

A Temporary Solution to Climate Change: The Federal Common Law to the Rescue?

by JEREMY HESSLER*

Many lawyers are responding to the [political] stalemate [on climate change legislation] through litigation, following the old saying that if all you have is a hammer, all problems begin to look like nails.

—Michael B. Gerrard¹

Introduction

In the latter half of 2009, the Second Circuit in *Connecticut v. American Electric Power Co.* (“AEP”)² and the Fifth Circuit in *Comer v. Murphy Oil USA* (“Comer”)³ provided a strong signal to the

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1. Michael B. Gerrard, *What the Law and Lawyers Can and Cannot Do About Global Warming*, 16 SOUTHEASTERN ENVTL. L.J. 33, 34 (2007).

2. *Conn. v. Am. Elec. Power Co.*, 582 F.3d 309 (2nd Cir. 2009) (petition for rehearing en banc denied Mar. 5, 2010) (“AEP”) *petition for cert. filed*, (U.S. Aug. 2, 2010) (No. 10-174).

3. *Comer v. Murphy Oil USA*, 585 F.3d 855 (5th Cir. 2009) (*Comer*). *Comer* may indeed become best known as an appellate procedure oddity. After the initial opinion by the Fifth Circuit reversing the district court, a majority of sitting judges voted for an en banc hearing, thereby vacating the three-judge panel’s opinion. *Comer v. Murphy Oil USA*, 598 F.3d 208 (5th Cir. 2010). Next, an additional judge recused herself creating a lack of quorum to actually hear the case en banc. *Comer v. Murphy Oil USA*, 607 F.3d 1049 (5th Cir. 2010). The remaining majority held that because the three-judge panel’s opinion was validly vacated (quorum was established at the time), the trial court’s opinion is reinstated and may be appealed to the Supreme Court. *Id.* at 1054–55. Judge Dennis dissented and found this to be an arbitrary distinction, stating that if the recently recused judge would have become recused three months earlier, the outcome would have been the opposite. *Id.* at 1055–56 (Dennis, J. dissenting). For the remainder of the note, I will

political branches that the courts could begin regulating greenhouse gas (“GHG”) emissions under common law tort actions. However, shortly after *AEP* was decided, the District Court for the Northern District of California flatly rejected the outcome and analysis of *AEP* in the case of *Native Village of Kivalina v. Exxon Mobile Corp.*⁴

In *AEP*, the Second Circuit reversed the district court’s dismissal of the federal public nuisance claims of eight states, a city, and three non-profit land trusts for the injuries allegedly caused by the emissions of the six largest power companies in the United States.⁵ In *Comer*, the Fifth Circuit similarly dismissed the political question doctrine as a defense to a suit for damages caused by the increased ferocity of Hurricane Katrina in a class action suit against a variety of Gulf Coast industrial companies under public and private nuisance, trespass, and negligence claims.⁶ Finally, *Kivalina* involved a native Inupiat village that sued twenty-four power and utility companies for the costs necessary of relocating the residents away from an island that allegedly would become uninhabitable due to climate change.⁷ Although *AEP* and *Comer* were dismissed before the merits stage, one can infer the broad issues with which trial courts will grapple from the appellate opinions’ substantive outlines.⁸

discuss *Comer v. Murphy Oil USA*, 585 F.3d 855 (5th Cir. 2009) prior to the opinion being vacated.

4. *Native Village of Kivalina v. Exxon Mobil Corp.*, 663 F. Supp. 2d 863 (N.D. Cal. 2009) (*Kivalina*).

5. See *AEP*, 582 F.3d 309, 393 (eight states, New York City, and three land trusts sued the six largest power companies in the U.S.). The term “greenhouse gases” refers to a group of gases that contribute to the “greenhouse effect,” trapping heat in the Earth’s atmosphere and contributing to global climate change. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. See DAVID HUNTER ET AL., *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* 633-36 (3d ed. 2007); Shi-Ling Hsu, *A Realistic Evaluation of Climate Change Litigation Through The Lens of a Hypothetical Lawsuit*, 79 U. COLO. L. REV. 701, 703 n.5 (2008).

6. *Comer*, 585 F.3d at 859-61 (where residents and land owners with property along the Mississippi Gulf coast, represented by two Louisiana class action law firms, sued sixteen national companies that produce energy, fossil fuels, and chemicals near the Gulf Coast).

7. *Kivalina*, 663 F. Supp. 2d at 868.

8. *Conn. v. Am. Elec. Power Co.*, 406 F. Supp. 2d 265, 274 (S.D.N.Y. 2005) (holding that “[b]ecause resolution of the issues presented here requires identification and balancing of economic, environmental, foreign policy, and national security interests, ‘an initial policy determination’ . . . is required”); *Comer v. Murphy Oil USA, Inc.* 2007 WL 6942285, 1 (S.D. Miss. 2007) (finding that “Plaintiffs do not have standing to assert claims against Defendants and that Plaintiffs’ claims are non-justiciable pursuant to the political question doctrine.”).

This note focuses upon these recent developments in climate change litigation⁹ by closely examining the different issues that arise in these suits, as well as of some of the issues that may arise if the trial courts reach the merits stage of these cases. Part I contains a brief background of climate change. Part II examines the political question doctrine in the context of climate change litigation. Part III analyzes public nuisance actions and climate change. Part IV looks at the displacement doctrine and the effect of the Environmental Protection Agency's ("EPA") regulation of GHGs. Part V considers the consequences of allowing similar suits to proceed and the general issues trial courts may face. The conclusion suggests that although many difficulties arise, climate change litigation could be a step forward in our nation's policy of regulating pollutants that cause climate change.

I. Background to Climate Change

To understand any law that seeks to regulate or mitigate the effects of climate change, it is important to understand climate change. In brief, deforestation, as well as the burning of fossil fuels including coal and oil, have caused a significant increase in atmospheric concentrations of heat-trapping chemical compounds known as "greenhouse gases."¹⁰ Of these greenhouse gases, carbon dioxide is the most significant gas because of the quantity in our atmosphere. The current quantities of GHGs far exceed the past natural ranges over the last 650,000 years.¹¹ Climate change is a broad

9. For the purpose of this note, "climate change litigation" comprises tort actions that seek to hold corporate defendants liable for their large-scale CO₂ production. Commentators have opined an action for carbon dioxide would not differ substantially from other non-regulated GHGs. See David A. Grossman, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1, 61 n.23 (2003).

10. See Intergovernmental Panel on Climate Change (IPCC), *Summary for Policymakers. In: Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the IPCC 8-9* (M.L. Parry et al., 2007) [hereinafter IPCC 4th AR], available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-spm.pdf> (concluding human activities are the primary contributor to global warming). Global warming is "an average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns." EPA, *Climate Change Basic Information*, <http://www.epa.gov/climatechange/basicinfo.html> (last visited March 14, 2010) (describing the process of global warming).

11. Intergovernmental Panel on Climate Change, *Summary for Policymakers. In: Climate Change 2007: Synthesis Report 2* (2007), available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf.

term that encompasses any change in the climate that can be directly or indirectly attributed to anthropogenic (i.e., human) activity, and global warming is one of the most significant components of climate change.¹²

Evidence of the dramatic effects of human influences on climate change is becoming increasingly obvious and alarming. “There is now indisputable evidence that human activities such as electricity production and transportation are adding to the concentrations of greenhouse gases that are already naturally present in the atmosphere.”¹³ Compared with the recent and distant past, these heat-trapping gases are now at record-high levels in the atmosphere.¹⁴

For example, the oceans have absorbed 50% of the CO₂ released from the burning of fossil fuels, resulting in a 30% increase of ocean acidification and many adverse impacts on marine organisms.¹⁵ The Pentagon has placed climate change as a top priority for our national security by linking the adverse changes in regional climates, such as flooding and droughts, to significant geopolitical impacts around the world; these changes will contribute to “poverty, environmental degradation, and further weakening fragile governments,” as well as lead to mass migrations due to food and water scarcity, and the spread of diseases.¹⁶

Much international and national momentum has gathered behind the environmental movement in the last five years. For example, Vice President Al Gore and the Intergovernmental Panel on Climate Change (“IPCC”) were awarded the 2007 Nobel Peace Prize for researching and raising awareness of the potential problems associated with climate change.¹⁷ Also, the countries with the largest

12. The term “climate change” in this note is used in accordance with the Framework Convention on Climate Change, where it “refers to a change of climate that is attributed directly or indirectly to *human activity* that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.” IPCC 4th AR, *supra* note 10, at 21 (emphasis added).

13. ENVIRONMENTAL PROTECTION AGENCY (“EPA”), *Climate Change Indicators 1* (2010), available at http://www.epa.gov/climatechange/indicators/pdfs/ClimateIndicators_full.pdf.

14. *Id.*

15. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (“NOAA”), *State of the Science Fact Sheet: Ocean Acidification* (May 2008), available at http://www.pmel.noaa.gov/co2/OA/Ocean_Acidification%20FINAL.pdf.

16. U.S. DEP’T OF DEFENSE, QUADRENNIAL DEFENSE REVIEW REPORT 84-85 (Feb. 2010), available at http://www.defense.gov/QDR/images/QDR_as_of_12Feb10_1000.pdf.

