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CLIMATE CHANGE LITIGATION IN THE U.S.

THEORIES OF LIABILITY AND INSURANCE ISSUES

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Climate Change Litigation in the US: Theories of Liability and Insurance Issues

There is a consensus in the scientific community that the Earth's climate is changing, at least in part, from man-induced ("anthropogenic") activities.¹ Some argue, however, that the dominant factor in global climate change is the natural geologic cycle² and, therefore, modifications of man-made causes should be tempered and may ultimately have little effect on resolving the problem.³ (Or, as one Senator stated on the Senate Floor in 2005, the "threat of catastrophic global warming [is] the greatest hoax ever perpetrated on the American people.") Regardless of which group is correct, climate change has, and will continue to, foster attempts at statutory, regulatory and litigation solutions. This Presentation will examine those efforts and their implications for the insurance market.

The Phenomenon – A Short Introduction to the Science

Climate is described by many as the long-term or "normal" weather (e.g., rain, temperature, wind) of a given locality or region.⁴ Global climate is comprised of the collective weather systems of the Earth. It is ever changing and is affected by, affects, and is a result of, the atmosphere, oceans, the ice sheets and snow pack, living organisms and the soil, sediments and rocks.⁵ Climate change – or "global warming" – is a complex phenomenon with potentially devastating consequences to humans and their environment. The Earth's mean surface air temperature and ocean temperature are rising.⁶ As a result, ice shelves and snow pack are receding, sea levels are rising, drought is more prevalent and storms are more severe.⁷

Energy from the Sun enters the atmosphere and is either absorbed by the Earth or reflected by its surface.⁸ Without retention of some of the reflected energy in the atmosphere, Earth's surface would be several degrees cooler and a harsher environment for human existence. According to the Intergovernmental Panel on Climate Change ("IPCC") "[m]ost of the observed increase in global average temperatures" over the last 50 years "is very likely due to the observed increase in anthropogenic GHG concentrations"⁹ – i.e., the "greenhouse effect." Moreover, the IPCC suggests that "long-lived GHGs" are the primary influence altering the atmospheric energy balance.¹⁰

Greenhouse gases ("GHGs") (gases, particulates and water vapor) are released from a number of natural and anthropogenic sources. Trace amounts of these substances remain in the atmosphere for centuries¹¹ and act as a blanket or canopy that captures, stores and returns energy reflected from the Earth's surface.¹² The Earth's surface temperature then increases as a result of these GHGs.¹³ Because this phenomenon occurs at different rates, energy is transferred from the warmer lower latitudes to the poles.¹⁴

Anthropogenic GHGs consist, in part, of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆) and halocarbons (e.g., fluorine).¹⁵ Carbon dioxide,

however, is the most significant anthropogenic GHG and is the target of much of the climate change litigation in the United States.¹⁶

Scientists have seen a continual increase in the level of atmospheric carbon dioxide. The rate of increase has risen sharply over the last 250 years – most dramatically, however, during the period 1995 to 2005.¹⁷ According to the IPCC, for the 8,000 years prior to the Industrial Revolution – c.1750 – carbon dioxide was near, or below, a concentration of approximately 280 parts per million by volume (“ppmv”).¹⁸ It had increased, moreover, by only approximately 20 ppmv over those eight millennia.¹⁹ By approximately 1957, the concentration of carbon dioxide at the Mauna Loa Observatory in Hawaii was approximately 315 ppmv, yet by approximately 2007, it had risen to approximately 379 ppmv.²⁰ Concentrations of some of the other GHGs have also increased over the last 250 years.²¹

In July 2006, the President of the National Academy of Sciences reportedly told the U.S. House of Representatives that,

“I think we understand the mechanisms of CO₂ and climate better than we do of what causes lung cancer...In fact, it is fair to say that global warming may be the most carefully and fully studied scientific topic in human history.”²²

Despite this level of confidence, however, some in the scientific community disagree with this conclusion.²³ As an example, one of the difficult tasks in climate change science appears to be predicting local temperature changes and their effects and linking those changes and effects to a particular source.²⁴

The Effects of Climate Change

A broad spectrum of physical events and effects²⁵ have been attributed to global warming:

- extreme weather events²⁶ (e.g., hurricanes and flooding²⁷);
- sustained high temperatures and drought;
- melting ice sheets and snow pack;
- changes in precipitation;
- greater humidity;
- ice storms;
- increased wildfires;
- increased particulate matter from wildfires in the atmosphere;
- mold;
- increased sediment in streams and other water bodies;
- rising sea levels (and saltwater intrusion into fresh water sources); and
- soil subsidence from melting permafrost.

Over the balance of this century, the IPCC predicts an increase in flash floods in inland European areas and coastal flooding with accompanying erosion.²⁸ Moreover, it warns of glacial reduction, less snow cover and widespread plant and animal death.²⁹ In Southern Europe, the

IPCC anticipates high temperatures and drought as well as heat waves and increased wildfires.³⁰ The IPCC's forecast for the United States and North America includes decreased snow, increased winter floods and less surface water in western mountains.³¹ It also suggests more, longer and harsher heat waves in metropolitan centers.³²

Some of the more well known events which many have credited to global warming are the 1998 El Nino year in the United States; Hurricanes Rita and Katrina of 2005 along the U.S. Gulf Coast; and the European heat wave of 2003. Even more in the public eye is the melting of the arctic ice sheets and the plight of the polar bear.

Climate Change Regulation in the United States

Climate change regulation in the United States is relatively new and emerging. In fact, the United States has promulgated no federal statutes or regulations³³ requiring reductions in GHG emissions and it has refused to participate in international agreements intended to slow climate change. Its position is that regulation is not the proper solution to such a widespread and far reaching problem.³⁴ Some contend that the benefits of such regulation are uncertain because our understanding of climate change is incomplete. They caution restraint and a reasoned approach to any regulation because mandatory GHG emissions reduction "will certainly cause significant harm to the economies of the countries participating in the reduction."³⁵

Despite these concerns, climate change regulation is imminent and likely to be comprehensive. The following paragraphs provide a brief introduction to some of the existing federal statutes which have been used to attempt positive change in the fight against global warming.

Federal Laws and Regulations

The Clean Air Act has the potential to directly regulate GHG emissions and, thus, will play an ever increasing role in climate control litigation in the United States. The other statutes and regulations discussed below provide potentially powerful collateral means to address the problem.

The Clean Air Act

The foremost existing federal law with the potential to positively affect climate change is the Clean Air Act (CAA) of 1970 (codified at 42 U.S.C. §§ 7401 et seq). In the words of the U.S. Environmental Protection Agency ("EPA"), the CAA "is the comprehensive federal law that regulates air emissions from stationary and mobile sources."³⁶ The same year the CAA was passed, Congress created the EPA which administers the law.³⁷

The act was intended, among other things, "to address the public health and welfare risks posed by certain widespread air pollutants."³⁸ "Air pollutant," as defined under the act, is far reaching and includes "any air pollution agent...including any physical, chemical, biological, radioactive...substance or matter which...enters the ambient air."³⁹ It also encompasses any "precursors" to those pollutants.⁴⁰

The EPA works with the states and local governments to implement the act.⁴¹ The CAA has been used as a basis to attempt to force the federal government to regulate GHG emissions.⁴² On the other hand, it has also been criticized for its provisions which preempt state regulation (with limited exception) of motor vehicle emissions.⁴³

EPA historically took the position that although carbon dioxide met the prima facie definition of “air pollutant,” it had no plan to regulate it because of Congress’ opposition to unilateral regulation of a global pollutant over concern for potential economic harm to the U.S.⁴⁴ In August 2003, however, it concluded the CAA did not give it authority to regulate carbon dioxide emissions.⁴⁵ It took the position that regulation required express Congressional authorization.⁴⁶ The Supreme Court, however, in its April 2007 decision in *Massachusetts v Environmental Protection Agency* (127 S.Ct. 1438 [2007]), admonished EPA holding that the CAA did give it authority to regulate CO₂ provided there were certain pre-conditions.⁴⁷

On May 14, 2007, in response to the Court’s *Massachusetts* decision, President Bush directed the EPA and the Departments of Transportation, Energy and Agriculture to “take the first steps toward regulations that would cut gasoline consumption and greenhouse gas emissions from motor vehicles.”⁴⁸ The President’s plan would (1) “set a mandatory fuel standard that requires 35 billion gallons of renewable and other alternative fuels by 2017;” and (2) increase “fuel efficiency standards for light trucks and cars.”⁴⁹ It appears the Executive prefers a coordinated broad political approach over direct regulation of GHG emissions.⁵⁰

