPA has pointed to Congress’ adoption of the “Energy Independence and Security Act of 2007” (the “Energy Act”), which sets tighter CAFE standards for cars, and new standards for heavy-duty vehicles. EPA considers this legislation a “national approach to this national challenge,” which is superior to California’s state-based approach.²² Unlike California’s standard, which sets tailpipe emissions standards, the Energy Act seeks to reduce GHG emissions by decreasing fuel consumption. It requires the Department of Transportation, in consultation with EPA, to establish new regulations for passenger and non-passenger automobiles sold in the United States that set more stringent CAFE standards beginning in 2011. DOT must then increase the CAFE standard over the course of the following nine years so as to eventually establish a CAFE standard of 35 mpg for model year 2020.²³

Unlike California’s regulation, however, the Energy Act also establishes new requirements for medium and heavy-duty on-highway vehicles and work trucks. The statute requires DOT, in consultation with EPA and the Department of Energy, to adopt and implement “appropriate test methods, measurement metrics, fuel economy standards, and compliance and enforcement protocols that are appropriate, cost-effective, and technologically feasible for



commercial medium- and heavy-duty on-highway vehicles and work trucks.”²⁴ The statute, however, also provides a fairly generous timeline for adopting and enforcing these regulations.

Timing for the adoption of new regulations is tied to the completion of a study by the National Academy of Sciences of technologies available for improving fuel economy in medium and heavy-duty vehicles. The statute requires DOT to enter into an agreement with NAS “as soon as practicable” after the enactment of the Energy Act, and further requires NAS to complete the study within one year of the date of the agreement. DOT must then establish fuel economy standards within two years of the completion of the NAS study. Finally, DOT’s regulations must provide for a minimum of four full model years of regulatory lead time and three full model years of regulatory stability,²⁵ meaning the standards cannot take effect for at least four years after they are adopted and may not be amended for the following three years. Based on this schedule, new fuel economy standards for medium and heavy-duty vehicles will not be adopted until 2015 at the earliest.

C. Greenhouse Gas Reporting Rule

Under the FY 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), EPA was directed to promulgate regulations requiring the mandatory reporting of greenhouse gas emissions “above appropriate thresholds in all sectors of the economy.” According to the Explanatory Statement accompanying the law, it mandates that EPA require reporting from “upstream production and downstream sources, to the extent that the Administrator deems it appropriate.”²⁶ The law directs EPA to rely on existing reporting authorities under the Clean Air Act, which include Section 208 of the Act, related to data collection, measurement and recordkeeping for mobile sources. At this juncture, based on the agency’s briefing materials it does not appear that EPA is focusing on mobile sources. Rather, it considers upstream sources generally to be “fossil fuel and chemical producers and importers,” and downstream sources generally to be “direct emitters – large industrial facilities.”²⁷ However, this rule should be monitored by all sectors of the industry. Under the law, EPA is directed to issue a proposed rule by September 2008, and a final rule by June 2009.

D. Potential for Additional Future Regulation of Mobile Source GHG Emissions

Notwithstanding the position of the current Administration on regulating GHG emissions from motor vehicles, it is now clear that EPA has more authority than ever before to address this issue. The *Massachusetts v. EPA* decision not only affirmed EPA’s authority to regulate GHG emissions under the Clean Air Act, but also directed the agency to determine whether GHG emissions from vehicles endanger public health or welfare. This determination is divorced from



any cost/benefit analysis. It vests substantial power in the agency to decide whether, and if so, how, to regulate GHG emissions for motor vehicles. This, coupled with the Supreme Court's mandate that the agency's decisions be given deference where Congress has clearly delegated authority to an agency, unless such decisions are "arbitrary, capricious, or manifestly contrary to the statute," leaves the door wide open for EPA to make an endangerment finding and subsequently regulate GHG emissions from mobile sources.²⁸

As political forces continue to play a critical role in the debate over climate change, the findings and conclusions of the current Administration are not a reliable indicator that EPA will refrain from regulating GHG emissions under the Clean Air Act. In addition, even if EPA does not reverse its current course, there remains a very real possibility that the courts will. At this juncture, it is not a question of whether EPA will act, but when.

IV. Regulation of Greenhouse Gases from Stationary Sources

The question of whether EPA will regulate greenhouse gas emissions from stationary sources under the Clean Air Act is more complicated. What is certain, however, is that the agency will develop rules requiring reporting of greenhouse gas emissions. As explained below, Congress has directed EPA to adopt such regulations by June 2009 through recently enacted legislation. This means that companies will, at a minimum, have to begin inventorying their greenhouse gas emissions.

When it comes to GHG emissions, however, unlike mobile sources, the statutory framework established under the Clean Air Act for regulating emissions from stationary sources does not easily lend itself to controlling these particular pollutants. By the same token, stationary sources face a greater risk of regulation under authorities other than the Clean Air Act, such as state law, due to the absence of definitive preemption provisions in the federal statute. For instance, the emergence of state GHG laws and regional compacts, such as the Regional Greenhouse Gas Initiative, could result in stationary sources ultimately being subject to a variety of requirements at the federal, state and even potentially local level. Absent coordination, companies could face complicated challenges in attempting to comply with multiple, independent requirements. Adoption of the Kyoto Protocol, which would force regulation of greenhouse gases at the federal level, could mitigate this problem. However, at this time there is no indication that the United States is close to being in a position to sign and ratify the treaty. As it appears ratification of the Kyoto Protocol by the United States is neither immediate nor concrete, we have not addressed it further in this analysis. Rather, this report focuses on legal developments that present the most proximate risk of legal liability with respect to emissions of greenhouse gases.



