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**SIGNIFICANT CLIMATE ISSUES LIKELY TO BE RAISED IN THE
FEDERAL COURTS**

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I. INTRODUCTION

Following the U.S. Supreme Court decision in *Massachusetts v. EPA* in 2007 and the election of President Obama, the political landscape has changed materially. The Congressional leadership has committed to bring comprehensive climate change legislation to the floors of both houses this year. This legislation will include not only a robust cap-and-trade program that will cover large stationary sources and confirm an emerging national motor vehicle (“GHG”) gas program, but almost certainly also will establish new national renewable energy and efficiency standards and require states to evaluate land use and transportation strategies to reduce carbon emissions. If enacted, the legislation will initiate several new national and state regulatory programs and trigger the expected suite of both rulemaking and permitting challenges and government and citizen enforcement actions typical of major environmental statutes. By establishing new tradable GHG emission allowances, emission reduction credits (i.e., “offsets”) and renewable energy credits, the new legislation will inevitably prompt litigation related to these new assets. The more explicit Congressional recognition contained in legislation also may influence the extent to which plaintiffs seek federal judicial remedies for damages alleged to be caused by climate change. As a result, over the next several years, the federal courts are very likely to witness an even greater explosion of litigation than it already has seen in recent years as climate change has figured prominently in the public’s consciousness as our most serious environmental challenge.

Even if Congress fails to enact comprehensive climate legislation, it is highly likely that the U.S. Environmental Protection Agency (“EPA”) would step into the breach and develop comprehensive GHG regulations of its own. In response to *Massachusetts v. EPA*, the EPA has issued a voluminous and thoughtful Advance Notice of Proposed Regulation (“ANPR”), in which it outlines the various ways in which it may regulate GHG emissions. Earlier this year, EPA undertook the first step towards such regulation by proposing to find under the Clean Air

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Act (“CAA” or the “Act”) that GHG emissions endanger public health and welfare. It is expected later this summer to finalize one or both of those findings. When it does, it will trigger a duty to regulate at least certain motor vehicle emissions and almost certainly will set in motion a duty to regulate several other emission sources. Depending upon the nature of EPA’s regulatory actions, many if not all of the types of claims that would be made possible by comprehensive Congressional action could arise as a result of EPA regulation. In addition comprehensive EPA regulation would raise a number of other issues regarding the scope of agency discretion to deviate from the plain language of the Clean Air Act given that Congress clearly did not construct the Act’s many potentially-applicable provisions with GHG emissions in mind.

Whether Congress or EPA or both take these actions in the months ahead, states continue to move aggressively to enact and implement their own programs. Current Congressional legislation would only partially preempt state action (e.g., only for a short period of time and only as to a cap-and-trade program), but it is highly unlikely that Congressional action will so clearly and unambiguously clarify respective federal and state roles that disputes regarding such respective roles would not flourish. And certainly if Congressional action makes EPA action necessary, there will likely be a range of difficult questions regarding the federal and state relationship that only the courts can resolve.

While it would be difficult to anticipate the full range of controversy likely to arise under the climate change umbrella, the following table illustrates some of the expected actions and issues. As not all of these disputes are likely to raise novel or particularly challenging issues, we chose to examine a smaller number that we believe will be among the most interesting.

Nature of Action	Potential Federal Issues Raised
1. Challenges to EPA (and other federal agency) Rulemaking	1. To what extent may EPA deviate from the plain language of the Clean Air Act? 2. To what extent may EPA develop complementary programs under the Clean Air Act if Congress passes comprehensive climate legislation?
2. Challenges to EPA or State Failure to Act or Delay	1. How much discretion does EPA (or other agency) have not to act, or to defer action, under one or more sections of the Clean Air Act (or other applicable statute)? 2. May a private party compel federal or state action if it is necessary to enable private party compliance? [Or, as noted below, does federal or state inaction excuse performance of dependent private party responsibilities?]
3. Challenges to EPA or State Permit Actions under the Clean Air Act	1. Has EPA regulated GHGs under the Act and, if so, does the permit comply with applicable control requirements (e.g., Best Available Control Technology)?
4. Challenges to State Legislation or Rulemaking	1. Is the challenged state legislation or rulemaking

	<p>preempted by Congressional or EPA action?</p> <p>2. Does the challenged state action violate the Dormant Commerce Clause or the Compact Clause?</p>
5. Government Enforcement against Private Parties	<p>1. To what extent is a private party's obligation under a state program relieved or altered due to conflicting, overlapping or duplicative federal program provisions?</p> <p>2. To what extent do the new (Congressional or EPA) climate programs alter a state's ability to enforce its own programs or the relief that a state can seek for violations of its programs?</p> <p>3. What defenses might be available to a private party whose ability to comply with one or more GHG reduction requirements depends on actions of others (e.g., on the siting of transmission lines or the approval of permits for new biofuel refineries)?</p>
6. Citizen Enforcement against Government or Private Parties	<p>1. To what extent may citizens enforce provisions of the Clean Air Act against private parties or the Government for activities related to GHG emissions or climate change?</p>
7. Challenges (under the National Environmental Policy Act (NEPA) or state counterpart statutes) to Projects for Alleged Failure to Consider or Mitigate GHG Emissions or Climate Change	<p>1. To what extent does NEPA (or other environmental impact review statutes) require projects to consider the potential impact of GHG emissions and climate change?</p> <p>2. To what extent do environmental review statutes require projects to mitigate GHG emissions or address climate change?</p>
8. Actions for Injunctive Relief or for Damages against GHG Sources	<p>1. To what extent may a public or private party bring an action for injunctive relief or for damages against sources of GHG emissions under a common law nuisance claim or an implied right of action under a statute?</p>
9. Challenges Brought Under the Endangered Species Act (ESA)	<p>1. To what extent do anticipated climate change impacts alter the application of the ESA and create claims related to the protection of species?</p>
10. Disputes related to Emission Reduction Credit or Allowance Transactions or Ownership	<p>[These matters will raise a wide range of commercial and regulatory issues similar to those raised under other statutes that establish or recognize financial instruments and to commercial and enforcement issues raised under the acid rain provisions of the Clean Air Act.]</p>

Although the list contains merely a sampling of issues that may come before federal courts, they illustrate the extent to which judicial decisions may have a powerful impact on public policy. While this article will not address each of the listed topics, we do identify three

sets of issues that are likely to be significant, particularly should Congress fail to enact comprehensive climate legislation. Under such circumstances, courts would likely determine:

- (1) whether, if necessary, EPA can reframe the Clean Air Act to craft a national carbon trading program that avoids clearly unintended adverse economic impacts on the economy (and, in particular, on small and medium-sized sources) and that avoids the need for states to develop their own programs;
- (2) whether states may continue to implement programs that materially affect interstate (and, in some significant instances, international) energy and transportation policies;
- (3) to what extent private citizens may access federal courts to challenge projects or to seek damages (or other remedies) related to climate change.

This article focuses on these three general policy questions and examines both the current state of the law and the possible ways in which the courts could address these topics in matters brought before them.

II. THE SCOPE OF EPA AUTHORITY TO REGULATE GHG EMISSIONS UNDER THE CLEAN AIR ACT

For EPA to regulate a substance under the Clean Air Act, typically it must find that the substance is an “air pollutant,” and “endangers” the public health or welfare (the latter determination is referred to as a positive “endangerment finding”). A source then becomes subject to regulation under the Act if it emits an air pollutant (often above a particular threshold) that causes or contributes to endangerment of the public health or welfare.

A. EPA Regulation of GHGs From Mobile Sources

In 1999, various public advocacy organizations petitioned the EPA to regulate GHG emissions from motor vehicle sources as “air pollutants” under Title II of the CAA. The EPA denied the petition in 2003 on the basis that GHGs were not “air pollutants” under the Act and that global warming had not been “unequivocally established.”² Public advocacy groups, joined by states and cities, brought suit in 2005 to challenge the denial. In 2007, the U.S. Supreme Court ruled against the EPA in its landmark *Massachusetts v. EPA* decision, holding that the term “air pollutant” encompassed GHGs (carbon dioxide, methane, nitrous oxide, and hydro-fluorocarbons). It then ordered the EPA to determine whether GHGs endanger the public health or welfare.³

In response to the Supreme Court’s ruling, the EPA published proposed findings on April 24, 2009, stating that GHGs endanger the public health and welfare and that motor vehicle

² Control of Emissions From New Highway Vehicles and Engines, 68 Fed Reg. 52,922, 52,930 (Sept. 8, 2003).

³ *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007).

emissions of GHGs contribute to air pollution that endangers the public welfare.⁴ If the proposed findings are adopted, the EPA will be required to regulate GHG emissions from motor vehicle sources under Section 202 of the Act. Proposed regulations were announced by President Obama on May 18, 2009.

Although *Massachusetts v. EPA* pertained to GHG emissions only from *motor vehicle* sources under Title II of the Act, petitions have been filed with the EPA to regulate GHGs from other *mobile* sources of GHGs under Title II of the Act. If the proposed positive endangerment finding is adopted, the EPA may be required to consider GHG emissions from these sources as well. Such sources include:

- Aircraft Engine Emissions: Section 231(a) of the Act requires the EPA, after considering appropriate factors, to establish standards from “time to time” for air pollutants emitted by aircraft engines that cause or contribute to pollution that endanger the public welfare. Various states and public advocacy organizations have petitioned the EPA to make a positive endangerment finding and regulate GHG emissions from aircraft engine sources.⁵
- Non-Road Vehicle Emissions: Section 213(a) of the Act provides that the EPA administrator *may* promulgate regulations for emissions of air pollutants that *significantly* contribute to air pollution that endangers the public health and welfare. At least five petitions are currently pending before the EPA to regulate GHG emissions from non-road vehicle sources (marine vessels, locomotives, etc.), however regulation will not be required absent a finding that these sources are significant contributors.⁶

B. EPA Regulation of GHGs From Stationary Sources

The Clean Air Act contains several provisions that potentially govern the regulation of *stationary* sources of air pollutants. Most prominent among these is the National Ambient Air Quality Standards (“NAAQS”) program by which states are required to submit implementation plans to control existing and new stationary (and other) sources of air pollutants to meet air quality standards established and periodically revised by EPA. Air pollutants that have been regulated by EPA and that occur from *new* or *modified* sources also are subject to additional stringent performance standards through the Act’s New Source Review (“NSR”) program, which requires stationary sources to install Best Available Control Technology (“BACT”) or Lowest Achievable Emissions Rate (“LAER) technology if their net emissions exceed applicable significance thresholds. Whether a source is subject to BACT or LAER depends on whether the air quality control region in which the source resides has attained the NAAQS for the pollutant in question. For certain significant categories of equipment, stationary sources also may be subject

⁴ Proposed Endangerment and Cause or Contribute Findings for GHGs Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18,886 (Apr. 24, 2009).

⁵ *California v. Johnson*, Petition for Rule Making Seeking the Regulation of GHG Emissions from Aircraft (Dec. 4, 2007); Earthjustice Petition for Rulemaking Under the Clean Air Act to Reduce the Emissions of Air Pollutants from Aircraft that Contribute to Global Climate Change (Dec. 5, 2007).

⁶ *California v. Johnson*, Petition for Rule Making Seeking the Regulation of GHG Emissions from Ocean-Going Vessels (Oct. 3, 2007).

to the Act's New Source Performance Standards ("NSPS") program. Finally, stationary sources may be subject to Maximum Achievable Control Technology ("MACT") and "residual risk" requirements under the Act's Hazardous Air Pollutant ("HAP") program if the pollutant is among those substances EPA deems hazardous and if the emissions exceed significance levels. For "major" stationary sources, each of these programs, if applicable, must be contained in an operating permit program as defined by Title V of the Act. EPA or, in appropriate circumstances, citizens, may enforce applicable standards contained in a state implementation plan ("SIP"), any of the applicable standards individually noted above or any federally enforceable requirements listed in a facility's Title V permit.

1. Regulation of GHGs Pursuant to NAAQS

Under the NAAQS program, the EPA establishes ambient air quality standards for "criteria pollutants" that are designed to protect public health and welfare. Only pollutants considered to be "criteria pollutants" are subject to regulation under NAAQS. Traditionally, NAAQS have been established for pollutants (e.g., ozone, carbon monoxide, sulfur dioxide, particulate matter, oxides of nitrogen, lead) that clearly have a local health impact. As GHG impacts of concern occur predominantly on a global scale, EPA would be faced with novel and difficult issues in establishing a GHG NAAQS both in defining an appropriate health or welfare "ambient" standard and in establishing how EPA would determine whether a state SIP has "attained" the applicable NAAQS.⁷

Claims will likely arise as to whether GHGs are properly considered "criteria pollutants." Section 108(a)(1) of the Act defines "criteria pollutants" as those: (1) which have an adverse effect on health and welfare, and (2) for which the EPA plans to issue air quality criteria. Thus, GHGs may not be "criteria pollutants" subject to regulation if the EPA plans not to issue GHG air quality criteria.