National Environmental Policy Act

The National Environmental Policy Act (“NEPA”) of 1969 requires the federal government to “give proper consideration to the environment prior to undertaking any major action.”⁵¹ NEPA requires environmental assessments (EAs) and impact statements (EISs) to determine the effects “from alternative courses of action” contemplated by the federal government.⁵²

NEPA litigation addresses the issue of whether a federal agency properly analyzed and disclosed the potential consequences of its actions on climate change and, thus, its potential effect on the environment.⁵³ Under NEPA, a successful litigant’s typical remedy is to vacate the agency’s decision and enjoin the project until the proper environmental impact analysis has been completed.⁵⁴

Energy Policy and Conservation Act

Under authority granted through the Energy Policy and Conservation Act of 2000, the Department of Transportation is required to set fuel efficiency standards for light-duty vehicles,⁵⁵ which are intended to reduce fuel consumption. The U.S. State Department predicts that the standards established for light trucks for model years 2005-2007, alone, will result in a savings of 3.6 billion gallons of gasoline and a reduction in CO₂-equivalent emissions of 42 terragrams by 2012.⁵⁶

Energy Policy Act

The Energy Policy Act (EPAct) of 2005 requires, among other things, an increase in the use of “renewable fuels” (e.g., ethanol) in gasoline sold in the United States.⁵⁷ According to the U.S. Climate Action Report 2006, the EPAct programs are intended to “accelerate market penetration of advanced, clean-energy technologies.”⁵⁸ In fact, the act required 4 billion gallons of such clean fuel in 2006, with a mandated 7.5 billion gallons by 2012.⁵⁹ The use of renewable, “clean fuels” will result in the reduction of GHG emissions from motor vehicles.

Securities and Exchange Commission Regulations

U.S. Securities and Exchange Commission (SEC) regulations require directors and officers of publicly-held companies to consider, evaluate and divulge risks regarding their company’s financial health.⁶⁰ Because of the potential to significantly affect the economics of a company, “[d]isclosure of climate change-related risks will increasingly be necessary.”⁶¹ The Sarbanes-Oxley Act of 2002 may also make corporate officers responsible for the timely and accurate disclosure of environmental-related liabilities.⁶²

The Endangered Species Act

The Endangered Species Act (“ESA”) of 1973 provides a program to preserve threatened plants (e.g., flowers and trees) and animals (such as, birds, insects, fish, mammals and others) in the United States.⁶³ The federal government must consult with United States Fish and Wildlife Service (“FWS”) and/or U.S. National Oceanic and Atmospheric Administration (NOAA) Fisheries Service to ensure its actions do not “jeopardize the continued existence,” or harm the habitat, of any species on the endangered list.⁶⁴ Congress has urged the FWS to evaluate the effects of climate change on threatened species.⁶⁵ Moreover, the federal court has censured FWS for not taking climate change into consideration in its evaluations of species and habitat.⁶⁶

Potential New Federal Laws and Regulations

Congress is currently working on additional means to battle global warming. By mid-2007, 54 bills addressing climate change had been introduced.⁶⁷ The proposed legislation generally is described under the following categories: (1) Research and Studies; (2) Emission Reduction Technology; (3) United States Participation in International Agreements; (4) Systems to Adapt to Climate Changes; (5) GHG Monitoring and Reporting; and (6) GHG Reduction Programs.⁶⁸

Tort-Based Theories of Liability

Some question whether statutory or regulatory schemes can call GHG producers to account for the adverse effects of their actions. The perceived inadequacy of legislative controls, in the view of some, results in the risks of climate change being borne by its victims. In these circumstances, the United States’ tort law system and the prospect of large damage awards may be used by creative counsel to provide an incentive for GHG emitters to change their ways and to bear the costs of injuries allegedly caused by climate change.

The following paragraphs outline a few of the tort theories arguably available to shift the costs of global warming to those who are allegedly better positioned to bear the burden.

Public Nuisance

Public nuisance is the primary legal theory employed by plaintiffs in climate change litigation. “A public nuisance is an unreasonable interference with a right common to the general public.”⁶⁹ This doctrine has traditionally been used in pollution cases. “Because the majority of climate change’s impacts affect inherently public rights involving health, safety, and use of property, the public nuisance legal theory may be well-suited to address climate change.”⁷⁰

Public nuisance is attractive to plaintiffs “because of the advantages it offers, such as the avoidance of laches, statutes of limitation, contributory negligence and other common tort defenses, immunity from administrative law defenses such as exhaustion, and the elimination of a fault/negligence requirement.”⁷¹ Nonetheless, “in light of barriers to using common law nuisance theory,” such as “lack of standing, preemption of common law or state statutory remedies” and the extreme difficulty in proving causation, only time will tell whether nuisance theory is the way to battle climate change.⁷²

Private Nuisance

“A private nuisance is a nontrespassory invasion of another's interest in the private use and enjoyment of land.”⁷³ Emitters of GHGs (e.g., chemical plants, refineries, electricity generating plants) could be sued under this theory by individuals (such as neighbors or nearby towns) injured by the physical effects of climate change.⁷⁴ If more “risk estimations ... with higher confidence levels” are found, plaintiffs may have a better chance proving private nuisance claims based on climate change – such as flooded home owners in low-lying coastal areas.⁷⁵

Trespass

“One is subject to liability to another for trespass...if he intentionally (a) enters land in the possession of the other, or causes a thing...to do so.”⁷⁶ More appropriate for consideration, however, with regard to potential climate change litigation is a cause of action based on negligent or reckless trespass. “One who recklessly or negligently, or as a result of an abnormally dangerous activity, enters land in the possession of another or causes a thing or third person so to enter” is liable for trespass.⁷⁷ Negligent trespass requires harm to the property or possessor whereas intentional trespass does not require such harm.⁷⁸

Contamination – e.g., spills of chemicals and oil – is routinely associated with storms. Change in groundwater availability and depth coupled with a rising sea-level caused by climate change may result in salt-water intrusion of freshwater supplies.⁷⁹ The contamination caused by these climate change-induced events “could give rise to claims in...trespass...other common law tort causes of action.”⁸⁰

Negligence

Negligence claims in climate change litigation “would be novel and challenging to sustain, as it would require a court to conclude that a reasonably prudent person would not have taken the action taken by the defendant business, and that the business’s actions have proximately caused the plaintiff’s damages.”⁸¹ Negligence could apply not only with regard to those causing GHG emissions but also toward those not reasonably preparing for climate change effects which in turn causes injury to a third party.⁸² This theory and all of the other tort-based theories requires proof that the conduct actually caused the alleged damage (i.e., the defendant’s conduct caused the climate change which, in turn caused the plaintiff’s alleged damage.)

Strict Liability

Strict liability is another potential legal theory that plaintiffs may attempt to use in climate change litigation. “One who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm.”⁸³ It seems, however, that since GHG emissions are released from so many sources – anthropogenic as well as from natural sources – this theory has an uphill battle in establishing that carbon dioxide emission is “an abnormally dangerous activity.”

Product Liability

Plaintiffs could conceivably sue utilities or automobile manufacturers for climate change-related injuries under product liability “design defect” claims.⁸⁴ “One engaged in the business of selling or otherwise distributing products who sells or distributes a defective product is subject to liability for harm to persons or property caused by the defect.”⁸⁵ Moreover, a design defect arises where “the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design...and the omission of the alternative design renders the product not reasonably safe.”⁸⁶ A plaintiff might assert that unnecessary emission of GHGs was an avoidable “design defect,” which led to their harm.⁸⁷ Such a legal theory, however, would be at the cutting edge of existing doctrine.⁸⁸

Breach of Fiduciary Responsibilities

The law imposes duties on corporate officers to “act in the best interests of shareholders.”⁸⁹ It is likely that corporate officers who fail to consider climate change will eventually harm their company financially. “As a recent report by Ceres found, ‘[t]he more information on climate-related damage accumulates, the more the refusal to examine these risks carries the potential for breach of fiduciary duty.’”⁹⁰

Emerging Litigation

Massachusetts v Environmental Protection Agency

Massachusetts v E.P.A. ([2007] 127 S.Ct. 1438) is the only climate change case to be decided by the United States Supreme Court.

In October 1999, several private groups filed a joint rule making petition which asked the EPA to regulate emissions of carbon dioxide and three other greenhouse gases from new motor vehicles pursuant to § 202 of the Clean Air Act.⁹¹ After nearly four years and a public comment period in which it received over 50,000 responses, EPA denied the petition.⁹²

It stated two reasons for its actions: (1) it had no authority under the CAA to issue mandatory regulations tackling global climate change; and (2) even if it had such authority, it was unwise to do so at that time.⁹³ EPA noted that Congress when last amending the CAA in 1990, “was well aware of the global climate change issue” yet it declined to adopt a proposed amendment establishing binding emissions limitations. The EPA argued that if Congress had intended EPA to regulate such emissions, it would have specifically so stated.