A. Impact of Endangerment Finding Under Clean Air Act

EPA currently is not under any court-ordered obligation to make a determination about whether greenhouse gases from *stationary* sources endanger the public health or welfare. The finding mandated by *Massachusetts v. EPA* is limited to emissions from mobile sources, as regulated under Section 202 of the Clean Air Act. Section 108 of the Act, however, requires EPA to make a similar determination with respect to emissions from stationary sources by mandating that the agency establish national ambient air quality standards for any “air pollutant – emissions of which, in [EPA’s] judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare...” Any conclusion EPA reaches with respect to GHG emissions under Section 202 will necessarily drive a similar determination under Section 108. Thus, if EPA determines that GHG emissions from mobile sources do endanger the public health and welfare, but fails subsequently to reach the same conclusion under Section 108, states and public health groups will almost certainly sue the agency to force a similar determination under Section 108.

1. The NAAQS Process & Problem (Square Peg in Round Hole)

Section 108 of the Clean Air Act separates the determination of whether an air pollutant presents an endangerment to public health and welfare from the decision-making process for determining how to regulate such pollutants. EPA must first determine – in a wholly separate and independent analysis – whether an air pollutant presents an endangerment. Once such a determination is made, emissions of the air pollutant become subject to regulation under the Clean Air Act. Because there is no consideration in the endangerment finding process of whether the established Clean Air Act mechanisms for regulating air pollutants are appropriate for a specific air pollutant, EPA could impose an ill-fitting statutory scheme on a pollutant for which the scheme clearly was not designed. Such appears to be the case with greenhouse gases.

Once EPA has determined that an air pollutant presents an endangerment, the agency must establish “air quality criteria” for the pollutant, which include information such as variable factors that may alter the impact of the pollutant on the public health or welfare, and whether the pollutant interacts with other pollutants to produce an adverse effect on health or welfare.²⁹ Once EPA has established air quality criteria, it is required under Section 109 of the Act to set primary and secondary national ambient air quality standards (“NAAQS”) for the pollutant. The primary NAAQS is established solely on the basis of “criteria... requisite to protect the public health” providing an “adequate margin of safety.”³⁰ Secondary standards are set at a level “requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.”³¹



Since greenhouse gases, such as CO₂, do not present an immediate health threat due to their presence in ambient air, it seems unlikely that EPA would find a basis for setting a primary NAAQS for these pollutants. The issue of climate change is more accurately characterized as a matter of “public welfare,” thus triggering the need for a secondary NAAQS for greenhouse gases. The challenge that will face EPA, however, is how to establish any NAAQS for greenhouse gases. Since the threat presented by these pollutants is their contribution to global climate change, it will be difficult to discern what ambient level of greenhouse gases at the local, regional or even national level is acceptable to protect against this phenomenon. The scientific process for establishing a NAAQS for any pollutant is often controversial, lengthy and quite complex – indeed it took EPA several years to revise the NAAQS for ozone and particulates in 1997, the last time significant revisions to these standards were made. (While EPA did recently revise the ozone standard again, the change – from 0.08 ppm to 0.075 ppm – was far less dramatic.) Given that there remains some controversy over whether climate change even results from greenhouse gas emissions, the process of developing a scientifically defensible ambient level at which greenhouse gases no longer present a threat of climate of change will be fraught with complications.

In addition, only after these standards are established (and thus after EPA has a legal mandate to set regulations controlling emissions of regulated air pollutants) does the mechanism under the Clean Air Act for actually regulating emissions come into consideration. Within one year of EPA’s establishing or revising a NAAQS, states are required to submit to EPA a list of areas within the state that do not meet the NAAQS (nonattainment areas); do meet the NAAQS (attainment areas); and/or cannot be classified on the basis of available information (unclassifiable areas).³² Based on this information, EPA is then required to promulgate attainment and nonattainment designations within two years of the setting or revising of a NAAQS.³³

The attainment status of an area is significant, as it determines which control strategies under the Clean Air Act apply. For instance, under the new source review (“NSR”) program, sources located in nonattainment areas must meet different emission control requirements than those located in attainment areas. Similarly, state implementation plans (“SIPs”), which are the mechanism states must use to ensure they comply with the NAAQS, are designed to ensure that states either are maintaining compliance with the NAAQS or are undertaking measures to ensure all areas come into compliance with the NAAQS. To properly utilize the regulatory approach established under the Clean Air Act, therefore, the government must be able to determine an acceptable ambient level of a particular pollutant and define which areas of the country are above this level and which are not. However, since the concern posed by greenhouse gases – climate change – is global in nature, the levels present in the ambient air of any one particular area are largely irrelevant. For this reason, unless the entire world is considered to be in a state of



nonattainment, the mechanism for regulating pollutants under the Clean Air Act does not fit squarely with the problems presented by greenhouse gases.

2. Impact on New Source Review Regulations

The *Massachusetts v. EPA* decision that greenhouse gases constitute air pollutants under the Clean Air Act already is having an impact on the permitting process under EPA's new source review regulations. Environmental and public health groups have challenged a number of NSR permits on the basis that they do not contain limits on greenhouse gas emissions. Overviews of certain of these decisions are set forth below. In general, however, the common thread in EPA's defense of each of these permits is that while greenhouse gases are "air pollutants" under the Clean Air Act, they are not yet regulated under the statute. EPA argues that this does not occur until the agency has undertaken and completed the standard-setting process for the NAAQS.

One assumption underlying EPA's position in these cases, however, is that the agency would presumably agree (or concede) that greenhouse gas emissions are subject to NSR requirements if EPA establishes ambient air quality standards for them. Similarly, EPA will have to set NAAQS for these pollutants if it concludes that they contribute to climate change, and climate change presents an endangerment to public health and welfare. Therefore, an endangerment finding could pave the way for future regulation of greenhouse gas emissions under the NSR program, and likely would lead to an increase in permit challenges where permits do not address greenhouse gas emissions.