In *Natural Resources Defense Council v. Train*, the most recent case interpreting Section 108(a)(1), the court held that the EPA could not avoid listing a pollutant as a "criteria pollutant" simply by stating that it did not plan to issue air quality criteria for that pollutant.⁸ Thus, under *Train* one could argue that in the face of a positive endangerment finding, the EPA must list GHGs as "criteria pollutants" and subject them to NAAQS regulation.

There are good reasons to believe, however, that EPA likely has greater discretion regarding the potential listing of GHGs than *Train* might suggest. First, since the time *Train* was decided, the CAA has been twice amended (in 1977 and 1990), and the U.S. Supreme Court has since recognized the agency's discretion in interpreting ambiguous statutory language.⁹ As noted above, EPA will have a strong basis not to treat GHGs as a "criteria pollutant" because the character of their emissions and impact differs significantly from that of the pollutants that Congress contemplated EPA would address under Section 108. Furthermore, the regulatory

⁷ Unlike other air pollutants whose local emissions directly impact air quality within the region, GHGs mix and distribute atmospherically and have global rather than local impacts. Accordingly, a local air quality control region could be in "non-attainment" of air quality standards based on GHGs that were emitted outside of the region. States could then face sanctions for "non-attainment" through no fault of their own.

⁸ 545 F.2d 320, 324 (2d Cir. 1976).

⁹ *Chevron v. Natural Resources Defense Council*, 467 U.S. 837, 842 (1984).

consequence of EPA establishing a NAAQS for GHGs would be so materially different from the listing of other pollutants in its scope and expense that there would be a unique and potentially compelling basis for EPA to exercise discretion not to list them either under the general discretion afforded the agency under *Chevron*, or under one or more of the extraordinary bases on which courts have permitted agencies to deviate from statutory language (e.g., the doctrines of administrative necessity or absurd results, as discussed more fully below).

2. Regulation of GHGs Pursuant to NSR

As noted above, the NSR program regulates new or modified sources of criteria and otherwise regulated air pollutants if their net emissions exceed applicable significance thresholds. NSR regulations differ according to whether the region has “attained” air quality at the level required by NAAQS (so-called “attainment” areas) or whether the region has exceeded NAAQS for a particular pollutant (“non-attainment” areas). Attainment areas are subject to Prevention of Significant Deterioration (“PSD”) requirements, while non-attainment areas are subject to Non-Attainment New Source Review (“NNSR”) requirements.

Air pollutants need not be listed as “criteria pollutants” to be regulated under the PSD program. Rather, sources are potentially regulated under the PSD program if they emit pollutants that are “subject to regulation” anywhere else in the Clean Air Act.¹⁰ The EPA has been petitioned to regulate GHGs under the PSD program on the basis, among others, that GHGs are subject to monitoring and reporting requirements under the Act.¹¹ The EPA has found, however, that pollutants are not “subject to regulation” solely on the basis of monitoring or reporting requirements, and therefore PSD regulations should not apply.¹² Pollutants are not considered “subject to regulation” under the Act unless regulations control the pollutant’s emissions.¹³ The current EPA Administrator has granted a petition to reconsider this position.¹⁴

If EPA adopted regulations that control GHG emissions from motor vehicles or from other sources, GHGs would become “subject to regulation” under the Act, and PSD regulations would then arguably be triggered. Should this occur, the agency still would be faced with the difficult task of determining whether there are any cost-effective control strategies that would qualify as BACT for new and modified GHG sources. Furthermore, it would face the difficult task of determining what should be the appropriate significance threshold for applying PSD to such sources. For some source categories, the PSD program establishes 100 annual tons as the applicable significance threshold, while for others it is 250 annual tons. Neither may be appropriate for GHG sources given the extremely large number of sources that emit GHGs above

¹⁰ CAA Section 165(a)(4).

¹¹ See, e.g., State of New Mexico’s Petition for Review and Request for Oral Argument In re Desert Rock Energy Co., LLC, Permit No. AZP 04-01.

¹² See EPA Addendum to the Statement of Basis for the Desert Rock Energy Facility PSD Permit, NSR 4-1-3, AZP 04-01. See also Memorandum of Administrator Stephen L. Johnson, “EPA’s Interpretation of Regulations that Determine Pollutants Covered By Federal Prevention of Significant Deterioration (PSD) Permit Program (December 18, 2008). But note that Administrator Lisa Jackson has agreed to reconsider this Memorandum, without staying its effect. See Letter to David Bookbinder (granting petition for reconsideration in part), February 17, 2009.

¹³ See *id.*

¹⁴ *Id.*

those levels.¹⁵ As EPA noted in its July 2008 ANPR, the effect of applying such low significant thresholds to GHG sources would be to include within the PSD program many sources that have never before been subject to such regulation, including equipment as small as a commercial furnace.¹⁶ The net effect would be to increase the number of PSD permits that EPA and the states would need to issue by a factor of 10 (e.g., to 2-3000 permits a year) and to regulate such small sources as “large office and residential buildings, hotels, large retail establishments, and similar facilities.”¹⁷ The scale and economic impact of such a program would vastly exceed that intended by Congress when it enacted the PSD program in 1977 and reauthorized it in 1990. Under such circumstances and as further discussed below, EPA may well seek to deviate from the strict language of the Act and its previous PSD implementing regulations if it regulates GHGs as a pollutant and applies the Act’s PSD provisions to GHG sources.

3. Regulation of GHGs Pursuant to NSPS

Pursuant to the NSPS program, the EPA must regulate sources of air pollution under Section 111(b)(1)(A) if: (1) the air pollution in question is reasonably anticipated to endanger the public health and welfare, and (2) the category of sources in question contributes significantly to air pollution that endangers the public health and welfare. Based on the proposed positive endangerment finding published by the EPA in April 2009, if the finding is finalized, then the EPA could be required to regulate sources under NSPS that are significant contributors of GHGs.

For sources not already regulated under NSPS, claims could arise as to whether a source “contributes significantly” to climate change and thus should become subject to NSPS regulation. For example, the State of New York has already brought suit to compel regulation of utility and industrial power plants.¹⁸ For sources already regulated under NSPS that may be significant contributors of GHGs (such as cement and steel plants), claims will likely arise to compel regulation of GHG emissions. The EPA has stated, however, that although it has discretion to promulgate emissions standards for already-listed sources, it has no obligation to promulgate standards without first undertaking a deliberate research process.¹⁹ Thus, EPA may be able to successfully defend claims to regulate GHGs for listed sources until an appropriate evaluative process is complete. Furthermore, as discussed below, should EPA decide to use Section 111(d) of the Act to develop a comprehensive national program for existing GHG sources, that program could affect the way in which EPA implements the section’s new source provisions under paragraph (b)(1). This would be another area of the statute for which the courts may be invited to review the exercise of EPA’s discretion.

¹⁵ *Advance Notice of Proposed Rulemaking (“Regulating GHG Emissions Under the Clean Air Act”)*, 73 Fed. Reg. 44354, 44367, 44420, 44498 (July 30, 2008)

¹⁶ 73 Fed. Reg. at 44498.

¹⁷ 73 Fed. Reg. at 44499.

¹⁸ *New York v. EPA*, No. 06-1148, 2007 U.S. App. LEXIS 30013 (D.C. Cir. 2007).

¹⁹ *Standards of Performance for Petroleum Refineries*, 73 Fed. Reg. 35,838, 35,859 (Jun. 24, 2008) (explaining the decision not to regulate GHG emissions from petroleum refineries).

4. Regulation of GHGs Pursuant to Title V

Title V of the Act requires the states or EPA to issue an operating permit for “major sources” of air pollutants. The operating permit incorporates all federal air pollution control requirements that apply to the facility, including those contained in a state’s applicable SIP or imposed under the Act’s NSR, NSPS, HAP or acid rain programs. As in the PSD program discussed above, under Title V a “major source” is typically defined as a facility or equipment that emits more than 100 tons per year of any air pollutant, but under certain circumstances lower thresholds apply.²⁰ Under this section of the Act also, a strict application of the 100 annual ton major source definition would result in a crushing burden on EPA and the states, as it would likely require the permitting of over 550,000 facilities. Such an expansive effect would be in sharp contrast to the scope anticipated by Congress, which expected that the “major source” definition would cover only a relatively small number of the largest sources, more in the range of approximately 16,000 facilities, roughly comparable to the number of major sources under the Clean Water Act.²¹ As suggested in the ANPR, in the absence of Congressional clarification, EPA will likely need to exercise its discretion to recast the major source definition for applying Title V to GHG sources. If so, the agency’s action may well trigger judicial review regarding the proper scope of the agency’s discretion in deviating from the Act’s plain language.

C. EPA Authority to Promulgate a GHG Cap-and-Trade Program Under the Clean Air Act

Many policymakers and reviewers consider a cap-and-trade program to be the most desirable means to regulate GHG emissions because it would assure environmental performance and minimize cost.²² Should Congress fail to enact comprehensive climate legislation for GHG sources, EPA will need to consider whether and to what extent it has the authority under the existing Clean Air Act to implement a cap-and-trade program. Although the question is hardly free from doubt, it appears that the best vehicle for EPA to establish a national cap-and-trade program would be a stationary source trading program under section 111(d) of the Act.

At least two sections of the Act potentially authorize EPA to craft a cap-and-trade program. Under the NSPS program, Section 111(d) authorizes the EPA to establish a “standard of performance” for sources of air pollutants. A “standard of performance” must state a “standard of emissions” for the air pollutant that “reflects the degree of emissions limitations achievable through the best system of emission reduction”²³ Cap-and-trade systems are arguably permissible “standards of performance” under this definition because they provide a cap or “limitation” on pollutants that could be determined by EPA to be the most appropriate, or “best” system of emissions reduction.

²⁰ A smaller “major source” definition, e.g., as low as 10 tons per year, may apply under the Act’s hazardous air pollutant (“HAP”) program or in certain non-attainment areas.

²¹ See S. Rep. 101-228, at 353.

²² See, e.g., Emissions Trading in the U.S.” Experience, Lessons and Considerations for GHGs, Ellerman, A. Denny, Joskow, Paul L., and Harrison, Jr., David, Pew Center on Global Climate Change, at 32-35 (May 2003), noting that past US emissions trading programs (e.g., the lead program, acid rain program and Regional Clean Air Incentives Market) significantly reduced the overall cost of compliance (often by up to 50%) and enhanced environmental effectiveness.

²³ Section 111(a)(1).

In a previous rulemaking, the EPA has already utilized a cap-and-trade system to implement a “standard of performance.” Under the Clean Air Mercury Rule (“CAMR”), EPA established a cap-and-trade system for mercury under Section 111(d). The CAMR regulation was successfully challenged on other grounds, specifically on the basis that EPA improperly revoked its categorization of mercury under Section 112, the Act’s HAP program. Because the D.C. Circuit did not address the question of whether EPA may use Section 111(d) to establish an emissions trading program, this path may still be available for EPA to address GHG emissions.²⁴

A cap-and-trade system also may be permissible under the NAAQS program. Section 110(a) of the Act expressly recognizes state authority to use “marketable permits and auctions” to achieve and maintain emissions standards. The EPA relied on Section 110(a) to administer a cap-and-trade program for nitrogen oxide (the “NO_x SIP Call”) in 2003 and again for sulfur dioxide and nitrogen oxides in 2005 with the Clean Air Interstate Rule (“CAIR”).

The recent invalidation of the CAIR cap-and-trade program, however, may call into question whether the NAAQS approach would be suitable for establishing a cap-and-trade program. In a 2008 decision, the D.C. Circuit invalidated the interstate cap-and-trade program, in part because it could allow an upwind state to purchase enough offsets so that its actual emissions might prevent a downwind state from attaining emissions standards.²⁵ This holding might require each state to guarantee at least some emissions reductions within its own borders in order to prevent neighboring states from failing to meet a NAAQS. Requiring each state to cut at least some emissions would interfere with the economic efficiency of a national market. Of course, for the reasons noted above (e.g., the global, rather than local, nature of the climate challenge and the infeasibility of enforcing a GHG NAAQS at the state level), the Act’s NAAQS program does not seem an appropriate context for EPA regulation of GHG emissions.