17. The Nobel Committee awarded the prize to the IPCC and Gore “for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.” The

GHG emissions signed the Copenhagen Accord, which acknowledges that climate change is “one of the greatest challenges of our time.”¹⁸ For the most part, the attitudes of scholars, scientists, government officials, and business leaders have largely shifted from doubting the very existence of climate change to now recognizing it is occurring at a rapid pace.¹⁹

However, the environmental movement has recently endured two controversies. In the first, emails from a climate scientist at the University of East Anglia revealed contempt for scientific papers that dispute climate change,²⁰ but he was later cleared of any wrongdoing.²¹ Second, in its most recent report, the IPCC made two errors due to incorrect data.²² Despite these setbacks, which are further discussed in Part IV, the recent actions by the federal government are encouraging. For example, the EPA and the National Highway Traffic Safety Administration (“NHTSA”) issued a joint Final Rule that set stricter fuel economy standards for vehicles and thereby reduce the GHGs emitted by vehicles pursuant to the Clean Air Act

Norwegian Nobel Committee, *Press Release for the 2007 Nobel Peace Prize* (Oct. 2007) http://nobelprize.org/nobel_prizes/peace/laureates/2007/press.html. The IPCC is a United Nations network of scientists charged with providing “a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.” IPCC, *Organization*, <http://www.ipcc.ch/organization/organization.htm> (last visited March 13, 2010).

18. United Nations Framework Convention on Climate Change, *Copenhagen Accord of 18 December 2009* (2009), available at http://unfccc.int/files/meetings/cop_15/application/pdf/cop15_cph_auv.pdf.

19. See generally Al Gore, *Op-Ed: We Can't Wish Away Climate Change*, N.Y. TIMES, Feb. 27, 2010, available at <http://www.nytimes.com/2010/02/28/opinion/28gore.html> (stating “there have been impressive efforts by many business leaders, hundreds of millions of individuals and families throughout the world and many national, regional and local governments”); William Stevens, *On the Climate Change Beat, Doubt Gives Way to Certainty*, N.Y. TIMES, Feb. 6, 2007, at F1 (reflecting on cultural attitudes toward climate change over the last decade and discussing recent research on certainty of climate change).

20. Lauren Morello, *'Climategate' Scientist Admits 'Awful E-Mails,' but Peers Say IPCC Conclusions Remain Sound*, N.Y. TIMES (Mar. 2, 2010), available at <http://www.nytimes.com/cwire/2010/03/02/02climatewire-climategate-scientist-admits-awful-e-mails-b-66224.html?scp=1&sq=east%20anglia&st=cse>.

21. BBC News, *'No Malpractice' by Climate Unit* (April 14, 2010), available at <http://news.bbc.co.uk/2/hi/science/nature/8618024.stm>.

22. The IPCC “published a flawed overestimate of the melting rate of debris-covered glaciers in the Himalayas, and used information about the Netherlands provided to it by the government, which was later found to be partly inaccurate.” Gore, *supra* note 19; see also Elisabeth Rosenthal, *Skeptics Find Fault with U.N. Climate Panel*, N.Y. TIMES (Feb. 8, 2010), available at <http://www.nytimes.com/2010/02/09/science/earth/09climate.html>.

(“CAA”).²³ Additionally, EPA recently promulgated two new rules: the first will mandate all stationary sources that emit substantial GHG emissions to report their emissions, while the second rule will require a permit issued under the CAA for GHG emissions emitted by select stationary sources.²⁴ Both of these new rules will take effect by January 2, 2011.²⁵

II. Climate Change Litigation and the Political Question Doctrine

A. Background

In *Baker v. Carr*, the Supreme Court formulated the modern understanding of the political question doctrine.²⁶ Justice Brennan, writing for the majority, outlined six factors that indicate a controversy is non-justiciable: “Prominent on the surface of any case held to involve a political question is found”:

- (1) A textually demonstrable constitutional commitment of the issue to a coordinate political department; or
- (2) A lack of judicially discoverable and manageable standards for resolving it; or
- (3) The impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or
- (4) The impossibility of a court’s undertaking independent resolution without expressing lack of the respect due coordinate branches of government; or
- (5) An unusual need for unquestioning adherence to a political decision already made; or
- (6) The potentiality of embarrassment from multifarious pronouncements by various departments on one question.²⁷

23. Light-Duty Vehicle Greenhouse Gas Emission Standards, 75 Fed. Reg. 25324, 25328 (May 7, 2010) (to be codified at 40 C.F.R. pts. 85-86, 600) (vehicle GHG emission regulation).

24. Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 52,260, 56,264 (Oct. 3, 2009) (to be codified reporting requirement); 74 Fed. Reg. at 40 C.F.R. pts. 86-90, 94, 98, 1033,1039,1042,1045,1048,1051,1054,1065); Endangerment and Cause or Contribute Findings for Greenhouse Gases, 74 Fed. Reg. 66,496, 66,497 (Dec. 15, 2009) (to be codified at 40 C.F.R. Ch. I); Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010) (to be codified at 40 C.F.R. pts. 51-52, 70-71) (requiring permits for select stationary sources).

25. See 74 Fed. Reg. at 56,264; 74 Fed. Reg. at 66,497; 75 Fed. Reg. at 31,514.

26. *Baker v. Carr*, 369 U.S. 186, 217-19 (1962).

27. *Id.* at 217.

A mixture of constitutional and prudential concerns, any of these six factors “exclude[] from judicial review those controversies which revolve around policy choices and value determinations constitutionally committed for resolution to the halls of Congress or the confines of the Executive Branch.”²⁸ *Baker* makes clear that not every matter touching on politics is a political question.²⁹ Instead, a political question involves a policy decision which the “[j]udiciary is particularly ill suited to make . . . [since] courts are fundamentally underequipped to formulate national policies or develop standards for matters not legal in nature.”³⁰

B. *Connecticut v. AEP*

On September 15, 2005, Judge Loretta Preska of the Southern District of New York dismissed the plaintiffs’ claim under the federal common law to abate “the public nuisance of global warming.”³¹ The District Court stated it could not even *consider* the standing analysis since merely analyzing the issue would require the court to “make judgments that could have an impact on the other branches’ responses to what is plainly a political question.”³² Unsurprisingly, the District Court found an initial policy determination would be required if the requested injunctive relief were granted.³³ The court cited some of the impermissible “policy determinations” such as determining the appropriate level to cap CO₂ emissions, the rate at which to implement these reductions, and assessing the available alternative energy resources.³⁴ Judge Preska is not alone; every district court has so far found a hearing on the merits requires an initial policy determination.³⁵

28. *Japan Whaling Ass’n. v. Am. Cetacean Soc’y*, 478 U.S. 221, 230 (1986).

29. *Baker*, 369 U.S. at 209.

30. *Japan Whaling Ass’n.*, 478 U.S. at 230 (internal quotations omitted) (citation omitted).

31. *Conn. v. Am. Elec. Power Co.*, 406 F. Supp. 2d at 267 (internal quotation omitted).

32. *Id.* at 271.

33. *Id.* at 274.

34. *Id.* at 272–73.

35. *Id.* at 274; *Comer v. Nationwide Mut. Ins. Co.*, 2006 WL 1066645 (S.D. Miss. 2006); *California v. Gen. Motors Corp.*, 2007 WL 2726871 (N.D. Cal. 2007); *Kivalina*, 663 F. Supp. 2d 863, 870 (N.D. Cal. 2009).

In *AEP*, a unanimous two judge panel³⁶ of the Second Circuit reversed the District Court.³⁷ The appellate court found that under the first *Baker* factor, reducing defendants' sizable GHG emissions implicated foreign policy, the relief sought only applies in "the most tangential and attenuated way to the expansive domestic and foreign policy issues."³⁸ Furthermore, the court found judicially discoverable and manageable standards, under the second *Baker* factor, because past federal public nuisance actions have addressed environmental issues,³⁹ and there exist clear standards in the Restatement (Second) of Torts ("Restatement").⁴⁰ Under the third *Baker* factor, i.e., whether an initial policy determination is required, the court relied upon *Milwaukee I* for the principle that if current statutes do not provide a remedy to an injury caused by a public nuisance, a plaintiff is free to bring a claim under a theory of federal nuisance.⁴¹ Therefore, the court concluded that this "ordinary tort suit" does not require an initial policy determination of a kind clearly for nonjudicial discretion.⁴²

C. *Comer v. Murphy Oil*

In *Comer*, plaintiffs filed a class action suit, based on diversity jurisdiction, for damages under Mississippi state law.⁴³ The plaintiffs alleged the emissions from energy, fossil fuel, and chemical industries caused the emissions of GHGs that contributed to global warming and in turn, caused an increase in global surface air and water

36. *AEP*, 582 F.3d at 313 (2nd Cir. 2009) (stating "The Honorable Sonia Sotomayor, originally a member of the panel, was elevated to the Supreme Court on August 8, 2009. The two remaining members of the panel, who are in agreement, have determined the matter.").

37. *Id.* at 315.

38. *Id.* at 325.

39. *Primarily consisting of Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907); *Missouri v. Illinois (Missouri I)*, 180 U.S. 208 (1901); *Missouri v. Illinois (Missouri II)*, 200 U.S. 496 (1906).