The challenges associated with determining attainment and nonattainment areas for greenhouse gases also will complicate efforts to implement NSR requirements for those pollutants. The NSR provisions in the Clean Air Act distinguish between permitting sources in attainment areas and permitting sources in nonattainment areas. Sources in attainment areas are regulated under the "prevention of significant deterioration" ("PSD") program, which requires sources to obtain preconstruction permits that contain emissions limits based on the use of "best available control technology" ("BACT").³⁴ Sources in nonattainment areas, meanwhile, are subject to nonattainment NSR requirements under the Clean Air Act.³⁵ The nonattainment NSR provisions require that sources obtain and comply with permit limits representing the "lowest achievable emission rate" ("LAER"). Both BACT and LAER are defined in some detail in the statute, but as a general matter, LAER is more stringent and does not allow for the consideration of economic factors (i.e. costs). In addition, sources located in nonattainment areas are required to obtain emissions reductions from other sources in the area, sufficient to offset any new emissions the source intends to release.³⁶



One PSD permit challenge is currently pending before the Environmental Appeals Board (“EAB”) on the basis that the permits do not require BACT for certain greenhouse gases. Two others have been dismissed on procedural grounds. EAB has not yet issued an opinion regarding whether challenges to NSR permits can be raised in the absence of a NAAQS for greenhouse gas emissions, or other EPA regulations governing these pollutants.

In the Matter of ConocoPhillips: The Natural Resources Defense Council challenged a permit issued by the Illinois Environmental Protection Agency to ConocoPhillips for a coker and refinery expansion project. Though the challenge covers several aspects of the permit, NRDC specifically challenged its lack of a BACT limit for CO₂ and methane. NRDC contended that, following *Massachusetts v. EPA*, CO₂ and methane are air pollutants “subject to regulation” under the PSD provisions of the Clean Air Act. Contrary to EPA’s position, NRDC argued that a pollutant is subject to regulation as long as EPA or the states have authority to regulate it, regardless of whether they actually have exercised that authority. The Environmental Appeals Board dismissed the petition on June 2, 2008. With respect to NRDC’s argument that the permit failed to include BACT for greenhouse gases, the Board did not reach the merits of that argument and dismissed it on grounds that it was not raised during the public comment period for the permit, and thus was not properly preserved.³⁷

In the Matter of Deseret Power Electric Cooperative: The Sierra Club is challenging a permit issued to Deseret Power for the construction of a waste and coal-fired power generation facility. Sierra Club is challenging the permit on the basis that it does not contain BACT limits for CO₂, which Sierra Club contends is “subject to regulation” under the PSD provisions of the Clean Air Act. The matter still is pending before the EAB. On June 16, the Board requested that the EPA clarify its position on whether it has authority to enforce certain provisions of the Clean Air Act to require facilities to monitor CO₂ emissions.³⁸

In the Matter of Christian County Generation, 13 EAD ____, Jan. 28, 2008: As with the two previous cases, Sierra Club challenged a permit issued to the permittee for a new coal-fired power generation facility on the basis that the permit did not contain a BACT limit for CO₂. The petition was denied by EAB on procedural grounds, as Sierra Club failed to raise its concern in comments to EPA before the permit was issued.

3. Impact on New Source Performance Standards

In addition to the NSR program, EPA is under increased pressure to regulate greenhouse gas emissions under Section 111 of the Clean Air Act, which requires the agency to set new source performance standards (NSPS) for a wide variety of source categories.³⁹ These standards set emission limits and performance requirements for new and reconstructed stationary sources.



Many NSPS limit emissions of greenhouse gases by virtue of their designation as criteria pollutants under the Clean Air Act. For instance, ozone is considered a GHG, and regulation of ozone precursors, such as nitrogen oxides (NO_x) or volatile organic compounds (VOC) is common under the NSPS program. However, EPA currently does not regulate emissions of any compound by virtue of its status as a greenhouse gas under this or any other program. While methane is a common greenhouse gas, for instance, the NSPS for landfills regulates only non-methane organic compounds.⁴⁰ Similarly, EPA does not regulate emissions of CO₂ under Section 111 or any other CAA authority.

The Supreme Court's decision in *Massachusetts v. EPA* has called into question EPA's conclusion that it is not required to regulate GHG under Section 111. This section requires EPA to establish a list of "source categories" that, in EPA's judgment "cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."⁴¹ As this endangerment finding is essentially the same as that required under Sections 108 and 202 of the Clean Air Act, any determination EPA makes under Section 202, pursuant to the Court's order, will have implications for the NSPS program.

The prospect that EPA may regulate GHG under the Section 111 is more than theoretical. The agency was called upon to establish standards for CO₂ emissions from electric power plants and industrial facilities when it revisited its NSPS for these sources. In February 2006, EPA decided against setting such limits, concluding that the CAA did not require it to regulate CO₂.⁴² As a result, ten states, New York City, and the District of Columbia sued the Agency, seeking CO₂ limits on new power plants and contending that by refusing to establish standards for the control of GHG emissions from these sources, EPA failed to adequately protect public health and welfare from the harms of climate change (*New York v. EPA*, No. 06-1322).⁴³

Following the *Massachusetts v. EPA* ruling, the federal Court of Appeals for the District of Columbia Circuit, at the request of the parties, remanded the rule to EPA for further proceedings consistent with the Supreme Court's ruling.⁴⁴ The appeals court, however, declined a request by the petitioners to summarily reverse and vacate the EPA's 2006 NSPS determination that it did not have the authority to regulate CO₂ emissions under Section 111.⁴⁵ The decision in *New York v. EPA* may have broader significance in that it requires EPA to determine how *Massachusetts* should be applied to stationary sources.