The EPA also argued that:

- GHGs were not “air pollutants” under the CAA;
- The causal connection between GHG emissions and global warming is uncertain;
- A “piecemeal’...regulation would conflict with the President’s ‘comprehensive approach’” to combat climate change and “hamper the President’s ability to persuade key developing countries to reduce greenhouse gas emissions.”⁹⁴

The Petitioners asked the Supreme Court to resolve two questions: (1) whether EPA had authority under § 202(a)(1) of the CAA to regulate new vehicle GHG emissions; and (2) if it did, whether its reasons for refusing to regulate were consistent with that statute.⁹⁵ EPA argued that the Court had no jurisdiction to hear the case because none of the Petitioners had standing.⁹⁶ In its view, standing was absent because GHG emissions cause “widespread” rather than particularized harm.⁹⁷

The Court granted a hearing and began with a review of § 202(a)(1). It noted that the CAA broadly defined an “air pollutant” to be “any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive ... substance or matter which is emitted into or otherwise enters the ambient air.”⁹⁸ The Court also pointed out that the CAA defined “[w]elfare” to include “effects on...weather...and climate.”⁹⁹

The Court also found that the standing requirement was met because the Petitioners had established “some possibility that the requested relief will prompt the injury-causing party to

reconsider the decision that allegedly harmed the litigant.”¹⁰⁰ That party only needs to “show that the procedural step was connected to the substantive result” – not that “the substantive result would have been altered.”¹⁰¹ The Court also noted that “EPA’s steadfast refusal to regulate greenhouse gas emissions presents a risk of harm to Massachusetts that is both ‘actual’ and ‘imminent,’ and that there is a ‘substantial likelihood that the judicial relief requested’ will prompt EPA to take steps to reduce that risk.”¹⁰²

The Court then recited the “serious and well recognized” harms of global warming which were detailed in the very NRC report that EPA had relied upon in justifying its refusal to regulate GHG emissions such as “the global retreat of mountain glaciers, reduction in snow-cover extent, the earlier spring melting of rivers and lakes, [and] the accelerated rate of rise of sea levels.”¹⁰³ Petitioners, by way of uncontested affidavit, presented evidence that the problem was even worse than stated in the NRC report.¹⁰⁴ Its expert, a climate scientist, declared that qualified scientific experts...“have reached a ‘strong consensus’ that global warming threatens (among other things) a precipitate rise in sea levels by the end of the century...‘severe and irreversible changes to natural ecosystems...significant reduction in water storage in winter snowpack in mountainous regions with direct and important economic consequences,’...and an increase in the spread of disease.”¹⁰⁵ Plaintiffs’ expert further indicated that hurricane strength could be intensified by warmer ocean temperature.¹⁰⁶

The Court stated the “widely shared” risks did “not minimize Massachusetts’ interest in the outcome of this litigation”.¹⁰⁷ Petitioners’ uncontested affidavit indicated that sea levels during the 20th Century had risen as much or more than 4- to 9-inches “as a result of global warming” and that those rising sea levels had already swallowed some of Massachusetts’ shoreline.¹⁰⁸

The Court then noted that EPA did “not dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming” and, as such, its “refusal to regulate such emissions ‘contributes’ to Massachusetts’ injuries.”¹⁰⁹ The Court rejected EPA’s argument “that its decision not to regulate [GHG] emissions from new motor vehicles contributes so insignificantly” to the alleged injuries that “it did not believe any realistic possibility exists that the relief [sought] would mitigate global climate change and remedy” those injuries.¹¹⁰ “That a first step might be tentative does not by itself support the notion that federal courts lack jurisdiction to determine whether that step conforms to law.”¹¹¹

The Court, citing petitioners’ expert, noted that the United States transportation sector accounted “for more than 6% of worldwide carbon dioxide emissions.”¹¹² It concluded that “by any standard, U.S. motor-vehicle emissions make a meaningful contribution to greenhouse gas concentrations and hence, according to petitioners, to global warming.”¹¹³

The Court concluded that the “rise in sea levels associated with global warming has already harmed and will continue to harm Massachusetts,” and that the risk of harm “would be reduced to some extent if petitioners received the relief they seek.”¹¹⁴ It held the petitioners had standing to challenge EPA’s order.¹¹⁵

The Court recognized that § 202(a)(1) of the CAA “authorized EPA to regulate [GHG] emissions from new motor vehicles in the event that it forms a ‘judgment’ that such emissions contribute to climate change.”¹¹⁶ The Court found that the “unambiguous” and “sweeping definition” in the statute defeated EPA’s position that CO₂ was not a pollutant under the CAA.¹¹⁷ “On its face, the definition embraces all airborne compounds” – including GHGs.¹¹⁸

The Court then addressed whether the EPA’s reasons for refusing to regulate GHG emissions was proper under the law. “While the statute does condition the exercise of EPA’s authority on its formation of a ‘judgment,’ (citations omitted) 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.”¹¹⁹ “If the EPA makes a finding of endangerment, the Clean Air Act requires the agency to regulate emissions of the deleterious pollutant from new motor vehicles.”¹²⁰

The Court concluded that the EPA’s refusal was “arbitrary, capricious...or otherwise not in accordance with law.”¹²¹ They went on to say, “We need not and do not reach the question whether on remand EPA must make an endangerment finding, or whether policy concerns can inform EPA’s actions in the event that it makes such a finding.”¹²² “We hold only that EPA must ground its reasons for action or inaction in the statute.”¹²³

Connecticut v American Electric Power Company, Inc.

In *Connecticut v American Elec. Power Co., Inc.* ([S.D.N.Y. 2005] 406 F.Supp.2d 265), Connecticut, six other states, the City of New York and three private groups sued American Electric Power Company and four other power companies under federal common law and state law, to curtail defendants’ contribution to the “‘public nuisance’ of ‘global warming.’”¹²⁴ The plaintiffs sought to cap and reduce defendants’ emissions of carbon dioxide.¹²⁵

The defendants moved for dismissal on several grounds. The court found the jurisdictional issue to be controlling. It posed the question of whether the issue of climate change raises a non-justiciable political question not appropriate for resolution by the judiciary.¹²⁶ The court found that it did and dismissed the case.¹²⁷

The court determined that it was impossible to balance the conflicting interests “without an ‘initial policy determination’” by Congress or the President.¹²⁸ “[N]one of the pollution-as-public-nuisance cases cited by Plaintiffs has touched on so many areas of national and international policy. The scope and magnitude of the relief Plaintiffs seek reveals the transcendently legislative nature of this litigation.”¹²⁹

The court then identified six issues which, at a minimum, it would have to determine to provide the relief sought by plaintiffs.¹³⁰ For example, the court said it would have to determine the appropriate carbon dioxide caps and reduction schedules as well as “determine and balance the implications of such relief” on U.S. international negotiations regarding climate change.¹³¹ It also said it would have to “assess and measure available alternative energy resources” and determine and balance those implications on U.S. energy sufficiency and national security.¹³²

Plaintiffs are appealing the dismissal.

California v General Motors Corporation

In *California v General Motors Corporation* (N.D. Cal.; C06-05755 EMC [Complaint Filed: Sept. 20, 2006]), California named as defendants the “Big Six” automakers¹³³ claiming that they were contributing to global warming, which was harming California.¹³⁴ It pleaded federal common law and California statutory public nuisance and sought damages and a declaratory judgment for “future monetary expenses and damages as may be incurred...in connection with the nuisance of global warming.”¹³⁵ The essence of California’s allegations was that defendants manufactured motor vehicles that emitted carbon dioxide into the atmosphere which contributed to global warming.