40. *See Cox v. City of Dallas*, 256 F.3d 281, 291 (5th Cir. 2001) (describing remedies available in nuisance actions by citing Restatement (Second) of Torts §§ 821B and 821C, and explaining that nuisance actions were "the common law backbone of modern environmental law" (citation omitted)); *Nat'l Sea Clammers Ass'n v. City of New York*, 616 F.2d 1222, 1234 (3d Cir. 1980), *vacated on other grounds*, 453 U.S. 1 (1981) (adopting Restatement definition of public nuisance and observing that the Restatement formulation "encompasses the injury alleged in this case").

41. *AEP*, 582 F.3d at 330.

42. *Id.*

43. *Comer*, 585 F.3d 855, 861 (5th Cir. 2009).

temperature, that increased the ferocity of Hurricane Katrina, which destroyed plaintiffs' private property and public property useful to them.⁴⁴ The plaintiffs did not state a federal claim, but instead filed an action under diversity jurisdiction seeking compensatory and punitive damages based on Mississippi's common law actions of public and private nuisance, trespass, negligence, unjust enrichment, fraudulent misrepresentation, and civil conspiracy.⁴⁵

In dismissing plaintiffs' claims on political question grounds, District Court Judge L.T. Senter Jr. did not issue a written opinion, but instead issued his ruling from the bench stating, "[a] court is simply ill-equipped or unequipped with the power" to address these issues.⁴⁶ The District Court held the political question doctrine prevented adjudication of the claims presented, since it would require an initial policy determination, e.g., the court would need to formulate standards for "the amount of greenhouse gas emissions that would be excessive and the scientific and policy reasons behind those standards."⁴⁷

In *Comer*, a unanimous three judge panel of the Fifth Circuit reversed the district court, and held the plaintiffs' claims were justiciable under the political question doctrine.⁴⁸ In regards to whether there exists a judicially cognizable standard to adjudicate the claim, the court had little difficulty in finding that Mississippi tort law provided "long-established standards" for adjudicating the common law claims brought by the plaintiffs.⁴⁹ Rejecting the notion that an initial policy determination was required,⁵⁰ the court reasoned that if this erroneous premise applied, then "all typical air pollution cases would pose nonjusticiable political questions."⁵¹ Even if injunctive relief was sought, the court held that relief may be limited or molded

44. *Id.*

45. *Id.* (quoting the hearing transcript of the District Court's ruling).

46. *Id.* For a fuller discussion of whether a court is ill-equipped to make decisions based on complex scientific and economic data see Section IV *infra*.

47. *Id.*

48. *Id.* at 874.

49. *Id.* at 875.

50. *Conn. v. Am. Elec. Power Co.*, 406 F. Supp. 2d 265, 272 (S.D.N.Y. 2007) ("In this case, balancing those interests, together with the other interests involved, is impossible without an 'initial policy determination' first having been made by the elected branches to which our system commits such policy decisions, *viz.*, Congress and the President."); see also *Gen. Motors*, 2007 WL 2726871 at *7.

51. *Comer*, 585 F.3d at 877 (internal quotations omitted).

for reasons of practicality, and thus there is no need or authority to invoke the political question doctrine for such reasons.⁵²

D. *Kivalina*

Kivalina, a federally recognized Alaskan Native Village, sued twenty-four energy and utility companies for relocation costs between \$95 million and \$400 million under federal public nuisance law.⁵³ The residents of the village are no longer able to live on their island since the Arctic sea ice that protects *Kivalina* from winter storms has significantly diminished due to climate change.⁵⁴ Judge Sandra Brown Armstrong stated that there are inadequate judicial standards for a fact-finder to weigh the social benefits of energy production that causes GHG emissions, against the risk that defendants' GHGs would result in flooding on *Kivalina's* island.⁵⁵ The court discounted the majority's reasoning in *AEP*, finding the federal common law pollution cases, namely *Milwaukee I* and *Tennessee Copper*, involved a discrete number of polluters that could be readily identified,⁵⁶ whereas when adjudicating climate change litigation, the court is confronted with an insurmountable scale of GHG contributors and an attenuated chain of events.⁵⁷ Secondly, the court found an initial policy determination is required to "delve into the task of retroactively determining what emission limits *should have* been imposed," as well as who should be held responsible for the injury, which the court reasoned to be decisions that left to the political branches.⁵⁸ *Kivalina* currently is on appeal in the Ninth Circuit.

III. The Common Law Doctrine of Public Nuisance

Early English and American nuisance cases were guided by the maxim: *sic utere tuo ut alienum non laedas* which means "one should use his own property in such a manner as not to injure that of

52. *Id.* at 860–61.

53. *Kivalina*, 663 F. Supp. 2d 863, 868 (N.D. Cal. 2009).

54. *Id.*

55. *Id.* at 874–75.

56. *Id.* at 875.

57. *Id.* at 876 ("In a global warming scenario, emitted greenhouse gases combine with other gases in the atmosphere which *in turn* results in the planet retaining heat, which *in turn* causes the ice caps to melt and the oceans to rise, which *in turn* causes the Arctic sea ice to melt, which *in turn* allegedly renders *Kivalina* vulnerable to erosion and deterioration resulting from winter storms.") (emphasis in original).

58. *Id.*

another.”⁵⁹ Although many historical common law public nuisances were enacted into criminal statutes, these public nuisance offenses are based on the concept that certain activities, whether negligent or intentional, interfere with the interests of the community, or disrupt the comfort or convenience of the general public, and thus should be discontinued.⁶⁰

A brief history of the federal common law and pollution places climate change litigation in context. In 1907, the United States Supreme Court decided *Georgia v. Tennessee Copper Co.*, which implicitly created the federal common law of nuisance.⁶¹ The Court held that a state may use federal courts in order to receive injunctive relief against transboundary polluters in other states, and thus created the cause of action.⁶² It was wise for the Court to adopt a federal standard to decide transboundary cases since it would be inappropriate to adopt the law of either the source state or affected state, and thereby inadvertently create a “race to the bottom” since states would have an incentive to adjust its own laws to its favor.⁶³ In 1972, shortly before passage of the modern Clean Water Act, Illinois filed suit against the City of Milwaukee for an injunction to prevent Milwaukee’s sewage overflows from polluting the beaches and water supplies in Illinois.⁶⁴ The United States Supreme Court remanded the action directing the district court to use the federal common law of

59. Elmer E. Smead, *Sic Utere Tuo ut Alienum Non Laedas: A Basis for the State Police Power*, 21 CORNELL L.Q. 280 (1935).

60. William L. Prosser, *Private Action for Public Nuisance*, 52 VA. L. REV. 997, 1000 (1966); see also PROSSER, TORTS § 89 at 605–06 (3rd ed. 1964) (finding interference with the interests of the public in health, safety, morals, peace, comfort, convenience, thrift and economy have been the basis for public nuisance actions).

61. *Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907). In *Massachusetts v. EPA*, the majority relied on *Tennessee Copper Co.* to support state standing: “The State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air.” *Massachusetts v. EPA*, 549 U.S. 497 (2007) (internal quotations omitted) (quoting *Tenn. Copper Co.*, 206 U.S. at 237).

62. *Id.* at 238 (“It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source.”).

63. See Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L. J. 931, 933, 939–46 (1997).

64. *Illinois v. City of Milwaukee*, 406 U.S. 91, 93, 99–108 (1972).

public nuisance.⁶⁵ Nine years after the enactment of the modern Clean Water Act, the Supreme Court decided the case again in *Milwaukee II*.⁶⁶ The Court rejected the application of federal common law to fill the regulatory gap since the amendments to the Clean Water Act provided adequate redress through a comprehensive permit system for the discharge of pollutants. The Court held the federal common law was displaced.⁶⁷

A majority of states have adopted the Restatement's definition of public nuisance.⁶⁸ The Restatement defines a public nuisance as "an unreasonable interference with a right common to the general public."⁶⁹ Under this standard, the fact-finder must weigh the "the gravity of the harm against the utility of the conduct."⁷⁰ This test, therefore, is highly dependent on community-based interests.⁷¹

A. *AEP*

Although the district court did not reach the question whether each group of plaintiffs stated a claim under public nuisance, the appellate court thought it proper to decide this issue in the interest of judicial economy.⁷² Instead of applying the state law of public nuisance, the Second Circuit applied the federal common law of public nuisance so as to not risk absorbing a state law as a federal law for transboundary pollution disputes.⁷³ The court found the Restatement's definition of public nuisance provided a workable standard for federal common law and found all plaintiffs adequately stated a claim.⁷⁴

IV. Climate Change Litigation and the Displacement Doctrine

The court in *AEP* held that the CAA, at the time the opinion was issued, did not displace the court's power to provide a remedy for damages caused by GHG emissions from stationary sources under the

65. *Id.* at 104.

66. *City of Milwaukee v. Illinois* ("*Milwaukee II*"), 451 U.S. 304 (1981).

67. *Id.* at 325–26.

68. Grossman, *supra* note 9, at 53.

69. RESTATEMENT (SECOND) OF TORTS § 821B (1977).

70. *Id.* at cmt. e.

71. *Cooper v. Chevron U.S.A., Inc.*, 49 P.3d 61, 72 (N.M. 2002) (adopting the Restatement (Second) of Torts as a community-based standard).

72. *AEP*, 582 F.3d 309, 349 (2nd Cir. 2009).

73. *Id.* at 351.