EPA officials have indicated, both in court filings and in congressional testimony, that the agency does not consider the mandate in *Massachusetts v. EPA* to extend beyond requiring a determination under Section 202. In their response to the motion for vacatur in *New York v. EPA*, lawyers for the agency argued that since petitioners challenged the Agency's decision not to regulate GHG emissions based on its interpretation of Section 111 of the CAA, rather than



Section 202, the *Massachusetts v. EPA* decision had no bearing.⁴⁶ In addition, EPA Administrator Stephen Johnson, in testimony before the U.S. Senate Committee on Environmental and Public Works, stated that *Massachusetts* was limited to a section of the Act pertaining to mobile sources.⁴⁷

Since new source performance standards are only required to be revised every eight years, any decision to regulate greenhouse gases under Section 111 probably will not affect most sources subject to existing NSPS for some time. However, such a decision could have significant impacts on certain NSPS rulemakings that are pending or soon to get underway. Most significantly, in May 2007 EPA proposed a revised NSPS for petroleum refineries. The proposal did not address GHG emissions from refineries, which prompted a number of environmental groups and other entities to file comments contending that the Agency was being derelict in its duties to regulate GHGs.⁴⁸ Assuming EPA continues the course of the current administration notwithstanding the current political climate, the regulation will most certainly face a challenge similar to that of the power plant NSPS. In addition, EPA proposed revisions to the existing NSPS for Portland cement kilns on June 16, 2008 (73 FR 34702), in which it again refrained from regulating GHG emissions. Rather, the agency concluded that it is more “appropriate to consider issues related to the regulation of GHGs under the CAA: through the process EPA initiated in its March 2008 advanced notice of proposed rulemaking (discussed above).

B. Greenhouse Gas Reporting Rule

As noted above, EPA was directed by Congress to promulgate regulations establishing mandatory reporting of GHG emissions from “upstream” and “downstream” sources. It appears that this rule will be primarily, if not solely, focused on stationary sources. The new requirement, which was adopted as part of the FY 2008 Consolidated Appropriations Act, directs EPA to “require mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy.” Although it has not yet proposed regulations, EPA has initially indicated that upstream sources would be facilities such as fossil fuel and chemical producers and importers, while downstream sources would be “direct emitters.”⁴⁹ The agency has said it will “build on methods from existing mandatory and voluntary reporting systems,” such as the Title IV program (acid rain), state and regional climate change programs and registries, and industrial protocols.⁵⁰ The rule is slated for proposal in September 2008, with a final rule scheduled for completion by June 2009.



C. Other Efforts to Regulate GHG Emissions from Stationary Sources

1. State Regulations

Several states have passed legislation or signed executive orders establishing goals for the reduction of greenhouse gases from statewide sources. In addition, as mentioned above, a number also have indicated that they will opt-in to California's regulations for motor vehicles if or when a waiver of preemption for these regulations is granted. Many states also are implementing GHG reduction goals in conjunction with regional initiatives, as explained further below. The following are GHG reduction mandates that states have adopted through legislation or executive orders. Several states are considering measures, but have not adopted them as of yet and are not included.

Arizona – By executive order adopted in 2006, Arizona has established a goal of reducing GHG emissions to 2000 levels by 2020, and 50 percent below 2000 levels by 2040.

California – By statute (AB 32), California has established goals of reducing GHG emissions to 1990 levels by 2020. By executive order, the state has adopted additional goals of reducing GHG emissions to 2000 levels by 2010, and to 80 percent below 1990 levels by 2050.

Connecticut – Adopted Public Act 04-252, providing that the state shall set a goal of reducing GHG emissions to 1990 levels by 1/1/2010, to 10 percent below 1990 levels by 1/1/2020, and to 75 percent – 85 percent below 2001 levels by 2050.

Florida – By executive order, Florida established goals to reduce GHG emission to 2000 levels by 2017, to 1990 levels by 2025, and to 80 percent of 1990 levels by 2050.

Hawaii – By statute, Hawaii adopted a goal to reduce GHG emissions to 1990 levels by 2020.

Iowa – By statute (SF 485), Iowa set a goal of reducing GHG emissions by 50 percent from current levels by 2050.

Maine – By statute in 2003, Maine adopted goals of meeting the GHG reduction targets established by the Conference of New England Governors/ Eastern Canadian Premiers (see below).

New Jersey – By statute (A 3301), New Jersey has adopted goals to stabilize GHG emissions at 1990 levels by 2020, and reduce GHG emissions to 80 percent below 2006 levels by 2050.



New Mexico – By executive order, New Mexico has adopted goals of reducing GHG emissions to 2000 levels by 2012, to 10 percent below 2000 levels by 2020, and by 75 percent below 2000 levels by 2050.

Oregon – By statute (HB 3542), Oregon has established goals of arresting growth of Oregon’s GHG emission levels and initiate efforts to meet 1990 levels by 2010, achieve a reduction of 10 percent below 1990 levels by 2020, and achieve additional reductions of at least 75 percent from 1990 levels by 2050.

Vermont – By statute, Vermont has established goals of reducing greenhouse gas emissions by 25 percent from 1990 levels by 1/1/2012, by 50 percent from 1990 levels by 1/1/2028, and by 75 percent from 1990 levels by 1/1/2050.

Washington – By executive order and statute, Washington has established goals of reducing GHG emissions to 1990 levels by 2020; to 25 percent below 1990 levels by 2035; and to 50 percent below 1990 levels by 2050.