If EPA establishes a cap-and-trade system under the Act, Section 111(d) would appear to be the preferable statutory basis because it provides the agency with the most discretion in determining which sources will be regulated, the stringency of the standards, the shape of the performance standards, and the timing of their implementation. Such discretion is important given that the GHG program would affect many sectors of the economy for which the agency will likely lack sufficient information to set individual standards, nor is it likely to know in advance the optimal mix or timing of control strategies. Section 111(d) is also preferable because it explicitly directs the EPA to balance the costs and benefits of its regulatory approach, while Section 108 (NAAQS) affords the EPA little discretion to account for costs of regulation.

D. EPA Authority to Deviate from the Plain Language of the Act

Whether it is to avoid the unintended adverse economic or agency resource impacts that would occur if EPA implemented some of the Act’s provisions (e.g., NAAQS, HAPs, NSR, Title V) or to structure an optimal national cap-and-trade GHG program, EPA may need to exercise an unprecedented degree of discretion under the Act. As it has recognized in its ANPR, the agency would be relying on judicial doctrine that have been rarely used but that may well be warranted given the extraordinary nature of the agency’s challenge.

²⁴ *New Jersey v. EPA*, No. 05-1097 (D.C. Cir. 2008).

²⁵ *North Carolina v. EPA*, No. 05-1244 (D.C. Cir. 2008).

1. The Doctrine of Absurd Results

Although appropriate occasions are necessarily limited, in the unusual circumstance of applying certain provisions of the Clean Air Act to the regulation of GHG emissions (effectively placing a square peg into a round hole), the EPA should have the legal authority to apply the so-called “absurdity doctrine” to avoid absurd, futile, or impossible results that are clearly contrary to Congressional intent. The absurdity doctrine, though not often used in recent years,²⁶ has survived even the most “textually oriented” periods in the Supreme Court’s history²⁷ and the most textually minded of the Court’s Justices.²⁸ It is notable that even in its decisions rejecting specific claims of absurdity, the Court has repeatedly reaffirmed the doctrine’s legitimacy as a means to effectuate legislative intent and qualify textual interpretation when the two differ.²⁹

The purpose of the absurdity doctrine is to provide relief when mechanical application of the seemingly “plain language” of a statute presents results other than those intended by Congress. In instances where the absurdity doctrine applies, the Supreme Court has stated that the “intention of the drafters, rather than the strict language, controls.”³⁰ As the EPA noted in the ANPR,³¹ to determine the intent of the drafters, “the courts may examine whether there is a related statutory provision that conflicts, whether there is legislative history of the provisions in question that exposes what the legislature meant by those terms, and whether a literal application of the provisions produces a result that the courts characterize variously as absurd, futile, strange, or indeterminate.”³²

²⁶ See, e.g., *United States v. Ron Pair Enters., Inc.*, 489 U.S. 235, 242 (1989); *Nixon v. Missouri Mun. League*, 541 U.S. 125, 138-142 (2004); *Clinton v. City of New York*, 524 U.S. 417, 429 (1998) (applying the absurdity doctrine to alter textual meaning); *United States v. X-Citement Video, Inc.*, 513 U.S. 64, 69 (1994) (same); *Burns v. United States*, 501 U.S. 129, 135 (1991) (same); *Pub. Citizen v. U.S. Dep’t of Justice*, 491 U.S. 440, 454-55 (1989) (same); *Green v. Bock Laundry Mach. Co.*, 490 U.S. 504, 509 (1989) (same).

²⁷ See John F. Manning, *The Absurdity Doctrine*, 116 Harv. L. Rev. 2387, 2388-89 (2003), for a discussion of the history of the absurdity doctrine.

²⁸ Even Justice Scalia accepts some form of the doctrine, although he rarely invokes it. See *Burns*, 501 U.S. at 135 (opinion joined by Scalia, J.) (finding it absurd to allow a district court to depart upward, *sua sponte*, from the sentencing guidelines range when Rule 32 gives defendants “an opportunity to comment upon the probation officer’s determination and on other matters relating to the appropriate sentence”) (quoting Fed. R. Crim. P. 32(a)(1)); *Bock Laundry*, 490 U.S. at 527-28 (Scalia, J., concurring in the judgment) (holding that, to avoid an “absurd and arguably unconstitutional result,” the Court should construe the word “defendant” in Rule 609(a)(1) of the Federal Rules of Evidence to refer only to criminal defendants).

²⁹ See, e.g., *Inter-Modal Rail Employees Ass’n v. Atchison, Topeka & S.F. Ry.*, 520 U.S. 510, 516 (1997) (acknowledging that an “absurd or glaringly unjust result” would justify “departure from the plain language” of the statute) (quoting *Ingalls Shipbuilding, Inc. v. Dir., Office of Workers’ Comp. Programs*, 519 U.S. 248, 261 (1997)); *Rowland v. Cal. Men’s Colony*, 506 U.S. 194, 200 (1993) (describing the absurdity doctrine as a “common mandate of statutory construction”); *EEOC v. Commercial Office Prods. Co.*, 486 U.S. 108, 120 (1988) (noting that the Court “need not and should not countenance” absurd or futile results). See also *Chapman v. United States*, 500 U.S. 453, 463-64 (1991) (“A straightforward reading of 841(b) does not produce a result so absurd or glaringly unjust ... as to raise a reasonable doubt about Congress’ intent.”) (citation and internal quotation marks omitted).

³⁰ *Ron Pair Enters., Inc.*, 489 U.S. at 242..

³¹ 73 Fed. Reg. 44,354 (July 30, 2008).

³² See ANPR at 44,503 (citing *Ron Pair Enters., Inc.*, 489 U.S. 235, *Nixon v. Missouri Mun. League*, 541 U.S. 125 (2004); *United States v. American Trucking Assoc., Inc.*, 310 U.S. 534 (1940); *Rector of Holy Trinity Church*, 143 U.S. 457); see also, *Pub. Citizen*, 491 U.S. at 440.

Applying these principles to several aspects of the Clean Air Act programs described above (e.g., NAAQS, HAPs, NSR and Title V), the plain language of the statute may be considered to produce absurd results that appear to be at odds with the clearly articulated intent of Congress. Under these circumstances, the EPA may have a sound basis for invoking the absurdity doctrine, evaluating the legislative history, and interpreting such sections in a manner that best effectuates Congress intent.³³

2. The Doctrine of Administrative Necessity

As also noted by EPA in its ANPR, based on grounds of “administrative necessity,” the burden of literal application of the NSR and Title V (and possibly other provisions) provides a basis for EPA to take sensible policy measures.³⁴ The *Alabama Power* Court affirmed the EPA’s authority to do so, explaining, “save in the face of the most unambiguous demonstration of congressional intent to foreclose them,” there are “certain limited grounds for the creation of exemptions [] inherent in the administrative process,” which “should not be presumed” “to be unavailabl[e].”³⁵ The D.C. Circuit considers necessity the “administrative need to adjust to available resources ... [where] the constraint was imposed ... by a shortage of funds..., by a shortage of time, [and] of the technical personnel needed to administer a program.”³⁶

The EPA may have authority to apply NSR and Title V regulations only to truly significant sources of GHGs under the doctrine of administrative necessity. In addition to the argument that regulation of these sources is not a wise or efficient policy option, the EPA likely lacks the personnel, time, and funding to regulate or oversee 2-3000 annual preconstruction permits under the PSD program or 550,000 additional sources of GHG emissions under the Title V program.

Should Congress fail to implement comprehensive climate legislation that clarifies EPA’s duties under the Act and should EPA be left to execute its responsibilities following *Massachusetts v. EPA*, there will be ample opportunity for the federal courts to consider whether EPA has properly exercised its discretion in applying the Clean Air Act to GHG sources. Resting on the outcome of the courts’ review will be the scope and content of regulations potentially affecting hundreds of thousands of US businesses, commercial buildings, universities, hospitals and a variety of other public and private enterprises.

III. THE SCOPE OF STATE AUTHORITY TO REGULATE GHG EMISSIONS

As until recently the United States government has opted not to implement comprehensive national controls over GHG emissions, several state and local governments have

³³ A noted commenter has gone so far as to argue that administrative agencies should be given even more leeway to avoid absurd results than the judiciary. See Cass R. Sunstein, *Avoiding Absurdity? A New Canon in Regulatory Law*, 32 *Envtl. L. Rep.* 11,126 (2002) (explaining that “excessive generality is a form of ambiguity, and that where a statute produces absurdity, it is reasonable to say ... that it lacks a plain meaning”).

³⁴ See e.g., ANPR at 44, 503 (citing *Alabama Power Co.*, 636 F.2d at 357-60; *NRDC v. Train*, 510 F.2d 692, 712 (D.C. Cir. 1974)).

³⁵ *Id.* at 357.

³⁶ *Id.* at 358.

stepped into the breach. Concerns about the potential cost of a patchwork of state and regional programs and potential interference with energy and fuel supplies, among other issues, has prompted affected industries to bring challenges to such programs. The earliest and most notable are those brought by the motor vehicle manufacturers, but one can expect others to follow as California's economy-wide program takes shape and as other states enact ambitious climate programs. The typical federal bases for challenging state GHG programs are federal preemption, and similar claims related to the federal-state relationship, and constitutional challenges, such as interference with interstate commerce and allegations of improper state compacts. Given an enduring interest by several states to continue to regulate GHG sources even if Congress enacts or EPA promulgates a comprehensive national program, one can expect an increase in challenges to state action on such bases. Depending in significant part on how extensive is Congressional or agency action and on how careful is Congress to articulate the state role through express preemption or savings provisions in its emerging legislation, it may well fall to the courts to determine the scope and content of state authority in the climate regulatory arena.

A. Regional Initiatives

Regional programs aimed at reducing GHGs to date include the Northeast Regional GHG Initiative ("RGGI"), the Western Climate Initiative ("WCI"), and the Midwest Regional GHG Reduction Accord ("MGGRA").³⁷

1. Regional GHG Initiative ("RGGI")

The Regional GHG Initiative is the first mandatory, market-based effort in the United States to reduce GHG emissions.³⁸ The ten states participating in RGGI have agreed to cap and reduce CO₂ emissions from the power sector by ten percent by 2018.³⁹ RGGI is composed of individual CO₂ budget trading programs in each of the ten participating states. These ten programs are implemented through state regulations, based on a RGGI model rule, and are linked through CO₂ allowance reciprocity. Regulated power plants will be able to use a CO₂ allowance issued by any of the ten participating states to demonstrate compliance with the state program governing their facility. Taken together, the ten individual state programs will function as a single regional compliance market for carbon emissions.⁴⁰

Additionally, RGGI Inc., a non-profit corporation, was created to provide technical and support services for key elements of the states' CO₂ Budget Trading programs.⁴¹ Emission permit auctioning began in September 2008 with subsequent auctions held quarterly.⁴²

³⁷ Other regional programs include the New England Governors-Eastern Canadian Premiers' Climate Change Action Plan, Powering the Plains, Western Governors' Association Clean and Diversified Energy Initiative, West Coast Governors Global Warming Initiative, and the Southwest Climate Change Initiative. See Michael B. Gerrard, *Global Climate Change and U.S. Law* 316 (2007).

³⁸ <http://www.rggi.org/home>.

³⁹ *Id.*

⁴⁰ <http://www.rggi.org/about>.

⁴¹ <http://www.rggi.org/rggi>.

⁴² Kate Galbraith, *Carbon Allowances: Going, Going, Gone!*, N.Y. Times, September 29, 2008, <http://greeninc.blogs.nytimes.com/2008/09/29/carbon-allowances-going-going-gone/?scp=8&sq=rggi&st=cse>

2. Western Climate Initiative (“WCI”)

The Western Climate Initiative was launched in February 2007 and is a collaboration between seven United States governors and four Canadian premiers.⁴³ WCI was created to identify, evaluate, and implement collective and cooperative ways to reduce GHGs in the region, focusing on a market-based cap-and-trade system.⁴⁴ WCI has a goal of reducing GHG emissions to fifteen percent below 2005 levels by 2020.⁴⁵ The cap-and-trade system will target multiple sectors and six GHGs.⁴⁶ On September 23, 2008, WCI released its Design Recommendations for a regional multi-sector cap-and-trade program.⁴⁷ The program is currently under evaluation.