74. *Id.*

federal common law.⁷⁵ Ironically, *Massachusetts v. EPA*, one of the most significant environmental victories in federal court, could also be the downfall of common law nuisance suits against GHG emissions under the doctrine of displacement.

A. The Clean Air Act

The CAA is viewed as “among the most complex regulatory statutes in American law.”⁷⁶ The CAA creates a regulatory scheme that generally divides regulatory responsibility between federal and state governments for the regulation of air pollution from mobile and stationary sources.⁷⁷

The mobile source regulatory scheme provided in sections 202 and 211 of the CAA allows EPA to set federal emissions standards for new vehicles and to regulate fuel additives.⁷⁸ On the other hand, stationary sources may be regulated under one or more of three regulatory provisions. First, under sections 108 through 110 of the CAA, EPA can set the National Ambient Air Quality Standards (“NAAQS”) for the “criteria” air pollutants that the Administrator found to endanger public health and cause or contribute to air pollution.⁷⁹ The states then must maintain these federal standards through a State Implementation Plan (“SIPs”).⁸⁰ Second, under CAA section 111, EPA can set new source performance standards (“NSPS”) that require new and modified emissions sources to implement specified systems for pollution control.⁸¹ Finally, EPA can regulate “toxic” pollutants that are especially hazardous to human health or the environment under section 112.⁸²

75. *Id.* at 381. The court also surveyed the paltry amount of legislation from Congress concerning GHG, and concluded: “[Our] review of the statutes cited by Defendants shows that Congress has not acted to regulate greenhouse gas emissions in any real way. Congress has prescribed research, reports, technology development, and monitoring, but . . . has not enacted any legislation that ‘addresses’ the problem that climate change presents to Plaintiffs.” *Id.* at 385.

76. Nathan Richardson, *Greenhouse Gas Regulation Under the Clean Air Act: Does Chevron Set the EPA Free?* 29 STAN. ENVTL. L.J. 283, 287 (2010).

77. For an overview of the CAA, see generally THE CLEAN AIR ACT HANDBOOK (David P. Martineau Jr. & David P. Novello eds., 2d ed. 2004).

78. 42 U.S.C. § 7521 (emissions standards for new vehicles), § 7545 (regulation of fuels).

79. *Id.* §§ 7408-7410; see also *Whitman v. Am. Trucking Ass’n*, 531 U.S. 457, 462–63 (2001).

80. 42 U.S.C. § 7410

81. 42 U.S.C. § 7411.

82. 42 U.S.C. § 7412.

In 2007, the Supreme Court, in *Massachusetts v. EPA*, held that EPA may permissibly regulate GHG emissions under the CAA.⁸³ The case was brought by Massachusetts and other states to compel the Bush Administration's EPA to regulate GHG emitted from mobile sources under section 202 of the CAA.⁸⁴ Although EPA argued GHGs were not "pollutants" under the CAA, the Court found that the Administrator could validly find GHGs to not only be criteria pollutants within section 202, but also within the statute generally.⁸⁵ However, the Court did not require that GHGs be regulated immediately, but instead deferred to EPA to make a finding under 202 of "endangerment," "no endangerment," or by explaining why a definite finding would be impossible.⁸⁶

Following this landmark decision, EPA initiated four actions to regulate GHG emissions:⁸⁷

- First, on October 30, 2009, EPA issued a final rule requiring specified sources emitting more than 25,000 tons of GHGs to report those emissions to EPA.⁸⁸
- Second, on December 15, 2009, EPA published a final endangerment finding that under section 202 of the CAA, GHGs in the atmosphere may be reasonably anticipated to endanger public health and welfare.⁸⁹
- Third, on May 7, 2010, EPA and the Department of Transportation's National Highway Traffic Safety

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

84. *Id.* at 504–06.

85. *Id.* at 528–29 (finding that "[t]he statutory text forecloses EPA's reading. The Clean Air Act's sweeping definition of 'air pollutant' includes 'any air pollution agent or combination of such agents, including any physical, chemical ... substance or matter which is emitted into or otherwise enters the ambient air. . . .' § 7602(g). On its face, the definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word 'any.' Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt 'physical [and] chemical . . . substance[s] which [are] emitted into . . . the ambient air.' The statute is unambiguous.") (alteration in original).

86. *Id.* at 533–35.

87. See Brief for the Tennessee Valley Authority in Support of Petitioners 24–25 (2010), available at http://www.eenews.net/assets/2010/08/25/document_gw_01.pdf.

88. Mandatory Reporting of Greenhouse Gasses, 74 Fed. Reg. 56,264, 56,260 (October 30, 2009) (stating that this rule "does not require control of greenhouse gases").

89. Endangerment and Cause or Contribute Findings for Greenhouse Gasses Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,497 (December 15, 2009).

Administration published a joint final rule that will require most vehicles covering model years 2012 through 2016 to meet an estimated combined average emissions level of 250 grams of CO₂ per mile, which can be met solely through fuel economy improvements or a reduction of the CO₂ emitted by each vehicle.⁹⁰ These standards take effect on January 2, 2011.

- Fourth, on May 13, 2010, EPA issued a final rule that tailors the application of CAA permitting requirements for stationary sources since the chain of regulatory events finding GHGs pollutants for mobile sources will regulate GHGs emitted by stationary sources.⁹¹ The so-called “Tailoring Rule” limits the scope and timing of the permitting requirements for GHGs under the CAA; since without this tailoring rule, the lower emissions thresholds would automatically take effect and lead to an insurmountable number of required permits.⁹² EPA will regulate GHGs at stationary sources that seek to obtain permits for other pollutants beginning January 2, 2011.⁹³

B. Displacement Analysis

In *AEP*, the Second Circuit rejected the argument that the federal common law of nuisance was displaced by EPA’s actions. This result is primarily because at the time of the opinion (September 21, 2009), EPA had only *initiated* the rule-making process and therefore was far from regulating GHGs.⁹⁴ The Second Circuit found EPA’s intentions insufficient for displacement purposes: “Until EPA completes the rulemaking process, we cannot speculate as to whether the hypothetical regulation of greenhouse gases under the Clean Air Act would in fact ‘speak[] directly’ to the ‘particular issue’ raised here by Plaintiffs, which is otherwise governed by federal common law.”⁹⁵ The Second Circuit concluded that until EPA makes the requisite

90. Light Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25,328 (May 7, 2010) (estimating “960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).”)

91. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010).

92. *Id.*

93. *Id.*

94. *AEP*, 582 F.3d 309, 381 (2d Cir. 2009).

95. *Id.* at 380 (quoting *Oneida Cnty., N.Y. v. Oneida Indian Nation of N.Y. State*, 470 U.S. 226, 236-37 (1985)).

findings, the CAA does not “(1) regulate greenhouse gas emissions or (2) regulate such emissions from stationary sources.”⁹⁶

In determining whether a federal statute displaces federal common law, the United States Supreme Court starts with “the assumption that it is for Congress, not federal courts, to articulate the appropriate standards to be applied as a matter of federal law.”⁹⁷ The Court has articulated the relevant inquiry as whether the statute speaks *directly* to the question otherwise answered by federal common law.⁹⁸ Accordingly, federal common law is used as a “necessary expedient” when Congress has not “spoken to a particular issue.”⁹⁹ The Court, in *Milwaukee II* stated, “the question is whether the field has been occupied, not whether it has been occupied in a particular manner.”¹⁰⁰ Therefore, if EPA’s actions have regulated GHG emissions produced by stationary sources in any way, even if the regulatory scheme is of a different character than these climate change lawsuits, federal common law suits regulating GHGs are displaced.

When the Second Circuit published the opinion in *AEP*, EPA was in the very early stages of this comprehensive regulatory scheme to regulate GHG emissions.¹⁰¹ However, now that EPA has published the final rules, which are set to go into effect on January 2, 2011, it will be exceedingly difficult to argue that EPA is not “thoroughly addressing” the problem of GHGs by incrementally regulating major sources of the United States’ GHGs.¹⁰²

The defendants in *AEP* have filed a petition for *certiorari*; however, assuming the Court does not hear the case, the Solicitor General’s brief in favor of *certiorari* suggests that such a precedent creates “an extensive roadmap for resolving several threshold questions in favor of plaintiffs in such cases, [and that] courts in the Second Circuit will likely host a disproportionate share of such suits,

96. *Id.* at 381 (quoting *Milwaukee II*, 451 U.S. 304, 320 (1992)).

97. *Milwaukee II*, 451 U.S. at 316 (internal quotation marks omitted).

98. *Oneida Cnty.*, 470 U.S. at 236–37 (quoting *Milwaukee II*, 451 U.S. at 315) (internal alterations omitted).

99. *Milwaukee II*, 451 U.S. at 313–14.

100. *Id.* at 324.

101. ENVIRONMENTAL PROTECTION AGENCY, *Timeline of EPA’s Endangerment Finding*, http://www.epa.gov/climatechange/endangerment/downloads/EndangermentFinding_Timeline.pdf.

102. *Milwaukee II*, 451 U.S. at 320

perhaps forestalling percolation of similar issues in other circuits.”¹⁰³ In light of such a dire warning, it is worth examining some of the issues district courts would face in climate change litigation suits, as well as whether adjudicating these claims violates the political question doctrine.