Defendants brought a motion to dismiss for lack of subject matter jurisdiction. The court granted defendants’ motion and dismissed the case.¹³⁶ In its order granting the motion, the court reviewed the chronology of the nearly 30-year development of United States policy on global warming – from the National Climate Program Act of 1978 to the current U.S. position on the Kyoto Protocol.¹³⁷

The court began its legal analysis with the issue of non-justiciable political questions. It noted that defendants argued that “global warming and its causes are issues of public and foreign policy fraught with scientific complexity, as well as political, social, and economic consequences,” which Congress and the federal Executive branch of government should resolve.¹³⁸ It found that a decision in the case could not be reached without making complex policy decisions reserved to the legislative and executive branches of government.¹³⁹ It described the necessary predicate policy decisions:

“As the Supreme Court has recognized, to resolve typical air pollution cases, courts must strike a balance ‘between interests seeking strict schemes to reduce pollution rapidly to eliminate its social costs and interests advancing the economic concern that strict schemes [will] retard industrial development with attendant social costs’”. (Citations omitted.)¹⁴⁰

The court noted that both Congress and the Executive had made specific statements regarding global warming yet refused to limit carbon dioxide emissions.¹⁴¹ The court gave great weight to the fact that the EPA – the agency which Congress authorized to administer environmental laws – had struggled with the complex problem of global climate change for years.¹⁴² They noted EPA’s concern for the importance of the issue, “‘It is hard to imagine any issue in the environmental area having greater “economic and political significance” than regulation of activities that might lead to global climate change.’”¹⁴³

The court concluded that despite the difference in relief sought, “the same justiciability concerns [as were found in *AEP*] predominate and significantly constrain” adjudication of the instant claim.¹⁴⁴ It stated the court would have to “balance the competing interests” of those that wanted to reduce “global warming emissions” and those that wanted to advance and preserve

“economic and industrial development” – which was for the political branches of government rather than the courts.¹⁴⁵

The court noted that the decision in *Massachusetts v EPA* underscored “the conclusion that policy decisions concerning the authority and standards for carbon dioxide emissions lie with the political branches of government, and not with the courts.”¹⁴⁶ The court found it could not hear the instant case “without making an initial policy determination of a kind clearly for nonjudicial discretion.”¹⁴⁷

The court viewed the judiciary as incapable of making the determination requested of it by climate change cases and, on this basis, dismissed the action. California appealed the order to the Ninth Circuit Court of Appeals on the same day the judgment was issued (September 17, 2007).

Village of Kivalina v ExxonMobil Corp.

In *Village of Kivalina v ExxonMobil Corporation* (N.D. Cal.; CV08-01138 SBA [Filed 2/26/08]) plaintiffs have sued twenty-four large U.S. and international oil and power companies¹⁴⁸ contending that their actions substantially contributed “to global warming, a nuisance that is causing severe harms to Kivalina.”¹⁴⁹ Plaintiffs are the Native Village of Kivalina and the City of Kivalina.¹⁵⁰

The complaint alleges four causes of action: (1) federal common law public nuisance; (2) state private and public nuisance; (3) federal common law – or, alternatively, state law – civil conspiracy; and (4) federal common law – or, alternatively, state law – concert of action.¹⁵¹ The plaintiff contends that they are entitled to damages and a declaratory “judgment for future monetary expenses and damages...in connection with the nuisance of global warming.”¹⁵²

“Kivalina is located on the tip of a six-mile barrier reef located between the Chukchi Sea and the Kivalina and Wulik Rivers on the Northwest coast of Alaska, some seventy miles north of the Arctic circle.”¹⁵³ Plaintiffs allege that, “[g]lobal warming is destroying Kivalina and the village thus must be relocated soon or be abandoned and cease to exist.”¹⁵⁴ They further allege, that “[t]he U.S. Army Corps of Engineers and the U.S. Government Accountability Office have both concluded that Kivalina must be relocated due to global warming and have estimated the cost to be from \$95 million to \$400 million.”¹⁵⁵

Plaintiffs allege that, “Defendants contribute to global warming through their emissions of large quantities of greenhouse gases,”¹⁵⁶ which they “have done...for many years.”¹⁵⁷ Those “millions of tons of carbon dioxide and other greenhouse gases” emissions annually “are responsible for a substantial portion of the greenhouse gases in the atmosphere that have caused global warming and Kivalina’s special injuries.”¹⁵⁸

Plaintiffs assert they are in grave danger because of defendants’ acts:

Global warming is destroying Kivalina through the melting of Arctic sea ice that formerly protected the village from winter storms. The result of the increased

storm damage is a massive erosion problem. Houses and buildings are in imminent danger of falling into the sea as the village is battered by storms and its ground crumbles from underneath it. Critical infrastructure is imminently threatened with permanent destruction. If the entire village is not relocated soon, the village will be destroyed.¹⁵⁹

They seek damages for “past and ongoing contributions to global warming.”¹⁶⁰

Plaintiffs allege that “some of the defendants...conspired to create a false scientific debate about global warming in order to deceive the public,”¹⁶¹ and “to suppress the awareness of the link between [GHG] emissions and global warming.”¹⁶² “Some of the defendants responded to these scientific developments [relating GHG emissions to climate change] with a nefarious campaign of deception and denial intended to manufacture a false sense of public uncertainty regarding the science of global warming.”¹⁶³

Although the case is in the very early stages of litigation, it may set the course for future tort-based climate litigation in the United States. The plaintiffs’ counsel are a consortium of public-interest law firms and some of the most successful plaintiffs’ contingency fee lawyers in the United States. If their efforts result in a significant award of damages, it is quite possible that the floodgates of climate change damage litigation will open.

Comer v Nationwide Mutual Insurance

In *Comer v Nationwide Mut. Ins.* ([S.D. Miss. 2006] (2006 WL 1066645), fourteen homeowners sued several insurance companies, mortgage lenders, chemical companies and oil companies under a variety of theories for damage to their homes arising from Hurricane Katrina.¹⁶⁴ Plaintiffs alleged that defendant oil and chemical companies’ actions contributed to global warming, which in turn caused injury to plaintiffs’ homes through heightening the intensity of Hurricane Katrina.¹⁶⁵

In the course of the proceedings, the trial judge expressed skepticism that the plaintiffs could meet their burden of establishing anthropogenic climate change as the cause of their damages:

I will observe that there 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...the degree to which global warming is caused by the emissions of greenhouse gasses;...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.¹⁶⁶

Plaintiffs later filed a third amended complaint and, on June 30, 2006, several coal company defendants filed a motion to dismiss on the grounds that “the Court lacks subject matter jurisdiction...inasmuch as this case calls for the adjudication of a political question, plaintiffs do not have standing...and plaintiffs claims are preempted by federal law.”¹⁶⁷ On August 30, 2007,

the Court granted the motion finding, “that Plaintiffs do not have standing to assert claims...and that Plaintiffs’ claims are non-justiciable pursuant to the political question doctrine.” The Court dismissed the claims against all defendants – not only the moving coal companies.¹⁶⁸ On September 17, 2007, plaintiffs appealed to the Fifth Circuit Court of Appeals.

The Insurance Coverage Impact

Emerging tort-based climate change litigation, like *Kivalina*, has begun to raise questions about the availability of liability insurance for the many named defendants and potential future defendants. These recently filed cases seek hundreds of millions of dollars in monetary damages – the type of relief addressed in general liability insuring agreements. And while the factual and legal merit of these cases may seem dubious, the cost of mounting even a successful defense may be formidable. An overview of the liability insurance impact is discussed below.

General Liability Policies

The “CGL” policy, a form of general liability cover, typically provides relatively broad coverage for hazards that fall within the ambit of the insuring language unless expressly excluded. Given the comprehensive aspects of these policies, coverage under a CGL policy can encompass new types of liability created after the formation of the policy.¹⁶⁹ As such, CGL policies may potentially be obligated to respond to long-tail claims years after the insured has gone out of business and long after the statutes of limitation for the types of risk contemplated in underwriting that by-gone policy have passed. Witness CERCLA and asbestos liability in the U.S. over the past two decades. Indeed, policyholders will likely assert that climate change litigation should follow the same path.

Various CGL forms have been in effect over the years, and considerable modifications to policy language have been made including the change from accident-based to occurrence-based coverage in 1966. The differences in policy language must be carefully scrutinized in dealing with tenders of global warming claims, particularly where older, manuscript policies are concerned. Depending on policy language and the allegations in the underlying complaint, one decades-old policy issued to an insured might provide coverage obligations while a second contemporaneous policy does not. The same may occur as to relatively newer policies, which must be analyzed on a case by case, policy by policy basis.

As the preceding discussion regarding nascent tort litigation over climate change reflects, the law in this area is in a state of flux and may change considerably over the next several years. Coverage law may change as well, albeit more slowly. At least for the foreseeable future, the inevitable claims by policyholders will likely raise a number of disputed issues concerning the availability and scope of CGL coverage.