2. Regional Initiatives

Many state greenhouse gas developments also are being driven by regional initiatives designed to implement greenhouse gas reduction strategies on a multi-state basis. The following regional initiatives have been created in the United States:

Midwestern Regional GHG Reduction Accord: The Midwestern Regional GHG Reduction Accord was entered into in November 2007 by nine states: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Ohio, South Dakota, and Wisconsin. Under the Accord, the member states have agreed to establish GHG reduction targets and timeframes “consistent with MGA member states’ targets”, develop a market-based, multi-sector cap and trade program for achieving these targets, establish a system for tracking credits under the program, and develop and implement whatever additional steps are necessary to achieve the targets. The Accord provides that the signatories will develop a proposed cap-and-trade agreement within 12 months of the signing of the Accord. The Accord is available at www.midwesterngovernors.org

New England Governors/Eastern Canadian Premiers: The Conference of New England Governors/ Eastern Canadian Premiers (NEG/ECP) adopted a climate action plan in August 2001 that calls for, among other things, the establishment of a regional standardized GHG emissions inventory and sets short-term, mid-term and long-term goals for achieving reductions



in the inventory. The short-term goal would reduce regulation GHG emissions to 1990 levels by 2010. The mid-term goal would further reduce GHG emissions by at least 10 percent below 1990 emissions by 2020, but also would establish an “iterative five-year process” beginning in 2005, to adjust the goals as necessary. The long-term goal is to “reduce regional GHG emissions sufficiently to eliminate any dangerous threat to the climate,” which the plan anticipates will require reductions of between 75 percent and 85 percent from current levels. A copy of the plan is available at www.negc.org. The states represented in the conference are Connecticut, Maine, Massachusetts, Rhode Island, New Hampshire, and Vermont.

Regional Greenhouse Gas Initiative: The Regional Greenhouse Gas Initiative (RGGI) consists of several Northeast and Mid-Atlantic states, which have committed to the development of a regional cap-and-trade program to stabilize and reduce CO₂ emissions. Under the program, a regional CO₂ “budget” will be developed and allocated among the member states. The budgets for each state would then be reduced by 2.5 percent per year, beginning in 2015, such that each state’s emissions budget for 2018 would be below 10 percent of its initial base. The current RGGI member states are Connecticut, Delaware, Maine, Maryland, New Hampshire, New Jersey, New York, and Vermont. Other Canadian provinces and states, including the District of Columbia, Massachusetts, Pennsylvania, and Rhode Island, are “observers” in the process. Additional information is available at www.rggi.org.

Western Climate Initiative: The Western Climate Initiative (WCI) was initiated by five western governors in February 2007 to develop an overall GHG reduction goal for the region, develop and design regional market-based, multi-sector mechanisms for achieving these goals, and participate in a multi-state GHG registry. The initial member states were Arizona, California, New Mexico, Oregon and Washington. Two Canadian provinces, British Columbia and Manitoba, have since joined. In August 2007, the WCI member states released the group’s regional greenhouse gas reduction goal, calling for an aggregate reduction of 15 percent below 2005 levels by 2020. Additional information is available at www.westernclimateinitiative.com

V. Tort Litigation Related to GHG Emissions

A. Overview

Although tort litigation over greenhouse gases/global warming has been limited to date, more complaints can be expected in the future. A recent electronic database search turned up approximately 75 law review articles and symposium pieces discussing possible tort claims for global warming, indicating that the area is receiving significant attention from the plaintiffs’ bar. Given that many of the potential targets of such litigation are successful multinational



corporations with “deep pockets,” it can be expected that the plaintiffs’ bar will continue to pursue these types of cases.

Plaintiffs’ cases to date have tended to be grounded in public nuisance theories. Thus far, efforts to impose liability on defendants premised on their alleged contribution have been unsuccessful. Federal courts in New York and California have dismissed global warming claims based on the political question doctrine, finding that issues involving global warming are inappropriate for resolution by the judiciary. Nevertheless, the plaintiffs’ bar is resilient and creative, and is expected to continue to bring new theories and new cases in hospitable jurisdictions in hopes of obtaining favorable rulings.

B. Significant Rulings

The following are some of the more significant rulings handed down in litigation regarding greenhouse gas emissions.

- *Connecticut v. Am. Elec. Power Co.*, 406 F. Supp. 2d 265 (S.D.N.Y. 2005): Eight states and the City of New York brought suit against five electric utilities that operated coal-fired power plants they claimed were significant contributors to global warming. Plaintiffs’ claims were grounded in federal common law and state law nuisance theories. The court dismissed the complaint, holding that it presented non-justiciable political questions that were inappropriate for resolution by a court. The court particularly focused on “the impossibility of deciding [the case] without an initial policy determination of a kind clearly for nonjudicial discretion.” *Id.* at 272. That is, the court found that the hotly-contested and unresolved political and policy issues surrounding global warming required “identification and balancing of economic, environmental, foreign policy, and national security interests” and were more appropriate for resolution by the elected branches of government rather than by a court. *Id.* at 274. The dismissal is currently on appeal before the United States Court of Appeals for the Second Circuit.
- *California v. Gen. Motors Corp.*, 2007 U.S. Dist. LEXIS 68547 (N.D. Cal. 2007): The State of California sought damages from various automakers for creating and contributing to global warming under a public nuisance theory. The case differed from *Connecticut v. AEP* in that it sought money damages, rather than simply injunctive relief, for costs the state had incurred to study, plan for, monitor, and respond to impacts already caused, and likely to occur, as a result of global warming. Nevertheless, the court also dismissed the case on political question grounds, holding that it would be required to make initial policy decisions about whether global warming constituted an “unreasonable interference with a public right,” and what levels of carbon dioxide emissions were “unreasonable.” It would require the court to balance the competing interests of reducing global warming emissions on the one hand, and the interests of advancing and preserving



economic and industrial development on the other. The court also pointed to the fact that the issues involved were better resolved by the political branches of government, noting the lack of judicially manageable standards.