V. Next Steps: Issues District Courts will Confront and Possible Solutions

A. *Daubert* Challenges

To prove that defendants’ actions are a substantial factor in causing the injury, plaintiffs will first have to introduce foundational scientific evidence that proves GHGs cause global warming in a nontrivial way. This would likely hinge on expert testimony from climate scientists. In a 1993 decision, *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (“Daubert”), the Supreme Court announced a new standard for the admissibility of scientific expert testimony which positions district court judges as “gatekeepers” guarding against junk science.¹⁰⁴ Discarding the previous *Frye*-test of general acceptability, the Court explained the purpose of the test is to determine whether the scientific methodology underlying the testimony is reliable through balancing multiple factors:

- (1) Testability: “whether [the] theory or technique . . . can be (and has been) tested”;
- (2) Peer review: “whether the theory or technique has been subjected to peer review and publication”;
- (3) Error rate: “the court ordinarily should consider the known or potential rate of error”;
- (4) Control standards: “the court ordinarily should consider . . . the existence and maintenance of standards controlling the technique’s operation”; and
- (5) General acceptance: “widespread acceptance can be an important factor in ruling particular evidence admissible.”¹⁰⁵

The Court emphasized that “the inquiry envisioned by Rule 702 is . . . a flexible one,” and thus compliance or noncompliance with any of

103. Brief for the Tennessee Valley Authority in Support of Petitioners, *supra* note 87, at 10.

104. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993) (“Daubert”).

105. *Id.* at 593–94.

the listed factors is not necessarily determinative of admissibility.¹⁰⁶ Each trial judge, as a gatekeeper, may make a *Daubert* determination on a case-by-case basis to ensure the expert testimony is not only relevant, but reliable.¹⁰⁷

In a case dealing with the science of climate change, an expert would most likely base many conclusions on the data of the IPCC. The IPCC is a scientific body composed of thousands of scientists from universities and research institutes from around the world.¹⁰⁸ They work for about three years writing and reviewing a report before publishing it, which occurs every six or seven years.¹⁰⁹ The IPCC is organized into three working groups that respectively research the physical science, the impacts and adaptation, and the mitigation of climate change.¹¹⁰ Because of the wide acceptability within the scientific community of the methodology, testability, and peer-reviewed reports it would be difficult to exclude or limit scientific testimony on the science or effects of climate change.¹¹¹

106. *Id.* at 594; see also Ryan Hackney, *Flipping Daubert: Putting Climate Change Defendants in the Hot Seat*, 40 ENVTL. L. 264 (2010).

107. *Daubert*, 509 U.S. at 597 (“The scientific project is advanced by broad and wide-ranging consideration of a multitude of hypotheses, for those that are incorrect will eventually be shown to be so, and that in itself is an advance. Conjectures that are probably wrong are of little use, however, in the project of reaching a quick, final, and binding legal judgment—often of great consequence—about a particular set of events in the past. We recognize that, in practice, a gatekeeping role for the judge . . . inevitably on occasion will prevent the jury from learning of authentic insights and innovations.”).

108. Intergovernmental Panel on Climate Change, *Structure of IPCC*, http://www.ipcc.ch/organization/organization_structure.htm (last visited March 13, 2010).

109. *Id.*

110. *Id.*

111. See IPCC 4th AR: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change 3, available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf> (“The understanding of anthropogenic warming and cooling influences on climate has improved since the [Third Assessment Report], leading to very high confidence that the global average net effect of human activities since 1750 has been one of warming.” (emphasis omitted) (footnote omitted)); see also American Association for the Advancement of Science, *AAAS Board. Statement on Climate Change 1* (2007), available at http://www.aaas.org/news/press_room/climate_change/mtg_200702/aaas_climate_statement.pdf (“The scientific evidence is clear: global climate change caused by human activities is occurring now, and it is a growing threat to society.”); The National Academies, *Understanding and Responding to Climate Change: Highlights of National Academies Reports 2* (2008 ed. 2008), available at http://dels.nas.edu/dels/rpt_briefs/climate_change_2008_final.pdf (“Most scientists agree that the warming in recent decades has been caused primarily by human activities that have increased the amount of greenhouse gases in the atmosphere.” (citation omitted)).

However, because of recent controversies, defendants may challenge an expert's reliance on the IPCC's Fourth Assessment Report ("IPCC 4th AR") as unreliable based on the recent discoveries of a flawed overestimate of the melting rate of debris-covered glaciers in the Himalayas, as well as inaccurate climate information concerning the Netherlands provided to the IPCC by the country's government.¹¹² Since only the overestimation of the glacial melting rate can be directly attributed to the IPCC, a court may look at this as increasing the "error rate" of the data. However, this is *one paragraph* out of Working Group II's 938-page contribution to the 4th Assessment Report. It is likely to have an effect if an expert substantially relies on this particular paragraph for the basis of her conclusion. However, if it is not central to the testimony, then it would be unlikely to have an effect on the admission of an expert's testimony. Also, it is worth emphasizing that a trial judge is provided great "flexibility" to apply the *Daubert* factors and view the research holistically, which is exemplified by *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie* ("*Green Mountain*").¹¹³

In *Green Mountain*, the plaintiffs, vehicle manufacturers and dealerships, challenged Vermont's adoption of California's stricter tailpipe emission standard, arguing that state-enacted standards were preempted by federal regulations.¹¹⁴ The defendants, the State of Vermont and environmental non-profit interveners, called a highly-regarded climate expert, Dr. James Hansen, who testified that "human emissions of greenhouse gases, including carbon dioxide and methane, are climate 'forcing' agents that can cause warming of the Earth's surface."¹¹⁵ In its analysis, the court balanced and flexibly applied the *Daubert* factors to ensure that Hansen's testimony was reliable.

112. The relevant paragraph stated:

Glaciers in the Himalaya are receding faster than in any other part of the world (see Table 10.9) and, if the present rate continues, the likelihood of them disappearing by the year 2035 and perhaps sooner is very high if the Earth keeps warming at the current rate. Its total area will likely shrink from the present 500,000 to 100,000 km² by the year 2035 (WWF, 2005).

IPCC 4th AR, available at http://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch10s10-6-2.html; see also Rosenthal, *supra*, note 22; Gore, *supra* note 19. For an apology by the IPCC see IPCC, *IPCC Statement on the Melting of Himalayan Glaciers* <http://www.ipcc.ch/pdf/presentations/himalaya-statement-20january2010.pdf>.

113. *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295 (D. Vt. 2007).

114. *Id.*

115. *Id.* at 313.

In addressing the plaintiffs' first challenge concerning the testability of climate change, the court called it "ridiculous" to exclude Hansen's testimony because it cannot be conclusively tested.¹¹⁶ Conclusively testing climate change would require global temperatures to increase two to three degrees Celsius: "A prediction [that global temperatures will rise] on this enormous scale must necessarily be tested by the extent to which it is confirmed by evidence such as the historical record and model results, rather than through testing. The same would be true of a theory on global warming offered by any expert."¹¹⁷ The plaintiffs called a rebuttal witness, Dr. John Christy, to challenge Hansen's reliability and to testify that the impact of global warming is unsupported by scientific evidence.¹¹⁸ The court found that the bulk of scientific opinion opposed Christy's position, and moreover the sources Hansen relied upon, i.e., historical temperature records, ice cores, ocean cores and modeling results, were indeed credible.¹¹⁹

Next, the court examined Hansen's peer-reviewed articles and the wide acceptance of his theories within the scientific community.¹²⁰ Christy, the rebuttal witness, even agreed with Hansen and the IPCC assessment that most of the warming over the last fifty years is due to an increase of GHG concentrations caused by the burning of fossil fuels.¹²¹ Plaintiffs also challenged Hansen's methodology as to his estimate of the exact level of sea rise, which Hansen conceded cannot be predicted according to any *precise* existing mathematical or scientific models.¹²² The court found that under these circumstances, Hansen's expertise to make general predictions based on climate history is a reasonable choice of methodology.

Although the court accepted Hansen's testimony, the court also concluded that Hansen's predictions do not have a known error rate and cannot be tested, at least not in a laboratory.¹²³ Because a trial judge is given a large amount of discretion under *Daubert*, it is conceivable that not every judge will overlook the lack of testability and error rate as to the exact effects of climate change. Therefore,

116. *Id.* at 318.

117. *Id.*

118. *Id.* at 316–17.

119. *Id.* at 316.

120. *Id.*

121. *Id.* at 319.

122. *Id.* at 317.

123. *Id.* at 318.

some district court judges may not find expert testimony of the science of climate change reliable.

Green Mountain illustrates the capability of district court judges to balance complex scientific evidence and apply the *Daubert* factors holistically. The opinion's detailed analysis of each *Daubert* factor and the relevance of each expert's testimony could act as a valuable roadmap for future parties in climate change litigation.