The *Kivalina* complaint, as often seen in large-scale progressive property damage cases, is pleaded with little factual specificity. Indeed, rather than pleading when in time the property damage to the village actually began, no specific dates are alleged; instead, plaintiffs provide scientific data that temperatures in the Arctic and Alaska, and in the ocean depths, began reflecting faster warming since at least 1949.¹⁷⁰ In this context, it is alleged that loss of sea ice

has occurred, leaving Kivalina more vulnerable to waves, storm surges and erosion; and that storms since have resulted in considerable erosion.¹⁷¹ The complaint specifically cites to an Army Corps of Engineers' report stating that winter storms in 2004 and 2005 have resulted in "significant erosion."¹⁷² And, instead of specifically identifying for each defendant the years in which it operated or how much greenhouse gas it emitted in each year of its operations (some selective, recent data is provided) it is generally alleged that "All Defendants directly emit large quantities of greenhouse gases and have done so for many years."¹⁷³

The insuring agreement in use in current CGL forms (*e.g.*, CG00001 12 04) provides in pertinent part as follows:

a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "bodily injury" or "property damage" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "bodily injury" or "property damage" to which this insurance does not apply. . . [¶] [¶]

b. This insurance applies to "bodily injury" and "property damage" only if:

- (1) The "bodily injury" or "property damage" is caused by an "occurrence" that takes place in the "coverage territory";
- (2) The "bodily injury" or "property damage" occurs during the policy period;

Trigger of Coverage

A threshold inquiry is the determination of what operative event or factual scenario, if any, took place during the policy period that creates a potential for coverage. This analysis essentially defines which policies might be required to respond to the claim. The issue may turn upon the nature of the claim being made – a claim of gradual erosion caused by decades of greenhouse gas emissions is patently different than a claim involving a single known event, such as Hurricane Katrina, that causes obvious and immediate damage.

A claim alleging progressive and continuous property damage conceivably triggers all successive policies in effect from the earliest possible date of the injury causing event to the last date of the continuing damage. This "continuous injury" trigger, which is applied in certain jurisdictions, including California where *Kivalina* is filed, can create a situation in which all of the successive CGL policies issued to the common insured could be "on the risk." In the *Kivalina* scenario, policyholders might expansively argue that the continuous trigger be applied such that policies from 1949 and possibly even earlier could be implicated. However, it must be kept in mind that numerous trigger of coverage theories abound in U.S. jurisdictions which may provide for a different result under the same factual allegations.

“As Damages”

The CGL policy states that the insurer will pay those sums that the insured becomes legally obligated to pay “as damages” and defend any suit seeking the recovery of such “damages.” In California and other jurisdictions, the “as damages” language is interpreted as limiting CGL coverage to suits seeking damages from the insured. Accordingly, where the underlying action seeks no damages but only injunctive relief, restitution or the imposition of statutory penalties or fines, no obligation to defend or indemnify should exist. By way of example, *Kivalina* seeks damages; *Comer* and *State of California* also sought damages, at least in part. However, other climate change lawsuits, like *Connecticut v. American Electric Power Co.*, seek only injunctive relief.

“Occurrence”

As defined in the current CGL form, “occurrence” means “an accident, including continuous or repeated exposure to substantially the same general harmful conditions.” Earlier versions of the form defined occurrence as “an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.”

Occurrence based policies may provide coverage for damage that takes place during the policy period, even though such damage may not be discovered until long after the policy period ends. Unlike claims-made policies, this “long-tail” may subject the policy to claims asserted years after the policy period expired. This scenario is all too well known in the context of environmental contamination damage. With *Kivalina* as an example, it is conceivable that other U.S. lawsuits alleging long-term damage caused by greenhouse gas emissions will be pursued.

Expected Or Intended Damage

As indicated above, the “occurrence” definition requires an “accident” and, in older forms, also required that coverage exists only for property damage that is not expected or intended from the standpoint of the insured. Current CGL forms now set forth the “neither expected or intended” element as an exclusion:

“2. Exclusions

This insurance does not apply to:

a. Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured..."

Whether included in the insuring agreement or labeled as an exclusion, courts are split on the evidentiary standard that must be met to establish that the damage at issue was expected or intended by the insured. Some courts apply an objective, hypothetical reasonable man standard; others apply a literal subjective intent standard, requiring proof that the particular insured at issue expected or intended the damage.

The *Kivalina* Complaint alleges that the defendants have emitted “large quantities of greenhouse gases” for many years and are responsible for a substantial portion of such gases in the atmosphere “that have caused global warming and Kivalina’s special injuries.”¹⁷⁴ Further, each of the defendants “knew or should have known of the impacts of their emissions on global warming” and “[d]espite this knowledge, defendants continued their substantial contributions to global warming.”¹⁷⁵ The Complaint also contains detailed allegations about the history of global warming knowledge and the contribution of greenhouse gas emissions. While policyholders may contend that they had no intent or expectation to affect the climate, and no knowledge that their emissions were harmful, these *Kivalina* allegations appear to raise significant questions about whether the “accident” requirement can be met and/or whether damage was at least “expected” from intentional, long-term carbon dioxide emissions.

Additional allegations in *Kivalina* assert various defendants’ liability on theories of civil conspiracy and concert of action. The plaintiffs allege that “there has been a long campaign by power, coal and oil companies to mislead the public about the science of global warming,” i.e., that global warming is not occurring and/or that climate change is not caused by man.¹⁷⁶ The alleged existence of such a conspiracy suggests several things, including that climate change damage was “expected” because major greenhouse gas emitters felt it necessary to cover up the problem.

Pollution Exclusions

In light of the United States Supreme Court’s decision in *Massachusetts* that greenhouse gases including carbon dioxide are “air pollutants” for purposes of the Clean Air Act, insurers should have a strong argument that the various versions of the pollution exclusion apply to foreclose coverage for global warming suits.

On the other hand, policyholders will argue that the Supreme Court did not find that greenhouse gas emissions are pollutants in all instances as the focus was limited to whether the EPA has authority over carbon dioxide emissions for regulatory purposes. They will also argue that the interpretation and implementation of contractual policy provisions are controlled by the specific policy language at issue and the insureds’ reasonable expectations.

Policyholders may directly attack the pollution exclusion on the ground that carbon dioxide does not qualify as a “pollutant” because it is a naturally occurring substance that is part of biological respiration in animals and photosynthesis in plants. They will argue that carbon dioxide is thus qualitatively different than the toxic materials focused upon in the pollution exclusions. In the same vein policyholders may assert that because carbon dioxide was never previously regulated, they did not reasonably expect that it and other greenhouse gases were pollutants at the time they were emitted.

Despite these contentions, the pollution exclusion appears to have significant application in climate change cases. Carbon dioxide is a “gas” and a “waste material” discharged into the atmosphere. As such, policies going back to the early 1970s that contain a form of the “sudden and accidental” pollution exclusion may well preclude coverage in many U.S. jurisdictions which have concluded that the regular and on-going discharges of pollutants in the normal course

of business operations does not meet the definition of “accidental” so as to trigger the exception to the exclusion. As for more contemporary policies one “total” pollution exclusion form succinctly states that the insurance does not apply to property damage “which would not have occurred in whole or part but for the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of pollutants at any time.” Given the definition of “pollutant” in the total pollution exclusion, grounds exist for a finding that damage allegedly caused by the emitted waste product carbon dioxide is excluded: the term “pollutant” is defined as meaning “any solid, liquid, gaseous, or thermal irritant or contaminant including smoke, vapor, soot, fumes, acid, alkalis, chemicals and waste.”

The application of pollution exclusions to climate change litigation may turn on the question of whether carbon dioxide is a “pollutant” and also perhaps on insureds’ contentions about their expectations regarding coverage for claims involving carbon dioxide emissions. If climate change litigation proliferates, these issues will likely be hotly litigated over the next few years.

Duty to Defend

It is generally accepted by U.S. courts that the duty to defend is broader than the duty to indemnify. The duty arises upon the potential that coverage may exist for the suit that has been brought against the insured. Courts often state that whenever the lawsuit against the insured seeks damages which, if proved, would be covered by the policy, the duty to defend exists. However, the duty to defend is not unlimited and if the claim falls clearly outside the scope of coverage provided, no defense duty is owed.¹⁷⁷

The obligation to defend is usually ascertained by comparing the insured’s policy language to the allegations of the underlying complaint. Some jurisdictions limit this inquiry to the “four corners” of the underlying pleading, *i.e.*, no extrinsic evidence may be considered. In other jurisdictions, including California, relevant extrinsic evidence available at the time the insured tendered the suit may be used by the insurer in determining if it has a duty to defend.