- *Comer v. Nationwide Mut. Ins. Co.*, 2006 U.S. Dist. LEXIS 22123 (S.D. Miss. 2006): Plaintiffs brought a class action suit against a variety of defendants, including major oil and chemical refiners, alleging that their operations led to global warming and contributed to the weather patterns that caused Hurricane Katrina. The district judge dismissed certain claims on procedural grounds, but went on to express extreme skepticism that valid tort claims could be asserted: “[T]here exists a sharp difference of opinion in the scientific community concerning the causes of global warming, and I foresee daunting evidentiary problems for anyone who undertakes to prove, by a preponderance of the evidence, the degree to which global warming is caused by the emission of greenhouse gasses; the degree to which the actions of any individual oil company, any individual chemical company, or the collective action of these corporations contribute, through the emission of greenhouse gasses, to global warming; and the extent to which the emission of greenhouse gasses by these defendants, through the phenomenon of global warming, intensified or otherwise affected the weather system that produced Hurricane Katrina.” The judge concluded by reminding plaintiffs of their obligations under Fed. R. Civ. P. 11.

Another recently-filed global warming case bears monitoring closely. *Native Village of Kivalena v. ExxonMobil Corp.* (U.S. Dist. Ct., N.D. Cal.), was brought in federal court in San Francisco on behalf of Native Alaskans against various oil and energy companies and utilities, alleging that global warming resulting from the companies’ operations was causing the destruction of an ice shelf that protected their ancestral village, requiring the village to be evacuated and relocated. The case asserts claims based on federal and state common law nuisance theories, and also asserts claims for civil conspiracy and concert of action. The action was instituted by a number of active members in the national plaintiffs’ trial bar, indicating that more such actions may follow. The case is still in its early stages.

C. Additional Defenses to Global Warming Litigation

As indicated above, federal courts have dismissed two global warming lawsuits brought by state governments on political question grounds, finding that resolution of such claims depends on initial policy determinations that are more appropriately made by the elected branches of the federal government. As more political action is taken on global warming issues, the political question doctrine may lose some of its power, because the “initial policy determinations” necessary to define the issues may be reached. Other strong defenses to global warming litigation may include:



Federal Preemption: Federal laws like the Clean Air Act contain provisions that may preempt efforts to prescribe, even through tort litigation, standards for engines, fuels, and other products that differ from those enunciated in federal statutes. *See, e.g., Geier v. Am. Honda Motor Co.*, 120 S. Ct. 1913 (2000). To the extent a defendant's conduct was consistent with federal laws or regulations that have preemptive effect on state law tort claims, compliance with those laws or regulations may be a defense to tort claims for global warming. Other courts have held that nuisance claims based on air pollution allegations may be preempted by the federal Clean Air Act. *See United States v. Kin-Buc, Inc.*, 532 F. Supp. 699 (D.N.J. 1982); *Save Our Summers v. Washington State Dep't of Ecology*, 132 F. Supp. 2d 896 (E.D. Wash. 1999); *Nez Perce Tribe v. Idaho Power Co.*, 847 F. Supp. 791 (D. Idaho 1993).

Lack of Causation: The causation requirement of various tort claims may present an insurmountable hurdle to recovery in most cases. Plaintiffs will need to prove that the injury they claim was proximately caused not only by global warming, but by the defendants' contribution to global warming. Any particular defendant's contribution to the phenomenon of global warming is likely to be *de minimis*. For example, the five power plant defendants sued in the *Connecticut v. AEP* matter were alleged to be responsible for no more than 2.5% of worldwide carbon emissions. 406 F. Supp. 2d at 268. Tying any one defendant's action to any particular plaintiff's alleged injury, therefore, seems unlikely. Plaintiffs may seek to avoid certain causation requirements through devices like market share liability or concert of action, but those types of theories generally are disfavored, and frequently will not be applied unless a "substantial share" of potentially liable defendants is before the court. Because global warming is, of course, a global phenomenon, and carbon dioxide emissions are generated by a host of different sources, many of which are in foreign countries and may be operated by foreign governments, it seems highly unlikely that a plaintiff would be able to join a "substantial share" of potentially liable defendants.

Federal common law nuisance: Several global warming plaintiffs have grounded their complaints in "federal common law nuisance." A number of courts have rejected the notion that such a doctrine exists for air pollution claims. *See, e.g., National Audubon Soc'y v. Dep't of Water*, 869 F.2d 1196 (9th Cir. 1988).

State law may provide additional defenses. *See, e.g., Alaska Stat. § 09.45.230*, which contains a prohibition on nuisance actions for air emissions where the emissions are expressly authorized by a statute or regulation, license, permit or order issued by the state or federal government, or a court order. Such defenses need to be evaluated and assessed on a case-by-case basis.

VI. Strategies for GHG Planning

A. Identify GHG Inventories and Cost-Effective Methods for GHG Reductions

The obvious first step in developing an effective strategy for managing GHG regulations and limiting GHG-related liability is to identify and quantify GHG emissions from particular product lines or facilities. *In fact, as noted above, this will become a mandatory requirement for many sources once EPA promulgates mandatory GHG reporting requirements.* What may be less obvious, however, is how this process will help companies maximize their GHG reductions in the most cost-effective manner. Companies that develop inventories of their GHG emissions will be better positioned to advocate for emission-reduction strategies that are tailored to their particular situations.

For instance, not all greenhouse gases are considered equal in terms of their global-warming potential. Methane (CH₄) is estimated to have more than 20 times the global warming potential than carbon dioxide over a 100-year period, according to EPA.⁵¹ Nitrous Oxide (N₂O) is estimated to have more than 300 times the global warming potential than carbon dioxide for the same period, while various fluorocarbons have several thousand-times the global warming potential as CO₂.⁵² While there may be some debate as to the scientific accuracy of global warming potentials, it is clear that differences between different greenhouse gases influence how they are regulated. As noted above, for instance, California's automobile emissions regulation attempts to normalize these differences by creating and regulating "CO₂ equivalent" emissions – which are derived from a formula that accounts for the global warming potential of certain gases.