B. Duty of Care and Proximate Cause

Public nuisance liability may be imposed if an intentional or negligent invasion of the plaintiff's interest takes place, or if the conduct is completely out of the ordinary, i.e., strict liability.¹²⁴ Since the Second Circuit adopted the Restatement's definition of public nuisance, trial courts will require that plaintiffs prove that the defendants *unreasonably* interfered with a right common to the general public.¹²⁵ In cases that also contain claims under state tort law, such as *Comer*, apportioning liability could be complicated by joint and several liability.¹²⁶

One commentator has argued for a strict liability standard in assessing monetary damages for GHG emissions.¹²⁷ Strict liability would promote general deterrence, and the payment of damages could effectively act as a "judicial carbon tax" both to provide a financial incentive for emitters to reduce emissions and to fund adaptation efforts by public and private entities.¹²⁸ These suits would be analogous to states recovering substantial medical costs from the tobacco industry.¹²⁹ Strict liability is imposed when a defendant's conduct constitutes an abnormally dangerous activity.¹³⁰ This high standard would be a difficult burden for plaintiffs seeing as the production of energy is generally seen as a necessary and not abnormally dangerous.

124. WILLIAM PROSSER, HANDBOOK OF THE LAW OF TORTS, § 574 (4th ed. 1971).

125. RESTATEMENT (SECOND) OF TORTS § 821B(1) (1965); *see also AEP*, 582 F.3d 309, 363 (2nd Cir. 2009).

126. Grossman, *supra* note 9, at 28.

127. Jonathan Zasloff, *The Judicial Carbon Tax: Reconstructing Public Nuisance and Climate Change*, 55 UCLA L. REV. 1827, 1930 (2008).

128. *Id.*

129. Angela Lipanovich, *Smoke Before Oil: Modeling a Suit Against the Auto and Oil Industry on the Tobacco Tort Litigation is Feasible*, 35 GOLDEN GATE U. L. REV. 429, 446–47 (2005) (proposing that tobacco litigation be used as a model to pursue climate change litigation based on products liability or nuisance).

130. RESTATEMENT (SECOND) OF TORTS § 519 (1965).

Besides strict liability, a negligence formula, which the Restatement leans in favor of for public nuisance, may be imposed to assess whether a defendant breached a duty.¹³¹ A *prima facie* negligence case requires four elements: duty, breach, causation, and injury.¹³² In order to determine whether a duty is owed, a trial court could use the “Hand Formula” in order to create a cost-benefit analysis for reasonability.¹³³ As Judge Learned Hand discussed in the context of a barge left unattended for several hours in a busy harbor, the owner’s duty depends on three variables: “(1) the probability [the vessel] would break away; (2) the gravity of the resulting injury, if [it] does; and (3) the burden of adequate precautions. . . . [I]f the probability be called P; the injury, L; and the burden, B; liability depends upon whether . . . $B < PL$.”¹³⁴

In this case, finding a duty would depend on the (1) probability of injuries by the plaintiffs due to defendants’ GHG emissions contributing to the warming of earth’s atmosphere, (2) the significance of the injury, and (3) the burden of purchasing and installing the best available control technology (“BACT”) to reduce emissions. The court would have to determine whether the cost of BACT is less than the injuries incurred and the likelihood of injuries. Although this scenario is much more complex than an unmanned barge floating through a busy harbor, both scenarios basically require a value judgment despite the appearance of an objective algebraic formula. How much value should be placed on the significance and probability of the injury versus the burden on defendant to mitigate or prevent it? Some view the Hand Formula as benefiting climate change plaintiffs:

[T]he probability (and thus foreseeability) of specific damage caused by climate change is increasingly being documented.

131. See RESTATEMENT (SECOND) OF TORTS § 821B cmt. e (1965) (stating “[t]he defendant is held liable for a public nuisance if his interference with the public right was intentional or was unintentional and otherwise actionable under the principles controlling liability for negligent or reckless conduct or for abnormally dangerous activities.”).

132. See John C.P. Goldberg & Benjamin C. Zipursky, *The Restatement (Third) and the Place of Duty in Negligence Law*, 54 VAND. L. REV. 657, 658 & n.1, 659 & nn.3–5 (2001) (citing case law, treatises, and casebooks).

133. *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947) (Learned Hand, J.) (explaining the formula in which balancing the probability of harm (P), the cost of harm (L), and the burden of taking precautions to prevent harm (B) imposes liability if $B < PL$.); see also RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 180–82 (5th ed. 1998).

134. *Carroll Towing*, 159 F.2d at 173.

This will not only allow for stronger arguments on causation but will also satisfy two prongs of the [Hand] formula—the probability of harm (P) and the severity of the harm (L)—and, thus, will strengthen plaintiffs’ cases for a breach of the duty of reasonable care.¹³⁵

Moreover, reducing GHG emissions is becoming less of a cost burden; solar, wind, biomass, geothermal, and biofuel alternatives have become less expensive because of technological advances and high development interest.¹³⁶ The trend is toward a reduction in GHG emissions, which will favor efforts to reduce the harms caused by the emissions of defendants. Tests that balance societal benefits and harms, such as the Hand Formula, are common tasks for the judiciary, and most likely led the courts in *AEP* and *Comer* to classify the climate change lawsuits as “ordinary tort suits” that do not require an “initial policy determination” under the political question doctrine.¹³⁷

Expert testimony will likely play a key role in assisting fact-finders to determine the standard of care to which defendants should be held. Plaintiffs’ experts would likely attest to the conclusion that GHG emissions caused the injury, as stated in the IPCC reports.¹³⁸ The defendant corporations will likely introduce evidence as to the large financial burden of installing BACT and the fact that this cost will be passed on to consumers. Under the Hand Formula, the fact-finder must decide if the defendants’ cost of mitigation measures, such as BACT, is lower than the probability and severity of the effects of climate change on public entities and land trusts.

While there is an abundance of scientific evidence concerning the sources and effects of climate change, proximate cause will likely be the most significant hurdle for the plaintiffs. The Restatement requires that the alleged negligent conduct must be a “substantial

135. David Hunter & James Salzman, *Negligence in the Air: The Duty of Care in Climate Change Litigation*, 155 U. PA. L. REV. 1741, 1762 (2007).

136. Rebecca Smith, *The New Math of Alternative Energy*, THE WALL STREET JOURNAL, Feb. 12, 2007, at R1; John Carey et al., *Alternate Power: A Change Is in the Wind*, BUSINESS WEEK, July 4, 2005, at 36–37.

137. *AEP*, 582 F.3d at 330 (2nd Cir. 2009); *Comer*, 585 F.3d at 873 (5th Cir. 2009) (quoting *Lane v. Halliburton*, 529 F.3d 548, 560 (5th Cir. 2008)).

138. The IPCC uses the following terms to indicate the corresponding likelihood: “Virtually certain” > 99% probability of occurrence, “Extremely likely” > 95%, “Very likely” > 90%, “Likely” > 66%, “More likely than not” > 50%, “Unlikely” < 33%, “Very unlikely” < 10%, “Extremely unlikely” < 5%. IPCC, AR 4th, available at http://www.ipcc.ch/publications_and_data/ar4/wg1/en/spmssp-human-and.html.

factor” in bringing about the harm to satisfy the proximate cause prong.¹³⁹ Specifically in the case of multiple contributions, the Restatement states that when “a person is only one of several persons participating in carrying on an activity, his participation must be substantial before he can be held liable for the harm resulting from it.”¹⁴⁰ Plaintiffs will have to prove defendants’ GHG emissions were a “substantial” cause in bringing adverse changes in the climate that resulted in injuries to the plaintiffs.

The range of interpretations from courts is evident from the “fairly traceable” standing analysis of *AEP* and *Kivalina*. In *AEP*, the court held that plaintiffs were not required to “pinpoint” the specific harms of their injuries, rather it was sufficient to simply allege defendants’ emissions “contributed” to their injuries.¹⁴¹ On the other hand, the court in *Kivalina* rejected the *AEP* court’s standing analysis partly because the sources of GHG emissions were “undifferentiated”; additionally, the harmful gases were untraceable and they rapidly mix “with the accumulation of emissions in California and the rest of the world.”¹⁴² Furthermore, in the concurring opinion in *Comer*, Judge Eugene Davis stated that the plaintiffs satisfied the “fairly traceable” standing requirement, but would affirm the district court’s dismissal on the alternate grounds of proximate cause.¹⁴³ This concurrence illustrates the heightened standard and the difficulty of proving a defendant’s GHG emissions were the proximate cause of plaintiff’s injury.¹⁴⁴

Using *Kivalina* to illustrate the hurdles involved in proving proximate cause, future plaintiffs would need to prove that (1) defendants’ emitted GHGs, (2) these GHGs combined with other gases in the atmosphere that resulted in the planet retaining heat, (3) which caused ice caps to melt and sea level to rise, (4) which also

139. RESTATEMENT (SECOND) OF TORTS § 431(a)

140. RESTATEMENT (SECOND) OF TORTS § 834 cmt. e.

141. *AEP*, 582 F.3d at 347.

142. *Kivalina*, 663 F.Supp. 2d at 880 (N.D. Cal. 2009).

143. *Comer*, 585 F.3d at 880 (5th Cir. 2009) (Davis, J. concurring).