A policy’s defense obligation may be more valuable to a global warming defendant than the promise to indemnify. Hundreds of thousands of dollars might be spent defending an insured until sufficient information is obtained to move for summary judgment or force a reasonable settlement. This is often seen in cases where proof turns on highly technical or new scientific theories of causation. Such a scenario may apply to global warming claims as it seems unlikely that any one single insured could be found liable for causing even appreciable global climate change. As previously described, the judge in *Comer* expressly foresaw “daunting evidentiary problems” for any attempt to prove the necessary elements of causation.¹⁷⁸

Thus, the biggest problem that general liability insurers may face is not whether actual coverage exists for damages arising from global warming, but rather the considerable burden of defending insureds in highly contested, expert driven cases that may require years of document and witness discovery going back decades. As of yet, none of the global warming cases have progressed to that point. Instead, trial courts have issued dismissals, finding that global warming claims are simply not proper subjects for resolution by the courts.

Allocation

In a continuous property damage case involving successive policies, the law in various jurisdictions, including California, provides that each insurer on the risk whose policy(ies) have been implicated separately and independently owes the insured a full defense. In that situation various allocation theories may be applicable in accordance with appropriate equitable principles. For example, where several insurers cover the same risk, the majority of courts allocate defense costs among the joint co-insurers on a pro rata basis. Courts have ordered that defense costs be allocated based on policy limits, time on the risk, policy limits multiplied by time on the risk, and other factors. In situations where an insurer covering the same risk refuses to participate with the other insurers, equitable principles permit the aggrieved insurers to sue the recalcitrant insurer for contribution.

Umbrella And Excess Policies

Whether umbrella and excess policies will be called into play in *Kivalina* and other climate change litigation will depend upon the facts of each case and issues such as exhaustion of primary limits, the existence and applicability of primary aggregate limits, lost primary policies, the insolvency of primary and underlying excess carriers and, of course, the amount of damages sought. As *Kivalina* asserts upwards of \$400 million in damages, at least some excess insurers may be put on notice, particularly as experience reveals that limits on primary policies issued to oil, chemical and manufacturing companies decades ago were, at least in hindsight, relatively insubstantial.

Other Forms of Potentially Impacted Liability Coverage

In addition to CGL policies, certain other liability policies might be called upon to provide defense and/or indemnity in future litigation scenarios related to global warming.

Pollution Legal Liability Coverage

This type of policy may provide among other things cleanup, liability and defense coverage to businesses for bodily injury, property damage and cleanup of “Pollution Conditions”. But PLL coverage differs substantially from CGL coverage – it is typically written on a claims-made or claims-made and reported basis and usually contains retroactive or other date limitations on coverage. Moreover, these policies are subject to an extensive application process and prior knowledge exclusions that serve to control and limit the risks undertaken. As such, a PLL policy does not provide “long-tail” coverage. At least insofar as claims alleging long-term damage due to global warming are concerned, this type of policy may provide limited coverage only or not be implicated at all.

Professional Liability Insurance

This type of insurance, also known as Errors & Omission (E & O) and malpractice insurance, provides liability coverage for medical professionals, attorneys, architects, engineers, etc. This coverage exists to fill the gap in CGL policies, which do not cover claims involving

economic loss and which often exclude coverage for claims for bodily injury and property damage arising out of the rendering or failure to render professional services. Professional Liability policies are typically written on claims-made or claims-made and reported bases; and also typically contain a provision requiring that the act or omission on which the claim is based must have occurred on or after a certain date – the retroactive date – in order to be covered. Disclosure of all known or potential claims against the insured is usually required to place the insurance.

The potential exists for global warming related negligence claims against professionals, particularly architects and engineers, for failing to avoid, or actively causing, damage associated with climate change. For example, suits could involve claims of negligence in urban planning and the design of factories and other facilities that discharge greenhouse gases. It is conceivable that professionals could be sued for failing to “go green” in that large scale buildings or developments were not designed to have a limited carbon footprint, did not use recycled materials, and failed to utilize renewable sources of energy. Engineers could be sued for negligently failing to take into consideration climate change and its ramifications in designing and building automobiles, aircraft, skyscrapers and other emitters of carbon dioxide that will remain in use for many years.

Directors & Officers Liability Insurance

This form of insurance provides coverage to corporate directors and officers for liability arising from wrongful acts in connection with their corporate duties, with the exception that claims for bodily injury and property damage are excluded. Like professional liability and PLL coverage discussed above, D & O insurance is claims-made coverage that also requires disclosure of potential claims. These policies may also contain a type of pollution exclusion.

With respect to global warming, D & O insurance could be implicated should directors and officers face claims arising from their alleged failure to address issues and practices concerning climate change. The potential for such claims may be tied to the “going green” trend and the additional corporate reporting requirements mandated following the Enron debacle. Claims could conceivably involve the failure of the company’s officers and directors to disclose global warming related problems in the company’s SEC filings; suits for ineffective implementation of the company’s going-green plan to reduce its carbon footprint; and shareholders and investors suing for loss of corporate value due to public derision arising from the failure to reduce greenhouse gas emissions. And, akin to *Kivalina*, it is conceivable that municipalities could sue companies in their midst for damages arising from greenhouse gas emissions, including as defendants the company directors and officers for negligently failing to diminish or eliminate the emissions.

Conclusion

If global warming claims proliferate, and as more is learned about the dynamics and consequences of global warming, liability insurers will likely be asked to shoulder the burden of defense cost expenditures for targeted insureds. The coverage issues are many, and, given the allegations, may involve general liability policies reaching back decades and continuing up to the present.

At the moment, however, U.S. climate change litigation has not successfully materialized – in fact, courts have dismissed these claims as non-justiciable. *Kivalina* should be closely watched to see whether it breaks this pattern as a harbinger of litigation to come.

For insurers, the challenges of responding to claims for global warming coverage and underwriting business in this new “climate” are readily apparent.

End Notes

¹ N. Oreskes, *Beyond the Ivory Tower: The Scientific Consensus on Climate Change*, *Science* (December 3, 2004). Some of the major human activities which release greenhouse gases into the atmosphere are burning of fossil fuels for electricity production, transportation and heating as well as agricultural burning, fertilization and deforestation. See UCLA School of Law (“UCLA Law”) (C. Ross, E. Mills and S. Hecht), Public Law & Legal Theory Research Paper Series, Research Paper No. 07-18, *Limiting Liability in the Greenhouse: Insurance Risk-Management Strategies in the Context of Global Climate Change* (hereinafter, “Limiting Liability in the Greenhouse”), 275 (2007).

² See K.C. Gerhard, W.E. Harrison and B.M. Hanson, *Geological Perspectives of Global Climate Change: Introduction and Overview*, Search and Discovery Article #70007 (2001).

³ See, e.g., Gardere Wynne Sewell LLP (Faulk, R.O., and J.S. Gray) (hereinafter, “Gardere”), Climate Change Task Force, *Stormy Weather Ahead?* (hereinafter, “*Stormy Weather Ahead*”), 37 (2007).

⁴ See, e.g., National Aeronautics and Space Administration, *What's the Difference Between Weather and Climate?*, (2005).

⁵ See Gardere, *Stormy Weather Ahead*, 14.

⁶ See Intergovernmental Panel on Climate Control (“IPCC”), *Climate Change 2007: Synthesis Report* (hereinafter, “*Synthesis Report*”), 30 (2007).

⁷ *Id.*

⁸ See National Research Council (“NRC”), *Free Executive Summary, Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties* (hereinafter, “Executive Summary Radiative Forcing”), 1 (2005).

⁹ See IPCC, *Synthesis Report*, 39.

¹⁰ *Id.* at 36 and fn 4.

¹¹ Carbon dioxide (CO₂) remains in the atmosphere for > 100 years; nitrous oxide (N₂O) remains for 100 years; and sulfur hexafluoride (SF₆) remains for > 1,000 years. See NRC, *Free Executive Summary, Climate Change Science: An Analysis of Some Key Questions* (hereinafter, “Executive Summary Climate Change Science”, 3 (Table 1 “Removal Times and Climate Forcing Values for Specified Atmospheric Gases and Aerosols”) (2001); also see IPCC, *Synthesis Report*, 47 (“Both past and future anthropogenic CO₂ emissions will continue to contribute to warming and sea level rise for more than a millenium, due to the time scales required for the removal of this gas from the atmosphere.”)

¹² NRC, *Executive Summary Radiative Forcing*, 1.

¹³ For example in 2007, the IPCC projected that global warming in the 21st century due to GHG emissions would range from approximately 0.3 to 6.4 C, depending on which of many emission scenarios was chosen. See IPCC, *Synthesis Report*, 45 (Table 3.1 “Projected global average surface warming ... at end of the 21st Century”).

¹⁴ See Gardere, *Stormy Weather Ahead*, 21-22.

¹⁵ See IPCC, *Synthesis Report*, 36 fn 5. Other GHGs include, e.g., hydrogen, water vapor (H₂O) and ozone (O₃). See UCLA School of Law, *Limiting Liability in the Greenhouse*, 274.