This type of an approach may present advantages for companies that emit, or produce products that emit, various types of greenhouse gases. A facility that would incur substantial expense trying to limit its CO₂ emissions, for instance, might be able to reduce emissions of methane at far less expense. Since the latter pollutant has greater global warming potential, a facility implementing a carbon-equivalent emissions strategy would get more credit per unit of reduction for these pollutants than it would trying to cut its CO₂ emissions. It would be in the interest of this company, therefore, to promote regulatory approaches that account for the increased global warming potential of certain greenhouse gases, especially if they can reduce emissions of these gases at lower expense.

Conversely, a company or industry that emits primarily CO₂ could find itself at a competitive disadvantage under this scenario, especially if market-based mechanisms are adopted for reducing GHG emissions. Such a company may have a greater interest in promoting



approaches that place an emphasis on targeting greenhouse gases with the greatest global warming potential first.

These examples necessarily oversimplify how the regulation of GHG may impact different companies in different ways. The larger point is that companies will be better positioned to manage GHG-related liabilities, and informing the development of GHG-related regulation if they have a comprehensive understanding of both their own emissions inventory and the most cost-effective methods for reducing that inventory.

B. Engage In the Rulemaking Process

Despite the emergence of economic opportunities associated with reducing GHG emissions, federal and state regulations still are going to be the primary drivers behind GHG reductions. At the moment, GHG regulation is in its infancy in the United States. For companies that have developed strategies for reducing GHG emissions at their facilities or from their products, now is the opportune time to get involved in the rulemaking process. EPA historically relies on the technological achievements of industry leaders as the foundation for its regulations. This approach allows the agency to justify its regulations on the basis that they are proven to be achievable. What this also means, however, is that a company may be subject to regulations that are based largely on what their competition already has achieved.

A company that can implement GHG reduction strategies and technologies that best fit its individual needs obviously is in a more enviable position than a company that is forced to comply with a federal or state mandate designed for an industry, but not necessarily a particular source. For this simple reason, it makes sense for companies to develop and implement GHG reduction strategies that are tailored to their own facilities or products and then use this knowledge to influence the development of GHG regulations.

Opportunities to engage in the rulemaking process are increasing. For instance, as noted above, EPA has announced that it will solicit comments on the development of a federal climate change strategy in response to the *Massachusetts v. EPA* ruling. In addition, greenhouse gases will continue to garner attention from EPA as it implements its existing programs. As new source performances standards are revised, for instance, EPA will face increased pressure to include new mandates for GHG controls, especially if the current Administration's ANPRM approach is abandoned or successfully challenged. The rulemaking process associated with these measures will present another opportunity for influencing outcomes. Companies should be prepared to submit comments and get involved in the early stages if they hope to have a seat at the table. Companies relying on industry associations should be careful to ensure that their



particular concerns are adequately represented. As GHG regulation is still in its infancy, and strategies for reducing GHG emissions may vary significantly – even within an industry – companies should be diligent in ensuring their particular interests and concerns are placed before federal and state agencies.

C. Maximize Benefits from Existing and Developing Emissions Trading Mechanisms

Most state GHG initiatives involve some form of cap-and-trade system for reducing GHG emissions, and federal approaches ultimately may take a similar course. These systems function by establishing goals for overall emission reductions from a particular category, or categories, of sources (the “cap”), and allocating emissions under the cap to individual sources. Sources that reducing their emissions to levels below their allocation can then generate emission “credits”, which can be traded or sold to other sources. Sources that exceed their allocation may comply by purchasing credits from other sources. These programs, therefore, present not only new GHG mandates, but also economic opportunities associated with GHG reductions.

Numerous programs already exist for generating, selling and purchasing air pollution credits, both in the United States and around the world. A complete discussion of these programs would require an entire report of its own. For purposes of this report, however, the salient point is that such programs exist and present additional opportunities for offsetting the costs of achieving GHG reductions.

D. Planning for Tort Litigation

As noted above, attempts by plaintiffs to bring tort litigation over the effects of climate change so far have largely met with failure. This does not necessarily mean, however, that these cases will go away. As both science and the law advance with respect to climate change, plaintiffs’ lawyers will continue to both explore new theories and press old ones in hopes of finding a sympathetic court. Companies should continue to monitor these cases closely. In addition, if climate change-related tort litigation succeeds in certain forums, companies that have taken pro-active steps to address greenhouse gas emissions will fare better than those that could be perceived as dragging their feet. While tort litigation may not be a driving force, on its own, for developing comprehensive GHG reduction strategies, it does provide an additional incentive for such efforts.



VII. Conclusion

The prospects for new regulations on greenhouse gas emissions have evolved from a possibility to inevitable. This is true despite Congress' persistent failure to ratify the Kyoto Protocol and general inaction at the federal level. Regulatory efforts by states and successes by both states and public health and environmental groups in the courts have set the stage for more comprehensive regulation at all levels. In addition, the issue of climate change has taken on increased urgency in the political arena. This momentum, if coupled either by a receptive Administration or a receptive Congress, likely will result in sweeping new efforts to reduce GHG emissions. Even if the next Administration continues to procrastinate, it will not be able to avoid litigation over climate change in light of the Supreme Court's decision in *Massachusetts v. EPA*. And, in light of that decision, it seems unlikely that EPA would prevail.