144. *Id.* at 864 (“[For standing purposes] an indirect causal relationship will suffice, so long as there is ‘a fairly traceable connection between the alleged injury in fact and the alleged conduct of the defendant.’”) (quoting *Toll Bros., Inc. v. Twp. of Readington*, 555 F.3d 131, 142 (3d Cir. 2009)); *see also* *Bennett v. Spear*, 520 U.S. 154, 168 (1997) (holding that the proximate cause of plaintiff’s injury is not equivalent to the fairly traceable standard for standing purposes); *Friends for Ferrell Parkway v. Stasko*, 282 F.3d 315, 324 (4th Cir. 2002) (“The ‘fairly traceable’ standard is ‘not equivalent to a requirement of tort causation.’”).

caused the Arctic sea ice to melt, (5) and that Kivalina became vulnerable to erosion and significant deterioration resulting from winter storms.¹⁴⁵ This lengthy causation chain provides judges with ample discretion over what is considered “substantial.” For example, should the substantiality of the GHG emissions from the twenty-four power and utility companies in *Kivalina* be measured against the total GHG emissions of the United States, or globally? A court could satisfy both criteria (substantial percentage of domestic and global emissions) if the court found defendants’ GHG emissions comprise a substantial portion of GHG emissions in the United States (greater than 50%), and then compare the total GHG emissions of the United States with every other country (currently, the U.S. is the second largest emitter of GHGs).¹⁴⁶ In other words, the defendants’ emissions are a substantial portion of US emissions, and in turn, U.S. emissions are a substantial portion of global emissions.

Defendants would likely counter that their GHG emissions are not substantial under the Restatement in relation to the more than 38 gigatonnes of total global GHG emissions.¹⁴⁷ In light of their contribution to *global emissions*, the defendants would likely argue that holding them liable under the “substantial cause” prong of proximate cause would be akin to tossing a match into a forest fire.¹⁴⁸ The standing analysis used by the Supreme Court in *Massachusetts v. EPA* may be a useful foundation for assessing proximate cause since the Court found “EPA’s refusal to regulate [GHG] emissions ‘contributes’ to Massachusetts’ injuries [of coastal erosion],”¹⁴⁹ despite the GHG emissions at issue being “a fraction of 4 percent of global emissions,” according to the dissent.¹⁵⁰ Therefore, even less than a four percent contribution of GHG emissions (a match compared to the other 96% of global sources) is significant for standing purposes, and also encourages a plaintiff to cast a wide net for defendants who

145. *Kivalina*, 663 F.Supp. 2d at 875.

146. Carbon Dioxide Information Analysis Center, *Fossil-Fuel CO₂ Emissions by Nation*, available at http://cdiac.ornl.gov/trends/emis/tre_coun.html (U.S. CO₂ emissions resulting from fossil fuels have only recently been surpassed by China, making the US the second largest emitter).

147. Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, 4th Assessment Report* 36 (2007), available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

148. W. KEETON, D. DOBBS, R. KEETON & D. OWEN, PROSSER AND KEETON ON THE LAW OF TORTS, § 41 (5th ed. 1984).

149. *Massachusetts v. EPA*, 549 U.S. 497, 523 (2007) (quoting the Clean Air Act).

150. *Id.* at 544 (Roberts, C.J., dissenting).

are major polluters. *Mass v. EPA* allows plaintiffs to fairly trace injuries to a meager contribution, which at least opens the door for a court to find proximate cause, despite being a tougher standard.

C. Fashioning a Workable Remedy

A key component of *Kivalina* and *AEP*'s analyses under the political question doctrine is whether the remedy sought could be judicially manageable and not involve an initial policy determination.¹⁵¹ The district court in *Kivalina* found that “regardless of the relief sought, the [c]ourt is left to make an initial decision as to what is unreasonable in the context of carbon dioxide emissions.”¹⁵²

Conversely, in *Koochi v. United States* the Ninth Circuit held that the political question doctrine did not bar a suit involving a United States warship that shot down a civilian aircraft, despite the fact that the incident occurred during a military action.¹⁵³ The court noted that a “key element” of its decision was the fact that the plaintiffs’ suit sought only damages.¹⁵⁴ The court explained that “[d]amage actions are particularly judicially manageable. However, the framing of injunctive relief may require the courts to engage in the type of operational decision-making beyond their competence, which is constitutionally committed to other branches, and therefore such suits are far more likely to implicate political questions.”¹⁵⁵ Courts are hesitant if a claim implicates the operational decision-making of the political branches and violates the political question doctrine.¹⁵⁶

As the *Kivalina* court stated in deciding whether there exists a manageable standard, “instead of focusing on the logistical obstacles, the relevant inquiry is whether the judiciary is granting relief in a reasoned fashion versus allowing the claims to proceed such that they

151. *Kivalina*, 663 F. Supp. 2d 863, 874–78 (N.D. Cal. 2009).

152. *Id.* at 876 (quoting *California v. Gen. Motors*, 2007 WL 2726871 at *8).

153. *Koochi v. United States*, 976 F.2d 1328 (9th Cir. 1992).

154. *Id.* at 1332.

155. *Id.*

156. See *Gilligan v. Morgan*, 413 U.S. 1, 10 (1973) (finding that the court could not manage the manner in which the National Guard was equipped or trained); *Aktepe v. U.S.*, 105 F.3d 1400, 1404 (11th Cir. 1997) (wrongful death claims arising out of a NATO training exercise raised nonjusticiable political questions in part because a decision would require “a policy determination regarding the necessity of simulating actual battle conditions”). See also Shawn M. LaTourette, *Global Climate Change: A Political Question?* 40 RUTGERS L.J. 219, 248 (2008) (“Decisions as to the use of military power are a quintessential example of operational decision making.”).

merely provide hope without a substantive legal basis for a ruling.”¹⁵⁷ Accordingly, the manner in which the court grants relief is a foremost concern; it must incorporate a manageable standard that is firmly rooted in a “substantive legal basis,” as well as avoid making an initial policy determination.

1. *Monetary Relief*

The Restatement distinguishes between the two remedies for public nuisance:

[A]n award of damages is retroactive, applying to past conduct, while an injunction applies only to the future. . . . [F]or damages to be awarded[,] significant harm must have been actually incurred, while for an injunction[,] harm need only be threatened and need not actually have been sustained at all.¹⁵⁸

In determining whether to award damages in a public nuisance suit is intrusive for defendants, “the court’s task is to decide whether it is unreasonable to engage in the conduct without paying for the harm done.”¹⁵⁹ Although many courts have found a remedy for damages less intrusive for defendants and generally more manageable to design,¹⁶⁰ the court in *Kivalina* nonetheless found that in order to award damages, an aggregate level for past GHG emissions must be set to determine whether defendants’ past conduct violated a reasonable standard.¹⁶¹ The *Kivalina* court’s trepidation of allowing a fact-finder to balance the social utility of Defendants’ GHG emissions with the harm it has inflicted on *Kivalina* illustrates the tremendous power of “community based standards” used in nuisance actions.¹⁶² Perhaps the court is unwilling to allow a fact-finder the possibility of

157. *Kivalina*, 663 F. Supp. 2d 863, 874 (N.D. Cal. 2009) (quoting *Alperin v. Vatican Bank*, 410 F.3d 532, 552 (9th Cir. 2005)) (internal quotations omitted).

158. RESTATEMENT (SECOND) OF TORTS § 821B cmt. i.

159. Grossman, *supra*, note 9, at 58 (quoting *Cox v. City of Dallas*, 256 F.3d 281, 291 (5th Cir. 2001)).

160. *Koohi*, 976 F.2d at 1332 (“Damage actions are particularly judicially manageable.”); *see also* Jonathan Zasloff, *The Judicial Carbon Tax: Reconstructing Public Nuisance and Climate Change*, 55 UCLA L. REV. 1827, 1839 (2008).

161. *Kivalina*, 663 F. Supp. 2d at 876 (Finding that the process of balancing the social utility with the harm “entails a determination of what would have been an acceptable limit on the level of greenhouse gases emitted by Defendants.”)

162. *Cooper v. Chevron U.S.A., Inc.*, 132 N.M. 382 (2002) (holding that the balancing of the factors for public nuisance imposes a test that is highly dependent on community-based interests for nuisance actions).

balancing the defendants' decisions to forego BACT mitigation or investment in alternative energy for the many years since the effects of climate change were foreseeable to a reasonably prudent person. The purposes of tort law are to deter, compensate, and regulate behavior to create an acceptable social order that substitutes legal process for self-help.¹⁶³ In accordance with these principles, a fact-finder may one day weigh whether defendants should continue this conduct "without paying for the harm done" to those who are injured by defendants' GHG emissions.

2. *Injunctive Relief*

Claims for injunctive relief in the pollution arena are not inherently unmanageable or certain to result in an initial policy determination by the court, but as the District Courts' unanimous holdings demonstrate, such claims run a fine line between policy and adjudication.¹⁶⁴ Injunctive relief is forward-looking since it requires a threat that is sufficiently serious and imminent.¹⁶⁵ Accordingly, this remedy could avoid some of the more difficult questions of proving sufficient injury at the time of trial, but instead requires a showing of likely *future* injuries.

As discussed earlier, injunctions run a greater risk compared to damages of violating the political question doctrine through "operational decision-making," i.e., decision-making beyond the judiciary's competence and is constitutionally committed to other branches.¹⁶⁶ An injunction in a public nuisance case is appropriate when the defendant's activity is so unreasonable that it must be stopped.¹⁶⁷ In distinguishing between damages and injunctive relief, one can easily imagine the hypothetical corporate defendant balking

163. *Greenwalt v. Ram Rest. Corp. of Wyoming*, 71 P.3d 717, 739 (Wyo. 2003); *Gordon v. Parker*, 83 F. Supp. 40, 42 (D. Mass. 1949); Grossman, *supra*, note 9, at 58 (quoting *Cox*, 256 F.3d at 291).