¹⁶ See IPCC, *Synthesis Report*, 36; also see UCLA Law, *Limiting Liability in the Greenhouse*, 275.

¹⁷ See IPCC, *Synthesis Report*, 37. The IPCC noted that the greatest rate of increase since direct measurement was begun in 1960, was observed during this period. *Id.* During the period from 1960 to 2005, the rate of CO₂ concentration increase was 1.4 parts per million by volume (“ppmv”)/year; during the period from 1995 to 2005, the rate of increase was 1.9 ppmv/year. *Id.*

¹⁸ See Gardere, *Stormy Weather Ahead*, 8 and fn 23 (citing Solomon et al).

¹⁹ *Id.*

²⁰ *Id.* at 8 (Graph “Atmospheric CO₂ at Mauna Loa Observatory”).

²¹ According to the IPCC, atmospheric methane (CH₄) concentration increased from 715 parts per billion by volume (“ppbv”) before industrial development to 1774 ppbv in 2005. See IPCC, *Synthesis Report*, 37. For the same period nitrous oxide (N₂O) concentration increased from 270 ppbv to 319 ppb. *Id.*

²² See Prometheus, R. Pielke, Jr., *Pielke's Comments on Houston Chronicle Story*, (January 22, 2007).

²³ *Id.* Roger Pielke, a senior research scientist at the University of Colorado, had the following response to the president's statement, "Not only is this absurd on its face, it is politically dangerous for those wanting action on climate change." *Id.*

²⁴ See IPCC, *Synthesis Report*, 72. The IPCC admits that, "[d]ifficulties remain in reliably simulating and attributing observed temperature changes to natural or human causes at smaller than continental scales." *Id.* It is, therefore, difficult to determine the effect of man-made "warming" on a small scale. *Id.* The IPCC further reveals that predicting the magnitude of global warming and its consequences beyond 2080, depends strongly on widely varying predictive models and scenarios. *Id.* at 73.

²⁵ See IPCC, *Synthesis Report*, 48-49; also see UCLA Law, *Limiting Liability in the Greenhouse*, 277, 280, 298-299; also see Gardere, *Stormy Weather Ahead*, 12.

²⁶ These extreme weather events are projected to cause increased disease, deaths and injury. See IPCC, *Synthesis Report*, 48.

²⁷ According to the IPCC, in as little as 70 or 75 years from now, millions more people than are at risk today will be at risk of flooding from increased sea level rise (see IPCC, *Synthesis Report*, 48) as well as river flooding due to increased heavy rainfall (*id.* at 49).

²⁸ See IPCC, *Synthesis Report*, 50.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.* at 52.

³² *Id.*

³³ The limited exception to this lack of direct regulation is the March 1996 "Landfill Rule" which derives from the Clean Air Act and requires landfills to capture and destroy their off-gas. See U.S. Climate Action Report—2006, Fourth National Communication of the United States of America Under the United Nations Framework Convention on Climate Control (hereinafter, "Fourth Climate Action Report"), 49 (2006). Because landfills—for the most part—as a natural result of decomposition and degradation of organic waste, produce methane, this law is limited in scope. *Id.* at 59.

³⁴ In its Fact Sheet, *Taking Additional Action to Confront Climate Change*, the White House states that the issue of GHG reduction "should not be left to unelected regulators and judges" but should be the responsibility of the elected branches of government. See White House Fact Sheet, *Taking Additional Action to Confront Climate Change* (hereinafter, "*Taking Additional Action*") (April 16, 2008). Although the federal government has not taken the tack of direct regulation, it is addressing the problem by increasing the use of "clean fuels" and through other cooperative programs. See generally, Fourth Climate Action Report, 55-59 (Table 4.1 Summary of U.S. Actions to Reduce Greenhouse Gas Emissions) (this table briefly details some of the programs the Administration has taken including two of the Department of Energy and Department of Transportation programs discussed later in this report).

³⁵ See Gardere, *Stormy Weather Ahead*, 37.

³⁶ See EPA, *Summary of the Clean Air Act 42 U.S.C 7401 et seq. (1970)* (hereinafter, "*Summary of the CAA*"), (March 6, 2008). The EPA has not yet set emissions standards, however, for carbon dioxide for either new motor vehicles or new stationary sources. See Gardere, *Stormy Weather Ahead*, 68. In 2006, the State of New York sued EPA over its lack of standards for new power plants. *Id.* at 288.

³⁷ See EPA, *Understanding the Clean Air Act, Brief History of the Clean Air Act* (hereinafter, "*Understanding the CAA*"), (May 2, 2007).

³⁸ See EPA, *Summary of the CAA*.

³⁹ See 42 U.S.C.A. § 7602(g) (West 2008).

⁴⁰ *Id.*

⁴¹ See EPA, *Understanding the CAA*.

⁴² The act allows "citizen suits" to force the EPA to act or perform it's duty. See 42 U.S.C.A. § 7604(a)(2) (West 2008).

⁴³ See 42 U.S.C.A. § 7543(a)-(b) (West 2008) (states are prohibited from regulating emissions from new motor vehicles unless waiver issued by EPA).

⁴⁴ See Gardere, *Stormy Weather Ahead*, 56, fns 218-219.

⁴⁵ See EPA, *EPA Denies Petition to Regulate Greenhouse Gas Emissions from Motor Vehicles*, (August 28, 2003).

⁴⁶ *Id.*

⁴⁷ See our discussion of *Massachusetts v EPA* which is provided in some detail later in this Presentation.

⁴⁸ See Environment News Service, *Bush Orders First Federal Regulation of Greenhouse Gases*, (May 14, 2007).

⁴⁹ *Id.*

⁵⁰ According to the White House, the CAA, the National Environmental Policy Act and the Endangered Species Act were “never meant to regulate global climate change.” See White House, *Taking Additional Action*.

⁵¹ See EPA, *Summary of the National Environmental Policy Act 42 U.S.C. § 4321 et seq (1969)* (hereinafter, “*Summary of NEPA*”), (March 6, 2008) <<http://www.epa.gov/lawsregs/laws/nepa.html>>, last visited April 17, 2008. NEPA’s purpose is, among others, “to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” See, 42 U.S.C.A. § 4321 (West 2008).

⁵² See EPA, *Summary of NEPA; also see 42 U.S.C.A. § 4332(C) and (E)* (West 2008).

⁵³ See Gardere, *Stormy Weather Ahead*, 74.

⁵⁴ *Id.*

⁵⁵ See 49 U.S.C.A. § 32902(a) (West 2008). These “Corporate Average Fuel Economy Standard” or “CAFÉ” standards are administered by the National Highway Traffic Safety Administration (“NHTSA”).

⁵⁶ See Fourth Climate Action Report, 44.

⁵⁷ See 119 STAT. 1069 (§ 1501 et seq).

⁵⁸ See Fourth Climate Action Report, 39.

⁵⁹ *Id.*

⁶⁰ Regulation SK Item 101 (“Description of Business”) regards costs of compliance with environmental laws (see 17 CFR 229.101[c][1][xii] [West 2008]); Regulation SK Item 103 (“Legal Proceedings”) addresses potential monetary sanctions imposed by governmental authority or legal proceedings reaching certain levels based on the company’s value (see 17 CFR 229.103 [West 2008], *Instructions to Item 103* 2. and 5.A., 5.B. and 5.C.); and Regulation SK Item 303 (“Management’s Discussion and Analysis of Financial Condition and Results of Operations”) requires management to discuss and analyze “currently known trends, events, and uncertainties that are reasonably expected to have material effects” (see 17 CFR 229.303 [West 2008]). See UCLA Law, *Limiting Liability in the Greenhouse*, 266, fns 59-61.

⁶¹ See UCLA Law, *Limiting Liability in the Greenhouse*, 266.

⁶² *Id.*

⁶³ See EPA, *Summary of the Endangered Species Act 7 U.S.C. § 136; 16 U.S.C. § 460 et seq [1973]*, (March 6, 2008).

⁶⁴ *Id.*; see also 16 U.S.C.A. § 1536(a)(2) (West 2008).

⁶⁵ See Gardere, *Stormy Weather Ahead*, 77.

⁶⁶ *Id.* In *Natural Resources Defense Council v. Kempthorne*, plaintiff environmental groups argued, among other things, that FWS ignored global climate change data in its evaluation of whether the California Delta Smelt would be affected by a state-federal water diversion project. See *Natural Resources Defense Council v. Kempthorne* (E.D.Cal. 2007) 506 F.Supp.2d 322, 328, 367. The U.S. District Court for the Eastern District of California found that FWS’s failure to consider data on global climate change in preparation of its biological opinion regarding the smelt was arbitrary and capricious. *Id.* at 370.