3. Midwest Regional GHG Reduction Accord (“MGGRA”)

The Midwest GHG Reduction Accord, signed in November 2007, is a commitment by the governors of nine Midwestern states and two Canadian premiers to reduce GHG emissions through a regional cap-and-trade program and other complementary policy measures.⁴⁸ According to the aggressive timeline set forth in the accord, the cap-and-trade system is expected to go live in May 2010.⁴⁹

B. State Initiatives

States have implemented a variety of different measures to address climate change including, but not limited to, providing incentives for installation of energy efficient devices, requiring new facilities to derive at least some portion of energy needs from renewable sources, and subsidizing research and development of alternative energy vehicles and “next generation” technologies.⁵⁰

California in particular has enacted several pieces of legislation aimed at reducing the state’s GHG emissions.⁵¹ Particularly notable are (1) California Global Warming Solutions Acts (“AB 32”), which aims to decrease GHG emissions to 1990 levels by 2020,⁵² (2) SB 1368, which directs the California Public Utilities Commission (“CPUC”) to establish GHG emission performance standards (“EPS”) for electricity procured by local publicly owned utilities, whether the electricity is generated within California or imported from plants in other states,⁵³ (3) AB 1493, which directed the California Air Resources Control Board (“CARB”) to promulgate rules to regulate GHG emissions from motor vehicles,⁵⁴ and (4) SB 375, which requires CARB to set

⁴³ <http://www.westernclimateinitiative.org/>.

⁴⁴ *Id.*

⁴⁵ Western Climate Initiative Statement of Regional Goal, August 22, 2007, <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F13006.pdf>.

⁴⁶ *Id.*

⁴⁷ Design Recommendations for the WCI Regional Cap-and-Trade Program, September 23, 2008, <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F21253.pdf>.

⁴⁸ <http://www.midwesternaccord.org/index.html>.

⁴⁹ Midwest Greenhouse Gas Accord, November 15, 2007, <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F21253.pdf>.

⁵⁰ See Gerrard, *supra* note 1, at Chapter 11, The State Response To Climate Change: 50-State Survey.

⁵¹ <http://www.climatechange.ca.gov/publications/legislation.html>.

⁵² <http://gov.ca.gov/press-release/4111/>.

⁵³ http://www.climatechange.ca.gov/publications/legislation/sb_1368_bill_20060929_chaptered.pdf.

⁵⁴ http://www.climatechange.ca.gov/publications/legislation/ab_1493_bill_20020722_chaptered.pdf.

regional GHG targets and metropolitan planning organizations to prepare housing, land use and transportation strategies as part of an integrated “sustainable community strategy.”⁵⁵ Additionally, in July 2006, Governor Schwarzenegger and British Prime Minister Tony Blair signed an accord between California and Britain which commits California and Britain to (1) evaluate and implement market-based mechanisms that spur innovation, (2) study the economics of climate change, (3) collaborate on technology research, and (4) enhance linkages between the scientific communications of California and Britain.⁵⁶

C. Local Initiatives

Local initiatives include laws that address the energy efficiency of buildings, local transportation initiatives to replace traditional government vehicles with hybrids and alternative-fuel vehicles, zoning initiatives to reduce the inefficiencies of “urban sprawl,” and renewable energy programs.⁵⁷

D. Challenges to State and Regional Initiatives

While there may be several avenues of attack for challenging a state or regional initiative based on its inconsistency with state authorizing legislation or its alleged violation of other state legislation or of the state constitution, federal challenges are likely to be based on claims of federal legislative or regulatory preemption, foreign policy preemption, or violations of the Dormant Commerce Clause or of the Compact Clause of the U.S. Constitution.

1. Federal Preemption

Federal preemption challenges can take one of three forms: express preemption challenges, field preemption challenges, and conflict preemption challenges.

The most recent set of preemption challenges (“the tailpipe emission cases”) involved regulations promulgated by CARB pursuant to AB 32 relating to motor vehicle emissions.⁵⁸ Generally, recognizing the economic desirability of uniform national standards for engine and vehicle manufacturers, the Clean Air Act (“CAA”) expressly preempts state regulation of motor vehicles emissions.⁵⁹ However, the Clean Air Act provides California with an exception, as long as it obtains a waiver of preemption from the EPA.⁶⁰ Further, although other states are not eligible to obtain waivers from the EPA, they may adopt standards that are promulgated by California for which a waiver of preemption has been granted by the EPA.⁶¹ Pursuant to these exceptions, CARB passed Resolution 04-28, which established GHG emission standards for automobiles.⁶² Several other states followed suit, adopting identical standards.

⁵⁵ http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=sb_375&sess=PREV&house=B&author=steinberg.

⁵⁶ <http://gov.ca.gov/index.php/press-release/2770>.

⁵⁷ See Gerrard, *supra* note 1, at, Chapter 12, Local Initiatives.

⁵⁸ See Section IIIB *supra*.

⁵⁹ 42 U.S.C. § 7543(a).

⁶⁰ 42 U.S.C. § 7543(b)(1).

⁶¹ 42 U.S.C. § 7505.

⁶² <http://www.arb.ca.gov/regact/grnhsgas/res0428.pdf>.

Plaintiffs, automotive manufacturers, filed suit in four different jurisdictions, alleging that the regulations were preempted by the Energy Policy and Conservation Act (“EPCA”).⁶³ Section 502 of EPCA directs the Department of Transportation (“DOT”) to set fuel economy standards for new passenger vehicles and light trucks.⁶⁴ The Secretary of Transportation has delegated his EPCA authority to the National Highway Traffic Safety Administration (“NHTSA”).⁶⁵ In setting fuel economy standards, the NHTSA was directed to consider “(1) technological feasibility; (2) economic practicability; (3) the effect of other Federal motor vehicle standards on fuel economy; and (4) the need of the Nation to conserve energy.”⁶⁶ Finally, Section 509 of EPCA contains a specific preemption provision and preempts any state laws or regulations related to fuel economy.⁶⁷ Plaintiffs argued that EPCA preempted the state GHG regulations “[b]ecause there is a relationship between decreasing carbon dioxide emission from the tailpipe of a motor vehicle and increasing its fuel economy.”⁶⁸

2. Applicability of the Supremacy Clause

As a threshold matter, a court hearing a preemption challenge must decide if the preemption doctrines apply at all. “The Supremacy Clause of Article VI of the United States Constitution grants Congress the power to preempt state or local law.”⁶⁹ But “[w]here the interrelationship of two federal laws is at issue, preemption doctrine *per se* does not apply. Rather, the issue becomes whether one federal law has preclusive effect on the applicability of the other.”⁷⁰

In *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, the first tailpipe emission case to be decided, the Vermont district court hearing the case held that the preemption doctrines did not apply. The court stated that “[t]he Supremacy Clause is not implicated when federal laws conflict or appear to conflict with one another. In such a case courts have a duty to give effect to both provisions if possible.”⁷¹ The court concluded that in this instance, the state GHG regulations had the force of federal law: “[o]nce approved by EPA, California and Vermont’s GHG standards become part of the [national] regulatory backdrop”⁷²

The California district court in *Central Valley Chrysler-Jeep v. Goldstene*, the second tailpipe emission case to be decided, analyzed the Supremacy issue in a different manner. First the court asked “if EPA may promulgate emission regulations that have an effect on fuel

⁶³ See *Green Mt. Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295 (D. Vt. 2007) (State’s adoption of California standards does not preempt federal fuel-efficiency standards); *Cent. Valley Chrysler-Jeep, Inc. v. Goldstene*, 529 F. Supp. 2d 1151 (E.D. Cal. 2007) (same); *Lincoln-Dodge, Inc. v. Sullivan*, 588 F. Supp. 2d 224 (D.R.I. 2008) (case dismissed due to issue preclusion); *Zangara Dodge, Inc. v. Curry*, No. 1:07-CV-01305 (D.N.M., filed Dec. 2007) (pending).

⁶⁴ 49 U.S.C. § 32902.

⁶⁵ 49 C.F.R. § 1.50(f).

⁶⁶ 49 U.S.C. § 32902(f).

⁶⁷ 49 U.S.C. § 32919(a).

⁶⁸ *Green Mt. Chrysler Plymouth Dodge Jeep*, 508 F. Supp. 2d 295 at 302.

⁶⁹ *Cent. Valley Chrysler-Jeep*, 529 F. Supp. 2d at 1165 (citation and quotations omitted).

⁷⁰ *Id.*

⁷¹ 508 F. Supp. 2d 295 at 343-44.

⁷² *Id.*

economy.”⁷³ Citing to the Supreme Court’s recent decision in *Massachusetts v. EPA*, the court answered that question in the affirmative.⁷⁴

Second, the court asked “whether any new EPA-promulgated regulations that would have the incidental effect of requiring greater fuel efficiency than is required under existing regulations set by NHTSA under the CAFE program are precluded by EPCA.”⁷⁵ After examining the structure and text of both EPCA and the relevant portions of the Clean Air Act, the court concluded that “Congress intended to allocate to EPA the broader scope of authority to regulate vehicle exhaust emissions for the more important purpose of safeguarding the public’s health and welfare.”⁷⁶ Thus, “where EPA, consistent with its obligation to protect public health and welfare, determines that regulation of pollutants under the Clean Air Act is necessary and where such regulation conflicts with average mileage standards established pursuant to EPCA, EPA is not precluded from promulgating such regulation.”⁷⁷

Third, the court asked whether “there is any basis for treating a state regulation that has been granted [a] waiver [by EPA] any differently than a regulation that has been promulgated by EPA.”⁷⁸ The court also answered that question in the negative, finding that there is “no legal basis for the proposition that an EPA-promulgated regulation or standard functions any differently than a California-promulgated and EPA approved standard or regulation.”⁷⁹ Accordingly, the court held that “just as the *Massachusetts* Court held EPA’s duty to regulate GHG emissions under the Clean Air Act overlaps but does not conflict with DOT’s duty to set fuel efficiency standards under EPCA, so too California’s effort to regulate GHG emissions through the waiver of preemption provisions of the Clean Air Act overlaps, but does not conflict with DOT’s activities under EPCA.”⁸⁰

The issue of whether or not an EPA approved state-regulation is equivalent to an EPA promulgated regulation for the purposes of preemption appears to be confined to the EPA waiver program. For that reason, most state preemption challenges will likely pass this threshold inquiry.

3. Express Preemption

In *Green Mountain*, the court held alternatively that Vermont’s GHG regulations were not preempted by EPCA. The specific preemption provision in EPCA states that “[w]hen an average fuel economy standard prescribed by this chapter is in effect, a State or a political subdivision of a State may not adopt or enforce a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter.”⁸¹

⁷³ 529 F. Supp. 2d at 1165.

⁷⁴ *Id.* at 1167.

⁷⁵ *Id.* at 1165.

⁷⁶ *Id.* at 1168.

⁷⁷ *Id.* at 1170.

⁷⁸ *Id.* at 1165.

⁷⁹ *Cent. Valley Chrysler-Jeep*, 529 F. Supp. 2d. at 1173.

⁸⁰ *Id.* 1174.

⁸¹ 49 U.S.C. § 32902(a).

The court explained that “EPCA’s preemption provision cannot invalidate Vermont’s GHG regulations unless Congress had the clear and manifest purpose to do so.”⁸² To determine intent, the court considered the plain wording of EPCA’s express preemption clause, the objectives of EPCA, and legislative history. The court found that “[t]he general language of the preemption clause and the absence of any indication of Congressional intent about its limits, combined with the specific requirement to take EPA-approved California emissions regulations into consideration, supports a conclusion that Congress did not clearly intend to preempt such regulations.”⁸³ Accordingly, the court held that Vermont’s GHG emissions regulations was not expressly preempted by EPCA’s preemption provision.⁸⁴

In addition to express legislative preemption, on occasion federal agencies include preemptive language in their regulations. While it is clearly preferable for such preemptive language to appear in the regulation itself so that the public has an opportunity to comment on the desirability and effect of the provision as part of the rulemaking process, in the past there have been several circumstances in which preemptive language has been included instead only in the preamble to the regulation. To discourage agencies from this practice and to express his view that the preemption of state environmental initiatives should be disfavored, on May 20, 2009, President Obama issued a memorandum discouraging the federal government from preempting efforts by state and local governments.⁸⁵ The President noted that throughout the nation’s history, “[s]tate and local governments have frequently protected health, safety, and the environment more aggressively than has the national Government.”⁸⁶ Accordingly, the President instructed:

1. Heads of departments and agencies should not include in regulatory preambles statements that the department or agency intends to preempt State law through the regulation except where preemption provisions are also included in the codified regulation.⁸⁷
2. Heads of departments and agencies should not include preemption provisions in codified regulations except where such provisions would be justified under legal principles governing preemption, including the principles outlined in Executive Order 13132.⁸⁸

If the heads of departments and agencies adhere to the Administration’s policy regarding preemption, then it is likely that occasions of express preemption of state laws will be limited primarily to legislative actions. The Waxman-Markey American Clean Energy and Security Act of 2009 (ACES)(H.R. 2454) contains in new Clean Air Act Section 861 (preemption) and revised Section 116 (savings clause) a limited (2012-2017) preemption of state cap-and-trade programs designed to give the federal carbon market an opportunity to succeed without potential

⁸² *Green Mt. Chrysler Plymouth Dodge Jeep*, 508 F. Supp. 2d at 351.