164. The district courts have unanimously held climate change litigation will result in an initial policy decision by the courts: *Conn. v. Am. Elec. Power Co.*, 406 F. Supp. 2d 265, 274 (S.D.N.Y. 2005); *Comer v. Nationwide Mut. Ins. Co.*, 2006 WL 1066645 (S.D. Miss. 2006). *See also* *California v. Gen. Motors Corp.*, 2007 WL 2726871 (N.D. Cal. 2007); *Kivalina*, 663 F. Supp. 2d 863.

165. RESTATEMENT (SECOND) OF TORTS § 933 cmt. b (1979).

166. *Koohi*, 976 F.2d at 1332.

167. RESTATEMENT (SECOND) OF TORTS § 821 cmt. i (1979); *see also* Grossman, *supra*, note 9, at 58.

at court-mandated technology as impossible to implement and maintain compared to a monetary payment.¹⁶⁸

Courts have balanced the line between an initial policy determination and valid injunctive relief in many situations. A clear example of operational decision-making occurred shortly after the Kent State controversy, when students brought a suit for injunctive relief against the Governor of Ohio “to restrain him in the future from prematurely ordering National Guard troops to duty in civil disorders and an injunction to restrain leaders of the National Guard from future violation of the students’ constitutional rights.”¹⁶⁹ The United States Supreme Court held that a court may not permissibly prescribe and regulate the training and weaponry of the National Guard, thus resulting in an initial policy determination without any judicially discoverable and manageable standards.¹⁷⁰

On the other hand, in *North Carolina ex rel. Cooper v. Tennessee Valley Authority*, after petitioning EPA to take action against a number of power plants in neighboring states, North Carolina successfully brought a public nuisance suit against the Tennessee Valley Authority (“TVA”).¹⁷¹ The court held TVA liable on the following grounds:

TVA’s generation of power at low cost to the consuming public has a high social utility. Nonetheless, the vast extent of the harms caused in North Carolina by the secondary pollutants emitted by these plants outweighs any utility that may exist from leaving their pollution untreated. . . . As with the Widows Creek plant in Alabama, TVA’s failure to speedily install readily available pollution control technology is not, and has not been, reasonable conduct under the circumstances.¹⁷²

For these reasons, the court imposed an injunction requiring TVA to install and continually monitor the use of appropriate pollution

168. Grossman, *supra* note 9, at 58. See also Lord Cairns’ Act (Chancery Amendment Act), 1858, 21 & 22 Vict., c. 27 (Eng.) (enabling courts of equity to grant personal judgments for money damages in lieu of injunctions).

169. Gilligan v. Morgan, 413 U.S. 1, 3 (1973).

170. *Id.* at 8.

171. *North Carolina ex rel. Cooper v. Tenn Valley Authority*, 593 F. Supp. 2d 812 (W.D.N.C. 2009).

172. *Id.*

control technology.¹⁷³ Importantly, the court rested its authority for such actions on the common law.¹⁷⁴

Enjoining energy companies from *all* GHG emissions would likely impose an unachievable cost of compliance.¹⁷⁵ However, due to the scope of injury and irreparable harm, a trial court could mirror the Hand Formula and follow the court in *North Carolina* in deciding what BACT is feasible for defendants to ratchet down their emissions to an acceptable level to the community.¹⁷⁶ Instead of requiring monetary compensation, a court could similarly require the BACT to be installed to mitigate future injuries. Thus a court could focus directly on the source of emissions and mandate conservation and efficiency measures, as well as technology improvements to reduce the emissions of the source.

Conclusion

The court in *AEP* has laid the foundation for states, cities, and non-profits to bring suits that regulate GHG through the doctrine of public nuisance, which could result in significant reductions of GHGs through injunctions, or require the payment of damages for the harm caused by their emissions. Although the court in *AEP* found that an initial policy determination is not required under the political question doctrine, in order for these claims to survive, courts will need to find that the actions are not displaced by EPA's recent activity. Trial courts must also determine that a duty and proximate causation exist, which would likely involve *Daubert* challenges to climate change experts.

If displacement is not an issue, *AEP* and *Comer* have found that ad hoc reductions and compensation could act as a temporary solution in reducing GHG emissions in the United States. Through the Hand Formula, a court can ask the same question we as a nation

173. *Id.*

174. *Id.* at 816 (citing *Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907); *Alfred L. Snapp & Son, Inc. v. Puerto Rico*, 458 U.S. 592, 603–05 (1982)).

175. Enjoining the companies from emitting further pollution is available to a court. *See Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (enjoining private defendant from discharging noxious gas).

176. Courts have ordered the installation of technology through injunctive relief. *See North Carolina ex rel. Cooper*, 593 F. Supp. 2d at 831; *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 518 F. Supp. 2d 1197, 1240 (C.D. Cal. 2007) (The court appointed a Special Master to assist in the implementation of a permanent injunction requiring the defendant to install filtering technology on its peer-to-peer file-sharing software to prevent unauthorized distribution of plaintiff's copyrighted works.).

are asking ourselves: Is the cost of emitting large quantities of GHG emissions worth the cost of injury to our society and the mitigation measures required to adapt to the rapidly changing world?

Although courts may be able to fill a gap on this *ad hoc* basis, both environmentalists and industry GHG emitters are not fond of this solution. Most environmentalists would likely prefer a nationwide regulatory scheme, while most industry with stationary sources would likely prefer predictability as to the compliance standards that must be met to control their liability. The fear of unpredictability is exemplified by insurance companies that provide insurance coverage to energy companies, which would cover a possible award of damages against the company.¹⁷⁷ Steadfast Insurance Co. has filed a suit in Virginia state court seeking a determination of “no coverage” for AES Corp., one of the defendants in *Kivalina*.¹⁷⁸ Although *Kivalina* was dismissed at the trial level, it has been appealed to the Ninth Circuit, and may indeed follow a similar path as that of *AEP*. This possibility worries the energy industry.¹⁷⁹ Swiss Re, a major insurer, has warned, “climate change-related litigation could become a significant issue within the next couple of years.”¹⁸⁰

Another factor that industry defendants should fear is the broadening of the field of potential plaintiffs. Although traditional environmental suits are primarily brought by environmental organizations or states, but as evidenced by the tort attorneys in *Comer*, the range of possible plaintiffs who have already been or could be injured by climate change is vast.¹⁸¹ If these suits are not displaced, it is likely climate change litigation could model tobacco litigation. The tobacco litigation model consisted of tobacco companies successfully defending torts suits for decades, then finally

177. Sally Roberts, *More Public Nuisance Suits Could Arise from Recent Court Decisions*, BUS. INSURANCE (Nov. 23, 2009).

178. A copy of the *Steadfast Insurance Co. v. AES Corp.* complaint filed in Virginia circuit court can be found at <http://www.globalclimatelaw.com/uploads/file/AES%20Complaint.pdf>.

179. *Kivalina*, 663 F. Supp. 2d 863 (N.D. Cal. 2009) (plaintiffs seek \$95 million to \$400 million for relocation expenses).

180. Rachel Morris, *The People v. CO₂*, SLATE, Apr. 20, 2010, available at <http://www.slate.com/id/2251153> (last visited May 14, 2010).

181. DEPARTMENT OF DEFENSE, *Quadrennial Defense Review Report* 84–85 (Feb. 2010), available at http://www.defense.gov/QDR/images/QDR_as_of_12Feb10_1000.pdf.

succumbing to large settlements and eventually federal regulation.¹⁸² In these suits, a tremendous amount of evidence of the tobacco industry's willful deception and knowledge of the harmful effects of tobacco came to light, which helped sway the public of the necessity of legislation to curb the "dishonest" tobacco companies.¹⁸³ One commentator has stated, "realistically, the greatest function of litigation may be to prod legislative action."¹⁸⁴

EPA now has finalized rules that will begin to incrementally regulate the GHG emissions of vehicles and stationary source emitters under the CAA, which will likely displace these climate change suits. The *AEP* court seemingly invites the political branches to displace these temporary solutions to climate change.¹⁸⁵ Also, these suits may serve the purpose of bringing industry to the table for comprehensive climate change legislation, especially if these suits are held not to be displaced by EPA's actions, which will continue to move forward toward stricter regulation. Although temporary, the judiciary is providing a much needed push forward towards a better and more permanent solution to climate change.

182. Lynn Mather, *Theorizing About Trial Courts: Lawyers, Policymaking, and Tobacco Litigation*, 23 L. & SOC. INQUIRY 897; Legislative Analyst's Office, *The Tobacco Settlement: What Will It Mean for California* (Jan. 14, 1999), available at http://www.lao.ca.gov/1999/011499_tobacco_settlement.pdf; The Family Smoking Prevention and Tobacco Control Act, 123 STAT. 1778 (2009).

183. See Laura Maggi, *Bearing Witness for Tobacco*, THE AMERICAN PROSPECT, November, 2002, available at http://www.prospect.org/cs/articles?article=bearing_witness_for_tobacco.

184. Daniel A. Farber, *Basic Compensation for Victims of Climate Change*, 155 U. PENN. L. REV. 1605, 1649 (2007).

185. *AEP*, 582 F.3d 309, 379 (2nd Cir. 2009).