⁶⁷ See Gardere, *Stormy Weather Ahead*, 83.

⁶⁸ *Id.* at 83-85.

⁶⁹ REST. 2D TORTS § 821B (West 2008).

⁷⁰ See UCLA Law, *Limiting Liability in the Greenhouse*, 287.

⁷¹ See Gardere, *Stormy Weather Ahead*, 95.

⁷² See UCLA Law, *Limiting Liability in the Greenhouse*, 262, 274.

⁷³ REST. 2D TORTS § 821D (West 2008).

⁷⁴ See UCLA Law, *Limiting Liability in the Greenhouse*, 288-289. This theory (among others) was advanced in *Village of Kivalina v ExxonMobil Corporation*. See Complaint Civ. Action 4:08-cv-01138-SBA, Filed Feb. 26, 2008; U.S.D.C. N.D. Cal. This case is in the very early stages of litigation and, therefore, it is too soon to say whether this theory will be successful.

⁷⁵ See UCLA Law, *Limiting Liability in the Greenhouse*, 289.

⁷⁶ REST. 2D TORTS § 158 (WEST 2008). Trespass encompasses other acts not necessarily relevant to this presentation.

⁷⁷ REST. 2D TORTS § 165 (West 2008).

⁷⁸ See REST. 2D TORTS § 158 and § 165 (West 2008).

⁷⁹ See UCLA Law, *Limiting Liability in the Greenhouse*, 289.

⁸⁰ *Id.*

⁸¹ *Id.* at 284.

⁸² See UCLA Law, *Limiting Liability in the Greenhouse*, 284.

⁸³ REST. 2D TORTS § 519 (West 2008).

⁸⁴ See UCLA, *Limiting Liability in the Greenhouse*, 292-293.

⁸⁵ REST. 3D TORTS § 1 (West 2008).

⁸⁶ *Id.* at § 2.

⁸⁷ See UCLA Law, *Limiting Liability in the Greenhouse*, 292-293.

⁸⁸ *Id.* at 293.

⁸⁹ *Id.* at 290-291 (*also see* fn 197).

⁹⁰ *Id.* at 270 (*also see* fns 84-85).

⁹¹ *Massachusetts v Environmental Protection Agency* (2007) 127 S.Ct. 1438, 1449.

⁹² *Id.* at 1450.

⁹³ *Id.*

⁹⁴ *Id.* at 1450-1451.

⁹⁵ *Id.* at 1446.

⁹⁶ *Id.* at 1453.

⁹⁷ *Id.*

⁹⁸ *Id.* at 1447.

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 1453.

¹⁰¹ *Id.*

¹⁰² *Id.* at 1455.

¹⁰³ *Id.* at 1455.

¹⁰⁴ *Id.* at 1456.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 1457.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.* at 1458.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.* at 1459.

¹¹⁷ *Id.* at 1460.

¹¹⁸ *Id.*

¹¹⁹ *Id.* at 1462.

¹²⁰ *Id.*

¹²¹ *Id.* at 1463.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ Plaintiffs alleged that the defendants were “the five largest emitters of carbon dioxide in the United States’ and their emissions ‘constitute approximately one quarter of the U.S. electric power sector’s carbon dioxide emissions’”—which, “according to the complaint,” would be 10% of “worldwide carbon dioxide emissions from human activities.” *Connecticut v American Elec. Power Co., Inc.* (S.D.N.Y. 2005) 406 F.Supp.2d 265.

¹²⁵ *Id.* at 270.

¹²⁶ *Id.* at 271.

¹²⁷ *Id.* at 274.

¹²⁸ *Id.* at 272.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ Defendants are GMC, Toyota Motor North America, Inc., Ford Motor Company (American), Honda Motor Company, Inc., Daimler Chrysler Corporation and Nissan North America, Inc.—the so-called “Big Six” automakers. *See California v GMC Order Granting Defendants’ Motion to Dismiss* (hereinafter, “Order”), filed Sept. 17, 2007.

¹³⁴ *California v GMC Complaint* at ¶¶ 1 and 3-5.

¹³⁵ *Id.* at ¶¶ 57-70 and 14:17-22.

¹³⁶ *California v GMC Order* at 24:9.

¹³⁷ *Id.* at 5:6-7:17.

¹³⁸ *Id.* at 7:25-8:2.

¹³⁹ *Id.* at 9:4-6.

¹⁴⁰ *Id.* at 10:1-4.

¹⁴¹ *Id.* at 10:19-24.

¹⁴² *Id.* at 10:25-27.

¹⁴³ *Id.* at 11:3-12.

¹⁴⁴ *Id.* at 11:16-17.

¹⁴⁵ *Id.* at 11:25-12:3.

¹⁴⁶ *Id.* at 14:22-24.

¹⁴⁷ *Id.* at 18:2-4.

¹⁴⁸ The defendants include BP PLC, BP America, Inc., BP Products North America, Inc., Chevron Corporation, Chevron U.S.A. Inc., ConocoPhillips Company, ExxonMobil Corporation, Royal Dutch Shell PLC, Shell Oil Company, Peabody Energy Corporation, The AES Corporation, American Electric Power Company, Inc., American Electric Power Service Corporation, DTE Energy Company, Duke Energy Corporation, Dynegy Holdings, Inc., Edison International, MidAmerica Energy Holdings Company, Mirant Corporation, NRG Energy, Pinnacle West Capital Corporation, Reliant Energy, Inc., The Southern Company and Xcel Energy, Inc. See *Kivalina v ExxonMobil* Complaint at ¶¶ 18-122.

¹⁴⁹ *Id.* at ¶ 2.

¹⁵⁰ *Id.* at ¶ 1.

¹⁵¹ *Id.* at ¶¶ 249-282.

¹⁵² *Id.* at 67:18-20.

¹⁵³ *Id.* at ¶ 1.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ Plaintiff contends that Defendants' following activities emit GHGs (primarily carbon dioxide, unless otherwise noted): fossil fuel, coal and biomass burning electricity generating facilities; flaring and venting of natural gas; petroleum refinery operations; petroleum distribution and marketing activities; (methane) coal mining; burning of fuel to power facilities; metals production; and the manufacture, distribution and marketing of (petroleum-based) chemicals. See generally *Kivalina v ExxonMobil Corp.* Complaint.

¹⁵⁷ *Id.* at ¶ 3.

¹⁵⁸ *Id.* at ¶ 3 (and generally).

¹⁵⁹ *Id.* at ¶ 4.

¹⁶⁰ *Id.* at ¶ 6.

¹⁶¹ *Id.* at ¶ 5.

¹⁶² *Id.* at ¶ 6.

¹⁶³ *Id.* at ¶ 162.

¹⁶⁴ *Comer v Nationwide Mut. Ins.* (S.D. Miss. 2006) (NO. 1:05 CV 436 LTD RHW) Slip Copy, 2006 WL 1066645 at 1*. According to the U.S. National Oceanic and Atmospheric Administration ("NOAA"), Hurricane Katrina "was the most destructive storm in terms of economic losses" to hit the United States. See NOAA, *Hurricane Katrina – Most Destructive Hurricane Ever to Hit the U.S.*, (April 22, 2008). It made landfall in Louisiana on August 29, 2005 (see *id.*), and caused severe damage to Louisiana and Mississippi.

¹⁶⁵ *Comer* 2006 WL 1066645 at 1*.

¹⁶⁶ *Id.*

¹⁶⁷ See *Comer v Murphy Oil* (S.D. Miss. Civ. Action No. 1:05CV436 LTS-RHW) Motion to Dismiss (Filed: 6/30/06).

¹⁶⁸ See *Comer v Murphy Oil* (S.D. Miss. Civ. Action No. 1:05CV436 LTS-RHW) Order Granting Defendants' Motion to Dismiss (Filed: 8/30/07).

¹⁶⁹ See, *AIU Ins. Co. v. Superior Court* (Calif.1990) 51 Cal.3d 807, 823.

¹⁷⁰ See *Kivalina v. ExxonMobil* Complaint, ¶ 128, 129, 130.

¹⁷¹ *Id.* at ¶ 184, 185.

¹⁷² *Id.* at ¶ 185.

¹⁷³ *Id.* at ¶ 3.

¹⁷⁴ *Id.* at ¶ 3.

¹⁷⁵ *Id.* at ¶ 5.

¹⁷⁶ *Id.* at ¶ 189.

¹⁷⁷ *Waller v. Truck Ins. Exchange* (Calif. 1995) 11 Cal.4th 1, 19.

¹⁷⁸ *Comer, supra*, 2006 WL 1066645 at *4.

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