⁸³ *Id.* at 354.

⁸⁴ *Id.*

⁸⁵ President Obama, Memorandum for Heads of Executive Departments and Agencies, May 20, 2009, http://www.eenews.net/features/documents/2009/05/20/document_pm_12.pdf.

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

interference from or confusion due to state programs. Under the current provisions of H.R. 2454, other state initiatives (so-called complementary measures) are expressly preserved for the states. Other key provisions of the bill (e.g., the combined renewable energy and efficiency program) expressly provide for a formally integrated state-federal partnership.

Express preemption challenges that are litigated will require the court conduct an analysis similar to the one found in *Green Mountain*. The court will have to look at the plain wording of the express preemption clause as well as the legislative and/or regulatory intent of the underlying law(s).

4. Field Preemption

“Under the doctrine of field preemption, state law is preempted if it attempts to regulate in a field that Congress intended the federal government to occupy exclusively.”⁸⁹ Further, [t]hat intent must be ‘clear and manifest,’ where the field ‘includes areas that have been traditionally occupied by the States.’”⁹⁰ The court in *Green Mountain* held that there was no field preemption because “[p]laintiffs have not shown that Congress exhibited a clear and manifest intent to render the regulation of carbon dioxide emissions from motor vehicles exclusively a federal domain.”⁹¹ The court stressed that other courts “have tended to find field preemption either by narrowly defining the field or in areas where states have not traditionally regulated.”⁹² In this case, “[t]he Supreme Court recently made clear that the regulation of carbon dioxide emissions from motor vehicles is not the exclusive province of the federal Department of Transportation.”⁹³ Further, “[w]hen Congress enacted EPCA, it was well aware of this long-standing practice of permitting California to apply for waivers from EPA for its emission standards pursuant to the CAA.”⁹⁴ Hence, “[i]t follows that the Congressional regulatory scheme to improve fuel economy does not express so dominant or pervasive a federal interest that EPA-approved state regulation is precluded.”⁹⁵

Environmental regulation in general, and recently climate protection in particular, has been described as a joint effort between the States and the Federal government. As President Obama’s memo indicates, climate change certainly is not a field that Congress intended the federal government to occupy exclusively. Given courts’ reluctance to find field preemption except either by narrowly defining the field or in areas where states have not traditionally regulated, challenges alleging field preemption are likely to fail, unless it is crystal clear what the “field” is and that the federal government intended to fully occupy that field.

5. Conflict Preemption

“A state law is invalid under the principal of conflict preemption if it actually conflicts with a federal statute or regulation.”⁹⁶ But “[t]he mere fact of ‘tension’ between federal and state

⁸⁹ *Green Mt. Chrysler Plymouth Dodge Jeep*, 508 F. Supp. 2d at 354.

⁹⁰ *Id.* (citing *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990)) (internal quotation omitted).

⁹¹ *Id.* at 355.

⁹² *Id.*

⁹³ *Id.* (citing *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007)).

⁹⁴ *Id.* at 355.

⁹⁵ *Green Mt. Chrysler Plymouth Dodge Jeep*, 508 F. Supp. 2d at 355.

⁹⁶ *Id.*

law is generally not enough to establish an obstacle supporting preemption, particularly when the state law involves the exercise of a traditional police power.”⁹⁷ A state law is also invalid if it “stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.”⁹⁸ “What constitutes a sufficient obstacle is a matter of judgment to be informed by reference to the overall federal statutory scheme.”⁹⁹

At trial, plaintiffs in *Green Mountain* bore the burden of proving that “the GHG regulations are sufficiently draconian that they essentially usurp NHTSA’s prerogative to set fuel economy standards.”¹⁰⁰ Plaintiffs’ primary argument was that EPCA provided “a level of protection from economic uncertainty by preventing states from promulgating regulations that upset the balance struck through the EPCA process. EPCA’s preemptive provision is seen as protecting manufacturers, dealers and customers from state regulations that would impose costly technological modifications or limit consumer choice by prohibiting sales of non-conforming vehicles.”¹⁰¹

The court, after a detailed and thorough evaluation of the plaintiffs’ evidence on the issue of conflict preemption found that “[p]laintiffs have not carried their burden to show that compliance with the regulation is not feasible; nor have they demonstrated that it will limit consumer choice, create economic hardship for the automobile industry, cause significant job loss or undermine safety.”¹⁰²

As state and federal governments continue to address climate change issues in parallel, it is almost certain that there will be some overlap between state and federal law. As such, claims of conflict preemption, especially claims that state laws frustrate the purpose of a federal law, will likely be at the forefront of any preemption challenge raised by plaintiffs.

6. Foreign Policy Preemption

In *Central Valley*, the court, after reviewing Supreme Court precedent, held that “a party asserting preemption on the ground of foreign policy preemption must show ‘clear conflict’ between a state law or program and the functioning of some agreement, treaty, or program that is the product of negotiations between the administrative branch and a foreign government.”¹⁰³ The court rejected plaintiffs’ foreign policy preemption argument because the court found “no evidence of any ‘policy’ on the part of the Administration to restrain state-based activities to curb GHG emission in order to leverage international cooperation” or any other “policy” with which California’s GHG regulations might conflict.¹⁰⁴

If *Central Valley* is any indicator, in the absence of particular agreements with other nations as to which a state program may conflict, claims of foreign policy preemption will likely

⁹⁷ *Id.* at 356.

⁹⁸ *Id.* at 343 (citation and quotation omitted).

⁹⁹ *Id.* at 356.

¹⁰⁰ *Id.* at 398.

¹⁰¹ *Cent. Valley Chrysler-Jeep Inc.*, 529 F. Supp. 2d at 1178 (explaining plaintiff’s conflict preemption argument).

¹⁰² *Green Mt. Chrysler Plymouth Dodge Jeep*, 508 F. Supp. 2d at 392.

¹⁰³ *Cent. Valley Chrysler-Jeep Inc.*, 529 F. Supp. 2d at 1184.

¹⁰⁴ *Id.* at 1188.

fail.¹⁰⁵ Because most treaties and agreements between nations are broad in nature and leave to signatory nations significant latitude in implementing commitments, plaintiffs alleging foreign policy preemption may have a difficult time demonstrating that a “clear conflict” exists.

7. Dormant Commerce Clause

The Commerce Clause gives Congress the power to regulate commerce among the States.¹⁰⁶ “[T]he Clause has long been understood to have a ‘negative’ aspect that denies the States the power unjustifiably to discriminate against or burden the interstate flow of articles of commerce.”¹⁰⁷ This negative aspect of the Commerce Clause is often referred to as the Dormant Commerce Clause. Dormant Commerce Clause claims are likely to be raised by state and regional actions to address the issue of “leakage.”¹⁰⁸

The first step in evaluating the constitutionality of a state law under the Dormant Commerce Clause is to determine whether the challenged law regulates evenhandedly with only “incidental” effects on interstate commerce, or discriminates against interstate commerce either on its face or in practical effect.

If the challenged law only has “incidental effects” on interstate commerce, then the *Pike* balancing test applies.¹⁰⁹ Under *Pike*, “[w]here the statute regulates even-handedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits.”¹¹⁰ Further, “[i]f a legitimate local purpose is found, then the question becomes one of degree. And the extent of the burden that will be tolerated will of course depend on the nature of the local interest involved, and on whether it could be promoted as well with a lesser impact on interstate activities.”¹¹¹

On the other hand, if the challenged law is facially discriminatory or discriminatory in effect, then the law will be analyzed under the “virtually *per se* rule of invalidity” and will almost certainly be found to be unconstitutional.¹¹² Since a finding that a law is either facially

¹⁰⁵ See also *Green Mt. Chrysler Plymouth Dodge Jeep*, 508 F. Supp. 2d at 392 (finding no foreign policy preemption).

¹⁰⁶ See U.S. Const. art I, § 8, cl. 3.

¹⁰⁷ *Oregon Waste System v. Dep’t of Env’tl. Quality*, 511 U.S. 93, 98 (U.S. 1994).

¹⁰⁸ In the RGGI cap-and-trade program for example, “[b]ecause the emissions cap will apply only to in-region generators, the RGGI plan will not limit emission from electricity that is imported into the region and used by consumers within RGGI states.” Harriott D. Bolster, *The Commerce Clause Meets Environmental Protection: The Compensatory Tax Doctrine as a Defense of Potential Regional Carbon Dioxide Regulation*, B.C. L. REV. Forthcoming, 745, available at SSRN: <http://ssrn.com/abstract=920701>.

¹⁰⁹ *Pike v. Bruce Church*, 397 U.S. 137 (U.S. 1970).

¹¹⁰ *Id.* at 142.

¹¹¹ *Id.*

¹¹² See *Oregon Waste System*, 511 U.S. at 100 (“Because the Oregon surcharge is discriminatory, the virtually *per se* rule of invalidity provides the proper legal standard here, not the *Pike* balancing test. As a result, the surcharge must be invalidated unless a state can show that it advances a legitimate local purpose that cannot be adequately served by reasonable nondiscriminatory alternatives. Cases require that justifications for discriminatory restrictions on commerce pass the ‘strictest scrutiny.’ A state’s burden of justification is so heavy that facial discrimination by itself may be a fatal defect.”).

discriminatory or discriminatory in effect is “fatal,” the biggest fight in court will likely be over whether a law is discriminatory or merely has incidental effects.

In California, for example, SB 1368 prohibits any-load serving entity, and any local publicly owned electric utility, “from entering into a long-term financial commitment ... unless any baseload generation ... complies with a GHG emission performance standard.”¹¹³ Critics have argued that SB 1368 has a discriminatory effect on coal plants, which operate exclusively outside of California. “The ability of [existing coal plants] and any new coal plants to enter into long-term contracts to export electricity into California will be severely restricted or perhaps eliminated altogether The effects on interstate commerce are arguably heightened by the fact that coal is cheaper than alternative energy sources.”¹¹⁴

One commentator has suggested that States may seek to avoid Dormant Commerce Clause scrutiny altogether by arguing that environmental regulation is a “traditional public function.” This is an emerging doctrine that may have the potential to save leakage laws from the clutches of strict scrutiny.

In *United Haulers Assn., Inc. v. Oneida-Kerkimer Solid Waste Management Authority*,¹¹⁵ the Supreme Court rejected a Dormant Commerce Clause challenge to a “flow control” ordinance requiring trash haulers to deliver solid waste to a processing plant owned and operated by a public authority in New York State.¹¹⁶ The Court reasoned that “[t]he Counties’ ordinances are exercises of the police power in an effort to address waste disposal, a typical and traditional concern of local government.”¹¹⁷ “Laws favoring local government, [in contrast to laws favoring particular private businesses over their competitors], may be directed toward any number of legitimate goals unrelated to protectionism. Here the flow control ordinances enable the Counties to pursue particular policies with respect to the handling and treatment of waste generated in the Counties, while allocating the costs of those policies on citizens and businesses according to the volume of waste they generate.”¹¹⁸

The Court stated further that “[t]he contrary approach of treating public and private entities the same under the Dormant Commerce Clause would lead to unprecedented and unbounded interference by the courts with state and local government. The Dormant Commerce Clause is not a roving license for federal courts to decide what activities are appropriate for state and local government to undertake, and what activities must be the province of private market competition.”¹¹⁹

Likewise, in *Department of Revenue v. Davis*,¹²⁰ the Supreme Court rejected a Dormant Commerce Clause challenge to Kentucky’s state income tax statute, which exempted from income taxation the bond interest its residents receive from Kentucky itself and its

¹¹³ Cal. Pub. Utilities Code § 8341(b)(1).

¹¹⁴ Gordon P. Erspamer, Stacey M. Sprenkel, *The Commerce Clause Implications of California’s Climate Change Initiatives*, Morrison and Foerster, Legal Updates & News, <http://www.mofo.com/news/updates/files/12444.html>.