Given the latest legal developments and current state of affairs with respect to climate change, companies should be positioning themselves to address greenhouse gas emissions by developing comprehensive climate change strategies. Such strategies should include an assessment of GHG inventories – whether associated with facilities or products – and should identify the most cost-effective methods for achieving meaningful reductions. Companies also should include plans for engaging in efforts by both federal and state governments to develop GHG regulations, both through the rulemaking process and through company-initiated meetings with regulators. Finally, strategies should consider both economic opportunities associated with GHG reductions, such as emissions credit generation, and potential liabilities associated with GHG emissions, such as climate-related tort litigation.

¹ 68 *Fed. Reg.* 52,922 (Sept. 8, 2003)

² *Massachusetts v. EPA*, Slip. Op. at 30.

³ *Id.*

⁴ *Id.* at 32.

⁵ *Id.* at 30, citing 42 U.S.C. §7521(a)

⁶ *Id.*

⁷ "Johnson Says EPA Will Address Court Ruling, Conduct Rulemaking on Greenhouse Gases," BNA Daily Environment Report, January 25, 2008.

⁸ Correspondence from S. Johnson, EPA Administrator, to Rep. John Dingell and Rep. Joe Barton, March 27, 2008.

⁹ *Id.*

¹⁰ *States Join Effort to Seek Court Order to Require EPA Endangerment Finding*, BNA Daily Report for Executives, April 2, 2008.

¹¹ CAA § 202(a)(1); 42 U.S.C. § 7521(a)(1)

¹² *See* 13 CCR § 1961.1(e)

¹³ 13 CCR § 1961.1(a)

¹⁴ 13 CCR § 1961.1(a)(1)(A)

¹⁵ CAA § 209(b), 42 U.S.C. § 7543(b)

- ¹⁶ Correspondence from S. Johnson, EPA Administrator, to Gov. Arnold Schwarzenegger, Dec. 19, 2007. (“EPA Waiver Decision”)
- ¹⁷ *Id.*
- ¹⁸ “Reducing Idling Emissions from New and In-use Heavy-Duty Trucks,” Presentation of the California Air Resources Board, Public Hearing, October 20, 2005.(www.arb.ca.gov/msprog/truck-idling/board-presentation.pdf)
- ¹⁹ Proposed 13 CCR § 2025(a), www.arb.ca.gov/msprog/onrdiesel/documents/MAY_08_Draft_Regulation_with_Errata.pdf
- ²⁰ CAA § 177, 42 U.S.C. § 7507
- ²¹ See State Greenhouse Gas (GHG) Actions, National Association of Clean Air Agencies, Jan. 16, 2008.
- ²² See EPA Waiver Decision, p. 1.
- ²³ H.R. 6, 110th Congress, 1st Sess., Section 102(b)
- ²⁴ *Id.*, Section 102(k).
- ²⁵ *Id.*
- ²⁶ Mandatory GHG Reporting Rulemaking, U.S. EPA Briefing, www.epa.gov/climatechange/emissions/ghgrulemaking.html
- ²⁷ *Id.*
- ²⁸ *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984)
- ²⁹ *Id.*
- ³⁰ CAA § 109(b), 42 U.S.C. § 7409(b)
- ³¹ *Id.*
- ³² CAA § 107(d), 42 U.S.C. § 7407(d)
- ³³ *Id.*
- ³⁴ CAA § 165, 42 U.S.C. § 7475
- ³⁵ CAA § 173, 42 U.S.C. § 7503
- ³⁶ CAA § 173(c), 42 U.S.C. § 7503(c)
- ³⁷ *In re: ConocoPhillips Co.*, PSD Appeal No. 07-02, Order Denying Review in Part and Remanding in Part, June 2, 2008.
- ³⁸ “Appeals Board Asks for Clarification of EPA Arguments on Power Plant Emissions,” BNA Daily Environment Report (117 DEN A-6, 6/18/2008)
- ³⁹ 42 U.S.C. § 7411.
- ⁴⁰ See 40 CFR 60.30c *et seq.*
- ⁴¹ 42 U.S.C. § 7411 (b)(1)(A).
- ⁴² “States, Two Cities Sue EPA, Seek Limits on Carbon Emissions from New Boilers,” BNA Daily Environment Report, April 28, 2006.
- ⁴³ *Id.*
- ⁴⁴ EPA Combined Mot. To Govern Further Proceedings and Resp. to Env’tl. And State Petitioners’ Mot. To Govern Further Proceedings at 4, *New York v. EPA* (No. 06-1322).
- ⁴⁵ See *New York v. EPA*, No. 06-1322 (D.C. Cir. Sept. 24, 2007) (granting the remand and failing to grant the vacatur, as “[p]etitioners have not shown that vacatur is warranted”).
- ⁴⁶ EPA Combined Mot. to Govern Further Proceedings and Resp. to Env’tl., and State Petitioner’s Mot. To Govern Further Proceedings, *New York v. EPA* (No. 06-1322).
- ⁴⁷ Statement of Stephen L. Johnson, Adm’r U.S. EPA Before Comm. on Env’tl. and Pub. Works, U.S. Senate, Apr. 24, 2007, at 16.
- ⁴⁸ Steven D. Cook, “Agency to Confront Greenhouse Gas Controls As Litigation, Probes, Rulemakings Loom” BNA Daily Environment Report, January 17, 2008.
- ⁴⁹ Mandatory GHG Reporting Rulemaking, *supra*.
- ⁵⁰ *Id.*
- ⁵¹ *Greenhouse Gases and Global Warming Potential Values*, Excerpt from the *Inventory of U.S. Greenhouse Emissions and Sinks 1990-2000.*, EPA Office of Atmospheric Programs, April 2002, www.epa.gov/climatechange/emissions/downloads/ghg_gwp.pdf
- ⁵² *Id.*