¹¹⁵ 550 U.S. 330 (2007).

¹¹⁶ *Id.* at 345.

¹¹⁷ *Id.* at 347.

¹¹⁸ *Id.* at 342.

¹¹⁹ *Id.*

¹²⁰ 128 S. Ct. 1801, 1814 (U.S. 2008).

municipalities.¹²¹ The Court reasoned that “[t]he Kentucky tax scheme falls outside the forbidden paradigm because the Commonwealth’s direct participation favors, not local private entrepreneurs, but the Commonwealth and local governments.”¹²²

Similar arguments to the ones found in *United Haulers* and *Davis* might be made to immunize state law and regulations that are aimed at enforcing broader climate change policies.¹²³ Whether such a “public function exception” exists for climate related regulation will turn in part on whether a court believes that regulating the environment is a traditional exercise of state police power similar to trash removal or state taxation.

8. Compact Clause

The Compact Clause prohibits states from entering into any agreement or compact with another state or foreign power without the consent of Congress.¹²⁴

a. Interstate Agreements

Not every agreement or compact between states is a “compact” for the purposes of the Compact Clause.¹²⁵ In fact, no court has ever invalidated an interstate agreement on Compact Clause grounds.¹²⁶

The Supreme Court, in *Virginia v. Tennessee*, adopted a functional test to determine whether an interstate agreement requires Congressional consent under the Compact Clause. Under the functional test, an interstate agreement requires Congressional consent only when it would lead to “the increase of the political power or influence of the States affected, and thus encroach ... upon the full and free exercise of Federal authority.”¹²⁷

In *Indeck Cornith v. Patterson*, filed this past January, plaintiffs allege among other things, that the Regional GHG Initiative (“RGGI”) violates the Compact Clause. Specifically, plaintiff’s argue that (1) RGGI impermissibly enlarges RGGI states’ political influence over environmental issues without congressional approval, (2) RGGI creates incentives for the increase of GHG emissions in states outside of RGGI and thus interferes with federal authority regarding the interstate effects of pollution, (3) RGGI benefits participating states at the expense of other states, (4) RGGI regulations are stricter than federal law and thus impermissibly encroach on federal supremacy, and (5) RGGI creates a regional organization with greater powers than the sum of the member states acting individually.¹²⁸

¹²¹ *Id.* at 1811.

¹²² *Id.* at 1814.

¹²³ Another commentator has argued that another exception to the Dormant Commerce Clause rule of invalidity may come from the compensatory tax doctrine. *See Bolster, supra* note 71, at 745.

¹²⁴ U.S. Const. art. I, § 10, cl. 3.

¹²⁵ *See Virginia v. Tennessee*, 148 U.S. at 517-21 (recognizing that not all interstate arrangements require congressional consent).

¹²⁶ Note, *The Compact Clause and the Regional GHG Initiative*, 120 HARVARD L. REV. 1958, 1960 (2007).

¹²⁷ *Virginia v. Tennessee*, 148 U.S. at 520.

¹²⁸ http://www.eenews.net/features/documents/2009/05/20/document_pm_11.pdf.

A case arguably similar to *Indeck* is *United States Steel Corp. v. Multistate Tax Commission*, which involved a challenge to the Multistate Tax Compact (“MTC”).¹²⁹ The agreement was intended to reform state taxation of multistate businesses.¹³⁰ The MTC also created the Multistate Tax Commission, which was authorized to study state and local tax systems, adopt uniform advisory administrative regulations for the consideration of the states, and conduct audits upon the request of a member state.¹³¹ The Supreme Court held that the MTC did not violate the Compact Clause because no provision posed a threat to federal supremacy.

The Court stated that “[o]n its face the Multistate Tax Compact contains no provisions that would enhance the political power of the member States in a way that encroaches upon the supremacy of the United States.”¹³² Further, it explained that although “[t]here well may be some incremental increase in the bargaining power of the member States [with respect to] the corporations subject to their respective taxing jurisdictions ... the test is whether the Compact enhances state power [vis-à-vis] the National Government. This pact does not purport to authorize the member States to exercise any powers they could not exercise in its absence. Nor is there any delegation of sovereign power to the Commission; each State retains complete freedom to adopt or reject the rules and regulations of the Commission. Moreover, as noted above, each State is free to withdraw at any time.”¹³³

Given (1) that states are free to implement their own cap-and-trade program to control GHGs, (2) that RGGI is implemented through individual state regulations, (3) the factual similarities of the RGGI to the MTC, and (4) that no court has ever invalidated an interstate agreement on Compact Clause grounds, the RGGI challenge and similar Compact Clause-based challenges to other state climate initiatives will require a relatively strong showing of inconsistency with, and potential damage to, the federal climate program if they are to succeed.

b. Foreign-State Agreements (“FSAs”)

Since the Compact Clause prohibits states from entering into any agreement or compact with another state *or foreign power* without the consent of Congress, agreements between states and foreign governments, regional initiatives such as RGGI which include alliances with Canadian premiers and the 2006 accord between Governor Schwarzenegger and British Prime Minister Tony are also potentially Constitutionally suspect. However, FSAs have received relatively little attention by Congress. In the last century, Congress has reviewed fewer than a dozen FSAs and has rejected only one outright.¹³⁴

An open issue is whether the functional test announced in *Virginia v. Tennessee* is applicable to FSAs. Since the same language prohibits both interstate agreements and FSAs, scholars have generally assumed that the Court’s interstate Compact Clause doctrine applies to

¹²⁹ 434 U.S. 452 (U.S. 1978).

¹³⁰ See Multistate Tax Compact art. IV (1967),

[http://www.mtc.gov/uploadedFiles/Multistate_Tax_Commission/About_MTC/MTC_Compact/COMPACT\(1\).pdf](http://www.mtc.gov/uploadedFiles/Multistate_Tax_Commission/About_MTC/MTC_Compact/COMPACT(1).pdf).

¹³¹ *Id.* art. VI.

¹³² *United States Steel Corp.*, 434 U.S. at 472-73.

¹³³ *Id.*

¹³⁴ Duncan B. Hollis, *Unpacking the Compact Clause*, TEX. L. REV. 2 (forthcoming 2009), available at <http://ssrn.com/abstract=1399665>.

FSAs.¹³⁵ One commentator has argued that “[w]hether viewed in terms of constitutional text, history, doctrine, function, or structure, the Constitution supports a distinct, Foreign Compact Clause.¹³⁶ However, “[t]o date, federal and state actors have adopted ... as the preferred approach in ... both theory and practice” a single Compact Clause.¹³⁷ Assuming that the functional test is applicable to FSAs, courts adjudicating Compact Clause claims would have to determine whether or not the agreement at issue poses a threat to federal supremacy.

IV. CITIZEN ACCESS TO THE COURTS TO SEEK DAMAGES, CHALLENGE PROJECTS OR ENFORCE CLIMATE REGULATIONS

Another important area of expected federal litigation will be actions brought by citizens to redress perceived or actual injury, to challenge projects or to enforce climate regulations. Such claims typically must meet procedural or substantive standing tests, withstand justiciability hurdles (e.g., the political question doctrine and ripeness) and satisfy other conditions under governing statutes or the common law.

A. Standing to Bring Climate Change Lawsuits

Pursuant to Article III of the Constitution, in order to establish standing to sue in federal courts, as articulated by the Supreme Court in *Lujan v. Defenders of Wildlife*, a litigant must demonstrate that it has suffered a concrete or particularized injury that is either actual or imminent, that the injury is fairly traceable to the defendant, and that it is likely that a favorable decision will redress that injury.¹³⁸

1. Increased Risk of Future Harm

Several Circuit Courts of Appeal have held that an increased risk of future harm may qualify as a cognizable injury sufficient to establish Article III standing.¹³⁹ The D.C. Circuit, however, has developed a particularly exacting standard in this area, requiring plaintiffs to show a “substantial probability” of future harm, consisting of “at least” a “non-trivial chance of injury.”¹⁴⁰ Overall, the increase in probability of future harm from climate change that plaintiffs

¹³⁵ See *id.* at 24-26; RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES §302f (“By analogy with interstate compacts, a State compact with a foreign power requires Congressional consent only if the compact tends ‘to the increase of political power in the States which may encroach upon or interfere with the just supremacy of the United States.’”) (citing *Virginia v. Tennessee*, 148 U.S. 519 (1893)).

¹³⁶ Hollis, *supra* note 97, at 60.

¹³⁷ *Id.* at 59.

¹³⁸ *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992).

¹³⁹ See *Baur v. Veneman*, 352 F.3d 625, 633 (2d Cir. 2003) (“the courts of appeals have generally recognized that threatened harm in the form of an increased risk of future injury may serve as injury-in-fact for Article III standing purposes.”); *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 204 F.3d 149, 160 (4th Cir. 2000) (“threats or increased risk constitutes cognizable harm” sufficient to meet the injury-in-fact requirement); *Central Delta Water Agency v. United States*, 306 F.3d 938, 947-48 (9th Cir. 2002) (holding that “the possibility of future injury may be sufficient to confer standing on plaintiffs”)

¹⁴⁰ *Natural Resources Defense Council, Inc. v. U.S. Environmental Protection Agency* (“*NRDC I*”), 440 F.3d 476, 483 (D.C. Cir. 2006) (indicating that it would closely scrutinize the probability of any alleged harm and even performing its own independent quantitative analysis of increased risk). Like the D.C. Circuit, the Eighth Circuit

must demonstrate to establish an injury-in-fact is not well-settled and will largely depend on the operative legal standard in a particular Circuit Court.¹⁴¹

2. Standing in Climate Change-Related Nuisance Cases

In general, courts have been reluctant to grant Article III standing to plaintiffs seeking relief under the federal common law of nuisance for climate change-related injuries. For example, in *Korsinsky v. United States EPA*, the plaintiff alleged that GHG emissions caused him to be increasingly vulnerable to disease-causing environmental pollution, and also claimed that he developed a mental sickness as a result of learning of the danger of pollution.¹⁴² On appeal, the Second Circuit held that the plaintiff's claims of future harm from climate change were too speculative to establish standing and further elaborated that the plaintiff failed to sufficiently allege the causation and redressability elements of the Article III standing test.¹⁴³

In the future, it is likely that litigants alleging climate change-related harm will continue to have difficulty establishing standing in nuisance cases, particularly with respect to the causation prong of the *Lujan* test. In light of climate change's global impact, and the extremely high number of entities contributing to GHG emissions, plaintiffs may be hard pressed to show that their injuries are "fairly traceable" to a particular defendant.

3. Procedural Standing

In *Massachusetts v. EPA*, the Supreme Court held that the state of Massachusetts had standing to challenge the EPA's refusal to regulate GHG emissions and invoked three principal reasons for its decision. First, the Court considered the state's procedural right to challenge the EPA's action, which could be asserted "without meeting all the normal [standing requirements of] causation and redressability."¹⁴⁴ The Court further noted that a litigant vested with a procedural right "has standing if there is some possibility that the requested relief will prompt the injury causing party to reconsider the decision that allegedly harmed the litigant."¹⁴⁵ Second, the Court noted that Massachusetts was entitled to "special solicitude" for standing purposes because of its "quasi-sovereign interests."¹⁴⁶ Finally, the Court pointed to Massachusetts' ability to show

has also rejected the proposition that a heightened risk of future harm, without more, is a cognizable injury. See *Shain v. Veneman*, 376 F.3d 815, 818 (8th Cir. 2004).

¹⁴¹ See Cassandra Sturkie and Nathan H. Seltzer, *Developments in the D.C. Circuit's Article III Standing Analysis: When is an Increased Risk of Future Harm Sufficient to Constitute Injury-in-Fact in Environmental Cases?*, 34 ELR 10287 (2007).

¹⁴² No. 05 Civ. 859, 2005 U.S. Dist. LEXIS 21778 (S.D.N.Y. Sept. 28, 2005).

¹⁴³ *Korsinsky v. United States EPA*, No. 05-6802-CV, 2006 U.S. App. LEXIS 21024 (2d Cir. N.Y., Aug. 10, 2006); see also *Comer v. Murphy Oil USA, Inc.*, No. 05-CV-0436 (S.D. Miss. Aug. 30, 2007) (refused to grant victims of Hurricane Katrina standing to sue several major oil companies where they alleged that the companies' carbon dioxide emissions contributed to global warming, which, in turn, amplified Hurricane Katrina's intensity and the corresponding destruction along the Gulf Coast).

¹⁴⁴ 549 U.S. 497, 517 (2007).

¹⁴⁵ *Id.* at 518.

¹⁴⁶ *Id.* at 520.

that it had already been *concretely* harmed by rising sea levels associated with global warming.¹⁴⁷

Thus far, *Massachusetts v. EPA* has not spawned a dramatic expansion in standing for plaintiffs alleging climate change-related harm. In *Center for Biological Diversity v. United States Department of the Interior*, for example, the D.C. Circuit emphasized that the holding in *Massachusetts* “turned on the unique circumstances of that case,” standing for the limited proposition that, “where a harm is widely shared, a sovereign, suing in its individual interest, has standing to sue where that sovereign’s individual interests are harmed, wholly apart from the alleged general harm.”¹⁴⁸

In *Center for Biological Diversity*, the petitioners claimed that the Department of the Interior’s approval of a leasing program for areas in the Outer Continental Shelf (“OCS”) would contribute to climate change, which, in turn, would adversely affect the ecosystem in OCS areas, thereby threatening the petitioners’ enjoyment of these areas. The court rejected the *substantive* theory of standing, finding that petitioners failed to establish the injury-in-fact and causation elements of the *Lujan* test.¹⁴⁹ It nevertheless held that the petitioners did have *procedural standing* to sue the Department of the Interior under two federal statutes, the Outer Continental Shelf Lands Act (“OCSLA”) and the National Environmental Policy Act (“NEPA”), for failing to consider the effects of the Leasing Program on climate change, as well as the effects of climate change on the OCS areas.¹⁵⁰

As reflected in *Center for Biological Diversity*, federal courts have been willing to grant private plaintiffs standing in climate change cases, at least where: (1) the plaintiffs seek to vindicate a procedural right conferred by a federal statute such as NEPA, and (2) the plaintiffs can show a threatened particularized interest.¹⁵¹ Indeed, it is well-established that courts will relax the normal *Lujan* causation and redressability standards for plaintiffs asserting procedural rights.¹⁵² Consequently, it is likely that courts will be deciding the merits of a growing body of

¹⁴⁷ *Id.* at 522-23 (further noting that “widely shared” climate change risks did not minimize Massachusetts’ concrete interest in the outcome of the litigation)

¹⁴⁸ *Center for Biological Diversity v. United States Dep’t of the Interior*, No. 07-1247, 2009 U.S. App. LEXIS 8097, at *15-16 (D.C. Cir. Apr. 17 2009).

¹⁴⁹ *Id.* at *21.

¹⁵⁰ *Id.* at *25-26;

¹⁵¹ It is also worth noting that the standing test for procedural rights cases varies among the Circuit Courts of Appeal. See *Fla. Audubon Soc’y v. Bentsen*, 94 F.3d 658, 666-72 (D.C. Cir. 1996) (applying a multipart test for standing in procedural rights cases, requiring that a plaintiff demonstrate (1) a particularized environmental injury (2) that is placed at demonstrably greater risk by governmental action or omission and (3) that such risk is fairly traceable to the agency action or omission); compare *Citizens for Better Forestry v. United States Dept. of Agric.*, 341 F.3d 961, 972-75 (9th Cir. 2003) (rejecting *Florida Audubon’s* standing test for procedural rights plaintiffs and stating that such plaintiffs “need only establish the reasonable probability of the challenged action’s threat to [their] concrete interest.”); *Comm. to Save the Rio Hondo v. Lucero*, 102 F.3d 445, 447-52 (10th Cir. 1996) (criticizing *Florida Audubon’s* test and instead requiring that plaintiffs establish an “increased risk of adverse environmental consequences” from the alleged failure to follow NEPA).

¹⁵² See Bradford C. Mank, *Standing and Future Generations: Does Massachusetts v. EPA Open Standing for Generations to Come?*, 34 Colum. J. Envtl. L. 1, 35 (2009).

climate change cases brought under federal environmental statutes like NEPA and the Endangered Species Act (“ESA”).¹⁵³

B. Justiciability of Climate Change Lawsuits

1. Political Question Doctrine

In recent years, lawsuits in which plaintiffs claim that defendants are creating a public or private nuisance by contributing to climate change have become increasingly common. Federal courts, however, have expressed their considerable reluctance to decide these cases on their merits, opting instead to dismiss them as nonjusticiable political questions better left to the executive and legislative branches of government, which had until recently generally declined to regulate GHG (“GHG”) emissions.

In *State of Connecticut v. American Electric Power Co., Inc.*, the plaintiffs, consisting of various states, a city, and environmental organizations, filed an action against the five alleged largest emitters of carbon dioxide in the United States under federal common law to abate the “public nuisance” of global warming. The court held that the case presented a nonjusticiable political question, emphasizing the impossibility of making a decision “without an initial policy determination of a kind clearly for nonjudicial discretion.”¹⁵⁴

In a similar case, *People of the State of California v. General Motors Corp.*, the state Attorney General filed a public nuisance action against six automobile manufacturers for allegedly contributing to global warming. Following in the footsteps of *American Electric Power Co.*, the court dismissed the case on political question grounds, stating that “injecting itself into the global warming thicket at this juncture would require an initial policy determination of the type reserved for the political branches of government.”¹⁵⁵ To further support its nonjusticiability finding, the court cited the “textual commitment of interstate commerce and foreign policy to the political branches of government” and the “lack of judicially discoverable or manageable standards by which to resolve the plaintiff’s claim.”¹⁵⁶

While no initial policy determination on global warming has yet been made by the political branches of government, the Obama administration has evinced a clear intent to regulate GHG emissions at the federal level. In his first speech to a joint session of the U.S. Congress, President Obama asked Congress to send him legislation placing a market-based cap on carbon pollution. The House of Representatives has moved significantly in this direction having moved H.R. 2454 out of the House Energy and Commerce Committee, while Senate Environment and Public Works Chair, Barbara Boxer, has announced her intention to develop a Senate counterpart bill that can be moved out of her committee by the fall. Additionally, in the event that Congress does not pass legislation regulating GHG emissions, President Obama has indicated that he intends to push for regulation under the Clean Air Act via the EPA’s rulemaking authority.¹⁵⁷

¹⁵³ See generally Matthew Gerhart, *Climate Change and the Endangered Species Act: The Difficulty of Proving Causation*, 36 Ecology L.Q. 167, 168 (2009).

¹⁵⁴ 406 F.Supp. 2d 265, 272 (S.D.N.Y. 2005).

¹⁵⁵ No. C06-05755 MJJ, 2007 U.S. Dist. LEXIS 68547, at *29 (N.D. Cal. Sept. 17, 2007).

¹⁵⁶ *Id.* at *38-45.

¹⁵⁷ See Darren Samuelsohn, *Obama Prefers Congress to EPA in Tackling Climate*, N.Y. Times, Feb. 23, 2009.

Ultimately, with expanding federal regulation of GHG emissions on the horizon, courts may find it increasingly difficult to avoid addressing the merits of climate change cases on political question grounds. The advent of a regulatory framework should also draw more public attention to climate change issues, which, in turn, may generate increased climate change litigation.¹⁵⁸

2. Ripeness Doctrine

In determining whether a case is ripe for review, courts will evaluate: (1) the fitness of the issues for judicial decision, and (2) the hardship to the parties of withholding court consideration.¹⁵⁹ Although these cases are likely to be highly fact-dependent, plaintiffs will likely have difficulty showing that anticipatory climate change claims are ripe for review in situations where the alleged harm is causally linked to a particular defendant's action that has either not yet occurred or is in its incipient stages.

This issue is illustrated in *Center for Biological Diversity v. United States Dep't of the Interior*. There, the plaintiffs challenged the Department of the Interior's approval of a leasing program in the Outer Continental Shelf and argued that Interior violated NEPA by failing to evaluate the impact of the program on climate change. The D.C. Circuit held that the plaintiffs' NEPA challenge was not ripe for review, observing that Interior had merely approved the leasing program and hadn't yet sold any leases. Consequently, the court reasoned that the leasing program hadn't reached that "critical stage" where an "irreversible and irretrievable commitment of resources" might adversely affect the environment.¹⁶⁰

C. **Causation Challenges in Climate Change-Related Public Nuisance Cases**

The plaintiff in a climate change-related public nuisance action must show that a particular defendant's contributions to global warming substantially and unreasonably interfered with a public right. While global warming lawsuits based on public nuisance theories are becoming increasingly common, they have largely been dismissed as nonjusticiable political questions. In the event of increased federal regulation of GHG emissions, however, courts may become more inclined to decide these cases on the merits, thus requiring difficult determinations on issues such as causation and whether a particular defendant's interference with a plaintiff's public right is sufficiently "substantial" or "unreasonable" to give rise to liability.

Commentators have expressed skepticism about whether plaintiffs will be able to hold individual defendants liable for contributing to climate change-related injuries in light of the many sources of GHG emissions worldwide and the lingering scientific uncertainty about what

¹⁵⁸ See Sharon Tompkins, Lisa Wing Stone & Melissa Onken, *Litigating Global Warming: Likely Challenges To Emerging GHG Cap-And-Trade Programs In The United States*, 39 *Env'tl. L. Rep. News & Analysis* 10389, 10409 (2009).

¹⁵⁹ *Abbot Labs v. Gardner*, 387 U.S. 136, 148 (1967).

¹⁶⁰ No. 07-1247, 2009 U.S. App. LEXIS 8097, at *29; see also *SF Chapter of A. Philip Randolph Institute, et al. v. United States EPA.*, No. C 07-04936 CRB, 2008 U.S. Dist. LEXIS 27794 at *14 (N.D. Cal. Mar. 28, 2008) (holding nuisance suit unripe where plaintiff sought an order prohibiting defendant from granting authority to construct two GHG emitting power plants).

portion of climate change is a direct result of increases in anthropogenic emissions.¹⁶¹ In *People of the State of California v. General Motors*, the district court expressed a similar skepticism, observing that it was left “without guidance in determining what is an unreasonable contribution to the sum of carbon dioxide in the Earth’s atmosphere, or in determining who should bear the costs associated with the global climate change that admittedly result from multiple sources around the globe.”¹⁶² Ultimately, while courts have thus far declined to decide causation issues in climate change-related public nuisance cases, they may be more willing to do so once EPA issues endangerment findings and, through legislation or administrative action, the federal government assumes a greater regulatory role.

D. Challenges To Regulatory Actions or Projects Under Environmental Statutes

1. National Environmental Policy Act (NEPA) Challenges to Climate Change Regulation

a. Overview of the National Environmental Policy Act

NEPA imposes a procedural requirement on federal agencies to take a “hard look” at the significant environmental consequences of a proposed action.¹⁶³ These “significant consequences” may include any direct, indirect, or cumulative effects of agency action.¹⁶⁴ However, courts have interpreted NEPA to include a “rule of reason” whereby agencies need only assess “reasonably foreseeable” impacts of a given project.¹⁶⁵ In *Department of Transportation v. Public Citizen*,¹⁶⁶ the Supreme Court likened NEPA’s “reasonable foreseeability” requirement to proximate cause in tort law. As such, a showing of “but for” causation is not enough to establish that an agency failed to adequately assess environmental impacts.

In recent years, environmental groups have petitioned the Council for Environmental Quality (“CEQ”) to promulgate regulations requiring consideration of climate change as a “reasonably foreseeable” effect in each federal agency’s NEPA analysis.¹⁶⁷ While no such regulations have yet been implemented, the CEQ has issued draft guidance acknowledging anthropogenic contributions to climate change and recommending that each agency use “its own

¹⁶¹ See Morgan McCue Sport, Comment, *An Inconvenient Suit: California v. General Motors Corporation and a Look At Whether Global Warming Constitutes An Actionable Public Nuisance Or A Nonjusticiable Political Question*, 38 CUMB. L. REV. 583, 615-16 (2007); Tompkins, *supra*, note 5, at 10410.

¹⁶² 2007 U.S. Dist. LEXIS 68547 * at 46.

¹⁶³ See 40 C.F.R. 1500 et seq.

¹⁶⁴ See 40 C.F.R. § 1508.8.

¹⁶⁵ See *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992); *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394, 400 (9th Cir. 1989).

¹⁶⁶ 541 U.S. 752, 767 (2004).

¹⁶⁷ See The International Center for Technology Assessment, Natural Resources Defense Council, and Sierra Club’s Petition Requesting That CEQ Amend Its Regulations To Clarify That Climate Change Analyses Be Included in Environmental Review Documents (Feb. 28, 2008), www.icta.org/template/index.cfm.

independent judgment and discretion ... to determine the extent to which it should assess global climate change.”¹⁶⁸

b. Determining Reasonably Foreseeable Indirect Effects of Agency Action

In the absence of clear federal regulations, courts face particular difficulty in determining when climate change constitutes a “reasonably foreseeable” indirect or cumulative effect of an agency action. More specifically, at what point does the chain of causation become so tenuous that a NEPA analysis is no longer required? This question remains unanswered, with courts arriving at mixed results.

Another unanswered question is the extent to which agencies must specifically address the impact of their GHG emissions on climate change, as distinguished from a general consideration of adverse environmental effects such as air pollution. In *Mayo Foundation v. Surface Transportation Board*, the Sierra Club argued that the Surface Transportation Board failed to adequately address the impacts of a new rail line on climate change. Ignoring the Sierra Club’s request for a specific analysis of climate change, the court held that an environmental impact statement need only assess the impact of a project’s most direct GHG emissions and found that the Surface Transportation Board “more than adequately considered the reasonably foreseeable significant adverse effects [of increased coal consumption] on the ... environment.”¹⁶⁹

c. Causation and the Science of Abrupt Climate Change

When presented with a NEPA challenge, agencies may claim that their actions will not have a significant enough impact on climate change to require an analysis.¹⁷⁰ In contrast, one commentator has argued that recent scientific data on “abrupt climate change” raise a question about whether there can be any threshold below which an agency can reasonably claim that its actions will have no meaningful impact on climate change.¹⁷¹ According to this argument, these data may suggest that there may be a “tipping point” beyond which even minimal incremental emissions of GHGs could accelerate climate change in a rapid and unpredictable way.¹⁷²

One recent Ninth Circuit case illustrates the role that this tipping point issue may play in future litigation. In *Center for Biological Diversity v. National Highway Traffic Safety*

¹⁶⁸ See CEQ’s Executive Office of the President, Draft Guidance Regarding Consideration of Global Climate Change in Environmental Documents Prepared Pursuant To The National Environmental Policy Act (1997), www.mms.gov/eppd/compliance/reports/ceqmemo.pdf.

¹⁶⁹ 472 F.3d 545, 556 (8th Cir. 2006).

¹⁷⁰ Agencies have successfully raised this argument in at least two climate change cases. See *Mayo Foundation v. Surface Transportation Board*, 472 F.3d 545, 556 (8th Cir. 2006) (approving the agency’s revised Environmental Impact Statement (EIS) and finding that the impacts of the project in terms of coal consumption and resulting air quality would be small on a national and regional basis); *North Slope Borough v. Minerals Management Service*, No. 3:07-cv-0045-RRB, 2008 U.S. Dist. LEXIS 1503, at *11-12 (D. Alaska 2008) (rejecting NEPA challenge to project with potential climate change impact on polar bear and commenting that “the rate and impact of climate change are largely independent of whether Lease Sale 202 is permitted to stand”).

¹⁷¹ See Norman Dupont, *NEPA And Climate Change: Are We At The “Tipping Point”?*, 23-SPG NAT. RESOURCES & ENV’T 18, 19-20 (2009).

¹⁷² *Id.*

Administration, the court held that the NHTSA failed to adequately assess the impact that its new 2006 light truck emissions standard would have on climate change.¹⁷³ In reaching its decision, the court discussed the data on abrupt climate change and noted that even though the agency’s new standard would reduce the rate at which light trucks emitted carbon dioxide, future incremental emissions could nonetheless have a significant impact on climate change. The court further identified the impact of carbon dioxide emissions on climate change as “precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”¹⁷⁴ As the science on abrupt climate change continues to develop and as expert agencies (e.g., EPA) express their views on GHG source contributions and impacts, courts will consider to what extent it is appropriate to defer to agency findings that a project’s GHG emissions impact is insignificant.

2. Endangered Species Act (ESA) Challenges

a. Overview of the Endangered Species Act

Under the Endangered Species Act (“ESA”), plaintiffs may file suit to prevent the harming of species that have been “listed” by the United States Fish and Wildlife Service as threatened or endangered.¹⁷⁵ Section 7 of the ESA requires federal agencies to ensure that their actions will not: (1) “jeopardize the continued existence” of a listed species, or (2) “result in the destruction or adverse modification of habitat” of a listed species.¹⁷⁶ Similarly, Section 9 of the ESA prohibits any government or private party from “taking” a threatened or endangered species.¹⁷⁷ “Take” is defined by the ESA as “to harass, harm, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”¹⁷⁸ A “harm” to a listed species “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns.”¹⁷⁹ The Supreme Court has held that plaintiffs must show that an agency or private party’s actions were both the “but for” and proximate cause of any harm to a listed species.¹⁸⁰

In recent years, environmental groups have increasingly focused their attention on the ESA as a tool through which to attack GHG emissions by government and private parties.¹⁸¹ However, these efforts have been met with a certain amount of resistance. In a press conference announcing the proposed listing of the polar bear as endangered, the Secretary of the Interior under the Bush administration, Dirk Kempthorne, stated that the “whole aspect of climate change is beyond the scope of the Endangered Species Act.”¹⁸² Regardless, it is likely that climate

¹⁷³ 508 F.3d 508 (9th Cir. 2007).

¹⁷⁴ *Id.* at 550.

¹⁷⁵ 16 U.S.C. § 1540(g)(1).

¹⁷⁶ 16 U.S.C. § 1536(a)(2).

¹⁷⁷ 16 U.S.C. §§ 1538(a)(1)(B)-(C).

¹⁷⁸ 16 U.S.C. § 1532(19).

¹⁷⁹ 50 C.F.R. § 17.3.

¹⁸⁰ *See Babbitt v. Sweet Home Chapter of Cmty. For a Great Or.*, 515 U.S. 687, 712 (1995).

¹⁸¹ *See generally* Matthew Gerhart, *Climate Change And The Endangered Species Act: The Difficulty of Proving Causation*, 36 *Ecology L.Q.* 167, 168 (2009).

¹⁸² *See* Press Conf. with Dirk Kempthorne, Sec. of Int., Dale Hall, Dir. Of the U.S. Fish and Wildlife Serv., Mark Myers, Dir. Of the U.S. Geology Survey, Tom Melius, Regl. Dir. For the Alaska Region of the U.S. Fish and Wildlife Serv. ([Boise, Idaho], Dec. 27, 2006).

change litigation under the ESA will increase in the future. However, plaintiffs will face several hurdles to prevailing in these suits.

b. Challenges in Establishing a Section 7 Violation of the ESA

(1) The Reach of Global Climate Change Strains the Concept of the “Action Area”

Under Section 7, federal agencies must assess the impacts of a proposed action on listed species within “all areas to be affected directly or indirectly”¹⁸³ In many cases, the relevant action area will be easy to define and limit, such as when a road into a national monument restricts the movement of a particular species outside of the monument.¹⁸⁴ However, the effects of GHG emissions may be felt by listed species not only in the area directly surrounding the action, but across the globe. In this context, must agencies consider the effects of GHG emissions resulting from their proposed actions on all listed species worldwide? Currently, there are no regulations or case law that set bright line boundaries limiting the breadth of the action area.¹⁸⁵ Thus, courts will have to make difficult determinations about whether and how to contain this “action area” concept in climate change litigation under the ESA.

(2) The Environmental Baseline and Climate Change

Once an action area has been defined, agencies must consult with either the Fish and Wildlife Service (“FWS”) or the National Marine Fisheries Service (“NMFS”) to determine whether the proposed action jeopardizes a listed species. As part of this process, the FWS or the NMFS is required to produce a biological opinion calculating: (1) the environmental baseline (“the current status of the listed species or critical habitat”), (2) the incremental impact of the proposed action on the listed species, and (3) the cumulative effects of other actions.¹⁸⁶ Thus far, the FWS has asserted that only “significant adverse impacts to a species’ chance of survival violate [S]ection 7.”¹⁸⁷

In future climate change cases, agencies may argue that the GHG emissions anticipated to result from their proposed actions do not significantly impact a listed species because past emissions - the environmental baseline - have already generated the climate change that will jeopardize the species. This argument is supported by a 2007 report indicating that “even if GHG emissions were immediately cut to zero, the climate would continue to warm over the next several decades.”¹⁸⁸ Thus, it will be difficult for plaintiffs to show that GHG emissions from a

¹⁸³ See 50 C.F.R. § 402.02.

¹⁸⁴ See Matthew Gerhart, Climate Change And The Endangered Species Act: The Difficulty of Proving Causation, 36 *ECOLOGY L.Q.* 167, 175 (2009).

¹⁸⁵ *Id.*

¹⁸⁶ 50 C.F.R. § 402.14.

¹⁸⁷ See Nat’l Marine Fisheries Serv. & U.S. Fish & Wildlife Serv., *Endangered Species Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conferences* 4-34 (March 1998).

¹⁸⁸ See Gerhart, *supra* note 10, at 180, citing Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis* 825 (Susan Solomon et al. eds., 2007).

proposed action will contribute enough to climate change such that a species' chance of survival will be *significantly* impacted.¹⁸⁹

(3) Scrutiny of Agencies' Biological Opinions Discussing Climate Change

In one recent case, *NRDC v. Kempthorne*, the court held that the FWS acted arbitrarily and capriciously in omitting from its biological opinion an assessment of climate change-related harm to the Delta smelt fish.¹⁹⁰ However, the court went on to state that "there is no basis to determine what weight FWS should ultimately give the climate change issue in its analysis."¹⁹¹ Thus, it appears that agencies have considerable latitude in how they conduct their analysis of whether a project's contributions to climate change significantly impact a listed species. In light of the relatively small amount of GHG emissions generated by individual projects, it seems unlikely that agencies' will often find that a project has significantly jeopardized a listed species.¹⁹²

(4) Challenges in Establishing a Section 9 Violation of the ESA

As with Section 7, plaintiffs will undoubtedly have difficulty proving that a particular defendant's emissions caused a "taking" of a listed species under Section 9. Under a traditional proximate cause analysis, defendants will only be held liable if their actions are a "substantial factor" in bringing about a harm. Given the large universe of individual GHG emitters, including past emitters, can any one defendant's contributions to climate change be considered a substantial factor in bring about harm to a listed species? Is there a minimum threshold of emissions at which a defendant will be held liable for contributing to climate change-related harm?¹⁹³ These are questions with which the courts will have to grapple. Thus far, the only source of guidance on these issues is *Massachusetts v. EPA*. While no minimum threshold was set, the Court deemed an action that emits six percent of annual global carbon dioxide emissions a *cause* of Massachusetts' climate change-related injuries, at least for the limited purpose of determining standing.¹⁹⁴

Another causation issue that courts must address is the difficulty of linking a defendant's emissions to the harm. In particular, how will plaintiffs trace a particular defendant's emissions to the climate change-related harm befalling a listed species? This problem is compounded by two additional variables. First, certain GHGs may contribute to climate change in different ways depending on where they are released. Second, these emissions may be removed from the atmosphere by other processes.¹⁹⁵ One commentator has suggested that courts might look to

¹⁸⁹ *Id.* But see the discussion above (note 181 and accompanying text) regarding the argument that, based on emerging scientific data, abrupt climate change renders significant even small contributions.

¹⁹⁰ 506 F.Supp. 2d 322 (E.D. Cal. 2007).

¹⁹¹ *Id.* at 370, n.28.

¹⁹² See J.B. Ruhl, *Climate Change And The Endangered Species Act: Building Bridges To The No-Analog Future*, 88 B.U.L. REV. 1, 58 (2008).

¹⁹³ See Gerhart, *supra* note 10, at 185.

¹⁹⁴ *Id.* at 188-89.

¹⁹⁵ *Id.* at 190.

prior asbestos litigation and the market share liability doctrine for guidance on how to resolve the individual causation problem in the climate change context.¹⁹⁶

V. CONCLUSION

As is evident from this review of three general areas of dispute likely to arise in federal courts, the climate change area will offer a fertile ground for judicial inquiry and, inevitably, law school exams. While Congress may resolve many of these areas of the law, the more likely scenario is that many of these issues will remain unresolved for some time.

¹⁹⁶ *Id.* at 194 (noting that “[g]reenhouse gas emissions are in some ways similar to exposure to asbestos” and citing to *Borel v. Fibreboard Products Corp.*, 493 F.2d 1076 (5th Cir. 1973) an asbestos case, for the proposition that “courts have relaxed the causation requirement in situations where the cumulative effects of multiple actions cause harm and the plaintiff cannot identify which defendant caused which portion of the harm.”).